

## **ARTICLE VI. LANDSCAPING**

### **Sec. 113-242. Purpose and intent.**

- (a) Landscape, landscaped areas, buffers and tree protection shall be provided and/or accomplished for all premises in the manner set forth in this article. Required landscaped areas shall be located at or above grade unless otherwise prescribed in these land development regulations. The minimum provision of required landscape, landscaped areas, buffers and trees may be exceeded. Unless otherwise prescribed, the most stringent provision of this schedule shall prevail.
- (b) Landscape, buffer and tree protection requirements serve many purposes in the built-up environment. Landscape provides visual and climatic relief from buildings, structures and broad expanses of pavement; landscape buffers pedestrian and vehicular traffic; and trees provide shade, scenic beauty and natural habitat.
- (c) In general, landscaping and buffers shall be designed to:
  - (1) Enhance the urban development by blending natural and manmade environments.
  - (2) Provide shade for paved surfaces.
  - (3) Separate vehicular and non-vehicular use areas.
  - (4) Define vehicular access ways and access points.
  - (5) Screen vehicular movement, noise and glare.
  - (6) Provide visual and physical separation of potentially incompatible land uses.
  - (7) Incorporate water conservation features such as drought tolerant landscaping and reclaimed water usage as required herein.

(Code 2001, § 98-231; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-231), 1-24-2017)

### **Sec. 113-243. Definitions.**

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Berm* means manmade earth contoured so as to form a mound above the general elevation of the adjacent ground or surface and designed to provide visual interest, screen undesirable view and/or decrease noise.

*Buffer* means a combination of physical space and vertical elements such as plants, berms, fences, or walls, whose purpose is to separate and screen incompatible land uses from one another.

*Caliper* means the diameter of a tree measured at breast height (DBH) which is approximately 4½ feet above the ground.

*Canopy or shade tree* means any tree grown specifically for its shade. The term "canopy or shade tree" usually applies to large trees with spreading canopies. Canopy trees normally grow to a minimum overall height of 30 feet and an average mature crown spread of 25 feet. Oaks, maples, ashes, lindens, and elms are examples canopy/shade trees. Canopy trees shall be a minimum of 2.5 inches caliper DBH.

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*Clear trunk* means the distance between the top of the root ball and the point of the trunk where lateral branching begins.

*Commercial* means all uses in RPO, CBD, GCN, GCC, C-1, and C-2 zoning districts and commercial development in a PUD zoning district.

*Common area* means that area which will be maintained by a homeowners association, city service area, or other form of cooperative organization.

*Decorative turf* means turf used purely for ornamental purposes having no use other than aesthetics.

*Drip line* means the vertical line running through the outermost portion of the tree crown projected vertically to the ground.

*Fully shielded lighting* means lighting constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal. Such fixtures usually have a flat, horizontally oriented lens and opaque (usually metal) sides. They are often described as shoebox luminaires if the luminaire has a predominantly rectangular form. Fixtures that either have reflecting surfaces or lenses (clear or prismatic) located below the lamp and visible from the side or above and fixtures that can be mounted such that the shielding is ineffective are not considered fully shielded lighting.

*Groundcover* means a low-growing plant, including turf grass, that, by the nature of its growth characteristics, completely covers the ground and does not usually exceed two feet in height.

*Hat racking ortopping* means pruning a tree in such a way that the majority of limbs are removed and the tree is left with only a trunk and the stumps of a few primary limbs, with little or no foliage or other trimming or pruning that has the effect of preventing a tree from attaining its natural height and/or shape.

*Hedge* means a row of evenly spaced shrubs planted to form a continuous unbroken visual screen.

*Industrial* means all uses in M-1 and M-2 zoning districts and all industrial uses in a PUD zoning district.

*Landscape* means vegetative and inert materials, including, but not limited to, grass, sod, shrubs, vines, hedges, trees, flowers, berms and complementary structural landscape architectural features such as rocks, fountains, sculpture, decorative walls and tree wells or other hardscape features.

*Landscaped area* means land area to be provided with landscape.

*Landscaped strip orlandscaped island* means required landscaped areas containing ground cover, shrubs, trees and/or other landscape used to divide parking areas into individual bays.

*Moisture sensingswitch* means a device which has the ability to shut off an automatic irrigation controller after receiving a determined amount of rainfall.

*Mulch* means nonliving organic materials such as wood chips that is customarily placed around the base of trees, shrubs and groundcovers for the purpose of retaining moisture and retarding weed infestation and soil erosion. Also, mulch is used in pathways and play areas.

*Native or naturalizing plant species* means plant species native to the region or introduced which once established are capable of sustaining growth and reproduction under local climatic conditions, without supplemental watering.

*Nonresidential* means, pursuant to land use category headings reflected in Schedule B, Permitted Uses, in these land development regulations, all commercial, transient lodging and entertainment, automotive, miscellaneous business and services, industrial and public/semi-public uses.

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*Parking area* means a paved ground surface area used for the temporary parking and maneuvering of vehicles by employees or customers, either for compensation or to provide an accessory service to a commercial, industrial, institutional or residential use.

*Paved ground surface area.* See section 101-5.

*Poodle cut* means stripping off the lower branches of a tree and rounding or shearing the ends of the greenery to create an unnatural shape.

*Required landscaped area* means any landscaped area required in this Code.

*Residential* means all uses in R-1, R-2, R-3 and PUD zoning districts; one-family, two-family and multiple-family dwellings.

*Shrub* means a self-supporting woody species of plant characterized by persistent stems and branches springing from the base.

*Specimen tree* means a particularly fine or unusual example of any tree due to its age, size, rarity, environmental value or exceptional aesthetic quality. A tree may also be designated a specimen due to its association with historic events or persons. A specimen tree cannot be of a species that is unacceptable as referenced in list of exempt trees in this Code.

*Tree* means a self-supporting woody plant of a species that normally grows to a minimum overall height of 15 feet and has an average mature crown spread greater than 15 feet within the city.

*Turf* means upper layer of soil bound by grass and plant roots into a thick mat.

*Understory, sub-canopy trees* means trees which normally grow to a maximum overall height of 15 feet and an average mature crown spread of 15 feet.

*Vehicular circulation area* means streets, rights-of-way, access ways, parking spaces, parking, loading and unloading and other similar or related functions.

(Code 2001, § 98-232; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-232), 1-24-2017)

### **Sec. 113-244. Required landscaping.**

- (a) Landscape requirements for one-family dwellings and two-family dwellings shall be as follows:
  - (1) At least one canopy tree, 2.5 inches DBH, shall be located in the required front yard of each dwelling unit.
  - (2) The lot shall be sodded, seeded, or appropriate ground cover for erosion control.
- (b) Landscape requirements for nonresidential uses, including multifamily structures with three or more dwelling units, shall be as follows:
  - (1) *Perimeter landscaping.* At a minimum, each site developed for multifamily, institutional, commercial, or industrial uses will contain one shade or canopy tree for each 50 linear feet of the perimeter of the site.
  - (2) *Interior landscaping.* There will be one tree per every 1,500 square feet of the first 10,500 square feet of the project site, then one tree for every 4,000 square feet of the remainder of the project site. The trees shall be an equal proportion of shade (canopy) and understory trees. At a minimum, 15 percent of the site shall be landscaped.
- (c) Landscape adjacent to streets and parcels.
  - (1) A landscaped strip shall be provided along all parcel lines and abutting street right-of-way lines.

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- (2) The depth of the required landscaped strip shall be measured and provided parallel to the parcel line or abutting street right-of-way in question.
  - (3) Landscaped strips shall be considered to be required landscaped area.
  - (4) A landscaped strip may be included in satisfying buffer requirements.
- (d) Landscaped strips shall be provided in the following manner:
- (1) Ten-foot landscaped strip along all rights-of-way.
  - (2) Alternative design for properties fronting on all roads classified as arterials, including, but not limited to, U.S. 17 (Orange Avenue), S.R. 16 East (Leonard C. Taylor Parkway) and S.R. 16 West (Ferris Street and Idlewild Avenue), shall comply with the following standards: The developer/property owner shall be responsible for providing a landscape buffer in the area abutting the designated roadway right-of-way lines by meeting one of the following conditions:
    - a. The roadway shall be separated from the back of curb by a six-foot landscaped strip, a six-foot pedestrian walkway, then a six-foot landscaped strip.
    - b. Building setback shall be calculated from the back of curb or ten-foot landscaped strip along all rights-of-way.
    - c. Alternative designs. Where natural features or spacing of existing driveways and roadways cause the access requirements of this section affecting placement or planting of landscaped buffers or trees to be physically infeasible, alternate designs may be approved as part of the issuance of the final development order.
  - (3) The landscape buffer area shall be planted in the following manner:
    - a. *Canopy trees.*
      1. One row of canopy trees, 2.5 inches DBH at planting. For 50 percent of the canopy trees, two sub-canopy/understory trees may be substituted for each canopy tree.
      2. The trees shall be planted every 50 feet and staggered so as to be midway between each other, and equal distance between each row and right-of-way and/or parcel line. Trees shall be evenly spaced. The tree spacing may be altered with approval of the development services, provided the total number of trees is provided.
    - b. *Sub-canopy/understory trees.* A minimum of four sub-canopy/understory trees per 100 feet of frontage shall be planted in and about each access point and intersection.
    - c. *Hedges.* When off-street parking, loading, unloading and vehicular circulation areas are to be located adjacent to the street right-of-way, a dense hedge of evergreen-type shrubs shall be provided in the following manner:
      1. At initial planting and installation, shrubs shall be at least 24 inches in height and shall be planted at least 36 inches or less on center.
      2. The hedge shall be planted four feet or more from the tree trunks.
      3. Within two years of initial planting and installation, shrubs shall have attained and be maintained at a minimum height of three feet and shall provide an opaque vegetative screen between the street and the use of the premises.
      4. In lieu of a vegetative hedge, the use of vegetated berms or other appropriate landscape materials in a manner that results in the visual separation of street right-of-way can be approved by the development services director.

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- d. *Shrubs.*
    - 1. Buffer areas, not adjacent to a street right-of-way, shall include nine shrubs for every 100 linear feet of the parcel line
    - 2. Shrubs shall be at least 24 inches in height at the time of planting.
  - (e) Groundcover. The buffer area shall be planted with groundcover minimum of 18 inches on center or solid grass sod, unless natural area to remain.

(Code 2001, § 98-233; Ord. No. O-01-2000, § 6.06.02, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-233), 1-24-2017)

### **Sec. 113-245. Exemptions and exceptions to landscape requirements.**

Interior landscaping for parking garages or other vehicle use areas contained entirely with a roofed and walled structure. Landscaping shall be provided around the perimeter of the structures.

(Code 2001, § 98-234; Ord. No. O-01-2000, § 6.06.01, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-234), 1-24-2017)

### **Sec. 113-246. Parking area landscaping.**

The requirements of this section apply to all development, unless exempted:

- (1) *Internal landscape area.*
  - a. Minimum required land area for required landscaped areas not in a parking area. Each required landscaped area shall contain a minimum land area of 200 square feet.
  - b. The minimum required internal landscaped area for parking areas shall cover ten percent of the parking area.
  - c. Required landscaped area for rows of parking spaces.
    - 1. A landscaped area shall be provided at each end of all rows of parking.
    - 2. In addition, at least one landscaped area shall be provided between every ten parking spaces.
    - 3. Each required landscaped area shall be five feet wide inside the curb or paving line running the entire length of the parking space.
    - 4. At least one canopy tree shall be provided at each island.
    - 5. A five-foot turning radius shall be accommodated at the end of parking rows.
  - d. Parking space reduction to protect existing trees. The development services director shall have the authority to reduce the required number of off-street parking spaces when such reduction would result in the preservation of existing trees.
    - 1. Trees to be preserved must be a minimum of 12 inches in diameter measured at breast height above the ground.
    - 2. The reduction in the number of required parking spaces shall result in a reduction in an amount of required parking of less than five percent of the total number of required off-street parking spaces.

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(2) *Required trees.*

- a. At least one canopy tree shall be provided in each required landscaped area.
- b. One canopy trees or two sub canopy trees shall be provided for each required landscaped area for the rows of parking. A minimum of 50 percent of the trees used shall be canopy trees.

(3) *Location of landscaped areas for interior landscaping.*

- a. A landscaped area or buffer shall be provided between all parking areas and principal structures or any sidewalks and street or rights-of-way.
- b. This landscape area or buffer must contain at least one canopy tree per 50 feet linear perimeter of the parcel.
- c. Every effort will be made to retain native vegetation and trees.
- d. Minimum width of the landscape area:
  - 1. Ten feet when abutting a public right-of-way.
  - 2. Five feet when abutting alleys or the rear or side property lines.
- e. Each landscaped area shall have five shrubs per each tree required.
- f. All landscaped areas shall be covered in groundcover or turf.

(4) *Maintenance of planted areas.*

- a. Irrigation shall be provided for all new planting. Hose bibs maybe installed as an alternative, one hose bib within 75 feet of all landscaped areas.
- b. Maintenance shall be the responsibility of the developer and/or landowner.
- c. Failure to maintain landscaped areas shall be considered a violation of this subpart and subject to code enforcement.

(5) *Buffer zones for incompatible land uses.*

- a. A buffer zone is a five-foot landscaped strip along parcel boundaries that serves as a buffer between incompatible uses and land use districts. This shall not be interpreted to mean that parcels within a planned mixed use development must meet these requirements.
- b. A buffer zone shall have a visual screen running the entire length of the property with a minimum opacity of 85 percent and a minimum height of six feet.
- c. The use of existing native vegetation in buffer zones is preferred.
- d. A five-foot buffer of native vegetation between a conservation designated land use and any other development shall be required. This is not in addition to buffers required by any permitting agency.

(6) *Street trees for subdivisions.*

- a. The developer shall plant, within ten feet of the right-of-way of each street within a residential development meeting the subdivision requirements of this Code, one canopy tree for every 50 linear feet of right-of-way.
- b. Except where property on one side of the right-of-way is not owned by the developer, the trees shall be planted alternately on either side of the street.
- c. Existing trees and native tree species that need less water and maintenance are preferred.

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- d. Coordination with the city utility departments is required prior to planting the street trees.
  - e. Street trees planted shall have a minimum overall height of 2.5-inch DBH at time of planting.
  - (7) *Certain functional uses not permitted.* No accessory structures, garbage or trash collection points or receptacles, parking, or any other functional use shall be permitted in the minimum required landscape area and/or buffer zone. Combining of compatible functions such as landscaping and drainage facilities are permitted.
  - (8) *Concealing and location of dumpsters.*
    - a. Dumpsters must be concealed in opaque concrete, brick or chain-link fence with screening slats of enough height consistent with the size of the container to shield the container from view from all sides.
    - b. The front of screen must be accessible for service of the container.
    - c. The dumpster must be located on a paved surface of asphalt or concrete.
  - (9) *Clear line of sight.* An unobstructed cross visibility shall be required within a triangle area formed by the intersection of two rights-of-way or access ways, as referenced in section 113-76.

(Code 2001, § 98-235; Ord. No. O-01-2000, § 6.06.03, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-235), 1-24-2017)

### **Sec. 113-247. Landscape design and materials.**

- (a) *Design principles.* All landscaped areas required shall conform to the following general design principles:
  - (1) Landscaping should integrate the proposed development into existing site features through consideration of existing topography, hydrology, soils and vegetation.
  - (2) The functional elements of the development plan, particularly the drainage systems and internal circulation systems for vehicles and pedestrians, should be integrated into the landscaping plan.
  - (3) Landscaping should be used to minimize potential erosion through the use of ground covers or any other type of landscape material that aids in soil stabilization.
  - (4) Existing native vegetation should be preserved and used to meet landscaping requirements.
  - (5) Landscaping should enhance the visual environment through the use of materials that achieve variety with respect to seasonal changes, species of living material selected, textures, colors and size at maturity.
  - (6) Landscaping design should consider the aesthetic and functional aspects of vegetation, both when initially installed and when the vegetation has reached maturity. Newly installed plants should be placed at intervals appropriate to the size of the plant at maturity, and the design should use short-term and long-term elements to satisfy the general design principles of this section over time.
  - (7) Landscaping should enhance public safety and minimize nuisances.
  - (8) All landscaping and plant material shall be planted in a manner which shall not be intrusive or interfere, at or before maturity, with pavement surfaces, power, cable television, or telephone lines, sewer or water pipes, or any other existing or proposed overhead or underground utility services.
  - (9) Landscaping should maximize the shading of streets and vehicle use areas.
  - (10) Architectural planters.
    - a. Planters can be used to meet landscaping requirements.

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- b. Planters shall be a minimum of ten square feet and shall have minimum depth of 15 inches.
  - c. Planters shall be maintained and replanted if necessary.
  - d. Planters cannot be located within the city right-of-way without prior consent from the development services director.
- (b) *Installation of required landscape and trees.*
- (1) *General.* All required trees and landscaping shall be installed according to generally accepted commercial planting procedures. Soil, free of limerock, rocks, and other construction debris, shall be provided. All landscaped areas shall be protected from pedestrian and vehicular encroachment by raised planting surfaces, depressed walks, curbs, edges, wheel stops and the like.
  - (2) *Florida No. 1 quality.*
    - a. All required plant materials, including, but not limited to, trees and shrubs, shall equal or exceed the standards for Florida No. 1 as established and revised by the state department of agriculture and consumer services.
    - b. Grass sod shall be healthy and reasonably free of weeds, pests and disease.
  - (3) *Proper planting and anchoring.*
    - a. All plant material shall be mulched to a depth of two inches.
    - b. Trees shall be installed with anchoring for a period of at least one year, in order to provide sufficient time for their roots to become established.
      - 1. Trees with trunks under four inches in diameter should be staked with one to three stakes.
      - 2. Trees with a diameter of 2.5 inches or more DBH should be guyed with three to four guy wires.
  - (4) *Irrigation.*
    - a. All landscaped areas shall be watered with an underground irrigation system or a drip irrigation system or hose bibs designed to allow differential operation schedules for high and low water requirement areas. To avoid operation of the system during periods of increased rainfall, an operational moisture sensor switch shall be required on all irrigation systems equipped with automatic controls that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.
    - b. The use of reclaimed water as a water supply source for irrigation shall be required when such source is available or anticipated to be available within 100 feet of an existing or proposed city reclaimed water line. In areas where food is served or consumed, such as outdoor eating areas of restaurants, a dual supply source distribution system shall be installed whereby potable water shall serve as the source for the food serving and/or consumption areas and reclaimed water shall serve as the supply source in all other landscaped areas.
    - c. If a landscaped area contains primarily species native to the immediate region, or plants acceptable for xeriscape landscaping, the development services director may waive the requirement for installation of an irrigation system. Consideration of a waiver of the irrigation requirement shall include, in addition to the area covered by native vegetation, such local conditions as sun or shade, use of fill soil, and depth to water table.
    - b. The development services director may require or otherwise approve water supply provisions for unusual landscape conditions provided, however, that a readily available water source shall be located within 100 feet of any required landscaping plant material.



- (5) *Berm*. When a berm is used to form a required visual screen in lieu of, or in conjunction with, a required hedge or wall, such berm shall not exceed a slope of 30 degrees and shall be completely covered with shrubs, trees, or other living ground cover.
- (6) *Grass*.
- Grass shall be seeded, plugged, or sodded.
  - On swales, berms or other areas that are subject to erosion, grass shall be completely sodded.
- (7) *Ground cover*. Ground cover shall be installed and maintained for all improved parcels, in order to prevent erosion and dust. Ground cover used in lieu of grass shall be planted in such a manner so as to present a finished appearance and reasonably complete coverage within three months after planting.
- (8) *Nonliving materials*. Mulch shall be a minimum depth of two inches.
- (c) *Recommended plant list*. Below is a list of recommended plants by category:

Understory Trees/Sub-Canopy	
<i>Common Name</i>	<i>Botanical Name</i>
Redbud	<i>Cercis canadensis</i>
Anise	<i>Illicium</i> spp.
Drake/Chinese elm	<i>Ulmus parvifolia</i>
Flowering dogwood	<i>Comus florida</i>
Wax myrtle	<i>Myrica cerifera</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Southern red cedar	<i>Juniperus silicicola</i>
Yaupon holly	<i>Ilex vomitoria</i>
Fringe tree	<i>Chionanthus virginica</i>
Sweet bay magnolia	<i>Magnolia virginiana</i>
Chinese fan palm	<i>Livistona chenensis</i>
Windmill palm	<i>Trachycarpus fortunei</i>
Washington palm	<i>Washingtonian robusta</i>
Dahoon holly	<i>Ilex cassine</i>
Savannah holly	<i>Ilex opaca</i> × <i>attenuate</i> & cultivars
River birch	<i>Betula nigra</i>
Palatka holly	<i>Ilex attenuate</i>

Understory	
<i>Common Name</i>	<i>Botanical Name</i>
Crape myrtle	<i>Lagerstroemia</i> × <i>fauriei</i>
Wax myrtle	<i>Myrica cerifera</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Junipers	<i>Juniperus torulosa</i> & <i>spartan</i>
Bottlebrush	<i>Callistemon</i> spp.
Redbud	<i>Cercis canadensis</i>
Rusty pittosporum	<i>Pittosporum ferrugineum</i>
Podocarpus	<i>Podocarpus nagi</i>
Holly	<i>Ilex</i> spp.
Leyland cypress	<i>Cupressocyparis leylandi</i>

Canopy Trees	
<i>Common Name</i>	<i>Botanical Name</i>
American elm	Ulmus americana
Live oak	Quercus virginiana
Chinese elm	Ulmus parvifolia
Red bay	Persea borbonia
American sycamore	Platanus occidentalis
Tulip tree	Lirodendron tulipifera
Southern magnolia	Magnolia grandiflora & cultivar
Laurel oak	Quercus laurifolia
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Pindo palm	Butia capitata
Hornbeam/bluebeech	Carpinus caroliniana
Water ash; pop ash	Fraxinus caroliniana
Florida winged elm	Ulmus alata
Florida elm	Ulmus americana floridana
Red maple	Acer rubrum
American holly	Ilex opaca & cultivars
Loblolly bay	Gordonia lasianthus

- (d) *Unacceptable plant species.* All prohibited species shall be allowed to be removed without a permit and prior to the development of the site.
- (e) *Maintenance and replacement of landscape plants.* All plant material shall be maintained according to the following standards:
- (1) All required trees, shrubs and landscaped areas shall be maintained in good and healthy condition for as long as the use continues to exist.
  - (2) Maintenance shall consist of mowing, removing of litter and dead plant material, necessary pruning, pest control, water and fertilizing.
  - (3) Maintenance also includes, but is not limited to, the replacement of plants damaged by insects, disease, vehicular traffic, acts of God and vandalism.
  - (4) Necessary replacements shall be made within a time period not to exceed 30 days after notification by the city of the violation.
  - (5) In order to increase the tree canopy within the city, give shade to paved surfaces, buffer pedestrian and vehicular traffic and provide scenic beauty and natural habitat, as well as prevent decay, sunburn and hazards to trees, all landscape material shall be pruned to maintain the natural shape of the plant.
  - (6) No topping, hat racking, poodle cutting, excess pruning or excess crown reduction shall be performed on trees within the right of way.
  - (7) The city shall encourage the standards of the International Society of Arboriculture and the Tree Care Industry Association for tree care operations, plant maintenance and proper pruning methods.

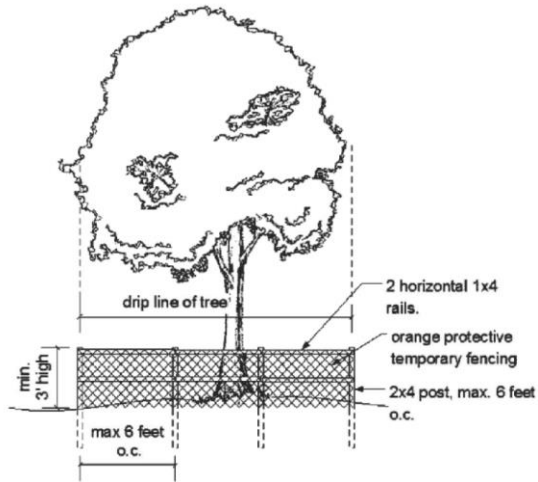
(Code 2001, § 98-236; Ord. No. O-01-2000, § 6.06.04, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-236), 1-24-2017)

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## **Sec. 113-248. Tree preservation during development and construction.**

- (a) Protective barriers.
  - (1) During construction, protective barriers shall be placed, as necessary and/or as directed by the development services director, to prevent the destruction or damaging of trees.
  - (2) Trees destroyed or receiving major damage must be replaced before occupancy or use unless approval for their removal has been granted during the site plan approval process
  - (3) All trees not designated for removal may be required to be protected by barrier zones erected prior to construction of any structures, roads, utility service, or other improvements,
- (b) The protective barrier shall be constructed to the following standards:
  - (1) The protective barrier shall be constructed outside the drip line of the tree, when possible (see Figure A). The protective barrier shall have a minimum of a six-inch radius, plus one inch for each one inch of caliper.
  - (2) The protective barrier shall be a minimum of three feet high.
  - (3) Protective barrier posts shall be two inches by four inches or larger and shall be no more than six feet apart.
  - (4) The barrier shall have two one-by-four-inch horizontal railings affixed securely to the posts.
  - (5) The entire protective zone shall be wrapped in orange safety fencing material, a minimum of three feet in height.
  - (6) The protective barriers shall be inspected by the department prior to the commencement of construction.
- (c) No grade changes shall be made within the protective barrier zones without prior approval of the city development services director.
- (d) Where roots greater than one-inch diameter are exposed, they shall be cut cleanly.
- (e) Protective barrier zones shall remain in place and intact until such time as landscape operations begin or construction is complete, whichever occurs first.
- (f) The development services director may conduct periodic inspections of the site before work begins and during clearing, construction and post-construction phases of development in order to ensure compliance.
- (g) No building materials, machinery or temporary soil deposits shall be placed within protective barrier zones defined above.
- (h) No attachments or wires other than those of a protective or non-damaging nature shall be attached to any tree.

Figure A



(Code 2001, § 98-237; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-237), 1-24-2017)

**Secs. 113-249—113-274. Reserved.**