CHAPTER 11 TREE PROTECTION, LANDSCAPING, BUFFERS, AND IRRIGATION
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Chapter 11. Tree Protection, Landscaping, Buffers, and Irrigation

Section 11.01. General Provisions

11.01.01. Purpose and Intent

The purpose of this chapter is to protect the general welfare of City residents and visitors and to promote energy and water conservation; reduce air pollution and noise; enhance property values; reduce erosion; improve surface water quality and groundwater recharge; moderate temperatures by providing shade; improve compatibility between various land uses; and enhance the City's appearance. The intent of the chapter is to establish procedures and practices governing the protection, installation and long term maintenance of trees, vegetation, and other landscaping elements within the City. The criteria in this chapter are intended to institute landscape and irrigation design principles that will result in creative solutions and provide alternative means to achieve an environmentally friendly and aesthetic community.

11.01.02. Applicability

The removal of trees or fill, and the excavation or dredging of any parcel of land shall be prohibited prior to issuance of all required permits (including tree removal permits), unless stated otherwise in this chapter.

A. Design of New Development

Developments shall be designed to the greatest extent possible to protect existing trees and their tree protection zones from stormwater facilities, drainage lines, utilities, grade changes, building footprints, parking areas, drives, and walkways. Subdivision plats shall shift lot lines to minimize placing specimen or historic trees in the buildable area of the lot, if practical.

B. Alteration of Existing Development

No building or parking lot existing on August 19, 2008 shall be required to be altered or moved in order to comply with this chapter, except that the following activities shall require compliance with this LDC to the maximum extent possible. (Exceptions may be granted when conflicting with pedestrian and traffic safety, interfering with the protection of specimen or historic trees or natural resources, removing required parking, or similar situations.):

1. When a structure is destroyed by fire or other calamity and is proposed to undergo substantial improvement, as defined in this LDC.
2. When an existing non-residential building is expanded the required building foundation plantings and their planting areas shall be provided for the new building area.
3. When a parking/vehicular use area is expanded but not the building, the new pavement area is required to be brought into compliance with this chapter. At a minimum temporary irrigation shall be required.
4. Any expansion project shall be required to replace previously planted required landscaping that has been damaged or has died.

11.01.03. Measurement of Trees

For the purposes of this chapter, the size of existing trees shall be calculated by the measurement of the diameter of the trunk in caliper inches, taken at breast height (four feet six inches). The size of new landscape trees shall be calculated by measurement of the diameter of the trunk at six (6) inches above grade, up to and including trees four (4) inches in diameter. The size of

trees over four (4) inches in diameter shall be calculated by measurement of the diameter of the trunk at twelve (12) inches above grade.

11.01.04. Classification of Developments

For the purpose of applying landscaping and irrigation requirements, developments are classified as follows:

A. MFR/COM: Townhouse, condominium, and multifamily residential development and institutional, office and commercial uses;

B. IND: Industrial and warehousing development;

C. SUBD: Subdivisions in any zoning district; and

D. SFR/DPX: Single-family detached and duplex development on individual lots.

Section 11.02. Tree Preservation, Protection, and Replacement

11.02.01. Protected Trees Defined

All trees that meet the following criteria are protected, with the exception of invasive species (see Subsection 11.02.05) and/or species not suited to this area per the United States Department of Agriculture hardiness list:

A. The trunk is six (6) inches or greater.

B. Trees four (4) inches or greater, if surveyed for credit.

C. Specimen trees, which are any protected species with a trunk of twenty-four (24) inches or greater except for pines; however the following species are considered specimen trees when they reach one of the following:

1. Twelve (12) inches or greater: Cypress, Magnolia, Loblolly Bay, Red Bay, Scrub Oak, and Red Cedar;

2. Eighteen (18) inches or greater: Elm, Hickory, Oak, Green Ash, Sycamore, Date Palm, and Maple.

D. Historic trees, which are any specimen trees with a trunk of thirty-six (36) inches or larger.

E. For SFR/DPX development, any tree one and one-half (1½) to six (6) inches that was planted to meet the minimum tree density requirements or an existing tree that was previously credited towards meeting the requirements of this chapter.

11.02.02. Tree Survey Requirements

A. Tree Survey

The required survey shall be accomplished within the last twenty-four (24) months and shall identify all protected trees by species name and the size of the trunk measured at the diameter at breast height.

B. Monument Signs

Where monument signs are proposed to be located on an existing development, all protected trees that are located within fifty (50) feet of the proposed sign shall be shown on the tree survey.

C. Protected, Specimen, and Historic Trees

1. MFR/COM and IND Developments

a. The tree survey shall show all protected trees six (6) inches and greater from the property lines to five (5) feet past the required buffer area width, except as provided in Section 11.02.02.D. Protected trees within any adjacent rights-of-way extending to the nearest street pavement shall be included in the survey.

b. All specimen and historic trees shall be individually located and identified over the entire site as to species and size except as provided in Section 11.02.02.D.

2. SUBD Developments

All specimen and historic trees shall be individually located and identified over the entire site as to its species and size except as provided in Section 11.02.02.D.

3. SFR/DPX Developments

a. Protected trees six (6) inches or greater within all front, rear, and street side building setback areas shall be shown on the tree survey.

b. Specimen and historic trees shall be surveyed over the entire lot except as provided in Section 11.02.02.D.

D. Survey of Individual Trees Not Required

Under the following circumstances, the Land Use Administrator may determine that a survey identifying each individual protected tree is not warranted and a count of all protected trees including species and diameter size is acceptable:

1. When existing vegetated areas are to remain undisturbed; or

2. Where it has been determined by the Land Use Administrator that some or all of a development site or a proposed subdivision must be filled to such an extent, in order for permitted development to occur, that there is no feasible means to save protected trees.

3. The trees are located in wetland preservation or conservation areas that will not be impacted.

11.02.03. Tree Preservation

A. Specimen and Historic Tree Preservation Requirements

Specimen and historic trees are select protected trees that due to their size and contribution to the overall tree canopy of the City are granted an extra level of significance and protection. Building footprints, drives, stormwater management facilities, and similar activities on all sites shall be designed to save the maximum practicable number of specimen and historic trees. During the subdivision platting process, lot lines shall be shifted for the same purpose. Table 11-1 shows the minimum percentage of specimen and historic trees that shall be preserved on a site. Owners of lots assigned the SFR, DPX, and EST zoning districts may remove any specimen or historic tree that is within the buildable area of the lot with no mitigation, if all reasonable efforts to shift or flip the building footprint cannot save the tree(s).

Table 11 - 1: Minimum Specimen and Historic Trees to be Preserved

Number of Specimen/ Historic Trees on a Site	Percentage of trees to be Preserved MFR/COM, SUBD	IND
Less than 3 per acre, or a portion thereof	75%	50%
3.0 to 5.0 per acre	67%	40%
5.1 to 8.0 per acre	50%	25%
More than 8.0 per acre	4 per acre	2 per acre

B. Tree Preservation Credits

The following credits apply only within the COM, IND, MFR, OFC, P&G, and PSP zoning districts:

1. Trees saved in wetlands or their associated upland buffers are eligible for preservation credits; however, preservation of trees in wetlands for preservation credits may not also be used as criteria for preserved wetlands and imperiled upland habitats density bonuses established in Chapter 3.
2. A stormwater retention/detention area may be credited toward meeting the tree density requirement provided the area contains tree species that will survive periodic flooding.
3. The total diameter at breast height of preserved protected, specimen, and historic trees on the site may be applied to satisfy the tree density requirements. A preserved palm tree shall be credited on a one-to-one basis for any palm tree removed.
4. Existing pine trees (other than sand pine) in good health may be used as buffer shade tree credits if they are a minimum of six (6) inches and comprise no more than fifty (50) percent of the buffer tree requirement. If pines meeting these criteria are of good quality and spacing such that planting of new shade trees for some or all of the remaining required buffer shade trees is impractical, then existing pines may count for more than the fifty (50) percent maximum requirement.

11.02.04. Tree Protection Measures

A. Canopy Road, Specimen, and Historic Tree Protection

In order to protect the existing tree canopy over roadways within the City, the following roadways have an extra level of significance and protection: Colbert Lane (from the south right-of-way line of Palm Coast Parkway SE to 2,200 feet to the south), Palm Coast Parkway, and Palm Harbor Parkway.

Roadway projects and modifications to these roadway systems necessitated by development shall preserve and protect any specimen or historic tree within the right-of-way and within thirty-five (35) feet of the right-of-way line along Palm Coast Parkway east of I-95 and along Palm Harbor Parkway south of the Hammock Dunes Bridge, and within twenty-five (25) feet along the remaining designated roadways and roadway segments. Where this requirement is thirty-five (35) feet, the applicant may meet this requirement by utilizing an average protected width of thirty-five and a minimum width of twenty-five (25) feet. Within these protected tree areas, the specimen and historic trees shall not be removed except for the minimal number necessary to allow for site access, sidewalks, necessary utilities, and signage. Preservation methods are to include, but are not limited to, the following:

1. Reduction of the length of turn, deceleration, or acceleration lanes subject to public safety needs and the approval of the Land Use Administrator.
2. Consideration of alternatives to widening such as alternate service roads.
3. Root protection/aeration construction methods such as retaining walls with guardrails.
4. Where no practical alternative for preservation is possible, such as traffic safety conflicts, the total diameter of the protected tree being removed shall be replaced with replacement trees having no less than four (4) inch caliper.

B. Tree Protection During Clearing or Tree Trimming Activities

Protected trees, including their tree protection zones, in front buffer areas shall be preserved if trees are in good condition and do not impede access or visibility into or out of the site.

C. Tree Protection During Construction

1. During any development activity, appropriate protective measures, per City standards, shall be taken to prevent the destruction or damage of all trees to be retained on the site. The preservation of existing vegetation within the tree protection zones of all trees to be retained is required, unless the vegetation is hand cleared.
2. Protection methods, including trimming/pruning of trees and tree barricades, shall conform to ANSI A-300 standards.

11.02.05. Tree Removal

A. Prohibitions

Unless exempted herein, it is prohibited and unlawful for a person or entity, agent, or representative thereof, directly or indirectly, to perform or authorize the following:

1. Cut down, remove, damage, or destroy any protected tree as defined in Section 11.02.01 on any parcel without first obtaining a tree removal permit (refer to Section 11.02.06 for replacement standards);
2. Commit any act or authorize the commission of any act that physically or effectively removes a protected tree or causes a tree to die, such as damage inflicted upon the root system by heavy machinery, chemicals, or paving, any pruning or tree work inconsistent with ANSI A-300 standards, or changing the natural grade above the root system (removal or effective removal of any protected, specimen or historic tree shall be mitigated per Section 11.04.02);
3. Root raking the area within the tree protection zone or adding fill over the tree protection zone, which may cause damage and permit infection or pest infestation to a protected tree; or
4. Perform tree removal, land clearing, grubbing, grading, excavation, construction, or make or install any improvement upon any site or parcel, regardless of the existence of valid permits or approvals for the given activity, unless all protected trees and protected vegetative areas established pursuant to this chapter have been surrounded by a protective barrier.

B. Land Clearing

During the subdivision infrastructure construction stage, clearing of trees and existing vegetation shall be limited to the minimum necessary to construct roadway and utility rights-of-way and stormwater facilities. Trees may only be cleared from individual lots upon review and approval of the tree survey and/or fire hazard considerations at the time of building permit application.

However, in order to accommodate development within a subdivision where fill is required to such a depth that it would preclude the survival of existing trees, lots may also be cleared provided:

1. A clearing and grading plan shall be submitted showing vegetation and tree areas to be preserved, the amount of fill needed for lot development based on existing grades, proposed roadway and building elevations, and drainage plans.
2. Replacement of these trees may be allowed in common areas of the subdivision (i.e., street trees, detention or retention ponds, buffer areas, etc.).

C. Tree Removal Activities Exempt from Permit/Replacement Requirements

The following activities shall be lawful without application or issuance of a tree permit and do not require tree replacement:

1. The removal of any invasive plant species as determined by the Florida Department of Agriculture and Consumer Services "Noxious Weeds" rule set forth in the Florida Administrative Code.
2. The removal or alteration of any tree or vegetation in or about an existing City or utility easement or right-of-way provided such work is done by, or under the control of, the operating utility company and said company has received all necessary licenses or permits to provide utility service within the easement.
3. On SFR and DPX zoned platted lots removal or effective removal of trees by a utility company.
4. Any activity conducted by a lawfully operating and bona fide commercial nursery, tree farm, agricultural operation, silvicultural operation, ranch, or similar operation when the activity occurs on property owned or lawfully occupied by the person conducting said activity and is done in pursuit of said activity. This exemption shall include the purposeful removal of a tree or trees for their permanent relocation at another site undergoing development.
5. Trees located within a City drainage easement, City drainage rights-of-way, or City access rights-of-way that need to be removed to allow for access to or maintenance and/or clearing and construction of the City's drainage ditches and drainage related facilities.

D. Permit Requirements

1. A permit is required for land clearing/filling. It is prohibited and unlawful to clear trees, fill land, excavate, or dredge any parcel of land prior to the issuance of a single-family building permit or a site development permit, unless otherwise stated in this LDC, or authorized by the Land Use Administrator. The building permit shall act as the tree removal permit.
    a. Vacant properties may be partially cleared to enable the construction of seawalls prior to a permit being issued for a principal structure. Refer to Section 4.01 for requirements.
    b. Vacant properties may be partially cleared for the purpose of removal of unsuitable debris or muck within the buildable area of a site. Refer to Chapter 9 for permitting requirements.
    c. Vacant single-family residential properties that are under common ownership with any developed adjacent residential lot may be cleared of all pines, vegetation, and any trees less than six (6) inches in diameter if the minimum tree densities are maintained or replaced. Refer to Chapter 9 for permitting requirements.

2. Prior to the removal of any protected tree, an application for tree removal shall be submitted to the City. If the requested removal is in conjunction with an approved building permit, grade and fill permit, or a site development permit, a separate permit need not be obtained, but tree removal shall be addressed during the development order review process. The following types of tree removals require a permit but mitigation is not required.

a. Trees within clusters if there is a need to relieve thinning or overcrowding of trees, as part of an approved fire mitigation plan.

b. Trees that would not drop the lots below the minimum tree density requirements on SFR/DPX platted lots, as outlined in Section 11.03.01. The Land Use Administrator shall determine which trees shall be preserved as credit towards the minimum tree density requirement.

E. Removal of Protected Trees

Protected trees removed under this section shall require replacement per Section 11.02.06 if the tree was originally preserved or planted to meet a requirement of this chapter or the tree removal would cause the property to no longer meet the minimum tree density standards outlined in Section 11.03.01. Upon receipt of a completed application and verification on-site by a certified arborist or the Land Use Administrator, the Land Use Administrator may permit the removal of the following protected trees:

1. Dead, severely diseased, or severely injured trees, as determined by a certified arborist or the Land Use Administrator.

2. Trees that pose imminent danger to the health, safety, and welfare of the public and cannot be corrected through standard arboricultural procedures, as determined by a certified arborist.

3. Trees that pose a sight distance visibility problem along any public rights-of-way.

4. Any pine tree within thirty (30) feet of a structure or within a distance from a structure less than the tree's height may be removed as a safety precaution providing the property owner where the tree is located is agreeable to the removal and applies for the permit.

5. Trees causing structural damage to a foundation, driveway, parking lot, patio, wall, water or sewer line, or which interfere with the construction or repair of public infrastructure or facilities that cannot be corrected by standard arboricultural means.

F. Tree Removal on Developed Residential Lots

On developed lots zoned SFR, DPX, or EST all provisions of Subsection 11.02.05.E and Subsection 11.02.05.F would apply as well as the requirements to maintain the minimum tree density as outlined in Subsection 11.03.01.A. The following additional requirements also apply:

1. Protected trees that are in excess of the minimum tree density for the lot can be removed without mitigation.

2. Removal of a specimen or a historic tree shall be mitigated as follows:

a. A specimen tree – One (1) shade tree per Table 11-3.

b. A historic tree - Two (2) trees meeting the standards of Table 11-3 with at least one (1) tree being a shade tree.

G. Tree Thinning on MFR/COM and IND Developments

On properties where the landscaping has been planted for a minimum of ten (10) years or where the property owner has retained or planted more trees than required by this chapter and meets all of the standards of this chapter; tree thinning of overcrowded trees may be requested by the property owner upon submittal of a report by a certified arborist to the Land Use Administrator. After review, the Land Use Administrator may approve or conditionally approve a thinning of the overcrowded trees when the intent of the original landscape plan and this chapter would still be met by the removal of such trees under one of the following conditions:

1. Required trees have matured and grown to such a size and density that tree thinning would be the most prudent methodology for maintaining the health and vibrancy of the trees.
2. Trees in excess of the required minimum have matured and grown to such a size and density that tree thinning would only have an insignificant impact to the overall landscaping of the site.

Preference shall be given to trees selected for removal to trees having poor structure, root issues, or in decline. Tree replacement and mitigation would not be required in the above circumstances.

H. Requirements Suspended

During a declared emergency, the Land Use Administrator may suspend the requirements of this subsection.

11.02.06. Tree Mitigation Standards

Applicants are strongly encouraged to preserve as much of the existing vegetation as possible. Therefore, existing protected trees are counted toward meeting the landscaping requirements for a site. By saving protected trees, rather than planting new ones, applicants can achieve the minimum planting requirements in a more efficient and economical manner.

Tree replacement for all protected, specimen, and historic trees for MFR/COM and IND developments shall be provided as shown in Table 11-2. The property owner shall be responsible for the cost of replacing the trees removed from the property.

Table 11 - 2: Tree Mitigation Requirements for New MFR/COM and IND Development

Protected Trees	Specimen Trees	Historic Trees	Palm Trees
70% of the predevelopment tree inches removed from the required perimeter buffer areas of the site. Minimum replacement tree size shall be 2-1/2" caliper.	70% of the tree inches removed from the site. Minimum replacement tree size shall be 3" caliper.	100% of the tree inches removed from the site. Minimum replacement tree size shall be 3-1/2" caliper, 14’ high.	40% of palms removed from the site. Minimum replacement shall be 8' clear trunk palms (preferably Sabal Palms).

11.02.07. Tree Bank Fund Established

If the Land Use Administrator determines that, due to site conditions or configuration, it is impossible or impracticable for the property owner, applicant, or developer to meet the requirements for tree density and/or replacement on-site, the property owner, applicant, or developer shall pay fees of equivalent value into the tree bank fund or plant the trees off-site upon approval of a suitable site or sites by the City.

A. The tree bank fund shall be a separate account set up and shown in City financial records in which all receipts are detailed. All monetary contributions paid to the tree bank fund pursuant to this section shall be used exclusively for the planting or replanting of mitigation trees. Funds may also be used for the installation of irrigation systems. Monies collected in the fund shall be used on public land.

B. Valuation of contributions to the tree bank fund shall be based on the caliper size and height, if applicable, of the required hardwood tree replacement and quantity of the required palm trees in accordance with City standards.

Section 11.03. Landscaping, Buffers, and Irrigation Requirements

11.03.01. General Landscaping Requirements

A. Tree Density Requirements

All developments shall be required to provide one (1) tree for every 2,500 square feet, or major fraction thereof, of property area excluding ponds, lakes and canals.

B. Preserved Trees

Preserved trees, including those within wetland or associated upland buffer areas, may be counted towards the tree density requirements as long as they are, at a minimum, the same size as the required new trees (refer to Table 11-3). The trees must be in good structural condition and health and the root zone shall be protected during the construction phase of the project.

C. Protected Trees and Plants

The use of protected trees, understory trees, shade trees, accent plants, shrubs, and groundcovers is required to partially or totally satisfy the planting requirements of this chapter. The Land Use Administrator may approve alternate plantings if the purpose and intent of this chapter are met and a nuisance or environmental hazard is not created.

D. Native Vegetation

Use of native plants and plant species that conserve water, adapt to local conditions, and are drought tolerant are required for all new landscaping. MFR/COM, IND and SUBD developments are required to use reuse water or plant at least fifty (50) percent of the pervious area of the site with native plants or plants and sod that conserve water, adapt to local conditions, and are drought tolerant.

E. Alternative Landscape Betterment Plan

Where an applicant with a unique and/or difficult site to develop, as determined by the Land Use Administrator, is unable to meet some of the specific landscaping standards in Chapter 11, the applicant may propose an alternative landscape betterment plan with at least the same quality of required plants and normally the same amount of landscaped area but in a revised location or design layout; and by providing at least two (2) landscape hardscape features that are pedestrian friendly such as fountains, benches or art work not otherwise required. The Land Use Administrator may approve or conditionally approve the alternative landscape betterment plan if the proposed changes will provide at least as much public benefit, screening from rights-of-way and adjacent properties, and aesthetic appeal than if the landscaping standards were strictly followed.

F. Freestanding Sign Landscaping

1. All monument signs shall have shrubbery or flowers planted around the perimeter of the sign. Signs shall be located so as to provide both adequate visibility from the public rights-of-way, meet safe site triangle standards per Florida Department of Transportation Design Standards, and preserve protected trees.
2. If freestanding signage cannot be shifted within the buffer to allow the required room for screen plantings between the sign and the outside parking envelope area without obscuring visibility to the sign, then the City shall allow a ten (10) foot radius from the base of the freestanding sign in which lower accent plantings are allowed in lieu of the screen plantings.

G. Retention and Detention Ponds

Stormwater retention/detention ponds shall be naturally shaped with rounded corners having a minimum radius of seven (7) feet for ponds between 2,500 and 10,000 square feet and a minimum radius of least a twelve (12) feet for ponds greater than 10,000 square feet. All wet ponds shall incorporate a combination of aquatic and non-aquatic native plants around portions of the perimeter to filter runoff of fertilizers, herbicides, and pesticides.

H. Screening plantings

Above ground structures such as: dumpster enclosures, mechanical equipment, backflow preventers, wells, pumps, tanks, ground-mounted HVAC units, transformers, generators, storage sheds, lift stations, utility cabinets, electrical panels, or ground-mounted cable/satellite television equipment shall have a short screen planting. If the structures are in areas that are visible from the public rights-of-way the screening shall be provided between the structures and the rights-of-way. If the structures are in areas that are visible from a parking lot or abutting property without an intervening buffer, fence, or wall; then a short screen planting shall be provided between the structures and the parking lot or abutting property. On transformers lattice may be used for screening or where vegetation is planted it shall be setback sufficiently so that at maturity it still meets the minimum setbacks from the transformers.

I. Plan Submittal Requirements

Landscape and irrigation plans shall be submitted for all MFR/COM, IND and SUBD developments and shall be prepared by a Florida registered landscape architect or other licensed professional authorized by ~~the~~ state law to prepare such plans. SFR/DPX development landscape plans shall also be required, but do not need to be prepared by a landscape architect.

J. Street Trees and Median Planting

1. In all subdivisions exclusive of those for SFR/DPX lots and other developments involving the creation of new streets or shared private access roads, street trees shall be planted in the rights-of-way or a median, unless the Land Use Administrator determines that a conflict exists between trees and utilities located in the rights-of-way or that site distances or recovery zones are not in compliance with sound and generally accepted engineering practices and principles. In such cases, the street trees shall be planted outside of the rights-of-way.
2. If street trees are to be located outside of the rights-of-way, trees shall be planted no farther than ten (10) feet outside of the right-of-way line or abutting utility easement, and shall be perpetually maintained. All property owners' association covenants and restrictions shall include this requirement, and all property owners shall comply with this paragraph. Street tree plantings shall be in accordance with City standards.

3. Street trees may be included to satisfy the minimum requirements for tree density and buffers.

K. Utility Lines

Shade trees shall not be planted under or within fifteen (15) feet horizontally of overhead power lines. Underground power lines, cable TV, and phone line clearance to trees shall be as specified by the utility providing the lines. Water mains shall be separated a minimum distance of ten (10) feet from shade trees. Distances less than ten (10) feet shall be reviewed and approved by the City. Understory trees that do not attain, or can be maintained by pruning to a height of no more than fourteen (14) feet, may be planted under utility lines.

L. Sight Triangles

1. Where landscaping is proposed within a sight triangle, landscaping shall only be planted and then shall be maintained so that an unobstructed cross-vision is provided at a vertical level between two (2) feet and seven (7) feet, as measured from the centerline of the adjoining road. Trees may be permitted within the sight triangle, at the discretion of the Land Use Administrator, if the trees have a single trunk and foliage is kept trimmed between two (2) feet and seven (7) feet.

2. The dimensions of the site triangle shall match the Florida Department of Transportation Standards for Sight Triangles and Sight Distances.

11.03.02. Specific Landscaping Requirements for Developments

A. MFR/COM Developments

1. Foundation Plantings

Foundation plantings are intended to soften buildings and improve their aesthetics. Planting beds with a minimum width of four (4) feet shall surround a minimum of seventy (70) percent of the building elevation excluding areas adjacent to: building entry doors, fountains, benches and sculptures. Bed lines where practicable, shall be curvilinear and wrap the corners of the structure with shrubbery plantings no closer than three (3) feet from the building. Screening that is at least four feet (4) wide around loading areas, dumpsters, and mechanical equipment running parallel to the adjacent building elevation may be counted towards these requirements. On sites located along specially designated collector or arterial roads, as listed in Subsection 11.03.05, an average minimum foundation planting bed width of eight (8) feet shall be provided. In this area, a minimum of two (2) different heights of plant material shall be used along with understory trees at the rate of one (1) tree per fifty (50) lineal feet of building wall length. These planting beds shall be emphasized in the most visible areas to the public. The following may be used in order to provide some alternatives:

a. Architectural Design

Foundation planting requirements for multifamily and nonresidential buildings may be reduced by the Land Use Administrator, when it is determined that building façade massing techniques beyond the minimum architectural standards described in Chapter 13, provide a similar benefit as foundation plantings.

b. Landscape Design

Alternative foundation planting may be permitted (e.g., architectural planter, pots, etc.) or allowed to be relocated along an alternative building elevation by the Land Use Administrator and applied as a credit towards meeting the foundation planting requirement

if demonstrated and determined that the methodology is of equal benefit to the general public and appropriate automatic irrigation facilities are provided.

2. Wildfire Hazard Assessment

The development may be required at the determination of the Land Use Administrator, to include a wildfire hazard assessment for the site prepared and certified by a forester, wildfire mitigation expert, or landscape architect. If the site is determined to be in a medium or higher wildfire hazard area, certain measures shall be required to be implemented prior to the issuance of a certificate of occupancy of the building. Wildfire mitigation shall be in accordance with City standards.

B. IND Developments

1. Foundation Plantings

Planting beds at least four (4) feet wide shall be planted adjacent to at least sixty (60) percent of front building elevations, twenty-five (25) percent of street side building elevations, and ten (10) percent of interior side building elevations but are not required along rear elevations. Areas adjacent to: building entry doors, benches, fountains or sculptures are excluded from these calculations. The following may be used in order to provide some alternatives:

a. Architectural Design

Foundation planting requirements may be reduced by the Land Use Administrator, when it is determined that building façade massing techniques beyond the minimum architectural standards described in Chapter 13, provide a similar benefit as foundation plantings.

b. Landscape Design

Foundation planting may be relocated along an alternate building elevation if the Land Use Administrator determines that mitigating circumstances are present and the alternate location provides equal or greater benefit to the general public.

2. Wildfire Hazard Assessment

The development may be required at the determination of the Land Use Administrator, to include a wildfire hazard assessment for the site prepared and certified by a forester, wildfire mitigation expert, or landscape architect. If the site is determined to be in a medium or higher wildfire hazard area, certain measures shall be required to be implemented prior to the issuance of a certificate of occupancy of the building. Wildfire mitigation shall be in accordance with City standards.

C. SUBD Developments

1. Common Area

Common areas within subdivisions including, but not limited to~~,~~: entrance ways, recreation areas, gateways, and street islands shall maintain the same tree density standards as required in Subsection 11.03.01.A and the same minimum planting standards as shown in Table 11-3.

a. Temporary sales trailers are required to be skirted and have a short screen planting as described in Table 11-3 with temporary irrigation around all sides visible to the public plus two understory trees to improve its aesthetics.

b. Unless an easement for perpetual maintenance is provided, buffer planting areas, if required, shall be provided in the common areas of the subdivision and not on individual private lots.

c. Provisions for maintenance of common areas and conservation/wetland areas shall be made through covenants and restrictions or other means.

2. Landscape Buffers

For subdivisions fronting any of the specific arterial and collector roads as noted in Subsection 11.03.05.B**,** landscape buffers Type B shall be required.

3. Wildfire Hazard Assessment

The development may be required at the determination of the Land Use Administrator, to include a wildfire hazard assessment for the site prepared and certified by a forester, wildfire mitigation expert, or landscape architect. If the site is determined to be in a medium or higher wildfire hazard area, certain measures shall be required to be implemented prior to the issuance of a certificate of occupancy of the building. Wildfire mitigation shall be in accordance with City standards.

D. SFR/DPX Developments

1. Number and Type of Trees

a. At least one (1) tree shall be provided for each 2,500 square feet of lot area, or major fraction thereof of property excluding ponds, lakes, and canals, per Subsection 11.03.01.A. On lots one-acre or larger this minimum tree planting standard shall only be based on the portion of the lot being developed with buildings, swimming pools, pavement, or new landscaped areas including turf.

b. Regardless of lot size a minimum of one (1) shade tree shall be provided, preferably in the front yard. At least two (2) shade trees shall be provided on lots 1/3 acre or larger and four (4) shade trees shall be provided on lots one (1) acre or larger.

2. Foundation Plantings

a. Residential homes shall provide foundation plantings consisting of sixteen (16) shrubs. On interior lots eight (8) shrubs shall be planted in front of the home and four (4) shrubs planted on each side of the home. On corner lots six (6) shrubs shall be planted on each side of the home facing a street and (4) shrubs planted on the side of the home. When the rear yard of a home faces a saltwater canal, lake, or golf course an additional four (4) shrubs shall be planted along the rear of the home.

b. All of these required shrubs shall be planted between two and one-half (2 ½) and eight (8) feet of the home's foundation.

c. The corners of the house shall be wrapped with shrubbery. Shrubbery shall be selected using varying heights to accent and soften walls.

3. Minimum Planting Requirement

There shall be a minimum planted area or preserved existing native vegetation area of sixty (60) percent of the pervious open space. The remainder of the pervious open space area may be decorative gravel or decorative crushed stone commonly used for landscaping purposes, or mulches. All swales in rights-of-way shall be sodded.

11.03.03. Tree and Plant Types, Sizes, and Quality

A. Trees, Shrubs, and Groundcovers

All trees, shrubs, and groundcovers shall meet or exceed the standards of a Florida No. 1 or better quality as set forth in the latest edition of Grades and Standards for Nursery Plants, Florida Department of Agriculture. Damage to any tree, shrub, or ground cover that in the opinion of the Land Use Administrator puts the plant material at risk of survival are grounds for rejection. The planting requirements at time of installation are listed in the following table:

Table 11 – 3: Minimum Planting and Maintenance Requirements

Type of Development	Shade Trees	Understory Trees	Shrubs and Groundcovers	Accent Plants
MFR/COM, IND and SUBD	Caliper: 3 ½" 3 palm trees at 8' clear trunk are required for 1 shade tree credit.	Caliper: 1 ½" Minimum container: 30 gallon In parking lot islands the minimum height shall be 12' – 14'.	Shrubs: 3 gallon Groundcover: 1 gallon Tall screen planting: shrubs 5' in height and 60% opacity installed that achieves within 2 years a minimum height of 6' and opacity of 80%. Short screen planting: shrubs 2' in height, 3-gallon container, and maximum 3' on-center spacing installed that achieves within 2 years a minimum height of 3' or shrubs 2 ½' in height, 7-gallon container, and maximum 4' on-center spacing.	Dwarf to medium 3-gallon container shrubs. Height: 12" minimum at time of planting.
SFR/DPX	Caliper: 2" 3 palm trees at 3' clear trunk are required for 1 shade tree credit.	Caliper: Minimum container: 15 gallon	Shrubs: 3 gallon Short screen planting: shrubs 2' in height, 3-gallon container, and maximum 3'on-center spacing installed that achieves within 2 years a minimum height of 3' or shrubs 2 ½' in height, 7-gallon container, and maximum 4' on-center spacing.	None required

Notes

1. A 10% tolerance level may be provided to the above minimum plant sizes to reflect plant availability at the determination of the Land Use Administrator.
2. Tall and short screen plantings shall be non-deciduous, always maintained to meet their minimum height and opacity standards, and if planted on a berm the berm may count towards the screening height.
3. Trees shall be allowed to grow to their natural height and typical shape in MFR/COM, IND and SUBD Developments.

1. Existing trees shall count towards any tree requirements as noted in this chapter if:
   - **a.** The trees are equal to or greater than the minimum sizes in Table 11 – 3;
   - **b.** Are in good structural condition and health, as determined by the Land Use Administrator; and
   - **c.** The root zone is protected during the construction phase of the project.
2. For MFR/COM, IND and SUBD developments a cluster of three (3) palm trees may replace up to twenty-five (25) percent of the required shade trees and on SFR/DPX developments palm trees may replace up to fifty (50) percent of the required shade trees. Where an architectural theme has a dominant tropical design, palm trees may replace 50% of the required shade trees in interior parking lot areas and 100% over the remainder of the site but the spacing requirements shall be similar to those for understory trees.

B. Turf

Grass areas shall be planted with sod in a species normally grown as permanent lawns in East Central Florida. Newly installed Bahia sod shall be healthy and have no more than twenty (20) percent weeds or unlike grass species. Newly installed St. Augustine, Seashore Paspallum, Bermuda, and Zoysia sod shall have no more than five (5) percent weeds or unlike grass species. For newly installed turf where irrigation is not provided, grass species shall be Bahia grass (or Bermuda grass upon approval of the Land Use Administrator). All areas of a disturbed site not otherwise landscaped or not left in natural native vegetation shall be grassed or mulched at a minimum.

11.03.04. Parking Lot Landscaping Requirements

A. Screening

Screening from the right-of-way and adjacent properties in the form of a short screen planting is required for off-street parking lot areas where the perimeter buffer does not already include one.

B. Internal Parking Lot Landscaping

Internal parking lot landscaping shall comprise an area equal to a minimum of ten (10) percent of the vehicular use area excluding those areas beneath vehicular canopies, such as a bank drive-thru or a convenience store with gas pumps. The vehicular use area is the total area of all parking stalls, drive aisles, and access ways within the limits of the property being developed. Sites zoned industrial can exclude vehicular use areas designated for heavy-duty truck parking, loading, and maneuvering from these calculations.

1. Landscape Islands

a. A qualifying island or planting area shall contain at least one (1) tree per landscaped island. Shade trees shall only be planted in islands having at least nine (9) feet in width and three hundred (300) square feet in size, except for median islands described in Subsection 11.03.04.B.2.a.(1).

b. Required islands shall be a minimum of one hundred fifty (150) square feet in area and shall have one (1) understory tree or a grouping of three (3) palms.

2. Placement of Landscape Islands

a. No more than five (5) consecutive parallel parking spaces may be constructed without separation by a vehicular use area landscape island, and no more than ten (10) consecutive parking spaces may be constructed without separation by a landscape island, except as specified below:

(1) Where shade trees are planted at a minimum of fifty (50) feet on-center the length of a center island located between two (2) rows of parking spaces (median island) it shall have a minimum planting width of eight (8) feet. If understory or a cluster of three (3) palm trees are planted instead, the median island shall have a minimum width of five (5) feet with the understory trees or clusters of three (3) palms spaced a minimum of thirty (30) feet on-center.

(2) Where a minimum of an additional five (5) feet of buffer width is provided, in addition to any required perimeter buffer width along the outside edge of the parking lot adjacent to the parking spaces with shade trees planted at a minimum of fifty (50) feet on-center**.**

b. If stabilized grass parking is approved, the parking spaces shall be delineated with parking stops and the required vehicular use area islands shall be provided.

c. All parking rows ending adjacent to drive or parking aisles shall be terminated by a landscape island (terminal island) that is at least five (5) feet in width.

3. Design Requirements for Landscape Islands

a. Where light poles or flagpoles are placed in landscape islands that contain shade trees the minimum size of those landscape islands shall be increased by one hundred fifty (150) square feet and such pole shall be located at least fifteen (15) feet from the shade tree.

b. Curbing shall be installed around the perimeter of all landscape islands that abut paved parking or drive aisles. Where the landscape islands abut stabilized grass parking pressure-treated timbers (minimum size of 6" x 6") securely attached with rebar to the ground are allowed in lieu of the curbs. Curbing or areas beneath the pressure-treated timbers shall not be counted towards the landscape island areas.

c. The Land Use Administrator may supersede specific landscaping standards when they conflict with concerns for public safety.

d. Landscape islands shall have at least one tree credit for every one hundred sixty-five (165) square feet of required internal parking lot landscape areas with understory trees receiving one (1) tree credit, clusters of three (3) palm trees receiving one and one-half (1½) tree credits, and shade trees receiving two (2) tree credits.

4. Alternate Planting Requirements for Parking Lot Islands

The following specific planting requirements relate to internal parking lots:

a. In lieu of providing the minimum open space in a parking lot island, the Land Use Administrator may approve one (1) or more of the following practices:

(1) Structural soils;

(2) Structural bridging under sub base and pavement areas; or

(3) Soil trenches/root paths that allow roots to access larger soil areas.

(4) Other methodology, such as pervious pavers, that provides adequate means for tree roots to properly grow.

b. Upon submittal and approval of design plans and specifications of an alternate means of rooting area under a paved surface, the minimum parking lot island planting area as required in this section may be reduced. Structural soil specifications shall comply with City standards.

5. Driveway Medians

A landscaped island may be installed to separate the ingress and egress driveways for any access way (driveway median). This driveway median shall meet the planting and design requirements for landscape islands.

6. Flexibility

a. The Land Use Administrator may permit the use of architectural planters to provide partial credit landscape island/area requirements if found to be of equivalent public benefit.

b. The Land Use Administrator may permit more than ten (10) contiguous parking spaces without an island in order to promote tree preservation or when unique site circumstances exist.

c. The Land Use Administrator may reduce the minimum area for parking lot islands if it is determined adequate tree rooting area is provided below the pavement area are provided per the City Technical Manual.

7. Related Standards

a. For large scale commercial centers see Sections 4.15.03.B. and 4.15.03C.

b. For screening of mechanical equipment, utilities and storage areas see Section 13.04.07.A.

11.03.05. Landscape Buffer Requirements

A. Buffer Type Determination

Determining perimeter buffer requirements for a site consists of a two (2) -step process:

1. Use Table 11- 4 to determine the type of buffer required.

2. Go to Table 11- 5 to find the design standards for the particular buffer required.

B. Perimeter Buffer Requirements

Table 11-4 shows the perimeter buffer types required based on the zoning of the subject property and the abutting zoning/use. The zoning of the subject property is shown on the second row with the black background and the abutting zoning/use is shown on the left-hand column. To use Table 11-4 go along the second row to find the subject property's zoning and then go down that column to where it aligns with the same row as the abutting zoning/use. For example, if the proposed development is located on land zoned "IND-1" and the abutting land is zoned "MFR-1" then use the "IND" column at the right-hand side of the table and follow it down to the row labeled "MFR", which would require a perimeter buffer type "D", "E", or "F".

Table 11 – 4: Perimeter Buffer Requirements

	Zoning of Proposed Development				
	AGR, PRS, P & G	**SFR, DPX, EST**	**MFR, MHD, OFC**	**COM, MPD[1], PSP[2]**	**IND**
Abutting Zoning/Use (shown below):					
AGR, PRS, P&G	None	None	None	None	None
SFR, DPX, EST	None	None	D, E or F	D, E or F	D, E or F
MFR, MHD, OFC	None	None	C	D, E or F	D, E or F
COM, MPD[1], PSP[2]	None	None	C	C	D, E, or F
IND	None	None	C	C	C
Local Roads	None	A	A	A	A
Specially Designated Arterial or Collector Roads [3]	None	B	B	B	B
Other Arterial or Collector Roads	None	A	A	A	A
Retention Pond, Lake, or Canal	None	None	None	C	D, E or F

1 In the MPD zoning district it shall revert to the underlying zoning district or use for the subject property as determined by the Land Use Administrator.

2 Uses in the PSP zoning districts shall typically use "high" or "very high" as a guideline depending on the proposed use. The Land Use Administrator may reduce or eliminate these buffer requirements on a case-by-case basis.

3 Specific arterial and collector roads include the following: Belle Terre Parkway, Belle Terre Boulevard, Colbert Lane, Cypress Point Parkway, I-95, Matanzas Woods Parkway, Old Kings Road, Palm Coast Parkway, Palm Harbor Parkway, Pine Lakes Parkway, Royal Palms Parkway, S.R. 100, Seminole Woods Parkway, U.S. 1, and White View Parkway.

1. For nonresidential uses, a perimeter buffer will not be required between two (2) or more newly created adjoining lot lines when subdividing a parcel of land that has an existing development or an approved site plan. In order to qualify, the existing or approved project and future developments on the proposed lots must have approval for a unified or master site plan that incorporates shared facilities including access, stormwater facilities, and connectivity.

C. Buffer Design Standards

The required buffers shall meet the following landscape standards:

Table 11 – 5: Buffer Design Standards

Type	Width	Shade Trees per Linear Feet	Maximum Shade Tree Spacing per Linear Feet	Understory Trees per Linear Feet	Short Screen or Tall Screen	Accent Planting per Linear Feet	Decorative Wall / Fence
A	10’	1/50’	75’	1/50’	Short Screen	N/A	N/A
B	25’	1/50’	75’	1/50’	Short Screen	30/100'	N/A
C	10'	1/50'	75’	Optional	Short Screen*	N/A	N/A
D	10'	1/50'	75’	Optional	Not Required	30/100'	Decorative Wall
E	20’	1/50’	75’	Optional	Tall Screen	N/A	Optional
F	15'	1/50’	75’	Optional	Not Required	30/100'	Fence

*Not required if the adjoining property has already been developed with the shrubs already planted or where multi-family, office, or commercial uses are adjacent to any pond, lake, canal or waterway and the view would be an enhancement for the proposed project while not negatively impacting neighboring properties, as determined by the Land Use Administrator. Also, not required when industrial properties are adjacent to each other except where a parking area is unscreened and adjacent to the buffer.

1. Landscape buffer areas shall be located at the perimeter of the site. Plantings shall not be located in any portion of a public or private right-of-way or drainage easement, unless permitted by a landscape easement. Tall and short screen plantings may be located between the minimum landscape buffer area and the parking lot, building, or structure they are intended to buffer. If not screening parking areas or other required items, these screen plantings can be incorporated into the required foundation plantings.

2. At least fifty (50) percent of the existing native vegetation shall be preserved within the landscape buffer area. Preserved native vegetation within the buffer shall be hand cleared of vines, debris, and dead branches to present an attractive transition from maintained to natural. If native vegetation is not present, is insufficient to meet the screening required by this section, or the Land Use Administrator has determined that it must be removed due to required site grading or existing utilities, then plant material shall be installed to meet the buffer requirement.

3. When calculating the required number of trees and shrubs within a buffer, the width of access ways or easements running perpendicular to the buffer shall be subtracted from the property length.

4. Understory trees may be used in lieu of shade trees where noted in Table 11-6 as “Optional”; however, no more than twenty-five (25) percent of the required trees may be understory trees.

5. Where accent plants are required, no more than thirty (30) percent of the planting bed area shall be comprised of groundcover plants.

6. Uses within buffers:

   a. Buffer yards shall be limited to passive recreation and may contain pedestrian or bicycle trails and public amenities such as decorative fountains, artwork, and similar structures.

   b. Mechanical equipment or structures, other than signs (excluding directional signs) and backflow preventers may be allowed in perimeter buffer areas pursuant to approval by the Land Use Administrator.

   c. In a buffer ten (10) feet in width, no more than twenty (20) percent of the required buffer area may be used for stormwater retention/detention. In a buffer fifteen (15) feet in width, no more than thirty-three (33) percent of the required buffer area may be used for stormwater retention/detention. In a buffer twenty (20) feet or more in width, no more than fifty (50) percent of the required buffer area may be used for stormwater retention/detention. These ratios shall be reduced if insufficient room is left for plantings.

   d. A required buffer shall be at least fifteen (15) feet wide before it can be encumbered by the partial overlap of a sidewalk or utility easement running parallel to the buffer and the overlap shall not exceed one-third of the required buffer width. This ratio shall be reduced if stormwater retention/detention areas are also in the buffer or if there is insufficient room for plantings.

7. Decorative walls and fences, when required, shall be six (6) feet in height and comply with the material and design requirements (see Chapter 4 for material and design requirements for walls and fences).

D. Miscellaneous Buffer Requirements

1. Vehicle Display Areas

For automotive, recreational vehicles, motorcycles, motorized watercrafts, and other similar displays, as determined by the Land Use Administrator, a maximum of thirty-three (33) percent of the frontage short screen plantings may be allowed to be reduced to a height of twelve (12) inches at time of planting if a minimum height of sixteen (16) inches shall be achieved within two (2) years and maintained at such height. The balance of the short screen planting shall be installed and maintained per the height standards in Table 11-3.

2. Frontage Road Buffers

Frontage roads that parallel the main road serving a site may encroach into a front landscape buffer if no less than ten (10) feet of the required buffer is provided on the development side of the frontage road with the remaining footage of the buffer width on the side of the main road.

3. Fleet Rental Parking Buffers

Fleet rental parking spaces (excluding of spaces limited to the renting of automobiles or pickup trucks) shall be located to the side or rear of the building and screened with a tall screen planting.

4. Phased Projects

Any development that proposes phasing shall be required to provide perimeter buffer plantings adjacent to existing development and rights-of-way visible to the general public. If existing

trees and vegetation are sufficient to provide this buffer, they may be used to satisfy this requirement. The first phase certificate of occupancy shall not be issued until this is done.

11.03.06. Irrigation Requirements

A. Requirements by Type of Development

1. **MFR/COM, IND**: These developments shall meet the irrigation design standards contained in this section.
2. **SUBD:** Irrigation systems for all common areas of a subdivision, including planted medians, shall be designed and installed with the subdivision infrastructure in accordance with this section. If the owner elects, the planting and irrigation of street trees on individual lots may be postponed until the lot is developed.

B. Design Standards

Irrigation systems shall meet all City irrigation design standards as well as the following:

1. Water Conservation

Irrigation systems shall be designed in such a way as to minimize runoff or spraying of irrigation water onto roadways, driveways, and adjacent properties that are not under the control of the owner. The irrigation systems shall be designed to correlate plants into water use zones.

2. Water Source

Non-potable water use demands shall be met using water of the lowest quality supply that is both available and feasible for the intended application, as determined by the Land Use Administrator. Water reuse or water reclamation programs, if available, shall be used to reduce groundwater or surface water withdrawals for water use applications which do not require potable water. The following are the water source priorities of the City from highest preference to lowest preference:

a. Reclaimed water.

b. Stormwater, lake, or canal.

c. Groundwater (well).

d. Potable water.

3. Temporary Irrigation

All landscape installations shall make necessary provisions for watering to establish and guarantee plant survival. Sites with these types of irrigation systems shall use super absorbents in the planting backfill as well as native plants or xeric plants and trees. A watering schedule shall be submitted. For an example, see the University of Florida Extension publication ENH856 – Tree Specifications for Planting and Shrubs in the Southeastern United States. Specifications shall be included to provide one (1) of the following:

a. Automatic irrigation;

b. Hand watering via hose bib or other water source;

c. Water truck hand watering; or

d. Automated water bags.

4. Irrigated Areas

The irrigation system, unless temporary, shall have mainlines and lateral lines buried underground and designed to provide adequate irrigation to all landscaped areas except for areas of existing native vegetation or planting areas comprised of vegetation that conserves water, is adaptable to local conditions, and is drought tolerant.

5. Backflow Prevention

Irrigation systems connected to a potable water source shall have a backflow prevention assembly installed as required and approved by the Land Use Administrator. Permitted wells shall have a serviceable double-check valve as required and approved by the Land Use Administrator. See Chapter 9 for these requirements.

6. Moisture Sensing Device or Smart Irrigation System

All irrigation systems shall have an operational moisture-sensing device or a smart irrigation system.

11.03.07. Installation of Plants

All landscaping is to be installed in a professional manner following good nursery practices as set by the Florida Nurserymen Landscape and Growers Association. All planting requirements shall meet or exceed the standards set forth in this chapter and the University of Florida Extension Publication ENH856 - Tree Specifications for Planting Trees and Shrubs in the Southeastern United States.

A. Mulching Requirements

All planting areas shall be mulched with a minimum of two (2) inches and a maximum of four (4) inches of mulching material. The type of mulching material is subject to approval by the City.

B. Turf

See Subsection 11.03.03.B for turf requirements and quality.

11.03.08. Compliance with Approved Plans; Maintenance

A. Compliance with Approved Plans

All required plantings as shown on the approved landscape plans must be completed prior to issuance of a certificate of occupancy.

B. Maintenance

1. The owner is responsible for maintaining the approved landscaping on-site in a healthy condition indefinitely. All required plant material that dies or becomes unhealthy and is not treatable shall be replaced within thirty (30) days. When any plants are replaced because they are dead, diseased, or destroyed by acts of nature, they should be of the same or similar species and meet the size standards of Table 11-3.
2. Pruning standards for all tree work done in the City shall follow American National Standards Institute (ANSI) A300, Part 1 "pruning standards" as well as ANSI Z133.1-2000 standards for safety.
    a. The owner, tenant and their agents including personnel and companies who do the tree work shall be jointly and severally responsible for following these pruning specifications and responsible for tree damage or loss. Trees shall not be topped (hat-racking), over-lifted (lions-tailing), shaped, or significantly pruned; but shall be allowed to grow to maturity and attain their natural form so that crown development is not inhibited. Trees may only

be pruned to maintain good health and growth by removal of limbs that are dead, weak, insect or disease-infested, storm damaged, crowded, rubbing other limbs, low and interfering with pedestrians or vehicles, or to maintain safe distances from utility lines.

b. For maintenance of commercial properties, including: office, medical, retail, and industrial uses; and multi-family projects of twenty-five (25) units or more, tree pruning of branches one (1) inch or larger and at a height of eight (8) feet or more shall only be provided by or under the direct supervision of arborists certified by the International Society of Arboriculture within Florida or by tree trimmers certified annually by the City.

3. Adequate provision shall be made, as approved by the Land Use Administrator, for the perpetual maintenance of common areas through covenants and restrictions or other means. These requirements can be achieved through either existing tree preservation (preferred) or by planting new trees. Buffer plantings shall be planted in common areas and not private lots, unless a landscape maintenance easement is granted with adequate perpetual maintenance assurances as approved by the Land Use Administrator.

4. The owners are responsible for maintaining the approved irrigation system in an operable and efficient condition in perpetuity.

5. The owners are responsible for ongoing removal of all invasive plant species, as determined by the Florida Department of Agriculture and Consumer Services "Noxious Weeds" rule set forth in the Florida Administrative Code, for developed lots and the improved portions of developed parcels.

6. The City may conduct periodic inspections to assure compliance with the planting and maintenance requirements of this section. If a violation is found the City will notify the owner that they have thirty (30) days in which to replace plants and make any other necessary repairs. Continued violation after the thirty (30) days will be referred to the Code Enforcement Board or another enforcement mechanism will be used.

7. In cases where the City must seek a remedy in court, the City may recover reasonable attorney's fees and costs where the City obtains affirmative relief.

11.03.09. Construction Phase/Acceptance of Improvements

A. Construction Phase

1. Permit

No site work shall commence until appropriate tree protection and erosion control measures are in place and approved by the Land Use Administrator.

2. Pre-construction Meeting

Prior to any site clearing, all trees and areas with shrubs to remain shall be properly marked and barricaded as indicated in this chapter. A pre-construction conference shall be scheduled with the general contractor, land clearing contractor or its designee, and City staff to review specific criteria for construction.

3. Erosion Control

Best Management Practices shall be utilized.

B. Acceptance of Improvements

1. Certificate of Occupancy

No certificate of occupancy may be issued until all specifications on the approved plan have been attained unless the Land Use Administrator determines that an extension of up to sixty (60) days is warranted and the site work landscape and irrigation is covered by a surety given to the City, on a form provided by the City, in the amount of one hundred fifty (150) percent of the estimated value of the unfinished work.

2. As-built Drawings

Landscape and irrigation as-built drawings (as-builts) are required prior to the certificate of occupancy of the project being issued in any zoning district except for SFR, DPX, and EST. The irrigation as-builts provided to the City for the City's files shall include certification by a landscape architect for location of water source, rain sensor, valves, clocks, and heads. Approximate underground pipe run locations will be acceptable in lieu of exact locations. Electronic format as-builts are required. As-builts may be bonded according to the procedure as noted in Subsection 11.03.09.B.1.

Section 11.04. Enforcement/Remediation and Penalties

11.04.01. Cease and Desist Orders

The Land Use Administrator may issue a cease and desist order for a maximum of two (2) working days whenever a violation of this subpart has occurred. Upon review of the violation the Land Use Administrator may extend the cease and desist order until the violation is brought into compliance and all resulting fines incurred as a result of the violation are paid.

11.04.02. Correction of Violation/Remediation

The City shall take the following actions when a violation of this chapter has occurred in addition to all other available code enforcement remedies:

A. Tree Replacement Remediation Requirements

Each tree destroyed or damaged contrary to the latest ANSI A-300, Part I standards shall be replaced pursuant to Table 11-2 by a desirable type of tree(s), except that in the case of total or effective removal, the total diameter inches of the protected trees removed shall be replaced. In the case of total or effective removal, the minimum replacement tree size shall be six (6) inch caliper except for SFR/DPX development which shall be three (3) inch caliper and twelve (12) feet in height. A mitigation plan consistent with this chapter must be submitted as required by the Land Use Administrator. This plan may require, in part, contribution to the tree bank fund. If contribution is to be made into the tree bank fund, the monetary equivalent amount of such contribution shall be determined pursuant to Subsection 11.02.07. The mitigation plan shall also require mitigation of any other damage to the property. Each tree so damaged or removed shall be considered a separate violation of this LDC.

B. Sites Cleared Without Approved Tree Surveys

If the site has been cleared and the trees have been removed from the site such that the Land Use Administrator is unable to determine with reasonable certainty the number of protected trees removed in violation of this subpart, the violation may be corrected by paying into the tree replacement fund. The Land Use Administrator will determine the appropriateness and numbers of tree replacements to be planted back on the lot upon inspection. No work shall continue until

the tree replanting plan has been approved. The contributions assessed under this subsection shall be payable to the City within ten (10) working days after assessment.

C. Clearing Without Construction/Inspections

Permitted projects cleared and upon which construction and inspection has not occurred within six (6) months of clearing shall be subject to mitigation per Table 11-2, as well as stabilization of all disturbed areas with sod or seed. In areas where a tree survey was accomplished, all protected trees on the survey shall be mitigated, and in areas where trees were not surveyed, the fine established by the City shall apply. Additionally, all perimeter buffer plantings, as shown on the approved plans, shall be installed and irrigated. Trees used in these buffers shall be credited towards the mitigation requirements.

11.04.03. Appeals

Any person aggrieved by an administrative order of the Land Use Administrator may appeal the order to the Planning and Land Development Regulation Board in accordance with requirements in Chapter 2.

Chapter 14 - GLOSSARY

Sec. 14.02. – Glossary.

Alternative landscape betterment plan: A replacement landscape plan proposed by the developer of a unique and/or difficult site that provides additional landscape features not already required and a better public benefit, project screening, and aesthetic appeal than a standard landscaping plan.

Caliper: The trunk diameter for new trees up to, and including, four inches in diameter as measured at six inches above grade. All new trees over four inches in caliper will be measured 12 inches above grade. The diameter of all existing trees shall be measured at four and one-half feet above grade (diameter at breast height (DBH)).

Driveway median: A landscaped island that separates ingress and egress driveways.

Island: A raised area in a roadway, driveway, or parking facility used to control or direct traffic flow and typically contains landscape material to aide in providing shade and aesthetics within parking facilities.

Island, median: A landscaped island at least five (5) feet wide located between two rows of parking spaces with no intervening drive aisle.

Island, terminal: A landscaped island at least five (5) feet wide located at the beginning or the end of a row of parking spaces that separates the adjacent parking space from a drive or parking aisle.

Mitigation: An action or series of actions to offset the adverse wetland impacts. Mitigation usually consists of restoration, enhancement, creation, preservation, or a combination thereof. Mitigation also refers to the required replacement of protected trees that are removed for multi-family, commercial, and industrial development. Relating to wireless communication facilities, mitigation means a modification of an existing antenna support structure to increase the height, or to improve its integrity, by replacing or removing one or several antenna support structure(s) located in proximity to a proposed new antenna support structure. This is to encourage compliance with this Code or improve aesthetics or functionality of the overall wireless network.

Screen planting, short: A two-foot high planting of continuous non-deciduous shrubs, with appropriate spacing, intended to partially block the view of something from adjacent properties or a rights-of-way.

Screen planting, tall: A five-foot high planting of continuous non-deciduous shrubs, with appropriate spacing, intended to primarily block the view of something from adjacent properties or a rights-of-way.

Sight triangle: A triangular-shaped area at intersections that provides a clear line of sight for drivers at a vertical level between two feet and seven feet above the average grade at the centerline of the right-of-way. Two sides of the triangle shall be the edges of pavement along each roadway from their intersection with their lengths based on the type of roadways and the third side being a line connecting the ends of the first two lines

Smart irrigation system: A weather-based irrigation arrangement that utilizes prevailing weather conditions, current, and historic evapotranspiration, soil moisture levels and other relevant factors to adapt water applications to meet the estimated needs of plants and lawns. System shall estimate or measure depletion of available plant moisture to operate an irrigation system that replenishes water as needed while minimizing excess.

Temporary irrigation system: An interim system, including surface distribution elements (hose, pipe etc.), that may be removed once the landscaping is established or no longer needed.

Vehicular use area (VUA): Any area used by vehicles for driving or parking except public thoroughfares, including but not limited to areas for parking, display, storage or traverse of any and all types of motor vehicles, bicycles, watercraft, trailers, airplanes or construction equipment. However, sites zoned industrial can exclude vehicular use areas designated for heavy-duty truck parking, loading, and maneuvering from these calculations.

Xeric: Native plants as well as other trees, shrubs, ground covers, and vines proven to survive only on natural rainfall after a sufficient plant establishment period.