ORDINANCE SUMMARY

Lake County Comprehensive Plan requires the landscape code be updated on a periodic basis. In 2006, the Board of County Commissioners requested that the Landscape and Tree Protection Regulations be updated. The changes indicated herein have involved several meetings with representatives of the County, City of Clermont, Cooperative Extension Service, Water Management District, Water Authority and the landscaping community.

Summary of Changes to Section 9.01.00 development design and improvement standards:

1. Clarifying applicability to existing development;
2. Requiring revegetation if development has not occurred within six months of development approval;
3. Providing that damage or destruction of each tree constitutes a separate violation;
4. Increasing the standard height, caliper and size of required vegetation;
5. Changing requirements for landscaped buffer zones; Allowing some wall heights to be eight feet (8') wall height (such as in heavy industrial sites) Allowing ornamental fencing for other landscape buffers.
6. Banning St. Augustine sod for new construction.
7. Proposing certain limitations to the type of irrigation zones; high, medium and low water use zones.
8. Proposing more landscape islands in parking lots; requiring landscape islands for every ten rather than fifteen parking spaces; and
9. Requiring a certain number of trees based upon square feet of lot.

Summary of changes to Section 9.02.00 Protected Trees:

1. Providing for a list of protected and recommended trees, shrubs and other plants;
2. Amending the list of prohibited trees;
3. Clarifying the silviculture exemption to tree removal permits; and
4. Providing for alternative tree replacement requirements;

Changes are shown as follows: ~~Strikethrough~~ for deletions, Underline for additions.
Notations showing "* * *" indicate that no changes are proposed between modified sections.

Changes shown in yellow highlight were made after the 12/20/08 hearing based on input received from the public and staff. These items are acceptable to staff and will be addressed at the 1/16/08 LPA meeting. These changes are shown in an effort to address issues that will be raised at the hearing to which staff is in agreement in an expeditious manner. These additions not intended and shall not be construed to indicate acceptance by the LPA. A hardcopy of these changes will be provided at the hearing.

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF LAKE COUNTY, FLORIDA; AMENDING CHAPTER II, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS, ENTITLED DEFINITIONS; AMENDING CHAPTER IX, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS ENTITLED DEVELOPMENT DESIGN AND IMPROVEMENT STANDARDS; AMENDING SECTION 9.01.00, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS, ENTITLED LANDSCAPING STANDARDS; AMENDING SECTION 9.02.00, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS, ENTITLED PROTECTED TREES;

PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Chapter IX, Lake County Code, Appendix E, Land Development Regulations, entitled Development Design and Improvement Standards, sets forth the design and improvement standards for landscaping and Tree Protection; and

WHEREAS, Comprehensive Plan Policy 1-1.3 requires Land Development Regulations be adopted to minimize potential adverse impacts created by different land uses located adjacent to each other by requiring the provision of landscaping, buffering, or other appropriate screening techniques; and

WHEREAS, the Board of County Commissioners (the "Board") desires to amend Chapter IX to update the design and improvement standards and best management practices to conserve water, improve water quality, provide habitat and enhance aesthetics; and.

WHEREAS, the Board determines that amending Chapter IX is in the best interests of the citizens of Lake County, Florida; and

NOW, THEREFORE, BE IT ORDAINED by the Board of County Commissioners of Lake County, Florida, that:

Section 1. **Recitals.** The foregoing recitals are true and correct and incorporated herein by reference.

Section 2. **Amendment.** Chapter II Lake County Code, Appendix E, Land Development Regulations, entitled Definitions, is hereby amended to read as follows:

* * *

Plant List for Lake County. Separate document that provides a listing of recommended canopy trees, ornamental trees, shrubs, groundcover and grasses for Lake County. The publication shall be managed by the Growth Management Department and updated on a periodic basis. The publication shall also contain a listing of prohibited exotic and invasive plants.

Florida Green Book. The Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Roads, May 2002 Edition, as amended or revised.

* * *

Florida Friendly Landscaping — Describes practices, materials, or actions that help to preserve Florida's natural resources and protect the environment. Promotes nine (9) essential principals:

a. Right Plant, Right Place
b. Water Efficient
c. Appropriate use of Fertilizer
d. Utilizes Mulch
e. Attracts Wildlife
f. Controls Yard Pests Responsibly
g. Recycles organic material
h. Reduces Storm Water Runoff
i. Protects the Waterfront

* * *

Visibility Triangle. The Areas of property on both sides of an access way and the public right-of-way pavement line with two (2) sides of each triangle being twenty-five (25) feet in length from the point of intersection and the third side being a line connecting the ends of the other sides.

* * *

Section 3. **Amendment.** Chapter IX, entitled **Development Design and Improvement Standards** of the Lake County Code, Appendix E, Land Development Regulations, is hereby amended to read as follows:

9.01.00 Landscaping Standards.

9.01.01 Purpose~~ and Protection Standards~~. The purpose of this section is to provide minimum standards for landscaping, buffering and tree protection within the unincorporated Area of Lake County. This section shall be implemented so as to promote the preservation of native plant species and to provide for aesthetic landscaping complements to proposed development and encourage the use of plants that are Florida Friendly Landscaping.

~~A. The purpose of this Section is to provide minimum standards for Landscaping, Buffering and tree protection within the unincorporated Area of Lake County. This Section Shall be implemented so as to promote the preservation of native plant species and to provide for aesthetic Landscaping complements to proposed Development and encourage the Use of plants that are drought tolerant.~~

~~B. Tree Protection Standards. The protection measures described in this Subsection are based on those described in the Tree City USA Bulletins published by The National Arbor Day Foundation: How to Save Trees During Construction (No. 8, 1998), A Systematic Approach to Building with Trees (No. 20, 1998), and How to Protect Trees During Underground Work (No. 35, 1998). These publications are hereby adopted and included by reference herein. A copy of such publications is available from the County Manager or designee. This publication should~~shall~~ be used to supplement the required protection measures. It also provides information on the economic value of trees to developments and their incorporation into designs as well as guidelines on professional tree care, tree planting and tree transplanting. The Lake County Tree Protection Standards are detailed in Subsection 9.01.10.A.~~

9.01.02 Applicability and Additions to Existing Development.

A. *Applicability*. It shall be unlawful for any person to clear, develop or increase the developed Area of any Lot, Parcel, Plot or Tract of Land unless in compliance with the terms of ~~this~~ Section 9.01.00 and Section 9.02.00, ~~or~~ unless otherwise exempted by these regulations. ~~this Section~~.

B. *Additions to Existing Development.* As a condition of approval for ~~such~~ any addition, the owner Shall comply with the requirements of this Section upon the following:

1. ~~should~~sShall- ~~a~~any addition made to a Structure and/or parking Area existing as of the effective date of this Section which exceeds a twenty-five (25) percent cumulative increase in the size of the existing Structure(s) floor area and/or parking area(s).
2. Additions of less than twenty-five (25) percent shall only be responsible for buffering the new structure; ~~or~~
3. Additions of 4,000 square feet of impervious area;~~.~~

C. It shall be the responsibility of the ~~newly approved~~approved use or development to provide all ~~the required~~ landscape and buffering as required by this section prior to occupation or operation.

Section 9.01.02A Prohibition, Separate Violations and Revegetation.

A. *Separate Violations.* Each tree damaged or destroyed without a permit required under Section 9.01.00 or Section 9.02.00 shall be considered a separate violation punishable as provided by law and also listed by these sections. Determinations of the number of cleared trees shall be based on best available data that may include surveys of adjacent property or aerial photographs taken prior to clearing.

B. *Re-vegetation Required.* If a property has not been developed within six (6) months of receiving development approval, re-vegetation shall be required.~~;~~

9.01.03 General Requirements

A. *Landscaping.* All ground surface Areas of any Lot, Plot, Tract or Parcel of Land, however designated, must maintain Landscaped Areas to eliminate Erosion, reduce the generation of dust particles and other windborne particles, provide aesthetic relief, and further the objectives of this Section.

B. *Monoculture.* In order to guard against disease susceptibility,

a. If ten (10) or more canopy trees are required then a minimum two (2) species shall be required; a minimum of thirty-five percent (35%) shall be any one species.
b. If thirty (30) or more canopy trees are required then a minimum three (3) species shall be required; a minimum of twenty-five percent (25%) shall be any one species.
c. If fifty (50) or more canopy trees are required, then a minimum four (4) species shall be required; a minimum of fifteen percent (15%) shall be any one species.
d. Shrub Diversity: For all required shrubs in the landscape plan, the developer shall meet the following diversity requirements:

i. For Plans requiring 350-699 shrubs, then a minimum of two (2) different species shall be used with a minimum of thirty percent (30%) for any one species.

ii. For Plans requiring 700-999 shrubs, then a minimum of three (3) different species shall be used with a minimum of twenty percent 20% for any one species.

iii. For Plans requiring 1000 shrubs or more, then a minimum of four (4) different species shall be used with a minimum of fifteen percent (15%) for any one species.

e. The County Manager or designee may Permit exceptions to this subsection where trees are used as a design element such as Bosques or Allees or based on Landscape design intent including but not limited to shrubs massed for the purposes of creating a unifying effect for color, texture, and shape or erosion control.

C. *Plant Substitutions*: The Applicant may make plant substitutions from any approved plan with approved plants that are on the Lake County approved plant list or designated as Florida Friendly with approval by the County Manager or designee as follows:

1. Significant changes require the resubmittal of a Landscape Plan and the appropriate fee. If any other changes have taken place that affects the landscape redesign, then a site plan amendment shall be needed. Significant changes are considered when a buffer is relocated or if five percent (5%) or more of the percentage of the landscape is changed in any one site.

2) Minor changes may be allowed to an approved Landscape Plan as follows: changing ten (10) or fewer trees, moving a buffer less than twenty (20) feet or making other minor plant changes with written permission from the County Manager or designee.

D. *Installation.* All Landscaping Shall be installed according to "Selecting and Planting Trees and Shrubs, ", published by the University of Florida/Florida Cooperative Extension Service (Institute of Food and Agricultural Sciences, Circular 858, October 2003 June 1990 and subsequent editions) and by "WaterStar Florida Landscaping" published by the St. Johns River Water Management District and which describes the principles of "right plant, right place". These is publications areis hereby adopted and included by reference herein. A copy of this publication is available from the County Manager or designee.

E. *Maintenance.* The owner of a Property Shall be responsible for the maintenance of all Landscaping so as to present a neat, healthy, and orderly appearance free of refuse and debris. All required Landscaping, pursuant to Site Plan approval, Shall be maintained in perpetuity. All required Landscaped Areas Shall contain an automatic irrigation system in accordance with Subsection 9.01.03(I), except for waterwise landscapes and/or Florida Friendly Xeriscape Landscapes per Section 9.01.03.IJ, and as approved by the County Manager or designee.

F. *Pruning*. Vegetation and trees required by these regulations shall only be pruned to maintain health and vigor. Pruning shall be in accordance with Standard Practice for Trees, Shrubs and Other Woody Plant Maintenance, ANSI 300 of the National Tree Care Association. Trees shall not be severely pruned in order to permanently maintain growth at a reduced height or spread. A tree's natural growth habit shall be considered in advance of conflicts which might arise (i.e. view, signage, lighting and similar conflicts). Excessive pruning (hat racking, topping, etc.) Shall be considered tree abuse and a violation of these regulations. These regulations apply to newly installed trees as well as established trees.

G. *Staking*. Staking may be required and will be determined on a site-by-site basis. All staking shall be in accordance with "Selecting and Planting Trees and Shrubs", published by the University of Florida/Florida Cooperative Extension Service (Institute of Food and Agricultural Sciences, Circular 858, June 1990 and subsequent editions).

H. *Plant Materials*

1. *Quality*. Plant materials used in conformance with the provisions of this Section Shall conform to the standards for Florida No. 1 or better as given in Grades and Standards for Nursery Plants, State of Florida, Department of Agriculture and Consumer Services, Tallahassee (97T-05, second edition, February 1998), which is hereby adopted and included by reference herein. A copy of such publication is available from the County Manager or designee. All plant material shall be planted in suitable soil ~~or soil that has been amended~~ to Permit its survival. ~~Plant materials listed for the site should~~shall ~~be found planted successfully within sixty (60) miles of Lake County.~~

2. *Native Plants.* A minimum of fifty percent (50%) of the required trees and shrubs shall be native species suitable for the site. This requirement shall increase to 75% two (2) years after the adoption of this section. Landscaping installed in addition to this requirement is not subject to this provision. ~~The preservation and Use of native material is encouraged and recommended.~~

3. *Canopy Trees.* To meet the minimum requirements, trees planted under this Section Shall be a minimum of two and one-half inches (2.5)~~two (2)~~ caliper and in a thirty (30) ~~fifteen (15)~~ gallon container or greater. Equivalent ball and burlap trees may be used; but container trees shall be preferred. The minimum height of trees is eight (8) feet and the minimum spread is four (4) feet. Trees planted voluntarily may be of any size. ~~Palms are measured by height of clear trunk. The minimum size for palms is four (4) feet of clear trunk for tree-form palms or five (5) feet from the ground surface to the apical bud for shrub-form palms.~~ A list of recommended Landscaping trees is provided in ~~Recommended Plants~~ The Plant List for Lake County.~~Subsection 9.01.10.B~~. New tree calipers shall be measured six inch (6") above grade for trees that are under four inch (4") caliper and

measured twelve inch (12”) above grade for trees that are larger than four inch (4”) tree caliper. Existing tree calipers are measured at Diameter at Breast Height (DBH) or fifty four inch (54) height from grade.

A. Additional Tree Credits for new Canopy Trees planted:

1) Minimum 2.5-inch ~~2-1/2”~~ Caliper x 8-feet Height x 4-foot Spread = 1 Canopy Tree Credit

2) Minimum 4-inch Caliper x 12-foot Height x 5-foot Spread = 2 Canopy Tree Credits

3) Minimum 6-inch~~”~~ Caliper x 14’-foot Height x 6-foot~~’~~ Spread = 3 Canopy Tree Credits

4. *Ornamental trees.* Ornamental trees set forth in The ~~Recommended Plants~~ Plant List for Lake County ~~-~~Shall be used as ornamental or accent trees when required, and may be used in place of canopy trees in situations where height restrictions or root zone intrusion issues are shown to be a concern , such as under power lines. ~~Or for a unique design concept to meet the minimum requirements.~~ In the case of ornamental trees being used in place of canopy trees, then a two to one ratio (2:1) ratio shall be required. ~~, or for a unique design concept to meet the minimum requirements~~. Ornamental trees shall be a minimum of two (2) inches in caliper and be in a thirty (30) gallon container or greater. The minimum height of an ornamental tree is eight (8) feet and the minimum spread is four (4) feet. For multi-trunk trees, trunks shall have an average cumulative caliper of two (2)-inches.

A. Tree Credits for new Ornamental trees planted:

1. Minimum 2-inch Caliper x 8-feet Height x 4-feet Spread = 1 Ornamental Tree Credit
2. Minimum 3-inch Caliper x 10-feet Height x 5-feet Spread = 2 Ornamental Tree Credits
3. Minimum 4-inch Caliper x 14-feet Height x 6-feet Spread = 3 Ornamental Tree Credits

5. ~~*Ornamental Trees and*~~ *Palms*. ~~In addition to protected trees, ornamental trees and~~ Palms set out in The ~~Recommended Plants~~ Plant List for Lake County may also be used to meet the minimum requirements. In no case shall the total number of ~~trees~~ palm trees of all species combined from The ~~Recommended Plants~~ Plant List for Lake County ~~Subsection 9.01.10.C~~ account for more than twenty ~~five~~ (20%~~5~~) percent of the required Landscape trees. The minimum size of palms is four (4) feet of clear trunk for tree form palms. If Palm trees are ~~may be~~ used in lieu of ~~for~~ canopy trees the following ratios shall apply:

A. Two (2) palm trees count as one (1) canopy tree unless it is a large specimen palm tree such as Medjool or Date Palms which may be counted as one (1) palm tree to one (1) canopy tree.

B. Palm trees shall not exceed twenty percent (20%) of the required canopy tree requirement.

6. *Shrubs*. The shrubs listed in The ~~Recommended Plants~~ Plant List for Lake County shall be used for all visual screens that are required pursuant to the provisions of this Section and shall be planted on ~~the~~ minimum centers listed in The ~~Recommended Plants~~ Plant List for Lake County. The minimum installed height of shrubs shall be twenty-four (24") height by eighteen inches spread (18") ~~table~~. The County Manager or designee may permit exceptions to the minimum centers, based on Landscape design intent including but not limited to massing for color, texture, and effect or Erosion control. The following standard applies:

A. In Type A, B, or C landscape buffer, shrubs Shall be a minimum of two (2) feet tall at the time of planting and in a minimum of a three (3) gallon container. Shrubs planted to fulfill the requirements of the Type A, B, or C Buffer Shall be able to obtain a height of three (3) feet within twelve ~~to eighteen~~ (12~~-18~~) months of planting under normal growing conditions.

B. In Type D and E landscape buffer, a minimum height of three~~four~~ (3~~4~~) feet tall shall be required at the time of planting and in a minimum of a five (5) gallon container. Their spread shall be appropriate for their size and species. Small or shrub-form palms shall be a minimum of three (3) feet from the ground surface to the apical bud. Shrubs planted to fulfill the requirement of a Type D and E buffer shall be able to obtain a height of five~~to six~~ (4~~5-6~~) feet in twelve (12) months and be maintained at a height of at least five~~six~~ (5~~6~~) feet.

7. *Lawn Grass*. ~~Grass Areas Shall be planted in species normally grown as permanent lawns in the vicinity of the County.~~ Grass Areas may be sodded, plugged, sprigged, or seeded and shall provide complete coverage planted to industry standards. ~~Drought-tolerant species are outlined in Subsection 9.01.10.E.~~ Complete coverage Shall mean that, once established, not more than ten (10) square feet cumulative of bare ground per one-quarter (1/4) acre of grass Area are exposed. Nothing herein shall be construed to prevent a landowner from converting lawn grass areas to Florida Friendly landscapes that require less water.

8. *Slopes*. Solid sod shall be used on slopes greater than fifteen ~~(15)~~ percent (15%). ~~Complete coverage Shall mean that not more than ten (10) square feet cumulative of bare ground per one-quarter (1/4) acre of grass Area are exposed.~~

9. *Synthetic Lawns and Plants*. Synthetic or artificial turf and plants may ~~Shall~~ be used ~~prohibited from Use~~ in lieu of required Landscape material on a case by case basis and with approval by the County Manager or designee.

10. *Architectural Planters.* The Use of permanent or moveable architectural planters may be permitted in fulfillment of Landscape requirements upon approval of the County Manager or designee. The planters shall be adequately sized for palms, ~~or~~ ornamental trees and shrubs, shall not cause the roots to bind and shall permit water to drain through the base of the planter. The base of the planter shall be wide enough that it does not blow over in mild to moderate winds. Required Canopy trees are prohibited from being planted in moveable planters.

11.~~10.~~ *Existing Trees.* Existing trees may be counted for tree requirements in Section 9.01.00 ~~and 9.02.00~~ pursuant to the following criteria:

a. The tree shall be in very good health and free of pests, disease, or injury.

b. The tree can be deciduous, coniferous, or evergreen, but no more than twenty ~~five~~ (~~25~~20%) percent of the existing native palm species ~~Shall~~shall count toward the tree requirement. ~~One (1) native palm Shall count as one (1) tree.~~

c. The minimum size of an existing canopy tree to count toward a tree requirement is two (2) inches diameter at breast height (DBH) with a minimum height of ~~-~~eight~~-~~ feet (8'), and a minimum spread of four (4') feet for trees and four (4') feet of clear trunk (tree-form). The trees used for tree credits shall be on The ~~Recommended Plants~~ Plant List for Lake County.

d. The tree ~~Shall~~shall not be a prohibited species ~~as outlined in Subsection 9.02.02.B.1~~.

e. The tree may count toward the ~~replacement requirements for the Lake County Tree Removal Permit or~~ required Landscaping for Site Plan or Residential development. To count for buffering or interior landscape requirements; the existing tree must be located within the appropriate corresponding area. ~~The tree Shall not count toward both requirements simultaneously.~~

f. ~~The caliper of the existing tree Shall count toward required trees as follows~~ Tree credits given for existing qualifying canopy trees:

Existing Tree Size based on DBH	Number of Trees Credited for required landscape – (not used for replacement trees)
2"-6.99"	1 Canopy Tree Credits
7"-12.99"	2 Canopy Tree Credits
13"~~-18"~~or greater	3 Canopy Tree Credits

C. 1. Ornamental trees meeting a minimum cumulative caliper shall be credited as one (1) existing ornamental tree = 1 replacement [Minimum two inch (2”) Caliper x eight feet (8’) height x four feet (4’) spread].

Caliper of Existing Tree	Number of Trees Credited
2--6	1
7--12	2
13--18	3
19--24	4
25--30	5
36--41	6
42 and greater	7

11 12. All Landscape material Shall be suited to soil and climate conditions of the siteCentral Florida in order to conserve water.

I. *Irrigation.*

1. For aIn all required landscaped areas, irrigation shall be used in order if necessary in order to establish and maintain the healthoptimal growth of plant material. Temporary irrigation may be utilized, if approved by the County Manager or designee, with a provided a Maintenance Plan by the applicantis submitted. Installed irrigation shall be noted on the landscape plan as; “All required irrigated landscape areas materials shall be irrigated with use an automatic irrigation system with a rain sensor shut off”.. or separate irrigation plans shall be provided for review The irrigation system shall be in compliance with The Florida Building Code and State Statue 373.62 F.S. for rain sensor shut-off devices. Micro-irrigation may be utilized to conserve water resources provided it is in compliance with the Florida Building Code.

a. Irrigation shall be limited to two days a week before 10:00 a.m. and after 4:00 p.m.as required by the applicable Water Management District.

b. Watering for new landscapes shall comply with the applicable St Johns or Southwest Florida Water Management District Guidelines.

2. In order to conserve potable Groundwater, Brightwater, Reclaimed water, reclaimed water, and Rainwater from cistern collection are recommended as primary irrigation sources. storm water ponds and cistern collection may be utilized for irrigation water if the water quality will meet the needs of the landscape. Any reuse irrigation water or storm water used for irrigation shall be marked with appropriate signage to let the public know about the non-potable

nature of the water source in conformance with the Florida Building Code. Purple pipe and irrigation heads shall be used in conformance with the Florida Building Code. Developments seeking to use water from retention ponds or natural lakes shall comply with all requirements of the appropriate Water Management District. ~~Or regionally applicable water management authority.~~

3. Automatic irrigation systems shall comply with the following requirements: ~~An automated irrigation system is required for Commercial buildings with over one thousand (1,000) square feet of Landscape area, and shall be~~:

a. Be zoned to reflect different levels of water usage. For the most efficient Use of irrigation, plants with similar water Use requirements ~~should~~shall be grouped together~~: such as low with medium water requirements or medium with high water requirements~~. Turf and shrub beds shall- be on a separate zone.

b. Be on a 24-hour automatic timer with a Backflow Prevention Device.

c. Be keyed to topography and soil type as to avoid runoff and promote optimal percolation.

d. Have a rain sensor per Section 373.62 of the Florida Statutes and shall be required to restrict the irrigation system from operating when adequate rainfall has occurred.~~ soil is saturated~~.

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4. In situations where irrigation is not required in small commercial or Community Facility Districts such as ~~billboards,~~ communication towers~~,~~ or antennae array areas, drought-tolerant species of ~~turfgrass~~grass shall be used. ~~in remote Commercial installation.~~ Refer to ~~Subsection 9.01.10.F~~ The ~~Recommended Plants~~ Plant List for Lake County for types of low water use ~~turfgrass~~ grass.

5. When a permanent system is not required, a temporary system is allowed and encouraged for establishment of Landscape material.

6. Pop-up irrigation heads shall be no shorter than six (6) inches when fully extended for turf grass irrigation.

7. Landscaped Areas that are irrigated shall not be less than five (5) feet in width. Areas less than five (5) feet in width shall incorporate micro-irrigation.

J. ~~*Voluntary*~~ *Mandatory Waterwise or Florida Friendly Landscape Measures. Site Appropriate Plants*~~*Voluntary Xeriscaping Measures*~~. The purpose of this Subsection is to establish minimum standards for the development, installation, and maintenance of Landscaped Areas on a Site with water Use efficiency as a goal without inhibiting the Use of creative Landscape design. Waterwise and~~/or~~ Florida Friendly landscaping, promotes ~~encourages~~

specific water conservation measures including the re-establishment of native plant communities, the Use of Site specific plant materials, and the Use of native vegetation. The intent of this Subsection is to recognize the need for the protection of groundwater as a Natural Resource through the application of enhanced Landscape practices, that water-efficient Landscaping maximizes the conservation of water by using Site appropriateadapted plants and efficient watering methods that will generally result in a reduction of irrigation requirements, costs, energy and maintenance. Irrigation should endeavor to shallfollow Florida Irrigation Society standards and Florida WaterStar standards maintained by the St. Johns Water Management District and comply with the Florida Building Code.

1. Applicants for Site Plan approval for development, redevelopment, and rehabilitation of all Parcels within unincorporated Lake County shall follow the requirementsguidelines of this Subsection.

2. In addition to the Landscape plan approval in Subsection 9.01.067.A, the following items will be required as a part of the site plan submittal to ensure that when water-efficient and waterwise principles are used.

   a. Illustrate and label the water Zone requirements. See Section 9.01.03.J.(3.)(E.1 through 3)

   b. Illustrate and label all areas of the Site to be preserved in a natural state, and therefore do not require irrigation.

   c. Illustrate and label all turf grass and shrub areas.

   d. Provide a maintenance schedule and management plan.
   d. Irrigation Plan in accordance with site requirements.

3. Any construction or Development activity requiring planting within Buffers or other Landscaping is encouragedrequired to be consistent with water-efficient Landscaping standards established herein. To achieve the objectives of this Subsection, the six seven (67) basic principles of water-efficient Landscaping shall be followed. are incorporated. These principles are:

   a. *Good design.* Preservation of existing vegetation Areas when possible. Installation of plant material in groups according to the water needs of the genus and species. The plants shouldshall be grouped as follows:

      1. *High water Use zones.* Plant material that is associated with moist soils and require supplemental water in addition to natural rainfall to survive. The high water Use Zone plant material be limited to less than fifty 50) percent of the total Landscaped Area of the site

~~2.*Moderate water Use zones*. Plant material that can survive on natural rainfall with supplemental water during seasonal dry periods.~~

~~3. *Low water Use zone*. Plant material that can survive on natural rainfall with no supplemental water.~~

A~~b~~. *Soil Analysis.~~improvement.~~* The existing soils on the Site ~~should~~shall be analyzed to help determine the appropriate plant types for the site. ~~The soils should~~shall ~~be enhanced if needed to give the soils more moisture retention capabilities~~

B~~c~~. *Use of mulch*. Organic mulches ~~should~~shall be used and maintained around all trees located in turf grass areas, in Landscaped Areas not planted or not appropriate for growing turf grass ~~or groundcover,~~ and in all planted areas.~~-~~ Due to slow growth rate, low renewability as a natural resource, and impacts to wetlands, cypress mulch shall not be used. Mulch shall be installed a maximum of two (2) inches deep and kept off the root ball and a minimum of two feet (2') away from the foundation of any structure. Mulch shall be kept a minimum of one foot (1') from the base of a tree trunk.

C~~d~~. *Limit irrigated lawn areas*. The use, type, and location of lawn Area in the Landscape Shall be selected in a planned manner and not used as a fill-in material. Low water use grasses such as Bahia are encouraged to cover areas reserved for turf. Since most lawn varieties used in the Landscape require supplemental watering more frequently than other types of Landscape plants, turf shall be placed so that it can be irrigated separately. Bahia grass, Zoysia Grass or other drought tolerant turf, shall be used. St. Augustine ~~sod~~grass shall not be permitted for new construction and lawn replacement in excess of fifty percent (50%) of existing lawn areas. ~~per the effective date of this .Ordinance~~.

D~~e~~. *Low water use plants*. Landscape ~~P~~plants ~~should~~shall be selected based on appropriateness ~~the plant's adaptability~~ to the site considering conditions such as soil type, moisture and sunlight using the principa~~a~~le of "right plant-right place."~~, desired effect, color, texture, and mature size.~~ The ~~Landscape should~~shall ~~be designed to give the desired aesthetic effect and~~ plants ~~should~~shall be grouped in accordance with their respective water needs. ~~The Use of native plants is encouraged whenever possible~~ . A list of ~~recommended~~ low water use plants ~~material~~ is contained ~~listed~~ in The ~~Recommended Plants~~ Plant List for Lake County.

E~~f~~. *Efficient and well designed irrigation~~ and good design~~*. The irrigation system shall be designed to correlate to the water ~~U~~use plant zones established in the Landscape design. The following criteria for irrigating the Site ~~should~~shall be used in the design of the system. Golf Course

Fairways and Greens, greenhouses, landscape nurseries, retail nurseries and agricultural production systems are exempt from meeting these requirements. Landscape production and retail centers ~~nurseries~~ shall comply with the watering restrictions for any landscape that is required as a part of landscape buffering, parking or other required landscape not related to the production or selling of landscape material on site.

1. *High Water Use Zones*. Plant material that is associated with moist soils and require supplemental water in addition to natural rainfall to survive. Generally, watering is limited to twice a week or as determined by the appropriate Water Management District. Watering shall not exceed three quarter (3/4") of an inch of water per application. The High Water Use Zone plant material shall be limited to less than twenty (20%) percent of the total Landscaped Area of the site. This high water use zone includes turf areas and annual beds. ~~Golf Course Fairways and Greens, greenhouses, landscape nurseries, retail nurseries and agricultural production systems are exempt from meeting these requirements.~~
~~In the high water Use zones all portions of the Zone Shall be provided with an automatic irrigation system with low volume heads that are timed to produce no more than (2) inches of water per week in established Landscapes~~ .

2. *Moderate water Use zones*. Plant material that can survive on natural rainfall with supplemental water during seasonal dry periods. Forty percent (40%) maximum of the landscape area shall be of the moderate water use zone. Generally, watering will not exceed once per week with a maximum of three quarter (3/4") of an inch per week.
~~In the moderate water Use zone, all portions of the Zone Shall be provided with a readily available water supply within twenty-five (25) feet to supplement natural rainfall when needed and to help ensure that watering will take place until the plant material is established~~.

3. *Low Water Use Zone*. Plant material that can survive on natural rainfall with low supplemental water. Forty percent (40%) minimum of the landscape area shall be of the Low Water Use Zone. Generally, watering will not exceed once every two weeks with a maximum of three quarter (3/4") of an inch per application. This zone is also characterized by low flow irrigation heads or micro-irrigation systems.
~~In low water Use zones, all portions of the Zone Shall be provided with a readily available water supply within fifty (50) feet to~~

~~supplement natural rainfall when needed and to help ensure that watering will take place until the plant material is established.~~

4. Rain sensor devices shall be required on all automatic irrigation systems to avoid irrigation during periods of sufficient rainfall.

5. The irrigation system shall be designed to minimize irrigation overthrow onto impervious surfaces and to avoid~~negate~~ any ponding effects.

6. ~~Required~~ ~~m~~Minimum size canopy trees requiring irrigation prior to becoming established shall use ~~have~~ tree bubblers or micro-irrigation on a separate zone~~. to ensure survival~~. Hand watering or a temporary irrigation system may be allowed providing sufficient water is provided to ensure the plants become established ~~as long as the owner is liable for all required landscape to live and thrive~~ in perpetuity. Temporary irrigation lines shall be covered by mulch or buried.

F~~g~~. *Appropriate maintenance*. ~~Lake County will require a maintenance plan to be submitted; this information is listed as a reference only.~~ Proper maintenance will preserve and ~~-~~enhance the quality of the Landscape. Included in the maintenance schedule should~~shall~~ be the time periods for the following: the checking, adjusting, and repairing of the irrigation system, resetting of the irrigation schedule according to the season, remulching, fertilizing, weeding, and pruning. Use of high amounts of fertilizer and pesticides is discouraged.

9.01.04 Landscape Requirements:

A. All Lots, Plots, Tracts or Parcels of Land Shall maintain Landscaping in Areas~~-~~ subject to site plan approval. ~~specifically authorized as a developed area~~. ~~The~~ This includes developed ~~Area~~areas, ~~includes~~ open space, and water retention areas. ~~Areas that have not been affected by Development and are illustrated on the Site plan, including clearing, grading, grubbing, or construction of Landscape or structural elements, are exempt from requirements of this Subsection~~~~Landscape buffers~~ ~~be required~~ ~~to screen uses that are viewed as incompatible or required by this code~~[b2]

B. General~~Required~~ Landscape Requirements: ~~ing~~ ~~adjacent to public rights-of-way for commercial, industrial, multi-family, condominium, institutional and community facility sites.~~

~~1. Minimum Buffer widths are addressed in Table 9.01.04.B.a. See Subsection 9.01.10.H.1-2 that depict illustrated examples of the following standards.~~

1. Between adjacent development parcels, ~~T~~the following Landscape plant materials Shall be required for ~~the~~ different Buffer types and width options per one hundred (100) linear feet of buffer length. Buffer lengths shall be determined to the nearest tenth and then multiplied by the number of plants required. For example, a three hundred and thirty foot buffer would be as follows for buffer A: 3.3 x 3 Canopy Trees = 9.9 Canopy trees required. For plants required standard math rounding will be used. For example, if 3.5 Canopy Trees are required per the multiplier, then that number would be rounded to four (4) Canopy Trees required. ~~(~~Existing native or indigenous vegetation may be used to meet the buffering requirements as long as it meets the minimum sizes set forth herein and is labeled and depicted on the Landscape Plan~~)~~

Table 9.01.04.B.2.A

Landscape Buffers between Zoning Types

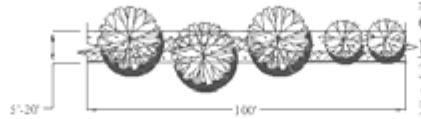
*Indicates that no landscape buffer is required.

	A~~gr~~	RA	AR	R1	R2	R3	R4	R5	R6	R7	RP	RMRP	RM	C1	C2	CP	LM	HM	MP	CFD	RV	PUD
A~~gr~~	*	*	*	*	*	*	*	*	*	*	A	~~*~~ A	A~~*~~	C	C	C	D	D	D	A	B	B
RA	*	*	*	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A	~~*~~ A	A~~*~~	C	C	C	D	D	D	A	B	B
AR	*	*	*	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A	~~*~~ A	A~~*~~	C	C	C	D	D	D	A	B	B
R1	*	A~~*~~	A~~*~~	*	*	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A	~~*~~ A	A~~*~~	C	C	C	E~~D~~	E~~D~~	E~~D~~	A	B	B
R2	*	A~~*~~	A~~*~~	*	*	*	*	*	*	*	A	~~*~~ A	A~~*~~	C	C	C	E~~D~~	E~~D~~	E~~D~~	A	B	B
R3	*	A~~*~~	A~~*~~	A~~*~~	*	*	*	*	*	*	A	~~*~~ A	A~~*~~	C	C	C	E~~D~~	E~~D~~	E~~D~~	A	B	B
R4	*	A~~*~~	A~~*~~	A~~*~~	*	*	*	*	*	*	A	~~*~~ A	A~~*~~	C	C	C	E~~D~~	E~~D~~	E~~D~~	A	B	B
R5	*	A~~*~~	A~~*~~	A~~*~~	*	*	*	*	*	*	A	~~*~~ A	A~~*~~	B	B	B	E~~D~~	E~~D~~	E~~D~~	A	B	B
R6	*	A~~*~~	A~~*~~	A~~*~~	*	*	*	*	*	*	A	~~*~~ A	A~~*~~	B	B	B	E~~D~~	E~~D~~	E~~D~~	A	B	B
R7	*	A~~*~~	A~~*~~	A~~*~~	*	*	*	*	*	*	A	~~*~~ A	A~~*~~	B	B	B	E~~D~~	E~~D~~	E~~D~~	A	B	B
RP	A	A	A	A	A	A	A	A	A	A	A	~~*~~ A	A~~*~~	B	B	B	E~~D~~	E~~D~~	E~~D~~	A	A	B
RMRP	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	~~*~~ A	A~~*~~	B	B	B	E~~D~~	E~~D~~	E~~D~~	A	A	B
RM	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	A~~*~~	C	C	C	E~~D~~	E~~D~~	E~~D~~	A	B	B
C1	C	C	C	C	C	C	C	B	B	B	B	B	C	B	B	B	E~~B~~	E~~B~~	E~~B~~	B	B	B
C2	C	C	C	C	C	C	C	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B
CP	C	C	C	C	C	C	C	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B
LM	D	D	D	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~B~~	B	B	B	B	B	B	C	D	B
HM	D	D	D	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~B~~	B	B	B	B	B	B	C	D	B
MP	D	D	D	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	E~~D~~	B	B	B	B	B	B	C	D	B
CFD	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	C	C	C	B	B	B
RV	B	B	B	B	B	B	B	B	B	B	A	A	B	B	B	B	D	D	D	B	B	B
PUD	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

Table 9.01.04.B.2.B
Land Use Buffer Area Requirements and Options

Buffer Area Type (See Table 9.01.04.B.2.A)	Width Options (All options available unless restricted)	Landscape/Hardscape Requirements (per 100 linear~~l~~ feet of Buffer Area)
A	1. 20 Feet	Three (3) canopy trees with two (2) ornamental trees plus two (2) foot height landscape shrub screen
	2. 10 Feet	Three (3) canopy trees with two (2) ornamental trees plus two (2) foot height landscape shrub screen or wall or fence
	3. 5 Feet	Three (3) canopy trees with two (2) ornamental trees plus two~~six~~ (2~~6~~) foot height landscape shrub screen or six (6) foot wall or fence
B	1. 20 Feet	Four (4) canopy trees plus three (3) ornamental trees and two (2) foot landscape screen
	2. 15 Feet	Four (4) canopy trees plus three (3) ornamental trees and two (2) foot landscape shrub screen or same height wall or fence
	3. 10 Feet	Four (4) canopy trees plus three (3) ornamental trees and two (2) foot landscape shrub screen plus six (6) foot wall or fence
C	50 Feet	Five (5) canopy trees plus four (4) ornamental trees plus double row of a two (2) foot height landscape shrub screen
	25 Feet	Five (5) canopy trees plus four (4) ornamental trees plus double row of a two (2) foot height landscape shrub screen plus six (6) foot wall or fence. An additional 300 SF of landscape groundcover other than turf is required
	15 Feet	Five (5) canopy trees plus four (4) ornamental trees plus double row of a two (2~~3~~) foot height landscape shrub screen plus eight (8) foot wall or fence. An additional 300 SF of landscape groundcover other than turf is required.
D	100 Feet	Six (6) canopy trees plus (5) ornamental trees with a four~~two~~ (4~~2~~) foot height shrub planted in a double row with optional three (3) foot high berm. An additional 300 SF of landscape groundcover other than turf is required

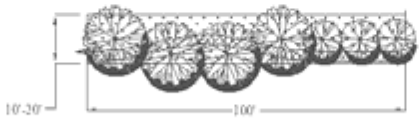
	50 Feet	Six (6) canopy trees plus (5) ornamental trees with a four~~two~~ (4~~2~~) foot height shrub planted in a double row with optional (3) foot high berm plus six (6) foot wall or fence. An additional 300 SF ~~feet~~ of landscape groundcover other than turf is required
E	50 Feet~~Varies~~	Ten (10) canopy trees plus (8) ornamental trees with a four~~two~~ (4~~2~~) foot height shrub planted in a double row- with (4) foot high berm



3 Canopy Trees
2 Ornamental Trees
5' Width
6' Ht. shrub screen or six foot wall or fence
10' Width
3' Ht. shrub screen or wall or fence
20' Width
3' Ht. landscape shrub screen

Buffer A

Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.



4 Canopy Trees
3 Ornamental Trees
10' Width
3' Ht. shrub screen plus six foot wall or fence
15' Width
3' Ht. shrub screen or same height wall or fence
20' Width
3' Ht. landscape shrub screen

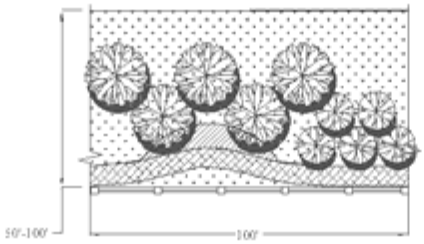
Buffer B

Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.

5 Canopy Trees
4 Ornamental Trees
Double row of 3' ht. landscape shrub screen
An additional 300 s.f. of groundcover other than turf
15' Width
8' Ht. wall or fence
25' Width
6' Ht. wall or fence
50' Width
No additional requirements

Buffer C

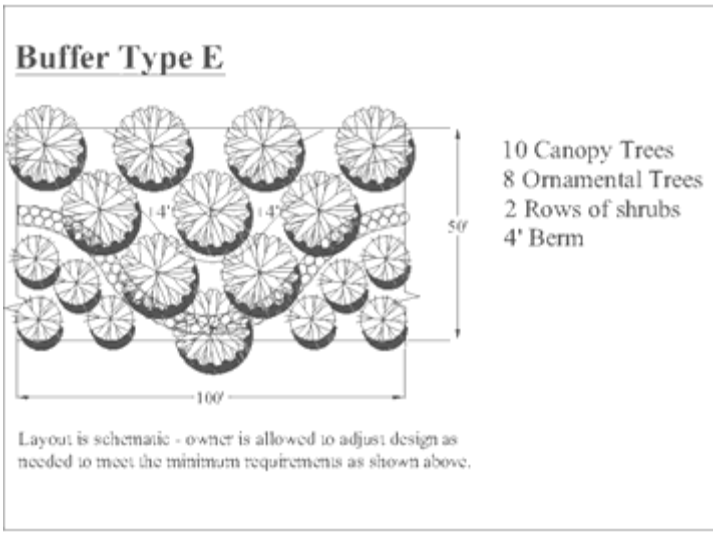
Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.



6 Canopy Trees
5 Ornamental Trees
Double row of 3' ht. landscape shrub screen
An additional 300 s.f. of groundcover other than turf
50' Width
Optional 3' Ht. berm
6' Ht. wall or fence
100' Width
No additional requirements

Buffer D

Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.



Zoning Based Buffering and Landscape Requirements:

1) "One-sided" wood fences Shall be installed with wood posts to the inside of the property that is installing the fence. ~~Any wood fence along a private or public right of way shall be painted.~~

2) The landscape material Shall be maintained in perpetuity.

Separately platted or phased developments will require a landscape ~~shared~~ buffer pursuant to the Zoning Buffer area requirements.

3) Allowed wall types include EFIS with stucco, stucco, brick, finished or textured block and poured-in-place concrete wall with a finished surface. Disallowed wall types include any type of wall that has an unfinished surface such as unfinished concrete or an unfinished (CMU) concrete masonry unit wall. Allowed fence types for fences or screens 3' or less include ornamental metal, opaque wood or other similar material. For fences or screens 6' or taller an opaque material shall be used. Chain link fencing may not be used to meet this requirement.~~areas~~. Chain link fencing may be allowed around ~~certain~~ utility areas and towers as allowed by the Lake County ~~Land Development~~ Code.

4) Required canopy trees Shall generally ~~not~~ be spaced ~~more than~~ at 50-feet averages; however, clustering may be utilized if desired for design intent. Required ornamental trees Shall have a maximum spacing of 50-feet however; clustering may be utilized for design intent. ~~Generally,~~ Spacing of tree groupings Shall not exceed 150-feet. ~~to allow for views and or sign placement.~~

5) The buffer may be shared for similar zoned properties. The first developed use Shall be responsible for installing the buffer. The buffer width may be split between two similar use properties such as commercial to commercial.

~~*Table 9.01.04.B.2.a: Landscape Plants for Required Buffers Between Lots and Rights-of-Way*~~

~~Buffer Type~~	~~Minimum Width~~	~~Minimum Number of Canopy Trees~~		~~Number of Ornamental Trees*~~	~~Shrub Reqt~~
~~A~~	~~10~~	~~3~~	~~AND~~	~~2~~	~~1 single row of shrubs~~
~~B~~	~~15~~	~~4~~	~~AND~~	~~3~~	~~1 single row of shrubs~~
~~C~~	~~20~~	~~6~~	~~AND~~	~~5~~	~~Double (2 rows) of shrubs~~
~~D~~	~~30~~	~~10~~	~~AND~~	~~8~~	~~Double (2 rows) shrubs AND a min 6 high wall~~

~~*Ornamental Trees are optional and in addition to the minimum number of canopy trees for Buffer types "A" and "B" only.~~

~~Notes for Table 9.01.04.B.2.a~~

~~*Indicates that no Landscape Buffer is required.~~

7. ~~The~~ Any parcel developed adjacent to a public right-of-way ~~Parcel~~ shall have a Landscape Buffer along its right-of-way that reflects the landscape requirements of the zoning category across the road/street or a Type A landscape buffer, whichever is more intense. ~~unless the Parcel is located~~ If the parcel is located along a road classified as an arterial ~~roadway~~ as designated by the County, then the minimum buffer shall be Type C

Landscape Buffer unless the adjacent zoning requires a more intense buffer. The arterials are as ~~defined~~designated by the ~~Lake~~ County ~~Public Works~~or a State Road~~, including but not limited to, all segments of SR 50, US 27 and US 441~~ Department.

Additional requirements:

a. Seventy five percent (75%) of the required landscape buffer shall be located on the right-of-way side of any required fencing, walls or any other screening structures. In addition, at least one row of required screening shrubs shall be located on the right-of-way side of any screen, wall or other screening structures.

b. Any wall, fence or other screening structure built along a public right-of-way shall consist of harmonious screening material that has a consistent and uniform texture, color and pattern along all major roadways.

~~along the Arterials in Subsection 9.01.04.2.a. Then, the minimum Buffer ShallShall be 20', unless the "D" category Buffer is greater.~~

8. One (1) Landscape Buffer is required between similar zoned adjacent Parcels in a tract of land that is master planned as one development.. If ~~the~~ commercial parcels are part of a master planned commercial center or mixed use Planned Unit Development (PUD) the adjacent lots may share the installation with each providing fifty percent (50%) of the required minimum buffer. Individually developed commercial sites, not part of a master planned commercial center, shall install full buffers.

9. For commercial, industrial, PUD, single-family subdivisions and multi-family subdivisions~~-~~, all areas set aside as pervious area ~~including but not limited to retention ponds and parks~~, shall have ten (10) Canopy trees per acre minimum. Some parts of the site may be left as open space but the total ~~average~~ number of trees shall average 10 canopy trees per acre for pervious areas. Other landscape requirements of this Code ~~Ordinance~~ may be used to meet this requirement such as required landscape buffering and canopy trees required around retention ponds. This rule does not apply to the yards of a single-family home, whose tree requirements are listed in Section 9.01.05 of this code. ~~ten ()~~Permanent water bodies, wetlands and wet retention ponds shall be excluded in calculating the amount of pervious area ~~open space~~ requiring ten (10) canopy trees per acre.

10. ~~W~~Subdivisions greater than ten (10) lots, shall place the required landscape buffers ~~shall~~ in a separate tract or easement that is maintained by a homeowners association. ~~or a portion of a yard that is owned and maintained by an individual homeowner~~. ~~shallsite . Buffering between residential developments as required by the Landscape Buffers between Zoning Types (Table 9.01.04.B.2.A) shall only be waived through the Variance process.~~

11~~7~~. Within single-family and multi-family residential developments, a buffer shall be provided along all external roadways to reduce noise generated by traffic and create a visual barrier. Unless otherwise noted, the buffer shall be as required by the adjacent land use or a Type A buffer at a minimum, whichever is ~~more robust~~greater. If the road is an arterial road then the buffer shall be a type C buffer

at a minimum.

~~12landscape~~

13. Existing native or non-invasive trees and vegetation may be retained and used to meet landscape buffering requirements. The existing material must be located and called out on the Landscape Plan and shall meet the minimum size~~slisted under~~ required for trees and shrubs to be utilized.

~~a. A minimum twenty (20) foot wide Buffer is required along the following rights-of-way:~~

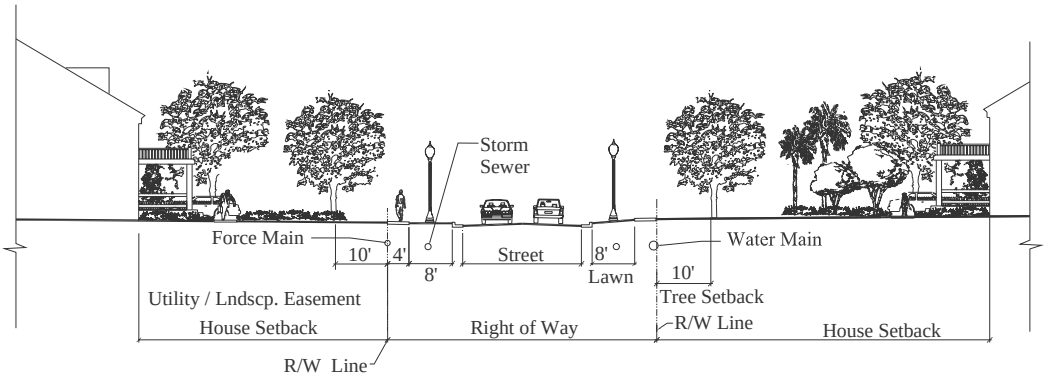
~~1. All existing Arterial Roads.~~

~~2. Any new major Arterial construction.~~

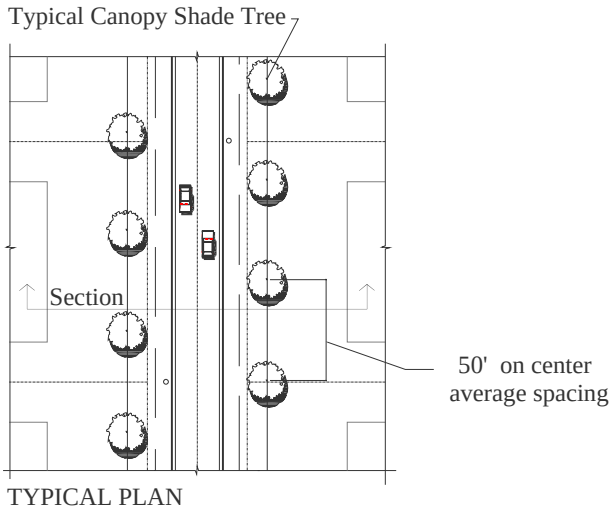
~~b. New single family and multi family Residential Development of more than twenty (20) units Shall provide a treed boulevard along the length of the Development along the all rights-of-way. The Buffer Shall be ten (10) feet in width unless it is along one (1) of the roads in Subsection 9.01.04.B.1.a.1-6.~~

14.~~9.~~ All ~~roads in~~ single family and multi-family developments shall provide internal canopy tree lined roads. ~~and that shall have~~ ~~s~~Street trees shall be~~,~~ selected from the canopy tree list, (as listed in the Plant List for Lake County) at an average spacing of 50-feet on center spacing along both side of roads. The canopy trees required for residential lots may also be used as required street trees as long as they are no more than twenty feet away from the right-of-way line unless prohibited by an easement.

~~It is recommended requiredthat~~ Canopy trees shall be~~are~~ planted a minimum of ten feet (10') and maximum of twenty (20) feet ~~just~~ outside the right-of-way (R.O.W.) with an alternating pattern on each side of the road. When the proposed development is only on one side of the road then street trees shall be required for that side of the road. ~~Developments Developers. It~~is ~~required that~~~~Canopy shall be eet, whichever is farther~~ Developers may plant trees in the right of way or within ten (10) feet of the right of way, with permission from the Lake County Department of Public Works. Any tree planted within the R.O.W. shall comply with the latest F.D.O.T. Green Book Standards Canopy trees~~ must~~ shall be planted a minimum of eight (8)~~5~~-feet~~oot~~ distance from public sidewalks. ~~When the proposed development is only on one side of the road then street trees shall be required for that side of the road.~~ The following zoning classification shall be exempt from providing street trees as listed by this paragraph only: (Exempt Zoning Categories:~~)~~ "A", "RA", "AR","R-1 [for lots less than one (1) acre]",~~"R-2",~~ "RV" ,"RMRP" ~~although 8-foot is preferred.~~



TYPICAL SECTION



TYPICAL PLAN

15~~0~~. Landscape materials within Buffers along all rights-of-way shall be designed to display variety, color, form, and texture, by utilizing native and drought tolerant plants.~~and exotic species~~. Such variety and color may be accomplished by using a combination of shrubs, and ornamentals~~s~~ from the ~~plant lists in Subsection 9.01.10.C & D~~ Plant List for Lake County as maintained by the County Manager

or designee. The placement of Landscape materials within Landscape Buffers Shall have a rational relationship to the existing patterns and densities of adjoining Areas which have been designed or preserved. Arrangements shall replicate natural conditions and shall not be linear unless dimensional limitations necessitate such an arrangement or linear arrangement is part of a formal Landscape directly related to the architecture of the building(s) or are part of a formal street tree landscape as described in paragraphsubsection #14 above.. Landscape materials Shall be clustered into groupings that simulate a natural, rather than man-made appearance.

16. When cross access is required, the landscape buffer shall terminate at the pavement's edge or the edge of the easement.

17. *Individual Trees Planting Requirement*

a.Unless specified by the Landscape Buffer requirements in Table 9.03.04.B, a minimum, three (3) canopy trees or five (5) understory or ornamental trees Shall be provided within the Landscaped Buffer for every one hundred (100) feet of public right-of-way. A combination of two (2) canopy and three (3) understory or three (3) canopy and two (2) understory may be used to fulfill this requirement.

a. Generally, understoryornamental trees shall be spaced a minimum twelvetwenty- (2012') feet apart and canopy trees a minimum of twenty (20')maximum forty (40) feet apart. However, cClusters of trees and non-linear alignments within the Landscaped Buffer may be used to meet the above requirement. Adequate spacing shall be maintained to protect and allow for the growth of the root systems and canopy of each tree. Special precautions shall be taken in to not locating locate canopy trees under or near utility easements. Generally, maximum spacing of trees shall not exceed 150' to allow for views and sign placement.

b. Each canopy tree shall be provided with a minimum one-hundred twenty-five (10025) square foot planting Area around the trunk with a minimum dimension diameter of eightfive (85) feet. Large maturing canopy trees will need more planting area typically. Each planting Area Shall be landscaped with a mulch ring, groundcover, or other Landscape material, excluding lawn grass, in addition to the required tree. See Subsection 9.01.10.H.12 for an illustrated example of a tree planting area.

cd. No understoryornamental or canopy tree shall be planted within a the Visibility Triangle.

de. No Certificate of Occupancy Shall be issued by the County Manager or designee on the types of construction indicated below unless the

underlying Parcel has the following minimum number of protected trees in Subsection 9.02.02;:

1. For any multifamily, or non-Residential Development requiring Site Plan Approval under the Lake County Land Development Regulations, six (6) trees per acre.

2. Existing trees may be used to meet these provisions in Subsection 9.01.03.E.10.

e. Trees shall be maintained in excellent condition and protected during development of the site. . for one (1) year during which survival is guaranteed by the Property owner pursuant to Subsection 9.02.06 below.

3. One (1) of the required trees Shall be planted within ten (10) feet Landward of the right-of-way for Lots less than or equal to one-half (1/2) acre.More canopy trees may need to be planted outside but parallel to the road right of way based on the street tree requirements as listed in 9.01.04.B.14.

184. *Individual Shrubs Planting Requirements*.

a. A visual screen Shall include shrubs or berm(s) with shrubs. The shrubs shall have an average height at time of planting of at least three (3) gallon or two to two and one-half (2' -2 1/2) feet or greater planted at the minimum centers provided in Subsection 9.01.10.D. Plant List for Lake County. Their spread shouldshall be appropriate for size and species. They shall be able to obtain a height of three (3) feet within twelve (12) months of planting under normal growing conditions.

b. The shrubs with or without berm(s) shall be located within the Landscaped Buffer between the planting Areas of the required trees.

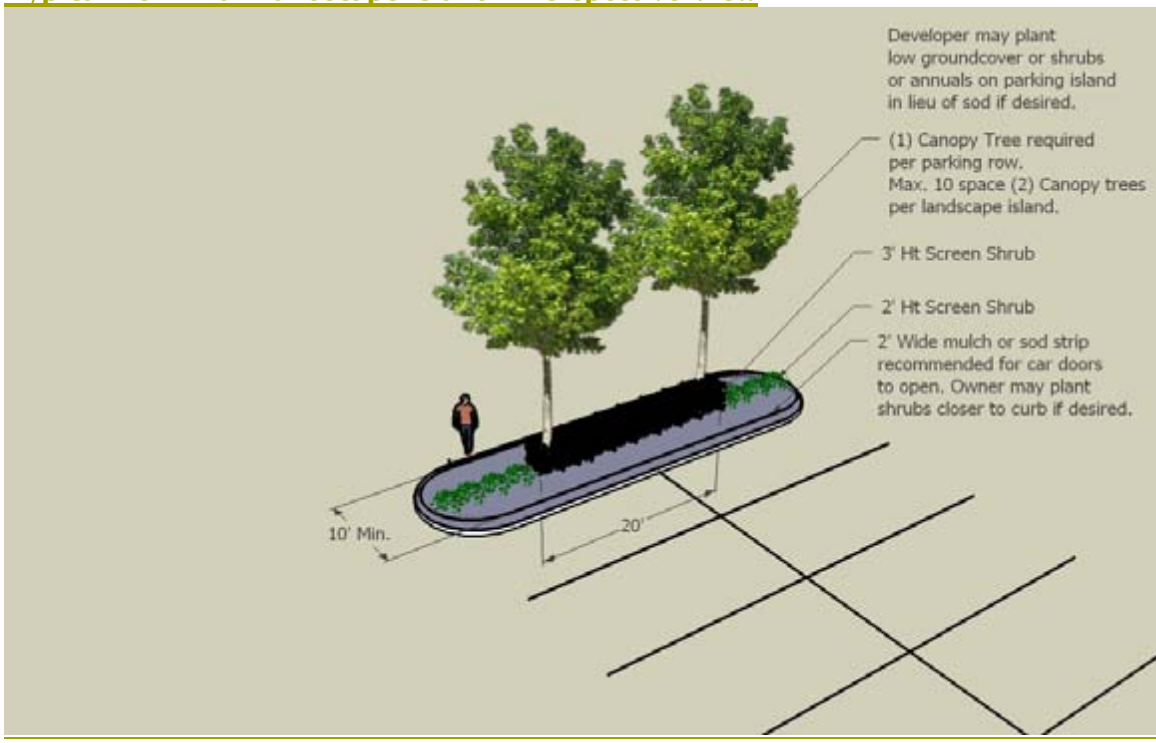
C. *Internal Landscaping in Parking areas and other Site Areas*

1. *Generally*. All ground surface Areas used on commercial, institutional, community facility, industrial, condominium, recreational vehicle parks, or multifamily sites shall have internal Landscaping to provide visual and climatic relief from broad expanses of pavement and channelize and define logical Areas for pedestrian and vehicular circulation. The following special landscaping requirements apply to commercial, institutional, community facility, industrial, condominium, recreational vehicle parks and multifamily sites.

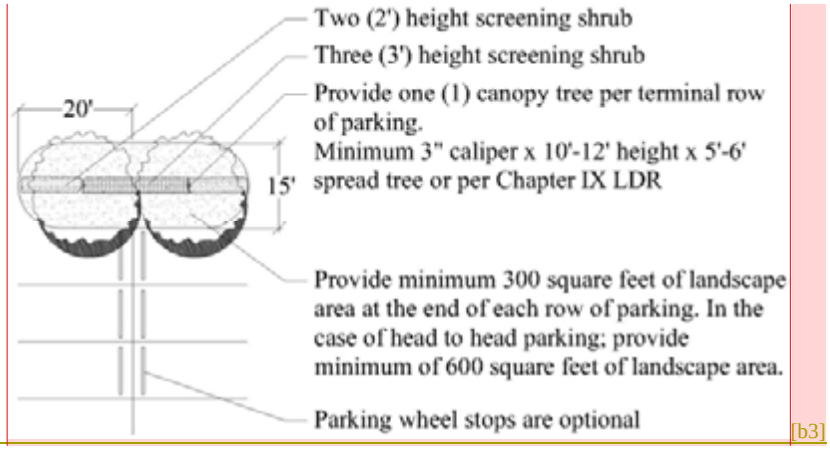
2. *Interior Parking aAreas*.
Landscape Islands shall be provided within parking areas, except parking garages, as described below to prevent excessively long, contiguous runs

of parking spaces. These Areas Shall use ~~have,~~ curbs, wheel stops, bollards or other control measure to prevent ~~vehicles from~~ encroachment or damage to ~~driving near or under the~~ trees and vegetation. ~~Variances to this rule may be granted by the County Manager or designee.Multiple floor parking garages are exempt from meeting paragraphs "a", "b" and "c" below.~~

Typical Terminal Landscape Island – Perspective View



Typical Terminal Landscape Island – Plan View

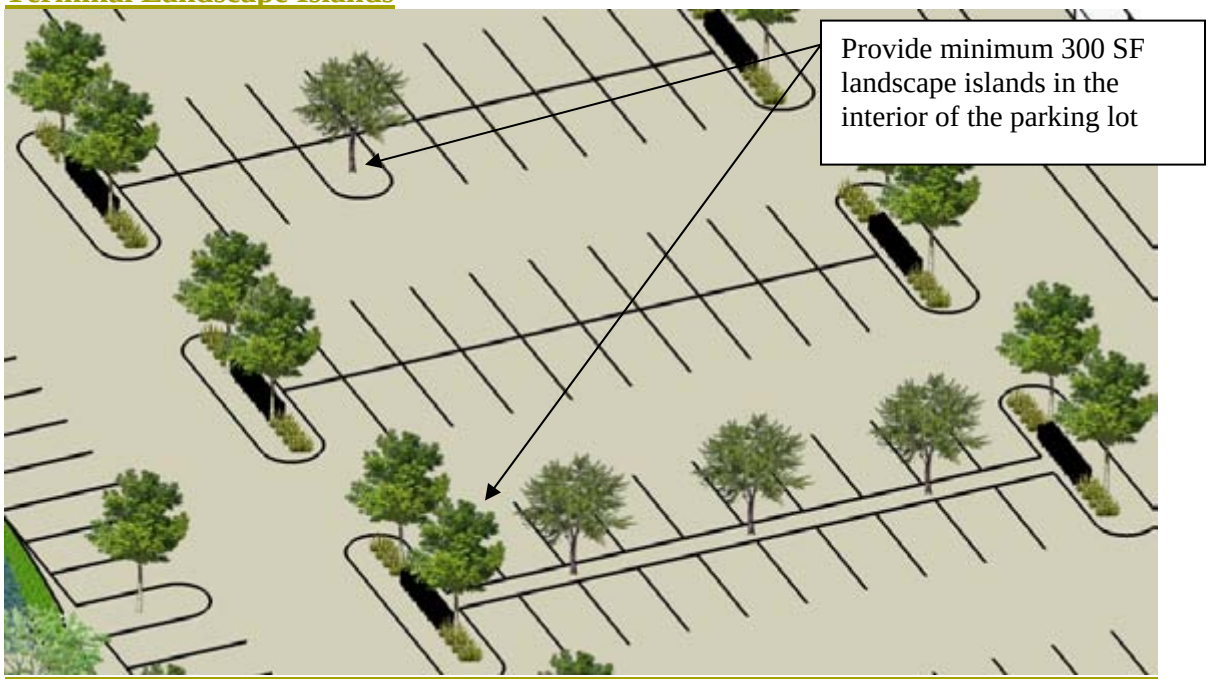


[b3]

a. *Single-Row Terminal Landscape Islands*

A single-row parking bay shall not contain more than ten (10) contiguous parking spaces or extend more than one-hundred and twenty (120), whichever is more restrictive. One single-row terminal landscape island, with a minimum pervious area of three hundred (300) square feet and a minimum width of ten (10) feet, shall be provided at each end of a single-row parking bay. Each single-row terminal landscape island shall contain at least one (1) canopy tree.

Terminal Landscape Islands



b. *Double-Row Terminal Landscape Islands*

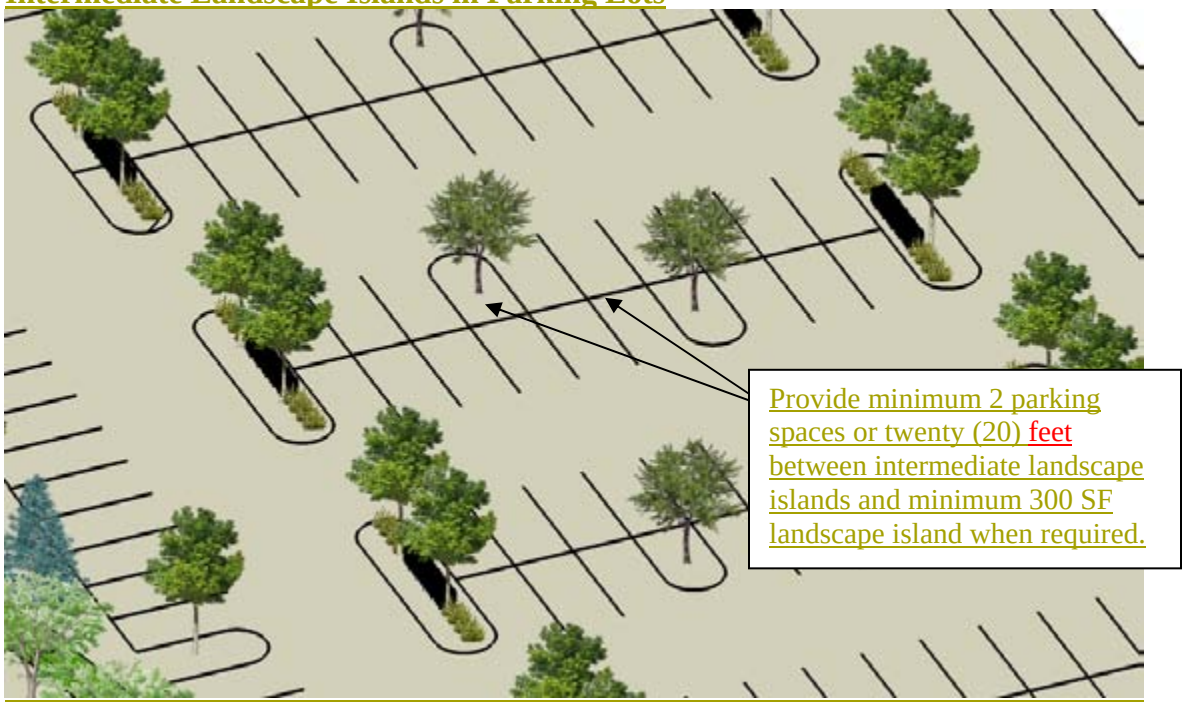
A double-row parking bay with head-to-head parking shall not contain more than twenty (20) contiguous parking spaces in a 2x10 configuration or extend more than one-hundred and twenty (120), whichever is more restrictive. One double-row terminal landscape island, with a minimum pervious area of six hundred (600) square feet and a minimum width of ten (10) feet, shall be provided at each end of a double-row parking bay. Each double-row terminal landscape island shall contain at least two (2) canopy trees.

c. Intermediate Landscape Islands

Additional interior landscape islands, known as an intermediate landscapes islands, shall be required within parking lots having

eighty (80) or more parking spaces. An intermediate landscape island shall be provided for any parking lot with eighty (80) or more parking spaces, and an additional intermediate landscape island shall be provided for every additional twenty (20) parking spaces in excess of eighty (80). Each intermediate landscape island shall have a minimum pervious area of three hundred (300) square feet and a minimum width of ten (10) feet, and each intermediate landscape island shall contain at least one (1) canopy tree. Alternatively a minimum seven (7) foot wide landscape strip may be provided between head-to-head parking, which may count as the required intermediate landscape island for every three hundred square feet (300) of impervious area provided. If a landscape strip is used, ornamental landscape trees and shrubs shall be planted within the landscape strip on minimum thirty (30) foot centers.

Intermediate Landscape Islands in Parking Lots



d.~~a.~~ Interior portions of Off-Street parking facilities, which are not specifically designed as parking spaces or maneuvering areas, Shall not be paved for vehicle use.

~~b. One landscaped area, a minimum of 300 square feet shall be provided at each end of all parking rows as measured from outside of vertical curbinside the curb or edge of impervious surface for non-curbed areas. , where installed~~

~~Unless specifically designated as open space or green area, all designated, planted and permanently maintained Landscaped Areas Shall have at least~~

one (1) canopy tree two (2)inches caliper and fifteen (15) gallon container or greater at time of planting for every two hundred (200) (300) square feetwith two canopy trees per 600 landscape island for a double row of parking. The minimum size of the tree is eight (8) feet in height with a spread of four (4) feet. These Areas Shall have curbing, wheel stops, bollards or other control measure to prevent vehicles from driving near or under the trees. Variances to this rule may be granted by the County Manager or designee.

e.c *Parking Lot Trees and Substitutions*

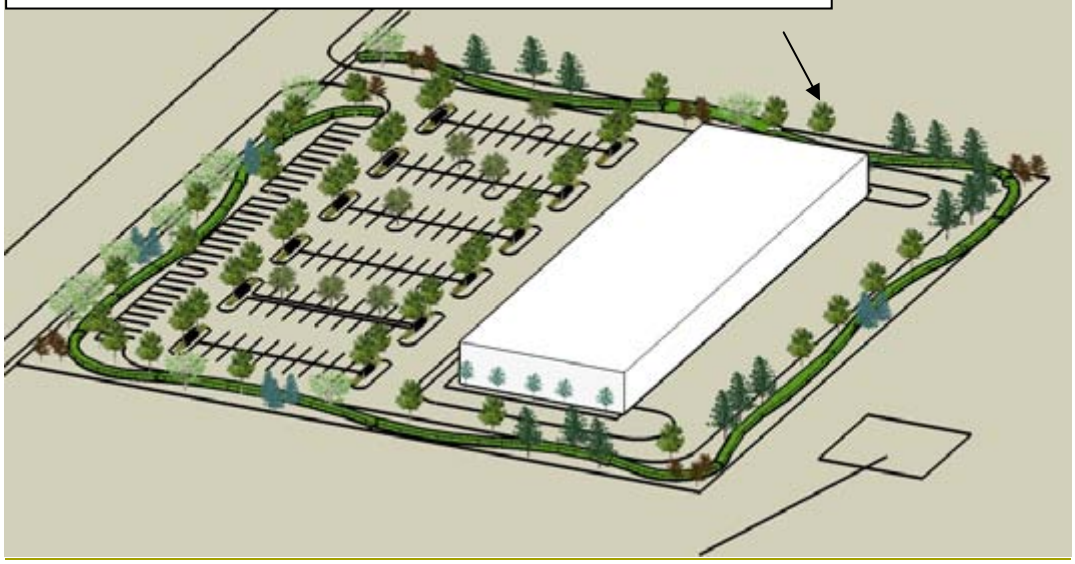
All trees in the parking lots shall be approved Canopy Trees contained in the Plant List for Lake County. A maximum of 20% of the required canopy trees in the parking lots may be substituted with palm trees. Palm trees used as substitutions in parking lots shall be planted at a 2:1 ratio (Cabbage Palms, Washingtonia Palms and Windmill Palms) in relation to canopy trees with the exception of Canary Island Palms, Date Palms and Paurotis Palms which may be planted at a 1:1 ratio.

f.d *Perimeter Trees and Spacing*

Canopy trees shall be planted an average of fifty (50) foot centers around the total perimeter of the parking lot and all vehicular service areas. Clustering may be utilized but spacing shall not exceed one-hundred-and-fifty-foot (150') foot spacing. The canopy trees shall be planted between eight feet (8') and thirty (30') feet from the edge of pavement. Canopy trees within the landscape buffers may be used if they fall within thirty feet (30') from the edge of paving or vehicular service area.

Perimeter Trees and Spacing

Provide canopy trees at an average of 50' spacing around the perimeter of parking areas. (Clustering may be utilized)
(at a maximum of 150' spacing. for views or signs)



Note:
Commercial, industrial, institutional, and multi-family buildings shall have a 3 feet wide landscape area around a minimum of 40% of the total building perimeter. Landscape perimeter shall occur adjacent to or within 25 feet of the building perimeter walls. Breaks are allowed for accessways, plazas or other building design features.

e. An additional interior landscape island shall be provided with a minimum three hundred (300) square feet area known as an "intermediate" landscape island for every twenty (20) parking spaces required for parking lots that are over eighty (80) spaces for a single use. The owner shall provide separate landscape islands OR provide a minimum seven (7) feet wide landscape strip between head to head parking. The parking landscape strip may be counted as a required intermediate landscape island for every three hundred (300) square feet and one (1) canopy tree provided.

g. Building Landscapes. *Landscape areas* shall be planted within trees, shrubs or groundcover,; other than sod, as specified below:. The footprint areas below uses are determined by calculating the square footage of the first floor of all buildings, footprint including both primary and secondary structures.and not in multiple story buildings. Minimum shrub shall be provided so that shrub spacing shall not exceed three (3') foot on center and a minimum onethree (3)- gallon or three-gallon shrub shall be used.

One (1) canopy tree or three (3) ornamental trees shall be required in addition to any other tree requirements for every three hundred and fifty (350) square feet of required "building" landscape area, including but not limited to required landscape islands within parking areas, required street trees, minimum canopy trees required for residential lots described in Section 9.01.05 and required trees surrounding retention areas. The following, however, may be credited toward the minimum requirement for ten (10) canopy trees per acre within a development site.

1) ~~Single Family~~ Residential development = ~~Twenty~~Thirty-five percent (~~20~~35%) of the ~~1st~~first floor ~~—~~footprint. This requirement shall not require a landscape plan to be submitted for a single-family residential plan; however a note shall be placed on the development site plan or landscape plan stating that a non-turf landscape area shall be provided.

~~Townhouse and Multi-Family with or without vehicular use area= 350 square feet per dwelling unit or thirty five percent (35%) of all the ground floor units, whichever is greater.~~

Commercial, Retail and Restaurant = Twenty five percent (25%) of the first floor footprint.

~~Commercial, industrial, institutional, and multi-family buildings shall have a 3 feet wide landscape area around a minimum of forty percent (40%) of the total building perimeter. Landscape perimeter shall occur adjacent to or within twenty five (25) feet of the building perimeter walls. Breaks are allowed for accessways, plazas or other building design features.~~

2) Office = Thirty percent (30%) of the first floor footprint

3) Mixed Use Buildings = Twenty five (25%) of the first floor footprint

4) ~~Developments occurring in "new urbanism" or "traditional town centers" may request for less landscape areas than noted above.~~

Commercial, institutional, and multi-family buildings shall have a 3-feet wide landscape area around a minimum of forty percent (40%) of the total building perimeter. Landscape perimeter shall occur adjacent to or within twenty five (25) feet of the building perimeter walls. Breaks are allowed for accessways, plazas or other building design features.

~~5)~~

h. *Pervious Parking*. -Parking spaces provided in excess of the minimum required shall be constructed of pervious materials, including grassed parking areas. ~~The owner may provide~~ Additional pervious parking may be provided, if not otherwise prohibited by other provisions of the Lake County Code, in the following areas:

i. Adjacent to parking lot landscape islands to allow for the percolation of water and the exchange of oxygen for the tree roots.

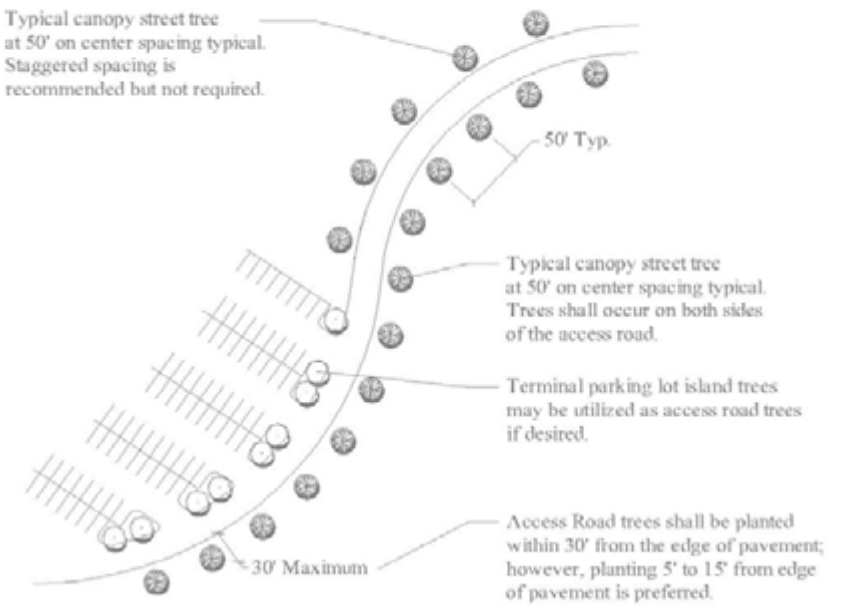
~~2)~~ii. Grass paving or turf block areas may be utilized in low impact areas or infrequent use areas such as churches or the outl~~a~~ying

parking areas of malls or other shopping areas.

i. Internal Access Roads

~~Commercial s~~Site plans- and plats having an internal access road shall be required to plant an average of one (1) canopy tree on each side of the road for every 50 feet of the road deemed an internal access road for both sides of the roadway. An internal access road is a collector road that occurs within any development either at the perimeter or internal to the development. Parking lot island trees may be used to meet this requirement if they fall within 30-feet from the edge of the pavement along the internal access road.

Typical Plantings Required at commercial center access roads



Notes:
1) Access roads are considered perimeter "collector" type roads within a planned commercial center. The roads immediately in front of the commercial stores do not have to meet the 50' on center tree planting requirement but do have to meet other parking lot landscape requirements such as providing terminal parking landscape islands with a canopy tree..
2) Palm trees may be utilized as a substitute for canopy trees at a 2:1 ratio for required access road trees (2 palms for every 1 canopy tree; see tree list for specific palm tree ratios) Palm trees shall not exceed 20% of the required canopy trees for any parking lot or vehicular use areas.
3) Safety and sight distance requirements take priority over tree requirements.

[b4]

~~**Intermediate Landscape Islands in Parking Lots** - Required for parking lots that have eighty (80) or more parking spaces for a single user and are required for every additional twenty (20) parking spaces above and beyond eighty (80) spaces.~~

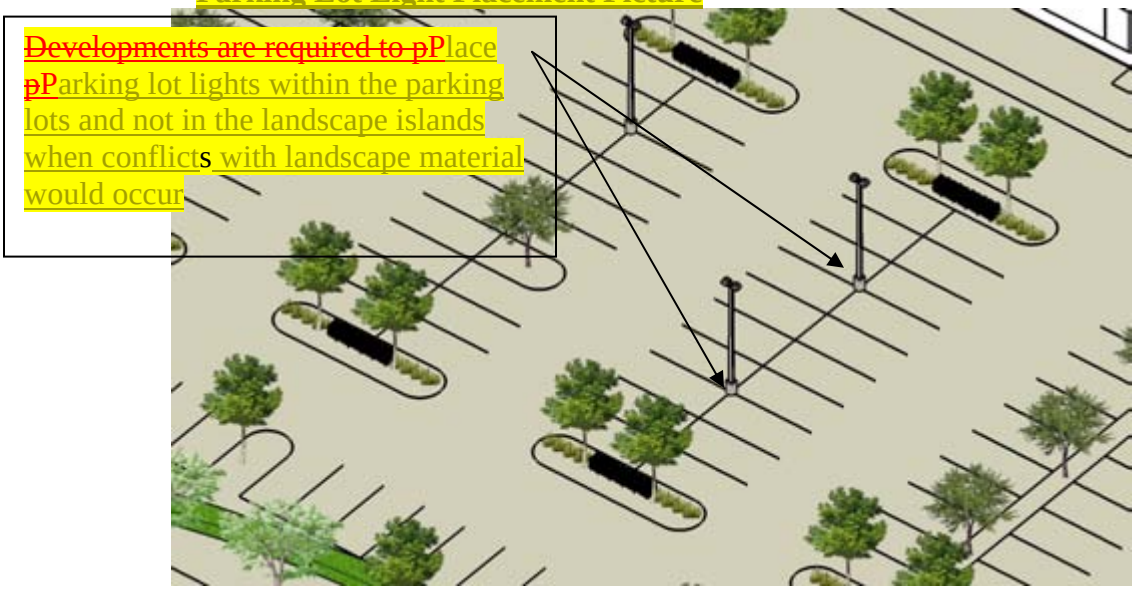
~~Provide minimum 7-foot wide landscape strip between head to head parking.~~

~~Provide 1 canopy tree equally spaced in the 'intermediate area'~~

j. Accomodations for lighting and other features

Islands shall be enlarged beyond the minimum requirements if necessary to accommodate light poles, fire hydrants, or other necessary features. Light poles may be located within the parking area rather than in landscape islands if necessary to ensure that the lighting placement does not conflict with the location with the location or normal growth of island trees.

Parking Lot Light Placement Picture



k. *Rain Gardens*

Parking lot islands are encouraged to use curb breaks and create swale or depression areas to allow for the percolation of rainwater and parking storm water. ~~Owner shall be careful in~~ Attention shall be given to the selection, placement and durability of landscape material within rain garden areas to ensure their long-term viability. Any proposed rain garden areas must comply ~~and meet~~ with all storm water requirements. Smaller rain gardens that serve as landscape islands shall adhere to all canopy and understory requirements for landscape islands.

Rain Garden Photo Example

3. *Maximum number of continuous parking spaces.* Landscaping Areas with a minimum width of ten (10) feet and a minimum total Area of two hundred (200) three hundred (300) square feet shall be provided to break up excessively long, continuous runs of parking spaces. A parking bay Shall not contain more than fifteen (15) ten (10) continuous parking spaces or extend more than one hundred sixty (160) one hundred and twenty (120) feet maximum, whichever is more restrictive, without being broken up by a min. 300 -H andscaped areaarea and 600 square feet for islands that have head-to-head parking.. These Landscaped Areas must have one (1) canopy tree to meet the minimum size canopy tree requirements., see Figure 14. The landscape termination islands shall contain one canopy tree at the end of each row of parking unless there is a restrictive condition such as a fire hydrant or unavoidable light pole in the landscape island. The restrictive conditions that prohibit the planting of a tree shall only be allowed in 15% of the landscape islands. (When a fire hydrant or necessary light pole is placed in the terminal parking rows.)

with a two (2) inch caliper and 15 gallon container or greater at time of planting. The minimum size of the tree is eight (8) feet in height with a spread of four (4) feet. See illustrated figure in Subsection 9.01.10.H.14.

4. *Termination of parking rows.* Each row of interior parking spaces which contains more than 15 continuous parking spaces or extend more than 160 feet, which ever is more restrictive, hall be terminated at each end by a Landscaping Area which hall be a minimum of two hundred (200) square feetshallshall

Figure 14 – Landscaped parking island at end of rows.

[b5]

Terminal Landscape Island – Plan View

45. *Curbing or wheel stops.* All interior Landscaping Area Shall be curbed or provided with wheel stops to prevent vehicular encroachment, as appropriate. Curbs may terminate to allow for swales -if desired in landscape areas. The

~~intermediate landscape islands are not required when the parking lot is less than 15,000 square feet. Terminal landscape islands are required at the ends of all parking rows with a minimum. Three hundred (300) square feet of landscape areas.~~

~~6. *Exceptions*. Interior Landscaping is not required when the paved (impervious) portion of a Lot is five thousand (5,000) square feet or less.~~

3. *Guardhouses* ~~Shall~~ An area greater than or equal to fifty percent (50%) of the footprint of any guardhouse shall be landscaped immediately adjacent to the guardhouse to create an aesthetic landscape. ~~The landscape shall be planted in the median if space is provided~~. If the guardhouse is located within the roadway median, the required landscaping shall also be planted in the median. Clear zones and clear sight lines must be maintained for any landscape within the road right of way. The clear zone shall consist of an area between two--feet (2') and eight--feet (8') height from the road elevation. The landscape area shall consist of shrubs, perennials and trees. Sod or other ornamental landscaping may be utilized in the remaining area around the guardhouse as long as 50% of the guardhouse has been landscaped as described.

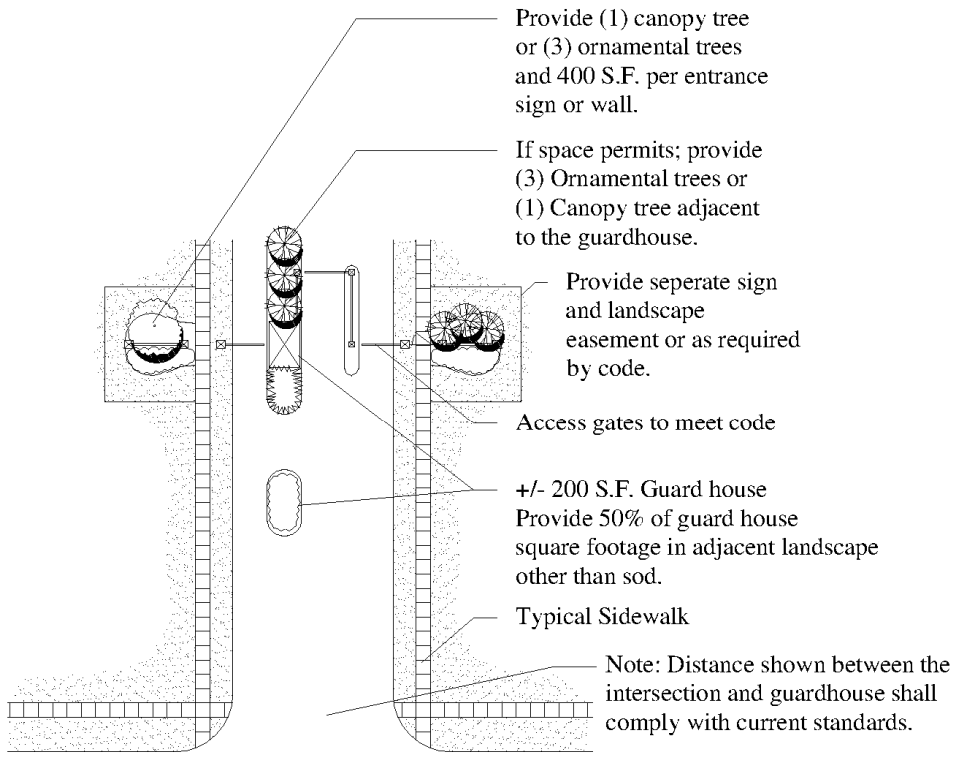
4. *Vehicular Gates and associated security walls*
~~sShall provide~~Landscapinge shall be required on the entrance side of gates and walls as follows;.

a) A minimum of 400 square feet of landscape area shall be provided on each side of an entrance road (800 square feet total) to a neighborhood or commercial area.

b) Within each entrance area of 400 square feet; one canopy tree or three ornamental trees shall be provided.

c) The landscape area shall have shrubs, perennials, vines or other ornamental plantings other than sod. If a utility easement or other restrictive condition restricts the use of trees then the tree portion of this requirement may be waived or limited by the County Manager or designee.

d) Please see *Guardhouse and Security Gate Landscape Requirements* picture below for additional landscape requirements.



Guardhouse and Security Gate Landscape Requirements

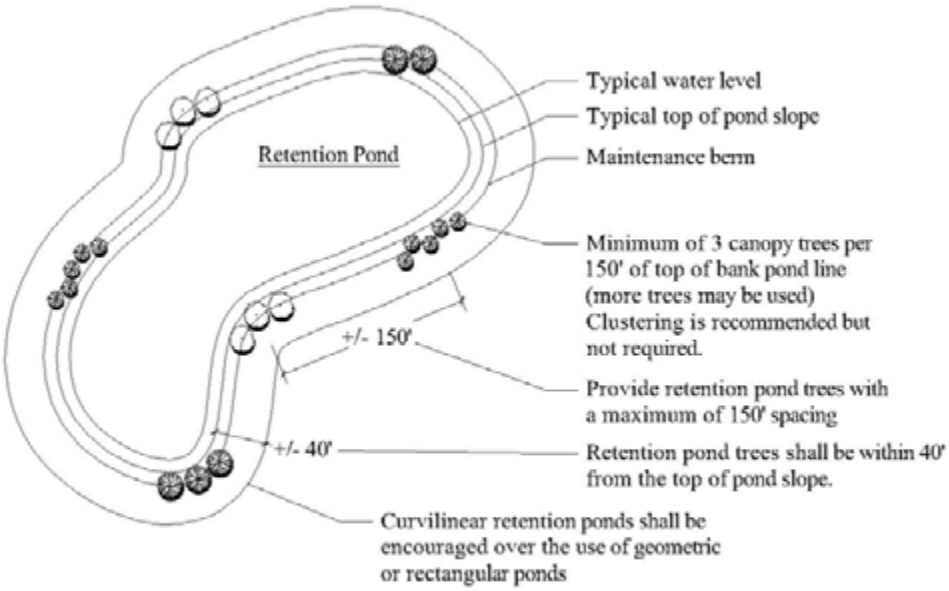
[b6]

5. Retention Ponds:

Retention ponds shall be planted with~~at~~ a minimum of three (3) canopy trees for every 150 linear feet of pond bank determined by measuring the top of pond bank. The trees shall be planted within forty (40) feet from the top of bank line. No less than three (3) canopy trees shall be required at retention ponds. Required retention pond trees may be used to meet the ten (10) canopy trees per acre requirement for "common" areas within a development site outside of single-family residential lots~~, excluding the single-family residential canopy tree requirement~~.

~~Please see~~ Lake edge and retention pond plantings shall be selected from The Plant List for Lake County for lake edge and retention ponds ~~for a listing of the recommended lake edge and retention pond plantings~~.

Typical Plantings Required at retention ponds

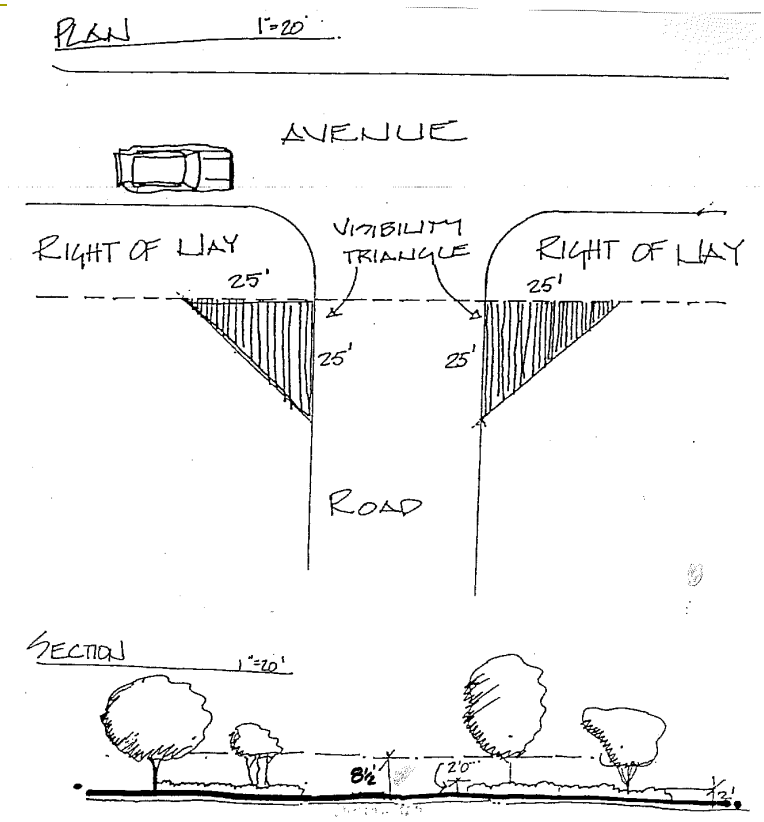


Notes:
1) Tree requirements are for retention ponds and do not apply to any existing wetland that are protected under other ordinances.
2) Proposed or existing canopy trees meeting the minimum canopy tree size may be used to meet the 10 canopy trees required per acre for non-residential land use. The required retention pond trees may be used to meet the required 10 canopy trees required per acre non single-family residential land use.

D~~E~~. *Intersection Visibility (See Figure 13)*.

Where an ~~accessway~~ access way intersects a public right-of-way ~~on a Commercial, Industrial, Multifamily, Institutional, or Community Facility Site~~, ~~L~~landscaping shall be used to define the intersection, provided, however, that all Landscaping within the triangular Areas described below Shall provide unobstructed cross visibility at a level between eighteen (18) inches and eight and one half ~~six~~ (8.5~~6~~) feet measured from road grade. Trees having limbs and foliage extending into cross visibility Shall be allowed provided they do not create a traffic hazard. Landscaping, except grass and ground cover, Shall not be located closer than three (3) feet from the edge of any ~~accessway~~access way pavement. The triangular Areas are: the Areas of Property on both sides of an ~~accessway~~access way and the public right-of-way pavement line with two (2) sides of each triangle being twenty-five (25) feet in length from the point of intersection and the third side being a line connecting the ends of the other sides. Visibility triangles shall be provided at all intersections of public rights-of-way~~. See illustrated Subsection 9.01.10.H.13 for diagram.~~ and shall meet the site distance requirements per *Chapter Three, Geometric Design of the Florida Green Book.*

Figure 13 – Intersection Visibility



E. *Natural Vegetation Preservation Credit.*

~~Where the preservation and incorporation of the existing natural vegetation exceeds twenty-five (25) percent of the total Land Area of Development and where preservation and incorporation of the existing natural vegetation meets the aesthetic intent of this Section, the Development may be eligible for credit from any Landscape requirements of this Section. However~~, ~~iIn order to meet the aesthetic intent of this Section, compliance with all applicable Buffering provisions within parking areas, along rights-of-way, and between Land uses as set out in Subsection 9.01.04 shall be required.~~ Trees preserved on the Site that meet dimensional, location and species type shall count toward number of trees required. ~~Any~~Qualifying preserved trees in areas requiring Landscaping shall be subtracted from the total tree planting requirements. ~~AnyQualifying trees preserved on the Site that meet dimensional and species type shall count toward number of trees required.~~ ~~Receiving credits toward the requirements of this Section does not exempt the Development from normal horticultural maintenance that is necessary to maintain the desirable aesthetic appeal required to meet the intent of this Section. All other attempts at preservation and incorporation of the existing natural vegetation less than twenty-five (25) percent of the total Land Area of Development will be evaluated and awarded credit on a Site specific basis.~~ All areas that ~~will~~ remain in natural vegetation ~~to be awarded a~~

credit shall be duly noted and designated on all site plans submitted for Development approval.

FG. *Screening of Heating/Ventilation/Air Conditioning Units.*
Where heating/ventilation/air conditioning units are located on the ground surface area, they shall be screened from view. A combination of a fence and a berm or shrubs shall be required. The sShrubs shallmay be selected from the suggested approved shrubs listed contained in The Plant List for Lake County . in Subsection 9.01.10.D and planted at the minimum center requirement.

9.01.05 Canopy Tree Requirements for Single-Family-Residential-, including Duplexes, (including mobile homes), Condominium, Institutional and Public Facility Areas.

A. Single Family residential canopy tree requirements may be noted on a Site or Landscape plan, however this Section 9.01.05, shall not require the submittal of a Single Family Residential Landscape Plan unless required by other provisions in this Landscape Code. No certificate of occupancy for a single-family residence shall be issued by the Building Official County Manager or designee unless the subject Parcel has the following: tree regimen:

1. A minimum of two (2) canopy trees for Lots 6,000 square feet or less;

2. A minimum of three (3) canopy trees for Lots between 6,001 and 10,000 square feet;

3. A minimum of five (5) canopy trees for Lots greater than between 10,001 square feet to 43,560 square feet (1 Acre).

4. A minimum of eight (8) canopy trees for lots between one (1) acre43,561 and 87,120 square feet (2 acres).

5. A minimum of eleven (11) canopy trees for lots between 87,121 square feet and 130,680 square feet (3 acres).

6. A minimum of fifteen (15) trees for lots 130,681 square feet (3 acres) or greater with three (3) additional canopy trees required for each acre after the first 3 acres

B. Existing trees greater than three (3) inches in diameter shall be preserved unless within the building footprint for the residence, infrastructure or required for access. Stem wall construction shall be used where necessary to achieve this requirement.

Three (3) trees for each additional acre in excess of one (1) acre, with a maximum number of trees not to exceed fifteen (15) for the total acreage;

C. 7. Existing trees may be used to meet the provisions in Subsection 9.01.054.B.2. Trees shall be in very good health and maintained in good condition in

perpetuity ~~for one (1) year~~ during which survival is guaranteed by the Property owner. ~~pursuant to Subsection 9.02.06;~~

D. ~~8.~~ One (1) or more of the required trees shall be planted within ten (10) feet Landward of the right-of-way for residential Lots less than or equal to one-half (1/2) acre. More canopy trees may need to be planted outside but parallel to the road right of way based on the street tree requirements as listed in 9.01.04.B.14

~~B~~E. For single-family Lots within a new subdivision, additional trees may be required pursuant to the replacement requirements in Subsection 9.02.05.D. ~~In such cases, the required number of replacement trees hall be divided by the number of Lots approved for the subdivision. The resulting number hall be added to the minimum tree requirements for each Lot as set out in Subsection 9.01.05.A above~~. The number of trees required shall be indicated or noted on the Landscape ~~or~~, -Site or Plot Plan.

~~C~~F. All protected trees listed in The Plant List for Lake County~~.~~ ~~Subsection 9.02.02.A~~ are prohibited from being removed from single-family Residential Lots of any size without an approved tree removal Permit.

1. The replacement requirements of Subsections 9.02.03 and 9.02.04 shall apply ~~here~~.

2. ~~Systematic clearing of a single family Residential Lot is prohibited.~~ In addition to the preservation of Protected Trees, g~~G~~roups of trees smaller than three ~~four~~ -(3 ~~4~~) inches caliper are encouraged to be preserved.

G. Single-family residences shall be located to avoid removing or damaging protected trees to the maximum extent possible.

9.01.06 Plan Approval.

A. An appropriate Landscape Plan shall be submitted to the County Manager or designee at the time an application for Site Plan or Development approval is submitted.

1. The Landscape plan shall be prepared by a Landscape architect if the following apply:

a. Single-Family or multi-family residential development in excess of ten (10) dwelling units; or
~~Single family Residential Development overten (10) one hundred (100) acres or a multi family Development over five (5) fifteen (15) acres; or~~

b. Commercial, industrial, community facility projects ~~exceeding a Parcel size of one-half (1/2) acre or twenty-one thousand seven hundred and eighty (21,780) square feet.~~

2. If the Landscape plan is prepared by a Landscape architect, it shall be signed, dated, and sealed by a Landscape architect registered pursuant to the provisions of Chapter 481, Florida Statutes, Part II.

B. The Landscape and irrigation plans shall be drawn at an appropriate scale (generally drawn at twenty (20) or thirty (30) scale or a scale that is legible) and shall include:

1. All property line dimensions, north arrows, scale distances, and plan information required by the Site Plan review process. All easements shall be shown and labeled, all existing and proposed structures and address of the owners and plan preparers, label topographic contours and spot elevations.

2. Delineation of proposed parking spaces, other vehicular areas, access drives, aisles;

3. A detailed plan, illustrating ~~an~~ the automatic irrigation system shall be ~~installed~~ provided to ~~that Shall~~ meet the requirements of Subsection 9.01.03.I~~F~~, prior to issuance of a Certificate of Occupancy. Water Use Zones shall be shown and labeled as part of the landscape plan submittal. The Water Use Zones may be indicated on the landscape plan if legible or a separate plan may be submitted;

4. Designation by common and botanical (scientific) name, including applicable cultivar name, and location of plant material to be installed or preserved in accordance with the requirements of this Section;

5. Location of buildings;location of internal and external streets, location of existing and proposed utilities.

6. Use or zoning classification of adjacent properties;

7. ~~7.~~ Pertinent features on adjacent properties, including buildings and landscaping near the property line and natural or man-made features that may continue into or through the subject site;

11. Location of natural and manmade features onsite that affect the location of landscaping, such as wetlands, water bodies, retention and open space.

8. Statement that the owner shall install the landscape according to the landscape plan and maintain the landscape according to the Landscape Plan.

9. A tabulation of all information necessary for evaluation of the plan, including gross and net acreage, Area in square feet of ~~paved~~ impervious areas; and other information that may be reasonably required to determine that the plan will meet requirements of this Section. A table with the required buffer type(s), width and number of required trees shall be provided for each buffer.

~~a. A tree removal matrix shall be shown, if applicable, on the Landscape Plan or Tree Removal Plan depicting how the removed trees will be mitigated. Removed trees that are required to be mitigated shall be shown on the Landscape Plan or Tree Removal Plan with location, DBH caliper size and species type.~~

10. Location of preserved trees or clusters of trees may be used to count as landscape credit with the species and DBH Caliper called out or a note stating that a group of trees will meet the minimum size canopy or ornamental trees.

12. A tree removal matrix shall be shown, if applicable, on the Landscape Plan or Tree Removal Plan depicting how the removed trees will be mitigated. Removed trees that are required to be mitigated shall be shown on the Landscape Plan or Tree Removal Plan with location, DBH caliper size and species type.

~~11. Removed trees that are required to be mitigated may be submitted. There must be a mitigation table on either the tree removal plan or the landscape plan that depicts how the trees will be mitigated.~~

C. Individual single-family and duplex (two-family) Residential Property Shall be exempted from having a Landscape architect sign and seal Landscape and irrigation plans.

9.01.07 Reserved.

9.01.08 Certificate Of Occupancy.

A. No certificate of occupancy shall be issued by the County Building Department until the requirements of this Section are met, except as provided in (B) below.

B. The ~~County Manager or designee~~ Lake County Building Official can issue a Certificate of Occupancy if the requirements of this Section are not met, provided the developer or owner submits a performance bond to the County Manager or designee in the amount of one hundred and ten (110) percent of the costs to bring the Property into compliance with the requirements of this Section. The required landscaping shall be installed no later than one (1) year after issuance of the Certificate of Occupancy. The developer or owner shall pay reinspection fees for subsequent reinspections of the property.

9.01.09 Administration and Enforcement.

A. The County Manager or designee shall be charged with the duty of administering the provisions of this section and securing compliance therewith. In furtherance of this responsibility, the County Manager or designee shall:

1. ~~Make such~~ Perform inspections as may be necessary to carry out the purposes and intent of this section.

2. Site conditions may prohibit the owner or developer from complying with the requirements of this section. The County Manager or designee may use discretion and waive and/or alter certain requirements based on site conditions relating to location, size or plant type up to 20% of the requirement while maintaining the intent of this section~~Subsections 9.01.02, 9.01.03, 9.01.04, 9.01.05 and 9.02 Protected Trees and all subsections. 9.01.01.A&B, 9.01.01A-d, and 9.02.01~~.

3. Enforce code requirements through fines or other punitive action consistent with State and Lake County regulations.

~~4. Report findings to the Board of County Commissioners for appropriate action.~~

9.01.10 ~~Lake County~~ Tree Protection Standards During Construction~~and Tables~~.

A. ~~*Lake County*~~ *Tree Protection Standards.*

1. The protection measures described in this Subsection are based on those in the Tree City USA Bulletins published by The National Arbor Day Foundation: How to Save Trees During Construction (No. 8, 1998), A Systematic Approach to Building with Trees (No. 20, 1998), and How to Protect Trees During Underground Work (No. 35, 1998). These publications are hereby adopted and included by reference herein. Copies of such publications are available from the County Manager or designee. These publications ~~should~~shall be used to supplement the required protection measures. They also provide information on the economic value of trees to developments and their incorporation into designs as well as guidelines on professional tree care, tree planting and tree transplanting.

2. ~~The applicable protection measures in t~~This Subsection Shall ~~be implemented~~ apply to all protected trees, specimen trees or historic trees.~~for:~~ All trees shall be retained or replaced pursuant to Sections 9.01 and 9.02.

~~a. Any exempt tree that will not be removed; and~~

~~b. Any non-exempt tree that has not been Permitted for removal; and~~

c. All trees that are retained or replaced pursuant to Subsection 9.02.05.D of the Lake County Land Development Regulations Chapter IX – Sections 9.01 and 9.02.

3. It shall be unlawful for any person, during the construction of any Structures or other improvements, to place solvents, materials, construction machinery or temporary soil deposits within the drip line of any protected tree. This includes soil that is placed in the drip-line permanently for the purpose of a grade change, unless the grade is changed according to the standards described in Subsection 9.01.10.A.6. a & b below.

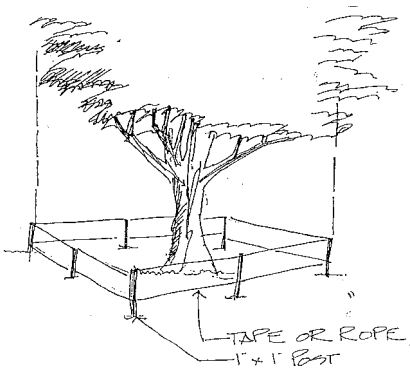
4. Avoiding mechanical injuries. In order to protect against mechanical injuries to roots, trunks and branches, and injuries by chemical poisoning, grade changes, excavations, paving, and attachments or wires, the applicable protection measures set out below Shall be implemented prior to commencement of Permitted construction.

a. A protective barrier (Illustration Subsection 9.01.10.H.3See Figure 3) shall be placed around all protected trees prior to any Land preparation or construction of Structures or other improvements in accordance with the following measures:

1. Posts shall be placed at points not closer than at the natural drip-line of the tree unless the Structure or improvement has been permitted by the County Manager or designee through the Development Review Staff process or special staff review to be erected within the drip-line of the tree with a wide canopy. The Structure or improvement may be placed within the drip-line of the tree only if the tree has been root pruned, as supervised by a licensed Landscape architect or arborist certified by the International Society of Arboriculture. For palm trees, the posts shall be placed at points not closer than six (6) feet from the trunk.

2. The posts shall be connected with clearly visible plastic- tape or ribbon, or rope

Figure 3 – Properly constructed barricade protects the total area at the tree drip line.



b. With the exception of identification ribbons, ~~N~~no attachments~~(other than "tree-save" ribbons),~~ wires, signs, nails, or Permits Shall be fastened to a protected tree other than supportive wires if applicable which Shall be attached in compliance with the guidelines set forth in the Tree City USA Bulletins published by The National Arbor Day Foundation: How to Save Trees During Construction (No. 8, 1998), A Systematic Approach to Building with Trees (No. 20, 1998), and How to Protect Trees During Underground Work (No. 35, 1998).

c. No equipment, construction materials or debris of any kind shall be placed within a protective barrier.

d. Landscaping activities within the bounds of the protective barrier (before and after it is removed) shall be accomplished with light machinery (such as, aerators and mowers) or manual labor. No grubbing, root rakes or similar activities are permitted.

e. In lieu of constructing the barriers required above in Subsection ~~9.10.10.A.4~~.a.1 ~~,~~ above large Areas containing protected trees where no Land preparation or other Development activities of any kind will occur may be designated on a tree removal application. The designated Area Shall be protected by placing stakes a maximum of twenty-five (25) feet apart along the outside perimeter of the Area and tying clearly visible plastic tape or ribbon, or rope, from stake to stake. The perimeter line shall be outside of the drip line of any protected tree within the designated area.

f. Protective barriers and perimeter lines shall remain in place until all construction activity is terminated, except for Landscaping.

5. Avoiding injuries due to chemical poisoning

a. No fuel, paint, solvent, oil, thinner, asphalt, cement, grout or any other construction chemical or other material or tools of any kind Shall be stored, or allowed in any manner to enter, within a protective barrier or perimeter line during the construction process.

b. No equipment shall be cleaned within a protective barrier or perimeter line.

6. Avoiding tree injury due to ~~grade changes~~root impacts.

Because construction within the drip line, such as changes in grade and installation of underground utilities, ~~changes in soil grade within the drip line of a protected tree~~ commonly cause extensive root damage or death of ~~the~~ a tree, ~~within one (1) to two (2) years, grade changes~~ construction Shall not be ~~made~~ permitted within the drip line unless ~~the following~~ protective measures are taken and supervised by a licensed landscape architect or arborist certified by the International Society of Arboriculture to ensure the health of the tree.~~:~~

~~a. Raising the Grade.~~

~~1. Preparing the ground.~~

~~a. Within the drip line, existing sod, vegetation and leaf litter shall be removed and the soil loosened without injuring the roots.~~

~~b. The Area within the drip line shall be properly watered and protected fertilized to improve the vigor and growth of the roots.~~

~~2. Installing tile drains.~~

~~a. Porous, four (4) inch agriculture drain tiles or perforated piping shall be laid over the soil to drain liquids away from the trunk. A drop of at least one-eighth (1/8) inch per foot shall be provided. The drain field shall be designed to provide adequate drainage of the existing configuration of the trees. (Illustration in Subsection 9.01.10.AH.64-5). See Figures 4, 5, 6 and 7~~

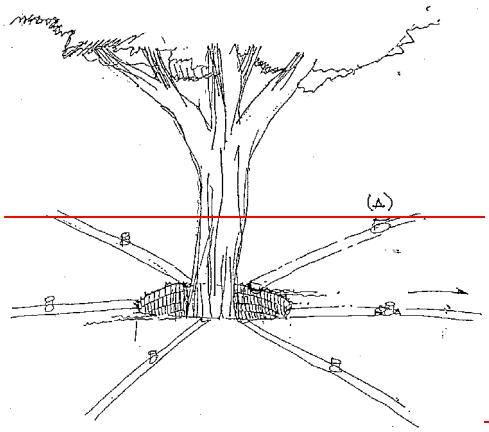
~~b. The number of drains shall depend upon the soil material; lighter sandy soils and porous gravelly material require fewer drains than heavy non-porous soils.~~

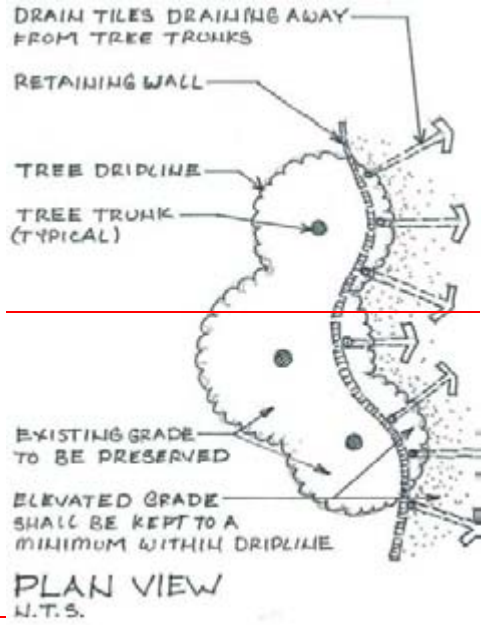
~~c. Installing vertical tiles along the system shall provide aeration. The vertical tiles shall be filled with gravel and capped with a heavy-duty mesh to keep out trash and debris.~~

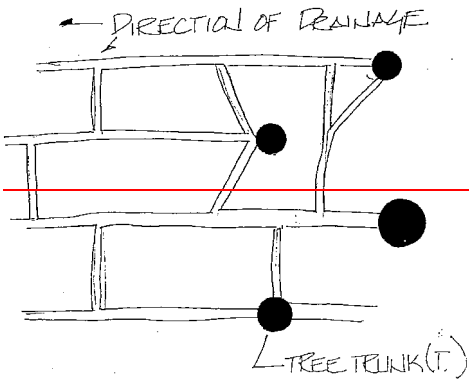
~~**Figure 4** – A dry well around a tree~~ ~~**Figure 5** – Grid pattern of tiles for~~

~~permits air and water circulation. Tiles on the ground are sloped to drain away from the trunk and off roots (arrow) Vertical tiles (A) are connected with drain to permit additional air circulation; the one on the extreme right is held erect by loose stones.~~

~~draining a stand of trees.~~

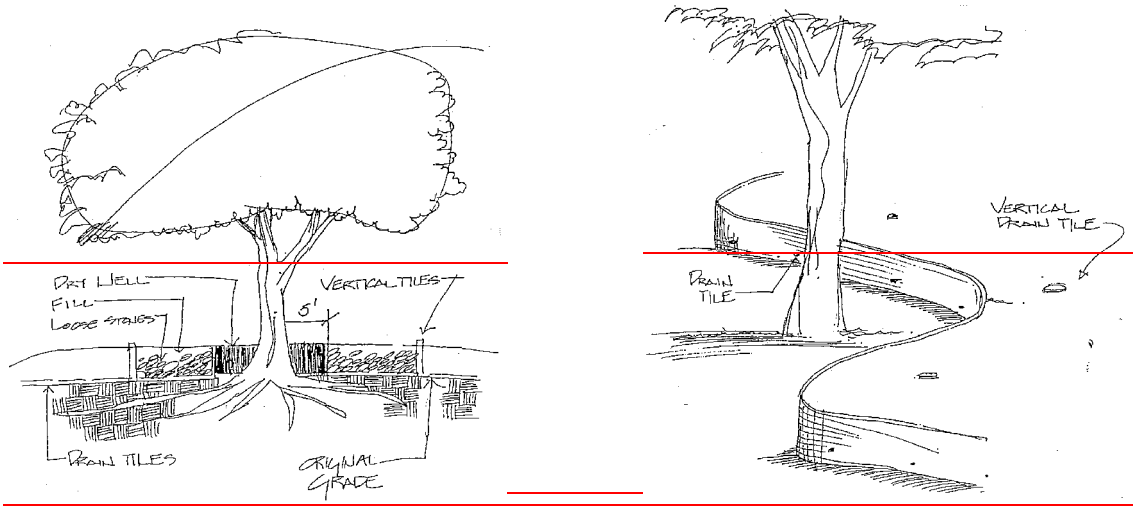






~~**Figure 6** – Section illustrating fill in over tiles.~~

~~**Figure 7** – Open dry well at the edge of a filled slope provides air and water circulation over part of the root system covered by fill. Extending the upper side of the wall a few inches above the fill prevents debris from washing into the well.~~



3. Dry well construction (Illustration in Subsection 9.01.10.A.6.a.3H.6). See Figure 4.

a. Dry wells shall be large enough to allow for maximum growth of the tree trunk. Most large shade trees require at least a sixty (60) inch radius diameter well. For slow growing mature trees, a space of at least twelve (12) to eighteen (18) inches shall be provided between the trunk and the side of the well at every point.

b. To prevent washing of material into the well, the dry well casing walls shall be high enough to bring the coping just above the level of the proposed fill.

c. Dry well walls shall be constructed of materials that Permit passage of air and water. Concrete blocks backed with galvanized screening may be used for the sides of the well.

d. Gratings of barriers shall be used around openings that are large enough to present a hazard to pedestrians.

e. Open wells (Illustration in Subsection 9.01.10.A.6.a.3H.7) shall be cleaned regularly to remove sediment, leaves, and debris that might interfere with the free passage of air. See Figure 7

4. Filling (Illustration in Subsection 9.01.10.A.6.a.3H.6). (See Figure 6)

a. Large stones, except for those made from limestone or marble chips, Shall be placed over the drainage tiles and a

~~layer of smaller stones shall be placed over the remainder of the ground within the drip line.~~

~~b. A layer of gravel shall be placed over the stones.~~

~~c. A layer of geotextile, including filter fabric or woven polystyrene, that prevents fill but allows water to pass through shall be placed over the gravel.~~

~~d. The fill shall be completed with a layer of porous soil.~~

~~b. Lowering the Grade.~~

~~1. Methods. When lowering the grade of the soil surrounding a protected tree, using any of the following methods shall preserve the maximum number of tree roots within the drip line:~~

~~a. Terracing. The Area within the drip line left at the original grade by terracing (Illustration in Subsection 9.01.10.H.8). See Figure 8~~

~~b. Retaining wall. The Area within the drip line is left at the original grade by constructing a dry retaining wall. The retaining wall shall be porous to allow for aeration. (Illustration in Subsection 9.01.10.H.9) See Figure 9~~

~~c. Terracing and retaining wall. The Area within the drip line is left at the original grade by the combined Use of terracing and dry retaining wall.~~

~~2. Precaution. In addition to the above, the following precaution shall be taken when lowering the grade around a protected tree:~~

~~Roots Shall be cut cleanly and retrimmed after excavation using equipment such as axes, shovels, chainsaws, and other similar root pruning instruments. No bulldozers, root rakes, or other such equipment shall be used.~~

~~a. Minor Changes in Grade. When the change in grade is minor, two (2) inch to four (4) inch maximum, protective measures may be taken as shown in Subsection 9.01.10.H.10 in lieu of the above requirements. Figure 10~~

~~b. The County Manager or designee shall approve the Use of these methods where their Use will not endanger the health of the protected tree.~~

7. *Avoiding injuries due to excavations.*

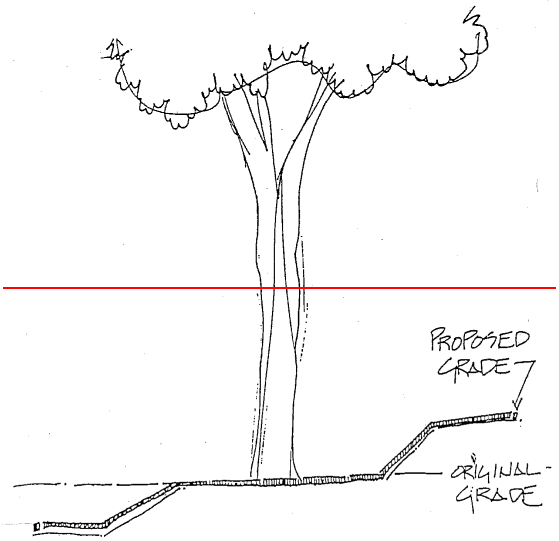
a. To avoid damage to protected trees, water, sewer, and other utility lines should be routed around the drip lines.

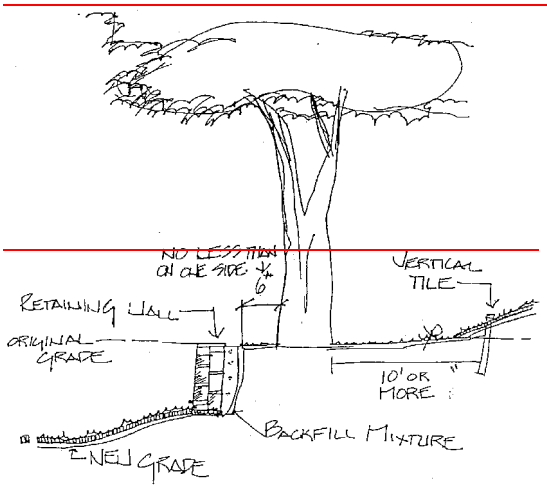
b. If a utility line cannot reasonably be routed around the drip line the utility line shall be tunneled beneath the Area within the drip line. The tunnel shall be offset to one (1) side of the trunk to prevent damage to the main taproots. (Illustration in Subsection 9.01.10.H.11). See Figure 11

87. Avoiding injuries by due to paving within the drip line, if approved by the County Manager or designee. Paving may be placed within the drip line but outside the tree protection Zone of a protected tree, so long as no damage is inflicted to the tree by grade change, compaction of soil, or any other cause, if approved by the County Manager or designee.

Figure 8 Lowering the grade by terracing.

Figure 9 Lowering the grade with a retaining wall.





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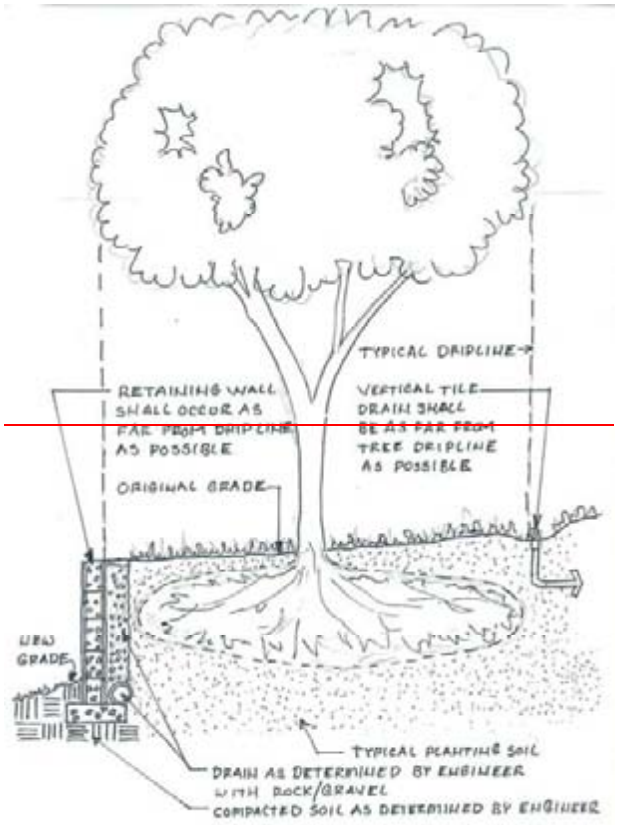
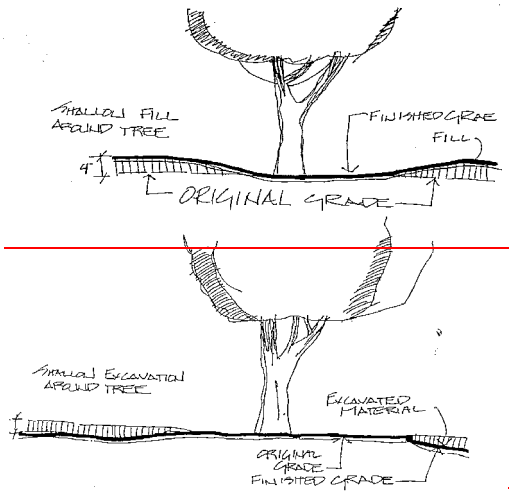
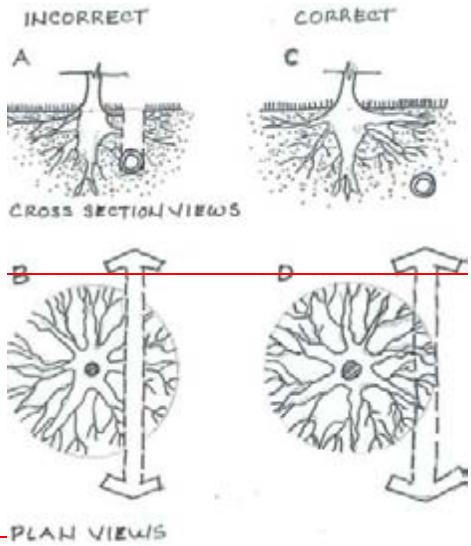
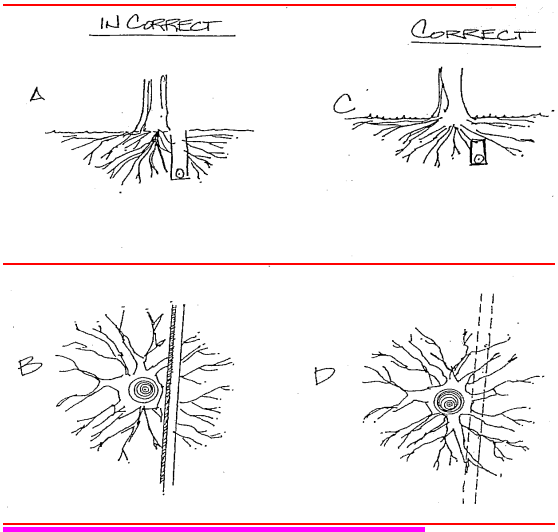


Figure 10 – Protection measures for minor changes in grade.

Figure 11 – Excavations within the drip line. Trenching to close to the (A & B) severs roots. Tunneling under the base of the tree and offset from the main taproot (C & D) destroys fewer roots.







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~~B.Table 1. List of recommended Landscaping trees~~.

~~Understory~~Ornamental ~~Trees~~	
~~*Common Name*~~	~~*Botanical Name*~~
~~Redbud~~	~~Cercis canadensis~~
~~Anise~~	~~Illicium spp.~~

~~Southern red cedar~~	~~Juniperus silicicola~~
~~Drake/"Chinese" elm~~	~~Ulmus parvifolia~~
~~Walter's viburnum~~	~~Viburnum obovatum~~
~~Flowering dogwood~~	~~Cornus florida (partial sun only)~~
~~Wax myrtle~~	~~Myrica cerifera~~
~~Fringe tree~~	~~Chionanthus virginica~~
~~Yaupon holly~~	~~Ilex vomitoria~~
~~Loblolly bay~~	~~Gordonia lasianthus~~

~~Canopy Trees~~	
~~Common Name~~	~~Botanical Name~~
~~American elm~~	~~Ulmus americana~~
~~American holly~~	~~Ilex opaca~~
~~Live oak~~	~~Quercus virginiana~~
~~Loblolly bay~~	~~Gordonia lasianthus~~
~~Bald cypress~~	~~Taxodium distichum~~
~~Loblolly pine~~	~~Pinus taeda~~

~~Cabbage palm~~	~~Sabal palmetto~~
~~Longleaf pine~~	~~Pinus palustris~~
~~Palatka holly~~	~~Ilex attenuata~~
~~Savannah holly~~	~~Ilex opaca x attenuata "Savannah"~~
~~Persimmon~~	~~Diospyros virginiana~~
~~Slash pine~~	~~Pinus elliottii~~
~~Red bay~~	~~Persea borbonia~~
~~Southern magnolia~~	~~Magnolia grandiflora~~
~~Red maple~~	~~Acer rubrum~~
~~Oct. Glory maple & cult.~~	~~Acer rubrum "October Glory" & cultivars (FL flame)~~
~~Sugarberry~~	~~Celtis laevigata~~
~~Sand pine~~	~~Pinus clausa~~
~~Swamp black gum~~	~~Nyssa sylvatica~~
~~Sweet bay magnolia~~	~~Magnolia virginiana~~
~~Dahoon holly~~	~~Ilex cassine~~
~~Sweetgum~~	~~Liquidambar styraciflua~~
~~Hornbean/Bluebeech~~	~~Carpinus caroliniana~~
~~American sycamore~~	~~Platanus occidentalis~~

~~Laurel oak~~	~~Quercus laurifolia~~
~~Tuliptree~~	~~Liriodendron tulipifera~~
~~Water ash/Pop ash~~	~~Fraxinus caroliniana~~

~~C. Table 2. List of ornamental Landscaping trees.~~

~~Small Trees~~	
~~Common Name~~	~~Botanical Name~~
~~Crape myrtle~~	~~Lagerstroemia x fauriei and cultivars~~
~~Rusty pittosporum~~	~~Pittosporum ferrugineum~~
~~Wax myrtle~~	~~Myrica cerifera~~
~~Podocarpus~~	~~Podocarpus macrophyllus~~
~~Loblolly bay~~	~~Gordonia lasianthus~~
~~Red holly~~	~~Ilex spp. including "EP", "Savi", "Nellie Stevens"~~
~~Junipers~~	~~Juniperus "Torulosa" and "Spartan"~~

~~Large Ornamental Trees and Palms~~	

~~Common Name~~	~~Botanical Name~~
~~Winged elm~~	~~Ulmus alata~~
~~Heritage river birch~~	~~Betula nigra "Heritage"~~
~~Washingtonia palm~~	~~Washingtonia robusta~~
~~Chinese fan palm~~	~~Livistona chinensis~~
~~Date palm~~	~~Phoenix dactylifera~~
~~Canary Island date palm~~	~~Phoenix canariensis~~
~~Windmill palm~~	~~Trachycarpus fortunii~~
~~European fan palm~~	~~C. humilis~~
~~Pindo palm~~	~~Butra capitate~~

~~D. Table 3. List of suggested shrubs and minimum center requirements for visual screens.~~

~~Common Name~~	~~Botanical Name~~	~~Minimum Center (in feet)~~
~~Glossy abelia~~	~~Abelia spp.~~	~~2.0~~
~~Pampas grass~~	~~Cortaderia selloana~~	~~4.0~~
~~Allamanda, Pineland~~	~~Angadenia berterii~~	~~2.5~~
~~Pineapple guava~~	~~Feijoa sellowiana~~	~~3.0~~

~~Anise~~	~~Illicium floridanum~~	~~2.5~~
~~Pittosporum~~	~~Pittosporum tobira~~	~~3.0~~
~~Azalea~~	~~Rhododendron hybrids~~	~~3.0~~
~~Plumbago~~	~~Plumbago capensis~~	~~2.0~~
~~Banana shrub~~	~~Michelia fuscata~~	~~3.0~~
~~Primrose jasmine~~	~~Jasminum mesnyi~~	~~3.0~~
~~Boxwood~~	~~Buxus microphylla~~	~~2.0~~
~~Viburnum~~	~~Viburnum hybrids~~	~~3.0~~
~~Chinese juniper~~	~~Juniperus chinensis~~	~~3.0~~
~~Silverthorn~~	~~Elaeagnus philippensis~~	~~3.0~~
~~Podocarpus~~	~~Podocarpus macrophyllus~~	~~2.0~~
~~Holly~~	~~Ilex spp.~~	~~2.0--3.0~~
~~Indian hawthorne~~	~~Raphiolepis indica~~	~~2.5~~

~~E. Table 4: List of Recommended Lawn Grass~~

~~Common Name~~
~~Centipede~~
~~Bahaia~~

~~St. Augustine "Palmetto"~~
~~St. Augustine "Bitter Blue"~~
~~St. Augustine "Floratam"~~
~~Annual Ryegrass~~
~~Perennial Ryegrass~~

~~F. Table 5: List of Recommended Xeriscape Plants~~

~~From *Drought Tolerant Plant Guide for Lake County* published by the Lake County Water Authority and Xeriscape plant list from St. John's Water Management District.~~

~~+ = Low drought tolerance~~

~~++ = Moderate drought tolerance~~

~~+++ = High drought tolerance~~

~~*Indicates species is native to North America~~

~~Canopy Trees~~		
~~Common Name~~	~~Botanical Name~~	~~Drought Tolerance~~
~~*Bald cypress~~	~~Taxodium distichum~~	~~+++~~
~~*Pond cypress~~	~~Taxodium ascendens~~	~~+++~~
~~*Pignut hickory~~	~~Carya glabra~~	~~+++~~
~~*Laurel oak~~	~~Quercus laurifolia~~	~~++~~

~~*Live oak~~	~~Quercus virginiana~~	~~+++~~
~~*Shumard oak~~	~~Quercus shumardii~~	~~+++~~
~~*Longleaf pine~~	~~Pinus palustris~~	~~+++~~
~~*Sand pine~~	~~Pinus clausa~~	~~+++~~
~~*Slash pine~~	~~Pinus elliottii~~	~~+++~~
~~*Redbay~~	~~Persea borbonia~~	~~+++~~
~~*Sweetgum~~	~~Liquidambar styraciflua~~	~~++~~

~~Understory~~ ~~Ornamental~~ ~~and Palm Trees~~		
~~Common Name~~	~~Botanical Name~~	~~Drought Tolerance~~
~~*Myrtle oak~~	~~Quercus myrtifolia~~	~~+++~~
~~*Cabbage palm~~	~~Sabal palmetto~~	~~+++~~
~~*Chickasaw plum~~	~~Prunus angustifolia~~	~~+++~~
~~Chinese fan palm~~	~~Livistona chinensis~~	~~++~~
~~Crape myrtle~~	~~Lagerstroemia indica~~	~~+++~~
~~Winged elm~~	~~Ulmus alata~~	~~+++~~
~~European fan palm~~	~~Chamerops humilis~~	~~++~~
~~*East Palatka holly~~	~~Ilex x attenuata~~	~~+++~~

~~*Yaupon holly~~	~~Ilex vomitoria~~	~~+++~~
~~Loquat~~	~~Eriobotrya japonica~~	~~++~~
~~Redbud~~	~~Cercis canadensis~~	~~++~~
~~*Southern red cedar~~	~~Juniperus silicicola~~	~~+++~~
~~*Sugarberry~~	~~Celtis laevigata~~	~~++~~
~~Purple tabebuia~~	~~Tabebuia heterophylla~~	~~+++~~
~~Washington palm~~	~~Washingtonia robusta~~	~~+++~~
~~Windmill palm~~	~~Trachycarpus fortunei~~	~~+++~~

~~Shrubs~~		
~~Common Name~~	~~Botanical Name~~	~~Drought Tolerance~~
~~Japanese anise~~	~~Illicium anisatum~~	~~++~~
~~*Florida anise~~	~~Illicium floridavum~~	~~++~~
~~*Beautyberry~~	~~Callicarpa americana~~	~~+++~~
~~Butterfly bush~~	~~Buddlea davidii spp.~~	~~+++~~
~~Japanese camellia~~	~~Camellia japonica~~	~~++~~
~~Sasanqua camellia~~	~~Camellia sasanqua~~	~~++~~
~~Cape honeysuckle~~	~~Tecomaria capensis~~	~~++~~

~~Croton~~	~~Codiaeum variegatum~~	~~+++~~
~~Firecracker plant~~	~~Crossandra infundibulifromis~~	~~+++~~
~~Firethorn~~	~~Crataegus spp.~~	~~+++~~
~~*Florida privet~~	~~Forestiera segregata~~	~~+++~~
~~*Gallberry~~	~~Ilex coriacea~~	~~+++~~
~~Chinese holly~~	~~Ilex chinensis~~	~~+++~~
~~Japanese holly~~	~~Ilex japonica~~	~~++~~
~~*Schillings holly~~	~~Ilex x 'Schilling'~~	~~+++~~
~~Indian hawthorn~~	~~Raphiolepis indica~~	~~+++~~
~~Japanese boxwood~~	~~Buxus sempervirens~~	~~+++~~
~~Juniper family~~	~~Juniperus spp.~~	~~+++~~
~~Leatherleaf mahonia~~	~~Mahonia bealei~~	~~++~~
~~Natal plum~~	~~Carissa macrocarpa~~	~~+++~~
~~Orange jasmine~~	~~Murraya paniculata~~	~~++~~
~~*Saw palmetto~~	~~Serenoa repens~~	~~+++~~
~~Pampas grass~~	~~Cortaderia selloana~~	~~+++~~
~~Pineapple guava~~	~~Psidium L. spp.~~	~~+++~~
~~Pittosporum family~~	~~Pittosporum spp.~~	~~++~~
~~Maki podocarpus~~	~~Podocarpus macrophyllus 'Maki'~~	~~+++~~

~~Yew podocarpus~~	~~Podocarpus macrophyllus~~	~~+++~~
~~*Viburnum family~~	~~Viburnum spp.~~	~~++~~
~~*Wax myrtle~~	~~Myrica cerifera~~	~~+++~~
~~*Prickley pear cactus~~	~~Opuntia humifusa~~	~~+++~~
~~*Spanish bayonette~~	~~Yucca filamentosa~~	~~+++~~

~~Vines~~		
~~Common Name~~	~~Botanical Name~~	~~Drought Tolerance~~
~~*Coral honeysuckle~~	~~Lonicera sempervirens~~	~~+++~~
~~Creeping fig~~	~~Ficus repens~~	~~+++~~
~~*Carolina jessamine~~	~~Gelsemium sempervirens~~	~~+++~~
~~*Grape~~	~~Vitis rotundifolia~~	~~++~~
~~*Virginia creeper~~	~~Parthenocissus quinquefolia~~	~~+++~~

~~Groundcover~~		
~~Common Name~~	~~Botanical Name~~	~~Drought Tolerance~~
~~*Beargrass~~	~~Nolina brittoniana~~	~~++~~

~~*Blue-eyed grass~~	~~Sisyrinchium angustifolium or S. atlanticum~~	~~++~~
~~*Coontie~~	~~Zamia pumila~~	~~++~~
~~*Crinum lily~~	~~Crinum amabile 'Purple Leaf' or C. asiaticum~~	~~++~~
~~Dwarf nandina~~	~~Nandina domestica 'compacta'~~	~~++~~
~~*Gopher apple~~	~~Licana michauxii~~	~~++~~
~~Holly fern~~	~~Crytomium falcatum~~	~~++~~
~~Algerian ivy~~	~~Hedera canariensis~~	~~++~~
~~English ivy~~	~~Hedera helix~~	~~++~~
~~Confederate jasmine~~	~~Trachelospermum jasminoides~~	~~+++~~
~~Creeping juniper(s)~~	~~Juniperus spp.~~	~~+++~~
~~Liriope~~	~~Liriope muscari~~	~~+++~~
~~Mondo grass~~	~~Ophiopogon japonicus~~	~~+++~~
~~*Cord grass~~	~~Spartina spp.~~	~~+++~~
~~Society garlic~~	~~Tulbaghia violacea~~	~~+++~~
~~*Wiregrass~~	~~Aristida stricta~~	~~++~~

~~Annuals and Perennials~~		

~~Common Name~~	~~Botanical Name~~	~~Drought Tolerance~~
~~Aloe~~	~~Aloe vera~~	~~+++~~
~~*Blanket flower~~	~~Gallardia grandiflora~~	~~+++~~
~~Daylilly~~	~~Hermocallis spp.~~	~~++~~
~~False heather~~	~~Cuphea hyssopifolia spp.~~	~~++~~
~~Kalanchoe~~	~~Kalanchoe spp.~~	~~+++~~
~~Perwinkle~~	~~Catharanthus roseus~~	~~+++~~
~~Moss rose~~	~~Portulaca grandiflora~~	~~+++~~
~~Innocence~~	~~Hedyotis spp.~~	~~++~~
~~Sun rose~~	~~Helianthemum spp.~~	~~++~~
~~Piriqueta~~	~~Piriqueta caroliniana~~	~~++~~
~~Stylisma~~	~~Stylisma patens~~	~~++~~
~~Pentas~~	~~Penta spp.~~	~~+++~~

~~G. Table 6: List of Xeric Oak and Sand Pine Community Plants~~

~~Trees and Palms~~	
~~Common Name~~	~~Botanical Name~~
~~Myrtle oak~~	~~Quercus myrtlefolia~~

~~Scrub oak~~	~~Quercus inopina~~
~~Saw palmetto~~	~~Serona repens~~
~~Chapman's oak~~	~~Quercus chapmanii~~
~~Dwarf red bay~~	~~Persea borbonia humilis~~
~~Bluejack oak~~	~~Quercus incana~~
~~Live oak~~	~~Quercus virginiana~~
~~Dwarf live oak~~	~~Quercus minima~~
~~Ground oak~~	~~Licania michauxii~~
~~Scrub hickory~~	~~Carya floridana~~
~~Scrub holly~~	~~Ilex opaca var. arenicola~~
~~Scrub palmetto~~	~~Sabal etonia~~
~~Scrub plum~~	~~Prunus geniculata (Endangered/endemic to scrub habitat)~~

~~Shrubs~~	
~~Common Name~~	~~Botanical Name~~
~~Prickley pear catcus~~	~~Opuntia spp./compressa~~
~~Rusty lyonia~~	~~Lyonia ferruginea~~

~~Blueberry~~	~~Vaccinium spp.~~
~~Winged sumac~~	~~Rhus copallina~~
~~Dwarf huckleberry~~	~~Gayllussacia dumosa~~
~~Paw-paw~~	~~Asimina reticulata~~
~~Florida rosemary~~	~~Ceratiola ericoides~~

~~Vines~~	
~~Common Name~~	~~Botanical Name~~
~~Calusa grapevine~~	~~Vitis shuttleworthii~~
~~Cat greenbriar~~	~~Smilax glauca~~
~~Greenbriar~~	~~Smilax auriculata/laurifolia~~
~~Muscadine grapevine~~	~~Vitis rotundifolia~~
~~Passion vine~~	~~Cassytha filiformes~~

~~Annuals and Perennials~~	
~~Common Name~~	~~Botanical Name~~
~~Bluestems~~	~~Andropogon spp.~~

~~Beak rush~~	~~Rynchospora spp.~~
~~Blazing star~~	~~Liatris tenuifolia~~
~~Britton's beargrass~~	~~Nolina brittonia~~
~~Queen's delight~~	~~Stillingia sylvatica~~
~~Wiregrass~~	~~Aristida stricta~~
~~Clasping warea~~	~~Warea amplexifolia (Extremely endangered/endemic to scrub)~~
~~Brown-haired snoutbean~~	~~Rynchosia cinerea~~
~~Frostweed~~	~~Heliantheum spp.~~
~~Panic grass~~	~~Dicanthelium sabulorem~~
~~Yellow indiangrass~~	~~Sorghastrum nutana~~

9.01.11 ~~10~~ Prohibited Plant Species. The control and elimination of invasive, non-native plant species helps ~~shall~~ protect the natural vegetative communities existing within Lake County. ~~The trees plant species set forth below are prohibited from being counted toward the required number of trees or vegetation, as replacements to removed trees, and not be voluntarily planted.~~

1. The Plant List for Lake County shall contain the list of prohibited vegetation. ~~These~~Prohibited ~~trees~~ plant species ~~are prohibited from being~~shall not be planted or counted toward minimum tree or vegetation requirements. ~~Refer to The Plant List for Lake County for an expanded list of prohibited vegetation.~~ Prohibited vegetation shall not be planted. These ~~trees~~ plant species do not require a~~n~~ ~~approved Lake County tree removal~~ permit ~~for~~to be remov~~al~~ed.

2. Removal of ~~these~~ ~~trees from a commercial, industrial, community facility, or multi-family Site that is being developed~~ prohibited plant species shall be completed as a requirement for~~-~~ approval of the final Permit inspection and prior to issuance of a certificate of occupancy. Prohibited vegetation shall not be removed from ~~protected~~ wetlands ~~and~~or natural water bodies that are regulated ~~and~~or protected by the Water Management Districts and/or the Department of Environmental Protection without an approv~~ed~~al ~~permit~~ for ~~vegetation~~invasive exotic plant removal~~.~~.

Single-family residences of new construction shall comply with this requirement.

3. Designers and land owners shall also not plant vegetationThe prohibited vegetation provided in the Plant List for Lake County shall be based on the following: that is listed in the following resources and web sites:

a) *"Prohibited Plant Species"* section as listed in the document *Plant List for Lake County*

b) Florida Exotic Pest Plant Council *Category I & II Prohibited Plants*. and web site: www.fleppc.org/.

c) Center for Aquatic and Invasive Plants, University of Florida, IFAS.: http://aquaand t1.ifas.ufl.edu/photos.html/

PROHIBITED SPECIES	
Common Name	Botanical Name
Australian Pine	Casuarina spp.
Brazilian Pepper	Schinus terbinthifolius
California Privet (Tree form)	Ligustrum ovalifolium
California Privet (Shrub form)	Ligustrum ovalifolium
Camphor	Cinnamomum camphora
Cedar Gum	Eucalyptus gunnii
Chinaberry	Melia azedarch
Chinese Tallow Tree	Sapium sebiferum
Ear Tree	Enterlobium cyclocarpum
Empress Tree	Paulownia tomentosa
Eucalyptus species	Eucalyptus spp.
Jacaranda	Grevillea robusta
Japanese Tallow Tree	Sapium japonicum
Melaleuca	Melaleuca quinquenervia
Mimosa	Albizzia julibrissin
Paper Mulberry	Broussonetia papyrifolia
Silk Oak	Grevillea robusta
Tree of Heaven	Ailanthus altissima

2. Removal of these trees from any site that is being developed shall be completed as a requirement for approval of the final permit inspection and prior to issuance of a certificate of occupancy. Removal of any plant, native or invasive from a jurisdictional water body such as wetlands and lakes shall first be permitted by the corresponding agency such as the St. Johns Water Management District.

3. A phasing plan may be submitted for the removal of prohibited species.

H. Figures 1--13 [14].

9.02.00 Protected Trees.

9.02.01 Purpose. The purpose of this Section is:

1. ~~Is~~To establish rules and regulations governing the protection of trees and vegetative cover within unincorporated Lake County
2. To encourage the proliferation of trees and vegetation ~~within unincorporated Lake County~~ as well as their replacement
3. To recognize the importance of trees and vegetation and their meaningful contribution to a healthy, beautiful, and safer community attributable to their carbon dioxide absorption, oxygen production, dust filtration, wind and noise reduction, soil erosion prevention, lakeshore erosion protection, wildlife habitat, surface drainage improvement, beautification and aesthetic enhancement of improved and vacant lands; and the general promotion of the health, safety, welfare and well-being of the community.

~~.) is to establish rules and regulations governing the protection of trees and vegetative cover within unincorporated Lake County; to encourage the proliferation of trees and vegetation within unincorporated Lake County as well as their replacement; to recognize their importance and their meaningful contribution to a healthy, beautiful, and safer community attributable to their carbon dioxide absorption, oxygen production, dust filtration, wind and noise reduction, soil Erosion prevention, lakeshore Erosion protection, wildlife habitat, surface drainage improvement, beautification and aesthetic enhancement of improved and vacant Lands; and the general promotion of the health, safety, welfare and well-being of the community.~~

9.02.02 *Protected* **Trees ~~Protection~~.**

A. Designation of Protected Trees. All trees native to Florida or Florida- Friendly~~or as grown healthy in to Lake County, Florida~~, including, but not limited to~~, the types of trees set forth below are~~ those identified within ~~the~~ *The Plant List for Lake County*, ~~following documents shall be protected and as contained in:~~ three (3) inches or larger in diameter at breast height, shall be considered Protected Trees. Prohibited trees shall not be considered Protected Trees.

B. Protected Trees require a Lake County Tree Removal Permit for removal.

~~1. *The Plant List for Lake County* (separate document)~~

~~*The Recommended Plant for Lake County* (separate document) and *Vascular Plants of Florida* by Richard P. Wunderlin~~

~~B. . The protected palm trees listed below may not be used for more than twenty-five (20%5) percent of the required replacement trees required pursuant to Subsections 9.01.03.E.4.~~

C. ~~These trees require an approved Lake County Tree Removal Permit for removal. Subsection 9.02.089 specifically addresses the designation~~ of Historic and Specimen trees shall be considered Protected Trees.

~~Specimen Trees. Subsection 9.02.09 specifically addresses the designation of Trees.~~

~~** Note: The Lake County Recommended Plants for Lake CountyLandscape Manual shall apply for trees that are required to be preserved in Lake County.~~

~~CEDAR~~	
~~(1) Atlantic White Cedar~~	~~(Chamaecyparis thyoides)~~
~~CYPRESS~~	
~~(2) Bald Cypress~~	~~(Taxodium distichum)~~
~~(3) Pond Cypress~~	~~(Taxodium ascendens)~~
~~ELM~~	
~~(4) American Elm; White Elm*~~	~~(Ulmus americana)~~
~~(5) Winged Elm; Cork Elm~~	~~(Ulmus alata)~~
~~*Or other engineered *U. americana* cultivars~~	
~~HICKORY~~	
~~(6) Mockernut Hickory~~	~~(Carya tomentosa Nutt.)~~
~~(7) Pignut Hickory~~	~~(Carya glabra)~~
~~(8) Scrub Hickory~~	~~(Carya floridana)~~
~~(9) Water Hickory~~	~~(Carya aquatica)~~
~~HOLLY~~	
~~(10) American Holly~~	~~(Ilex opaca)~~

~~(11) Dahoon Holly~~	~~(Ilex cassine)~~
~~(12) Palatka Holly~~	~~(Ilex attenuata)~~
~~MAPLE~~	
~~(13) Florida Maple~~	~~(Acer barbatum Mich.)~~
~~(14) Red Maple~~	~~(Acer rubrum)~~
~~MAGNOLIA~~	
~~(15) Sweet Bay~~	~~(Magnolia virginiana)~~
~~(16) Southern Magnolia~~	~~(Magnolia grandiflora)~~
~~OAK~~	
~~(17) Bluejack Oak~~	~~(Quercus incana)~~
~~(18) Chapman Oak~~	~~(Quercus chapmanii)~~
~~(19) Laurel Oak~~	~~(Quercus laurifolia)~~
~~(20) Live Oak~~	~~(Quercus virginiana)~~
~~(21) Myrtle Oak~~	~~(Quercus myrtifolia)~~
~~(22) Post Oak~~	~~(Quercus stellata)~~
~~(23) Sand Live Oak~~	~~(Quercus geminata)~~
~~(24) Turkey Oak~~	~~(Quercus laevis)~~
~~(25) Water Oak~~	~~(Quercus nigra)~~
~~PALM~~	

~~(26) Sabal Palm; Cabbage Palm~~	~~(Sabal palmetto)~~
~~(27) Silver Palm~~	~~(Coccothrinax argentata)~~
~~PINE~~	
~~(28) Loblolly Pine~~	~~(Pinus taeda)~~
~~(29) Longleaf Pine~~	~~(Pinus palustris)~~
~~(30) Pond Pine~~	~~(Pinus serotina Mich.)~~
~~(31) Sand Pine~~	~~(Pinus clausa)~~
~~(32) Slash Pine~~	~~(Pinus elliottii)~~
~~RED CEDAR~~	
~~(33) Southern Red Cedar~~	~~(Juniperus silicicola)~~
~~OTHERS~~	
~~(34) Basswood~~	~~(Tilia americana)~~
~~(35) Blackgum~~	~~(Nyssa sylvatica)~~
~~(36) Chickasaw Plum~~	~~(Prunus angustifolia)~~
~~(37) Fringe Tree~~	~~(Chionanthus virginica)~~
~~(38) Hackberry~~	~~(Celtis canadensis)~~
~~(39) Sugarberry~~	~~(Celtis laevigata)~~
~~(40) Hornbeam~~	~~(Carpinus caroliniana)~~
~~(41) Loblolly Bay~~	~~(Gordonia lasianthus)~~

~~(42) Persimmon~~	~~(Diospyros virginiana)~~
~~(43) Red Bay~~	~~(Persea borbonia)~~
~~(44) Redbud~~	~~(Cercis canadensis)~~
~~(45) Red Mulberry~~	~~(Morus rubra)~~
~~(46) Sparkleberry~~	~~(Vaccinium arboreum)~~
~~(47) Sweetgum~~	~~(Liquidambar styraciflua)~~
~~(48) Tulip Tree~~	~~(Liriodendron tulipfera)~~
~~(49) Walter's Viburnum~~	~~(Viburnum obovatum)~~
~~(50) Wax Myrtle~~	~~(Myrica cerifera)~~
~~(51) Wild Olive-Devilwood~~	~~(Osmanthus americanus)~~
~~(52) River Birch~~	~~(Betula nigra)~~
~~(53) Flowering Dogwood~~	~~(Cornus florida)~~

~~B.*Prohibited Species.* The control and elimination of invasive, nonnative species Shall protect the natural vegetative communities existing within Lake County. The trees set forth below are prohibited from being counted toward the required number of trees, as replacements to removed trees, and hall not be voluntarily planted.~~

~~1. These trees are prohibited from being planted or counted toward minimum tree requirements. These trees do not require an approved Lake County Tree Removal Permit for removal.~~

~~(1)~~	~~Australian Pine~~	~~(Casuarina spp.)~~

~~(2)~~	~~Melaleuca~~	~~(Melaleuca quinquenervia)~~
~~(3)~~	~~Chinaberry~~	~~(Melia azedarch)~~
~~(4)~~	~~Ear Tree~~	~~(Enterlobium cyclocarpum)~~
~~(5)~~	~~Eucalyptus species~~	~~(Eucalyptus spp.)~~
~~(6)~~	~~Brazilian Pepper~~	~~(Schinus terbinthifolius)~~
~~(7)~~	~~Paper Mulberry~~	~~(Broussonetia papyrifolia)~~
~~(8)~~	~~Silk Oak~~	~~(Grevillea robusta)~~
~~(9)~~	~~Empress Tree~~	~~(Paulownia tomentosa)~~
~~(10)~~	~~Tree of Heaven~~	~~(Ailanthus altissima)~~
~~(11)~~	~~Chinese Tallow Tree~~	~~(Sapium sebiferum)~~
~~(12)~~	~~Japanese Tallow Tree~~	~~(Sapium japonicum)~~
~~(13)~~	~~Camphor~~	~~(Cinnamomum camphora)~~
~~(14)~~	~~California Privet*~~	~~(Ligustrum ovalifolium)~~
	~~*both shrub and tree forms~~	
~~(15)~~	~~Cedar Gum~~	~~(Eucalyptus gunnii)~~

~~2. Removal of these trees from a commercial, industrial, community facility, or multi-family Site that is being developed hall be completed as a requirement for approval of the final Permit inspection and prior to issuance of a certificate of occupancy. Single-family residences of new construction are not exempt from this requirement.~~

9.02.03 Removal of Trees Requiring a ~~es~~ Permit from Lake County~~.~~

Unless exempt pursuant to Subsection 9.02.04, the following provisions shall apply to the removal of trees requiring a permit in Lake County:

A. It shall be unlawful and a violation of this Section to clear, kill or remove a protected tree by any method without first submitting a Permit application and fee and securing a tree removal Permit in accordance with Section 14.14.04 of the Land Development Regulations ~~from the County Manager or designee~~. If protected trees are removed intentionally or unintentionally without a Permit, then the real Property owner shall take the following remedial actions:

1. ~~Restore the Property consistent with a restoration and monitoring plan submitted by the real Property owner and approved by the County Manager or designee.~~ A restoration plan must be prepared and submitted within 30 days by the property owner, developer, contractor, or agent for approval by the County Manager or designee. All trees and vegetation shown on the approved site restoration plan must be installed on the property and the site grade restored.

2. The restoration plan shall include tree replacement in accordance with the following standards:

a. Each ~~canopy tree~~ replacement canopy tree shall be a minimum two and one-half ~~three~~ (2-1/2~~"3~~) inches caliper, eight (8~~'~~) feet height x four (4~~'~~) feet -spread in a minimum thirty (30) gallon container. Each ornamental tree shall be a minimum two inch -(2~~"~~) caliper x eight (8~~'~~) foot height x four feet (4~~'~~) feet spread minimum. Required ornamental tree credits shall not exceed twenty percent (20%) of the total caliper inches of required replacement.

b. The total caliper of all the replacement trees shall be 1:1 (100%) ~~equa~~l the total caliper of the trees removed or damaged for those trees that are not historic or specimen trees.

c. The total caliper of all the replacement trees shall be 1:1.25 (125%) the total caliper of the trees removed or damaged for those trees that are historic or specimen trees.

~~3. Removal of a Historical tree, as defined in this section and 9.02.09 requires approval by the Lake County Board of County Commissioners~~

3. If a restoration plan is not submitted within thirty (30) days it shall be a code violation. Remediation shall include restoration as specified above.

B. When the removal of trees is associated with a Development project, the removal of trees authorized pursuant to the Lake County Tree Removal Permit Shall not commence until one (1) of the following has been approved or issued; ~~or unless otherwise authorized within the tree removal Permit:~~

a. Subdivision construction plan;

b. PUD or MUQD final Development plan;

~~c. MUQD final Development plan;~~

c~~d~~. Final Master Site plan;

d~~e~~. Master park plan; (only applicable within parks) ~~or~~

e~~f~~. Building Permit.

f. Lot grading / site alteration plan submitted as part of a Master Site Plan.

~~g. Landowners wishing to clear their property for Agricultural Purposes shall first seek zoning approval if needed. These cases shall be reviewed on a case by case basis and shall comply with other provisions of the Lake County Land Development Code.~~

C. Approval of a preliminary plat Development plan does not authorize approval for the removal of trees or other vegetation~~. A separate Lake County Tree Removal Permit is required by the Landowner.~~

D. If trees have been ~~approved for removal in the aforementioned plans in Subsections 9.02.03.B.(a) - (f),~~ removed with required approvals and pursuant to the requirements of this section, and the subject Property has not been developed within twelve (12) months of approval of the Development Order, then the Property owner Shall submit an interim Landscape plan within thirty (30) days to the County Manager or designee for partial revegetation ~~revegetating~~ the subject Property, which shall provide for:

a. A stabilizing vegetative groundcover of grasses, forbs, or legumes;

b. Canopy and ~~understory~~ornamental trees at half the required number for the approved development, which is equal to ~~tenthree~~ (5~~103~~) canopy trees per acre. The trees may be grouped together, subject to County approval and provided that ~~a sufficient~~ distribution occurs across the property; and

c. Masses of Landscape shrubs to complement the canopy and ~~understory~~ornamental trees, subject to County approval.

~~d.~~ If the Interim landscape plan is not submitted within thirty (30) days, the County shall be authorized to perform a complete assessment of site conditions, collect a fee from the property owner necessary to pay for the purchase, installation, and maintenance of trees pursuant to parts (a) through (c) above, and perform the aforementioned revegetation.

E. Tree Removal Permits.

1. Application for Permit. An application for tree removal shall be filed on official forms provided by the County Manager or designee. Completed applications shall be returned to the Department of Growth Management along with the appropriate Permit fee as set by resolution of the Board of County Commissioners.

2. Removal of a Historical tree or Specimen tree, as defined in this section and subsections 9.02.08 and 9.02.09 requires approval by the Lake County Board of County Commissioners

F. In order to ~~Landowners wishing to~~ clear ~~their~~ property for agricultural purposes the property- must have necessary zoning and the owner must demonstrate that the property is being used for a bona fide agricultural operation pursuant to State and County requirements. ~~shall first seek zoning approval if needed. These cases shall be reviewed on a case by case basis and shall comply with other provisions of the Lake County Land Development Code.~~

~~F. Tree Protection in Rural Village. When the removal of trees are associated with a Development project in a Rural Village, a tree removal Permit ShallShall be required. Removal of trees ShallShall not commence until the final Development approval has been authorized. Regulation of tree removal ShallShall be as follows:~~

~~a. Tree removal Permits authorize, but do not require, removal of trees specified herein. At least twenty-five (25) percent of the total number of trees Permitted for removal pursuant to any one (1) Permit ShallShall be replaced on-site by the Permittee.~~

~~b. Trees that are prohibited as replacement to removed trees are:~~

~~(1)~~	~~Australian Pine~~	~~(*Casuarina species*)~~

~~(2)~~	~~Cajeput or Punk Tree~~	~~(*Melaluca quinquenervia*)~~
~~(3)~~	~~Chinaberry~~	~~(*Melia azedarch*)~~
~~(4)~~	~~Ear Tree~~	~~(*Enterlobium cyclocarpum*)~~
~~(5)~~	~~Eucalyptus species~~	~~(*Eucalyptus spp.*)~~
~~(6)~~	~~Brazilian Pepper~~	~~(*Schinus terebinthifolius*)~~
~~(7)~~	~~Paper Mulberry~~	~~(*Broussonetia papyrifora*)~~
~~(8)~~	~~Silk Oak~~	~~(*Grevillea robusta*)~~

~~c. Replacement size. A replacement tree ShallShall be an approved tree at least one (1) inch DBH, Florida number 1 grade or better.~~

~~d. Exceptions to the requirements of this policy ShallShall be allowed for the following:~~

~~(1) Trees within road or drainage rights-of-way and easements which are to be removed as part of an approved project of the Board of County Commissioners.~~

~~(2) Trees of less than six (6) inches DBH, unless a wetland tree or a tree that is part of a Sand Pine (Scrub) community.~~

~~(3) Trees which pose an immediate and direct threat to persons or Property.~~

~~(4) Trees existing on Lots of five (5) acres or less upon which one (1) or more single family or duplex dwellings exist unless such trees are being cleared to construct any other residence, or Commercial or industrial Structure regardless of when or by whom construction is planned.~~

~~(5) Trees that are located on Land zoned for agriculture and taxed and used for bona fide agricultural or silvicultural purposes.~~

9.02.04 Exemptions to Tree Removal Requirements.

The following are exempted from the requirements of this Section to receive a permit for tree removal or to replace removed trees;

A. Prohibited trees listed in Subsection 9.01.11., The Plant List for Lake County – Prohibited Plants section and ~~9.02.02.B or~~ citrus or nonnative fruit trees of ~~-~~any species.

B. Trees located within existing recorded or prescriptive public road or drainage rights-of-way and easements that are to be removed as part of a Board approved project. However, all protected trees that are removed under this exemption shall be relocated or replaced either within the project Site or at a public Offsite location (e.g., other right-of-way, parks, governmental buildings, or tree farms). All replacement canopy trees shall be at least ~~two to~~ two and one-half (~~2~~ 2-1/2") inch caliper, Florida number 1 grade or better.

C. For the purposes of this exemption, trees located within new rights-of-ways along existing roads which are to be removed as part of a Board approved project shall also be exempt from the Permitting requirements of this Section provided:

1. The rights-of-way are necessary to meet minimum County width standards, up to a total right-of-way width of eighty (80) feet;

2. The existing number of roadway lanes will not be increased;

3. A notice of all such activities is submitted to the County Manager or designee within ten (10) working days prior to the activity; and

4. The trees removed are relocated or replaced as required below.~~above.~~

D. Trees less than ~~four (4)~~ three (3) inches caliper measured at diameter breast height (DBH) Trees that are required for landscape buffering, parking, interior areas, single-family residential lots or any other requirements of this Landscape Code shall **not** be exempt. ~~, unless a wetland tree or a tree that is part of a Sand Pine (Scrub) or Xeric Oak community~~ ~~as listed in Subsection 9.01.10.B. 1-3G. Xeric (Sand) Pine and Xeric Oak community's trees less than 2" caliper are exempt from this requirement.~~

E~~.~~ Trees of three inches diameter breast height (DBH) or smaller ~~any size~~ existing on Lots of one (1) acre or less upon which one (1) or more single-family or duplex dwellings exist unless such trees:

1. Are being cleared in ~~order to construct a second residence on the Property, or Development associated with a Commercial or industrial Structure regardless of when or by whom construction is planned; or~~ association with development or a building permit.

2. Are trees ~~planted to~~that fulfill the tree replacement requirements ~~set out in Subsection 9.02.05(D); or~~

3. Are trees that ~~planted to~~ fulfill the minimum tree requirements ~~set out in Subsection 9.01.04; or~~

4. Are wetland trees or protected trees ~~that are part of a Sand Pine (Scrub) or Xeric Oak community as listed in Subsection 9.01.10~~. as listed in the Protected Tree List in the Lake County Tree Removal Permit.

F. If any tree is determined to be in a hazardous or dangerous condition so as to endanger the public health, welfare, or safety, and requires immediate removal without delay, written authorization may be given by the County Manager or designee and the trees removed without obtaining a written Permit as herein required:

1. Photo documentation of hazardous tree by ~~P~~property owner is required prior to removal and shall be submitted to the County Manager or designee.

2. Replacement requirements herein required apply to any tree or group of trees deemed hazardous and removed.

3. If the tree, due to immediate danger, is removed prior to obtaining written authorization, a letter and photo documentation proving that there was immediate danger shall be submitted to the County Manager or designee within 15 days after removal.

~~G. Greenbelt Exemption. Any tree that is in a documented Lake County designated Greenbelt is exempt from the tree removal requirements~~.

G~~H~~. Agriculture and Silviculture subject to the following provisions;

1. Trees located on Land zoned agriculture ("A~~, RA or R-1~~"), taxed and used for bona fide agricultural purposes, such as field crops, citrus, nurseries, forest crops, animal husbandry, or greenhouses, except trees removed in order to construct improvements not reasonably related to bona fide agricultural and silvicultural purposes regardless of when or by whom construction is planned, are exempt from the provisions of Subsection 9.02.03.

~~2. Trees located on Land zoned Ranchette District ("RA") or Rural Residential ("R-1") are also exempt from the provisions of Subsection 9.02.03 for those agricultural uses that are allowed within these zoning districts.~~

2~~3~~. Stands of Pine (*Pinus spp.*) planted or occurring naturally which would be used in a silvicultural activity and are subject to compliance with the most current edition

of the Florida Department of Agriculture and Consumer Services silvicultural best management practices (BMP's) described in Silviculture Best Management Practices published by the Florida Department of Agriculture and Consumer Services ~~(1993 edition).~~ This publication is hereby adopted and included by reference herein. A copy of such publication is available from the County Manager or designee.

3. To be recognized as a Silviculture or viable forestry operation, the removal of the trees shall be part of a bona-fide agricultural operation

~~a. Part of a bona-fide agricultural operation.~~

H. Mining operations that have an approved Lake County Mining Site Plan and Operating Permit. Mining operations shall comply with all applicable landscape buffering, internal parking and building requirements as set by this Code.

9.02.05 Criteria for Issuance of Tree Removal Permit.

A. A tree removal Permit Shall be issued when one (1) or more of the following circumstances exist:

1. Street opening. The location of a tree restricts the opening of a street or right-of-way.~~;~~ Streets and rights-of-way shall be located to minimize the loss of trees, especially specimen and historic trees;

2. Utilities and drainage. The location of the tree restricts the construction of utility lines or drainage facilities.~~;~~ Utility lines and drainage facilities shall be located to minimize the loss of trees, especially specimen and historic trees;

3. Property access. The location of the tree prevents ~~restricts~~ access to the Property; Exit and entry shall be located to minimize the loss of trees, especially specimen and historic trees;

4. Property use. The location of the tree restricts use of the property consistent with all other County and state codes, statutes, ordinances, and resolutions, and site location modifications are not feasible or reasonable; ~~and which a variance would otherwise have to be granted;~~

5. Hazards. The tree constitutes a potential hazard to life or Property that cannot be mitigated without removing the tree;

6. Poor tree health. The tree is dying or dead so that its restoration to sound condition is not practical, or it has a disease which can be expected to be transmitted to other trees and to endanger their health;

7. Thinning of trees. In order to increase light and air circulation for the purpose of improving poor health conditions of a group of trees or preventing disease of a

group of trees, the selective removal of up to twenty-five (25) percent of the group of trees may be Permitted. Silviculture best management practices (BMP's) described in the Silviculture Best Management Practices published by the Florida Department of Agriculture and Consumer Services (1993) Shall apply.

B. The tree removal Permit, when issued, Shall specifically identify which trees Shall be Permitted to be removed. Each tree Permitted for removal Shall be physically marked with an "X" using brightly colored paint or surveyor's tape, or if a group of trees are Permitted for removal, the outside perimeter trees of the group may be designated with brightly-colored rope or tape in lieu of each tree. Such Permit Shall automatically expire twelve (12) months after issuance. Trees not removed during the life of the Permit may not be removed without the issuance of a new Permit based upon a new application.

C. Removal not required. Tree removal Permits merely authorize the removal of trees specified therein. Nothing in this Section Shall be construed to require the removal of such trees by the Permittee, except the prohibited trees as required in subsection 9.01.11.

9.02.06 Replacement Requirements

A~~1~~. Amount of replacement. At least thirty-three (33) percent of the total number of trees caliper inches measured in caliper inches at diameter breast height (DBH) ~~of~~ for qualifying trees, as listed in the Protected Tree List within the Plant List for Lake County, ~~treesPermitted for removal~~ pursuant to any one (1) Permit shall be replaced onsite by the Permittee. (For trees that are not designated historic or specimen.) ~~Removed historic and specimen trees shall replace fifty~~ At least fifty percent (50%) of the total number of specimen and historic trees measured in caliper inches ~~of the~~ DBH pursuant to any one (1) Permit shall be replaced onsite by the Permittee. ~~caliper inches removed~~ More than one tree may be used to replace a tree or trees that are removed, but the minimum caliper of the replacement canopy trees shall be no less than two and one half (2-1/2") inches and ~~one-and-one-half~~ two inches (2") for ornamental trees.

1. Minimum of seventy-five percent (75%) of the replacement trees shall be canopy trees. ~~The replacement canopy trees shall meet the minimum size requirements as listed within this section.~~
2. Twenty-five (25%) maximum of the replacement trees shall be ornamental trees. ~~or those trees that have an installed caliper of one-and-one-half (1-1/2) inches.~~
3. Palm trees and pine trees may be used but shall not exceed four inches credit given as replacement regardless of their installed size. Pine trees will be given credit based on their installed size and shall not exceed four inches credit given per tree.

B. **Tree Sampling Method:** Sites that are over 5 acres may perform sample plots and extrapolate tree calipers to be removed as follows:

1) Minimum of 5 acres impacted by development shall be surveyed by accounting for all qualifying trees to be removed within the first 5 acres. After the first 5 acres for development the developer may sample survey qualifying trees to be removed with sample plots. The sample plots shall be a minimum area of twenty percent (20%) of the remaining part of the ~~developed part of the~~ site to be developed or twenty percent (20%) of ~~for~~ each vegetative community within the remaining part of the site to be developed; ~~project~~; whichever yields the ~~is~~greater number of trees. Each of the sample survey plots shall be a minimum of one-hundred feet by one-hundred feet (100' x 100') in size and shall conform to current forestry practices.

2) The tree survey ~~sample plots~~ shall be conducted by a qualified professional: ~~such as a~~landscape architect, arborist or forester. ~~environmental scientist, or other professional~~ that is certified and acceptable to Lake County. A tree survey report detailing all findings, including the number and caliper of trees surveyed, the size and location of vegetative communities, estimates of total tree coverage based on survey plots, and the size and location of specimen trees, shall be prepared and submitted to the County as part of the site plan review process. The means and methods of the tree survey shall be clearly detailed in the written report provided to Lake County.

3) Lake County reserves the right to require ~~ask~~for more detailed tree sampling ~~should~~shall the County designee feel that the information provided is insufficient or that site-specific considerations warrant additional information.

4) The locations of all specimen and historic trees proposed for removal shall be located on a site plan.

5) Qualifying trees that are sampled shall be a minimum of three inch (3") DBH Caliper. ~~unless the trees are part of a wetland, xeric pine or xeric oak community in which case trees 2" DBH and larger will be counted as part of the tree sampling~~.

C. Site plan projects.

1. Replacement trees shall be planted prior to issuance of the certificate of occupancy. For unfinished projects, a performance bond or letter of credit shall be provided in the amount of 110% of the cost of the unfinished landscape improvement and shall be filed with the County. Unfinished landscaping shall be installed within 12 months of issuance of the Certificate of Occupancy.

2. Replacement trees shall be located onsite or an approved offsite location as provided in subsection 9.02.06.K(1) and (2). in areas approved by the County Manager or designee as a condition of the tree removal Permit. These areas may

include, but are not limited to, open space areas, areas adjacent to stormwater management facilities, Landscaped Buffer areas, and entrances to the project Area (when visibility for vehicular and pedestrian traffic would not be hindered).

3. Subdivisions.

a. Replacement trees shall be planted in accordance with either, or both, of the following:

1. Prior to issuance of the certificate of occupancy for each individual Structure on a Lot; or

2. At the time of submission of the performance bond required pursuant to Section 14.08.00 of the Lake County Land Development Regulations.

b. When the certificate of occupancy method is used pursuant to Subsection 9.02.05.(D)~~.3.a.1~~ above, the required number of replacement trees shall be equally~~equitably~~ distributed on each Lot within the subdivision in accordance with Subsection 9.01.04 above.

c. When the performance bond method is used, ~~pursuant to Subsection 9.02.05.D.31.b.a.2 above,~~ the replacement trees shall be located onsite in Areas approved by the County Manager or designee as a condition of the tree removal Permit. These areas may include, but are not limited to, open space ~~Areas~~areas, ~~in PUD's, A~~areas adjacent to stormwater management facilities Buffer areas, and entrances to the project Area (when visibility for vehicular and pedestrian traffic would not be hindered). The Permittee shall demonstrate the availability of water to maintain the trees through water trucks, wells, central system, or other methods until established.

d. When both the certificate of occupancy and performance bond methods are used, the applicable proportions of replacement trees determined from each method shall be indicated on the tree removal Permit.

D. Landscape credit. The replacement trees may be used to meet the requirements of the Landscape standards set out in Section 9.01.00.

E~~5~~. Replacement maintenance. The replacement trees shall be maintained in good condition ~~for one (1) year during~~ in perpetuity and~~which~~ the Property owner ~~pursuant to Subsection 9.02.06~~ shall guarantees survival.

F~~6~~. Restriction on Use of palm trees. ~~Protected p~~Palm trees shall not account for more than twenty percent ~~one-quarter (1/4)~~(20%), ~~or twenty-five (25) percent~~ of the required replacement trees. More palms may be planted but shall not count for the required replacement trees.

G~~7~~. Replacement credit. The Permittee may choose and is encouraged to retain some of the trees Permitted for removal in lieu of replacement. The trees to be retained may be selected totally at the discretion of the Permittee except for those trees required to be removed by other ordinances, regulations, or statutes. ~~The number of trees retained Shall be credited toward meeting the above thirty-three (33) percent replacement requirement~~ The retained trees may count for required landscape provided the trees and landscape material is in good health and meet the minimum trees sizes..

H~~8~~. Replacement exception. These replacement requirements shall not apply to any Permit for the removal of less than three (3) trees or total ten (10") caliper inches removed, whichever is greater for one site. ~~The removal of four (4) trees requires one (1) replacement tree.~~

I~~9~~. Replacement size. A replacement tree shall be an approved tree at least two and one half (2-1/2") inch caliper for canopy trees and ~~one-and-one-half~~ two inch caliper (2") for ornamental trees. ~~two to two and one-half (2--2 1/2~~), Florida number 1 grade or better. Ornamental trees may not exceed twenty-five percent (25%) of the total caliper replacement inches required.

J~~10~~. Minimum tree requirements. These replacement requirements ~~may~~ shall apply in addition to all the minimum tree requirements set out in Subsections 9.01.03~~4~~ through 9.01.06.

K. If replacement cannot be made on the subject property, the owner and or applicant may:

1. Mitigate with replacement of the required trees on a designated recipient property within Lake County. The recipient property shall ~~shall~~ be acceptable to the County and shall be suitable to accept the replacement trees. Mitigated replacement trees shall not count toward meeting minimum requirement of the recipient site for development purposes. Mitigated replacement trees shall not be exempt ~~for~~from the tree removal and replacement requirements if the recipient property is subsequently cleared at a later date, regardless of the size of the tree(s) at the time of clearing. The request to utilize this option shall be submitted to the County Manager or designee in writing and shall include the following justifications and information:

a. Explanation why the trees cannot be replaced on site.

b. A legal description and a copy of the property record information from the Lake County Property Appraiser for the proposed recipient site.

c. An Affidavit from the owner of the recipient site agreeing to the

terms of accepting the mitigated trees as listed above. A conservation easement or similar legally-binding instrument approved by the County shall be required to ensure that mitigation trees planted at the recipient site will be protected and maintained in perpetuity.

2. The owner and or applicant may make a contribution to the ~~"Pollution Recovery Trust Fund",~~ "Tree mitigation fund" or other Lake County environmental fund in lieu of planting the replacement trees as an option of "last resort". The amount of the contribution shall be equal to the estimated cost of the replacement trees and the cost of installation of the trees~~ shall~~ as determined by Lake County in a separate Fee Schedule. Documentation shall:

   a. Explain why the trees cannot be replaced on site.

   b. Explain why the replacement trees cannot be mitigated by replacement on an alternative recipient site.

   c. Contain original estimates with the name, address, contact name and contact phone number of the landscape nurseries, tree farms or landscape contractors.

~~A minimum of twenty-five 10(25%) of the removed trees requiring mitigation shall be replaced on the property as approved by the County Manager or designee.~~

9.02.06 Guarantee of Survival.

A. The Property owner Shall guarantee survival of the following trees in perpetuity ~~for one (1) year~~ from completion of Permitted construction:

1. Any ~~exempt~~ tree that has not been removed;

2. All trees that are retained or replaced pursuant to Subsections 9.01.03, 9.02.02 and 9.02.06 ~~.E and 9.02.05.D~~.

3. In the event any tree planted pursuant to the approved Landscape plan dies within one (1) year of planting, ~~the~~a replacement tree Shall be planted to fulfill the remaining period of the original tree's guarantee year.

B. The County Manager or designee may conduct periodic inspections of the site. It is the responsibility of the Permittee to ensure that all provisions of Section 9.02.0~~0~~ are met.

9.02.07 Voluntary Planting.

This Section Shall not be interpreted to restrict, regulate, or limit the voluntary planting of any protected tree in Lake County. Any size tree may be voluntarily planted. The provisions of this Section govern only the planting of trees that are required to be planted or retained under this Section.

9.02.08 Historic Trees.

A. *Purpose.* It is the purpose of this Subsection to acknowledge the existence of certain trees that portray a notable historical association or significance to Lake County, and to protect such trees through their designation as historic trees and by requiring compliance with the protection measures set out in Subsection 9.01.10.A. Designation of historic trees by the Lake County Board of County Commissioners Shall be in accordance with the standards and procedures in this Subsection.

B. *Application procedures.*

1. Applications may be initiated by:

a. Owners of the Property;

b. Developers as part of their Development plan; or

c. The County Manager or designee as part ~~of a County review~~ of a tree removal Permit application, a Development Plan or a County tree-protection planning program.

2. Applications on forms provided by the County Manager or designee Shall be completed and submitted to the County Manager or designee.

3. Completed applications shall be provided to the Lake County Historical Society with a request for review and written recommendation for approval or denial.

C. Historical Society Recommendation. The Lake County Historic Society or the State Historic Preservation Officer of Florida or their designee may recommend approval of the designation of a historic tree for a tree that is considered to have a notable historical interest and value to the County due to its historical association or significance. The Lake County Historic Society or the State Historic Preservation Officer of Florida or their designee may recommend denial or approval; ~~,~~ however, that recommendation, or the lack of any recommendation, does not preclude the County from denying or approving an application.

D. *Designation Procedure.*

1. Upon review and approval by the County Manager or designee, the application Shall be scheduled for a public hearing before the Board of County Commissioners at a regularly scheduled Board meeting.

2. The Lake County Board of County Commissioners Shall approve or deny the request. Approval by the Board Shall be in the form of a resolution.

3. Any tree designated a historic tree Shall be protected by the Property owner. At a minimum, compliance with the protection standards set out in Subsection 9.01.10.A Shall be required.

9.02.09 Specimen Trees.

A. *Purpose.* It is the purpose of this Subsection to acknowledge the existence of certain trees within the County that are rare or unique due to factors such as age, size, or type, and to protect such trees through their designation as specimen trees and by requiring compliance with the protection measures set out in Subsection 9.01.10.A. Designation of specimen trees by the Board Shall be in accordance with the standards and procedures in this Subsection.

B. *Designation Standards.* At least one (1) of the following standards shall apply in order for a tree to be designated a specimen tree:

1. *Size.* Trees with a thirty (30) inch caliper or greater, or a circumference of eight (8) feet or greater, singly or with a combined trunk, measured at fifty-four (54) inches from the surface of the ground

2. *Age.* Trees that are determined to be at least one hundred (100) years old, or to be at approximate half-life maturity and are in good health.

3. *Form.* Trees that are determined to have a unique form or shape, due to geography, climate, environmental or natural growth habitat conditions, and are in good health.

4. *Ecological Value.* Trees that are determined to have an ecological value to the County in terms of soil or water conservation and management, wildlife habitat, or endemic native flora habitat, and are in good health.

5. *Rarity.* Trees that are determined to be non-indigenous, rare, or unique to the County, and are in good health. Prohibited trees, as listed in Subsection 9.02.10.I.~~02.B~~, are excluded from designation as a Specimen tree.

C. *Application Procedures.*

1. Applications may be initiated by:

a. Owners of the ~~own~~ Property; or

b. Developers as part of their Development plan; or

c. The County Manager or designee as part of the County review of a tree removal Permit application, ~~or~~ a Development plan or a County tree protection planning program.

2. Applications on forms provided by the County Manager or designee shall be completed and submitted to the County Manager or designee.

3. The County Manager or designee may request assistance from the Lake County Forester, State Division of Forestry, in determining compliance with any of the designation standards.

D. Mandatory Recognition of Specimen Trees

Any non-prohibited trees with thirty inch (30) caliper or greater, or a circumference of eight (8) feet or greater, singly or with a combined trunk, measured at fifty-four (54) inches from the surface of the ground shall be recognized as a Specimen Tree. The applicant shall identify the location, number and size of all specimen trees on the required tree survey submitted to the County for site plan review. In addition, the County as part of a tree protection planning program may identify Specimen Trees that are found to meet this criteria.

E~~D~~. *Approval.*

1. Any non-prohibited tree satisfying one or more of the size criteria in subsection 9.02.09B(1) shall be recognized and recorded as a Specimen Tree by the County Manager or designee, without approval by the Board of County Commissioners.

2.~~1~~.~~A request for designation of specimen tree~~Upon review and approval by the County Manager or designee, any tree that has been submitted for consideration as a Specimen Tree and does not automatically qualify because of size shall be scheduled for a public hearing before the Board of County Commissioners at a regularly scheduled Board meeting~~.~~

3.~~2~~.The Board Shall approve or deny the request. Approval by the Board Shall be in the form of a resolution.

4~~3~~. Any tree designated a specimen tree shall be protected by the Property owner. At a minimum, compliance with the protection standards set out in Subsection 9.01.10.A shall be required.

* * *

Section 4. **Severability**. If any section, subsection, sentence, clause, phrase, word or provision of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this ordinance.

Section 5. **Inclusion in the Code.** It is the intention of the Board and it is hereby provided that the provisions of this ordinance shall be made a part of the Lake County Code; that the sections of this ordinance may be renumbered or relettered to accomplish such intention; and that the word "ordinance" may be changed to "section", "article", or other appropriate designation.

Section 6. **Effective Date.** This Ordinance shall become effective as provided for by law.

Enacted this _____ day of _____, 2008.

Filed with the Secretary of State _____2008.

Effective _____.

ATTEST:

BOARD OF COUNTY COMMISSIONERS
OF LAKE COUNTY, FLORIDA

_____

Neil Kelly, -County Clerk of
of Lake County, Florida

_____

Welton G. Cadwell, Chairman
This _____day of _____, 2008.

Approved as to form and legality:

_____

Sanford A. Minkoff
County Attorney