



Forsyth County Tree Protection & Replacement Ordinance



Ordinance Number 98
Revised April 13, 2017

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FORSYTH COUNTY, GEORGIA
ORDINANCE NUMBER 98-D
A RESOLUTION AND ORDINANCE
BY
THE BOARD OF COMMISSIONERS
OF FORSYTH COUNTY

A resolution and ordinance to adopt a Tree Protection and Replacement Ordinance for Forsyth County, by establishing regulations for the protection and replacement of trees within the unincorporated areas of the county.

WHEREAS, the Constitution of the State of Georgia, approved by the voters, of the State in November of 1982, and effective July 1, 1983, provides in article IX, Section II, Paragraph I thereof, that the governing authority of the county may adopt clearly reasonable ordinances, resolution and regulations; and

WHEREAS, O.C.G.A. Section 36-1-20 authorizes counties to enact ordinances for protecting and preserving the public health, safety and welfare of the population of the unincorporated areas of the county; and

WHEREAS, the governing authority of Forsyth County, to wit, the Board of Commissioners, is desirous of executing its authority in adopting the resolution and ordinance; and

WHEREAS, the General Assembly has made the following legislative findings:

1. Trees are proven producers of oxygen, a necessary element to the survival of man, and appreciably reduce the ever-increasing and environmentally dangerous carbon dioxide content of the air; and
2. Trees precipitate dust and other particulate airborne pollutants from the air; and
3. Trees transpire considerable amounts of water each day and thereby purify the air much like the air washer device employed in commercial air conditioning systems; and
4. Trees play a vital role in neutralizing waste water passing through the ground from the surface to groundwater table and lower aquifers; and
5. Trees, through their roots systems, stabilize the groundwater table; and
6. Trees leaves break the onslaught of pelting raindrops upon the soil surface and give the soil a chance to soak up as much water as possible, and when falling, cover the ground to keep the soil from drying out, and, by decaying, replace minerals in the soil and enrich it to support later plant growth; and

7. Trees play a pronounced and important part in community-wide soil conservation, erosion control and reduce storm water runoff; and
8. Trees contribute food and shelter for wildlife in the urban and suburban environment; and
9. Trees are an invaluable psychological counterpart to the manmade urban and suburban setting, camouflaging harsh scenery and unsightly cityscape and softening the outline of masonry, metal and glass; and
10. Trees provide shade and in wooded areas reduce the ground temperature; and
11. Trees provide wind breaks and sound barriers; and
12. Trees increase the value of property and are valuable property assets that can affect an area economically, beautifying the land and breaking the monotony of endless sidewalks and miles of highways and streets.

WHEREAS, it is requisite and proper for the security, welfare, health and convenience of the citizens of Forsyth County, Georgia and for the preservation of peace and good order of said County, a Tree Protection and Replacement Ordinance be adopted and enforced and rules and regulations thereto be established.

ARTICLE 1 FORSYTH COUNTY TREE PROTECTION AND REPLACEMENT ORDINANCE

Section 1.1 Short Title

This enactment may be cited as the “Forsyth County Tree Protection and Replacement Ordinance.”

Section 1.2 Definitions

Agriculture: The commercial cultivation or growth from or on the land of horticultural, floricultural, forestry, dairy, livestock, poultry, and apiarian products. Included within the definition of "agriculture" shall be the importation, storage, or distribution in bulk, unpackaged form of raw materials directly to persons engaged in agriculture. "Raw materials" for purposes of this definition shall include organic materials such as straw, hay, animal feeds, sawdust, mulches, and like items. "Raw materials" shall also include inorganic dolomitic lime. "Raw materials" shall not include farm equipment, building materials, chemicals, fertilizer, manure not produced on the premises, packaged materials not produced on the premises, materials distributed for resale not produced on the premises, or materials not expended in the production of the above listed products.

Basal Area: The cross-sectional area of all trees on a given area measured 4.5 feet above the ground. In American forest practice, it is expressed in square feet for an acre. Example: An acre of land with a Basal Area of 120 would have 120 square feet of cross-sectional trunk area ($3.14 \times r^2$ where r is equal to $\frac{1}{2}$ the diameter of the tree).

Buffer: A natural and/or landscaped open space and/or screen for buffering incompatible land uses, for visibly separating uses through distance to shield or block noise, light, glare, or visual or other nuisances, and/or for protecting natural features such as streams and wetlands.

Caliper: A forestry standard of tree trunk measurement for understory or Replacement Trees. Caliper will be measured at ground level for trees having a 4” Caliper or less.

Clearing: The removal of vegetation from a property, whether by cutting or other means.

Commercial and Industrial Zoning Districts: For the purposes of this ordinance the following zoning district are defined as commercial and industrial: NS, UV, HB, CBD, HC, BP, O&I, OCMS, M1, M2, OR, and MINE. Additionally, any zoning district created after the adoption of this ordinance will be classified as a ‘residential zoning district’ or a

‘commercial and industrial zoning district’, by the Director of the Department of Planning and Development, depending on the characteristics of the new zoning district.

Critical Root Zone: The minimum area beneath a tree that must be left undisturbed in order to preserve sufficient root mass to give a tree a reasonable chance of survival. The Critical Root Zone (CRZ) is a circle centered on the tree’s trunk with a radius equal in feet to 1.3 times the number of inches of the tree’s Diameter at Breast Height.

EXAMPLE: a tree with a diameter of 20 inches would have a CRZ radius of 26 feet.

Density Factor: A unit of measure used to prescribe the calculated required tree coverage on a Site.

Department of Planning and Development: Forsyth County Department of Planning and Development, or successor department, by whatever title designated.

Disturbed Area: Land area subject to any Land-Disturbing Activity.

Diameter Breast Height (DBH): The standard measure of tree size, is the diameter of a tree trunk measured in inches at a height of 4 and 1/2 feet above the ground. If a tree splits into multiple trunks below 4 1/2 feet, then the trunk is measured at its most narrow point beneath the split.

Director: The manager of the Department of Planning and Development, or his successor to his duties, by whatever title designated, or his designee.

Dripline: A line on the ground established by a vertical plane extending from a tree’s outermost branch tips down to the ground; i.e., the line enclosing the area directly beneath the tree’s crown from which rainfall would drip.

Grading: The placement, removal, or movement of earth by use of mechanical equipment on a property. This includes stripping, cutting, filling, stock piling, or any combination thereof, and shall include the land itself in its cut or filled condition.

Growing Season: A period of not less than twelve (12) months during which there are at least three (3) contiguous months of dormancy followed by a spring leafing.

Hardwood Tree: Any tree that is not coniferous (not cone bearing or a needle leaf evergreen).

Hazard Trees: Any tree or tree part that poses a risk of danger or injury upon failure or fracture for damage or injury. Generally recognized as a 0 (no hazard) to 9 (high hazard) score with 0 to 3 points assigned for failure potential, size of part, and target rating.

Reference the book, Evaluation of Hazard trees in Urban Areas, Nelda P. Matheny and James R. Clark, International Society of Arboriculture, 1991.

Historic and Landmark Trees: Any tree or group of trees which the Georgia Urban Forest Council has included on The Georgia Landmark and Historic Tree Register.

Large Tree: See Overstory Tree

Land Disturbance Permit: The authorization necessary to begin a Land-Disturbing Activity under the provisions of the Unified Development Code.

Land-Disturbing Activity: Any Grading, scraping, excavating, or filling of land; clearing of vegetation; and any construction, rebuilding, or alteration of a structure. Land-Disturbing Activity shall not include activities such as ordinary maintenance and landscaping operations, individual home gardens, yard and grounds upkeep, repairs, additions or minor modifications to a single family dwelling, and the cutting of firewood for personal use.

Lot: A portion or parcel of land separated from other portions or parcels by description (such as on a subdivision plat of record or a survey map or plat) or described by metes and bounds, and intended for use, transfer of ownership, or for building development. The word "Lot" shall not include any portion of a dedicated right-of-way. For purposes of calculating Lot sizes, a Lot shall also exclude any areas reserved for easements upon which, by the nature thereof, construction is prohibited, i.e., easements for ingress and egress to other Lots or properties, major power line transmission easements, etc. For purposes of calculating Lot sizes, "Lot" shall also not include strips of property, with widths less than the minimum Lot width of the particular zoning district, intended to provide access to a given Lot or parcel; provided, however, land less than the minimum required Lot width may be considered as part of the square footage Lot size calculation in those instances where Lot lines are radial to a curved street or cul-de-sac on a major or minor subdivision plat approved by the Planning Department or the Planning Commission.

Overstory Tree: Those trees that compose the top layer or canopy of vegetation and will generally reach a mature height of (40) feet or more.

Parking Bay, Single: The clear space containing one row of parking stalls.

Parking Bay, Double: The clear space containing two rows of parking stalls.

Person: A natural human being, estate, association, firm, partnership, corporation, or other legal entity.

Replacement Tree: A new tree planted on a Site to meet minimum Site Density Factor requirements.

Residential Zoning District: For the purposes of this ordinance the following zoning district are defined as residential: R1R, CR1, R1, R2R, OSR, R2, R3, R4, RES1, RES2, RES3, RES4, RES6, LR, A1, A2, A RES, CONS, and PUD. Additionally, any zoning district created after the adoption of this ordinance will be classified as a ‘residential zoning district’ or a ‘commercial and industrial zoning district’, by the Director of the Department of Planning and Development, depending on the characteristics of the new zoning district.

Significant Tree: Any historic, landmark or specimen tree; or any tree deemed by the Director, registered forester or landscape architect to be of a rare or unusual species.

Site: Any plot or parcel of land, or a combination of contiguous Lots or parcels of land, where Grading, building, construction, or alteration is performed or permitted.

Site Density Factor: The minimum number of tree density units per acre, including recompense for Significant Trees, that must be achieved on a property after development.

Small Tree: See Understory Tree

Softwood Tree: Any coniferous (cone bearing or needle leaf evergreen) tree.

Specimen Tree or Stand: Any tree or grouping of trees which has been determined, by the Director, to be of high value because of its species, size, age, or other professional criteria. General criteria for the determination of specimen trees or stands of trees are provided in Appendix C.

Tree Density Unit: A credit assigned to a tree, based on the diameter of the tree, in accordance with tables contained in this Ordinance.

Tree: Any self-supporting woody perennial plant, usually having a main stem or trunk and many branches, and at maturity normally attaining a trunk diameter greater than three inches at any point and a height of over ten feet.

Tree Diameter: The widest cross-sectional dimension of a tree trunk measured at Diameter Breast Height (DBH) or at a point below DBH for new trees or multi-trunked species, but in no case less than 6 inches from the ground.

Tree Protection Area: Any portion on a Site wherein are located existing trees that are proposed to be retained in order to comply with the requirements of this Ordinance or any other existing trees proposed to be retained due to zoning conditions or requirements from other Ordinances.

Tree Protection and/or Replacement Plan (TP/RP): A plan that identifies Tree Protection Areas, existing trees to be retained and proposed trees to be planted on a Site

to meet minimum requirements, as well as methods of tree protection to be undertaken on the Site and other pertinent information.

Tree Save Area: Any portion of a Site wherein are located existing trees that are proposed to be retained in order to comply with the requirements of this Ordinance. The Tree Save Area shall include no less than the total area defined by the Critical Root Zone (CRZ) of a tree or a group of trees, collectively.

Understory Tree: Those trees that grow beneath the overstory, and will generally reach a mature height of under forty (40) feet.

Section 1.3 Scope

The terms and provisions of this Ordinance shall apply to all real property being within the unincorporated areas of Forsyth County.

Section 1.4 Severability and Conflicts

- A. If any provision of this Ordinance is found by a court of competent jurisdiction to be invalid or unconstitutional, or if the application is found to be invalid or unconstitutional, such as invalidity or unconstitutionality shall not affect other provisions or applications of this Ordinance which can be given effect without the invalid or unconstitutional provision or application.
- B. All laws, resolutions, or Ordinances or parts thereof that conflict with the provisions of this Ordinance are repealed, including the repeal of the heretofore-existing Ordinance 81 and any amendments thereto.

ARTICLE 2 APPLICABILITY AND PERMITTING

Section 2.1 Exemptions

The following activities are specifically exempted from this Ordinance

1. The construction of single-family detached and duplex dwellings in subdivisions of six (6) or less homes;
2. Any addition, alteration, improvement or remodeling of an existing residence or the construction of structures accessory to an existing residence;
3. Tree removal by individual single-family detached and duplex homeowners;

4. The construction of telecommunication towers (cell towers);
5. Land Clearing or Clearing and grubbing activities for bona fide agricultural purposes permitted in the A1 and A2 zoning districts;
6. Removing trees from nurseries and botanical gardens, which are being grown for retail or wholesale sale;
7. Growing orchards of trees in active commercial operation for bona fide agricultural purposes only;
8. Public utility companies and government agencies conducting operation on public and utility rights-of-way and easements or on Sites for electric power substations and similar facilities which operations are for the purpose of assuring uninterrupted utility and governmental services and unobstructed passage on public streets;
9. Removal of diseased or infested trees upon receiving written confirmation from the County Extension service, Georgia Forestry Commission or Director.
10. Unzoned tracts of property as described in O.C.G.A. 12-6-24 (e) (4) (B).
11. Timber Harvesting as provided in O.C.G.A. 12-6-24 (e).

Section 2.2 Zoning Applications

All zoning applications shall include a sworn statement that the property has not been clear cut within three (3) years prior to the zoning application, and shall state that the property will not be clear cut prior to a decision by the Board of Commissioners on the zoning. Any property which has been clear cut within three years prior to the date of the zoning application, shall not be eligible for rezoning for a period of three years from the date said property was clear cut.

Section 2.3 Permit Procedures

- A. All applications for a Land Disturbance Permit shall require submission and approval of a Tree Protection and/or Replacement Plan as defined in this Ordinance.
- B. All Tree Protection and/or Replacement Plans and related documents shall be reviewed by the Department of Planning and Development for conformance to the provisions of these regulations. The permit process shall be identical to that described in the UDC, but will require approval and sign-off of the Tree Protection and/or Replacement Plan.

- C. Department of Planning and Development sign-off shall constitute an approval of the required Tree Protection and/or Replacement Plan and conformance to the provisions of these regulations.

Section 2.4 Tree Protection Standards

The following section establishes standards by which plans and field conditions are to be evaluated to determine compliance with the Forsyth County Tree Protection and Replacement Ordinance.

A. Protection of Existing Trees

If trees are existing on the Site, the required density (see section 2.11) should be met with those trees. If this cannot be done, Replacement Trees are required. A Tree Protection and/or Replacement Plan must be a part of the approved Land Disturbance Plan (refer to section 2.8 for specific requirements of a Tree Protection and/or Replacement Plan).

When a choice is available as to which existing trees to save, Significant Trees, even isolated individual trees, should be given preference over other trees. Non-Significant Trees, however, should be saved in stands rather than as individual trees scattered over a Site.

B. Tree Inventories and Surveys

All trees that are to be counted toward meeting density requirements must be inventoried. Existing trees within buffers may not be counted toward the required Site Density Factor. On Sites greater than three (3) acres, all trees counted must be inventoried using an approved scientific method (e.g., Basal Area). On Sites three (3) acres or less, all trees need to be individually counted.

Significant Trees must be shown on the Tree Protection and/or Replacement Plan with an indication whether they are to be retained or removed. Approximate locations are acceptable.

C. Plan Review Standards

1. All Tree Save Areas must be delineated on the Tree Protection and/or Replacement Plan along with a designation whether protection during construction is to be active or passive as set forth in section 2.4.E.
2. The method used to inventory the trees must be indicated on the plans.

3. All Buffers must be identified on the Tree Protection and/or Replacement Plan.

D. Construction Standards

Tree protection devices are necessary to eliminate activities detrimental to trees including but not limited to:

1. Soil compaction in the Critical Root Zone from heavy equipment, vehicular or excessive pedestrian traffic, or storage of equipment or materials;
2. Root disturbance due to cuts, fills or trenching;
3. Wounds to exposed roots, trunks or limbs;
4. Other activities such as chemical storage, cement truck cleaning, fire, etc.

E. Location and Types of Tree Protection Devices

Tree protection devices are to be installed as shown on the Tree Protection and/or Replacement Plan or otherwise completely surrounding the Critical Root Zone of all trees to be preserved. Active protection is required where Tree Save Areas are located in proximity to construction activity. Passive protection may be used in more remote locations and in all Tree Protection Areas not designated as Tree Save Areas as determined by the Director. Once Tree Protection Areas are established and approved, any changes are subject to Department of Planning and Development review.

F. Materials

1. Active tree protection shall consist of chain link, orange laminated plastic, wooden post, rail fencing or other equivalent restraining material (See Detail 3-- *Active Tree Protection*).
2. Passive protection shall consist of heavy mill plastic flagging of a bright color or equivalent signage on a continuous, durable restraint sufficient to delineate the bounds of any tree protection or save areas (See Detail 2-- *Passive Tree Protection*).

G. Sequence of Installation and Removal

All tree protection devices shall be installed prior to any Land-Disturbing Activity. The Department of Planning and Development will inspect the installation of tree protection devices. It shall be the sole responsibility of the property owner and/or developer to ensure that all Tree Protection devices remain in functioning condition throughout all phases of

development. In the event Passive Tree Protection is not kept in functioning condition, Active Tree Protection may be required throughout the project.

H. Other Specifications

1. Where Clearing has been approved, trees shall be removed in a manner that does not adversely impact the trees to be preserved. Avoid felling trees into Tree Protection Areas or disturbing roots inside the Tree Protection Areas.
2. All erosion and sedimentation control measures shall be installed so that sediment will not accumulate within the Tree Protection Area.
3. All Tree Protection Areas shall be designated as such with “Tree Protection Area” signs posted visibly on all sides of the fenced-in area. These signs are intended to inform subcontractors of the tree protection process. Signs requesting subcontractor cooperation and compliance with the tree protection standards are recommended for Site entrances.

Section 2.5 Tree Replacement Standards

The following section establishes standards by which Tree Protection and/or Replacement Plans and field conditions are to be evaluated to determine compliance with the Forsyth County Tree Protection and Replacement Ordinance.

Tree Protection and/or Replacement Plans should be prepared with appropriate consideration given to the function of trees in the urban landscape. Every effort should be made to maximize the environmental benefit of the plant material.

Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of 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 Transplanting Manual*” or similar publication. Reference the American Association of Nurserymen publication “*American Standard for Nursery Stock*” (ANSI Z60,1) for plant material quality specifications.

Reference the “*Manual for Woody Landscape Plants*” (Michael A. Dirr) or similar publication for information on tree species Site requirements.

A. Tree Planting Standards

1. Always pick a tree up by the container or root ball, never by the trunk.
2. The hole should be a minimum of 1-½ times the width of the root ball with sloped sides.
3. The depth of the hole should be no deeper than the height between the bottom of the root ball and the trunk flare.
4. Once the tree is placed in the hole, the burlap and wire basket must be removed a minimum of 12 inches from the top of the root ball.
5. Backfill soil should not be amended.
6. Stake only if necessary.

B. Species

Species selected as Replacement Trees must be quality species, and must be ecologically compatible with the intended-growing Site.

Ornamental species are acceptable for use in meeting density requirements only with prior approval from the Director and only for the replacement of understory trees.

C. Minimum Root Zones

In order to provide sufficient growing area for planted trees, the following minimum criteria must be observed unless otherwise approved by the Director:

Large Trees:	400-sq. ft. of pervious root zone minimum
Small Trees:	100-sq. ft. of pervious root zone minimum
All Planting strips:	Ten- (10) feet minimum width

Section 2.6 Special Requirements

The following classifications will be required to comply with these special requirements in addition to the standard requirements of this ordinance.

A. Residential Zoning District

1. The Site Density Factor for development in Residential Zoning Districts shall be met by preserving or replacing trees in common areas, rear and exterior setbacks, and other areas that are not to be disturbed during house construction.

2. Each single family residential lot shall contain a minimum of two trees, at least one of which must be located in the front yard. Corner lots shall contain a minimum of three trees with at least one tree located in each yard abutting the streets. The required trees must be a minimum of 2-inch caliper size and be an overstory hardwood species. Where planting space is limited or an overstory tree would not be compatible with the intended growing site, the use of understory species may be approved on a case by case basis as determined by the Director. Existing or replacement trees may be used to satisfy this requirement. The trees may be counted toward the required Site Density Factor for the project.

B. Commercial and Industrial Zoning Districts Subdivisions

Subdivisions in Commercial and Industrial Zoning Districts require the Site Density Factor to be shown on the as built. At the time of Site development, each Lot must submit a Tree Protection and/or Replacement Plan indicating compliance with the Tree Protection and Replacement Ordinance. Specimen Tree liability shall be assessed against the entire development on a prorated per Lot basis.

Section 2.7 Location of Trees within a Development (This section does not apply to Single Family Development)

Forsyth County has given priority to the retention and placement of trees in frontage planting strips and parking lot planting islands. Trees retained or placed in these areas may be used to meet the Site Density Factor for a project. However, if the Site Density Factor is met with trees saved or planted in other areas, the tree location guidelines outlined below must still be performed with additional tree plantings.

A. Frontage Planting Strips

Planting strips shall meet the minimum depth requirements as indicated in the following table. Trees equivalent to at least one Tree Density Unit (see Table A) for every 75 linear feet of length shall be saved or planted in such strips (trees may be planted in groups rather than in a single line). Any trees placed between the right-of-way line or utility easement and the construction area (the buildings, accessory uses, or parking area) may be considered to be in the planting strips. (See Appendix A, Detail One – *Frontage Planting Strips*)

Zoning District	Depth of Strip Adjoining Street right-of-way or easement (feet)
Multi Family Residential	20
Commercial	10
Industrial	10

B. Landscape Islands

Landscape islands shall be provided within parking areas (but not within vehicle storage, maneuvering, or display areas) as follows:

1. Landscape islands shall be located at the end of every Parking Bay and at every 150 linear feet of continuous parking space. Measuring from the trunk, the tree must be a minimum of 6 feet from the back of the curb. No portion of an island less than three feet in width may be counted in the area. Landscape islands for Single Parking Bays shall contain a minimum of 200 square feet. Landscape islands for Double Parking Bays shall require a minimum of two 200 square foot islands or one continuous Landscape Island of 400 square feet.
2. Landscape islands shall be located in such a manner as to divide and break up the parking area. A planting area, which intrudes upon or is located wholly within a generally rectangular area that is (a) devoted to parking and (b) between a building and a Lot line or between two buildings will generally serve this purpose.
3. At least one Overstory Tree shall be planted in every landscape island.
4. Method of irrigation shall be indicated on the on Tree Protection and/or Replacement Plan.

Section 2.8 Tree Protection and/or Replacement Plan Requirements

Tree Protection and/or Replacement Plans shall be prepared by a professional Landscape Architect, Urban Forester, or Arborist in accordance with the specifications for such plans contained herein. The performance of professional services in the preparation of plans required herein shall comply with Georgia Law governing the practice of the applicable profession. When the planting of replacement trees is not required to meet the Site Density Factor, licensed professionals (e.g. architects, engineers, surveyors etc.) may be authorized by the Director to prepare the Tree Protection and/or Replacement Plan, provided that they demonstrate, to the satisfaction of the Director, competency and knowledge in the principles and practices of arboriculture.

The Tree Protection and/or Replacement Plan shall be shown on a copy of a Site plan, as appropriate to the proposed development, drawn to the same scale as the other plan documents prepared for a Land Disturbance Permit application on the property, and shall cover the same area.

After the submission of the plan, the Director will perform a Site walk. The Tree Protection and/or Replacement Plan shall provide sufficient information and detail to clearly demonstrate that all applicable requirements and standards of this Ordinance will be fully satisfied.

Section 2.9 Tree Protection and/or Replacement Plan Elements

Tree Protection and/or Replacement Plans shall include the following:

- A. All Tree Protection Areas.
- B. Approximate location of all Specimen Trees or stands of trees.
- C. Exact location of all Specimen Trees when their protection is questionable, or might result in a change of Site design.
- D. Indicate those Specimen Trees to be removed and reason for removal.
- E. Indicate limits of Disturbed Area.
- F. Existing and proposed location of underground utilities or easements.
- G. Methods of tree protection shall be indicated for all Tree Protection Areas, including but not limited to tree fencing, erosion control, retaining walls, tunneling for utilities, aeration systems, transplanting, staking, signage, etc.
- H. Indicate staging areas for parking, material storage, concrete washout, debris burn and burial holes where these areas might negatively impact protected trees.
- I. The required Site Density Factor must be satisfied. Compliance shall be demonstrated on the Tree Protection and/or Replacement Plan. Existing trees or stands of trees used in the density calculation must be indicated on the plan.
- J. A planting schedule showing the type (common and botanical names), size and quantity of trees to be planted, and any special planting notes.
- K. The locations of all trees to be planted on the Site to meet density requirements.
- L. A note indicating the type of irrigation to be used.
- M. Additional information as required by the Director on a case by case basis.
- N. The following notes: see Appendix A.

Section 2.10 Plan Review Procedures

The Department of Planning and Development administers the Forsyth County Tree Protection and Replacement Ordinance. The Director is the primary tree plan reviewer, and is responsible for making professional judgments regarding any arboricultural principles or practices related to the implementation of this Ordinance.

A. Pre-Submittal Conference

Developers and design professionals are encouraged to meet with the Director and/or other Department of Planning and Development professional staff prior to submitting a Tree Protection and/or Replacement Plan. The Director is available for field inspections of Site conditions prior to submittal to give advice as to the relative value of trees, and to assist in the Tree Protection and/or Replacement Plan development process as it relates to preserving trees. Information can also be disseminated about how to prepare a Tree Protection and/or Replacement Plan.

B. Land Disturbance Permit

Tree Protection and/or Replacement Plans shall be submitted with other permit drawings as part of the plan approval and/or Land Disturbance Permit process as required in the Unified Development Code. The Department of Planning and Development shall review these plans for conformance with the Tree Protection and Replacement Ordinance in the manner specified in the Unified Development Code.

Section 2.11 Density Requirements

The quantity of total existing and Replacement Trees on a Site must be sufficient so as to produce a total Site Density of no less than:

- Fifteen (15) units per acre for property in Commercial and Industrial Zoning Districts;
- Eighteen (18) units per acre for Planned Commercial Developments or Mixed Use Developments (wherein the commercial component of the mixed use exceeds 50% of the development) that meet or exceed the threshold for Developments of Regional Impact (“DRI”);
- Twenty (20) units per acre for property in Residential Zoning Districts.

The Site Density Factor shall be calculated using the total acreage from Disturbed Areas. Units should be distributed throughout the development and not located in only one area.

Site Density calculation for mixed use development will be based on land use as determined by the Director. Procedures for determining the Site density requirements and subsequent tree replacements are provided in Appendix B.

Section 2.12 Significant Trees

Some trees on a Site warrant special consideration and encouragement for protection. These trees are referred to as Significant Trees. Significant Trees are composed of Specimen, Historic, and Landmark trees. Criteria for determining Specimen, Historic, and Landmark trees can be found in Appendix C.

To obtain credit as a Significant Tree, Significant Trees are to be protected in their natural state, free from damage. In order to encourage protection of Significant Trees and the incorporation of these trees into the design of projects additional density credit will be given for Significant Trees that are successfully saved. Credit for any Significant Tree saved will be four (4) times the assigned unit value shown in Table A, Appendix B “Trees to Remain on Site.” Significant Trees that need to be removed require a plan or written documentation indicating the reason for removal to be submitted to the Department of Planning and Development prior to the removal. Specimen trees removed with prior approval from the Department of Planning and Development must be replaced at the rate of one unit for each unit awarded it in Table A, Appendix B, in addition to the minimum Site Density Factor in recompense for their removal. Specimen trees must be replaced by species with similar characteristics. If a Specimen, Historic or Landmark tree is damaged or removed without prior approval by the Director, recompense or penalty will be required or imposed as follows:

- A. Any Specimen Tree that is removed without the appropriate review and approval of the Director must be replaced by trees with a total density equal to twice the unit value of the tree removed. Size alone will determine whether a tree was of specimen quality if the tree is removed without approval and there is no evidence of its condition.
- B. If a Historic or Landmark tree is damaged or removed without prior approval of the Director, the Department of Planning and Development will require replacement by trees with a total density equal to eight times the unit value of the tree removed.

- C. In the event the Director determines a Specimen, Historic or Landmark tree is a hazard to property, power lines or people the tree may be removed without recompense or penalty.

Replacement of Specimen Trees removed shall not be required for Planned Commercial Developments or Mixed Use Developments (wherein the commercial component of the mixed use exceeds 50% of the development) that meet or exceed the threshold for Developments of Regional Impact (“DRI”).

Section 2.13 Alternative Compliance

Where the minimum density requirements cannot be fully met, due to Site conditions, the applicant must have the approval of the Director, to make a contribution to the Tree Replacement Fund of Forsyth County. Such contributions will be used for the sole purpose of planting trees on public property. Contribution to the Tree Replacement Fund must have the approval of the Director and be paid in full prior to the issuance of any permit.

The Tree Replacement Fund is to act as an “emergency relief valve” and is to be utilized at the County’s discretion. When it has been determined the required Site Density Factor cannot be met with residual or planted trees, a contribution equal to \$400 per unit for each unit short of the requirement must be paid into the Tree Replacement Fund by the developer.

Section 2.14 Maintenance Period for Development in Commercial and Industrial Zoning Districts

Trees, which are used to meet the density requirements, shall be maintained for one (1) full Growing Season after the date of final inspection. After one (1) full Growing Season a maintenance inspection will be performed by the Director to determine if the project is still in compliance with the Tree Protection and Replacement Ordinance. Any trees planted to meet the required Site Density requirement, which are dead or near death must be replaced. Trees protected to meet the required Site Density which are dead or near death at the time of the maintenance inspection must be replaced if there is evidence that the demise of such trees was due an act or omission that caused the tree to deteriorate.

Any trees required to be replaced by this inspection must be planted within 30 days of receipt of notification by the current owner(s). New tree plantings may be postponed for up to six (6) month by posting a performance security (see section 3.1). Failure to plant new trees in accordance with these provisions will constitute a violation of this Ordinance, and will subject the property owner to civil penalties as set forth in this Ordinance.

ARTICLE 3 ENFORCEMENT PROCEDURES

Section 3.1 Performance Security

When planting stock availability is low or weather conditions are not appropriate for planting new trees, the project owner may postpone planting for up to six (6) months, provided that performance security is posted with Forsyth County in accordance with the following criteria:

- A. Security shall be in an approved form submitted to the Department of Planning and Development with appropriate documentation of stock availability and weather conditions.
- B. Security shall be in an amount equal to 110 percent of the cost of materials, installation, and guarantee, as demonstrated by a signed contract between the owner and a landscape contractor and approval by Department of Planning and Development.

An inspection shall be made by the Department of Planning and Development of all tree plantings to assure compliance with plan requirements prior to release of the performance security. Forsyth County will use the performance security at the time of expiration if the planting requirements have not been fulfilled, or if the owner has not requested an extension. Funds received from the performance security will be used to bring the project into compliance. One six (6) month extension is permitted with documented justification. Any inspections performed after the final inspection (for project release) are subject to re-inspection fee schedules, which shall be maintained on file at the Department of Planning and Development.

Section 3.2 Inspection

The Director may periodically inspect the project during the course thereof and shall make a final inspection following the completion of work. Applicants shall cooperate with the Department of Planning and Development in making such inspections. The Department

of Planning and Development shall have the power to conduct such investigations as it may reasonably deem necessary to carry out duties as prescribed in this Ordinance, and for the purpose of entering at reasonable times upon any property, public or private, for the purpose of investigating and inspecting the Sites of any Land-Disturbing Activities.

No Person shall refuse entry or access to any authorized County employee who request entry for the purpose of inspection, and who presents appropriate credentials, nor shall any Person obstruct, hamper or interfere with any such representative while in the process of carrying out his official duties.

Prior to the issuance of a permit for any Land-Disturbing Activity, the Department of Planning and Development must inspect all tree protection devices for compliance with the Tree Protection and/or Replacement Plan. Failure to adhere to Tree Protection and/or Replacement Plan will subject the project to enforcement procedures found in this Ordinance (Article 3).

Prior to the issuance of a certificate of occupancy, final plat, or other forms of County acceptance, the Department of Planning and Development shall inspect for compliance with all Tree Protection and Replacement Ordinance requirements. Any disturbances in Tree Save Areas or deficiencies in the required Site Density Factor will be cited at this time. Tree Save Area deficiencies must be corrected with new tree plantings prior to project release.

Existing trees, which are not expected to survive, will not be counted toward meeting density requirements. Conversely, any existing trees not shown to remain on plans but which have been saved (meeting all tree protection standards) through field adjustments may be counted toward density requirements, provided that all changes are recorded.

Once a Tree Save Area has been established through the Department of Planning and Development plan approval process, any destruction of trees in that area must be mitigated by planting new trees to a density factor of 60 units per acre. A Revised Tree Protection and/or Replacement Plan must be submitted and approved by the Department of Planning and Development.

Section 3.3 Remedial Care

Trees in Tree Save Areas, which have been adversely impacted by the construction process, may be subject to remedial care. Remedial care will be performed at the discretion of the Director and may include (but is not limited to) the following:

- Pruning
- Soil Aeration
- Fertilization
- Supplemental Watering

Section 3.4 Stop-Work Orders, Suspension, Revocation and/or

Modification of Permit Civil Penalties

Any County issued permit may be suspended, revoked or modified by the Director upon finding that the holder is in violation of the terms of the permit or any portion of this Ordinance.

- A. If it is determined that a Person has engaged in Land-Disturbing Activities and has failed to comply with the terms and conditions of this Ordinance, a written notice to comply shall be posted on Site. Failure to comply with the terms and conditions of this ordinance within three (3) days after such notice of non-compliance has been issued shall result in immediate issuance of a stop work order. Where any emergency exists, as determined by the Director, no written notice shall be required before a stop work order is issued.
- B. Any Person violating any provision of this ordinance, permitting condition or stop-work order shall be subject to issuance of a Magistrate Court Citation, which may result in a fine up to \$1000 per violation or by imprisonment for a period not to exceed (60) sixty days, or both.

In addition to or in lieu of any civil penalty, the Department of Planning and Development shall require the replacement of trees by the Person violating this Ordinance in order to meet the minimum requirements set out herein.

Section 3.5 Fees

Permit processing and/or inspection fees may be established from time to time by the Department of Planning and Development.

ARTICLE 4 TREE PROTECTION COMMISSION

Section 4.1 Establishment; Appointment of Members

There is hereby established a Tree Protection Commission of Forsyth County, Georgia. The Tree Protection Commission shall consist of five (5) members appointed by unanimous decision of the Board of Commissioners, as follows:

- One member shall be a registered landscape architect;
- One member shall be a botanist, arborist, forester, horticulturist or nurseryman;
- One member shall be a registered architect or engineer;
- One member shall be a member of the development community, land disturbance industry, or home building industry;
- One member shall be a lay citizen interested in environmental protection or the preservation of trees in Forsyth County.

Section 4.2 Vacancies and Compensation

The Tree Protection Commission membership shall contain five members each appointed for a term of four years. Members of the tree protection commission may be appointed for consecutive terms consistent with the general laws regulating service on Forsyth County boards and commissions. The Chairman of the Forsyth County Board of Commissioners may recommend removal and replacement of a member of the tree protection commission for nonperformance of duty. Any such recommendation of removal must be ratified by a majority vote of the Forsyth County Board of Commissioners. Any vacancy in the membership of the Tree Protection Commission shall be filled in the same manner as the initial appointment. All members shall serve without compensation. The tree protection commission shall select from its members a chairperson to serve for a one-year term.

Section 4.3 Function, Power; Duties

- A. The Tree Protection Commission shall hear and decide appeals of decisions authorized by this ordinance.
- B. The Tree Protection Commission shall establish educational and other programs to encourage proper management and maintenance of trees on private property in the unincorporated areas of Forsyth County.

- C. The Tree Protection Commission shall review and recommend amendments to the Forsyth County Tree Protection and Replacement Ordinance.

Section 4.4 Appeals of Decisions of Administrative Officials

Appeals may be taken by any Person aggrieved by any decision authorized by this Ordinance, by filing with the Tree Protection Commission a notice of appeal specifying the grounds thereof, within thirty days after the action appealed from was taken. An appeal stays all proceedings in furtherance of the action appealed from unless the official from whom the appeal is taken certifies to the Tree Preservation Commission, after notice of appeal shall have been filed, that by reason of facts stated in the certificate, a stay would, in his or her opinion, cause imminent peril to life and property. In such case, proceedings shall not be stayed otherwise than by a restraining order which may be granted by the Tree Protection Commission or court of record on application, on notice to the official from whom the appeal is taken, and on due cause shown. The Tree Protection Commission shall fix a reasonable time for the hearing of the appeal and shall give notice thereof as well as due notice to the parties in interest. Upon the hearing, any party may appear in Person or by agent or by attorney. The Tree Protection Commission shall decide the appeal within 30 days of submittal. If no decision is made within this time frame, the appeal shall be considered approved. An appeal shall be sustained upon an expressed finding by the Tree Protection Commission that the administrative official's action was based upon an erroneous finding of a material fact, or that he or she acted in an arbitrary manner. In exercising its powers, the Tree Protection Commission may reverse or affirm, wholly or partly, or may modify the order, requirement, decision or determination appealed from and to that end shall have all the powers of the administrative official from whom the appeal was taken and may issue or direct the issuance of a permit provided that all requirements imposed by the applicable laws other than these are met.

Any Person aggrieved by a decision of the Tree Protection Commission may appeal such decision to the Forsyth County Zoning Board of Appeals. Such Person is entitled to the benefit of the powers and procedures of the appeal process outlined in the Unified Development Code, and any subsequent amendments, provided that they have been heard and aggrieved by a decision of the Tree Preservation Commission.

Section 4.5 Meetings and Rules of Procedures

The Tree Protection Commission shall establish a regular meeting schedule and all meetings of the Tree Protection Commission shall be open to the public. The Tree Protection Commission shall adopt rules of procedures for the conduct of meetings, hearings and attendance requirements for members.

ARTICLE 5 EFFECTIVE DATE

THIS RESOLUTION AND ORDINANCE SHALL BE EFFECTIVE ON
April 13, 2017, the public health, safety and general welfare demanding it.

FORSYTH COUNTY BOARD OF COMMISSIONERS



Todd Levent, Chairman



Rick Swope, Vice Chairman



Laura Semanson, Secretary



Ralph J. Amos, Member



Cindy Jones Mills, Member

Attest:



Sonya Bush, Clerk to the Board

References

- Georgia Gardener's Guide.* Erica Glasner & Walter Reeves. Cool Springs Press, Franklin TN, 1997; ISBN: 1-888608-08-0
- Know It and Grow It III.* Carl E. Whitcomb. Lacebark Inc., Stillwater, Ok, 1975; ISBN: 0-88192-148-3
- Landscape Plants of the Southeast.* R. Gordon Halfacre and Anne R. Shawcroft. Sharks Press, Inc., Raleigh, NC, 1989; ISBN: 0-916822-14-1
- Manual of Woody Landscape Plants.* Michael A. Dirr. Stipes Publishing Co., Champaign, IL, 1975; ISBN: 0-87563-347-1
- The Southern Gardener's Book of Lists.* Lois Trigg Chaplin. Taylor Publishing, Dallas, TX, 1994; ISBN: 0-87833-844-6
- Trees of Georgia and Adjacent States.* Claud L Brown & Katherine Kirkman. Timber Press, Inc., Portland, OR; ISBN: 0-88192-148-3

Appendix A: Notes and Details

The following notes must be on the Tree Protection and/or Replacement Plan.

TREE PROTECTION NOTES:

TREE PROTECTION FENCING MUST BE INSTALLED AND INSPECTED PRIOR TO OR CONCURRENT WITH ANY CLEARING, GRUBBING OR GRADING. CALL THE DEPARTMENT OF PLANNING AND DEVELOPMENT FOR AN INSPECTION.

TREE PROTECTION SHALL BE ENFORCED ACCORDING TO THE FORSYTH COUNTY TREE PRESEVATION AND REPLACEMENT ORDINANCE.

THE DENSITY REQUIREMENTS SHOWN ON THE TREE PROTECTION AND/OR REPLACEMENT PLAN MUST BE VERIFIED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY OR ACCEPTANCE OF THE FINAL PLAT. CALL THE DEPARTMENT OF PLANNING AND DEVELOPMENT FOR AN INSPECTION.

WITH THE EXCEPTION OF SINGLE FAMILY RESIDENTIAL DEVELOPMENTS, MAINTENANCE INSPECTION FOR TREES WILL BE PERFORMED AFTER ONE FULL GROWING SEASON FROM THE DATE OF THE FINAL SITE INSPECTION. PROJECT OWNERS AT THE TIME OF THE MAINTENANCE INSPECTION ARE RESPONSIBLE FOR SCHEDULING THIS INSPECTION.

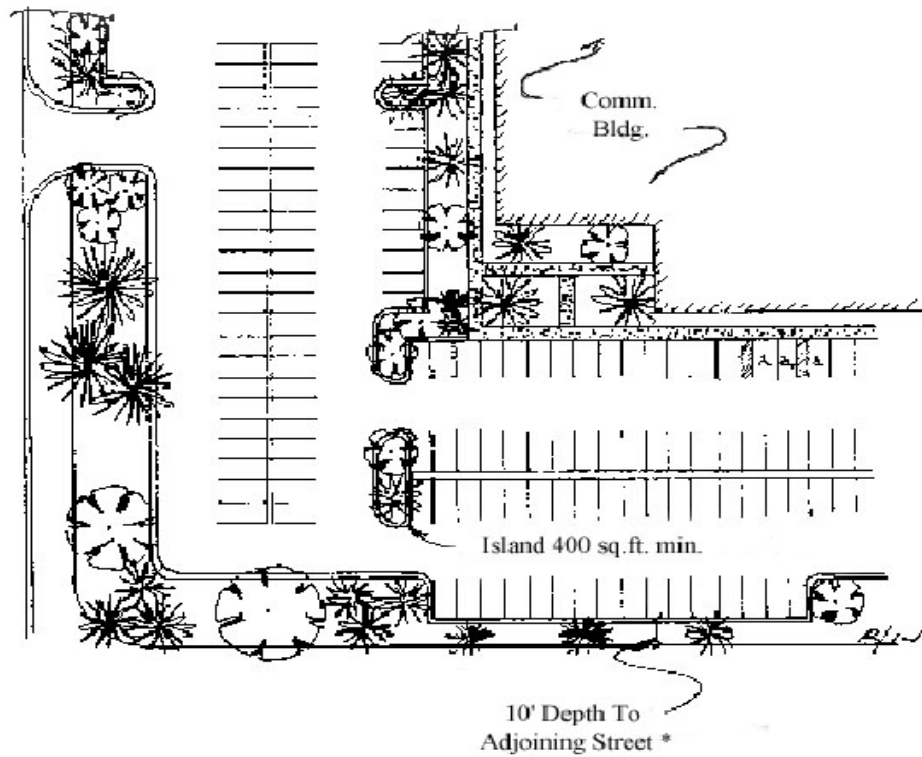
TREE REPLACEMENT NOTES:

TREE DENSITY REQUIREMENTS SHOWN ON THE TREE PROTECTION AND/OR REPLACEMENT PLAN MUST BE VERIFIED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY OR ACCEPTANCE OF THE PROJECT. CALL THE DEPARTMENT OF PLANNING AND DEVELOPMENT FOR AN INSPECTION.

WITH THE EXCEPTION OF SINGLE FAMILY RESIDENTIAL DEVELOPMENTS, MAINTENANCE INSPECTION FOR TREES WILL BE PERFORMED AFTER ONE FULL GROWING SEASON FROM THE DATE OF THE FINAL SITE INSPECTION. PROJECT OWNERS AT THE TIME OF THE MAINTENANCE INSPECTION ARE RESPONSIBLE FOR SCHEDULING THIS INSPECTION.

ALL PLANT MATERIALS ARE TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, AMERICAN ASSOCIATION OF NURSEYMEN.

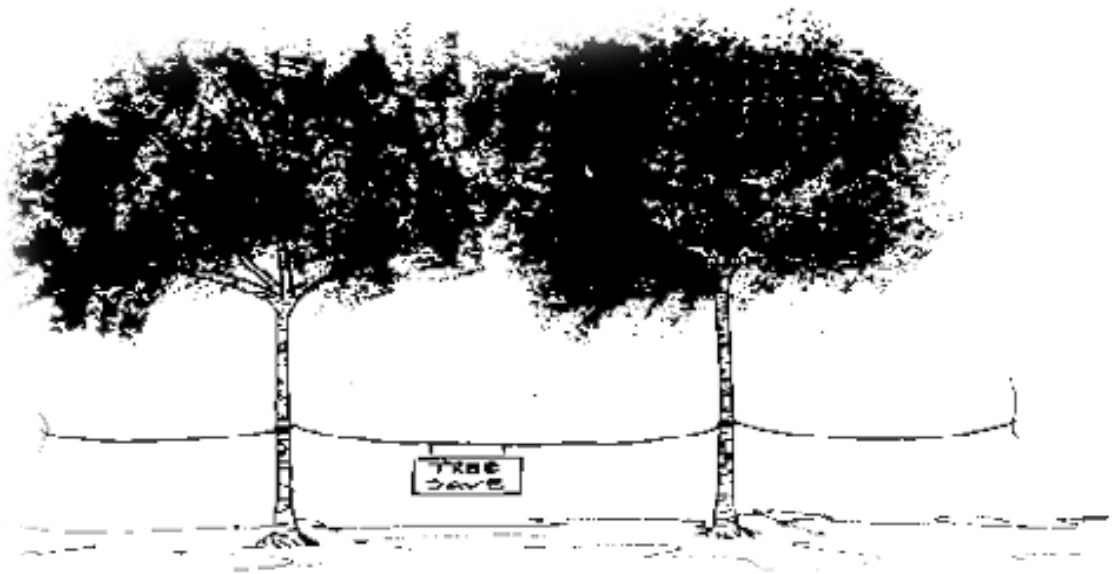
Detail No. 1 Frontage Planting Strips



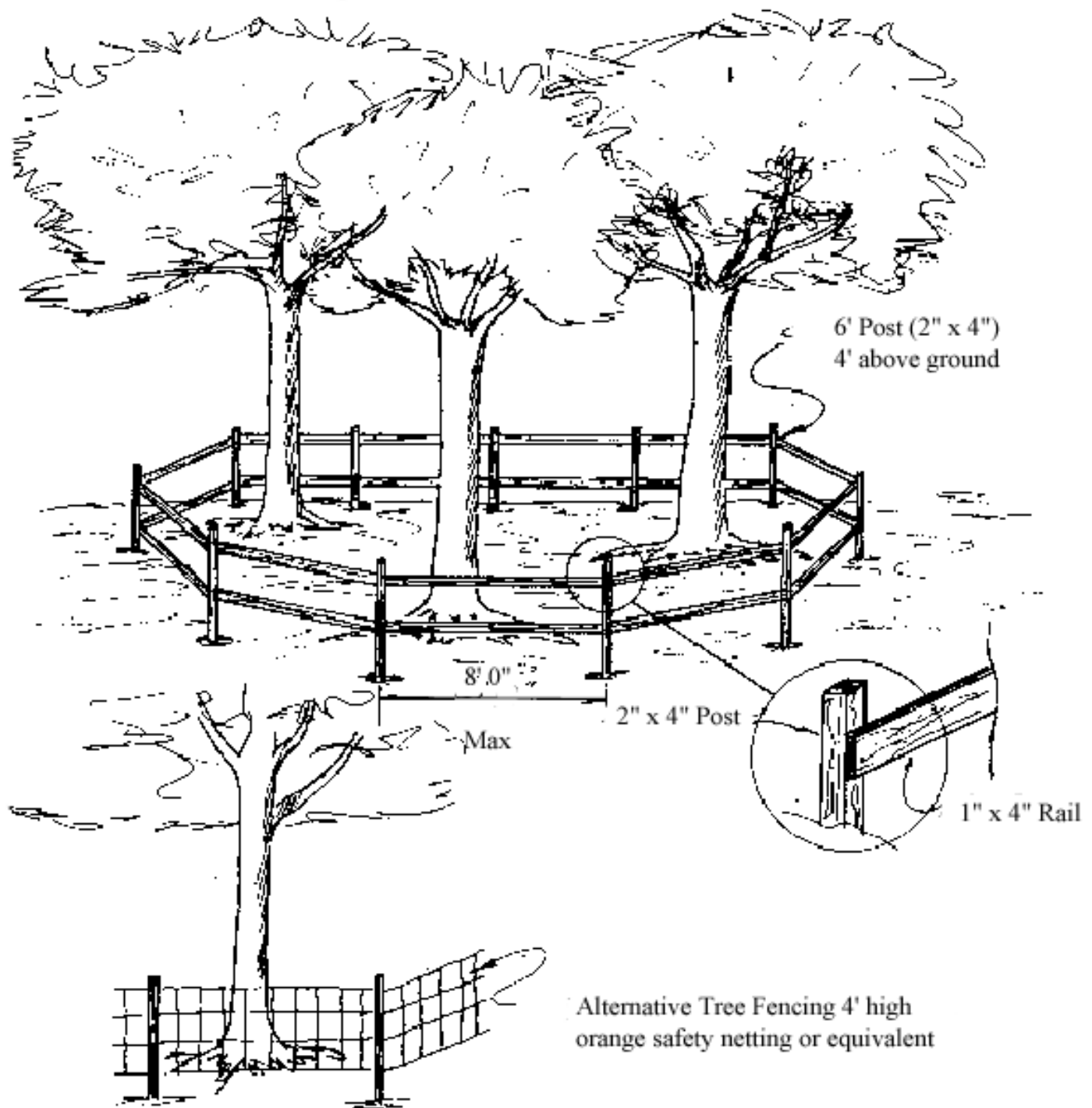
Planting Strips change with zoning, see Article 2.7(A). Trees equivalent to at least one tree density unit for every 75 linear feet of length shall be saved or planted.

**TREE PROTECTION AREA
DO NOT DISTRUB**

Heavy Mill Plastic, Min. 4" Width
Dark Lettering On Bright Background



Detail No. 3 Active Tree Protection



Appendix B: Density Calculations

The density may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two as represented by the following formula:

$$\text{Site Density Factor (SDF)} = \text{Existing Density Factor (EDF)} + \text{Replacement Density Factor (RDF)}$$

Site Density Factor (SDF)

The SDF is calculated by multiplying the Disturbed Area by the Density Factor and adding any required Significant Tree recompense.

Existing Density Factor (EDF)

The EDF is calculated by converting the diameter of individual trees to Density Factor units. The Density Factor for existing trees is shown in Table A, "Trees Remaining on Site".

Replacement Density Factor (RDF)

The RDF is calculated by subtracting the EDF from the SDF. The Density Factor for replacement (new) trees is shown in Table B, "Proposed New Trees".

Trees within Buffers

Existing trees within buffers may not be counted toward the required Site Density Factor. Replacement trees planted within buffers may be counted toward the required Site Density Factor.

EXAMPLE:

1. A commercial Site with 7.5 acres of Disturbed Area and no Significant Trees removed would result in a Site Density Factor of 112.5 tree units, calculated as follows:

$$7.5 \text{ acres} \times 15 \text{ Tree Density Units} = 112.5 \text{ SDF}$$

2. A total of 13 trees will remain on the 7.5-acre Site. The tree count is as follows:

7 - 12" diameter pines
3 - 14" diameter pines
3 - 18" diameter oaks

3. Converting diameters (DBH) to density units, the EDF is determined below (see Table A):

DBH	Units		No. of Trees	Total
12"	2.4	x	7	16.8
14"	3.3	x	3	9.9
**18"	5.4	x	3	64.8
			EDF	91.5

**See Article 2, Section 2.12, *Significant Trees*, for explanation of specimen tree credits.

4. The RDF is calculated by subtracting the EDF from the SDF.

$$\text{RDF} = 112.5 - 91.5 = 21$$

5. A total of 21 replacement units are required.

Table A: Existing Tree Table

Conversion from **Tree Diameter** in inches to **Tree Density Units** for
TREES REMAINING ON SITE

Caliper/Dia.	Units	Dia.	Units	Dia.	Units	Dia.	Units
2-4	0.3	18	5.4	29	13.8	40	26.1
5-7	0.9	19	6	30	14.7	41	27.6
8-9	1.5	20	6.6	31	15.6	42	28.8
10	1.8	21	7.2	32	16.8	43	30.3
11	2.1	22	7.8	33	17.7	44	31.8
12	2.4	23	8.7	34	18.9	45	33
13	2.7	24	9.3	35	20.1	46	34.5
14	3.3	25	10.2	36	21.3	47	36
15	3.6	26	11.1	37	22.5	48	37.8
16	4.2	27	12	38	23.7	49	39.3
17	4.8	28	12.9	39	24.9	50	40.8

Table B: Replacement Tree Table

Conversion from **Tree Diameter** in inches to **Tree Density Units** for
PROPOSED NEW TREES

Caliper/Dia.	Units	Dia.	Units
1	.4	8	1.3
2	.5	9	1.5
3	.6	10	1.7
4	.7	11	1.9
5	.9	12	2.1
6	1.0	13	2.3
7	1.2	14	2.5

NOTE: For the purpose of this Ordinance, Tree Diameters are measured at Diameter Breast Height (DBH) or Caliper is measured at ground level for trees having a 4" Caliper or less.

Seven gallon, or larger, container grown pine trees will be given a replacement credit of 0.4 units each.

Tree Relocation: Replacement units will be granted to trees relocated on Site. Tree Relocation is subject to approval of the Director.

B1 Criteria for Replacement Trees

1. Spacing and the potential size of species chosen shall be compatible with spatial limitations of the Site.
2. The species must be ecologically compatible with the specifically intended growing Site.
3. Trees must be replaced with at least sixty percent (60%) overstory species.
4. The tree must be compatible in extent of crown and root systems at maturity with nearby utilities
5. Where trees must be added to achieve the SDF pines may not comprise more than forty percent (40%) of the required units. Where existing pines already comprise more than 40% of the required units, no more pines may be credited toward the required units. This limitation applies to replacement planting only; existing pines may comprise 100% of the Existing Density Factor.
6. No more than 40% of the Replacement Trees can be composed of any one genus.

Appendix C: Size and Condition Criteria for Significant Trees

Specimen Trees

Size Criteria

Overstory Hardwood Trees	18 inch DBH
Pine, Poplar & Sweetgum Trees	25 inch DBH
Understory/Small Trees	8 inch DBH

Condition Criteria

The Director will determine if a tree qualifies as a specimen tree using the following criteria.

- A. All specimen trees are to have a sound trunk, with less than 20% radial trunk dieback.
- B. No more than one major and several minor dead limbs (hardwoods only).
- C. No major insect or pathological problems.
- D. Life expectancy of 15+ years for hardwoods, 8+ years for pines.
- E. Smaller trees can be considered specimen trees if rare or of unusual quality, species or historical significance.
- F. Specimen tree stands are a contiguous grouping of mature and evenly aged trees of high value. These trees may be of pure species composition, historical significance, or possess unusual aesthetic qualities. Not all the trees within the Specimen tree stand have to be the size of specimen trees for the stand to qualify.

Historic and Landmark Trees

The Georgia Landmark & Historic tree Register was established in 1994 by the Georgia Urban Forest Council. The register serves as a record of all the Significant Trees across the state.

Landmark and historic trees are those individual trees and groups of trees that have been designated as significant on the basis of their importance in national, state or local history. They possess integrity of location, setting, design, progeny, and represent events, heritage, feeling, and association.

Inclusion of a tree or group of trees on the register is used in Forsyth County for the protection and preservation of the tree(s). Any tree or group of trees in Forsyth County which is included on *The Georgia Landmark & Historic Tree Register* is prohibited from being damaged and shall be removed only with prior County approval. If a historic and/or landmark tree is damaged or removed without prior County approval, the Department of Planning and Development will require replacement by trees with a total density equal to eight times the unit value of the tree removed.

In order to qualify as a historic or landmark tree according to this ordinance, a tree must be included on *The Georgia Landmark & Historic Tree Register* prior to the issuance of the development permit being sought.