

ARTICLE VI. LANDSCAPING*

***Cross references:** Tree protection, § 110-251 et seq.

DIVISION 1. GENERALLY

Sec. 108-381. Purpose, intent and applicability.

The intent of this article is to require screening and beautification of all storage, parking, display or sales areas so as to improve, protect and preserve the city's unique aesthetic characteristics and qualities. This article shall apply to all development requiring site plan approval. A landscape plan shall be a required component of all site plans. If sections of this article conflict with other land development regulations, the more restrictive provisions apply.

(Ord. No. 97-10, § 1(3-13.1), 7-3-1997)

Sec. 108-382. 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:

Accessory vehicular use area means all land upon which vehicles traverse the property, excluding the parking lot.

Accessway means a paved or unpaved area intended to provide ingress and egress from a public or private right-of-way to a public or private premises, including an off-street parking area.

Barrier means a solid and unbroken visual screen, including a masonry fence or solid wood fence, which presents a 100-percent opaque screen. An open chainlink fence shall not constitute a barrier.

Berm means mounding of soil which is planted with living plant material designed as a natural landscape buffer to screen incompatible land uses or to absorb or otherwise reduce nuisance impacts, such as noise, smoke, glare, or other similar impacts.

Buffer means a landscape area comprised of trees, shrubs and ground cover, and/or other landscaping material that is used to separate one use from another or from a roadway, and/or to shield or block noise, light or other nuisances.

Caliper means diameter at breast height (dbh) of a dicot or conifer tree trunk as measured 4.5 feet above the ground. Caliper of a monocot is the diameter of the tree trunk measured one foot above the ground.

Canopy tree and *shade tree* mean a single-trunked dicot or conifer tree which by virtue of its natural shape provides at maturity a minimum shade canopy of 15 feet in diameter.

Dripline means the natural outside end of the branches of a tree or shrub projected vertically to the ground.

Encroachment means a protrusion of a vehicle outside of a parking space, display area or accessway into a landscaped area.

Excavation means to make a hole, unearth, scrape, or dig out for the purpose of construction, demolition or removal with specific relation to a tree dripline and root system.

Grass means green herbage, commonly referred to as "grass," which is commonly grown yearround in the city. For the purpose of this article, no artificial grass shall be considered living plant material.

Ground cover means low-growing living plant material or landscaping material.

Hatracking means pollarding or flat-cutting a tree such that the leaders are severed, or such that the canopy spread is reduced by one-third or more during any 365-day period.

Hedge means a dense and continuous visual screen of self-supporting living plant material.

Interior parking space means any parking space which is not adjacent to a required landscape strip.

Landscape area means an area containing trees, barriers, ground cover and/or other plant material as required by this article.

Lawn grass means grass areas which shall be planted in species normally grown as permanent lawns in the vicinity of the city. Grass areas may be sodded, plugged, sprigged or seeded, except that solid sod shall be used in swales or other areas subject to erosion. When grass seed is sown it shall be a variety of seed which produces complete coverage within 90 days from sowing. In areas where a ground cover other than solid sod or grass seed is used, nursegrass seed shall be sown for immediate effect and protection until coverage is otherwise achieved.

Living plant material means grass, ground cover, shrubs, vines and trees.

Mulch means an organic soil additive or topping such as compost, wood chips, wood shavings, seasoned sawdust, bark leaves or straw, used to reduce evaporation, prevent erosion, control weeds enrich the soil and lower soil temperature. Install at a three-inch depth, maximum.

Protected tree means a tree species which, due to its size, shape, character, age and/or aesthetic value, is declared by the city commission to be a locally unique example of the species.

Shock means a physiological state of or degeneration of the vital processes resulting from but not limited to root damage, wounds, damage, impact, partial or total girdling, or improper cutting.

Shrub means a self-supporting, woody, evergreen plant smaller than a tree and branching from or near the ground.

Synthetic plants means synthetic or artificial material in the form of trees, shrubs, ground covers or vines which shall not be used in lieu of plant requirements in this article.

Transplanting means the relocation of a plant from one location to another.

Tree means a self-supporting, wood plant of a species which normally at maturity has a trunk with a diameter of at least 2 1/2 to three inches measured 4 1/2 feet above grade and has an overall height of a minimum of 15 feet.

Tree abuse means any action or inaction which causes the decline or death of a tree. Abuse includes but is not limited to improper trimming, damage inflicted upon the tree including but not limited to abuse by machinery, changing the natural grade within the dripline, destruction of the natural shape or any action which causes infection, infestation,

decay, or destroys the natural landscape function of the tree or results in the death of the tree.

Vehicular use areas includes all areas used for the circulation, parking and/or display of any and all types of vehicles, mobile homes, boats or heavy construction equipment, whether self-propelled or not, and all land upon which vehicles traverse as a function of the primary uses. This includes but is not limited to activities of a drive-in nature, such as service stations, convenience stores, banks, restaurants and similar activities.

Vine means a plant which normally requires support to reach mature form. Vines shall be a minimum of 30 inches in height immediately after planting and may be used in conjunction with fences, screens or walls to meet physical barrier requirements as specified.

(Ord. No. 97-10, § 1(3-13.2), 7-3-1997)

Cross references: Definitions generally, § 1-2.

Secs. 108-383--108-410. Reserved.

DIVISION 2. REQUIREMENTS FOR SPECIFIC AREAS

Sec. 108-411. Landscape plan approval.

(a) *Development plan review.* A landscape plan showing proposed landscaping shall be submitted at such time as any development plan is submitted for development plan review. All landscape plans shall be drawn to scale and shall include sufficient information to demonstrate compliance with all of the landscape requirements of this article and section 108-243. All landscape plans must include a complete list of the plant types and sizes to be planted along with a planting and maintenance schedule.

In addition to review procedures identified in article II of this chapter, landscape plans shall be reviewed by the tree commission. The tree commission, within 30 days of receiving a development plan with the landscape component, shall hold a public meeting to review and act on such plans. Required tree removal permit information identified in article VI of chapter 110 shall be submitted with the landscape plan.

The planning board shall not review a development plan until the plan has been reviewed by the tree commission, unless the city landscape coordinator renders a finding that the subject development plan is compliant with all criteria of this article and article VI of chapter 110. In the latter case, the development plan may be reviewed by the planning board prior to review by the tree commission; however, in such case any development plan approval by the planning board shall be conditioned on approval by the tree commission. Notice of the date of all public meetings of the tree commission shall be provided to the applicant. The applicant shall be given reasonable opportunity to be heard at the public meeting prior to the tree commission's action.

(b) *Building permits.* Where development plan review is not required, a landscape plan shall be submitted at the time application is made for a building permit. The landscape plan shall be drawn to scale and shall clearly delineate the location and dimensions of the existing and proposed landscaping. The landscape plan shall also include a detailed plan of off-street parking areas as well as the location of existing and proposed buildings.

(Ord. No. 97-10, § 1(3-13.3), 7-3-1997)

Sec. 108-412. Minimum landscaping requirements.

(a) *Minimum landscaped areas.* The minimum area of a building site which shall be landscaped with trees, including canopy trees, shrubs and ground cover, and other landscaping as defined in this article shall be a minimum of 20 percent of the building site area.

(b) *Minimum native plant requirement.* Seventy percent of the minimum required landscaping shall be native plant species.

(c) *Landscaping combination requirement.* All landscaping must consist of a combination of trees, including canopy and shade trees, shrubs and ground cover and must be in compliance with the land development regulations.

(d) *Maintenance.* The owner or the owner's agent, where appropriate, shall be responsible for the maintenance of all required landscaping. All required landscaping shall be maintained free of debris and free of tree abuse. Where newly installed plants do not survive, they shall be replaced no later than 30 days from the time the prior tree expired.

(Ord. No. 97-10, § 1(3-13.4), 7-3-1997)

Sec. 108-413. Requirements along street frontage.

(a) *Location of landscaping.* Landscaping shall be required to be located within the property line and/or building setback as established by the land development regulations or as otherwise established. Landscaping, when required in easements, may be adjusted by the planning board. A decision on any related issue decided upon by the planning board but remaining in dispute shall be resolved by the city commission.

(b) *Minimum standards.* The landscaping shall comply with the following stipulated minimum standards and shall, in all cases, consist of a minimum of 70 percent native species. The local extension service provides a list of native trees, shrubs, and ground cover:

MINIMUM STANDARDS FOR LANDSCAPING ALONG THE RIGHT-OF-WAY
TABLE INSET:

Area of Site	Width of Required Landscaping (linear feet)	Number of Plant Units* Required per 100 Linear Feet of Property Line or Right-of-Way
Less than 0.5 acre	10	40
0.5 to <1 acre	20	80
1 to <3 acres	30	120
3 or more acres	40	160

*A plant unit is a measurement describing the amount of required plant material in flexible units based on the unit values in the following table.

TABLE INSET:

Type of Plant Material	Number of Plant Units
One canopy or shade tree	10
One evergreen or ornamental tree	3
One shrub	1

All property other than the required landscaped strip lying between the right-of-way and off-street parking area or other vehicular use area shall be landscaped with grass or other ground cover.

(c) *Required screening material.* Any combination of barriers, shrub or landscaped berm shall be planted or installed along the entire length of each required landscape strip. In all residential or commercial or mixed use districts, the barrier, shrub, or landscape berm (berm with shrubs) shall be a minimum of 3.5 feet in height, except in commercial districts, where the barrier, shrub or landscaped berm along street rights-of-way shall be a minimum of three feet in height.

Where a barrier is erected, the barrier shall be restricted to a decorative masonry wall pursuant to standards cited in section 108-449. Where a decorative wall is provided, the required plant material shall be planted on the street side along a public right-of-way and shall be maintained in perpetuity by the applicant or successive owners. All nonliving barriers abutting public streets shall be at least 18 inches inside the property line or within the building setback line, whichever is greater.

(Ord. No. 97-10, § 1(3-13.5), 7-3-1997)

Sec. 108-414. Requirements for interior areas.

(a) *Scope.* This section presents a summary of the minimum requirements for landscaping and tree planting within the interior of parking lots and along the other perimeters of a parking lot.

(b) *Size and composition of interior landscaping.* All off-street parking areas including all paved areas for off-street parking, drives, aisles, standing zones, and other vehicular use areas, except parking areas for single-family residences, shall have a minimum landscape area of 20 percent of the total parking area. Each landscaped area shall have a minimum dimension of six feet with a minimum of 60 square feet of continuous landscaped open area and is required to contain at least one shade tree. All landscaped open area shall contain grass, ground cover or other living plant material. Landscaped area for the interior of parking lots as well as landscaped area for perimeter requirements and other nonvehicular use areas shall not include any water areas. The total number of required trees shall be one tree for each 100 square feet or fraction thereof of required landscape area.

(c) *Use of interior landscape strip.* Interior parking landscaping shall, insofar as possible, be used to delineate and guide major traffic movement within the parking area and to prevent cross space driving wherever possible. Landscaping dividing strips with concrete curbing along the outer perimeter and with or without walkways shall be used to subdivide parking areas. Landscaping shall be designed so no more than ten spaces shall be in an uninterrupted row. Where two rows of parking spaces are adjacent to one another (i.e., head to head), a landscape strip with a minimum dimension of six feet shall be

planted along the common boundary. In addition, each ten parking stalls must be separated by a parallel landscaped area with a minimum dimension of nine feet to allow car doors to open freely. The end of each aisle and corner area must be landscaped. Each landscape strip shall contain a minimum of one shade tree.

(Ord. No. 97-10, § 1(3-13.6), 7-3-1997)

Sec. 108-415. Perimeter landscape requirements.

(a) *Scope; standards.* Perimeter landscaping defines parking areas and prevents two adjacent lots from becoming one large expanse of paving. Perimeter landscaped areas for all off-street parking areas, excepting single-family homes and parking lots for six or less vehicles, must meet the following standards:

**MINIMUM PARKING LOT
PERIMETER LANDSCAPING**

TABLE INSET:

Building Site (sq. ft.)	Perimeter Landscaping Width (feet)
20,000 or less	5.0
20,000--50,000	7.5
Over 50,000	10.0

(b) *Required plant material in perimeter landscape strip.* One canopy shade tree and ten shrubs per 35 linear feet or fraction thereof is required in perimeter landscaped areas.

(c) *Cross easements.* Cross easements between abutting parking lots together with coordinated plans for access, egress and internal circulation may be required for purposes of maintaining adopted levels of service for traffic circulation and avoiding the cumulative effect of uncontrolled curb cut proliferation.

(Ord. No. 97-10, § 1(3-13.7), 7-3-1997)

Sec. 108-416. Other landscape requirements for nonvehicular use areas.

(a) Trees shall be planted in the nonvehicular open space, excluding the required street frontage landscape strips, the interior parking lot landscape strips, and the perimeter landscape strips, to meet the following requirements:

**LANDSCAPE REQUIREMENTS IN
NONVEHICULAR USE AREAS**

TABLE INSET:

Percent of Site in Nonvehicular Open Space (NOS) (percent)	Tree Requirement
Less than 30	4 trees/2,000 sq. ft. NOS
30--39	4 trees/2,500 sq. ft. NOS
40--49	4 trees/3,000 sq. ft. NOS
50--59	4 trees/3,500 sq. ft. NOS

60 or more	4 trees/4,000 sq. ft. NOS
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(b) Grass, ground cover, shrubs, and other landscaping materials shall be used to treat all ground not covered by building, paving, or other structures. All structures shall be treated with landscaping so as to enhance the appearance of the structure and to screen any unsightly features. Trees, as required in this section, shall be spaced in clusters or situated in strategic locations consistent with good principles of design and plant installation.

(Ord. No. 97-10, § 1(3-13.8), 7-3-1997)
 Secs. 108-417--108-445. Reserved.

DIVISION 3. REGULATIONS GENERALLY

Sec. 108-446. Applicability.
 The general regulations in this division shall apply to all landscaped areas.
 (Ord. No. 97-10, § 1(3-13.9), 7-3-1997)

Sec. 108-447. Protection of plant material.
 (a) All landscape strips required by this article shall be protected from vehicular encroachment by raised curbing.
 (b) During the construction stage of development, the developer shall not cause or allow the cleaning or storage of equipment or material, within the dripline (refer to the figure in section 108-448) of any tree or groups of trees to be maintained. The developer shall provide and maintain protective barriers, in a form to be approved by the landscape coordinator, around all landscaping existing on site prior to construction. The developer shall not cause or allow the disposal of waste material such as paint, oil, solvents, asphalt, concrete, mortar or any other material harmful to the life of a tree within the dripline of any tree or groups of trees.
 (Ord. No. 97-10, § 1(3-13.9(A)), 7-3-1997)

Sec. 108-448. Required coverage.
 All landscape strips required by this article shall be covered by a living plant material, excepting a mulched area having a radius no larger than three feet from the outside diameter of the fill. Grass areas shall be planted in species normally grown as permanent lawns in the vicinity of the city. Grass areas shall be sodded. Synthetic or artificial material in the form of trees, shrubs, ground covers or vines shall not be used in lieu of plant requirements in this article.

GRAPHIC LINK:[PROTECTIVE BARRIER DETAIL](#)

- NOTES:
1. Trees to be protected shall be centered within protective barrier (minimum shown above).
 2. Protective barrier shall be enlarged when necessary to enclose all exposed roots.
- (Ord. No. 97-10, § 1(3-13.9(B)), 7-3-1997)

Sec. 108-449. Berms and decorative masonry walls.
 (a) Berms are encouraged for use in meeting the landscape barrier requirements of this article. If berms are utilized, they shall be landscaped with living plant material to

achieve the required heights. Berms must be at least 1.5 feet high with a minimum slope of 2:1. The minimum crown of the berm shall be two feet. The berm must be covered with live vegetation.

(b) Where berms or decorative masonry walls (i.e., faced with stucco, brick, or other ornamental material) are constructed within the required landscape strip, the number of required plant units may be reduced by 50 percent. Notwithstanding, canopy or shade trees shall be provided pursuant to section 108-415(b). All such plant material shall be planted on the side of the wall facing the right-of-way.

(Ord. No. 97-10, § 1(3-13.9(C)), 7-3-1997)

Sec. 108-450. Landscape screening.

A landscape strip is required along the entire perimeter of all storage, parking, display, sales or accessory vehicular use areas except along the portion of the perimeter which is entirely screened visually from adjacent property by buildings on the property being improved.

(Ord. No. 97-10, § 1(3-13.9(D)), 7-3-1997)

Sec. 108-451. Credit for existing trees.

Credit shall be granted for trees which are preserved on a site and which meet the tree requirements of any landscaping section of this division. Where a tree is of exceptional quality, as determined by a qualified landscape professional, the planning board shall grant a two-tree credit for the preserved tree. Exceptional quality shall be judged on the basis of such factors as extraordinary size of the tree, vigorous health, large canopy cover, historic value, rareness, and age. No credit will be granted for preserved trees which are classified as undesirable, which are extremely poor specimens or which are in declining health.

(Ord. No. 97-10, § 1(3-13.9(E)), 7-3-1997)

Sec. 108-452. Required sight distances for landscaping adjacent to public rights-of-way and points of access.

When an accessway intersects a public right-of-way or when the subject property abuts the intersection of two or more public rights-of-way, all landscaping within the triangular area described in this section shall allow unobstructed cross visibility at a level between 30 inches above the sidewalk grade and six feet above the sidewalk grade. However, trees or palms shall be permitted provided the trees or palms are trimmed so as to allow visibility at the levels indicated in this section and provided they are located so as not to create a traffic hazard. Triangular areas are as follows:

(1) *Clear zone adjacent to intersection of accessway and public right-of-way.* The clear zone adjacent to an intersection of an accessway and a public right-of-way shall be the triangular areas of property on both sides of an accessway formed by the intersection of each side of the accessway and the public right-of-way line for a distance of 15 feet in length along the accessway and eight feet in length along the public right-of-way, and the third line connecting the ends of the two sides.

(2) *Clear zone adjacent to intersection of two or more intersecting rights-of-way.* The clear zone adjacent to the intersection of two or more intersecting rights-of-way shall be the area of property located at a corner formed by the intersection of two or more public

rights-of-way with two sides of the triangular area being 30 feet in length along the abutting public rights-of-way measured from their point of intersection, and the third side being a line connecting the ends of the other two lines.

(Ord. No. 97-10, § 1(3-13.9(F)), 7-3-1997)

Sec. 108-453. Required clearance over roadways and fire lanes.

Every tree, whether new or existing, shall have a minimum of 14 feet of clearance over any roadway or fire lane, whether public or private, to allow for the unobstructed passage of emergency apparatus to safely travel under.

(Ord. No. 97-10, § 1(3-13.9(G)), 7-3-1997)

Sec. 108-454. Attachments to trees; excessive cut or fill.

(a) *Attachments to trees prohibited.* It shall be unlawful to attach anything to a tree trunk or stem having a diameter of six inches or more, other than protective wires, braces or other similar noninjurious materials.

(b) *Excessive cut and/or fill.* It shall be unlawful to remove any material or ground within the dripline of a tree which is necessary for the growth of the subject tree. Also, when raising the existing grade of a site, it shall be unlawful to raise the grade within the tree's dripline more than six inches without incorporating retaining walls to preserve the tree's root system.

(Ord. No. 97-10, § 1(3-13.9(H)), 7-3-1997)

Secs. 108-455--108-480. Reserved.

DIVISION 4. PLANTING METHODS, MATERIAL, MAINTENANCE

Subdivision I. In General

Sec. 108-481. Specifications for plant materials.

(a) *Trees.* All trees shall be a minimum of 12 feet in height with a minimum of six feet of clear trunk space immediately after planting. Trees shall be of a species having an average mature crown of greater than 30 feet wide and having trunks which can be maintained with over six feet of clear wood. Trees or palms having an average mature crown spread of less than 30 feet may be substituted by grouping the trees or palms so as to create the equivalent of 20 feet of crown spread. Such a grouping shall count as one tree toward meeting the tree requirement for any section in this article. If palms are used, they shall constitute no more than 25 percent of total tree requirements for any section in this article. No other tree species shall account for more than 50 percent of the total number of trees. Trees must be spaced between ten and 50 feet apart depending on the characteristics of the tree species and the function of the respective tree.

(b) *Shrubs and hedges.* Individually planted shrubs shall be a minimum of 24 inches in height immediately after planting. Shrubs planted for required hedges shall have minimum heights immediately after planting as follows: two feet for three-foot high hedges; 2 1/2 feet for four-foot high hedges and three feet for five-foot high hedges. The planning board may waive the size and minimum standard specifications if the applicant can demonstrate that current market conditions are such that shrubs and hedges meeting these specifications are not readily available. Shrubs shall be planted no further apart than

four feet on center. Hedges shall reach the required height and form a solid and unbroken visual screen within one year after planting.

(Ord. No. 97-10, § 1(3-13.10), 7-3-1997)

Sec. 108-482. Installation and maintenance.

(a) *Plant quality and installation.* All plant materials shall be of a species adaptive to the Florida Keys and shall conform to standards for Florida No. 1 or better, as stated in Grades and Standards for Nursery Plants, part I (1973) and part II (1975), state department of agriculture, as may be amended. Grass sod shall be clean and reasonably free of noxious pests or diseases. Installation of all landscaping shall be in a sound workmanlike manner according to accepted good planting procedures. Prohibited species of trees shall be those species whose roots are known to cause damage to public roadways or other public improvements. Prohibited trees include the following:

- (1) Australian pine (Casuarine sp.).
- (2) Melaleuca (Cajeput) (Melaleuca

leucadendra).

- (3) Brazilian pepper (Schinus terebinthifolius).

(b) *Maintenance, including irrigation.* Maintenance of landscaping shall be the responsibility of the owner, tenant or agent, jointly and severally. The landscaping shall be maintained in perpetuity in a good condition so as to present a healthy, neat and orderly appearance. All landscaped areas must be equipped with an irrigation system approved by the planning board. All landscaped areas shall be kept free of weeds, refuse and debris.

If at any time after issuance of a certificate of occupancy or other form of approval the landscaping of a development to which this article is applicable is found to be noncompliant, the administrative official shall issue notice to the owner that action is required to comply with this section and shall describe what action is required to comply. The owner, tenant, or agent shall have 30 days to restore the landscaping as required. If the landscaping is not restored within the allotted time, such person shall be in violation of this section, the punishment for which shall be as provided pursuant to the Code of Ordinances. If, after due process, the landowner fails to comply with the order of the city, the city commission may order the administrative official to enter into a contract for city commission approval for purposes of undertaking required maintenance and bill the property owner or lessee for the costs incurred.

(Ord. No. 97-10, § 1(3-13.11), 7-3-1997)

Secs. 108-483--108-510. Reserved.

Subdivision II. Drought Tolerant Landscape

Sec. 108-511. Landscape plan required.

(a) A landscape plan shall be submitted to and approved by the planning board prior to issuance of a site plan approval where applicable or prior to issuance of a building or paving permit where a site plan is not applicable. The landscape plan shall contain the following:

- (1) Names, addresses and phone numbers of the owner and designer.

- (2) North arrow, scale and date; the minimum scale is one inch equals 50 feet.
 - (3) Property lines, easements and rights-of-way with internal and property line dimensions.
 - (4) Location of existing or proposed utility service.
 - (5) Location and size of any existing or proposed structures.
 - (6) Location and size of any existing or proposed site features, such as earthen mounds, swales, walls, and water areas.
 - (7) Location and size of any existing or proposed vehicular use areas.
 - (8) Location and size of any existing or proposed sidewalks, curbs and wheel stops.
 - (9) Irrigation plan, showing location of sprinkler heads, hose bibs or quick couplers and other information on irrigation.
 - (10) Calculations of required type, dimensions, and square footage of landscape material and of required landscape areas, including total site area, parking areas, other vehicular use area, percentage of nonvehicular open space, perimeter and interior landscape strips, required number of trees.
 - (11) Location of required landscape areas and dimensions.
 - (12) Location, name, height, and size of all existing plant material to be retained.
 - (13) Location, size, height, and description of all landscape material including name, quantity, quality, spacing and specified size and specification of all plant material.
 - (14) Height, width, type, material, and location of all barriers of nonliving material.
 - (15) Indicate location, dimensions and area of landscaping for freestanding signs.
 - (16) Show all landscaping, buildings or other improvements on adjacent property within five feet of the common property line.
- (b) The landscaping plan shall be drawn by a landscape architect or other person with comparable experience in the field of landscaping.
(Ord. No. 97-10, § 1(3-13.12(A)), 7-3-1997)

Sec. 108-512. Techniques utilized.

Landscape designs shall incorporate appropriate plant material which will survive and flourish with comparatively little supplemental irrigation. These plants are native, drought tolerant, noninvasive plants.

(Ord. No. 97-10, § 1(3-13.12(B)), 7-3-1997)

Sec. 108-513. Landscape plans in industrial, commercial, civic and multifamily residential buildings or structures and common areas of single-family or multifamily residential developments.

Industrial, commercial, civic and multifamily residential buildings or structures and common areas of single-family or multifamily residential developments shall incorporate drought tolerant trees, shrubs, and ground covers in landscape plans as a water conservation measure. A list of plants which require minimal water can be found in section 108-518 as well as Xeriscape Plant Guide II, made available through the South Florida Water Management District. Interior remodels or minor modifications to the exterior of a structure are not subject to this requirement.

(Ord. No. 97-10, § 1(3-13.12(B)), 7-3-1997)

Sec. 108-514. Review of landscape plans.

The administrative official shall review all landscape plans to verify that the following drought tolerant fundamentals have been utilized:

- (1) Consideration for the site's soil characteristics, topography, drainage, and microclimatic conditions should be made when making plant selection.
 - (2) Organic mulches (pine and cypress) and inorganic mulches (rock, stone and gravel) shall be specified in planting beds to a minimum depth of three inches. Mulches will help in holding moisture, cooling the surface, reducing weed growth, slowing erosion, and, in the case of organic mulches, even improve the soil quality as they decompose.
 - (3) Drought tolerant, native and noninvasive exotic plants shall be used. This conserves water resources and increases a plant's chance of survival. Plants shall be installed and maintained in a professional and responsible manner so as to allow for the plant's optimum growth and longevity.
- (Ord. No. 97-10, § 1(3-13.12(B)), 7-3-1997)

Sec. 108-515. Irrigation plan required.

- (a) The landscape plan shall be accompanied by an irrigation plan showing the following information:
 - (1) The name, address and phone number of the irrigation contractor responsible for the design.
 - (2) A schedule of materials, including heads, piping, meters, cocks, etc., with sizes and quantities specified.
 - (3) Include a scaled drawing showing location of all heads, piping, meters and cocks.
 - (4) Indicate the source of water to be used (i.e., on-site well, city water or reclaimed water). The irrigation system shall be designed to connect to the city's reclaimed water system if and when it becomes available within 100 feet of the site.
 - (5) Backflow preventers shall be indicated on the design.
 - (b) The irrigation design shall provide for 100-percent coverage of all planted areas, and irrigation zones shall accommodate plants with similar watering requirements.
 - (c) All irrigation systems shall include a rain sensor device or switch which will override the irrigation cycle of the system when adequate rainfall has occurred.
 - (d) Shrubs, trees, ground covers, and low mass plantings shall be watered with bubblers of low volume emitters placed in separate zones from turf sprinklers.
 - (e) In an effort to conserve water, very narrow areas where sprinkler heads would overspray, mulches, gravel or other nonliving forms of ground cover shall be utilized.
- (Ord. No. 97-10, § 1(3-13.12(C)), 7-3-1997)

Sec. 108-516. Review and approval procedure.

Landscape and irrigation plans shall be subject to review and approval as part of the development plan review procedure. The administrative official shall authorize the inspection of all landscaping and irrigation, and no certificate of approval and occupancy shall be issued until the landscaping and irrigation are completed in accordance with the submitted landscape and irrigation plans and the requirements of this article. A decision on any related issue in dispute shall be resolved by the planning board.

(Ord. No. 97-10, § 1(3-13.12(D)), 7-3-1997)

Sec. 108-517. Waivers or modifications.

(a) An application for waiver or modification to the standards of this ordinance shall be filed with the city planning office and shall be considered by the planning board after reviewing recommendations of the city planner or designated staff. The planning board shall render the final action. The application shall:

- (1) Be filed on forms provided by the administrative official.
- (2) State clearly and in detail the waivers requested and reasons therefor.
- (3) Be accompanied by sketches, surveys and statistical information.
- (4) Be accompanied by an application fee, the amount of which shall be determined by the resolution of the city commission.
- (5) Be executed and sworn to by the owner or authorized agent.

(b) The planning board may approve or grant the waiver or modification only if it determines that the waivers or modifications are not contrary to the intent of this subdivision and that a literal enforcement of the standards of this subdivision would be impracticable and would not violate the following criteria:

- (1) *Public interest; adjacent property.* The waiver or modification would not have a significant adverse impact on the public interest, or on adjacent property.
- (2) *Not discriminatory.* The waiver or modification is not discriminatory, considering similar situations in the general area.
- (3) *Superior alternatives.* The development will provide an alternative landscape solution which will achieve the purposes of the requirement through clearly superior design.
- (4) *Protection of significant features.* The waiver or modification is necessary to preserve or enhance significant existing environmental or cultural features, such as trees, scenic areas, historic sites or public facilities, related to the development site.
- (5) *Deprivation of reasonable use.* Strict application of the requirement would effectively deprive the owner of reasonable use of the land due to its unusual size, shape, topography, natural conditions, or location, provided that:
 - a. Such effect upon the owner is not outweighed by a valid public purpose in imposing the requirement in this case; and
 - b. The unusual conditions involved are not the result of actions of the developer or property owner which occurred after the effective date of the ordinance from which this section derives.
- (6) *Technical impracticality.* Strict application of the requirement would be technically impractical.

(Ord. No. 97-10, § 1(3-13.12(E)), 7-3-1997)

Sec. 108-518. Recommended plant material.

Recommended plant material shall be as follows:

RECOMMENDED PLANT MATERIAL*

TABLE INSET:

Common Name/Scientific Name	Natural Height (feet)	Salt Tolerance	Drought Tolerance

<i>Ground Covers</i>			
Swamp fern/ <i>Blechnum serrulatum</i>	2--4	L	L
Silver sea oxeye/ <i>Borrchia arborescens</i>	2--4	H	H
Beach bean/ <i>Canavalia maritima</i>	0.5--1	H	H
Pineland snowberry/ <i>Chiococca pinetorum</i>	2--3	H	H
Condradina/ <i>Condradina grandiflora</i>	1--3	H	H
Swamp lily/ <i>Crinum americanum</i>	1--2	M	M
Christmas berry/ <i>Crossopetalum ilicifolium</i>	1--2	H	H
Seashore saltgrass/ <i>Distichlis spicata</i>	0.25--0.5	H	H
Twinflower/ <i>Dyschoriste oblongifolia</i>	0.5--1.5	H	H
Golden creeper/ <i>Ernodea litteralis</i>	1--3	H	H
Blanket flower/ <i>Gaillardia pulchella</i>	1--1.5	H	H
Beach sunflower/ <i>Helianthus debilis</i>	1--2	H	H
Spider lily/ <i>Hymenocallis floridana</i>	1--2	M	L
Spider lily/ <i>Hymenocallis latifolia</i>	1--3	M	H
Alligator lily/ <i>Hymenocallis palmeri</i>	1	H	M
Dwarf yaupon holly/ <i>Ilex vomitoria</i> "Schellings dwarf"	1--3	H, M	M
Railroad vine/ <i>Ipomoea pes-caprae</i>	0.3--0.6	H	H
Beach morning glory/ <i>Ipomoea stolonifera</i>	0.5	H	H
Seacoast beach elder/ <i>Iva imbricata</i>	1--3	H	H
Dwarf lantana/ <i>Lantana ovatifolia</i> var. <i>reclinata</i>	0.7	H	H
Gopher apple/ <i>Licania michauxii</i>	0.3--1	H	H
Matchweed/ <i>Lippia nodiflora</i>	0.3	H	H
Sea lavender/ <i>Mallotonia gnophalodes</i>	4--6	H	H
Giant sword fern/ <i>Nephrolepis biserrata</i>	3--4	L	L
Beach peanut/ <i>Okenia hypogaea</i>	0.5	H	H
Basket grass/ <i>Oplismenus setarius</i>	0.2--0.75	L	M
Beach panic grass/ <i>Panicum amarum</i>	1--2	H	H

Baby rubber plant/Peperomia obtusifolia	1--1.5	L	H
Pennyroyal/Satureja rigida	0.5--2	L	H
Inkberry/Scaevola plumieri	1--6	L	H
Saw palmetto/Serenoa repens	4--8	H	H
Sea purslane/Sesuvium portulacastrum	1--1.5	H	H
Spiderwort/Tradescantia ohiensis	1--2	M	M
Sea oats/Uniola paniculata	3--5	H	H
Wild allamanda/Urechites lutea	1--2	M	H
Shiny blueberry/Vaccinium myrsinites	1--2	L	H
Beach verbena/Verbena maritima	0.5--1	H	H
Bear grass/Yucca filamentosa	1--2	H	H
Coontie/Zamia pumila	1--3	H	H
<i>Shrubs</i>			
Sweet acacia/Acacia farnesiana	8--10	M	H
Paurotis palm/Acoelorrhaphe wrightii	15--20	M	M
Black calabash/Amphitecna latifolia	20--30	H	H
Torchwood/Amyris elemifera	12--16	H	M
Pineland allamanda/Angadenia berterii	2--4	L	H
Marlberry/Ardisia escallonioides	12--15	H	M
Butterfly weed/Asclepias tuberosa	3--4	L	H
Salt bush/Baccharis halimifolia	5--7	H	H
Tarflower/Beraria racemosa	4--8	L	M
Silver sea oxeye/Borrchia arborescens	2--4	H	H
Slender buchthorn/Bumelia reclinata	20--30	H	M
Locustberry/Byrsonima lucida	15--20	L	H
Beautyberry/Callicarpa americana	4--8	L	H
Spicewood/Calyptanthes pallens	10--25	M	H
Jamaican caper/Capparis cynophallophora	8--10	H	H
Seven-year apple/Casasia clusifolia	5--10	H	H
Buttonbush/Cephalanthus occidentalis	15	L	L

Rosemary/ <i>Ceratiola ericoides</i>	4--5	H	H
Snowberry/ <i>Chiococca alba</i>	6--9	H	H
Cocoplum/ <i>Chrysobalanus icaco</i>	6--8	H	M
Sea grape/ <i>Coccoloba uvifera</i>	15--30	H	H
Coffee colubrina/ <i>Colubrina arborescens</i>	15--20	H	H
Silver buttonwood/ <i>Conocarpus erectus</i>	15--20	H	H
Coin vine/ <i>Dalbergia ecastophyllum</i>	6--9	H	H
Varnish leaf/ <i>Dodonaea viscosa</i>	5--12	H	H
Golden dewdrop/ <i>Duranta repens</i>	12--15	M	M
Coral bean/ <i>Erythrina herbacea</i>	4--20	L	M
Stoppers/ <i>Eugenia</i> spp.	8--20	H	H
Wild olive/ <i>Forestiera segregata</i>	5--20	H	H
Wild cotton/ <i>Gossypium hirsutum</i>	10--15	H	H
Scarletbush/ <i>Hamelia patens</i>	5--6	M	H
Dahoon holly/ <i>Ilex cassine</i>	25--40	M	M
Gallberry/ <i>Ilex glabra</i>	6--10	M	M
Yaupon holly/ <i>Ilex vomitoria</i>	2--8	H	H
Marsh elder/ <i>Iva frutescens</i>	3--10	H	M
Joewood/ <i>Jacquinia keyensis</i>	10--15	H	H
Christmas berry/ <i>Lycium carolinianum</i>	6--8	H	H
Rusty lyonia/ <i>Lyonia ferruginia</i>	10--20	L	H
Sea lavender/ <i>Mallotonia gnaphaloles</i>	4--6	H	H
Florida mayten/ <i>Maytenus phyllanthoides</i>	4--8	M	M
Wax myrtle/ <i>Myrica cerifera</i>	12--15	H	H
Rapanea/ <i>Myrsine guianensis</i>	15--20	H	H
Blackhead/ <i>Pithecellobium guadelupense</i>	15--20	H	H
Cat's claw/ <i>Pithecellobium unguis-cati</i>	15--20	H	H
Wild coffee/ <i>Psychotria nervosa</i>	4--6	L	M
White indigoberry/ <i>Randia aculeata</i>	6--10	H	M
Needle palm/ <i>Rhapidiphyllum hystrix</i>	3--5	L	M

Winged sumac/ <i>Rhus coppalina</i>	5--25	L	H
Scrub palmetto/ <i>Sabal etonia</i>	3--4	M	H
Dwarf palmetto/ <i>Sabal minor</i>	5--7	H	H
Maidenbush/ <i>Savia bahamensis</i>	8--10	H	H
Inkberry/ <i>Scaevola plumieri</i>	1--6	H	H
Saw palmetto/ <i>Serenoa repens</i>	6--15	H	H
Necklace pod/ <i>Sophora tomentosa</i>	6--10	H	M
Bay cedar/ <i>Suriana maritima</i>	10--15	H	H
Yellow elder/ <i>Tecoma stans</i>	10--20	M	H
Florida tetrazygia/ <i>Tetrazygia bicolor</i>	5--20	M	H
Shiny blueberry/ <i>Vaccinium myrsinites</i>	1--2	L	H
Spanish bayonet/ <i>Yucca aloifolia</i>	12--15	H	H
Spanish dagger/ <i>Yucca gloriosa</i>	6--8	M	H
<i>Trees</i>			
Sweet acacia/ <i>Acacia farnesiana</i>	10--12	M	H
Red maple/ <i>Acer rubrum</i>	35--50	L	L
Paurotis palm/ <i>Acoelorrhaphe wrightii</i>	15--25	M	M
Black calabash/ <i>Amphitecna latifolia</i>	20--30	H	H
Pond apple/ <i>Annona glabra</i>	25--40	M	L
Marlberry/ <i>Ardisia escallonioides</i>	15--25	L	M
Black mangrove/ <i>Avicennia germinans</i>	20--30	H	L
Strongbark/ <i>Bourreria succulenta</i> var. <i>revoluta</i>	20	M	H
Buckthorn/ <i>Bumelia</i> spp.	20--40	M, L	M, H
Gumbo limbo/ <i>Bursera simaruba</i>	40--60	M	H
Wild cinnamon/ <i>Canella alba</i>	20--35	M	H
Satin leaf/ <i>Chrysophyllum oliviforme</i>	30--40	M	H
Fiddlewood/ <i>Citharexylum fruticosum</i>	25--30	M	H
Pitch apple/ <i>Clusia rosea</i>	25--30	H	H
Pigeon plum/ <i>Coccoloba diversifolia</i>	25--30	H	H
Sea grape/ <i>Coccoloba uvifera</i>	15--30	H	H

Silver palm/ <i>Coccothrinax argentata</i>	10--20	H	H
Buttonwood/ <i>Conocarpus erectus</i>	30--50	H	H
Geiger tree/ <i>Cordia sebestena</i>	20--25	H	H
Willow-leaved bustic/ <i>Dipholis salicifolia</i>	30--50	L	M
Stoppers/ <i>Eugenia</i> spp.	15--20	H	H
Princewood/ <i>Exostema caribaeum</i>	20--25	L	M
Strangler fig/ <i>Ficus aurea</i>	40--50	M	H
Shortleaf fig/ <i>Ficus citrifolia</i>	40--50	M	H
Loblolly bay/ <i>Gordonia lasianthus</i>	30--40	L	L
Lignum vitae/ <i>Guaiacum sanctum</i>	10--20	M	L
Blolly/ <i>Guapira discolor</i>	35--50	M	H
Everglades velvetseed/ <i>Guettarda elliptica</i>	10--20	L	H
Rough velvetseed/ <i>Guettarda scabra</i>	15--30	H	H
Crabwood/ <i>Gymnanthes lucida</i>	15--30	M	H
Mahoe/ <i>Hibiscus tiliaceus</i>	30--45	H	H
White ironwood/ <i>Hypelate trifoliata</i>	30--40	H	H
Dahoon holly/ <i>Ilex cassine</i>	25--40	M	H
Tawnyberry holly/ <i>Ilex krugiana</i>	25--40	H	M
Yaupon holly/ <i>Ilex vomitoria</i>	20--25	H	H
Southern juniper/ <i>Juniperus silicicola</i>	25--30	H	H
Black ironwood/ <i>Krugiodendron ferreum</i>	20--30	M	H
White mangrove/ <i>Laguncularia racemosa</i>	40--60	H	L
Wild tamarind/ <i>Lysiloma bahamensis</i>	40--50	H	H
Southern magnolia/ <i>Magnolia grandiflora</i>	60--100	H	H
Sweetbay/ <i>Magnolia virginiana</i>	40--60	L	L
Mastic/ <i>Mastichodendron foetidissimum</i>	45--70	H	H
Twinberry/ <i>Myrcianthes fragrans</i>	20--30	H	H
Wax myrtle/ <i>Myrica cerifera</i>	15--25	H	H
Lancewood/ <i>Nectandra coriacea</i>	30--40	L	M
Red bay/ <i>Persea borbonia</i>	50--60	M	H

Sand pine/ <i>Pinus clausa</i>	60--80	H	H
South Florida slash/ <i>Pinus elliottii</i> var. <i>densa</i>	80--100	M	H
Jamaican dogwood/ <i>Poscidia piscipula</i>	35--50	H	H
Sycamore/ <i>Plantanus occidentalis</i>	70--110	L	L
West Indian cherry/ <i>Prunus myrtifolia</i>	15--40	L	M
Buccaneer palm/ <i>Psuedophoenix sargentii</i>	10--15	H	H
Laurel oak/ <i>Quercus laurifolia</i>	60--100	L	H
Live oak/ <i>Quercus virginiana</i>	50--80	H	H
Darling plum/ <i>Reynosia septentrionalis</i>	20--30	H	H
Red mangrove/ <i>Rhizophora mangle</i>	30--80	H	L
Florida royal palm/ <i>Roystonea elata</i>	60--125	M	M
Cabbage palmetto/ <i>Sabal palmetto</i>	45--70	H	H
Coastal plain willow/ <i>Salix caroliniana</i>	20--30	L	L
Soapberry/ <i>Sapindus saponaria</i>	35--45	H	H
Florida boxwood/ <i>Schaefferia frutescens</i>	20--40	M	M
Paradise tree/ <i>Simarouba glauca</i>	35--50	M	H
Mahogany/ <i>Swietenia mahogani</i>	35--60	H	H
Bald cypress/ <i>Taxodium distichum</i>	60--100	M	H
Yellow elder/ <i>Tecoma stans</i>	10--20	M	H
Key thatch palm/ <i>Thrinax morrisii</i>	15--30	H	H
Florida thatch palm/ <i>Thrinax parviflora</i>	20--25	H	H
Thatch palm/ <i>Thrinax radiata</i>	15--25	H	H
Florida basswood/ <i>Tilia floridana</i>	30--60	L	L
Tallowwood plum/ <i>Ximenia americana</i>	20--25	H	H
Hercules club/ <i>Zanthoxylum clava-herculis</i>	25--50	M	H
Wild lime/ <i>Zanthoxylum fagara</i>	20--30	H	H

TABLE INSET:

L	=	Low
M	=	Medium
H	=	High

*The plants recommended in this list are taken from the following periodicals:
Native Ground Cover for South Florida, Alan W. Meerow; Cooperative Extension Service, University of Florida, Institute of Food and Agricultural Sciences; Reprinted August 1990.

Native Shrubs for South Florida, Alan W. Meerow; Cooperative Extension Service, University of Florida, Institute of Food and Agricultural Sciences; 1989.

Native Trees for South Florida, Broschat, Donselman, and Meerow; Cooperative Extension Service, University of Florida, Institute of Food and Agricultural Sciences; March 1992.

Another comprehensive source for drought tolerant plants can be found in the publication "Xeriscape, Plant Guide II," distributed by the South Florida Water Management District. (Ord. No. 97-10, § 1(app. XIII-A), 7-3-1997)

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