



July 8, 2008
9:00 a.m.
Green Workshop

(Training Room)

1. Landscape Ordinance
2. Lot Grading Ordinance

MEMORANDUM



LAKE COUNTY FLORIDA

To: Cindy Hall, County Manager
From: Amye King, AICP, Sr. Growth Management Director
Date: June 24, 2008 revised July 1, 2008
Subject: Proposed Landscape Ordinance

The proposed Landscape Ordinance is attached for your review. This ordinance represents the product of many staff hours by several County Divisions and outside agencies. County Staff that was involved in the process included the County Attorney's Office, Planning and Community Design, Parks & Trails, Economic Growth and Redevelopment, Conservation and Compliance, Cooperative Extension Service, Operations, as well as others. Participants of outside agencies included the St. Johns River Water Management District, the City of Clermont and the City of Mt. Dora. Input was also received by many private sector interests including nursery growers, field nurseries, and landscape architects.

The Local Planning Agency (LPA) considered this ordinance in eight (8) public hearings. Significant modifications to the original proposed ordinance were made during the LPA hearing process. Input was received from the organizations such as the development community, planning consultants and environmental interests as well as private sector participants.

The comments below are concerns or observations that have been brought to the attention of Growth Management staff by other County departments and the public. Please note that Line numbers are provided for reference and approximate. Staff has provided a response and options to address the particular concern, where appropriate.

Comment 1. General Comment

The ordinance should provide a vesting of projects to be completed under the existing landscape ordinance. If housing was started in a phase of a subdivision the housing in that phase should be allowed to continue under the existing rules. Commercial, office and industrial developments may have only one building remaining to be built but they would be forced to completely change their buffers, parking and landscaping. These changes may not be physically possible or are cost prohibitive. There is no vesting language in the regulations. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: The Board may consider placing a specific provision to allow pending applications to be reviewed under the existing code. Applications for future phases or for additional development would be subject to the adopted ordinance.

OPTIONS

- A. Amend Section Twenty-Three. *Effective Date* to include an additional sentence to exempt pending projects as follows: “This Ordinance shall only apply to applications received on or after the effective date.”
- B. Also an additional exemption to amendment (A) above, to include application submitted in reliance of a Presubmittal issued within the previous six (6) months.
- C. Adopt ordinance as proposed. Projects have the option of apply through the vesting process.

Comment 2. General Comment

How will the County monitor and enforce these regulations on existing residences and businesses? Will the County require homeowners to obtain a permit if they change their landscape? **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Existing business and homes made nonconforming to the new regulations will not be required to comply unless they trigger the thresholds stated in Section 1.08.04 (C) *Nonconforming Landscapes*.

Comment 3. Sections 1.08.04(A)(3) and 1.08.04(A)(4) [Page 3 Line 4 & 6] Termination of Nonconforming Development.

Since structural alteration is defined as any change in the system, building or structure, does this mean any change to a non-conforming development in the main building or accessory will require the entire property to be brought into full compliance with these regulations? This would include structural repair to a building such as wind damage or replacement of windows and doors? **[Jim Bible, Showcase Homes, Inc.]**

Many changes in use will not be able to comply with the regulations without significantly altering the building. Changes in buffers, landscape requirements, and parking will not be able to be incorporated on small parcels. Even on large parcels changes in uses cannot be accommodated without very significant and prohibitive costs. This will significantly reduce redevelopment in the County. The cost of complying with the regulations can be significantly greater than the building improvements. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: These are existing regulations and do not apply to landscaping. These provisions are not being proposed for amendment at this time and have been in place since 1993 and the scenarios described above have not occurred. The requirements for nonconforming landscaping are in Section 1.08.04(C).

Comment 4. Section 1.08.04(C)(1) [Page 3 Line beginning 51] Nonconforming Landscaping.

The threshold for change of use to bring an entire site into compliance is very low and will require full compliance upon minor changes to a site. This concern was raised by private developers, consultants and staff. Where appropriate staff has addressed the specific concern and comprehensively at the end of the comments below:

This threshold could be detrimental to site redevelopment efforts and actually discourage them.

“The requirements for non-conforming were made more restrictive than first presented. I find nothing that exempts Single family from complying with all requirements (no St Augustine, extra trees, foundation plantings, take out part of existing irrigation if total site is currently irrigated) if that add 1,000 sq ft or 25% to their house.” **[Tim Green, ASLA, AICP]**

“An analysis of the financial costs for a residential, commercial and industrial property should be performed. The analysis should include a new project and a project that will trip the 25% or 1,000 square foot rule of Section 1.08.04.C. This threshold is too small and will cause many residences and businesses to not go forward with an expansion.” **[Jim Bible, Showcase Homes, Inc.]**

Staff Response [Cost]: A estimated cost for single-family residential has been prepared by staff. Please see the Estimated Single-Family Landscape Costs sheet. Preliminary tabulations indicate the proposed landscape ordinance will add approximately \$700 to the initial cost of a single family home however a potential water savings of 6,400to 8,000gallons annually for single-family residential could off-set these additional costs.

Section 1.08.04. C.1.i. The 1,000 square foot threshold is a very small increase for an office, warehouse or industrial expansion as it would also include parking. If the previously approved site plan provided for expansion will the entire project be subject to the regulations? **[Jim Bible, Showcase Homes, Inc.]**

Section 1.08.04. C.1.b. The 25% threshold is a very small increase for residential properties. Adding a pool and /or accessory structure could easily trip this threshold and will add several thousand dollars to the cost of the improvements. **[Jim Bible, Showcase Homes, Inc.]**

Section 1.08.04.C.1.c. The 25% threshold for parking can easily be reached for an expansion of any project including residential. For instance adding a detached garage with a driveway would trip this threshold and then the lot would be subject to all the additional landscape requirements. This will add several thousand dollars to the project cost. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: The residential example is not likely since the requirement is only triggered for required parking. Single family is only required two parking spaces so the addition of parking would not trigger this requirement for most single family and duplex residences. The thresholds will be brought to the attention of the Board.

Section 1.08.04C.1.d. “Any substantial improvement” is not defined and it should be defined. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Substantial Improvement is defined in Chapter 2 Land Development Regulations (LDR) and is generally defined as an improvement exceeding fifty (50) percent of the fair market value of the structure.

Overall Staff Response For Nonconforming Threshold: The current regulations require full compliance for existing development that has an increase of 25% or more of the existing structure or parking area. The Board has discretion in setting threshold for compliance.

OPTIONS

- A. Amend Section 1.08.04 to maintain existing regulations. These require existing development to come into compliance for an increase of 25% or more of the structure or parking area.
- B. Amend compliance threshold to increase from 1,000 square foot to 2,000 square feet or greater, to allow greater flexibility.
- C. Have a compliance threshold for both a square footage (for small projects) and a percentage threshold.
- D. Adopt ordinance as proposed.

Comment 5. Section 1.08.04.C.2. [Page 4 Line 12] Nonconforming Landscaping. Is this section to be interoperated that the entire Section 1.08.04.C. is only related to buffers and individual residential lots are not subject to this section? [**Jim Bible, Showcase Homes, Inc.**]

Staff Response: The section requires changes to structures [**that are less than the thresholds provided for full compliance**] will be responsible for buffering **only** the improved structure. It is anticipated that there will be a few instances where a residential improvement will require a partial landscape buffer. This provision is not available in the current regulations and staff is requesting it to address past situations where an applicant was required to buffer the entire property when adding a minor accessory building.

Comment 6. Section 9.01.02 [Page 5 Line 4] General Requirements and Exemptions.

There is concern that an exemption is not provided for parks and natural lands maintained by the County and other governmental and agencies managing conservation land within Lake County. These sites and natural lands should be exempt from tree removal permits and landscaping requirements if a management plan has been completed.

OPTIONS

- A. Amend Section 9.01.02 to include an exemption for park and conservation lands that have an approved management plan.
- B. Accept regulation as proposed.

Comment 7. Section 9.01.02 [Page 5 Line 4] General Requirements and Exemptions.

There is concern that the ordinance provides no allowances for workforce or affordable housing and the proposed requirements will add significantly to the cost of housing. The existing or proposed regulations do not provide specific exemptions for workforce or affordable housing. There are opinions and comments on both sides of this concern. Proponents of requiring landscaping argue that the cost savings in terms of cooling, property value and health benefits outweigh the costs of the initial installation. Detractors argue that it adds too much upfront cost to the development.

OPTIONS

- A. Adopt regulations as proposed. A waiver could be granted by the Board for developments approved as Planned Unit Developments (PUDs) to reduce the landscape requirements. For other projects a variance could be granted by the Board of Adjustment.
- B. Provide exemption or a reduction for affordable/workforce housing

Comment 8. Section 9.01.03 (C)(1) [Page 5, Line 42] Water Efficiency – Soil Analysis.

This section requires that “The existing soils on the site shall be analyzed to help determine the appropriate plant types for the site.” There is concern that this requirement is not in the appropriate location in the ordinance.

OPTIONS

- A. Relocate this requirement to Section 9.01.04(A) General Landscape Requirements – Plant Material and change “shall” to “should” in sentence.
- B. Adopt regulations as proposed.

Comment 9. Section 9.01.03 (C)(2) [Page 5, Line 42] Water Efficiency – Use of Mulch.

Keeping mulch two (2) feet away from the foundation of homes will result in a serious erosion problem. Wash up of soil onto the face of the walls after every rain event will be a maintenance problem. This sentence should be deleted. Mulch is not a termite issue; it is the moisture that is the problem. Keeping irrigation heads away from the foundation solves the moisture problem. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Staff has received comments from several resources that this should be required due to termite and mold/mildew threats.

OPTIONS

- A. Delete or increase requirement.
- B. Adopt regulations as proposed.

Comment 10. Section 9.01.03 C.3 [Page 6, Line 4] Limit irrigated lawn areas.

This requirement states that “. . . If lawn replacement in excess of fifty (50) percent of existing lawn areas is required then drought tolerant turf shall be used.” There is concern that enforcement of this provision will be very difficult if not impossible. In order to accomplish, some sort of permitting/inspection process will be required. There is really no process in place for monitoring and without painstaking review, to say whether a yard has had 49 or 51% of the turf replaced. Would we rely on neighbors or sod companies to get information leading to enforcement? If enforced, would we require the non-compliant sod to be removed/replaced or simply fine the individual for its use?

OPTIONS

- A. Delete requirement.
- B. Adopt regulations as proposed.

Comment 11. Section 9.01.03 C.3 [Page 6, Line 4] Limit irrigated lawn areas.

The banning of St. Augustine grass should be reexamined to identify cost and availability of alternative sods. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: The water management districts report that as much as fifty (50) percent of home water use is outdoors and for landscape purposes. Limiting and changing the types of sod being used outdoors can potentially save vast quantities of water.

Comment 12. Section 9.01.03 C. 5. d. [Page 6, Line 48] – Rain & Soil-Moisture Sensors.

Functioning rain and soil-moisture sensor devices shall be required on all automatic irrigation systems to avoid irrigation during periods of sufficient rainfall.

There is concern that this article establishes a requirement for redundant sprinkler shutoff mechanisms by requiring both a rain sensor device and a soil-moisture sensor. This contradicts section 9.1.04 D. 2. of the proposed ordinance which states the irrigation system shall be in compliance with Florida Building Code and Section 373.62, Florida Statutes for rain sensor shut-off devices.

F.S. §373.62 Water conservation; automatic sprinkler systems.--Any person who purchases and installs an automatic lawn sprinkler system after May 1, 1991, shall install, and must maintain and operate, a rain sensor device or switch that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.

The Statute clearly indicates that “a” (singular) system is required rather than multiple systems.

OPTIONS

- A. Delete requirement for soil-moisture sensor.
- B. Adopt regulations as proposed.

Comment 13. Section 9.01.03 (C)(5) [Page 6 Line 18] Efficient and well-design irrigation.

The St. Johns Water Management District has concerns that this provision is not clear whether the water use zones percentages are a percent of the total landscape area or a percent of the 60% of the allowed area to be irrigated.

“This section limits irrigation to only 60% of a residential lot. How is the area for low flow irrigation systems calculated? The entire lot should be allowed to be irrigated since the proposed regulations are limiting the amount of water to be applied to the site. To establish the landscape it may require a certain amount of regular water for a year or two and a properly installed irrigation system will achieve that goal. Even low water use plants will require supplemental irrigation. How is the county right of way calculated in the landscape percentages?” **[Jim Bible, Showcase Homes, Inc.]**

St. Johns Water Management District has concerns that there is one provision in Section 9.01.03 (C)(5) that may preempt the District rules. They have requested that all references to water use restrictions be removed. However, the County can correct the problematic language by changing the words “shall” to “should” in the section and making it clear that the references to water use are not *restrictions* but merely *guidelines*.

Staff Response: This provision was intended to address water use in the landscape. The Water Management District has requested that the requirements be a recommendation instead of a requirement and the Extension Service has recently indicated that they would prefer that the provision to be changed to a straight limitation on the amount of landscaped area that can have an installed irrigation system. The Extension Service believes that this would limit the amount of water wasted through automatic irrigation by

limiting the amount of area irrigated with overhead sprinklers. Micro-irrigation would be exempt from this limitation to encourage its use.

OPTIONS

A. Change subsection (C)(5) (a)-(c) as follows:

Efficient and well-designed irrigation. No more than ~~sixty~~ twenty percent (~~60~~20%) of the pervious area of any single family or duplex residential lot shall be irrigated with an installed irrigation system, excluding micro-irrigation systems. ~~The irrigation system shall be designed to correlate to the water use plant zones established in the landscape design. The following criteria for irrigating the site shall be used in the design of the system. Golf course fairways and greens, public active recreation fields, greenhouses, landscape nurseries, retail nurseries, and agricultural production systems are exempt from meeting these requirements. Landscape production and retail centers shall comply with the watering restrictions for any landscape that is required under these regulations that is not related to the production or selling of landscape material on site. The following criteria for irrigating the site shall be used in the design of the system.~~

- ~~i. High Water Use Zones have plant material that is associated with moist soils and requires supplemental water in addition to natural rainfall to survive. Generally, watering in this zone shall not exceed 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.~~
- ~~ii. Moderate Water Use Zones have plant material that can survive on natural rainfall with supplemental water during seasonal dry periods. Forty (40) percent maximum of the landscape area shall be of the moderate water use zone. Generally, watering in this zone shall not exceed once per week with a maximum of three-quarter (3/4) of an inch of water per application.~~
- ~~iii. Low Water Use Zones have plant material that can survive on natural rainfall with low supplemental water. Forty (40) percent minimum of the landscape area shall be of the Low Water Use Zone. Generally, watering in this zone shall not exceed once every two (2) weeks with a maximum of three-quarter (3/4) of an inch of water per application. This zone is also characterized by low flow irrigation heads or micro-irrigation systems.~~

If Option (A) is not exercised then the following options are available

- B. Relocated the following “No more than sixty percent (60%) of the pervious area of any single family or duplex residential lot shall be irrigated with an installed irrigation system. The irrigation system shall be designed to correlate to the water use plant zones established in the landscape design” to a new subsection above subsection (5) to clarify that the 60% is a reference to total irrigation not the water use zones.
- C. Change the language in three Water Use Zones from “shall” to “should” as follows: “... in this zone shall should not exceed...”
- D. Adopt regulations as proposed.

Staff Response: The intent is to achieve greater water conservation and the above requirement will help. Temporary irrigation is allowed for the establishment of plants including low water use plants. The intent is to limit “installed” irrigation in single-family, duplex and residential developments. Right of Way (R.O.W) is not calculated in required landscape percentages. Most R.O.W. is typically non-irrigated Bahia Grass which would be classified as a low water use landscape. See response above.

Comment 15. Section 9.01.04 (A)(2) [Page 7, Line 19] Native Plants.

This is a new provision that requires trees and shrubs to be 50% native until June 1, 2010 and then requires 75%. A site that is designed to meet code will become non-conforming in 2010 if it has less than 75% native plants. [Tim Green, ASLA, AICP]

Staff Response: The St. Johns River Water Management District (SJRWMD) recommends that high native plant requirements beyond fifty (50) percent of the landscape restrict the use of non-native “Florida-Friendly” plants that perform well and are also drought tolerant. The delay in implementing a 75% standard was provided to allow nurseries to make a transition to more native plant materials.

OPTIONS

- A. Follow recommendation of SJRWMD and Delete the sentence: “On June 1, 2010, this requirement shall increase to seventy-five (75) percent.”
- B. Adopt regulations as proposed.

Comment 16. Section 9.01.04 (A)(2) [Page 7 Line 19] Native Plants.

It should be noted that prior to these proposed regulations, homeowners did not have any requirement for shrubs and plants. This section which requires a high percentage of native trees and shrubs should be deleted. If native means unaltered, most of the trees and shrubs on the Plant List probably would not qualify. By mandating that 75% of the plants be native, this will limit the landscaping to a small selection of plants and shrubs and this will be against the need for diversity in the landscape of Lake County. If the majority of trees and plants are Florida Friendly or Waterwise and are selected for Lake County’s climate than that should be the only criteria. Homeowners should be allowed to select a portion of their landscape that may not be on these lists as long as they are not invasive. [Jim Bible, Showcase Homes, Inc.]

Staff Response: Native means “native to Florida” not unaltered. The recommendation of the SJRWMD recommends not more than fifty (50%) percent native plant requirement. The SJRWMD indicates that non-native “Florida-friendly” plants perform well and many are drought tolerant too. This will be brought to the Board for consideration

OPTIONS – See above

Comment 17. Section 9.01.04 (A)(3) [Page 7 Line 23] Canopy Trees.

The additional cost for increasing the tree size from a 2” caliper to a 2-1/2” caliper with the mulch is \$100 or an increase of \$400 to \$500 per house for four trees. This is an unnecessary cost to the homeowner. The

difference in cost is too high for gaining only a few months of growth. It will also be easier to establish a smaller tree. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: This issue was discussed in length at the Local Planning Agency meetings with Agricultural Extension and SJRWMD Staff and the conclusion was that smaller tree size was not recommended. The nursery growers also provided comment on this issue recommending the larger size trees. This establishes a required uniform tree size minimum that can be applied to both residential and commercial landscapes.

OPTIONS

- A. Reduce tree size to 2" caliper.
- B. Adopt regulations as proposed.

Comment 18. Section 9.01.04(A) (4) [Page 7, Line 44] Ornamental Trees.

On residential lots an allowance to use one ornamental tree for one canopy tree should be allowed. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: A provision is in the proposed ordinance that the use two ornamental trees in lieu of one canopy tree.

OPTIONS

- A. Allow one ornamental tree for one canopy tree.
- B. Adopt regulations as proposed.

Comment 19. Section 9.01.04(A) (5) [Page 8, Line 14] Palms.

On residential lots an allowance to use one palm tree for one canopy tree should be allowed. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: There is a provision in Section 9.01.04 (A) (5) that allows the use of Medjool or Date Palms as one palm tree equals one canopy tree. Otherwise the provision is that palms such as the Sabal Palm shall be planted as two palms for one canopy tree because of their small size.

OPTIONS

- A. Allow one palm tree for one canopy tree.
- B. Adopt regulations as proposed.

Comment 20. Section 9.01.04(A) (14) [Page 9, Line 38] Plant Substitutions.

What will be required to be submitted for a change, will it require a complete site plan submission and what will the fee be for this change? **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Any change to site plan will require an updated plan or a letter stating the requirements will be met. For typical residential lots a typical lot drawing shall be submitted with the appropriate notes for submittal. The fees will be set through a future resolution by the Board, however no fee is expected at this time for minor substitutions.

Comment 21. Section 9.01.04(B)(1)(a) & (2)(a). [Page 10 Lines 6 & 17] Diversity.

“High water use zone is limited to 20% of landscape area, moderate water use zone is limited to 40% which means only 60% of the lot can be Zoysia grass and the remainder must be Bahia or low water use plants. This will dramatically change the look of existing residential communities.” **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Ideally builders may use Zoysia grass in the front and then Bahia grass in the back. This requirement is similar to the City of Clermont where they allow St. Augustine in the front and Bahia grass in the back yard.

Comment 22. Section 9.01.04 B(1)(a) & (2)(a). [Page 10 Lines 6 & 17] Diversity.

The diversity now creates a situation (having two minimums that have to be met) which limits the total number of species that can be on a site. Example 10 or more trees with minimum of two species AND a minimum of 45% for any one species limits the site to having only two species. You cannot have three species and meet 45% minimum for each species used in a site.

Why not say “No more than 50% of any one species.” This would force two (2) species on a site (50%, 50%) at a minimum BUT would not place a limit on the maximum number of species. And “No more than 33% on any one species.” This would force three (3) species. ETC. With 50 or more I cannot have one specimen palm I have to have at least eight (8). And no more than six (6) total species on the site (15%, 15%, 15%, 15%, 15%, 25%) **[Tim Green, ASLA, AICP]**

Staff response: This provision was discussed at length during the LPA hearings and staff agrees that it can be confusing due to the use of percentages and minimums. The purpose of the provision is to ensure that there is sufficient diversity of trees, as well as shrubs, planted

OPTIONS

- A. Amend Section 9.01.04(B) to delete minimum percentages from Lines 6 through 24, and place a general provision in the main section heading for a 25% diversity requirement as follows: “In order to guard against disease susceptibility, all required landscaping shall meet the following requirements below. No more than twenty-five (25) percent of the trees or shrubs used shall be of the same species. Trees used for parking lot landscaping are exempt from this requirement.”
- B. Remove minimum percentages entirely from Lines 6 through 24.
- C. Adopt regulations as proposed.

Comment 23. Section 9.01.04 D.1 [Page 10 Line 41] Irrigation.

Is a garden hose temporary irrigation? How do I draw a plan to show this? **[Tim Green, ASLA, AICP]**

Yes. A note on the plan would suffice to meet this requirement. Commercial site plans are required to submit a “water use zone” drawing based on the plants water use rating in the Lake County, Florida Plant Guide.

Comment 24. Section 9.01.04 D.1 [Page 10 Line 41] Irrigation.

Add to the end of the sentence “Nothing herein shall be construed to require irrigation to be installed on any residential lot.” **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: This is not needed.

Comment 25. Section 9.01.04(G) [Page 11 Line 12] Notification.

Does this notification only apply to individual lots that include a portion of the landscape buffer on them and not the standard lot landscaping? **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Yes.

Comment 26. Section 9.01.05 [Page 11 Line 29] Landscape Buffer Requirements.

This section adds landscape buffers between residential zoning districts and this should not be required. Requiring landscape buffers will cost at least \$1,000 per home and will double or triple the cost of maintenance to the Homeowners Association. The additional buffers can easily add another \$500 per year per home in maintenance. It will also require in most cases a loss of developable lots in a subdivision. This is an unnecessary cost to the homeowners. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Most buffer requirements for residential to residential phases are the minimal buffer “A” adding only a modest cost and width. Where an existing buffer on an adjacent parcel is already in place that was required by a development order, the buffer may be used as buffer credit. Also buffers are not required where the single-family homes are less dense than one home per acre and less than ten homes are planned for construction. The whole intent of the landscape buffers is that native and Florida-Friendly landscaping would be used and ultimately would result in less maintenance than turf areas. Furthermore, landscape buffers use less water than turf. Any existing trees preserved on the site within the buffer area would be credited to the requirement as well. The buffers requirements are discussed further below.

Comment 27. Section 9.01.05(A) [Page 11 Line 31] Landscape Buffer Requirement - General Requirements.

Does this section apply to platted residential projects where building on lots either has not started or there are lots that have not been built upon? Will a landscape buffer be required to be installed if the residential subdivision is already platted? Will a buffer need to be installed in a future phase that is not platted? **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Already approved and platted subdivisions will not have to meet the proposed landscaping standards. To receive final plat approval, common area landscape shall be installed or bonded as per current standards. A future non-platted phase would have to meet the proposed landscape buffers once the ordinance is adopted.

Comment 28. Section 9.01.05(A)(1)(d) [Page 11 Line 52] under General Buffer Requirements.

There is concern that the exemption for subdivisions of less than 10 units from buffer requirements would require the adjacent properties to put in the entire buffer, which is not equitable to the adjacent property owners.

This provision only applies for subdivisions of less than 10 unit AND less than one (1) unit per acre. The areas where this would apply are generally low density semi-rural areas where a large amount of landscaping may not be necessary.

OPTIONS

- A. Delete exemption.
- B. Accept regulation as proposed.

Comment 29. Section 9.01.05 (A)(2) [Page 12, Line 2] *Landscape Buffer Requirements – General Buffer Requirements.*

The last sentence of this section is in conflict with 9.01.05 (A) since it references individual lots in certain zoning districts which are exempt from the requirements of this section. **[Tim Green, ASLA, AICP]**

Single Family lots are exempted from buffers. This conflicts with 9.01.05 A 2. that exempts only certain single family lots for public road buffers. **[Tim Green, ASLA, AICP]**

Staff response: Staff concurs.

OPTIONS

- A. Delete last sentence of this section as follows: “~~Single family lots in the A, AR, and RA Zoning Districts not within a platted subdivision shall be exempt from this requirement, unless required by another provision of the Landscape Code.~~”

Comment 30. Section 9.01.05(A)(3)(d) [Page 12, Line 26] *Landscape Buffer Requirements – Internal Roadway Buffering.*

What is the explanation for exempting certain residential zoning districts from providing street trees? **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Certain rural districts may be predominately pasture and residential mobile home parks are designed in different ways than traditional suburban developments. Traditional provisions for street trees are not necessary for the low density rural lots nor the very high density mobile home parks.

Comment 31. Section 9.01.05(A)(4) [Page 12 Line 29] *Access Roads adjacent to Subdivisions.*

What is the explanation for requiring a Landscape Buffer on an internal subdivision road? **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: In cases where there is a road adjacent to another subdivision or lot, this requirement serves to mitigate the negative impact of the road by placing buffering at the outlying edge of a development.

Comment 32. Section 9.01.05(A)(4) [Page 12 Line 29] *Access Roads adjacent to Subdivisions.*

This section requires street trees on the open space side of a street if it has no lots but allows backs of homes to face the adjacent parcel. **[Tim Green, ASLA, AICP]**

Staff response: When the homes are denser than one net acre and there are more than ten lots in a subdivision, they shall provide a buffer if the zoning use table requires one. See Section 9.01.05 (C) (5) regarding subdivision buffers.

Comment 33. Table 2 Landscape Buffers between Zoning Districts

Zoning does not necessarily correspond to density, is there any allowance for the situation where the zoning district is substantially different than the actual development? **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: No, however a variance to this requirement could be requested.

Comment 34. Section 9.01.05(B) [Page 13 Line 7] *Landscape Buffers Table 2.*

There is concern that like uses should not require buffer zones between them, i.e., industrial uses adjacent to industrial uses. The current regulations require buffers between like uses.

Staff Response: The proposed ordinance proposes changes to the buffer table (with minor deviations) as follows:

	Age	RA	AR	R1	R2	R3	R4	R5	R6	R7	RP	RMRP	RM	C1	C2	CP	LM	HM	MP	CFD	RV	PUD	
Age	*	*	*	*	*	*	*	*	*	*	A	Δ	Δ	C	C	C	D	D	D	A	B	B	
RA	*	*	*	Δ	A	Δ	Δ	C	C	C	D	DE	D	A	B	B							
AR	*	*	*	Δ	A	Δ	Δ	C	C	C	D	DE	D	A	B	B							
R1	*	Δ	Δ	*	*	Δ	Δ	Δ	Δ	Δ	A	Δ	Δ	C	C	C	D	ED	D	A	B	B	
R2	*	Δ	Δ	*	*	*	*	*	*	Δ	A	Δ	Δ	C	C	C	D	ED	ED	A	B	B	
R3	*	Δ	Δ	Δ	*	*	*	*	*	A	Δ	Δ	C	C	C	D	ED	ED	A	B	B		
R4	*	Δ	Δ	Δ	*	*	*	*	*	A	Δ	Δ	C	C	C	D	ED	ED	A	B	B		
R5	*	Δ	Δ	Δ	*	*	*	*	*	A	Δ	Δ	B	B	B	D	ED	ED	A	B	B		
R6	*	Δ	Δ	Δ	Δ	*	*	*	*	A	Δ	Δ	B	B	B	D	ED	ED	A	B	B		
R7	*	Δ	Δ	Δ	Δ	*	*	*	*	A	Δ	Δ	B	B	B	D	ED	ED	A	B	B		
RP	A	A	A	A	A	A	A	A	A	A	Δ	Δ	B	B	B	D	ED	ED	A	A	B		
RMRP	Δ	B	B	B	D	ED	ED	A	A	B													
RM	Δ	C	C	C	D	ED	ED	A	B	B													
C1	C	C	C	C	C	C	C	C	B	B	B	B	C	BA	BA	BA	B	ED	ED	B	B	B	
C2	C	C	C	C	C	C	C	C	B	B	B	B	B	C	BA	BA	BA	B	ED	ED	B	B	B
CP	C	C	C	C	C	C	C	C	B	B	B	B	B	C	BA	BA	BA	B	ED	ED	B	B	B
LM	D	D	D	D	D	D	D	D	D	D	D	D	D	B	B	B	B	B	B	B	C	D	B
HM	D	D	D	E	E	E	E	E	E	E	E	E	E										
MP	D	D	D	D	E	E	E	E	E	E	E	E	E	E									
CFD	A	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	B	B	B	B	B	B	D	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	B

The underlined and strikethrough indicate the changes proposed in the ordinance to the existing buffer table. New buffer requirements are proposed between residential categories R1 through R7, RMRP and RM. Buffers are proposed to be reduced for most commercial categories. Buffers between Industrial and residential uses are increased consistent with the recently adopted ordinance for Heavy Industrial Uses.

OPTIONS

- A. Eliminate or reduce buffer requirements between LM, HM and MP Zoning Districts.
- B. Eliminate or reduce buffer requirements between like residential uses of similar density.

Comment 35. Section 9.01.05(A)(1)(d) [Page 14 Line 1] under Table 3 Land use Buffer Area Requirements
 There is also concern that this section penalizes an owner who gives MORE buffer width by requiring more groundcover plantings since it is base on a set percentage of the width. [Tim Green, ASLA, AICP]

The buffer widths were increased as shown below and ornamental trees are now required whereas they were previously optional. All buffers are proposed to include 20% groundcover.

Buffer area Type	Changes
A	<ul style="list-style-type: none"> • 10' foot width option is deleted (3 canopy, 2 Ornamental and single row shrubs) <p>Proposes two new width options as follows:</p> <ul style="list-style-type: none"> • 15 Feet consisting of Four (4) canopy trees; Three (3) ornamental trees; Two (2) foot high hedge. • 20 Feet consisting of Three (3) canopy trees; Two (2) ornamental trees; Two (2) foot high hedge
B	<ul style="list-style-type: none"> • Addition of a Six (6) foot wall or fence to requirement for the 15' foot width option. (Wall not required in the 20' feet width option): <p>Proposes one new width option as follows:</p> <ul style="list-style-type: none"> • 20 Feet consisting of Four (4) canopy trees; Three (3) ornamental trees; Two (2) foot high hedge
C	<ul style="list-style-type: none"> • 20' foot width option is deleted (6 canopy, 5 Ornamental and double row shrubs) <p>Proposes three new width options as follows:</p> <ul style="list-style-type: none"> • 15 Feet (5 feet smaller than current) consisting of Five (5) canopy trees; Four (4) ornamental trees; Two rows of hedges, two (2) feet high; Eight (8) foot wall or solid fence; • 25 Feet consisting of Five (5) canopy trees; Four (4) ornamental trees; Two rows of hedges, two (2) feet high; Six (6) foot high wall, fence or a berm or combination thereof; • 50 Feet consisting of Five (5) canopy trees; Four (4) ornamental trees; Two rows of hedges, two (2) feet high. • Walls or Fences are not required for commercial and office uses that are along frontage roads
D	<ul style="list-style-type: none"> • 30' foot width option is deleted (10 canopy, 8 Ornamental, double row shrubs and 6' wall) <p>Proposes two new width options as follows:</p> <ul style="list-style-type: none"> • 40 Feet consisting of Eight (8) canopy trees; Seven (7) ornamental trees; Two (2) rows of hedges (3'), Six (6) foot wall or berm or a combination thereof. • 80 Feet consisting of Eight (8) canopy trees; Seven (7) ornamental trees; Two (2) rows

	of hedges (3'), and a Four (4) foot high berm;
E	No Change

The basic premise of the changes in this table is to reduce the amount of lawn and further encourage the use of native and Florida-Friendly groundcovers. Groundcovers may consist of one (1) gallon plant material planted at thirty-six (36) inches centers.

The deletion of the current width for Buffers A, C, and D may result in some existing properties becoming nonconforming to this requirement. If the width available after development occurs may result in the need for a variance. The addition of walls to Buffers B & C has the same concern.

OPTIONS

- A. Add current width as an option for each buffer type.
- B. Reduce the amount of trees required for the wider options by 20% as the buffer becomes wider.
- C. Accept regulation as proposed.

Comment 36. Section 9.01.05(B) [Page 14 Line 1] *Landscape Buffers Table 3.*

There is some concern that the requirements for walls and berms in Buffer Types D and Type E are excessive.

The current regulations for Type D (min. 30ft wide) and Type E (min. 50ft wide) buffers require:

- 10 canopy and eight (8) ornamental trees, and
- A double row of shrubs, and
- A six (6) foot wall.
- Four (4) berm (Class E only)

These buffers are generally only required between residential and industrial uses or between heavy Industrial and commercial uses.

The most significant change in the proposed ordinance is to increase the minimum width of the Class D buffer 10 feet to 40 feet and requiring 20% of the area to have groundcovers.

OPTIONS

- A. Accept regulation as proposed.
- B. Reduce or eliminate buffers between specific zoning categories.
- C. Reduce or eliminate requirement for walls and/or berms.

Comment 37. Section 9.01.05(B) [Page 14 Line 1] *Landscape Buffers Table 3.*

The additional buffer requirements will cost over \$1,000 per residential home and in some cases several thousand dollars. In addition the maintenance of the additional landscape buffers will double or triple the Homeowner's Association dues to each individual homeowner. These additional costs are not warranted and the

landscape buffers should be reexamined. For commercial and industrial projects the proposed landscape buffers will cause many projects to be not cost effective to go forward. **[Jim Bible, Showcase Homes, Inc.]**

For Buffer A, a six (6) foot fence or wall with a five (5) foot buffer width should be allowed to substitute for the 15 foot or 20 foot landscape buffer. **[Jim Bible, Showcase Homes, Inc.]**

Buffer E will make the top of the wall 10' above grade, this is very tall. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: See comment above. Most buffer requirements for residential to residential phases are not proposed to change. Generally, the minimal buffer "A" adding a modest cost. Also, where an existing buffer on an adjacent parcel is already in place and that was required by a development order, that buffer may be used as buffer credit. Buffers are not required where the single-family homes are less dense than one home per acre and less than ten homes are planned for construction. Please also see comments and options above.

Comment 38. Section 9.01.05(C)(2) [Page 17 Line 3] Supplemental Requirements for Subdivisions and Site Plans. Add plastic fences to the allowable fences. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: This is request was considered by the LPA but was not ultimately recommended due to the limited acoustic and aesthetic shortfalls of plastic fences.

OPTIONS

- A. Accept regulation as proposed.
- B. Add plastic fences to list of materials.

Comment 39. Section 9.01.05(C)(5) [Page 18 Line 11] Supplemental Requirements for Subdivisions and Site Plans.

The need for 10 trees per acre is excessive. There is no justification for increasing the number of trees per acre above the existing code of six (6) trees per acre. Florida was not all trees. Open space that is open is also desirable. This is another add on of cost and maintenance that is not justified.

Staff Response: This requirement was discussed thoroughly during the LPA hearings. This is the recommended standard and is not considered excessive. All trees preserved onsite shall count towards this requirement and it will also serve to provide additional incentive for developers to preserve existing trees. The regulation allows trees to be averaged over the amount of pervious open space so some of the land may be left as open space. Some municipalities require eighteen (18) or more canopy trees per acre.

OPTIONS

- A. Accept regulation as proposed.
- B. Reduce number of trees required.

Comment 40. Section 9.01.06(A) [Page 18 Line 32] Interior Parking Areas.

This section is not clear that parking lot landscaping requirements would not apply to staging and storage areas of distribution facilities, such as occur in the Christopher C. Ford Commerce Park. This issue is not addressed in existing regulations either.

OPTIONS

- A. Provide additional language “Staging areas and storage areas shall not be subject to the requirements of this section.”
- B. Accept regulation as proposed.

Comment 41. Section 9.01.06(A) [Page 18 Line 32] *Interior Parking Areas*

The requirement that 50% of all trees be Live Oak trees should be deleted. Live Oak trees situated in parking areas is not an appropriate tree for that location. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Staff has worked to increase the size of the parking islands from two-hundred to three-hundred square feet. Live Oaks are hardy, wind resistant and shade producing trees that will provide immeasurable benefits. The City of Clermont has this requirement with success.

OPTIONS

- A. Accept regulation as proposed.
- B. Delete requirement.

Comment 42. Section 9.01.06(A) [Page 18 Line 35] *Internal Landscaping in Parking Areas*. This section requires 50% of the interior parking trees to be Live Oaks this could be an issue with the diversity standards as currently drafted. **[Tim Green, ASLA, AICP]**

Staff Response: A review of this requirement indicates that 50% requirement for Live Oak trees in parking lots will work in all instances.

Comment 43. Section 9.01.06.A.3 [Page 19 Line 15] *Intermediate Landscape Islands*.

Are intermediate islands also the island that break the no more than 10 in a row rule? If so why do we need more on a larger parking lot? **[Tim Green, ASLA, AICP]**

Staff Response: Intermediate landscape islands are in addition to the terminal landscape islands placed at the ends of every ten (10) parking spaces. The reason for more intermediate landscape islands is to reduce the negative effects of heat gain, glare and solar radiation. Also, larger parking lots have greater flexibility in meeting other site requirements such as the required number of parking and on site storm water requirements.

Comment 44. Section 9.01.06.C [Page 21 Line 21] *Pervious Parking*. All extra parking must be impervious. This should be amended in the site plan section of the LDR’s so civil engineers are aware of this requirement. **[Tim Green, ASLA, AICP]**

Staff Response: If approved, an amendment will be considered.

Comment 45. Section 9.01.06(I) [Page 24 Line 22] Retention Ponds Landscaping.

The new proposed regulations for retention pond landscaping may impede maintenance efforts by having the trees at the top of bank where the equipment is used to maintain the pond. A ten foot, clear zone should be created at the top of bank to allow for ease of operations.

Retention Pond Landscaping. Why do the trees need to be planted within 40 feet from the top of the bank line and what is the definition of the “top of the bank line?” **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: Forty feet allows the flexibility for retention ponds to be cleaned out if necessary. Top of pond bank is the area where the steeper pond slope breaks/transitions into a more gradual slope with the existing grade. This is also shown graphically in Figure J of the proposed ordinance.

OPTIONS

- A. Modify Section 9.01.06 (I) as follows: “Three (3) canopy trees for every 150 linear feet of retention pond bank shall be required as measured at the top of pond bank. Trees shall be planted within forty (40) feet from the top of bank line and include a 10 foot wide clear zone for maintenance. A minimum of three (3) canopy trees shall be required at retention ponds. Curvilinear retention ponds, rather than geometric or rectangular ponds, are encouraged. (See *Figure J Retention Ponds*).
- B. Adopt regulations as proposed.

Comment 46. Section 9.1.07.C [Page 25 Line 33] Other Landscape Requirements.

Are septic tanks and drain fields infrastructure? [Tim Green, ASLA, AICP]

Staff Response: Yes.

Comment 47. Section 9.01.07.C.1 [Page 25 Line 35] Landscape Requirements for Individual Single-Family Residential and Duplex Lots - Other landscaping requirements.

The sentence says residential development must provide a landscape area equal to 35% of the first floor footprint. This will add \$750 to \$1000 per average house. There should not be a requirement for shrubs on a residential lot. It should be left to the homeowner. If the percentage of landscaping on lots with low, medium and high water usage are maintained that should be the only requirement for residential lots. Many people like to add shrubs and other landscaping and not have that cost as part of the mortgage. . **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: The requirement is that the area be landscaped in landscape material other than sod/turf. Each tree planted on the lot accounts for roughly 100 square feet so this area may be subtracted from the 35%. Preliminary tabulations by Staff indicate a \$700 dollar increase for a 2,200 SF home; however, potential water savings are estimated to be 6,400 to 8,000 gallons of water annually per single-family home.

OPTIONS

- A. Accept regulation as proposed.

- B. Delete or reduce requirement.

Comment 48. Section 9.01.07.C.2 [Page 26 Line 8] *Landscape Requirements for Individual Single-Family Residential and Duplex Lots - Other landscaping requirements.*

Why are A, AR, and RA zoning categories exempt? If they are exempt than all other residential categories should be exempt. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: These are generally rural residential land uses that quite often do not have irrigation installed for initial establishment, are more likely to be pasture, grazing, or woodlands. The main purpose for the building landscape areas is to conserve water, but also to restore vegetation lost when subdivisions are mass graded. Also, in rural residential situations this may further allow the creation of greater fire protection barriers.

OPTIONS

- A. Accept regulation as proposed.
B. Delete exemption.

Comment 49. Section 9.01.07(D) [Page 26 Line 10] *Preservation of existing trees.*

Preserving all trees within five (5) feet of home is not in keeping with the “Firewise” guidelines of the department of agriculture of 30 foot defensible space around a home. This is a major with pine trees. (Palm Coast 1998 and Palm Bay 2008 are examples) [Tim Green, ASLA, AICP]

"An allowance for replacement trees as provided for in sections 9.02.04, 9.02.05 and 9.02.06 should be provided. Requiring trees to remain that are only 5' from a home is a major liability and should not be required. There are many instances where because of grade issues a tree will need to be removed." **[Jim Bible, Showcase Homes, Inc.]**

A greater distance was considered however the LPA was concerned that homeowners may take advantage of a “fire wise” provision and thus eliminate native or Florida-Friendly landscaping in areas that have low fire danger. This is cause for concern by emergency management officials as well.

OPTIONS

- A. Increase defensible space up to 30 feet.
B. Increase defensible space only in areas highly susceptible to fire, such as pinelands.
C. Adopt regulations as proposed.

Comment 50. Section 9.01.08 B. [Page 26, Line 28] *Prohibited Plant Species - Removal.*

This provision states “Removal of 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 wetlands or natural water bodies that are regulated or protected by the Water Management Districts or other regulatory agency without an approval for invasive exotic plant removal.”

There is concern that this section would require that any property owner, regardless of the size of their lot, to remove all invasive non-native plant species from the lot when building a home. In addition, this could be read to require removal of aquatic plants (*hydrilla* or some other invasive) that were located in a water body on the property. This provision was added to begin the elimination of invasive plant species to prevent their spread and limit their impacts on natural lands. The impacts of invasive plants are significant in terms of environmental damage as well as fiscal impacts on state and local governments. Information on these impacts is included in the back up materials.

No exclusion for such vegetation located in regulated wetlands or water bodies, or areas left undisturbed; so this requirement requires the owner to obtain necessary external permits and remove the vegetation in order to get a certificate of occupancy (CO). Although the regulatory agencies are very supportive of invasive plant removal there is no guarantee that an authorization would be given and the provision above does not provide for that scenario. This could be problematic from the applicants' perspective in that obtaining necessary permits from outside agencies may be difficult or overly time-consuming (perhaps months).

Also, if someone is leaving a significant portion of a large lot (20 acres for example) in a natural state for the purpose of water conservation, they would still need to do a complete survey of the property and remove all prohibited vegetation before moving into their dwelling. This could result in a number of variance requests.

Verification of the removal will require a site visit by trained staff and could result in additional programmatic costs to the County. Will this require a detailed inspection of the entire property by a County employee prior to CO in order to implement?

OPTIONS

- A. Amend Section 9.01.08 B. to include a limit on the acreage for removal. For example, a minimum of one (1) to five (5) acres must be free of prohibited plant species prior to certificate of occupancy. This requirement would require a site visit by a trained staff person, most likely in the Conservation and Compliance Division.
- B. Adopt regulations as proposed.

Comment 51. Section 9.02.04(A) [Page 27 Line 53] under *Exemptions to Tree Removal Permit Requirements*.

The Lake County Department of Public Works RO Division has performed a review of this requirement. This review included an analysis of cost implications as well as an operational impact assessment. Removals are currently coordinated with the County Forester who performs a site visit and issues a letter with recommendations for the tree, i.e. needed pruning, removal, etc. The advice provided by the County Forester becomes the Division's course of action regarding the tree. Only diseased, dying, or dead trees are removed from existing right of ways unless severe safety issues are involved.

When reviewing the cost implications of this regulation, historical tree removal figures were evaluated from 2005 to present. These figures included the actual size, type of tree removed and the present cost of removal. Once this comprehensive list was compiled, the additional costs of tree replacement and tree removal permits

required by the new proposed ordinance were considered. It was discovered that the replacement criteria and permit requirements would increase tree removal costs four (4) times more than our current expenditure. For example, our most active year for tree removal, 2005, would have costs escalate from \$98,379.00 to \$400,572.60. These costs do not include the watering establishment costs to keep the newly planted tree(s) in good health.

Staff Response: Section 9.02.04 *Exemption to Tree Removal Requirements* exempts “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, the same provision also requires that all protected trees that are removed under this exemption to be relocated or replaced either within the project Site or at a public Offsite location. The proposed regulations contain similar language to the existing ones and exempt public projects from obtaining permits but require replacement or relocation for trees removed from the right of way.

OPTIONS

- A. Modify Section 9.02.04 (A) as follows: “Trees located within new or existing recorded or prescriptive public road or drainage rights-of-way and easements that are to be removed as part of a Board of County Commissioners approved project. ~~However, all protected trees that are removed under this exemption shall be relocated or replaced pursuant to replacement requirements contained herein.~~”
- B. Modify Section 9.02.04 (A) as follows: “Trees located within new or existing recorded or prescriptive public road or drainage rights-of-way and easements that are to be removed as part of a Board of County Commissioners approved project. However, all protected trees shall be avoided when ever feasible. Protected trees that are removed under this exemption shall be relocated ~~or replaced pursuant to replacement requirements contained herein~~ whenever feasible.”
- C. Modify Section 9.02.04 (A) to include an exemption for the replacement of dead and diseased trees at the end of this section as follows: “Dead or diseased trees shall not require replacement or relocation.”
- D. Adopt regulations as proposed.

Comment 52. Section 9.02.04 B. 2. [Page 28, Line 11] Exemptions to Tree Removal Requirements.

There is concern that the exemptions do not provide for a tree that is damaged/removed due to an “act of God” or circumstances beyond the control of the property owner (e.g., hurricane, tornado, lightning strike, vehicle accident, etc.) or that poses health or safety hazard (e.g. breaking foundation of home, danger of falling on home, etc). Replacement of a large Specimen or Heritage Tree would be significant. For example, a dead tree 49” DBH/approximately 13’ in circumference would require a total of 20 trees using 2-1/2” caliper trees. Each replacement tree (at 2-1/2”) costs roughly \$200-\$400 installed, therefore in addition to the cost of removal the total cost to replace the example tree could be \$4,000 to \$8,000. An affected citizen could require a variance but that would take time and increase cost.

OPTIONS

- A. Delete Section 9.02.04(B)(2) that requires replacements and Section 9.03.05(A)(5) that requires a permit for a hazard tree.
- B. Amend Section 9.02.04(B)(2) to limit replacement of hazard trees to one replacement tree meeting the size requirements of Section 9.01.04 A.

- C. Amend Section 9.02.04(B)(2) to allow single family and duplex lot owners to remove one (1) to three (3) trees, not exceeding a total of twenty (20) caliper inches within any three (3) year period, that are not required for any landscape requirement.
- D. Adopt regulations as proposed.

Comment 53. Section 9.02.06 [Page 29, Line 21] *Mitigation of replacement trees.*

It is not clear that trees installed as part of required landscaping may be counted toward mitigation requirements. The current regulations provide only for replacement on-site and specifically that replacement trees may be used to meet the requirements of the Landscape standards of Section 9.01.

OPTIONS

- A. Amend Section 9.02.06 (D) to include a new subsection (5) that states “Replacement trees may be used to meet the Landscape requirements set out in Section 9.01.”
- B. Adopt regulations as proposed.

Comment 54. Section 9.02.09, 9.02.10, and 9.02.11 [Pages 31-33 beginning at Line 23] *Historic, Specimen and Heritage Trees.*

There has been some concern that having three “special” designations for large trees is cumbersome. It may be adequate to have one or two definitions and criteria for protecting unusually large trees. Size rather than “historic value” or “unusual form” could be adequate to require the protection of those trees.

The current regulations provide for Specimen and Historic Trees with similar provisions as the proposed ordinance. An additional category was recommended by the LPA for Heritage Trees. Heritage Trees are generally those that are over 40 inches in caliper or have a circumference of 10 feet. It was felt that these trees are of such significance that they should receive automatic designation by the County Manager or designee if they meet the requirements. Removal of a designated Heritage Tree requires a variance from the Board of Adjustment.

OPTIONS

- A. Adopt regulations as proposed.
- B. Delete designation for Heritage Trees if Board feels Historic and Specimen Tree provisions are adequate.

Comment 55. Section 9.02.01(A) [Page 27 Line 2] *Protected Trees- Designation of Protected Trees.* Designating protected trees to be 3” or larger verse the existing code of 4” is not justified and will only cost the homeowner more money. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: The purpose of this provision is to protect more existing native and Florida-Friendly trees as much as possible. Careful planning on the part of the homeowner and developer in avoiding existing trees on a site could greatly reduce the replacement costs and increase the property value by immediately providing the amenity of mature trees.

OPTIONS

- A. Adopt regulations as proposed.
- B. Increase size back to 4".

Comment 56. Section 9.02.01(A) [Page 27 approx. Line 8] *Protected Trees- Designation of Protected Trees.*
 Again, reducing the tree size to 2" verse the existing 4" is not justified. **[Jim Bible, Showcase Homes, Inc.]**

Staff Response: The two-inch protected trees apply to the rare sand pines and xeric scrub oak communities that are in limited areas within Lake County. The purpose of this provision is to protect more existing native and Florida-Friendly trees as much as possible. Careful planning on the part of the homeowner and developer in avoiding existing trees on a site could greatly reduce the replacement costs and increase the property value by immediately providing the amenity of mature trees.

OPTIONS

- A. Adopt regulations as proposed.
- B. Increase size back to 4".

Comment 57. Section 14.07.05 (D)(10) [Page 37 Line 5] *As-Built/Record Drawings.*

There is concern that this requirement could result in a high cost to an applicant and if substantial changes are made to the approved Landscape Plan a new one would have to be submitted. "As-built" plans can be very expensive. [Tim Green, ASLA, AICP]

As-built plans are not necessary for the review. Staff reviews the landscape plans at the time of submittal and again for final CO. Any significant changes to the landscape plans require the submittal of plans and staff is concerned that having a certified as-built is burdensome to property owners. The as-built provision is more applicable to engineering and architectural site improvements and not the landscape.

OPTIONS

- A. Eliminate "and by the landscape architect of record." In the third and fourth sentences.
- B. Adopt regulations as proposed.

Comment 58. Section 14.08.00(D) [Page 39 Line 6] *Developer's Agreements to Delay Installation of Required Landscaping.*

There is concern this provision would require residential subdivision developers to install all landscaping, even on individual lots or enter into an agreement to install at a later date.

The current code does not allow a CO until all landscaping is in place. This provision would provide flexibility to the developer to defer installation of treed boulevards and similar features as the subdivision was developed. This would allow the developer to install required street trees in the right of way as each residence was developed.

OPTIONS

- A. Adopt regulations as proposed.

- B. Delete provision. This would require all landscaping to be installed prior to CO of the first residence.

Comment 59. General Comment.

There is a concern that the various code provisions in this draft ordinance will require intense training and expansion of the landscape inspection program. Today, a landscape inspection is required for commercial locations prior to CO and 11-months following issuance to verify continued compliance as well as residential subdivisions to make sure the correct number of plants are present of the appropriate type. The proposed ordinance, landscape inspections will now be required on all new single-family dwellings and a number of accessory structures.

Applicants will need to submit a landscape plan or include the information on a plot plan to be submitted and reviewed prior to issuing of a permit and each lot will then be required to undergo a landscaping inspection by County staff. This inspection will look to ensure correct installation of appropriate percentages of high, moderate, and low water use plantings; that any plant substitutions made to the approved plantings are both on the approved plant list. An inspector will be required to ensure the planting plan is followed. The level of detail and expertise associated with the review of the plantings and inspection will require increased training and/or altered job requirements for County inspectors. This training would include botany and/or landscape architecture for proper evaluation of the requirements and implementation of each plan. This type of review/inspection could be done by a County Arborist.

A logical extension of these duties is for the landscape inspector to ensure the installed irrigation system adequately and appropriately provides water to plantings. Today, building inspectors conduct an inspection of the irrigation that consists primarily of ensuring backflow prevention is in place and piping is appropriate. The requirements of this ordinance far exceed those of the building code and would not appropriately be inspected by building inspectors.

Words such as those contained in 9.02.06 F. *Replacement maintenance* which state “. . . replacement trees shall be maintained in good condition **in perpetuity** and the property owner **shall guarantee survival.**” (emphasis added) indicate to me that there will be a continuing obligation on the County’s part to inspect and enforce these provisions.

The Department of Conservation and Compliance has indicated that County staff may be able to accomplish what is necessary to implement this ordinance in the short term. As part of the adoption of the new ordinance, the Landscape Architect from the Growth Management Department may assist in initial inspections. If the pace of building increases even marginally, additional personnel will be required during both the permitting phase and inspection phase accordingly.

In conclusion, staff will be available to discuss these items and provide any clarifications or recommendations desired.

MEMORANDUM

GROWTH MANAGEMENT
Planning & Community Design
315 W, Main Street
Tavares, FL 32778



LAKE COUNTY
FLORIDA

P: 352.343.9739
F: 352.343.9595
www.lakecountyfl.gov

To: Amye King – Growth Management Director
From: Grant Wenrick, ASLA Landscape Architect
Brian T. Sheahan, AICP Director of Planning & Community Design
Date: June 6, 2008 Revised June 19, 2008
Subject: **Estimated Single-Family Landscape Costs**

This memorandum discusses the anticipated costs for an average single family home to comply with the landscape requirements. Examples of landscaped homes are included to put the requirements into context.



JENNIFER HILL
District 1

ELAINE RENICK
District 2

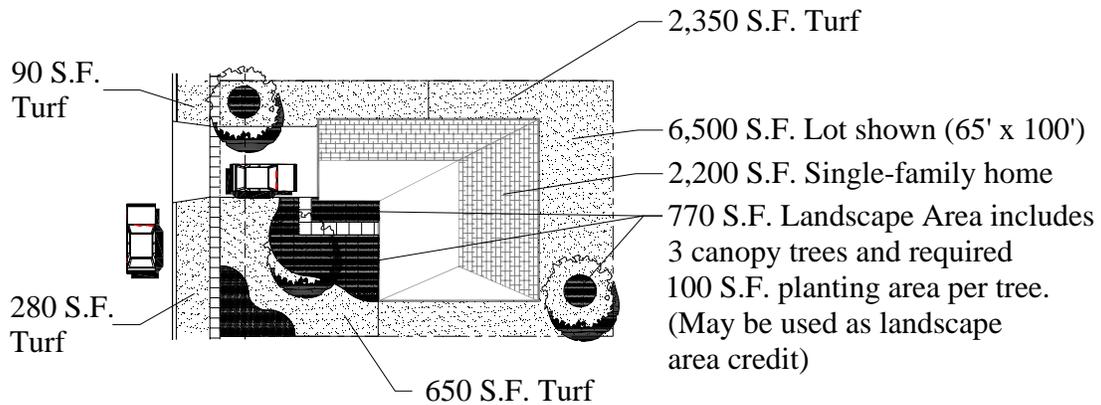
DEBBIE STIVENDER
District 3

LINDA STEWART
District 4

WELTON G. CADWELL
District 5



- Single-Family Residential Example



Summary for Existing Code

4,140 S.F. Turf (Area in ROW included)

Summary for Proposed Code

3,370 S.F. Turf (Area in ROW included)

720 S.F. Landscape Area

(50 S.F. Difference due to current code requiring 25 S.F. mulch area per tree for the trees outside the landscape area.)

- Three canopy trees required for this lot size has not changed from the original landscape code.

- Landscape Areas
 - Additional requirement of thirty-five (35) percent landscape area is a new requirement
 - Under Existing Code:
 - 720 S.F. St. Augustine Turf = $\$0.32 \text{ SF} \times 490 \text{ SF} = \230 installed
 - Potential water use (With proposed SJRWMD rules):
 - 34 weeks / 2 times per week / $\frac{1}{2}$ " per application = 34 inches supplemental irrigation
 - 18 weeks / 1 Time per week / $\frac{3}{4}$ " per application = 13.5 inches supplemental irrigation
 - Thus, a potential 47.5 inches supplemental irrigation could be used; however irrigation rain sensor assumed to restrict water use at least 25% of the time. Thus, 47.5 inches X 75% = 35.62 inches of supplemental irrigation is the potential reality for the consumptive use of irrigation water.
 - Equivalent to 16,029 Gallons of water for St. Augustine Sod annually. (Irrigated over the 720 S.F. area)
 - With Proposed Code:
 - 720 S.F. Turf is replaced with Florida Friendly Plants (Installed Costs)
 - Shrubs at 48" on center (.08 x 720 S.F.) = 58 x \$10 = \$580 **OR**
 - Groundcover at 36" on center (.14 x 720 S.F.) = 101 x \$4 = \$404 **WITH**
 - Pine Bark Mulch = 720 SF x \$0.30 SF = \$216
 - Water Saved
 - Florida Friendly landscaping estimated to save 40% or more in irrigation watering. Thus, assuming 40%-50% water savings results in approximately 6,400 to 8,000 gallons saved annually.
 - Economic savings through less water, less mowing and less fertilizer.
 - Tree Requirement - Differences from existing code compared to proposed landscape code.
 - No changes in tree requirements for lots 10,000 S.F. and smaller for tree quantity required; however, requiring 2-1/2" caliper canopy trees VS. 2" caliper trees will add an estimated \$100 per tree. (Typically, these costs represent the contractors wholesale cost to a builder.) The slightly larger tree size is actually less expensive per "cubic" foot of tree.
 - Additional category added requiring four (4) canopy trees for lots between 10,001 and 15,000 S.F. (This was added based on public comment and is actually one LESS tree than current requirements)

- Canopy tree requirements are broken down into additional categories with an additional one (1) tree for lots greater than three (3) acres but one (1) less tree for lots that are between four and five acres than current requirements.
 - The requirement for a minimum of twenty-five (25) trees for single-family and duplex lots greater than five (5) acres is a new requirement. The existing code currently requires a maximum of fifteen (15) canopy trees for lots that are over five (5) acres.
- **Cost and Water Savings Results:**
- \$230 St. Augustine Sod cost VS. \$616 installed cost for groundcover and mulch. In addition, the slight increase in tree size will add about \$100 per tree and in this case that will be \$300 increase. Thus, the overall cost of \$230 VS. \$916 represents a modest increase of \$686 dollars per home. However an estimated 6,400 to 8,000 gallons of water saved annually plus maintenance cost will allow homeowner to recover modest initial cost increase within a modest time period.
 - In summary, for the above home size example, the difference is less than \$700 per home.

1
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ORDINANCE 2008-

ORDINANCE SUMMARY

The Lake County Comprehensive Plan requires that the landscape code be updated on a periodic basis. In 2007, 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 Districts, Water Authority, landscaping community and the Local Planning Agency (LPA) Hearings. The LPA considered the Landscaping Ordinance over several meetings and this ordinance represents the final result of those meetings.

LPA hearings: April 17, 2008, April 30, 2008, and May 9, 2008. The LPA recommended unanimous approval of the ordinance at the May 9, 2008 meeting.

Changes are shown as follows: ~~Strikethrough~~ for deletions, Underline for additions.

Notations showing “* * *” indicate that no changes are proposed between modified sections.

Rev. 06-03-08

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AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF LAKE COUNTY, FLORIDA; AMENDING THE LAKE COUNTY CODE APPENDIX E LAND DEVELOPMENT REGULATIONS; RENUMBERING AND AMENDING s. 3.11 RELATING TO NONCONFORMING DEVELOPMENT; DELETING SURPLUS NONCONFORMING PROVISIONS OF S. 6.13; ADDING DEFINITIONS TO CHAPTER II; REPEALING AND REWRITING IN ITS ENTIRETY s. 9.01 LANDSCAPING AND SITECLEARING STANDARDS; PROVIDING FOR PURPOSE, GENERAL REQUIREMENTS AND EXEMPTIONS; PROVIDING FOR WATERWISE AND FLORIDA FRIENDLY LANDSCAPING; PROVIDING GENERAL LANDSCAPING REQUIREMENTS; PROVIDING LANDSCAPE BUFFER REQUIREMENTS; PROVIDING INTERNAL LANDSCAPING FOR PARKING AREAS AND OTHER SITE AREAS; PROVIDING LANDSCAPE REQUIREMENTS FOR SINGLE FAMILY RESIDENTIAL AND DUPLEXES; PROVIDING FOR PROHIBITED PLANT SPECIES; REPEALING AND REWRITING IN ITS ENTIRETY s. 9.02 TREE PROTECTION; PROVIDING FOR TREE PROTECTION; PROVIDING FOR PROTECTED TREES; REQUIRING A TREE REMOVAL PERMIT; PROVIDING EXEMPTIONS TO TREE REMOVAL PERMIT REQUIREMENTS; PROVIDING CRITERIA FOR ISSUANCE OF TREE REMOVAL PERMITS; PROVIDING TREE REPLACEMENT REQUIREMENTS; PROVIDING FOR LOCATION OF TREE REPLACEMENT SITES; PROVIDING FOR VOLUNTARY PLANTING; PROVIDING REGULATIONS FOR HISTORIC TREES, SPECIMEN TREES, AND HERITAGE TREES; PROVIDING FOR TREE PROTECTION DURING CONSTRUCTION; AMENDING CHAPTER 14 ADMINISTRATION; AMENDING s 14.07.05 TO ADD LANDSCAPE REQUIREMENTS; AMENDING s 14.07.06 REGARDING ISSUANCE OF A CERTIFICATE OF OCCUPANCY; AMENDING s 14.08.00 REGARDING GUARANTEES AND SURETIES; AMENDING s 14.09.01 SITE PLAN SUBMITTAL REQUIREMENTS; AMENDING s 14.10.02 MASTER PARK PLAN SUBMITTAL REQUIREMENTS; AMENDING s 14.14.01 DEVELOPMENT PERMITS; AMENDING s 14.14.04 TREE REMOVAL PERMITS; PROVIDING FOR SEVERABILITY; INCLUSION IN THE CODE; AND 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

1 **WHEREAS**, Comprehensive Plan Policy 1-1.3 requires Land Development Regulations be adopted
2 to minimize potential adverse impacts created by different land uses located adjacent to each other by
3 requiring the provision of landscaping, buffering, or other appropriate screening techniques; and
4

5 **WHEREAS**, the Local Planning Agency considered this during eight public hearings and
6 recommended approval on May 9, 2008 at a properly advertised public hearing; and
7

8 **WHEREAS**, the Board of County Commissioners (the "Board") desires to amend Chapter IX to
9 update the design and improvement standards and best management practices to conserve water,
10 improve water quality, provide habitat and enhance aesthetics; and
11

12 **WHEREAS**, the Board has determined that amending Chapter IX is in the best interests of the
13 citizens of Lake County, Florida; and
14

15 **NOW, THEREFORE, BE IT ORDAINED** by the Board of County Commissioners of Lake County,
16 Florida, that:
17

18 **SECTION ONE. Recitals.** The foregoing recitals are true and correct and incorporated herein by
19 reference.
20

21 **SECTION TWO. Repeal and Replace.** Section 3.11.00 consisting of sections 3.11.01 –
22 3.11.04 is hereby repealed and replaced and Section 1.08.00 is created to read as follows:
23

24 **1.08.00 Nonconforming Development.**
25

26 **1.08.01 Defined.** The following provisions apply to Nonconforming Development as defined in
27 Chapter II.
28

29 **1.08.02 Normal Maintenance.** Normal maintenance and incidental repair of a lawful
30 nonconformity shall be permitted provided that such maintenance and repair does not violate any other
31 Section of these Regulations and is in full compliance with all building and technical codes adopted by
32 Lake County.
33

34 **1.08.03 Continuation of Nonconforming Development.** Subject to the provisions below for
35 terminating Nonconforming Development, such uses and development may, if otherwise lawful, remain in
36 use in their nonconforming state.
37

38 **1.08.04 Termination of Nonconforming Development.**
39

40 A. Generally. Nonconforming development shall be brought into full compliance with the other
41 requirements of these Regulations, in conjunction with the following activities:
42

- 43 1. Any expansion, change, enlargement, or alteration of a use or development in any way which
44 increases its nonconformity. This shall not be construed to include normal maintenance and
45 incidental repair (e.g., painting, providing for a new roof, rescreening an existing porch, etc), nor
46 shall it include the modification or rebuilding of a nonconforming communication tower in order to
47 accommodate co-location of additional communication antennas so long as the tower is of the
48 same type which existed and there is no increase in height.
49
- 50 2. Reconstruction of the principal or accessory structure after the structure has been substantially
51 destroyed by fire or other natural disaster. A structure is "substantially destroyed" if the cost of
52 reconstruction is fifty (50) percent or more of the fair market value of the structure before the fire
53 or natural disaster. If there are multiple principal structures on a site, the cost of reconstruction shall
54 be compared to the combined fair market of all the structures. A nonconforming development may

1 continue if, within two (2) years from the date that the principal structure was substantially
2 destroyed, a Certificate of Occupancy is issued for the rebuilt principal structure.
3

4 3. Structural alteration, as defined in Chapter II.
5

6 4. Any change in the use of the property, whereby a change from one Use Classification identified in
7 Subsection 3.01.03 to another Use Classification constitutes a change in the use of the property.
8 This shall not be construed to include normal maintenance and incidental repair (e.g., painting,
9 providing for a new roof, rescreening an existing porch, etc.).
10

11 5. The discontinuance of any nonagricultural use or development for twelve (12) consecutive months
12 or the registration of a business tax receipt for which the expiration has exceeded one (1) year.
13

14 6. The discontinuance of any agricultural uses (not requiring a CUP) for fifteen (15) consecutive years.
15

16 7. The substantial improvement of any nonconforming development that does not comply with the
17 drainage and flood hazard area requirements of the Land Development Regulations.
18

19 B. Nonconforming Signs. In addition to the requirements above the following shall apply:
20

21 1. Nonconforming signs shall be brought into full compliance with the other requirements of these
22 Regulations in conjunction with the following activities:
23

24 a. Any structural or mechanical extension or change which expands the nonconformity.
25

26 b. Repair or rebuilding of a sign that has been destroyed or damaged to the extent of
27 fifty (50) percent or more of its replacement value.
28

29 c. Nonconforming status shall not be granted to any sign erected without the required
30 permit issued by the County, State, or any Federal agency before or after the
31 enactment of this Code, or to any preexisting signs which have been illegally installed,
32 constructed, placed, or maintained.
33

34 2. Another nonconforming sign shall not replace a nonconforming permanent on-premise or off-
35 premise sign with the exception of substitution or interchange of letters, painted boards, or
36 dismountable material.
37

38 3. No permits shall be issued for electrical or mechanical work for a nonconforming sign unless
39 there is a present safety hazard.
40

41 4. For the purpose of this Section, existing ground signs shall be deemed to be conforming signs
42 for the purpose of continued use.
43

44 5. If the provisions of Section 479.15(3)-(6), Florida Statutes, would apply to a sign, a hearing
45 shall be held before the Board of County Commissioners for the purpose of determining
46 whether the owner of the nonconforming sign is permitted to relocate the sign or whether the
47 County will compensate the owner for its removal. The Board's determination shall be based
48 upon the amount of just compensation due the owner, the current location of the sign, the
49 proposed relocation site, and any other factors applicable to the removal of the sign.
50

51 C. Nonconforming Landscaping. For landscaping that is nonconforming due to Sections 9.01 and 9.02,
52 the following shall apply instead of (A) above:
53

- 1 1. Any one of the following activities shall require the entire lot to be brought into full compliance
2 with the Landscaping provisions of Sections 9.01 and 9.02:
3
4 a. Any additional structure or addition to an existing structure of twenty-five percent
5 (25%) or 1,000 square feet, whichever is greater.
6
7 b. Any cumulative increase in required parking of two (2) spaces, or vehicular use area
8 of twenty-five percent (25%).
9
10 c. Any substantial improvement.
11
12 2. If the increase in area of a new structure, an additional structure, parking area or vehicular
13 use area is less than any of the requirements of subsection (1) above, only the new structure,
14 addition, increased parking area or increased vehicular use area shall be buffered in
15 accordance with the provisions of Section 9.01.

16
17 **SECTION THREE. Repealer.** Section 6.13.00 Nonconforming Uses and Development,
18 consisting of Subsections 6.13.01-6.13.04 is hereby repealed in its entirety.
19

20 **SECTION FOUR. Amendment.** Chapter II, Lake County Code, Appendix E, Land
21 Development Regulations, entitled Definitions, is hereby amended to add the following definitions:
22

23 * * *

24 **Florida Green Book.** The Manual of Uniform Minimum Standards for Design, Construction and
25 Maintenance for Streets and Roads, May 2002 Edition.

26 * * *

27
28
29 **Landscaping.** Areas set aside from structures and parking which are developed with natural materials
30 (i.e., lawns, trees, shrubs, vines, hedges, bedding plants, rock) and decorative features, including paving
31 materials, walls, fences, and street furniture.

32 * * *

33
34
35 **Plant List for Lake County.** A listing of recommended canopy trees, ornamental trees, shrubs, groundcover
36 and grasses for Lake County approved by the Board of County Commissioners. The publication shall also
37 contain a listing of prohibited exotic plants, prohibited invasive plants and drought tolerant plants.

38 * * *

39
40
41 **Remove or Removal.** As used in Section 9.01 or 9.02 of these regulations, the cutting down, destruction,
42 or damaging of a tree or Trees, or to cause the cutting down, destruction, or damaging of a tree or Trees.
43

44 * * *

45
46 **SECTION FIVE. Repeal and Replace.** Section 9.01.00, Lake County Code, Appendix E,
47 Land Development Regulations, entitled Development Design and Improvement Standards, is hereby
48 repealed and replaced in its entirety as follows:
49

50 **9.01.00 LANDSCAPING STANDARDS.**

51
52 **9.01.01 Purpose.** The purpose of this section is to provide minimum standards for landscaping, buffering
53 and site clearing within the unincorporated area of Lake County. This section shall be implemented so as to
54 promote the preservation of native plant species, to provide for aesthetic landscaping complements to

1 proposed development and to encourage the use of plants that qualify as Florida Friendly Landscaping.
2 The provisions of this section may be cited as the Landscape Code.
3

4 **9.01.02 General Requirements and Exemptions.** It shall be unlawful for any person to clear, develop or
5 increase the developed area of any site or lot unless in compliance with the terms of this Section. No
6 development order or development permit shall be issued unless it complies with these requirements or
7 unless such development is specifically exempted as specified below. The following activities are exempt
8 from the provisions of this Section:
9

- 10 A. Agriculture and Silviculture so long as the operation qualifies as a bona fide farm operation on land
11 classified as agricultural pursuant to Section 193.461, Florida Statutes, or if such activity is regulated
12 through implemented best management practices, interim measures, or regulations developed through
13 the Florida Department of Environmental Protection, Florida Department of Agriculture and Consumer
14 Services or a water management district and adopted under Chapter 120, FLORIDA STATUTES under
15 a regional program; or if such activity is expressly regulated by the U.S. Army Corps of Engineers or
16 U.S. Environmental Protection Agency.
17
18 B. Emergency maintenance work performed for the protection of public health and welfare.
19
20 C. Any maintenance to an existing approved landscaped area made in accordance with approved
21 landscape plan.
22

23 **9.01.03 Waterwise and Florida Friendly Landscaping.**
24

- 25 A. *Landscaping.* All ground surface areas of any lot shall maintain landscaping to eliminate erosion,
26 reduce the generation of dust particles and other windborne particles, provide aesthetic relief, and
27 further the objectives of this section.
28
29 B. *Mandatory Waterwise and Florida Friendly Landscape Measures with Site-Appropriate Plants.* All
30 required landscaping shall be installed and maintained to meet the following purposes:
31
32 1. To conserve and use water efficiently.
33 2. To encourage creative landscape design.
34 3. To use Waterwise and Florida Friendly Landscaping, implementing right plant-right place
35 principles.
36 4. To use native vegetation.
37 5. To re-establish native plant communities.
38 6. To recognize the need to protect groundwater as a natural resource.
39 7. To use site appropriate plants.
40 8. To reduce energy costs and maintenance.
41
42 C. *Water Efficiency.* All required landscaping shall be installed and maintained to be consistent with the
43 water-efficient landscaping requirements established herein. Landowners are additionally encouraged
44 to follow Florida WaterStar and Florida Irrigation Society standards. The water-efficient requirements
45 are as follows:
46
47 1. *Soil Analysis.* The existing soils on the site shall be analyzed to help determine the appropriate
48 plant types for the site.
49
50 2. *Use of mulch.* Organic mulches shall be used and maintained around all trees located in turf grass
51 areas, in landscaped areas not planted or not appropriate for growing turf grass, and in all
52 planted areas. Due to slow growth rate, low renewability as a natural resource, and impacts to
53 wetlands, cypress mulch shall be prohibited. Mulch shall be installed two (2) to four (4) inches

1 deep and kept off the root ball and a minimum of two (2) feet away from the foundation of any
2 structure. Mulch shall be kept a minimum of one (1) foot from the base of a tree trunk.
3

- 4 3. *Limit irrigated lawn areas.* The use, type, and location of lawn area in the landscape shall be
5 selected in a planned manner and not used as a fill-in material. Since most lawn varieties used in
6 the landscape require supplemental watering more frequently than other types of landscape
7 plants, turf shall be placed so that it can be irrigated separately. Bahiagrass, Zoysiagrass, or
8 other drought-tolerant turf shall be used. Non-drought tolerant grasses, including St. Augustine
9 grass, shall be prohibited for new construction. If lawn replacement in excess of fifty (50) percent
10 of existing lawn areas is required then drought-tolerant turf shall be used.
11
- 12 4. *Low water use plants.* Landscape plants shall be selected based on appropriateness to the site
13 considering conditions such as soil type, moisture, and sunlight using the principle of "right plant-
14 right place," as described in "WaterStar Florida Landscaping" published by the St. Johns River
15 Water Management District. The plants shall be grouped in accordance with their respective
16 water needs. A list of low water use plants is contained in The Plant List for Lake County.
17
- 18 5. *Efficient and well-designed irrigation.* No more than sixty percent (60%) of the pervious area of
19 any single family or duplex residential lot shall be irrigated with an installed irrigation system. The
20 irrigation system shall be designed to correlate to the water use plant zones established in the
21 landscape design. The following criteria for irrigating the site shall be used in the design of the
22 system. Golf course fairways and greens, public active recreation fields, greenhouses, landscape
23 nurseries, retail nurseries, and agricultural production systems are exempt from meeting these
24 requirements. Landscape production and retail centers shall comply with the watering restrictions
25 for any landscape that is required under these regulations that is not related to the production or
26 selling of landscape material on site.
27
- 28 a. *High Water Use Zones* have plant material that is associated with moist soils and requires
29 supplemental water in addition to natural rainfall to survive. Generally, watering in this zone
30 shall not exceed twice a week or as determined by the appropriate Water Management
31 District. Watering shall not exceed three-quarter (3/4) of an inch of water per application.
32 The High Water Use Zone plant material shall be limited to less than twenty (20) percent of
33 the total landscaped area of the site. This high water use zone includes turf areas and annual
34 beds.
35
- 36 b. *Moderate Water Use Zones* have plant material that can survive on natural rainfall with
37 supplemental water during seasonal dry periods. Forty (40) percent maximum of the
38 landscape area shall be of the moderate water use zone. Generally, watering in this zone
39 shall not exceed once per week with a maximum of three-quarter (3/4) of an inch of water
40 per application.
41
- 42 c. *Low Water Use Zones* have plant material that can survive on natural rainfall with low
43 supplemental water. Forty (40) percent minimum of the landscape area shall be of the Low
44 Water Use Zone. Generally, watering in this zone shall not exceed once every two (2) weeks
45 with a maximum of three-quarter (3/4) of an inch of water per application. This zone is also
46 characterized by low flow irrigation heads or micro-irrigation systems.
47
- 48 d. *Rain & Soil-Moisture Sensors.* Functioning rain and soil-moisture sensor devices shall be
49 required on all automatic irrigation systems to avoid irrigation during periods of sufficient
50 rainfall.
51
- 52 e. *Irrigation Overthrow.* The irrigation system shall be designed to minimize irrigation overthrow
53 onto impervious surfaces and to avoid any ponding effects.
54

- 1 f. *Temporary Irrigation.* Minimum size canopy trees requiring irrigation prior to becoming
2 established shall use tree bubblers or micro-irrigation on a separate zone. Hand watering or a
3 temporary irrigation system may be allowed to ensure the plants become established.
4 Temporary irrigation lines shall be covered by mulch or buried.
5

6 **9.01.04 General Landscaping Requirements.**
7

8 **A. Plant Materials.** All required landscaping shall meet the following general requirements:
9

- 10 1. *Quality.* All required plant materials shall be installed and maintained in conformance with the
11 provisions of this Section and shall conform to the standards for Florida No. 1 or better as given in
12 Grades and Standards for Nursery Plants, State of Florida, Department of Agriculture and
13 Consumer Services, Tallahassee (97T-05, second edition, February 1998), which is hereby
14 adopted and included by reference herein. A copy of such publication is available from the
15 County Manager or designee. All plant material shall be planted in suitable soil to permit its
16 survival. Any plant materials not contained in The Plant List for Lake County and not prohibited by
17 Section 9.01.08 must be shown to be suitable for planting.
18
- 19 2. *Native Plants.* A minimum of fifty (50) percent of the required trees and shrubs shall be native
20 species suitable for the site. On June 1, 2010, this requirement shall increase to seventy-five (75)
21 percent. Landscaping not required by this section is not subject to this provision.
22
- 23 3. *Canopy Trees.* All required canopy trees shall be a minimum of two and one-half (2.5) caliper
24 inches and in a thirty (30) gallon container or greater. Equivalent ball and burlap trees may be
25 used but container trees shall be preferred. The minimum height of trees is eight (8) feet and the
26 minimum spread is four (4) feet. Trees that are not required by this section are not subject to this
27 provision. New tree calipers shall be measured six (6) inches above grade for trees that are
28 under four (4) inches caliper and measured twelve (12) inches above grade for trees larger than
29 four (4) inches tree caliper. Existing tree calipers are measured at Diameter at Breast Height
30 (DBH) or fifty-four (54) inches height from grade. Additional Tree Credits for new Canopy Trees
31 planted:
32
- 33 a. Minimum 4-inch caliper x 12-foot Height x 5-foot Spread = 2 Canopy Tree Credits
34 b. Minimum 6-inch caliper x 14-foot Height x 6-foot Spread = 3 Canopy Tree Credits
35

36 Canopy trees shall be provided with a minimum one hundred (100) square foot pervious planting
37 area around the trunk with a minimum diameter of eight (8) feet. Large maturing canopy trees will
38 need more planting area typically. Each planting area shall be landscaped with a mulch ring,
39 groundcover, or other landscape material, in addition to the required tree.
40

41 Clustering may be utilized if needed for design intent. Special precautions shall be taken to not
42 locate canopy trees under or near utility easements.
43

- 44 4. *Ornamental trees.* Ornamental trees may be used in place of canopy trees in situations where
45 height restrictions or root zone intrusion issues are shown to be a concern, such as under power lines
46 at a ratio of two (2) ornamental trees to replace each canopy tree. All required ornamental trees
47 shall be a minimum of two (2) caliper inches and in a thirty (30) gallon container or greater.
48 Equivalent ball and burlap trees may be used, but container trees shall be preferred. The minimum
49 height of trees is eight (8) feet and the minimum spread is four (4) feet. Trees that are not
50 required by this section are not subject to this provision. New tree calipers shall be measured six
51 (6) inches above grade for trees that are under four (4) inches caliper and measured twelve (12)
52 inches above grade for trees that are larger than four (4) inches tree caliper. Existing tree
53 calipers are measured at Diameter at Breast Height (DBH) or fifty-four (54) inches height from

1 grade. For multi-trunk trees, trunks shall have an average cumulative caliper of two (2) inches.
2 Credits for new Ornamental trees planted:
3

- 4 a. Minimum 3-inch caliper x 10-foot Height x 5-foot Spread = 2 Ornamental Tree Credits
- 5 b. Minimum 4-inch caliper x 14-foot Height x 6-foot Spread = 3 Ornamental Tree Credits

6
7 Adequate spacing shall be maintained to protect and allow for the growth of the root systems of
8 each tree. Special precautions shall be taken to not locate ornamental trees under or near utility
9 easements.

10
11 Required ornamental trees shall have a maximum spacing of fifty (50) feet. However, clustering
12 may be utilized if needed for design intent. Spacing of tree groupings shall not exceed 150-feet.
13

- 14 5. *Palms*. Palms may be used in place of ornamental or canopy trees to meet the minimum tree
15 requirements. In no case shall the total number of palms of all species combined account for more
16 than twenty (20) percent of the required canopy trees nor more than twenty (20) percent of the
17 required ornamental trees. The minimum size of palms is four (4) feet of clear trunk for tree form
18 palms. Two (2) palm trees count as one (1) canopy or ornamental tree unless it is a large specimen
19 palm tree such as a Medjool or Date Palm which may be counted as one (1) palm tree to one (1)
20 canopy or ornamental tree.
21
- 22 6. *Shrubs*. Shrubs shall be used for all visual screens that are required pursuant to the provisions of
23 this Section and shall be planted on minimum centers no greater than forty-eight (48) inches. The
24 minimum installed height of shrubs shall be two (2) feet in height by eighteen (18) inches spread.
25 Their spread shall be appropriate for their size and species. The following standard applies:
26
 - 27 a. In Type A, B, or C landscape buffer, shrubs shall be a minimum of two (2) feet in height at
28 the time of planting and in a minimum of a three (3) gallon container. Shrubs planted to
29 fulfill the requirements of the Type A, B, or C Buffer shall be able to obtain a height of
30 three (3) feet within twelve (12) months of planting under normal growing conditions.
31
 - 32 b. In Type D and E landscape buffer, shrubs shall be a minimum of three (3) feet tall at the
33 time of planting and in a minimum of a five (5) gallon container. Small or shrub-form
34 palms shall be a minimum of three (3) feet from the ground surface to the apical bud.
35 Shrubs planted to fulfill the requirement of a Type D and E buffer shall be able to obtain
36 a height of four (4) feet in twelve (12) months, under normal growing conditions.
37
- 38 7. *Ground Covers*. Ground covers shall be used when required pursuant to the provisions of this
39 Section and shall be planted on minimum centers no greater than thirty-six (36) inches. The
40 minimum installed size of groundcovers shall be one (1) gallon. Their spread shall be appropriate
41 for their size and species. Required groundcovers shall be planted to provide complete coverage
42 planted to industry standards.
43
- 44 8. *Lawn Grass*. Required grass areas may be sodded, plugged, sprigged, or seeded and shall
45 provide complete coverage planted to industry standards within 180 days. Complete coverage
46 shall mean that, once established, not more than ten (10) square feet cumulative of bare ground
47 per one-quarter (1/4) acre of grass area are exposed. Nothing herein shall be construed to
48 prevent the conversion of lawn grass areas to Florida Friendly landscapes. Solid sod shall be used
49 on slopes greater than fifteen (15) percent.
50
- 51 9. *Site Appropriateness*. All landscape material shall be suited to soil and climate conditions of the site
52 in order to conserve water.
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10. *Synthetic Lawns and Plants.* Synthetic or artificial turf, trees, and plants shall be prohibited from use in lieu of required live plantings.

11. *Architectural Planters.* The use of permanent or moveable architectural planters may be permitted. The planters shall be adequately sized for palms, ornamental trees, and shrubs, shall not cause the roots to bind and shall permit water to drain through the base of the planter. Required canopy trees are prohibited from being planted in moveable planters.

12. *Existing Trees.* Existing trees may be used to meet tree requirements in accordance with the following criteria:

- a. The tree shall be in very good health and free of pests, disease, or injury.
- b. The tree shall meet the requirements above for canopy, ornamental and palms.
- c. The tree shall not be a prohibited species.
- d. To count for buffering or interior landscape requirements; the tree shall be located within the appropriate corresponding area.
- e. Tree credits shall be given for existing qualifying canopy trees are as follows:

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"or greater	3 Canopy Tree Credits

f. 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 (8) foot height x four (4) foot spread].

13. *Existing Shrubs.* Existing shrubs may be used to meet shrub requirements in accordance with the following criteria:

- a. The shrub shall be in very good health and free of pests, disease, or injury.
- b. The shrub shall not be a prohibited species.
- c. To count for buffering or interior landscape requirements; the shrub shall be located within the appropriate corresponding area.

14. *Plant Substitutions to approved plans.* Changes to the landscape section of the approved site plan shall require an amendment to the site plan, unless:

- a. The change affects five (5) percent or less of any plant species; or
- b. A buffer is moved less than twenty (20) feet.

Any change authorized by subsection (a) and (b) above shall require written notification by the applicant to the County Manager, or designee, including plans indicating the change.

1 B. **Diversity.** In order to guard against disease susceptibility, all required landscaping shall meet the
2 following requirements:

3
4 1. Trees:

- 5
6 a. When ten (10) or more canopy trees are required, a minimum of two (2) species shall be used
7 with a minimum of forty-five (45) percent for any one species.
8
9 b. When thirty (30) or more canopy trees are required, a minimum three (3) species shall be
10 used with a minimum of twenty-five (25) percent for any one species.
11
12 c. When fifty (50) or more canopy trees are required, a minimum four (4) species shall be used
13 with a minimum of fifteen (15) percent for any one species.
14

15 2. Shrubs:

- 16
17 a. For plans requiring 350-699 shrubs, a minimum of two (2) different species shall be used with
18 a minimum of thirty (30) percent for any one species.
19
20 b. For plans requiring 700-999 shrubs, a minimum of three (3) different species shall be used
21 with a minimum of twenty (20) percent for any one species.
22
23 c. For plans requiring 1,000 shrubs or more, a minimum of four (4) different species shall be used
24 with a minimum of fifteen (15) percent for any one species.
25

26 C. **Installation.** All landscaping shall be installed according to "Selecting and Planting Trees and Shrubs,"
27 published by the University of Florida/Florida Cooperative Extension Service (Institute of Food and
28 Agricultural Sciences, Circular 858, October 2003) or to "Waterwise Florida Landscapes" published
29 by the St. Johns River Water Management District, which describes the principles of "right plant, right
30 place." These publications are hereby adopted and included by reference herein. The natural growth
31 habit of a tree shall be considered in advance of conflicts which might arise (i.e. view, signage, lighting
32 and similar conflicts). Plantings in close proximity to roadways and intersections shall meet the site
33 distance requirements of the Florida Green Book.
34

35 D. **Irrigation.** All installed irrigation systems shall be designed to provide irrigation appropriate to meet
36 the needs of the landscape area to be served. An irrigation plan shall be required for other than
37 single family lots. In evaluating irrigation plans, the primary consideration shall be water conservation.
38 Irrigation systems shall be designed to provide the minimum irrigation necessary to ensure the survival
39 of the plant material and shall be designed to avoid runoff and promote optimal percolation.
40

- 41 1. Temporary irrigation is the preferred method of irrigation and installed irrigation shall be
42 discouraged.
43
44 2. The irrigation system shall be in compliance with the Florida Building Code and Section 373.62,
45 Florida Statutes, for rain sensor shut-off devices. The use of micro-irrigation shall be encouraged to
46 conserve water resources, provided it is in compliance with the Florida Building Code. All irrigation
47 systems shall use zones, automatic timers, back-flow preventers, soil-moisture sensors and rain
48 sensors. Landscaped areas less than five (5) feet in width shall incorporate micro-irrigation, if
49 irrigated.
50
51 3. Irrigation shall be limited as required by the applicable Water Management District.
52
53 4. To conserve potable water, reclaimed water, storm water ponds and cistern collection shall be
54 encouraged for irrigation water if the water quality will meet the needs of the landscape.

1 Developments seeking to use water from retention ponds or natural lakes shall comply with all
2 requirements of the appropriate Water Management District.
3

4 E. **Maintenance.** All landscaping shall be maintained so as to present a neat, healthy, and orderly
5 appearance free of refuse and debris. Use of high amounts of fertilizer and pesticides is discouraged.
6

7 F. **Pruning.** All pruning shall be in accordance with Standard Practice for Trees, Shrubs and Other
8 Woody Plant Maintenance, ANSI 300 of the National Tree Care Association. Trees shall not be
9 severely pruned in order to permanently maintain growth at a reduced height or spread. Excessive
10 pruning (hat racking, topping, etc.) is prohibited.
11

12 G. **Notification.** In any residential plat where landscaping is proposed on individual lots, the final plat
13 and restrictive covenants shall contain a provision that notifies prospective lot purchasers of the
14 landscape maintenance requirements.
15

16 H. **Re-vegetation Required.**

17 1. Revegetation shall be required within six (6) months of expiration of any development order if
18 natural vegetation was disturbed and if the landscaping has not been completed in accordance
19 with the landscape plan.

20 2. If work ceases for six (6) months on a site, then the entire site shall be revegetated if natural
21 vegetation was disturbed and if the landscaping has not been completed in accordance with the
22 landscape plan.

23 3. If Revegetation is required, the property owner shall submit and have approved an interim
24 landscape plan within thirty (30) days by the County Manager or designee for revegetation of the
25 subject property, which shall provide for stabilized vegetative groundcover of trees, grasses,
26 forbs, or legumes consistent with the original condition of the site. The Revegetation plan shall
27 indicate the method and location of tree replacement required by any tree removal permit.
28

29 **9.01.05 Landscape Buffer Requirements** 30

31 A. **General Buffer Requirements.** Any approved development order, other than for a single-family or
32 duplex lot, shall provide for the following buffers.
33

34 1. *Buffering from adjacent Properties.* Landscape buffering shall be required at the time of
35 development as specified in the table below.
36

37 a. If no buffer exists on the adjoining property or if the existing buffer fails to meet the
38 requirements of the table below, buffering shall be required. In order to utilize a buffer on an
39 adjoining property to meet the regulations, the buffer on the adjoining property must have
40 been required by a development order issued by Lake County or a municipality in Lake
41 County.
42

43 b. If a buffer exists on the adjoining property that meets the requirements of the table below, no
44 additional buffering shall be required. In order to utilize a buffer on an adjoining property to
45 meet the regulations, the buffer on the adjoining property must have been required by a
46 development order issued by Lake County or a municipality in Lake County.
47

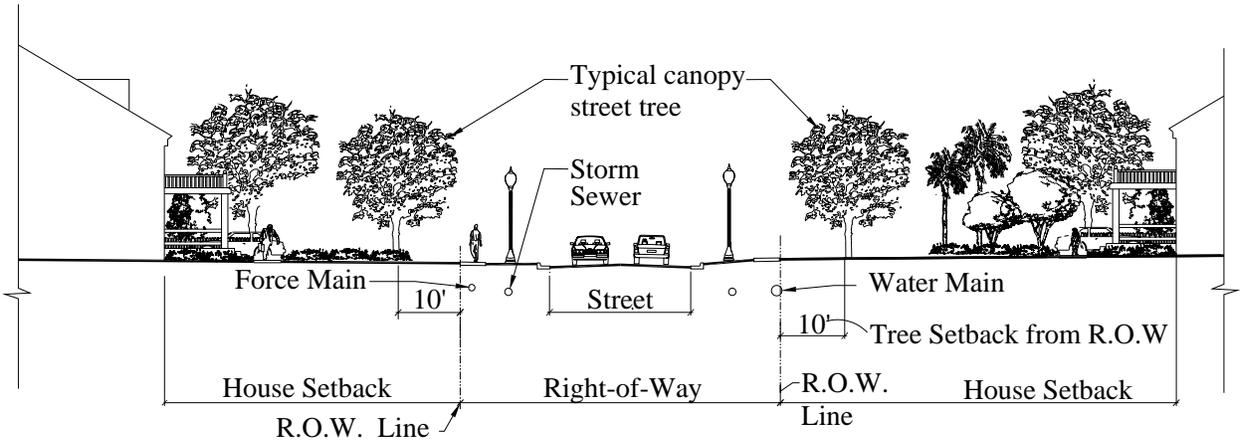
48 c. Commercial parcels within a master planned commercial center, or mixed use Planned Unit
49 Developments (PUD) may utilize the buffer installed on adjacent parcels within the same
50 development if such buffers were required by a development order issued by Lake County.
51

52 d. Single-Family residential subdivisions of less than ten (10) lots and a density of less
53 than one (1) dwelling unit per net acre shall be exempt from this buffer requirement.

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- 2. *Buffering from Public Roadways.* Any parcel adjacent to a public right-of-way shall have a landscape buffer along its right-of-way that reflects the landscape requirements of the zoning district across the road/street or a Type A landscape buffer, whichever is greater. A Type C Landscape Buffer is required for parcels along SR 50, US 27, US 192 and US 441. Single-family lots in the A, AR, and RA Zoning Districts not within a platted subdivision shall be exempt from this requirement, unless required by another provision of the Landscape Code.
- 3. *Internal Roadway Buffering.* Any development order shall require that:
 - a. All single-family and multifamily development shall provide internal tree-lined roads. Street trees shall be selected from the canopy tree list, as listed in the Plant List for Lake County, at an average spacing of fifty (50) feet on center spacing along both sides 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 (20) feet away from the right-of-way line unless prohibited by an easement.
 - b. Canopy trees shall be planted a minimum of ten (10) feet and a maximum of twenty (20) feet 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. Developers may plant trees in the right-of-way or within ten (10) feet of the R.O.W., with a R.O.W. Utilization Permit. Any tree planted within the R.O.W. shall comply with the Florida Green Book. Canopy trees shall be planted a minimum of an eight (8) foot distance from public sidewalks.
 - c. The following zoning districts shall be exempt from providing street trees: A, RA, AR, R-1 [for lots greater than or equal to one (1) acre], RV, and RMRP.
- 4. *Access Roads adjacent to Subdivisions.* A Type A landscape buffer shall be installed between any internal subdivision road and the property line of the adjacent subdivision or lot(s). The buffer shall be installed within seventy-five (75) feet of the adjacent property line.

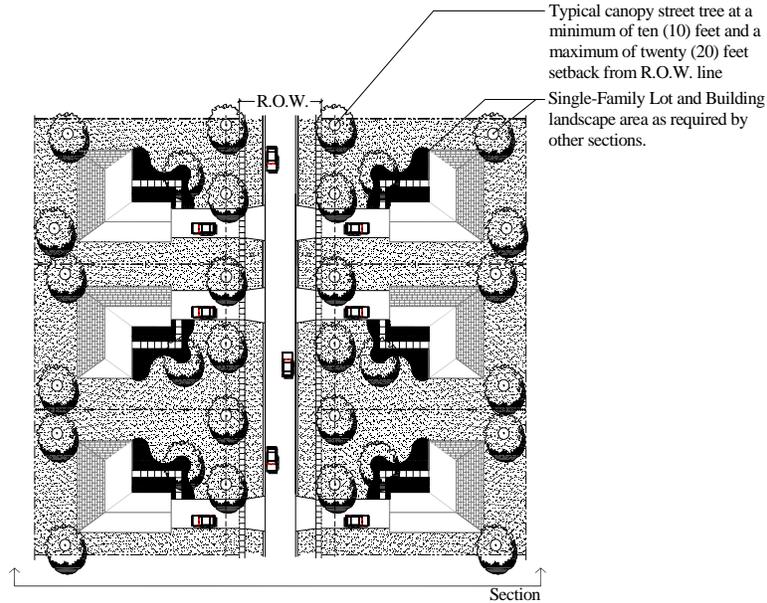
Figure A – Typical Street Tree Section



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Figure B – Typical Street Tree Plan



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B. Landscape Buffers. The table below provides the required buffer and specific requirements.

Table 2 Landscape Buffers between Zoning Districts.

	A	R A	A R	R 1	R 2	R 3	R 4	R 5	R 6	R 7	R P	RMRP	R M	C 1	C 2	C P	L M	H M	M P	CFD	R V	PUD
A	*	*	*	*	*	*	*	*	*	*	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	E	D	A	B	B
AR	*	*	*	A	A	A	A	A	A	A	A	A	A	C	C	C	D	E	D	A	B	B
R1	*	A	A	*	*	A	A	A	A	A	A	A	A	C	C	C	D	E	D	A	B	B
R2	*	A	A	*	*	*	*	*	A	A	A	A	A	C	C	C	D	E	E	A	B	B
R3	*	A	A	A	*	*	*	*	*	*	A	A	A	C	C	C	D	E	E	A	B	B
R4	*	A	A	A	*	*	*	*	*	*	A	A	A	C	C	C	D	E	E	A	B	B
R5	*	A	A	A	*	*	*	*	*	*	A	A	A	B	B	B	D	E	E	A	B	B
R6	*	A	A	A	A	*	*	*	*	*	A	A	A	B	B	B	D	E	E	A	B	B
R7	*	A	A	A	A	*	*	*	*	*	A	A	A	B	B	B	D	E	E	A	B	B
RP	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	D	E	E	A	A	B
RMRP	A	A	A	A	A	A	A	A	A	A	A	*	A	B	B	B	D	E	E	A	A	B
RM	A	A	A	A	A	A	A	A	A	A	A	A	A	C	C	C	D	E	E	A	B	B
C1	C	C	C	C	C	C	C	B	B	B	B	B	C	A	A	A	B	E	E	B	B	B
C2	C	C	C	C	C	C	C	B	B	B	B	B	C	A	A	A	B	D	C	B	B	B
CP	C	C	C	C	C	C	C	B	B	B	B	B	C	A	A	A	B	E	C	B	B	B
LM	D	D	D	D	D	D	D	D	D	D	D	D	B	B	B	B	B	B	B	C	D	B
HM	D	D	D	E	E	E	E	E	E	E	E	E	E	E	D	E	B	B	B	C	D	B
MP	D	D	D	D	E	E	E	E	E	E	E	E	E	C	C	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

9 *Indicates that no landscape buffer is required.

Table 3 Land Use Buffer Area Requirements

Buffer area Type	Width Options (All options available unless restricted)	Landscape Requirements (per 100 linear feet)¹
A	20 Feet	<ul style="list-style-type: none"> • Three (3) canopy trees; • Two (2) ornamental trees; • Two (2) foot high hedge; and • 20% of landscape groundcover other than turf.
	15 Feet	<ul style="list-style-type: none"> • Four (4) canopy trees; • Three (3) ornamental trees; • Two (2) foot high hedge; and • 20% of landscape groundcover other than turf.
B	20 Feet	<ul style="list-style-type: none"> • Four (4) canopy trees; • Three (3) ornamental trees; • Two (2) foot high hedge; and • 20% of landscape groundcover other than turf.
	15 Feet	<ul style="list-style-type: none"> • Four (4) canopy trees; • Three (3) ornamental trees; • Two (2) foot high hedge; • Six (6) foot wall or fence; and • 20% of landscape groundcover other than turf.
C	50 Feet	<ul style="list-style-type: none"> • Five (5) canopy trees; • Four (4) ornamental trees; • Two rows of hedges, two (2) feet high; and • 20% of landscape groundcover other than turf.
	25 Feet	<ul style="list-style-type: none"> • Five (5) canopy trees; • Four (4) ornamental trees; • Two rows of hedges, two (2) feet high; • Six (6) foot high wall, fence or a berm or combination thereof; and • 20% of landscape groundcover other than turf.
	15 Feet	<ul style="list-style-type: none"> • Five (5) canopy trees; • Four (4) ornamental trees;

		<ul style="list-style-type: none"> • Two rows of hedges, two (2) feet high; • Eight (8) foot wall or solid fence; and • 20% of landscape groundcover other than turf.
D	80 Feet	<ul style="list-style-type: none"> • Eight (8) canopy trees; • Seven (7) ornamental trees; • Two (2) rows of hedges, three (3) feet high; • Four (4) foot high berm; and • 20% of landscape groundcover other than turf.
	40 Feet	<ul style="list-style-type: none"> • Eight (8) canopy trees; • Seven (7) ornamental trees; • Two (2) rows of hedges, three (3) feet high; • Six (6) foot wall or berm or a combination thereof; and • 20% of landscape groundcover other than turf.
E	50 Feet	<ul style="list-style-type: none"> • Ten (10) canopy trees; • Eight (8) ornamental trees; • Two (2) rows of hedges, four (4) feet high; • Four (4) foot high berm; • Six (6) foot high wall on top of the berm; and • 20% of landscape groundcover other than turf.

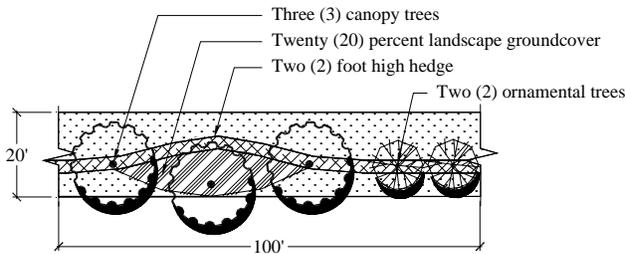
1 1 Commercial and office uses are not required to have a wall along frontage roads.

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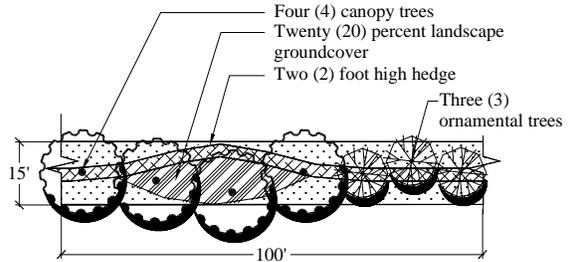
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Figure 4 - Landscape Buffer Plan Views

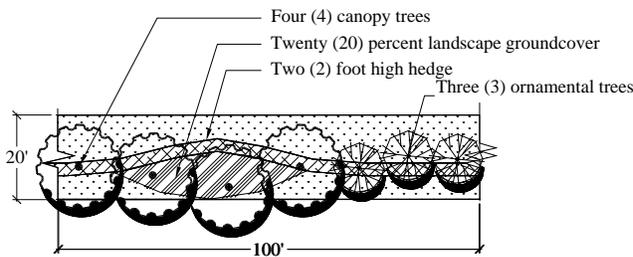
Note: Below landscape buffer layouts are schematic and designer may adjust layouts as long as minimum requirements are provided.



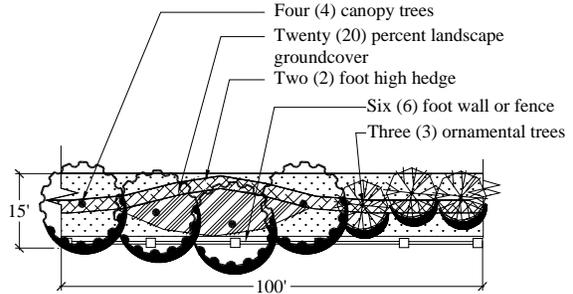
Landscape Buffer A
Twenty-foot (20) width option



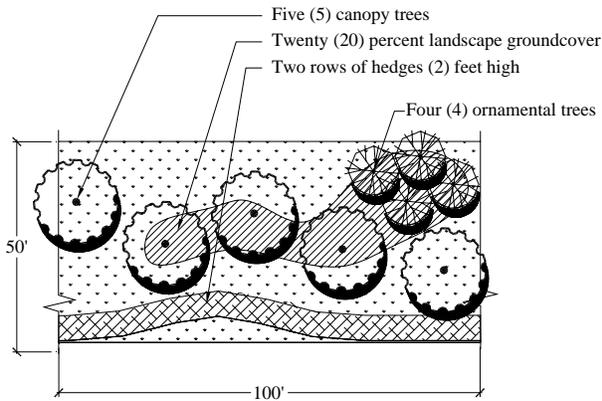
Landscape Buffer A
Fifteen-foot (15) width option



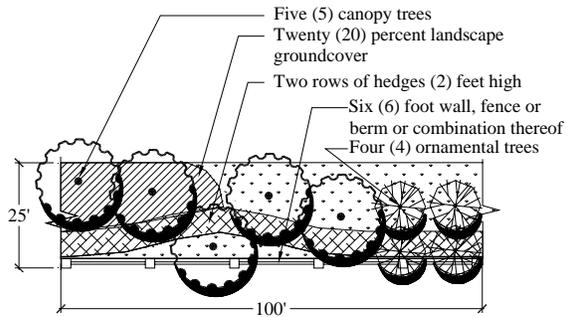
Landscape Buffer B
Twenty-foot (20) width option



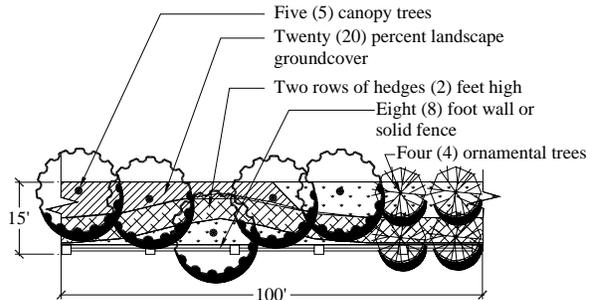
Landscape Buffer B
Fifteen-foot (15) width option



Landscape Buffer C
Fifty (50) feet width option

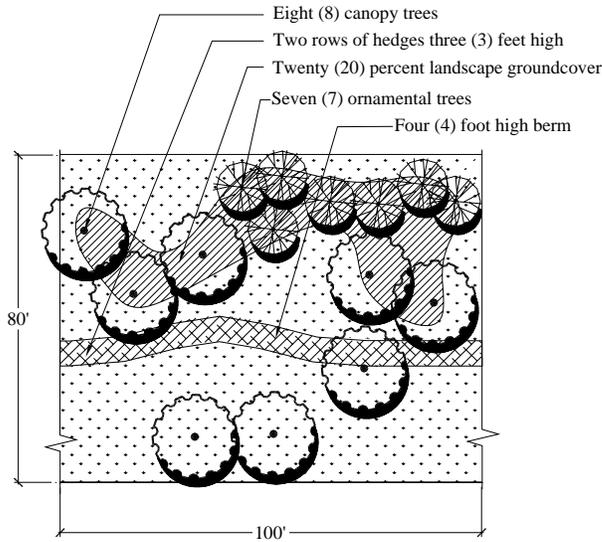


Landscape Buffer C
Twenty-five (25) feet width option

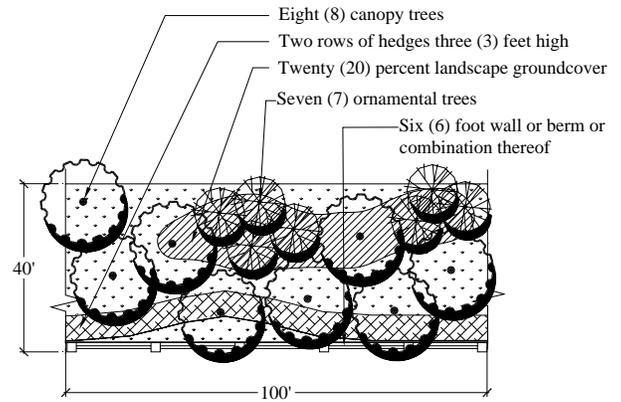


Landscape Buffer C
Fifteen-foot (15) width option

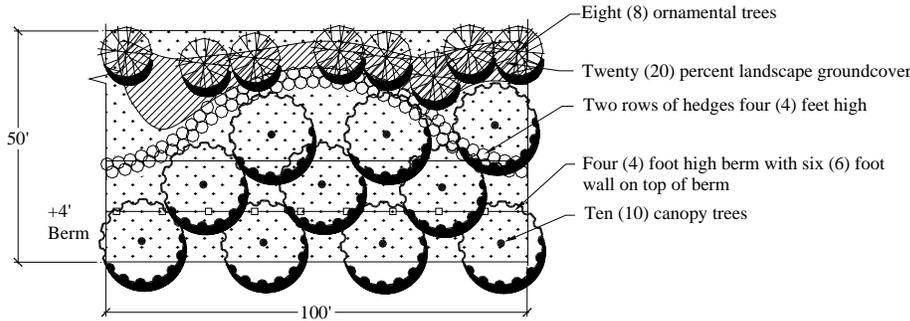
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Landscape Buffer D
Eighty (80) feet width option



Landscape Buffer D
Forty (40) feet width option



Landscape Buffer E
Fifty (50) feet width option

C. **Supplemental Requirements for Subdivisions and Site Plans.** The following requirements supplement the tables above and shall be used to install and maintain the required buffer.

1. Separately platted or phased developments will require a landscape buffer pursuant to the landscape buffer requirements between internal plats or phases.
2. Required walls shall be solid, and surfaces shall be finished. Allowed wall types mean solid walls and include Exterior Insulation Finish Systems (EIFS) with stucco, brick, stucco, finished or textured block, pre-cast and poured-in-place concrete wall with a finished surface. Solid fences where required shall be opaque. One-sided wood fences shall be installed with wood posts to the inside of the property that is installing the fence. Chain-link and barbwire fencing may not be used to meet the screening requirement.
3. Additional requirements:
 - a. Seventy-five (75) percent 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 for property which requires a landscape plan shall consist of harmonious screening material that has a

1 consistent and uniform texture, color, and pattern along all major collector or arterial
2 roadways.
3

- 4 4. All pervious areas shall have ten (10) Canopy trees per acre minimum. Some parts of the site may
5 be left as open space, but the total number of trees shall average ten (10) canopy trees per acre
6 for pervious areas. Other landscape requirements may be used to meet this requirement such as
7 required landscape buffering and retention pond landscaping. Permanent water bodies, wetlands
8 and wet retention ponds shall be excluded in calculating the amount of pervious area requiring ten
9 (10) canopy trees per acre.
10
11 5. Subdivisions greater than ten (10) lots shall place the required landscape buffers in a separate
12 tract or easement that shall be maintained by a homeowners association.
13
14 6. Landscape materials within buffers along rights-of-way shall be designed to display variety, color,
15 form, and texture, by emphasizing native and drought tolerant plants. Such variety and color may
16 be accomplished by using a combination of shrubs and ornamentals from the Plant List for Lake
17 County. The placement of landscape materials within landscape buffers shall have a rational
18 relationship to the existing patterns and densities of adjoining areas which have been designed or
19 preserved. Arrangements shall replicate natural conditions and shall not be linear unless
20 dimensional limitations necessitate such an arrangement or linear arrangement are part of a
21 formal landscape directly related to the architecture of the building(s) or are part of a formal
22 street tree landscape.
23

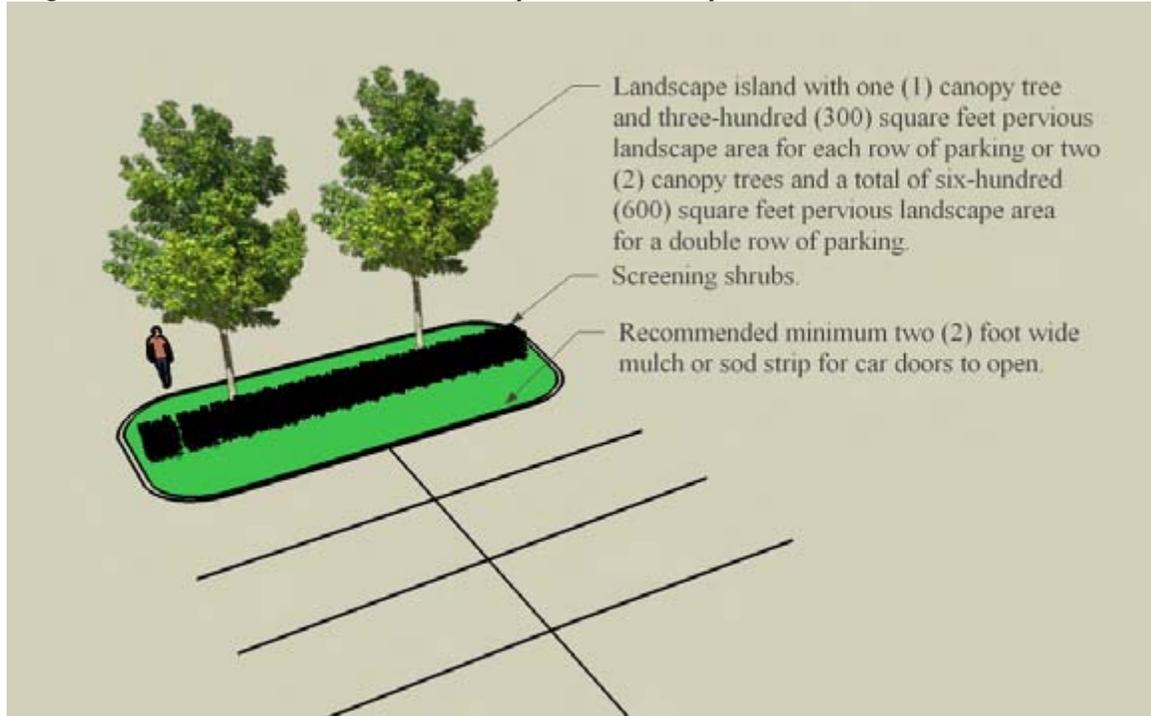
24 **Section 9.01.06 Internal Landscaping in Parking Areas and other Site Areas, other than Single-Family**
25 **And Duplex Lots.** Any development order other than for single-family or duplex dwellings shall require
26 that all ground surface areas used on commercial, institutional, community facility, industrial, condominium,
27 recreational vehicle parks, or multifamily sites shall have internal landscaping to provide visual and
28 climatic relief from broad expanses of pavement and channelize and define logical areas for pedestrian
29 and vehicular circulation. The following special landscaping requirements apply to commercial, institutional,
30 community facility, industrial, condominium, recreational vehicle parks and multifamily sites.
31

32 A. *Interior Parking Areas.* Landscape islands shall be provided within parking areas, except parking
33 garages, as described below to prevent excessively long, contiguous runs of parking spaces. These
34 areas shall use curbs, wheel stops, bollards or other control measures to prevent encroachment or
35 damage to trees and vegetation. A minimum of fifty percent (50%) of the required Interior Parking
36 areas trees shall be Live Oak trees.
37

- 38 1. *Single-Row Terminal Landscape Islands.* A single row parking bay shall not contain more
39 than ten (10) contiguous parking spaces or extend more than one hundred and twenty
40 (120) feet, whichever is more restrictive. One single-row terminal landscape island, with a
41 minimum pervious area of three hundred (300) square feet and a minimum width of
42 twelve (12) feet, shall be provided at each end of a single-row parking bay. Each single-
43 row terminal landscape island shall contain at least one (1) canopy tree. Required
44 maximum two (2) foot high screening shrubs shall be utilized the entire length of the
45 landscape island, or as limited by sight distances. Please see below *Figure C – Single and*
46 *Double-Row Terminal Landscape Island*
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48

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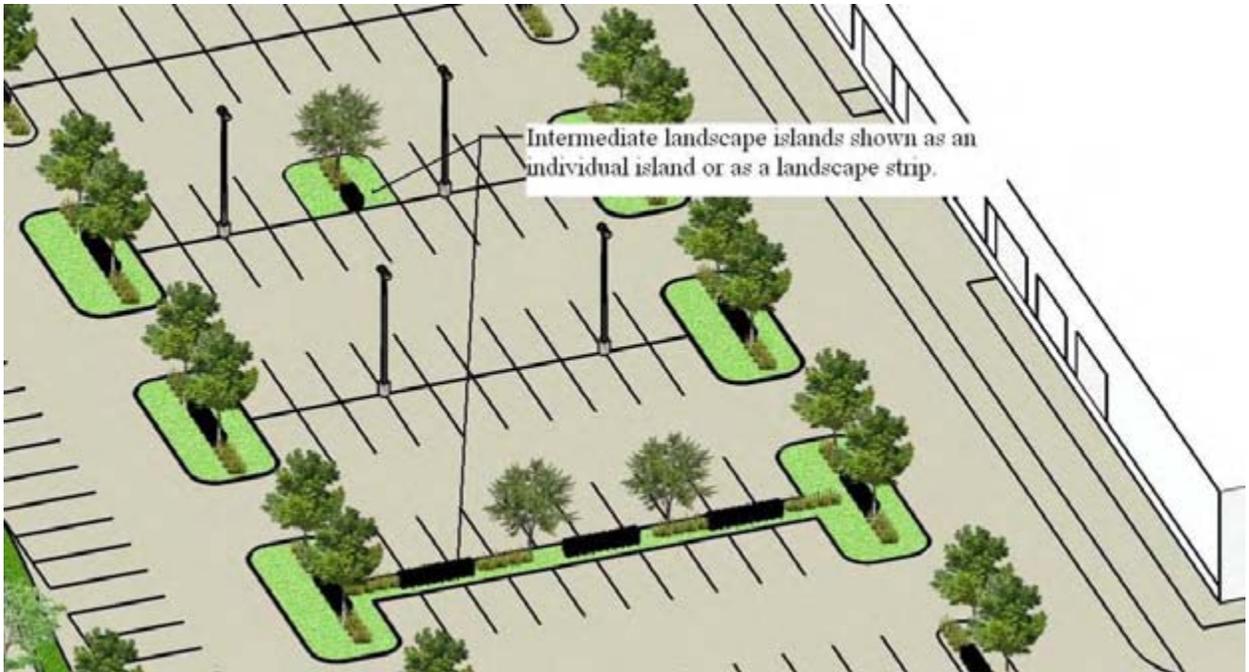
**Figure C – Interior Parking areas
Single and Double-Row Terminal Landscape Island – Perspective View**



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2. *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 two (2) rows x 10 space configuration or extend more than one hundred and twenty (120) feet, 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 twelve (12) 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. Required maximum two (2) foot high screening shrubs shall be utilized the entire length of the landscape island, or as limited by sight distances.
3. *Intermediate Landscape Islands.* Intermediate landscape islands 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 twelve (12) feet, and each intermediate landscape island shall contain at least one (1) canopy tree. Required maximum two (2) foot high screening shrubs shall be utilized the entire length of the landscape island, or as limited by sight distances. 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 pervious 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. Please see below *Figure D – Intermediate Landscape Islands.*

Figure D – Interior Parking areas - Intermediate Landscape Islands



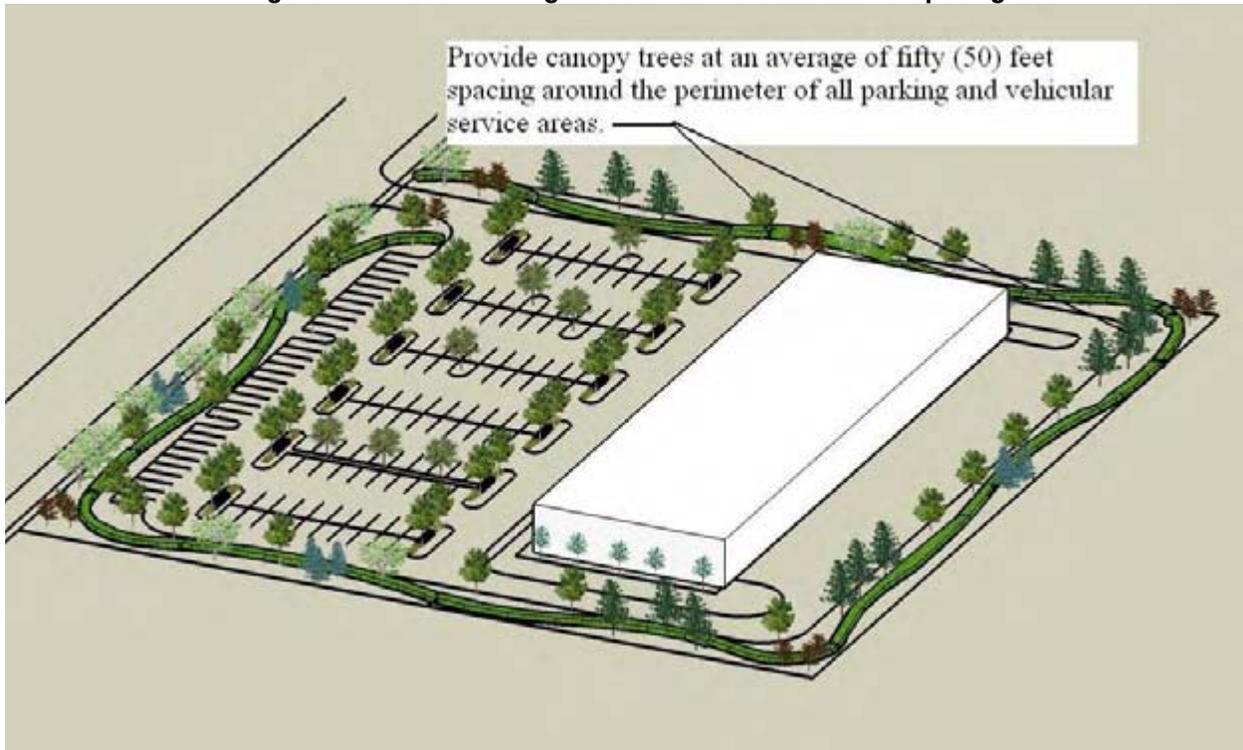
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- 4. *Limited Off-Street Paved Parking areas.* Interior portions of off-street parking facilities, which are not specifically designed as parking spaces or maneuvering areas, shall not be paved for vehicle use.
- 5. *Parking Lot Trees and Substitutions.* All trees in the parking lots shall be canopy trees, unless otherwise provided. A maximum of twenty (20) percent 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.
- 6. *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 (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 (30) feet from the edge of paving or vehicular service area as shown in *Figure E – Perimeter Trees and Spacing.*

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Figure E – Interior Parking areas – Perimeter Trees and Spacing



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B. Building Landscapes, other than industrial.

- 1. Buildings shall have landscape areas planted with trees, shrubs or groundcovers, other than sod, around the building as follows:

- a. *Building Perimeter landscaping.* A minimum three (3) foot wide landscape area, with an average of five (5) feet or more, around a minimum of forty (40) percent of the total building perimeter and within twenty-five (25) feet of the building walls.

- b. *Minimum planting requirement.* One (1) canopy tree or three (3) ornamental trees, and twenty-eight (28) shrubs shall be required for every three hundred and fifty (350) square feet of planting area in (a) above. Trees installed for any other requirement of this section may be credited towards this requirement if in the required location.

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C. Pervious Parking. Parking spaces provided in excess of the minimum required shall be constructed of pervious materials, such as turf blocks or grassed parking areas. Additional pervious parking may be provided, if not otherwise prohibited by other provisions of the Lake County Code, in the following areas:

- 1. Adjacent to parking lot landscape islands to allow for the percolation of water and the exchange of oxygen for the tree roots.
- 2. In low impact areas or infrequent use areas such as churches or the outlying parking areas of malls or other shopping areas.

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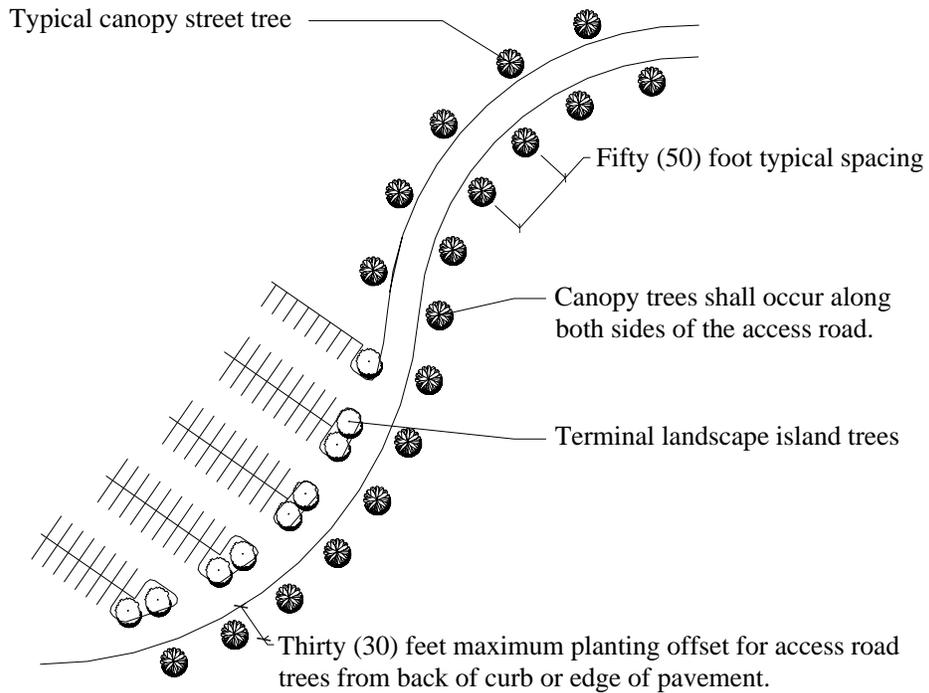
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D. Internal Access Roads. Developments with internal access roads shall be required to plant one (1)

1 canopy tree on each side of the road approximately every fifty (50) feet. Access roads
2 immediately in front of commercial structures and other buildings do not have to meet the access
3 road tree requirement but do have to meet other parking landscape requirements. Parking lot
4 island canopy trees may be used to meet this requirement if they fall within thirty (30) feet from
5 the edge of the pavement along the internal access road. *Figure F – Internal Access Roads.*

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7 **Figure F – Interior Parking areas – Internal Access Roads**
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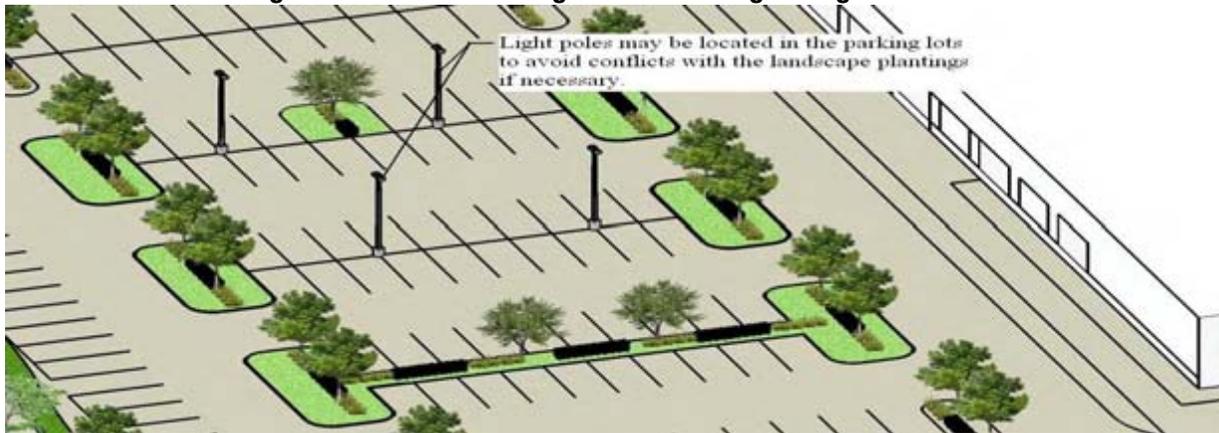


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12 E. *Accommodations for Lighting and Other Features.* Islands shall be enlarged beyond the minimum
13 requirement if necessary to accommodate light poles, fire hydrants, or other necessary features.
14 Light poles may be located within the parking area rather than in landscape islands if necessary
15 to ensure that the lighting placement does not conflict with the location or normal growth of
16 landscape island trees. *Figure G – Parking Lot Light Placement* below.
17
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Figure G – Interior Parking areas – Parking Lot Light Placement



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- F. *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. 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 with all storm water requirements. Smaller rain gardens that serve as landscape islands shall adhere to all canopy and understory requirements for landscape islands. *Figure H – Rain Garden Photo* below

Figure H – Interior Parking areas – Rain Garden Photo Example



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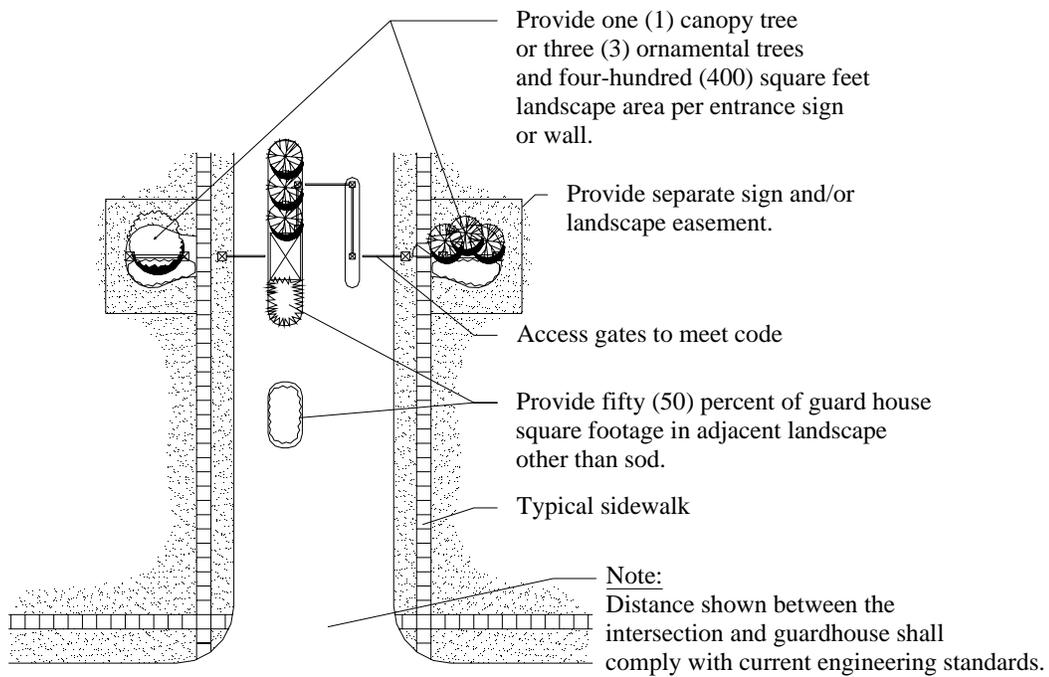
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- G. *Guardhouses.* An area greater than or equal to fifty (50) percent of the footprint of any guardhouse shall be landscaped immediately adjacent to the guardhouse to create an aesthetic landscape. When the guardhouse is located within the roadway 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 (2) feet and eight and one half (8.5) feet height from the road elevation. The landscape area shall consist of shrubs, groundcovers, and trees. Sod or other ornamental landscaping may be utilized in the remaining area around the guardhouse as long as fifty (50) percent of the guardhouse square footage area has been landscaped as described (see *Figure I Vehicular Gates and Associated Security Walls*).

1
2 H. *Vehicular Gates and Associated Security Walls*. Landscaping shall be required on the entrance side
3 of gates and walls as follows (see Figure I):
4

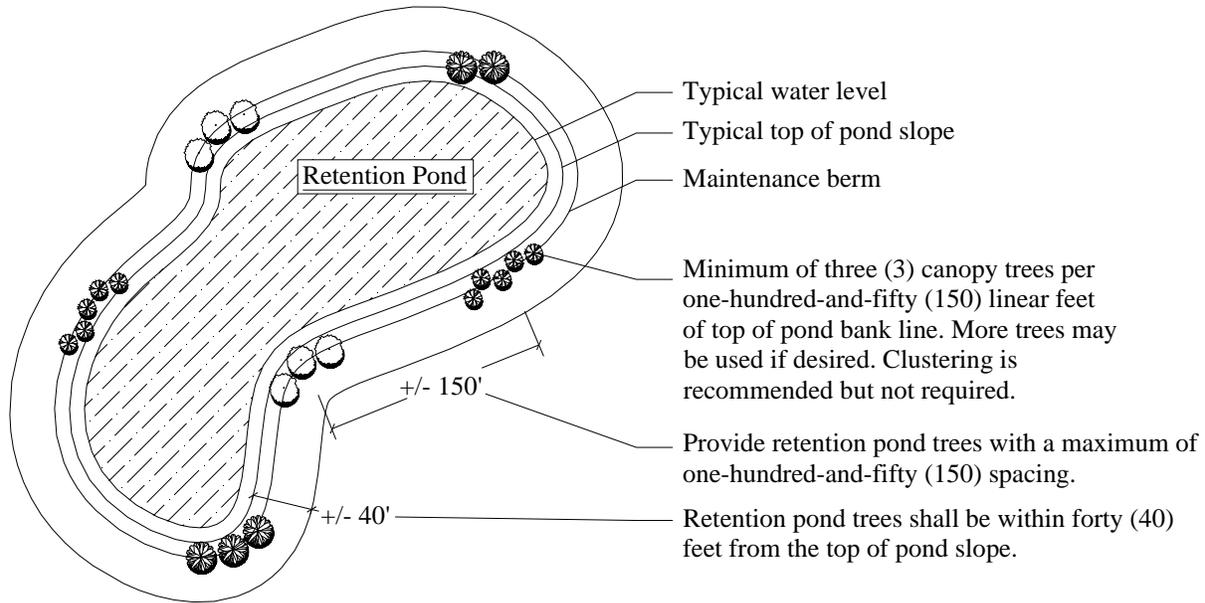
- 5 1. A minimum of four hundred (400) square feet of landscape area shall be provided on
6 each side of an entrance road.
7
8 2. Within each entrance area of four hundred (400) square feet, one (1) canopy tree or
9 three (3) ornamental trees shall be provided.
10
11 3. The landscape area shall have shrubs, perennials, vines or other ornamental plantings
12 other than sod. When a utility easement or other restrictive condition restricts the use of
13 trees, then the tree portion of this requirement may be waived or limited by the County
14 Manager or designee.
15

16 **Figure I – Vehicular Gates and Associated Security Walls**
17



- 18
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21
22 i. *Retention Ponds Landscaping*. Three (3) canopy trees for every 150 linear feet of retention pond
23 bank shall be required as measured at the top of pond bank. Trees shall be planted within forty
24 (40) feet from the top of bank line. A minimum of three (3) canopy trees shall be required at
25 retention ponds. Curvilinear retention ponds, rather than geometric or rectangular ponds, are
26 encouraged. (See Figure J Retention Ponds).
27
28
29
30
31

32 **Figure J – Retention Ponds (Landscaping)**
33



J. *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.

Section 9.01.07 Landscape Requirements for Individual Single-Family Residential and Duplex Lots. No development permit or Certificate of Occupancy shall be issued unless in compliance with this section. The requirements of this Section shall be noted on the development permit; however this section, shall not require the submittal of a Single Family Residential Landscape Plan unless required by other provisions in the Lake County Code or any other development order.

A. *Canopy tree requirements.* Each single-family or duplex lot shall provide canopy trees as follows:

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 four (4) canopy trees for lots between 10,001 square feet to 15,000 square feet.
4. A minimum of five (5) canopy trees for lots between 15,001 square feet to 43,560 square feet (1 acre).
5. A minimum of eight (8) canopy trees for lots between one (1) acre and less than two (2) acres.
6. A minimum of eleven (11) canopy trees for lots between two (2) acres and less than three (3) acres.
7. A minimum of fifteen (15) canopy trees for lots between three (3) acres and less than five (5) acres.
8. A minimum of twenty-five (25) trees for lots five (5) acres or greater.

B. *Street trees within lots.* One (1) or more of the required trees shall be planted at a minimum of ten (10) feet and maximum of twenty (20) feet outside 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 along the road right-of-way to satisfy other requirements of the code.

C. *Other landscaping requirements.* Any principal dwelling unit shall have landscape areas planted with trees, shrubs or groundcovers other than sod, around the perimeter of the building as follows.

1 1. Minimum planting based on size of building. For purposes of this section, the first floor
2 footprint shall include the area of the first floor of all principal and accessory structures.
3 All buildings shall require a landscaped area on the lot of thirty-five (35) percent of the
4 building footprint.
5

6 2. Lots within the A, AR, and RA Zoning Districts shall be exempt from this requirement.
7

8 D. *Preservation of existing trees.* Existing trees greater than three (3) inches in diameter shall be
9 preserved unless within the infrastructure or areas required for access, the building footprint or
10 within a five (5) foot offset of the footprint for the residence. Stem wall construction shall be used
11 where necessary to achieve this requirement.
12

13 E. *Avoid damage by structures.* Structures shall be located to avoid removing or damaging protected
14 trees to the maximum extent possible.
15

16 **9.01.08 Prohibited Plant Species.** The control and elimination of invasive, non-native plant species helps
17 protect the natural vegetative communities existing within Lake County.
18

19 A. *Planting.* Prohibited plant species shall not be planted or counted toward minimum tree or
20 vegetation requirements.
21

22 B. *Removal.* Removal of prohibited plant species shall be completed as a requirement for approval
23 of the final Permit inspection and prior to issuance of a certificate of occupancy. Prohibited
24 vegetation shall not be removed from wetlands or natural water bodies that are regulated or
25 protected by the Water Management Districts or other regulatory agency without an approval for
26 invasive exotic plant removal.
27

28 C. *Prohibited Plants.* Prohibited vegetation shall be listed in the Plant List for Lake County based on
29 the following sources:

- 30 1. Florida Exotic Pest Plant Council *Category I & II List of Invasive Plant Species.*
- 31 2. Center for Aquatic and Invasive Plants, University of Florida, IFAS.
32

33 **SECTION SIX. Repeal and Replace.** Section 9.02.00, Lake County Code, Appendix E, Land Development
34 Regulations, entitled Protected Trees, is hereby repealed in its entirety and replaced as follows.
35

36 **Section 9.02.00 Tree Protection.**
37

38 A. *Purpose.* The purpose of this Section is:

- 39 1. To encourage the proliferation of trees and palms.
- 40 2. To establish rules and regulations governing the protection and replacement of trees and
41 palms within unincorporated Lake County; and
42
- 43 3. To recognize the importance of trees and palms and their meaningful contribution to a healthy,
44 beautiful, and safer community attributable to their carbon dioxide absorption, oxygen
45 production, dust filtration, wind and noise reduction, soil erosion prevention, lakeshore erosion
46 protection, wildlife habitat, surface drainage improvement, beautification and aesthetic
47 enhancement of improved and vacant lands and the general promotion of the health, safety,
48 welfare and well-being of the community.
49
50
51

52 **9.02.01 Protected Trees.**
53

54 A. *Designation of Protected Trees.* The following trees and palms are designated protected trees:

- 1
- 2
- 3 1. All trees and palms native to Florida or Florida Friendly, including, but not limited to those
- 4 identified within *The Plant List for Lake County*, three (3) inches or larger in diameter at
- 5 breast height.
- 6
- 7 2. Sand Pine and Xeric Oak Scrub community trees two (2) inches diameter or larger at breast
- 8 height.
- 9
- 10 3. Wetland trees of any size.
- 11
- 12 4. Historic, Specimen, and Heritage trees.

- 13 B. Prohibited trees, invasive trees, citrus or non-native fruit trees of any species shall not be
- 14 considered a protected tree.
- 15

16 **9.02.02 Tree Removal Permit.** It shall be unlawful and a violation of this Section to clear, kill or remove a
17 protected tree or palm by any method without first obtaining a tree removal permit. When a
18 development order is issued for a site plan, subdivision or master park plan, a separate tree removal
19 permit shall not be required if the trees to be removed are identified and mitigated on the approved
20 landscape plan. Approval of a preliminary plat does not authorize approval for the removal of trees or
21 other vegetation. Any tree removal permit shall require replacement trees in compliance with this Section
22 and shall specify the schedule when trees will be removed and when such replacement trees will be
23 planted.

24
25 When the removal of trees is associated with a development project, the removal of trees authorized
26 pursuant to the Lake County Tree Removal Permit shall not commence until one (1) of the following has
27 been approved or issued:

- 28
- 29 A. Subdivision construction plan;
- 30 B. Final master site plan;
- 31 C. Master park plan; (only applicable within parks);
- 32 D. Building permit; or
- 33 E. Lot grading / site alteration plan.
- 34

35 **9.02.03 Violations.** Each tree damaged or destroyed without a permit required under Section 9.01 or
36 Section 9.02 shall be considered a separate violation punishable pursuant to Chapter 8, Lake County
37 Code. Determinations of the number of cleared trees shall be based on best available data that may
38 include surveys of adjacent property or aerial photographs taken prior to clearing.

39
40 If a specimen tree, an historic tree or a heritage tree is removed without a tree removal permit, each tree
41 shall be replaced at a ratio of 1.25:1 of the mitigation requirement. If three (3) or more protected trees
42 are removed without a tree removal permit, each tree shall be replaced at a ratio of 1:1 for mitigation.
43 Any other tree removal without a tree removal permit shall be replaced in accordance with the
44 replacement requirements stated for a permitted removal.

45
46 If a protected tree is removed without a permit, a restoration plan shall be prepared and submitted within
47 thirty (30) days for approval by the County Manager or designee. All trees shown of the approved site
48 restoration plan must be installed on the property.

49
50 **9.02.04 Exemptions to Tree Removal Permit Requirements.** The following protected trees and palms
51 may be removed without a tree removal permit:

- 52
- 53 A. Trees located within new or existing recorded or prescriptive public road or drainage rights-of-
- 54 way and easements that are to be removed as part of a Board of County Commissioners

1 approved project. However, all protected trees that are removed under this exemption shall be
2 relocated or replaced pursuant to replacement requirements contained herein.
3

4 B. Any tree determined to be in a hazardous or dangerous condition so as to endanger the public
5 health, safety or welfare and requires immediate removal. Authorization may be given by the
6 County Manager or designee pursuant to the following procedures:
7

- 8 1. Photo documentation of the hazardous tree(s) by property owner is required prior to
9 removal and shall be submitted to the County Manager or designee.
10
- 11 2. Replacement requirements herein apply to any tree or group of trees removed.
12
- 13 3. If the tree, due to immediate danger, is removed prior to obtaining written authorization,
14 a letter and photo documentation demonstrating the immediate danger shall be submitted
15 to the County Manager or designee within fifteen (15) days of the removal.
16

17 C. Agriculture and Silviculture so long as the operation qualifies as a bona fide farm operation on
18 land classified as agricultural pursuant to Section 193.461, Florida Statutes, if such activity is
19 regulated through implemented best management practices, interim measures, or regulations
20 developed through the Florida Department of Environmental Protection, Florida Department of
21 Agriculture and Consumer Services or a water management district and adopted under Chapter
22 120, Florida Statutes under a regional program; or if such activity is expressly regulated by the
23 U.S. Army Corps of Engineers, or U.S. Environmental Protection Agency.
24
25

26 **9.02.05 Criteria for Issuance of Tree Removal Permit.** 27

28 A. *Tree Removal Permit.* A tree removal permit may be issued when one (1) or more of the following
29 circumstances exist:
30

- 31 1) *Street opening.* The location of a tree restricts the opening of a street or right-of-way.
32 Streets and rights-of-way shall be located to minimize the loss of trees, especially historic,
33 specimen and heritage trees;
34
- 35 2) *Utilities and drainage.* The location of the tree restricts the construction of utility lines or
36 drainage facilities. Utility lines and drainage facilities shall be located to minimize the loss
37 of trees, especially historic, specimen and heritage trees;
38
- 39 3) *Property access.* The location of the tree prevents access to the property. Exit and entry
40 shall be located to minimize the loss of trees, especially specimen, historic and heritage
41 trees;
42
- 43 4) *Property use.* The location of the tree restricts use of the property consistent with all other
44 County and state codes, statutes, ordinances, and resolutions, and site location
45 modifications are not feasible or reasonable;
46
- 47 5) *Hazards.* The tree constitutes a potential hazard to life or property that cannot be
48 mitigated without removing the tree;
49
- 50 6) *Poor tree health.* The tree is dying or dead so that its restoration to sound condition is not
51 practical, or it has a disease which can be expected to be transmitted to other trees and
52 to endanger their health;
53

1 7) *Thinning of trees.* For non-bona fide silviculture operations, thinning of trees in order to
2 increase light and air circulation for the purpose of improving health conditions, or to
3 prevent disease, of a group of trees, the selective removal of up to twenty-five (25)
4 percent of the group of trees may be permitted. Thinning shall include any removal of
5 trees from the lot and shall not exceed the maximum clearing allowed in this Section.
6 Thinning shall follow Best Management Practices (BMP's) published by a government
7 agency or the National Tree Care Industry Association.
8

9 B. *Tree Removal Procedure.* The tree removal permit, when issued, shall specifically identify which
10 trees shall be permitted to be removed. Each tree permitted for removal shall be physically
11 marked with an "X" using brightly colored paint or surveyor's tape; or if a group of trees are
12 permitted for removal, the outside perimeter trees of the group may be designated with brightly-
13 colored rope or tape in lieu of each tree. Such permit shall automatically expire twelve (12)
14 months after issuance. Trees not removed during the life of the permit may not be removed without
15 the issuance of a new permit based upon a new application.
16

17 C. *Removal not required.* Tree removal permits merely authorize the removal of trees specified
18 therein. Nothing in this Section shall be construed to require the removal of protected trees by the
19 permittee.
20

21 **9.02.06 Replacement Requirements.** When a tree removal permit is issued, the County Manager, or
22 designee, shall require the replacement of removed trees and palms as a condition of the issuance
23 of a permit, as follows:
24

25 A. *Protected Trees.* Thirty-three (33) percent of the total number of caliper inches measured at
26 diameter breast height (DBH) for qualifying trees as listed in the Plant List of Lake County.
27

28 B. *Specimen Trees.* Fifty (50) percent of the total caliper inches of specimen trees.
29

30 C. *Historic and Heritage Trees.* One-hundred (100) percent of the total caliper inches of Heritage and
31 Historic Trees.
32

33 D. *Regulations regarding replacement trees.*
34

35 1. More than one (1) tree may be used to replace a tree or trees that are removed, but the
36 minimum caliper of the replacement canopy trees shall be no less than two-and-one-half
37 (2.5) inches and two (2) inches for replacement ornamental trees.
38

39 2. Minimum of seventy-five (75) percent of the replacement trees shall be canopy trees.
40

41 3. Twenty-five (25) percent maximum of the replacement trees may be ornamental trees.
42

43 4. Palm trees and pine trees may be used but shall not exceed four (4) inches credit per tree
44 given as replacement regardless of their installed size.
45

46 E. *Tree Sampling for Large Sites.* Sites over fifty (50) acres may identify and sample trees to be
47 removed as follows:
48

49 1. The locations of all historic, specimen and heritage trees protected or proposed for
50 removal shall be located.
51

52 2. Other protected trees shall be surveyed as follows:
53

- a. The first fifty (50) contiguous acres shall be surveyed by accounting for all protected trees to be removed.
 - b. The remaining acreage may be surveyed using sample plots. The sample plots shall be a minimum area of twenty (20) percent of the remaining part of the site to be developed and twenty (20) percent of each vegetative community within the remaining part of the site to be developed. 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.
 - c. All protected trees three (3) inch DBH caliper or greater, unless the trees are part of a wetland, sand pine or xeric oak scrub community in which case trees two (2) inches DBH and larger shall be counted.
3. The tree survey shall be conducted by a certified Landscape Architect, certified arborist, or certified forester.
 4. A tree survey report detailing all findings, including the number and caliper of trees surveyed, estimates of trees surveyed, estimates of protected trees and distribution based on survey plots, and the size and location of specimen, historic, or heritage trees, shall be prepared and submitted to the County as part of the site plan review process. The methods of the tree survey shall be clearly detailed in the written report provided to Lake County.
 5. Lake County reserves the right to require more detailed tree sampling if the County Manager or designee determines that the information provided is insufficient or that site-specific considerations warrant additional information.
- E. *Landscape credit.* The replacement trees may be used to meet the requirements of the landscape standards set out in Section 9.01. All replacement trees shall be provided even if the total number exceeds the landscape requirement.
 - F. *Replacement maintenance.* The replacement trees shall be maintained in good condition in perpetuity, and the property owner shall guarantee survival.
 - G. *Restriction on use of palm trees.* Palm trees shall not account for more than twenty (20) percent of the required replacement trees.
 - H. *Replacement size.* Replacement trees shall conform to the size and planting requirements of the Landscape Code. Ornamental trees may not exceed twenty-five (25) percent of the total caliper replacement inches required.

9.02.07 Location of Tree Replacement Sites.

- A. Replacement trees shall be mitigated on the lot, if possible.
- B. If replacement trees cannot be placed on the lot, they shall be located in common areas of the development such as: open space areas, areas adjacent to stormwater management facilities, landscape buffer areas, or entrances of the development in which the site is located, if possible.
- C. If replacement cannot be made on the lot or in a common area of the development, the owner or applicant may replace the required trees on a designated conservation or park property within Lake County. The recipient property shall be acceptable to the County and shall be suitable for the replacement trees. Mitigated replacement trees shall not count toward meeting minimum

1 landscaping requirements of the recipient site for development purposes. The request to utilize this
2 option shall be submitted to the County Manager or designee in writing and shall include the
3 following justifications and information:
4

- 5 1. Explanation why the trees cannot be replaced on site;
- 6
- 7 2. A legal description and a copy of the property record information from the Lake County
8 Property Appraiser for the proposed recipient site;
- 9
- 10 3. If the property is not County owned, an Affidavit from the owner of the recipient site
11 agreeing to the terms of accepting the mitigated trees as listed above. A conservation
12 easement or similar legally-binding instrument approved by the County shall be required
13 to ensure that mitigation trees planted at the recipient site will be protected and
14 maintained in perpetuity; and
- 15
- 16 4. The applicant shall be responsible for paying for all the costs for installation and
17 maintenance of the tree(s), including planting and any necessary irrigation.
18

19 **9.02.08 Voluntary Planting.** This Section shall not be interpreted to restrict, regulate, or limit the voluntary
20 planting of any protected tree in Lake County. Any size tree may be voluntarily planted. The provisions of
21 this Section govern only the planting of trees that are required to be planted or retained.
22

23 **9.02.09 Historic Trees.**

- 24
- 25 A. *Purpose.* It is the purpose of this Subsection to acknowledge the existence of certain trees that
26 portray a notable historical association or significance to Lake County, to protect such trees
27 through their designation as historic trees, and by requiring compliance with the protection
28 measures set out in Section 9.01. Designation of historic trees by the Lake County Board of County
29 Commissioners shall be in accordance with the standards and procedures in this Subsection.
30
- 31 B. *Application procedures.* Applications may be initiated by:
32
 - 33 1. Owners of the property, developers as part of their development plan, or the County
34 Manager or designee as part of a tree removal permit application, a development plan
35 or a County tree protection planning program.
 - 36
 - 37 2. Applications on forms provided by the County Manager or designee shall be completed
38 and submitted to the County Manager or designee.
 - 39
 - 40 3. Completed applications shall be provided to the Lake County Historical Society with a
41 request for review and written recommendation for approval or denial.
42
- 43 C. *Historical Society Recommendation.* The Lake County Historical Society or the State Historic
44 Preservation Officer of Florida or their designee may recommend approval of the designation of
45 a historic tree for a tree that is considered to have a notable historical interest and value to the
46 County due to its historical association or significance. The Lake County Historic Society or the State
47 Historic Preservation Officer of Florida or their designee may recommend denial or approval;
48 provided, however, that recommendation or the lack of any recommendation does not preclude
49 the County from denying or approving an application.
50
- 51 D. *Designation Procedure and Protection.*
 - 52
 - 53 1. Upon review and approval by the County Manager or designee, the application shall be
54 scheduled for a public hearing before the Board of County Commissioners.

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. Removal of historic trees shall be prohibited, unless an exemption is granted by the Board of County Commissioners. A tree designated as a historic tree shall be protected by the property owner to ensure its long-term health.

9.02.10 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. 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.
- C. *Prohibited Trees* are excluded from designation as a Specimen Tree.
- D. *Application Procedures.*
 1. Applications may be initiated by owners of the Property or developers as part of their development plan.
 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.
- E. *Mandatory Recognition of Specimen Trees* Any non-prohibited trees with 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 shall be recognized as a specimen tree without application. The applicant shall identify the location, number and size of all specimen trees

1 on the required tree survey submitted to the County for site plan or plat review. In addition, the
2 County may identify specimen trees that are found to meet this criterion.
3

4 F. *Approval and Protection.*
5

- 6 1. Any non-prohibited tree satisfying one or more of the size criteria in this subsection as
7 specified above shall be recognized and recorded as a specimen tree by the County
8 Manager or designee without approval by the Board of County Commissioners.
9
10 2. Upon review and approval by the County Manager or designee, any tree that has been
11 submitted for consideration as a specimen tree and does not automatically qualify
12 because of size shall be scheduled for a public hearing before the Board of County
13 Commissioners.
14
15 3. The Board of County Commissioners shall approve or deny the request. Approval by the
16 Board of County Commissioners shall be in the form of a resolution.
17
18 4. The property owner shall be encouraged to protect any tree designated as a specimen
19 tree to ensure its long-term health.
20

21 **9.02.11 Heritage Trees.**
22

- 23 A. *Purpose.* It is the purpose of this Subsection to acknowledge the existence of certain trees within the
24 County that are significant or unique due to factors such as age, size, or type and to protect such
25 trees through their designation as heritage trees. Designation of heritage trees by the Board shall
26 be in accordance with the standards and procedures in this Subsection.
27
28 B. *Designation Standards.* At least one (1) of the following standards shall apply in order for a tree
29 to be designated a heritage tree:
30
31 1. *Size.* Trees with a forty (40) inch caliper or greater, or a circumference of ten (10) feet or
32 greater, singly or with a combined trunk, measured at fifty-four (54) inches from the
33 surface of the ground.
34
35 2. *Age.* Trees that are determined to be at least one hundred (100) years old or to be at
36 approximate half-life maturity and are in good health.
37
38 3. *Form.* Trees that are determined to have a unique form or shape, due to geography,
39 climate, environmental or natural growth habitat conditions, and are in good health.
40
41 4. *Ecological Value.* Trees that are determined to have an ecological value to the County in
42 terms of soil or water conservation and management, wildlife habitat, or endemic native
43 flora habitat, and are in good health.
44
45 5. *Rarity.* Trees that are determined to be non-indigenous, rare, or unique to the County, and
46 are in good health.
47
48 C. Prohibited Trees are excluded from designation as a Heritage Tree.
49
50 D. *Application Procedures.*
51 1. Applications may be initiated by owners of the Property or developers as part of their
52 development plan.
53

1 2. Applications on forms provided by the County Manager or designee shall be completed
2 and submitted to the County Manager or designee.
3

4 3. The County Manager or designee may request assistance from the Lake County Forester,
5 State Division of Forestry, in determining compliance with any of the designation
6 standards.
7

8 E. *Mandatory Recognition of Heritage Trees* Any non-prohibited trees with forty (40) inch caliper or
9 greater, or a circumference of ten (10) feet or greater, singly or with a combined trunk, measured
10 at fifty-four (54) inches from the surface of the ground shall be recognized as a heritage tree
11 without application. The applicant shall identify the location, number and size of all heritage trees
12 on the required tree survey submitted to the County for site plan or plat review. In addition, the
13 County may identify heritage trees that are found to meet this criterion.
14

15 F. *Approval and Protection.*

16 1. Any non-prohibited tree satisfying one or more of the size criteria for a heritage tree as
17 specified above shall be recognized and recorded as a heritage tree by the County
18 Manager or designee, without approval by the Board of County Commissioners.
19

20 2. Upon review and approval by the County Manager or designee, any tree that has been
21 submitted for consideration as a heritage tree and does not automatically qualify because
22 of size shall be scheduled for a public hearing before the Board of County Commissioners.
23

24 3. The Board of County Commissioners shall approve or deny the request. Approval by the
25 Board of County Commissioners shall be in the form of a resolution.
26

27 4. Removal of heritage trees shall be prohibited, unless a variance is granted by the Board
28 of Adjustment. The property owner shall protect any tree designated as a heritage tree to
29 ensure its long-term health.
30

31 **9.02.12 Tree Protection Standards During Construction.** The following standards shall apply to all
32 protected trees during construction.
33

34 A. *Tree Protection Standards.* The protection measures described in this Subsection are based on those
35 in the Tree City USA Bulletins published by The National Arbor Day Foundation: How to Save
36 Trees During Construction (No. 8, 1998), A Systematic Approach to Building with Trees (No. 20,
37 1998), and How to Protect Trees During Underground Work (No. 35, 1998). These publications
38 are hereby adopted and included by reference herein. Copies of such publications are available
39 from the County Manager or designee. These publications shall be used to supplement the
40 required protection measures. They also provide information on the economic value of trees to
41 developments and their incorporation into designs as well as guidelines on professional tree care,
42 tree planting and tree transplanting.
43

44 B. *Drip line protection.* Solvents, materials, construction machinery or temporary soil deposits shall not
45 be placed within the drip line of any protected tree. This includes soil that is placed in the drip line
46 permanently for the purpose of a grade change, unless the grade is changed as allowed with
47 these Land Development Regulations.
48

49 C. *Protection from injury.* In order to protect against mechanical injuries to roots, trunks and branches,
50 and injuries by chemical poisoning, grade changes, excavations, paving, and attachments or wires,
51 the applicable protection measures set out below shall be implemented prior to commencement of
52 any construction.
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1. A protective barrier (See Figure L – *Tree Protection Barricades*) shall be placed around all protected trees prior to any land preparation or construction of structures or other improvements in accordance with this Section. No equipment, construction material, chemicals or debris of any kind shall be placed within the protection barrier.
2. 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 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.
3. The posts shall be connected with clearly visible plastic tape or ribbon, or rope



Figure L – Tree Protection Barricades
(Properly constructed tree barricade protects the entire natural drip line area)

4. With the exception of identification ribbons, no attachments, 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).
5. 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.
6. In lieu of constructing the barriers required in this section, 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.
7. Protective barriers and perimeter lines shall remain in place until all construction activity is terminated, except for landscaping.

1 D. *Avoiding tree injury due to root impacts.* Construction within the drip line, such as changes in grade
2 and installation of underground utilities, commonly causes extensive root damage or death of a
3 tree. Construction shall not be permitted within the drip line unless protective measures are taken
4 and supervised by a registered landscape architect or certified arborist, to ensure the health of
5 the tree.
6

7 E. *Avoiding injuries due to paving within the drip line.* When approved by the County Manager or
8 designee, paving may be placed within the drip line, so long as no damage is inflicted to the tree
9 by grade change, compaction of soil, or any other cause and protective measures are taken and
10 supervised by a registered landscape architect or certified arborist, to ensure the health of the
11 tree.
12

13
14 **SECTION SEVEN. Creation.** Section 14.00.12, Lake County Code, Appendix E, Land
15 Development Regulations, entitled Generally, is hereby created to read as follows:
16

17 14.00.12 Administration. The County Manager or designee shall administer the provisions of the Land
18 Development Regulations and if necessary shall conduct periodic inspections to ensure ongoing compliance
19 with development orders.
20

21
22 **SECTION EIGHT. Deletion.** Section 14.07.04(A)(4)(b), Lake County Code, Appendix E, Land
23 Development Regulations, entitled Preliminary Plat, is hereby deleted in its entirety
24

25
26 **SECTION NINE. Creation.** Section 14.07.05 (A)(2)(i), Lake County Code, Appendix E, Lake
27 County Land Development Regulations, entitled Construction Requirements, is hereby created to read as
28 follows:
29

30 j. Landscape plan. The plan shall be prepared by a certified landscape architect if the plan
31 proposes development of three (3) or more dwelling units or any commercial, industrial, or
32 community facility project. The plan shall include the following:
33

34 (1) A detailed plan illustrating the irrigation system shall be provided to meet the
35 requirements of Section 9.01. Water Use Zones shall be graphically shown, including
36 areas not irrigated, and their areas quantified in square feet or acres in relative
37 percentages on the landscape plan;

38 (2) Designation by common and botanical (scientific) name, including applicable cultivar
39 name, size, and location of plant material to be installed or preserved in a natural state in
40 accordance with the requirements of this Section;

41 (3) Landscaping on adjacent property intended to count towards any landscaping
42 requirement;

43 (4) Location of all required buffers, showing width and number of required trees, shrubs, and
44 landscape features;

45 (5) Location of preserved trees, or clusters of trees, intended to count for landscape credits
46 with the species and Diameter at Breast Height Caliper called out or a certification by a
47 registered Landscape Architect or Arborist stating that a group of trees will meet the
48 minimum size for required trees;

49 (6) A tree removal permit application for any protected trees proposed to be removed,
50 showing their location.
51
52

1 a developer in connection with the approved development. In some instances, it is acceptable to
2 delay the construction of infrastructure, the installation of landscaping, or the construction of other
3 required improvements. The purpose of this Section is to provide a mechanism for such delay,
4 while at the same time providing a guarantee to Lake County that such infrastructure, landscaping,
5 or other improvements will be provided.
6

7 2. ~~1-~~The provisions of this Section apply to all proposed developments in Lake County, including
8 private road subdivisions.
9

10 ~~3.2. Nothing in this Section shall be construed as relieving a developer of any requirement relating to~~
11 ~~concurrency in the Comprehensive Plan or Chapter V, Land Development Regulations.~~
12

13 ~~4.3.2.~~ Nothing in this Section shall be construed as relieving a developer of any requirement relating
14 to concurrency in the Comprehensive Plan or Chapter V, Land Development Regulations.
15

16 B. Developer's Agreements Required Where a Plat is Recorded Prior to Completion of Infrastructure. The
17 approval of any final plat prior to the completion of the infrastructure shall be subject to the
18 developer providing assurance that all required improvements, including, but not limited to storm
19 drainage facilities, streets and highways, water and sewer lines, wetlands mitigation, uplands
20 mitigation, landscape requirements, and replacement trees shall be satisfactorily constructed
21 according to the approved construction plans. The following information shall be provided:

22 1. Agreement that all improvements, whether required by these regulations or constructed at the
23 developer's option, shall be constructed in accordance with the standards and provisions of these
24 regulations.

25 2. The term of the agreement indicating that all required improvements shall be satisfactorily
26 constructed within the period stipulated. The term shall not exceed two (2) years from the
27 recording of the plat, ~~or thirty (30) percent occupancy of the development, whichever comes first.~~

28 3. The projected total cost for each improvement. Cost for construction shall be determined by either
29 an estimate prepared and provided by the applicant's engineer or a copy of the executed
30 construction contract.

31 4. Specification of the public improvements to be made and dedicated together with the timetable
32 for making improvements.

33 5. Agreement that upon failure of the applicant to make the required improvements (or to cause
34 them to be made) according to the schedule for making those improvements, the County shall
35 utilize the security provided in connection with the agreement to ensure performance.

36 6. Provision of the amount and type of security provided to ensure performance.
37

38 C. Developer's Agreements Required to Delay Construction of Sidewalks. In the case of a single-family
39 residential subdivision where sidewalks, other than common area sidewalks, are required, a Developer
40 may elect to delay construction of the sidewalks which would be in front of the single-family
41 residences. The approval of this delay shall be subject to the developer providing assurance that such
42 sidewalks will be satisfactorily constructed according to the approved construction plans. The following
43 information shall be provided:

44 1. Agreement that the sidewalks shall be constructed in accordance with the standards and provisions
45 of these regulations.

46 2. The term of the agreement indicating that all sidewalks shall be satisfactorily constructed within the
47 period stipulated. The term shall not exceed four (4) years from the recording of the final plat,
48 with the condition that no single family dwelling shall be given a certificate of occupancy until and
49 unless the required sidewalk is constructed along the entire frontage of such single family lot.

50 3. The projected total cost for such sidewalk. Cost for construction shall be determined by an estimate
51 prepared and provided by the applicant's engineer.

1 | acceptance to the Board of County Commissioners shall be made upon receipt of a certification of
2 | project completion by the project engineer including sealed as-built plans and one (1) copy of all test
3 | results.

4 | E.G. E-Maintenance of Improvements.

- 5 | 1. A maintenance agreement and security shall be provided by every developer for those projects
6 | dedicating property to the public to assure the County that all required improvements shall be
7 | maintained by the developer according to the following requirements:
8 | a. The period of maintenance shall be a minimum of two (2) years or as otherwise set out in other
9 | parts of these regulations.
10 | b. The maintenance period shall begin with the acceptance by the County of the construction of
11 | the improvements.
12 | c. The security shall be in the amount of ten (10) percent of the entire construction contract
13 | amount which includes all costs of the improvements. Prior to the conclusion of the two (2) year
14 | maintenance period, the work will be inspected by the County. Deficiencies shall be corrected
15 | by the developer/owner. Should the developer/owner fail to make corrections prior to the
16 | expiration of the maintenance bond, the County shall make corrections utilizing funds from the
17 | bond.
18 | d. If the developer enters into an agreement for sidewalks as specified above, the developer
19 | shall provide a maintenance bond for sidewalk infrastructure at the time of the agreement.
20 | The bond shall be for a period not to exceed six (6) years from the date of the agreement or
21 | two (2) years from the date that all sidewalks are completed, whichever occurs first.
22 |
23 | 2. Whenever a proposed development provides for the creation of facilities or improvements which
24 | are not proposed for dedication to the County a legal entity shall be created to be responsible
25 | for the ownership and maintenance of such facilities and/or improvements. No development order
26 | shall be issued for a development for which an owner's association is required until the documents
27 | establishing such association have been reviewed and approved by the County Manager or
28 | designee.
29 |

30 | **SECTION FOURTEEN. Amendment.** Section 14.09.01(B)(2)(i)(4), Lake County Code, Appendix E, Land
31 | Development Regulations, entitled Site Plans, is hereby amended to read as follows:
32 |

33 |
34 | (4) All water courses, water bodies, floodplains, wetlands, important natural features, all
35 | protected trees and wildlife areas, U.S.D.A. Soil Conservation Service soil types, Florida Land
36 | Use Classification System (FLUCS) vegetative cover overlain on the concept plan, and pre-site
37 | survey for designated species when native habitat is being altered or cleared.
38 |
39 |

40 | **SECTION FIFTEEN. Amendment.** Section 14.09.01(B)(2)(J)(10), Lake County Code, Appendix E, Land
41 | Development Regulations, entitled Site Plans, is hereby amended to read as follows:
42 |

43 |
44 | (10). Landscape plan. The plan shall be prepared by a certified landscape architect if the plan
45 | proposes development of three (3) or more dwelling units or any commercial, industrial, or
46 | community facility project. The plan shall include the following:
47 |

- 48 | a. A detailed plan, illustrating the irrigation system shall be provided to meet the
49 | requirements of Section 9.01. Water Use Zones shall be graphically shown, including
50 | areas not irrigated, and their areas quantified in square feet or acres in relative
51 | percentages on the landscape plan;
52 | b. Designation by common and botanical (scientific) name, including applicable cultivar
53 | name, size, and location of plant material to be installed or preserved in a natural
54 | state in accordance with the requirements of this Section;

- 1 4. Agreement that upon failure of the applicant to construct such sidewalks according to the schedule
2 for making those improvements, the County shall utilize the security provided in connection with the
3 agreement to make the improvements.
- 4 5. Provision of the amount and type of security provided to ensure performance.

5
6 D. Developer's Agreements Required to Delay Installation of Required Landscaping.

- 7
8 1. In the case of a single-family residential subdivision where landscaping, other than common area
9 landscaping, is required, a Developer may elect to delay installation of the landscaping, which
10 would be on or in front of the single-family lots. The approval of this delay shall be subject to the
11 developer providing assurance that such landscaping will be satisfactorily installed according to
12 the approved construction plans. The following information shall be provided:
 - 13 a. Agreement that the landscaping shall be installed in accordance with the standards and
14 provisions of these regulations.
 - 15 b. The term of the agreement indicating that such landscaping shall be satisfactorily constructed
16 within the period stipulated. The term shall not exceed four (4) years from the date of
17 recording of the plat, except that landscaping required on a lot other than street trees or
18 adjacent zoning district buffers may be delayed until such lot requests a certificate of
19 occupancy. No certificate of occupancy for a lot shall be issued unless all landscape
20 requirements for that lot have been installed.
 - 21 c. The projected total cost for such landscaping. Cost for landscaping shall be determined by an
22 estimate prepared and provided by the applicant's landscape architect.
 - 23 d. Agreement that upon failure of the applicant to install such landscaping according to the
24 schedule for making those improvements, the County shall utilize the security provided in
25 connection with the agreement to make the improvements.
 - 26 e. Provision of the amount and type of security provided to ensure performance.
- 27
28 2. In the case of a site plan approval for a commercial, institutional, community facility, industrial,
29 condominium, recreational vehicle parks, or multifamily sites, where such site plan includes the
30 approval of parcels or multiple building sites, where landscaping will be required for each
31 building site, a developer may elect to delay installation of the landscaping which would be on
32 each individual building site until a site plan and building permit are issued for such site. A
33 developer will not be allowed to delay any adjacent property buffering, public roadway
34 buffering, or buffering which will be provided on any common area. The approval of this delay
35 shall be subject to the developer providing assurance that such landscaping will be satisfactorily
36 installed according to the approved construction plans. The following information shall be
37 provided:
 - 38 a. Agreement that the landscaping shall be installed in accordance with the standards and
39 provisions of these regulations.
 - 40 b. The term of the agreement indicating that such landscaping shall be satisfactorily constructed
41 at the time a site plan and building permit is issued for such site.

42
43 ~~E.E.C.~~ Amount and Type of Security.

- 44 1. Security requirements may be met by but are not limited to the following:
 - 45 a. Cash, certified check or cashiers check.
 - 46 b. Irrevocable Letters of Credit.
 - 47 c. Surety Bond.
- 48 2. The amount of security Shall be one hundred and ten (110) percent of the total construction costs
49 for the required developer installed improvements, including, but not limited to storm and
50 drainage facilities, streets and highways, water and sewer lines, wetlands mitigation, uplands
51 mitigation and landscaping requirements.

52 ~~D.F.D.~~ Completion of Improvements. When improvements are completed, final inspection shall be
53 conducted and corrections, if any, shall be completed before final acceptance is recommended by the
54 County Manager or designee to the Board of County Commissioners. A recommendation for final

- c. Landscaping on adjacent property intended to count towards any landscaping requirement;
- d. Location of all required buffers, showing width and number of required trees, shrubs, and landscape features;
- e. Location of preserved trees, or clusters of trees, intended to count for landscape credits with the species and Diameter at Breast Height Caliper called out or a certification by a registered Landscape Architect or certified Arborist stating that a group of trees will meet the minimum size for required trees;
- f. A tree removal permit application for any protected trees proposed to be removed, showing their location.

* * *

SECTION SIXTEEN. Creation. Section 14.10.02(B)(9), Lake County Code, Appendix E, Land Development Regulations, entitled Master Park Plans, is hereby created to read as follows:

(9). Landscape plan. The plan shall be prepared by a certified landscape architect if the plan proposes development of three (3) or more dwelling units or any commercial, industrial, or community facility project. The plan shall include the following:

- a. A detailed plan, illustrating the irrigation system shall be provided to meet the requirements of Section 9.01. Water Use Zones shall be graphically shown, including areas not irrigated, and their areas quantified in square feet or acres in relative percentages on the landscape plan;
- b. Designation by common and botanical (scientific) name, including applicable cultivar name, size, and location of plant material to be installed or preserved in a natural state in accordance with the requirements of this Section;
- c. Landscaping on adjacent property intended to count towards any landscaping requirement;
- d. Location of all required buffers, showing width and number of required trees, shrubs, and landscape features;
- e. Location of preserved trees, or clusters of trees, intended to count for landscape credits with the species and Diameter at Breast Height Caliper called out or a certification by a registered Landscape Architect or certified Arborist stating that a group of trees will meet the minimum size for required trees;
- f. A tree removal permit application for any protected trees proposed to be removed, showing their location.

* * *

SECTION SEVENTEEN. Amendment. Section 14.14.01 Lake County Code, Appendix E, Land Development Regulations, entitled Development Permits, is hereby amended to read as follows:

14.14.01 Application. Application for the following development permits shall be made to the County Manager or designee and may be acted upon without public hearing or notice. No portion of the permit fees will be refunded if the permit becomes void. Applications for development permits for individual single family and duplex dwelling units shall not require a landscape plan which is sealed by a licensed registered landscape architect; however, prior to the issuance of a development permit for a individual single family or duplex dwelling unit, the applicant shall submit information, including drawings if necessary, to demonstrate compliance with the requirements of the

1
2 **SECTION TWENTY-ONE. Severability.** If any section, subsection, sentence, clause,
3 phrase, word or provision of this ordinance is for any reason held invalid or unconstitutional by any court
4 of competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be
5 deemed a separate, distinct and independent provision, and such holding shall not affect the validity of
6 the remaining portions of this ordinance.
7

8 **SECTION TWENTY-TWO. Inclusion in the Code.** It is the intention of the Board and it is
9 hereby provided that the provisions of this ordinance shall be made a part of the Lake County Code; that
10 the sections of this ordinance may be renumbered or relettered to accomplish such intention; and that the
11 word "ordinance" may be changed to "section", "article", or other appropriate designation.
12

13 **SECTION TWENTY-THREE. Effective Date.** This Ordinance shall become effective as
14 provided for by law.
15

16 Enacted this _____ day of _____, 2008.

17
18 Filed with the Secretary of State _____, 2008.

19
20 Effective _____, 2008.
21

22
23 ATTEST:

BOARD OF COUNTY COMMISSIONERS
OF LAKE COUNTY, FLORIDA

24
25
26 _____
27 Neil Kelly, County Clerk of
28 of Lake County, Florida

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

29
30 Approved as to form and legality:
31

32
33 _____
34 Sanford A. Minkoff
35 County Attorney
36

2008 TREE REMOVAL ACTIVITY BY COUNTY ROAD OPERATIONS

LOCATION	CALIPER SIZE	TREE TYPE	CURRENT COST TO REMOVE	SPECIMEN OR HERITAGE	PERCENT CALIPER REPLACEMENT T	NEEDED REPLACEMENT CALIPER INCHES	NEW REPLACEMENT T COST (TREE ONLY)	TREE DELIVERY COST	NEW TREE PLANTING COST
Southland	46 Oak		\$2,100.00	Heritage	100%	46	\$4,600.00	\$150.00	\$2,750.00
Oakshade	18 Pine		\$425.00		33%	5.94	\$594.00	\$150.00	\$356.40
Moss	30 Oak		\$1,000.00	Specimen	50%	15	\$1,500.00	\$150.00	\$900.00
Live Oak	22 Pine		\$725.00		33%	7.26	\$726.00	\$150.00	\$435.60
Live Oak	14 Pine		\$425.00		33%	4.62	\$462.00	\$150.00	\$277.20
Clear Lake	35 oak		\$1,000.00	Specimen	50%	17.5	\$1,750.00	\$150.00	\$1,050.00
Summit Lakes	18 oak		\$425.00		33%	5.94	\$594.00	\$150.00	\$356.40
Mink	15 Pine		\$425.00		33%	4.95	\$495.00	\$150.00	\$297.00
	EXISTING COSTS		\$6,525.00						
	NEW COSTS						\$10,721.00	\$1,200.00	\$6,432.60
	TOTAL COSTS		\$24,878.60						

The Large Tree Argument: The Case for Large Trees vs. Small Trees

Jim Geiger

Why did we like elm trees so much?

Large stately elm trees once graced many communities throughout the US. But now they are gone. Why were entire communities so disappointed when they lost their elm trees to Dutch elm disease several decades ago?

People had a sense that these large trees were important to them, their family, and their community. And this was long before we quantified the benefits of trees. Now we have scientific evidence for what these people knew decades ago.

Large trees pay us back

We now know that, dollar for dollar, large-stature trees deliver big savings and other benefits we can't ignore. Small-stature trees like crape myrtle deliver far fewer benefits. In fact, our research shows that their benefits are up to eight times less.

Compared to a small-stature tree, a strategically located large-stature tree has a bigger impact on conserving energy, mitigating an urban heat island, and cooling a parking lot. They do more to reduce stormwater runoff; extend the life of streets; improve local air, soil and water quality; reduce atmospheric carbon dioxide; provide wildlife habitat; increase property values; enhance the attractiveness of a community; and promote human health and well being. And when we

use large-stature trees, the bottom-line benefits are multiplied. When it comes to trees, size really does matter.

Don't forget the established "old guard"

We can't forget the already-established trees. These older trees provide immediate benefits. The investment that community leaders made 30, 40, 50 years ago is producing dividends today. Dr. McPherson, Director of the Center for Urban Forest Research, points out that "since up-front costs to establish these trees have already been made, keeping these trees healthy and functional is one of the best investments communities can make."

is: can we afford not to invest in our trees? Are we willing to forego all of these benefits? Or, would we rather make a commitment to provide the best possible care and management of our tree resources and sustain these benefits for future generations.

Costs vs. benefits

In most areas of the country, communities can care for their largest trees for as little as \$13 per year, per tree. And, each tree returns an average of \$65 in energy savings, cleaner air, better managed stormwater, extended life of streets, and higher property values. Smaller trees do not come close to providing the same magnitude of benefits.

"When it comes to trees, size really does matter."

What do you lose if you don't plant large trees?

Municipal tree programs are dependent on taxpayer supported funding. Therefore, communities must ask themselves, are large trees worth the price to plant and care for? Our research has shown that benefits of large trees far outweigh the costs of caring for them, sometimes as much as eight to one. The big question communities need to ask

A hypothetical example

A few years ago, the community of Greentree was faced with a budget crisis and decided to save money by downsizing its community forest—planting a majority of small trees in favor of larger ones and even replacing large trees with smaller ones (see below). It made choice X. Unfortunately; this is not an uncommon story in communities today. But the real question is, what did they give up in return, and was downsizing a wise choice?

In this case, the city decided that planting 1,693 small trees and only 259 large trees would be a good budget-cutting strategy. Over the short term this may save the city a little money. But over the long term they will have decidedly fewer benefits and a decreased quality of life. City elected

WHAT LARGE TREES MEAN

- ▲ More shade = more energy savings
- ▲ Cleaner air = better health and fewer hospital visits
- ▲ More stormwater management = lower costs for stormwater controls
- ▲ More shaded streets = longer time between resurfacing

SINGLE FAMILY LOT GRADING ENCOUNTERED PROBLEMS

by: Ross Pluta
Development Review Engineer
Public Works Department

Introduction

Lot grading is an integral part of the development process. If not addressed during house construction it may cause serious drainage and erosion problems and consequently citizen's complaints. Defective lot grading is usually very difficult to fix due to limited space, existing structures, legal (ownership) issues, etc.

Existing Lake County Codification pertaining to lot & subdivision grading

- LAKE COUNTY LAND DEVELOPMENT REGULATIONS
- Section 9.07.09
- *Provides general information about filling, grading, draining, erosion and flood protection of the single family lot*

Existing Codification continued

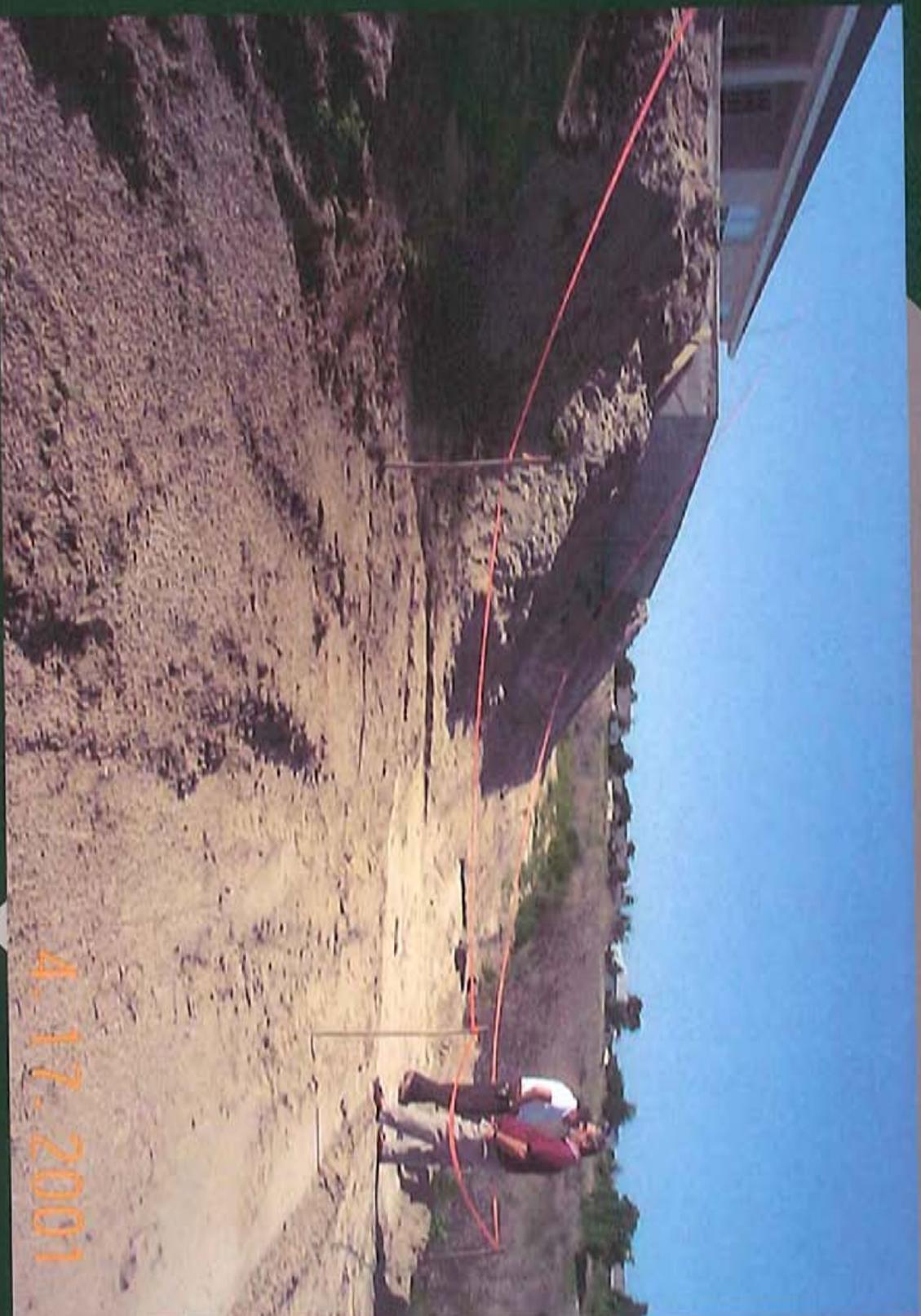
- Section 14.07 Subdivisions
- Section 14.14 Development Permits
- *Construction Plans shall include but not be limited to: overall grading plan, master drainage and typical lot grading schemes.*
- *Plot plan shall include at the minimum: all proposed structures, flood hazard areas, easements and signed notification stating that the existing/permitted drainage patterns shall not be altered*

Encountered lot grading problems:

- Excessive grading
- Lack of erosion protection
- Encroachment into protected areas, easement and neighboring property

SINGLE FAMILY LOT GRADING

Montclair Estates - 1



4.17.2001

SINGLE FAMILY LOT GRADING

Montclair Estates -2



4.17.2001

SINGLE FAMILY LOT GRADING

Magnolia Pointe Subdivision



2.18.2000

SINGLE FAMILY LOT GRADING

B-Tween Waters Subdivision Umatilla



SINGLE FAMILY LOT GRADING

B-Tween Waters Subdivision Umatilla



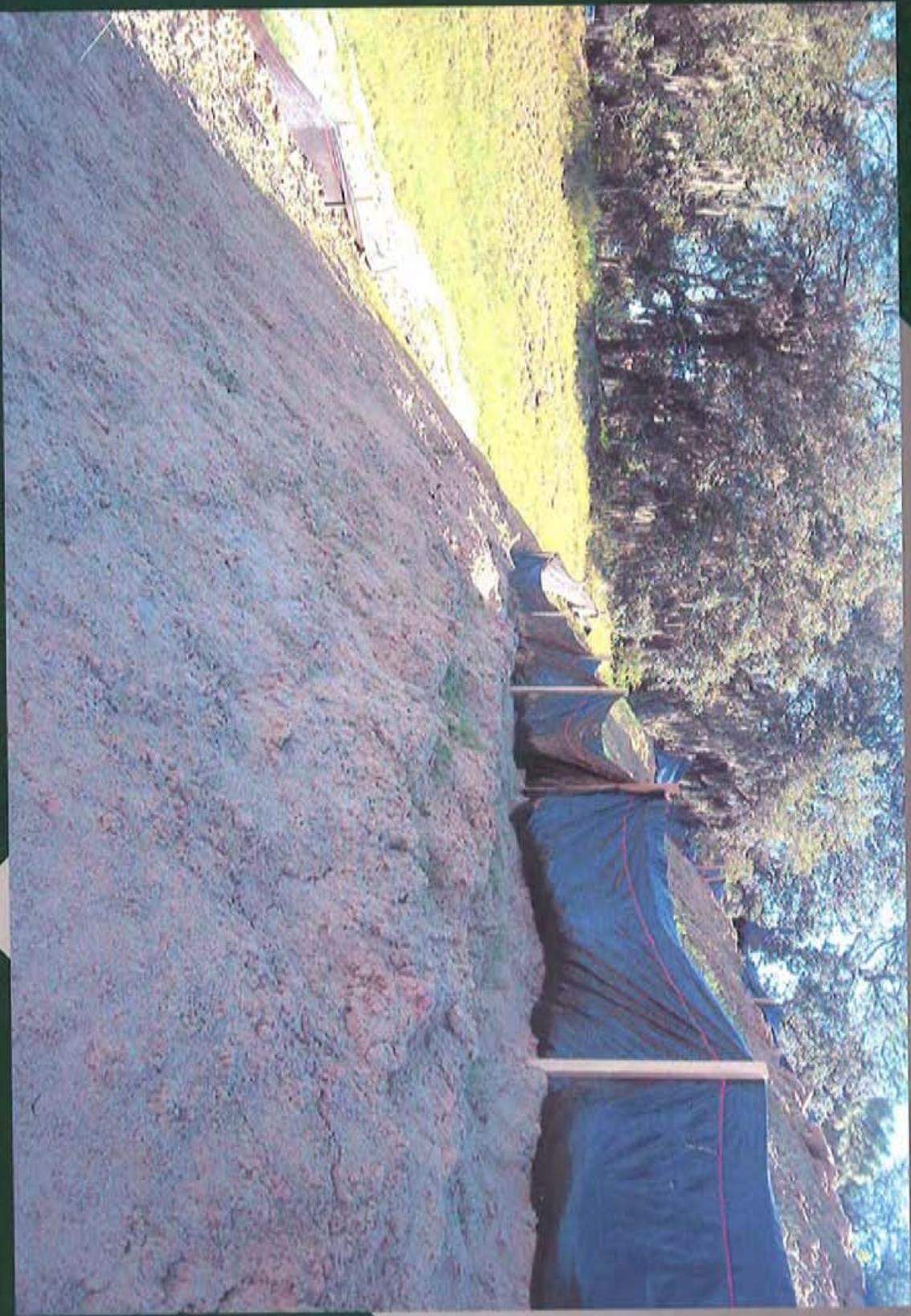
SINGLE FAMILY LOT GRADING

Crown Pointe Subdivision



SINGLE FAMILY LOT GRADING

Crown Pointe Subdivision



SINGLE FAMILY LOT GRADING

Crown Pointe Subdivision



SINGLE FAMILY LOT GRADING

Sullivan Ranch



SINGLE FAMILY LOT GRADING

Sullivan Ranch



SINGLE FAMILY LOT GRADING

Sullivan Ranch

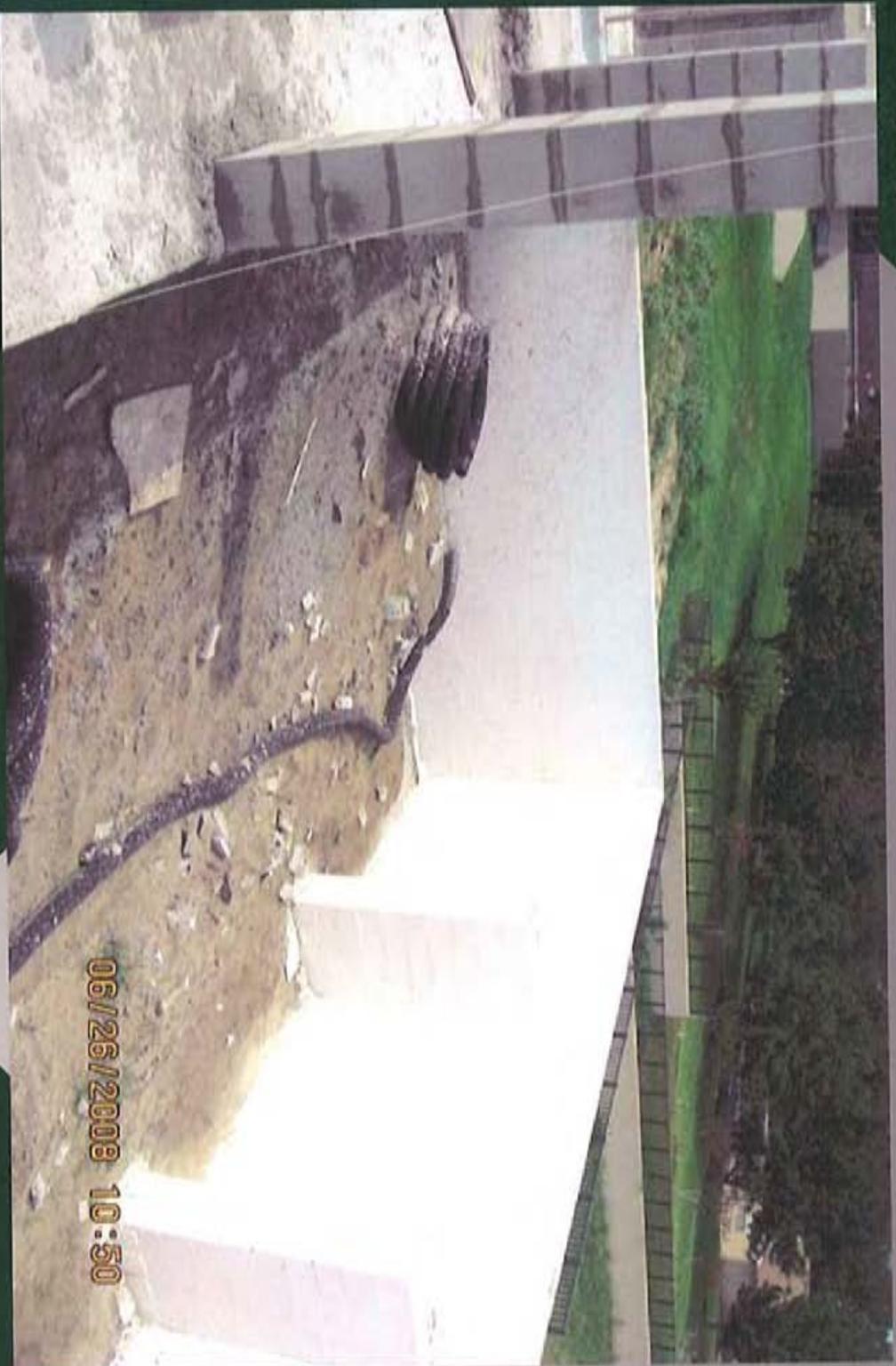


SINGLE FAMILY LOT GRADING

Sullivan Ranch



SINGLE FAMILY LOT GRADING
On the positive note
Pillars Cove



SINGLE FAMILY LOT GRADING

On the positive note
Pillars Cove



Conclusions and recommendations

- For past 4 years we require more detailed subdivision grading plans including cross-sections and stem/retaining walls for steep slopes lots
- Our Stormwater Inspectors are actively pursuing NPDES Program implementation and assisting Building Services with difficult cases of single family lot grading