

ORDINANCE 03-36
AN ORDINANCE AMENDING TITLE 13, CHAPTER 4, THE CITY OF LAKELAND TREE MANAGEMENT
ORDINANCE, OF THE MUNICIPAL CODE FOR THE CITY OF LAKELAND, TENNESSEE;
AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the Lakeland Board of Commissioners reviewed and passed on first reading the proposed amendments to Title 13, Chapter 4 of the Municipal Code on April 3, 2003, and,


WHEREAS, a Public Hearing before the Board of Commissioners of the City of Lakeland was held pursuant to a notice thereof published in a newspaper of general circulation within the community.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF LAKELAND, TENNESSEE, AS FOLLOWS:

Section 1. Title 13, Chapter 4, The City of Lakeland Tree Management Ordinance, of the Municipal Code for the City of Lakeland, Tennessee, shall be repealed in its entirety and replaced completely with attached Exhibit "A".

Section 2. Be it further ordained that this Ordinance shall take effect 30 days from and after its passage on second and final reading, the public welfare so requiring it.

First Reading April 3, 2003.
Public Hearing April 28, 2003.
Final Reading June 12, 2003.


Scott Carmichael, Mayor

ATTEST:

Sontidra Franklin, City Recorder

LAKELAND TREE MANAGEMENT ORDINANCE

WHEREAS, the Board of Commissioners of the City of Lakeland recognizes trees for their importance in shading, cooling, noise and wind reduction; and

WHEREAS, the Board of Commissioners recognizes trees for their importance in soil erosion prevention, stormwater runoff reduction; and

WHEREAS, the Board of Commissioners recognizes trees for their importance in oxygen production, dust filtration, carbon dioxide absorption, wildlife habitat; and

WHEREAS, the Board of Commissioners recognizes trees for their aesthetic and economic enhancement of all real property; and

WHEREAS, the Board of Commissioners recognizes that development pressure has the potential to dramatically reduce canopy cover and its associated benefits; and

WHEREAS, the Board of Commissioners recognizes the contribution of trees to the general well being and quality of life for citizens of the City of Lakeland; and

WHEREAS, the Board of Commissioners deems it necessary and desirable in the interest of public health, safety, and welfare to enact an ordinance for the maintenance, preservation, planting and replacement of trees and to prevent the indiscriminate removal of trees and reduction of canopy cover within the City of Lakeland;

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF LAKELAND THAT THE FOLLOWING ORDINANCE, HEREINAFTER REFERRED TO AS THE LAKELAND TREE MANAGEMENT ORDINANCE PROVIDE AS FOLLOWS:

SECTION 13-401 PURPOSE

The purposes of this ordinance are to:

- (1) Provide standards for and promote the preservation of trees as part of the land development and construction process;
- (2) Prevent indiscriminate grading of land, both developed and undeveloped, without provision for replacement of trees; and
- (3) Promote the preservation of trees on commercial and residential properties within the City of Lakeland.

SECTION 13-402 DEFINITIONS

For purposes of this Ordinance, the following definitions shall apply:

- (1) Applicable Site – land upon which a minimum tree density must be maintained, including but not limited to, land upon which a residential or commercial subdivision is being developed, a land disturbance permit is being implemented, or construction of a single-family and/or duplex residential dwelling is being undertaken. See Section 13-405 for more details.
- (2) Arborist – The agent for the City of Lakeland primarily responsible for administering the provisions of this Ordinance under the direction of the City Manager.
- (3) Basal Area – The cross-sectional area of a tree trunk at diameter breast height (dbh) expressed herein in terms of “units” per acre.
- (4) Buffer – A landscaped open space area and/or screen for buffering incompatible uses, as defined in the City of Lakeland Zoning Ordinance.

- (5) Caliper – A forest standard of tree trunk diameter measurement. For purposes of this ordinance, caliper shall be the standard diameter measurement of replacement trees and shall be taken at six (6) inches above the ground.
- (6) Density Factor Analysis – A method of converting the size (dbh or caliper) of any given tree to tree density units for purposes of determining whether a given site meets the minimum tree density unit requirements prescribed by this ordinance. (See Density Factor Analysis, Appendix A of this ordinance)
 - a.) Site Density Factor (SDF) = The minimum tree density required to be maintained on a developed site (20 units per acre).
 - b.) Existing Density Factor (EDF) = The density of existing trees to be preserved on a site.
 - c.) Replacement Density Factor (RDF) = The density of new trees to be planted on a site.
- (7) Development approval– For the purposes of this ordinance, an official authorization issued by the Municipal Planning Commission, including, but not limited to, approvals of subdivisions, planned residential developments, commercial developments, and planned commercial developments.
- (8) Diameter breast height (dbh) – The standard measure of tree size for those trees existing on a site that are at least two (2) inch diameter at a height of four and one-half (4.5) feet above the ground. If a tree splits into multiple trunks below four and one-half (4.5) feet, then the trunk is measure at its most narrow point beneath the split.
- (9) Drip Line – An imaginary perpendicular surface of a tree's branch tips down to the ground. The circular area of land surrounding the tree from the trunk to the outermost branches.
- (10) Hardwood Tree – Any tree botanically classified as an angiosperm.
- (11) Overstory Trees – Those trees that compose the top layer or canopy of vegetation and will generally reach a mature height of greater than forty (40) feet.
- (12) Revegetation – The replacement of trees and landscape materials into the minimum required landscape areas, as determined by the Zoning Ordinance, conditions of zoning approval, or the provisions of this Ordinance.
- (13) Root Protection Zone – The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The Root Protection Zone will typically be represented by the dripline of the tree but may be modified by or on approval of the Arborist.
- (14) Softwood Tree – Any tree botanically classified as a gymnosperm.
- (15) Specimen Tree or Stand – Any tree or collective group of trees which qualifies for special consideration for preservation due to size, type and condition. See Section 13-404 for general criteria regarding specimen trees or stands.
- (16) Tree – Any self-supporting, woody perennial plant which normally attains a single trunk diameter of five (5) inches or more and which normally attains a mature height of a minimum of fifteen (15) feet.
- (17) Tree Bank – An account, maintained by the Finance Department of the City of Lakeland of funds contributed from developers as a form of alternative compliance to the Lakeland Tree Management Ordinance. Funds from the Tree Bank are to be used solely for the purchase and planting of trees on public sites within the City of Lakeland as authorized by the City Manager or designee.
- (18) Tree Management Plan – a to-scale map or site plan prepared in accordance with Section 13-408 of this ordinance, showing among other items, a detailed plan designed to protect and preserve trees before, during and for a period of two (2) years after construction.

- (19) Tree Management Zone – All areas of a parcel required to remain in open space, or all areas required as landscaping strips or buffers according to the City of Lakeland Zoning Ordinance, conditions of zoning approval or provisions of this Ordinance, or any area designated for the purpose of meeting tree density requirements, saving natural trees, preserving the root system of natural trees and/or preserving natural buffers.
- (20) Tree Removal Permit – A formal letter or permit issued by the Arborist allowing for the removal of said tree(s) on a property.
- (21) Tree Replacement Plan – a to-scale map or site plan prepared in accordance with Section 13-409 of this ordinance, showing among other items, a detailed planting schedule with proposed tree names, quantity, size, spacing and any special planting notes.
- (22) Tree Species Selection List – The recommended species of trees for planting within the City maintained and updated periodically by the Arborist.
- (23) Tree Survey – a to-scale map or site plan prepared in accordance with Section 13-407 of this ordinance and noting the location of all specimen trees plus all other trees which will be preserved and counted toward meeting site density requirements.
- (24) Understory Tree – Those trees that grow beneath the overstory, and will generally reach a mature height of under forty (40) feet.

SECTION 13-403 APPLICABILITY

- (1) No development approval (as defined by this ordinance), building permit, land disturbance permit, rezoning approval, or other site plan approval shall be issued until it is determined that the proposed activity is in conformance with the provisions of this Ordinance.
- (2) No person shall remove, cause to be removed, poison, damage, or transplant any tree through an activity regulated by this ordinance without first obtaining a tree removal permit, as herein provided.

SECTION 13-403.1 REGULATED ACTIVITIES

The following activities require compliance with the Lakeland Tree Management Ordinance:

- (1) Subdivision development (regardless of underlying zoning classification).
- (2) Planned residential development (PD) (regardless of underlying zoning classification).
- (3) Commercial development (regardless of underlying zoning classification).
- (4) Planned commercial development (CP) (regardless of underlying zoning classification).
- (5) Any activity requiring issuance of a building permit (regardless of previous approvals on or current use of the land).
- (6) Any activity requiring issuance of a land disturbance permit (regardless of previous approvals on or current use of the land).
- (7) Rezoning requests (regardless of previous approvals on or current use of the land).
- (8) Any activity requiring site plan approval, including but not limited to, pool permit requests, fence permit requests, and accessory structure permit requests.
- (9) Minor Subdivisions (regardless of previous approvals on or current use of the land).
- (10) Removal of specimen tree(s) from owner occupied single family or duplex lots.
- (11) Timber harvesting (as per Section 13-403.3 of this ordinance).
- (12) Removal of specimen trees from detention ponds and drainage easements.
- (13) Removal of specimen tree(s) on recreational areas including common open space within planned communities.
- (14) Construction of utility, sewer, and other infrastructure easements, except as noted in Section 13-403.2 "Exemptions."

- (15) Removal of specimen tree(s) for any reason not listed in Section 13-403.2 Exemptions.

SECTION 13-403.2 EXEMPTIONS

- (1) The following activities shall be exempt from the provisions of this Ordinance:
- a. The removal of trees, other than specimen trees, from an owner occupied, single family or duplex lot of record.
 - b. The removal of trees from agricultural properties, as defined under the laws of the State of Tennessee, except as noted in Section 13-403.3 "Agricultural Uses / Timber Harvesting." This exception shall not be interpreted to include timber harvesting incidental to development of the land.
 - c. The necessary removal of trees by a utility company within dedicated utility easements.
 - d. The removal of trees on public rights-of-way conducted by or on behalf of a federal, state, county, municipal or other government agency in pursuit of its lawful activities or functions in the construction or improvement of public rights-of-way.
 - e. The removal of non-specimen trees, from detention ponds and drainage easements.
 - f. The removal of any tree which has become or threatens to become a danger to human life or property, as determined by a professional arborist.
 - g. The removal of non-specimen trees, from recreation areas such as playgrounds, ballfields, golf courses and other such uses.
- (2) Notwithstanding the foregoing, all reasonable efforts shall be made to save specimen trees. Reasonable efforts shall include, but not be limited to, alteration of building design; alternate location of building, parking area, water retention, drainage pipes; or relocation of utilities.

SECTION 13-403.3 AGRICULTURAL USES / TIMBER HARVESTING

- (1) There shall be a ten (10) year suspension of all development approvals (as defined by this ordinance), rezoning requests, and land disturbance permits for any property upon which timber is harvested pursuant to T.C.A. § 6-54-126 or any similar legislation, ordinance, regulation or rule.
- (2) The suspension period shall begin at the time a timber harvesting permit is granted. The permit shall be valid for a period of six (6) months from the date of issuance.
- (3) An application and permit from the City of Lakeland is required to harvest timber on any property located within the limits of the City of Lakeland. The application, which shall be provided to the City and reviewed by the Arborist, shall include items specified by the City on the application, and will include, but not be limited to, the following items:
- a. A plan for harvesting the timber that is consistent with best management practices for harvesting timber as set forth by the Tennessee Department of Agriculture, Division of Forestry, and
 - b. A plan that provides for the subject property to remain in a forested condition unless it is the intent of the property owner to remove the subject property from forest land status, as defined under the laws of the State of Tennessee, although continuing to use the property for agricultural uses, in which case, the property owner shall provide the City with evidence of written notice to the tax assessor, pursuant to T.C.A. § 67-5-1006 and any other applicable state statutes, rules or regulations, that the property owner is withdrawing the subject property from forest land status and its associated tax benefits, and
 - c. Site review by the City Engineer to ensure that the timber harvest and subsequent agricultural activity, if applicable, will fully comply, in plan and

practice, with the City's Erosion and Sedimentation Control Ordinance, and will not damage or flood surrounding properties nor increase the established base flood elevation of the upstream or downstream portion of the Flood Way within or without the drainage basin in which the subject property is located.

SECTION 13-404 GENERAL CRITERIA FOR THE DETERMINATION OF SPECIMEN TREES OR STANDS OF TREES

(1) Specimen tree:

- a. Any tree in fair or better condition which equals or exceeds the following diameter sizes:
 - i. 24" dbh Large hardwoods such as oaks, hickories, yellow poplars, sweetgums, etc.
 - ii. 30" dbh – Large softwoods such as pines, deodar cedars, etc.
 - iii. 4" DBH – Small trees such as dogwoods, redbuds, sourwoods, etc.
- b. A tree in fair or better condition must meet the following minimum standards:
 - i. A life expectancy of greater than 15 years.
 - ii. A structurally sound trunk, not hollow and having no extensive decay.
 - iii. No more than one major and several minor dead limbs (hardwoods only).
 - iv. No major insect or pathological problem.
- c. A lesser sized tree can be considered a specimen tree if it meets any of the following criteria
 - i. is a rare or unusual species, including but not limited to, species federally or state listed as endangered, threatened, or of special concern.
 - ii. is of exceptional or unique quality, including but not limited to, a tree that is the only species of its kind or size within the project area, or a tree that provides habitat for a species that is state or federally listed as endangered, threatened, or of special concern.
 - iii. is of historical significance, including but not limited to, trees listed on the state Landmark and Historic Tree Registry or trees listed on the national or state Big Tree Registry.
- d. A lesser sized tree can be considered a specimen tree if it is specifically used by a builder, developer, or design professional as a focal point in a landscape project.

(2) Specimen tree stands – A contiguous grouping of trees which has been determined to be of high value in the opinion of the Arborist, based upon the following criteria:

- a. A relatively mature (over 25 years average age for softwood stands, over 75 years average age for hardwood or mixed stands), even-aged stand (less than 10% difference between the oldest and youngest trees within the stand).
- b. A stand with purity of species composition (less than three overstory species present in the stand or more than 80% of stand basal area represented by one species) or of a rare or unusual nature such as stands composed of trees that are state or federally listed as endangered, threated, or of special concern; or, stands that constitute habitat for species that are state or federally listed as endangered, threatened, or of special concern.
- c. A stand of historical significance, such as trees listed on the state Landmark and Historic Tree Registry or trees listed on the national or state Big Tree Registry.
- d. A stand with exceptional aesthetic quality, such as stands of flowering trees or stands used by a builder, developer, or design professional as a focal point in a landscape project.

SECTION 13-405 MINIMUM TREE DENSITY REQUIREMENTS

- (1) A basic condition of the Lakeland Tree Management Ordinance is that all applicable sites maintain a minimum tree density of twenty (20) units per acre. Applicable sites, for this section, include but are not limited to, land upon which:
- a residential subdivision (including planned developments) is being developed;
 - a commercial subdivision (including planned commercial) is being developed;
 - any activity requiring issuance of a land disturbance permit is carried out;
 - construction of a single-family and/or duplex residential dwelling is being undertaken (unless in accordance with an approved development where tree density has been addressed and approved by the City).

The term "unit" is an expression of basal area, and is not synonymous with "tree." The density requirement must be met whether or not a site had trees prior to development or disturbance of the applicable site. The density may be achieved by preserving existing trees, by planting new trees according to the minimum standards in this Ordinance or by a combination of the two. Minimum tree density shall be calculated and established pursuant to the formula and analysis set forth in Appendix A to this Ordinance. Any existing tree of not less than two (2) inches dbh left in good growing condition on the property is eligible to be counted toward the minimum required density. The property owner shall be subject to the minimum tree density requirement set forth in this section. The property owner shall base the density calculation on the gross site area.

- (2) Trees replanted to achieve density requirements are to be selected species from the City of Lakeland Tree Species Selection List, on file with the City. In addition, replanting shall be at the ratio of not less than one (1) overstory tree for every three (3) understory trees. Density credit may be met by planting all overstory trees, but not by planting only understory trees. No more than forty (40) percent of any one genus may be included in any replanting plan. Exceptions to this requirement may be authorized by the Arborist where in his opinion an exception is justified. Refer to Table 2, Appendix A, of this ordinance for minimum size requirements of replacement trees. All replacement trees will be maintained properly to ensure their survivability.

SECTION 13-405.1 ALTERNATIVE COMPLIANCE TO TREE DENSITY REQUIREMENTS

- (1) One of the intentions of this Ordinance is to ensure that a minimum density of trees is maintained on all applicable sites, as defined in this ordinance. If this intent cannot be met because a site will not bear the required density of trees, two methods of compliance, at the discretion of the City Arborist, may be acceptable:
- Planting at a location remote from the project site; or
 - Contributing to the City of Lakeland Tree Bank
- (2) The following standards have been established for administering these alternative compliance methods. The Arborist must review and approve all requests for alternative compliance. In no instance shall one hundred percent (100%) of the required site density be met through alternative compliance. As many trees as can reasonably be expected to survive must be planted on the site in question.
- (3) No development approval (as defined by this ordinance), land disturbance permit, or building permit (unless in accordance with an approved development where tree density has been addressed and approved by the City) shall be issued until the Arborist has approved the request and received the necessary documentation and/or funds for the alternative compliance method.
- (4) If trees are to be planted at another location, a Tree Replacement Plan, meeting all applicable standards, must be reviewed and approved. The following note must be shown on the approved plan: "A tree replacement plan addendum for this project shall be submitted to the Arborist for the City of Lakeland at least thirty (30) days prior to

requesting a final inspection. This plan shall include the species, size and location of trees to be planted off-site to meet the tree density deficit shown. Final acceptance of this project is subject to approval of this plan, as well as verification of the installation of the trees.”

- (5) As another method of alternative compliance, the City of Lakeland will accept donations to the City of Lakeland Tree Bank. These donations will be used for the sole purpose of planting trees on public property within the City of Lakeland. For calculating contributions to the City of Lakeland Tree Bank, see Appendix B of this Ordinance.
- (6) The City of Lakeland Tree Bank will be administered by the Arborist. An annual report shall be submitted to the Lakeland City Manager showing amounts collected, amounts spent, and the type and location of trees planted.

SECTION 13-406 APPLICATION REQUIREMENTS

The following section details what documents are required to be submitted for different regulated activities. This section is not all-inclusive. Other requirements may apply, as detailed in Sections 13-407, 13-408, and 13-409 of this ordinance. The timing of submission of these documents is addressed in the Lakeland Development Handbook and the Administrative Guidelines to the Lakeland Tree Management Ordinance on file with the City.

When a person applies for a permit or approval for one of the regulated activities as per Section 13-403.1 of this ordinance, such person shall also file an application for a tree removal permit providing the following information:

- (1) A complete Tree Survey, as specified in Section 13-407. A Tree Survey shall be submitted for the regulated activities listed in Section 13-403.1 of this ordinance, items 1-9 or as required by the Arborist. Items 10-15 of Section 13-403.1 do not require submission of a Tree Survey but shall require an on-site inspection, by the Arborist or designee, of the proposed activity.
- (2) A complete Tree Management Plan, as specified in Section 13-408. This plan shall be an integrated site plan showing specimen trees, the tree management zones, those trees to be saved and those to be removed, utilities to be installed, grading, the approximate location of all structures, driveways, and curb cuts, proposed tree planting and other landscaping. A Tree Management Plan shall be submitted for the regulated activities listed in Section 13-403.1 of this ordinance, items 1-6 and item 8 when determined applicable by the Arborist, or as required by the Arborist.
- (3) A complete Tree Replacement Plan as specified in Section 13-409. Replacement trees used in density calculation must be ecologically compatible with the intended growing site. A list of acceptable replacement trees is provided in the City of Lakeland Tree Species Selection List, on file with the City. A Tree Replacement Plan shall be submitted for the regulated activities listed in Section 13-403.1 of this ordinance, items 1-5 or as required by the Arborist.
- (4) Minor revisions to existing developments that do not involve the removal or replacement of trees require only that a sketch showing proposed changes be submitted to the Arborist for review and approval. Minor revisions that involve the removal or replacement of trees require demonstration of proof of compliance with this ordinance including submission of all applicable documents as listed in this section.
- (5) Minor subdivisions, as defined in the Lakeland Zoning Ordinance, require submittal of a Tree Survey as specified in Section 13-407 and may require additional information at the discretion of the Arborist.

SECTION 13-407 TREE SURVEY

- (1) Before the commencement of any regulated activity listed in this ordinance Section 13-403.1, items 1-9, a Tree Survey is required. An on-site inspection by the Arborist or designee is required before commencement of any of the regulated activities as listed in this ordinance Section 13-403.1, items 10-15.
- (2) The Tree Survey shall be a to-scale map or a site plan prepared, signed, and sealed by a registered surveyor or certified engineer, and signed by an International Society of Arboriculture (ISA) Certified Arborist, Society of American Foresters (SAF) Certified Forester, or landscape architect noting the location of all specimen trees and all other trees which will be preserved and counted toward meeting site density requirements.
- (3) All specimen trees and their root protection zones shall be labeled, and must be shown on the survey and inventoried by size and species. This includes those specimen trees that are to be preserved as well as those proposed for removal. When the root protection zone of a specimen tree whose trunk is located on an adjacent property overhangs the proposed project area, the approximate location, size, species, and root protection zone of this specimen tree shall be provided on the Tree Survey. This provision shall not authorize the trespass on private property abutting the site. If disturbance is proposed within the root protection zone of this specimen tree, an application for a tree removal permit, specifically for this specimen tree, shall be submitted.
- (4) All other trees that are to be counted toward meeting density requirements must be shown on the survey and inventoried by size and species. Only trees with a dbh measurement of two (2) inches or greater are to be identified as eligible for density compliance purposes. Existing trees less than two (2) inches dbh will not be counted toward EDF.
- (5) Trees, other than specimen trees, that are proposed for removal, and thus cannot be counted toward density requirements, are not required to be counted and shown individually on the Tree Survey. Such trees shall be identified on the Tree Survey as a stand(s) with an estimate of the number of trees by size class and species provided.
- (6) Sampling methods may be used to determine tree densities for forested areas over two (2) acres or as determined appropriate by the Arborist.
- (7) All tree management zones must be delineated on the Tree Survey. All buffers with existing trees must be delineated on the Tree Survey as tree management zones. Disturbance within any buffer is subject to determination by the Arborist that the disturbance would not foreseeably reduce the survivability of existing trees within the buffer or that the existing trees within the buffer are not suitable for retention or will not be counted toward density requirements.
- (8) The Tree Survey shall provide an accurate list of those trees to be saved and a total value of EDF units for the entire property.

SECTION 13-408 TREE MANAGEMENT PLAN

- (1) Before the commencement of any regulated activity listed in this ordinance Section 13-403.1, items 1-6 and item 8 when determined applicable by the Arborist, or as required by the Arborist in order to demonstrate that the proposed activity will not foreseeably reduce the survivability of any trees within the project area or affected by the project area that are proposed for retention, a Tree Management Plan is required.
- (2) The Tree Management Plan shall be a detailed plan designed to protect and preserve trees before, during and for a period of two (2) years after construction. Any trees designated for retention on the Tree Management Plan that die or are severely damaged within the first two (2) years after construction shall be replaced in accordance with this

- ordinance. These replacement trees shall be maintained for a minimum of two (2) consecutive years after planting or replacement.
- (3) The Tree Management Plan shall be submitted as a separate drawing unless the Arborist approves the combination of the Tree Management Plan with the Tree Replacement Plan on a single drawing where this combination would not sacrifice the clarity of the documents.
- (4) The Tree Management Plan shall be submitted on a current survey of the proposed site, drawn to scale and showing clearly all required information as outlined by this section for acceptance as the plan required in Section 13-408(2). Required specifications for a Tree Management Plan include, but are not limited to, the following:
- a. The identity of the tract of land upon which tree(s) sought to be removed are located.
 - b. The name, address and phone number of the owner of the land and the name, address and phone number of any tenant of the property.
 - c. The type, location and size as measured at dbh of the tree(s) to be protected. Only trees designated for retention on the Tree Management Plan will be counted toward density requirements.
 - d. Locations of all specimen trees, their root protection zones, and an indication of those specimen trees proposed for removal or for preservation. Removal of specimen trees is subject to approval by the Arborist. Any specimen tree proposed for removal is to be identified in terms of exact location, size and species.
 - e. All tree management zones, natural areas, landscaped areas, buffers and areas of revegetation. Include detailed locations and specifications for active and/or passive tree management measures. Methods of tree management shall be indicated for all tree management zones, including tree fencing, erosion control, retaining walls, tunneling for utilities, aeration systems, transplanting, staking, signage, etc.
 - f. Limits of clearing and land disturbance such as grading, trenching, etc. where these disturbances may affect tree management zones.
 - g. The locations of all existing and proposed utility lines or easements. Include the location for any boring sites for underground utilities.
 - h. Indication of staging areas for parking, material storage, concrete washout, debris burn and burial holes and other areas where tree management may be affected during construction.
 - i. A delineation of tree management zones in which trees have been inventoried for density calculations.
 - j. Calculations showing compliance with the required Site Density Factor using existing trees, replacement trees, and/or alternative compliance methods. Site density compliance shall be demonstrated on the Tree Management and Tree Replacement plans. Existing trees or stands of trees used in the density calculation must be indicated on the drawing. Only existing trees with a dbh of two (2) inches or greater are eligible to be counted toward the minimum tree density requirements.
 - k. Site area
 - l. The locations of existing and proposed structures, paving, driveways, cut and fill areas, detention areas, etc.
 - m. Phase lines or limits of construction.
 - n. Location and details for all permanent tree management measures (tree wells, aerations systems, permeable paving, retaining walls, bollards, etc.)

- o. Additional information as required on a case-by-case basis or as requested by the Arborist regarding:
 - i. Prior to approval of the Tree Management Plan, the Arborist may require relocation or replacement of trees as uniformly as possible throughout the site.
 - ii. Prior to approval of the Tree Management Plan, the Arborist may require the use of active tree management fencing for any or all tree management zones. Passive tree management fencing is to be used only for areas remote from construction activity.

SECTION 13-409 TREE REPLACEMENT PLAN

- (1) Before the commencement of any regulated activity listed in this ordinance Section 13-403.1, items 1-5 or as required by the Arborist in order to demonstrate compliance with density requirements, a Tree Replacement Plan, as described in this section, is required. This plan shall be submitted as a separate drawing but may be included as a part of the Tree Management Plan upon determination by the Arborist that the combination will not sacrifice the clarity of the documents.
- (2) The Tree Replacement Plan shall include planting schedules with proposed tree names (botanical and common), quantity, size, spacing and any special planting notes.
- (3) Unless otherwise approved by the Arborist, trees selected for replanting must be on the City of Lakeland Tree Species Selection List on file with the City. Trees selected must be free from injury, pests, disease, nutritional disorders or root defects, and must be in good vigor in order to assure a reasonable expectation of survivability. Standards for transplanting shall be in keeping with those established in the International Society of Arboriculture publication Tree and Shrub Planting Manual or similar publication.
- (4) It is desirable that replanted trees be ecologically compatible with the site and neighboring sites. Accordingly, the replanted trees shall be of the same or similar species as those removed when practical. The composition of replacement trees shall be no more than 20% softwood unless specifically approved by the Arborist.
- (5) The use of flowering ornamental trees or plants classified as large shrubs may be included in the Tree Replacement Plan, but shall not be used for the purpose of meeting density calculations for the site unless approved by the Arborist.
- (6) All replanted overstory trees shall be a minimum of six feet (6') tall and have a trunk of not less than two (2") caliper inches. All replaced understory trees shall be a minimum of four feet (4') tall and have a trunk of not less than one caliper inch (1"). In order to provide sufficient growing area for planted trees, the following minimum criteria must be observed unless otherwise approved by the Arborist:
 - Overstory Trees – 200 square feet of pervious root zone
 - Understory Trees – 75 square feet of pervious root zone
- (7) For residential single family detached or duplex dwellings, smaller caliper replacement trees will be considered provided the total minimum tree density requirement is satisfied. A list of proposed plant species and sizes shall be submitted in writing to the Arborist.
- (8) Planting and staking details shall be provided on the plan and adhere to International Society of Arboriculture (ISA) standards.
- (9) Trees must be relocated or replaced on site in accordance with the provisions of this Ordinance.
- (10) Any trees that die or are severely injured within a two (2) year period after replacement, original replacement, or any subsequent replacement shall be replaced with equivalent species and sizes by the permittee.

SECTION 13-410 INSPECTION

Following the receipt of each required component of the completed tree removal application, (Tree Survey, Tree Management Plan, and Tree Replacement Plan) and supporting data, if applicable, the Arborist shall schedule and conduct an inspection of the proposed development site within ten (10) working days. The applicant or his designee shall be advised as to the date and time of the inspection and given an opportunity to participate. Following inspection, the Arborist, consistent with the purposes of this Ordinance, shall advise the applicant of any recommended changes in the applicant's proposal.

SECTION 13-411 PERMIT PROCEDURES

- (1) Prior to approval of any regulated activity, as listed in this ordinance Section 13-403.1, or the issuance of any Tree Removal Permit, all applicable documents, determined by the Arborist as necessary to demonstrate compliance with this ordinance (e.g. Tree Survey, Tree Management Plan, Tree Replacement Plan), must be submitted to and reviewed by the Arborist. The Arborist shall have 30 days to review all applicable documents.
- (2) All applicable plans and related documentation shall be reviewed by the Arborist for conformance to the provisions of this ordinance. Based on this review, the Arborist will approve, return for revision, or deny the application, or give a written recommendation to the approving body for approval, revision, or denial. If denied, the reasons for denial shall be annotated on the plans or otherwise stated in writing.
- (3) After completion of the approval process, the Arborist or designee will be charged with the responsibility of inspecting the site to ensure that trees are adequately protected during the permitted or approved activity including any grading of the property for infrastructure installation. To adequately protect the site, tree management zones shall be delineated in the field with tree management fencing.
- (4) All tree management measures shall be installed prior to any land disturbance, and the Arborist shall be contacted for a pre-construction conference prior to land disturbance. Land disturbance may proceed only after a permit is obtained and the Arborist has approved the tree management measures.
- (5) After completion of a development, the Arborist will conduct an on-site inspection of the site to ensure compliance with the Tree Management Plan.
- (6) The Arborist shall make unscheduled inspections before and during development to ensure proper management of trees, root protection zones and tree management zones. Any person, firm, or corporation not properly managing retention trees, replacement trees, root protection zones, or tree management zones, including but not limited to, not maintaining tree management fencing shall be in violation of this section and will be issued a notice of violation by the City. If the violation(s) is not corrected within 48 hours of the issuance of this notice, a stop work order will be issued by the City and the person, firm, or corporation in violation shall be fined not more than the maximum allowable fine under State law. Each day's continuance of a violation shall constitute a separate offense.
- (7) No tree removal permit shall be issued until it has been determined that the proposed activity is in conformance with this Ordinance.

SECTION 13-412 REMOVAL OF TREES – CONDITIONS AND EXCEPTIONS

- (1) Tree removal shall be disallowed in the following circumstances:
 - a. Soil erosion or runoff problems will result due to topography, soil type, or proximity to flood plain areas, and the removal will substantially alter the existing soils adversely with regard to runoff and erosion. Information submitted by the

City Engineer or other environmental specialist may be used by the Arborist in his evaluation of this criterion.

- b. Reasonable accommodations can be made to alter the proposed project to save specimen trees and have not been made.
- (2) Tree removal from a site may be allowed if:
 - a. The tree is located in an area where a structure or improvement will be placed and the tree cannot be relocated on the site because of age, type or size of tree.
 - b. The tree is diseased or structurally unsound.
 - c. The tree poses an imminent danger.
 - d. The tree interferes with existing utility service.
 - e. The tree creates an unsafe vision or clearance for vehicular movement.
- (3) Trees must be relocated or replaced on site in accordance with the provisions of this Ordinance. Prior to approval of the Tree Management Plan, the Arborist may require relocation or replacement of each tree being moved or removed on the site to be supplemented with additional trees to establish within the tree management zone a minimum of one tree per five hundred (500) square feet of minimum required open space.
- (4) Debris removed. All debris from trees cut or substantially damaged shall be removed from the site in a timely fashion, including the removal of any portion of the tree stump above the original natural grade or elevation of land, unless excepted by the Arborist.

SECTION 13-413 TREE MANGEMENT DURING CONSTRUCTION

- (1) No person during the construction of any structure(s) or improvement(s) or during any activity regulated by this Ordinance shall encroach, place solvents, material, construction machinery, portable toilets, construction trailers, place temporary soil deposits within, strip the topsoil, or remove the natural leaf layer from within the root protection zone, as defined herein, of any specimen tree or any tree within a tree management zone unless authorized by the Arborist in writing.
- (2) Before development, land clearing, filling, land alteration, or commencement of any activity regulated by this Ordinance, the developer and/or landowner, shall be required to erect suitable protective barriers as required by the Arborist, including tree fences, tree management signs, and erosion barriers until completion of site landscaping. Authorization to remove the protective devices shall be in writing by the Arborist. Inspection of tree management barriers is required prior to any land disturbance, development, or commencement of any activity regulated by this Ordinance. The Arborist shall be contacted to schedule an inspection time.
- (3) Materials for active tree management shall consist of chain link, orange laminated plastic, wooden post and rail fencing or other equivalent restraining material.
- (4) Materials for passive tree management shall consist of heavy mil, plastic flagging, a minimum of three (3) inches wide with dark letters reading "Tree Management Area – Do Not Enter" or equivalent signage on a continuous, durable restraint.
- (5) All tree management devices must remain in functioning condition until the completion of the project.
- (6) The Arborist may recommend specific tree management measures to be performed during the construction/development process to maintain and promote the health and probability of survival of trees proposed for retention. The Arborist, before the completion of the regulated activity, must provide these measures in writing to the developer or applicant for tree removal permit. The developer or applicant for a tree removal permit shall utilize the services of an ISA Certified Arborist to perform, or cause to be performed, these measures which may include, but are not limited to:

- a. Watering, mulching, fertilizing and treating trees for pests or disease as needed and in accordance with the standards of the International Society of Arboriculture.
- b. Felling trees away from tree management zones.
- c. Pruning where necessary in accordance with the American National Standards Institute (ANSI) A300 standards and with the approval of the Arborist. "Topping" or severe pruning is prohibited on any tree to be retained during the proposed activity.

SECTION 13-414 TREE DAMAGE

Any non-specimen tree, designated in the Tree Management Plan to be retained, which is damaged during or as a result of any regulated activity listed in Section 13-403.1 of this ordinance, as determined by the Arborist, shall be treated according to accepted American National Standards Institute (ANSI) Standards, or replaced with a tree or trees equal to the unit value of the tree removed. Any specimen tree damaged as described above shall be replaced with trees equal to two (2) times the unit value of the tree removed or damaged. If a damaged specimen tree must be removed, the area occupied by its dripline must remain in a pervious state. A replacement plan for such area must be approved by the Arborist prior to issuance of a final plat.

SECTION 13-415 TREE REMOVAL AND CONSTRUCTION COMPANIES

All applicable provisions of this Ordinance shall apply to any person removing trees on behalf of any other person, including all tree removal companies, utility companies or persons in the business of construction or removing trees, while undertaking any activity regulated by this ordinance. It shall be unlawful for any person or company to remove or cause to be removed any tree, or undertake any work for which a tree removal permit is required pursuant to this Ordinance, unless a valid permit thereof is in effect and is displayed in accordance with the provisions of Section 13-416. If any such work or removal is performed without the permit being displayed as required in Section 13-416, such removal or work shall constitute a violation of this Ordinance and shall subject the person or company violating this Ordinance to all penalties provided herein. However, utility companies may provide emergency work without formal approval; provided, however, that emergency actions are reported in writing to the Arborist within three (3) working days after completion of all emergency services. Further, the permit taken by any person, company or utility under this section may include defined areas of tree cutting and trimming under one permit. All tree removal companies, utility companies or persons in the business of construction or removing trees shall remove from the site any trees, stumps, limbs or debris caused by activities allowed by the issuance of a permit under this Ordinance.

SECTION 13-416 DISPLAY OF PERMIT AND INSPECTIONS

The applicant shall prominently display the permit issued on the site. Such permit shall be displayed continuously while trees are being removed or replaced or work done as authorized on the permit. As a condition for the issuance of a permit, the applicant shall agree to entry onto the premises by representatives of the City of Lakeland to inspect the permit and activities at any time, and such entry shall be lawful. Failure to allow such entry shall be unlawful and shall constitute failure to display the permit as required under this section.

SECTION 13-417 EMERGENCIES

In case of emergencies, such as hurricane, tornado, windstorm, flood, freeze or other disasters, the requirements of these regulations may be waived by the Arborist or other

designated official, upon a finding that such waiver is necessary so that public or private work to restore order in the City of Lakeland will not be impeded.

SECTION 13-418 FEES

Each applicant requesting a permit under the provisions of the Lakeland Tree Management Ordinance shall deposit a nonrefundable fee with the City of Lakeland, as per the most recent City of Lakeland Fee Schedule, on file with the City. Provided, however, no fees shall be charged on any application filed solely within a public right-of-way. Provided, further, that no fee shall be charged on any application where the Arborist determines that the tree(s) meet the criteria contained in Section 13-412(2)(b-e) or at the discretion of the Arborist.

SECTION 13-419 MUNICIPAL TREE MANAGEMENT

This section reserved for future use.

SECTION 13-420 APPEAL

An appeal to the Board of Appeals may be taken by any person, firm or corporation aggrieved, or by any governmental officer, department, board or bureau affected by any decision of the Arborist based in whole or in part upon the provisions of this Ordinance. Such appeal shall be taken by filing with the Board of Appeals a notice of appeal, specifying the grounds thereof. The Arborist shall transmit to the Board all papers constituting the record upon which the action appealed was taken. The Board shall fix a reasonable time for the hearing of the appeal, giving public notice thereof, as well as due notice to the parties in interest, and decide the same within fifteen (15) days from the date of the hearing. Upon the hearing any person or party may appear and be heard in person or by agent or attorney.

With regards to this Ordinance, the Board of Appeals shall have the following powers:

A. Administrative Review

Appeal of Decision by Arborist - To hear and decide appeals where the appellant alleges that there is error in any order, requirement, decision or change made by the Arborist or other administrative official in the refusal, carrying out or enforcement of any provision of this Ordinance.

B. Variance from Tree Ordinance

To hear and decide applications for variance from the terms of this Ordinance, but only where by reason of exceptional narrowness, shallowness or shape of specific piece of property which at the time of adoption of this Ordinance was a lot of record; or where, by reason of exceptional topographic conditions, physiographic conditions, soil physiology, or other extraordinary or exceptional situation or conditions of a piece of property the strict application of the provisions of the Ordinance would result in exceptional difficulties or the exceptional and undue hardship upon the owner of such property, provided that such relief may be granted without the substantial detriment to the public and without substantially impairing the intent and purpose of this Ordinance. Financial disadvantage to the property owner is no proof of hardship within the purpose of this ordinance and as further explained below. The Board shall not grant a variance unless it makes findings based upon evidence presented to it as follows:

1. Physical or topographical conditions - The particular physical surroundings, shape, or topographic conditions of the specific property involved would result in a particular hardship upon the owner as distinguished from a mere inconvenience, if the strict application of this Ordinance were carried out.
2. Relationship to other properties within the district - The conditions upon which the petition for variance is based would not be applicable, generally, to other property within the same district.
3. Permitted activity - The variance will not authorize activities in a zoning district other than those permitted by this Ordinance.
4. Financial implications - The variance is not based solely on financial returns.
5. Self-created hardship - The alleged difficulty or hardship has not been created by any person having an interest in the property after the effective date of this Ordinance.
6. Special privilege - Granting the variance will not confer on this applicant any special privilege that is denied by this Ordinance to other lands, structures, or building in the same district.
7. Minimum variance required - The variance is the minimum variance that will make possible the reasonable use of the land, building, or structure.
8. Effect on public welfare - Granting the variance will not be detrimental to the public welfare or injurious to other property or improvements in the area in which property is located.
9. Effect on adjacent properties - The variance will not impair an adequate supply of light and air to adjacent property, substantially increase the congestion in the public streets, increase the danger of fire, endanger the public safety, or substantially diminish or impair property values within the area.
10. Physiological conditions – The physical geology of or soil conditions on the site are such that the site has historically not sustained nor is capable of sustaining tree cover.
11. Prohibited uses - Under no circumstances shall the Board of Appeals grant a variance to allow a use not permissible under the terms of this Ordinance in the district involved, or any use expressly or by implication prohibited by the terms of this Ordinance in said district.

C. Conditions and Restrictions by the Board

The Board may impose such conditions and restrictions upon the premises benefited by a variance as may be necessary to reduce or minimize the injurious effect of such variation upon surrounding property and better carry out the general intent of this Ordinance.

SECTION 13-421 PENALTY

Any person, firm or corporation determined by the Arborist to be in violation of any provision of this Ordinance shall be fined fifty dollars (\$50) for each offense, and in addition thereto may be enjoined from continuing the violation. Each tree cut, damaged or poisoned shall constitute a separate offense. When the cut, damaged, or poisoned tree was designated for retention within the Tree Survey, Tree Management Plan, or Tree Replacement Plan, that tree shall be replaced with tree(s) of equal density unit value.

Removal or damage of any specimen tree(s) from within the City limits, including specimen trees located on owner occupied single family or duplex lot, without a tree removal permit issued by the City shall constitute a violation of this Ordinance. Each tree removed or damaged shall constitute a separate offense. Each specimen tree removed without a permit issued by the City shall be replaced with tree(s) equal to twice the density unit value of the removed tree.

SECTION 13-422 SEVERABILITY

If any section, clause, provision, or portion of this Ordinance be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the Ordinance as a whole which other provisions shall remain in full force and effect, or any part thereof, other than the part so declared to be invalid.

SECTION 13-423 PROVISIONS OF FEDERAL AND STATE LAW EXCEPTED

No provision of this Ordinance shall contravene by term or application any existing or later enacted statute or regulation of the Federal or State governments, and in the event of said conflict, the provisions of the State and/or Federal regulations shall control.

THE LAKELAND TREE MANAGEMENT ORDINANCE – APPENDIX A DENSITY FACTOR ANALYSIS

A basic condition of the Lakeland Tree Management Ordinance is that all applicable sites maintain a minimum tree density of twenty (20) units per acre. The term “unit” is an expression of basal area and is not synonymous with “tree.” The density requirement must be met whether or not a site had trees prior to development. The density may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two. For density factor analysis, the following formula shall apply:

$$\text{SDF} = \text{EDF} + \text{RDF}$$

Where:

SDF (Site Density Factor) = The minimum tree density required to be maintained on an applicable site (20 units per acre).

EDF (Existing Density Factor) = Density of existing trees to be preserved on a site.

RDF (Replacement Density Factor) = Density of new trees to be planted on a site.

PROCEDURE FOR CALCULATING THE REQUIRED TREE REPLACEMENT:

Step 1. Calculate the Site Density Factor (SDF):

The SDF is calculated by multiplying the number of site acres by 20.

EXAMPLE: A 2.2 acre site has a SDF of $2.2 \times 20 = 44$

Step 2. Calculate the Existing Density Factor (EDF):

The Existing Density Factor, EDF, is determined by converting the diameter breast height (dbh) of individual trees to density factor units as shown in the following Table 1. These units are totaled to determine the EDF for the site.

EXAMPLE: A total of 8 trees will remain on the 2.2 acre site in Step 1. These trees include:

3-14" elm; 3-18" oaks; 1-20" hickory; 1-30" oak

When converted to density factor units using Table 1, we arrive at the following values:

Dbh	Units x Number of Trees
14"	$3.1 \times 3 = 9.3$
18"	$3.8 \times 3 = 11.4$
20"	$4.2 \times 1 = 4.2$
30"	$6.9 \times 1 = 6.9$
Total Units:	31.8

The total units, 31.8, is the EDF (Existing Density Factor).

Step 3. Calculate the Replacement Density Factor (RDF):

Replacement Density Factor (RDF) is determined by subtracting the EDF from the SDF.

EXAMPLE: $44(\text{SDF}) - 31.8(\text{EDF}) = 12.2$

This means that 12.2 tree units are required as replacements for the total site to meet the requirement of 20 units per acre. The Density Factor credit for each caliper size of replacement (new) trees is shown in the following Table 2.

TABLE 1. CONVERTING EXISTING TREE DIAMETERS TO DENSITY UNITS

DBH	UNITS (hardwood)	UNITS (softwood)	DBH	UNITS (hardwood)	UNITS (softwood)
2-4	2.0	1.5	30	6.9	5.2
5-7	2.3	1.7	31	8.2	6.2
8-9	2.5	1.9	32	8.6	6.5
10	2.6	2.0	33	8.9	6.7
11	2.7	2.0	34	9.3	7.0
12	2.8	2.1	35	9.7	7.3
13	2.9	2.2	36	10.1	7.6
14	3.1	2.3	37	10.5	7.9
15	3.2	2.4	38	10.9	8.2
16	3.4	2.6	39	11.3	8.5
17	3.6	2.7	40	11.7	8.8
18	3.8	2.9	41	12.2	9.2
19	4.0	3.0	42	12.6	9.5
20	4.2	3.2	43	13.1	9.8
21	4.4	3.3	44	13.6	10.2
22	4.6	3.5	45	14.0	10.5
23	4.9	3.7	46	14.5	10.9
24	5.1	3.8	47	15.0	11.3
25	5.4	4.0	48	15.6	11.7
26	5.7	4.3	49	16.1	12.1
27	6.0	4.5	50	16.6	12.5
28	6.3	4.7	51+	20	15.0
29	6.6	5.0			

TABLE 2. CONVERTING REPLACEMENT TREES TO DENSITY UNITS

CALIPER	UNITS (hardwood)	UNITS (softwood)	CALIPER	UNITS (hardwood)	UNITS (softwood)
1"	.4	.3	8"	2.3	1.7
2"	.8	.6	9"	2.5	1.9
3"	1.6	1.2	10"	2.7	2.0
4"	1.7	1.3	11"	2.9	2.2
5"	1.9	1.4	12"	3.1	2.3
6"	2.0	1.5	13"	3.3	2.5
7"	2.2	1.6	14"+	3.5	2.6

A seven (7) gallon container grown pine tree is given replacement credit of .2 units. For tree relocation, replacement units will be granted to trees relocated on site. Tree relocation is subject to Arborist approval.

THE LAKELAND TREE MANAGEMENT ORDINANCE - APPENDIX B

CITY OF LAKELAND TREE BANK FORMULA FOR DETERMINING CONTRIBUTIONS

Contribution calculations are based on two (2) inch caliper replacement trees with a value updated semi-annually, and on file with the City, representing the average size and cost of materials, labor and guarantee for trees planted in The City of Lakeland area.

Example: Based on unit value of tree replacement of \$220.00 (amount subject to change)
To determine the appropriate contribution, first calculate the Density Factor Deficiency (DFD) or unit value which cannot be planted on the site.
Divide the DFD by .8 (the unit value of a 2" caliper hardwood replacement tree) and multiply by \$220.00.

Example: A 2.2 acre site will have a required Site Density Factor of 44.0 units (2.2 X 20 = 44).
The site has existing trees totaling 21.4 units (Existing Density Factor). Due to space limitation, the site can only bear 19.0 units as replacement trees.

Determine the DFD using the formula:

$$\text{DFD} = \text{SDF} - \text{EDF} - \text{Approved RDF}$$

In this example $\text{DFD} = 44.0 - 21.4 - 19.0 = 3.6$ units

This means that a total of 3.6 units of trees are to be planted at a remote site as a form of alternative compliance OR the developer may elect to contribute to The City of Lakeland Tree Bank the value of 3.6 units

Determine the acceptable contribution amount as follows:

$$\text{Divide } 3.6 \text{ by } .8 = 4.5$$

$$4.5 \times \$220.00 = \$990.00 \text{ TOTAL CONTRIBUTION TO TREE BANK}$$