

### 19-6.3 Tree Protection and Replacement

#### 19-6.3.1 General

- (A) *Purpose.* Protection of existing tree cover is intended to preserve the visual and aesthetic qualities of Greenville; to encourage site design techniques that preserve the natural environment and enhance the developed environment; to control erosion, slippage, and sediment runoff into streams and waterways; to increase slope stability; and, to protect wildlife habitat and migration corridors. Preservation or provision of trees near structures also serves to conserve energy by reducing heating and cooling costs.
- (B) *Applicability.* The requirements of this section shall apply to all existing and new development, including but *not* limited to:
- (1) Nonresidential development pursuant to 19-6.5.7 (M).
  - (2) Multifamily residential development pursuant to 19-6.8.9 (J) and (L)
  - (3) Single family residential infill pursuant to 19.6.9.7
  - (4) Subdivision, construction, or reconstruction of all residential and nonresidential developments pursuant to 19-6.2.
  - (5) Construction of a parking structure or a vehicular use area.
  - (6) Dedication of roadway to public right-of-way.
  - (7) Expansion, paving, or repaving of a nonconforming parking lot pursuant to the provisions of section 19-9.6, nonconforming parking lots.
  - (8) The use of property to store or stage materials.
- (C) *Exemptions.* The following developments and activities shall be exempt from this section:
- (1) Developed existing single family residential lots.
  - (2) The removal of diseased, dead or naturally fallen trees, or trees that are found by the administrator to be a threat to the public health, safety, or welfare.
  - (3) The selective and limited removal of vegetation or trees under ten inches diameter at breast height necessary to obtain clear visibility at driveways or intersections, or for the purpose of performing authorized field survey work.
  - (4) The selective and limited clearing of utility easements to maintain their intended function.
  - (5) The removal of trees or vegetation on land zoned or lawfully used for:

- i. Agricultural and forestry activities, including tree farms and approved forestry management practices, except that if a site is substantially cleared of trees pursuant to legitimate forestry activities, no development applications shall be accepted for 36 months from the date the clearing is completed; or
- ii. Stand-alone commercial garden centers, greenhouses, or nurseries.

(D) *Definitions :*

- (1) Administrator: the department director who is the final authority for the application and interpretations of the ordinance.
- (2) administrator: the staff level employee to whom day-to-day ordinance application and interpretation is delegated by the Administrator.
- (3) Arborist: any person certified by the International Society of Arboriculture (ISA) as an arborist and a member in good standing with the ISA.
- (4) Boundary tree: a tree on adjacent property whose critical root zone intrudes across the property line of the site under consideration.
- (5) Buildable area: that area of the lot available for the construction of a dwelling and permissible accessory uses after having provided the required front, side, rear and any other special yards required.
- (6) Caliper: the diameter of a sapling to be planted measured six inches above the top of the root flare up to and including four-inch caliper size. If the caliper at six inches above the top of the root flare exceeds four inches, the caliper should be measured at 12 inches above the top of the root flare.
- (7) Construction: any new construction, renovation, expansion, clearing or other activity that requires a site permit or impacts the site's ability to support a tree canopy.
- (8) Cover area: that area which falls within the drip line of any tree.
- (9) Critical root zone: a per foot radial distance from the base of the tree equal to the diameter at breast height of the tree. For example, a 25 inch diameter (DBH) tree will have a critical root zone radius of 25 feet from the base of the tree.
- (10) Destroy: any intentional or negligent act or lack of protection that is likely to cause a tree to die within a period of five years.
- (11) Diameter at Breast Height (DBH): the diameter of a tree measured at 4.5 feet above the ground.
- (12) Impacted tree: a tree that will suffer injury or destruction of 20 to 33 percent of its critical root zone.

- (13) Invasive plant: any plant that has been introduced to the region and has been shown to disrupt ecosystem processes. Reference lists for plants invasive in the Greenville area are available in Appendix E.
- (14) Land-disturbing activities: any activity involving the clearing, cutting, excavating, filling, or grading of land or any other activity that alters land topography or vegetation.
- (15) Native or naturalized plant: Any plant that was in existence in this region prior to European settlement or has since become thoroughly established without disrupting ecosystem processes.
- (16) Pruning: the definition of the term as set forth in both the most recent International Society of Arboricultural pruning standards and guidelines and American National Safety Institute 300.33. At no time shall trimming, topping, tipping or flush cutting of trees be deemed a form of “pruning.”
- (17) Overstory/Canopy tree: a tree that normally attains a DBH in excess of 25 inches and a height in excess of 45 feet at maturity.
- (18) Saved tree: any tree that is to be protected and not destroyed or injured during construction as required by this article.
- (19) Tree inventory: a survey provided by a certified arborist and licensed surveyor that shows the location, species, and DBH of all trees greater than 3” DBH on site to be saved; and all trees on site greater than 6” to be destroyed, or impacted.
- (20) Tree protection plan: a documented showing a visual plan for all existing trees that are to be saved and protected, and showing new trees required to meet replacement quantities.
- (21) Understory/Ornamental tree: a tree that normally attains a DBH of less than ten inches and a height of less than 45 feet at maturity.
- (E) *Enforcement*: Tree protection and maintenance requirements are subject to inspection and enforcement pursuant to 19.10 – Enforcement.
- (1) Tree protection is to be installed prior to any land disturbance, storage of materials, or clearing. Tree protection must meet or exceed the details provided in Appendix E unless otherwise approved in writing by the administrator.
- (2) Additional actions and penalties. In addition to all other actions and penalties authorized in this section, the city attorney is authorized to institute injunctive, abatement or any other appropriate judicial or administrative actions or proceedings to prevent, enjoin, abate, or remove any violations of this section.

### **19-6.3.2 Tree Protection and Replacement**

(A) *Tree inventory*: The tree inventory and protection plan shall be submitted as part of a site plan permit application for all developments listed in subsection 19-6.2.1(B).

(1) A legible tree inventory shall be submitted as part of an application for any land disturbing permit or activity, including storage or staging of equipment. The inventory shall show all trees greater than six inches DBH to be removed, and any tree three inches DBH or greater to be retained. Trees shall be clearly identified as either to be removed or retained. The inventory shall be in a form approved by the administrator and contain the information as required in Appendix E.

(a) The tree inventory shall include any boundary trees, i.e trees on neighboring properties, which may experience any land disturbance, including storage of equipment or other material, within their critical root zone.

(b) Invasive tree species as defined in Appendix E and all *pinus* species are exempt from tree protection requirements.

(c) Encroachment within the critical root zone of trees located on adjacent properties is not allowed without written approval from that adjacent property's owner. If the limits of disturbance or land disturbance activity may reasonably be expected to occur within the critical root zone of trees located on adjacent properties, a letter from the tree's owner may be provided in lieu of tree protection for the tree. The letter must clearly state that the tree's owner is aware of the risk to the tree, that the land disturbing activity may result in the immediate or long-term death or demise of the tree, and that the City shall not be responsible for any damage or removal of the tree or its parts. The letter must be signed by the adjacent property owner and included with the landscape plan.

(B) *Tree Removal and Replacement*: Development or activity that results in the removal or injury of trees six inches or greater in DBH shall provide replacement or mitigation equal to or greater than the cumulative DBH of the trees removed and/or injured.

(1) Trees required to meet landscape requirements, such as those specified in 19-6.2, may be used to meet tree replacement requirements.

(2) Tree loss mitigation may be provided by retaining existing trees on site which meet the following criteria:

(a) Trees are between 3" and 6" DBH

(b) Trees meeting ANSI nursery stock standards

(c) Trees are not a recognized invasive species

(3) Where appropriate site conditions exist, replacement trees shall be canopy trees. Minimum tree spacing shall be 25 feet for canopy trees, 15 feet for understory trees. The sizes may be

interspersed as long as the minimum spacing is maintained and species cultural requirements are met.

(4) In cases where tree planting is infeasible due to site constraints, the administrator may approve a fee-in-lieu-of mitigation via a payment to the city's Tree Fund. Fees shall be based on market rates and updated periodically in Appendix E.

(a) The Tree Fund shall be managed by the Parks and Recreation Department and shall be used solely for the purposes of:

- i. Tree purchase and installation of new trees on public property and rights-of-way, or
- ii. Maintenance of existing tree canopy on public property and rights-of-way.

(C) *Tree density minimum.* All properties subject to this section shall provide and maintain at minimum a ratio of one tree per 3,000 sf. Building footprints and the area of athletic fields and courts will not be included in this tree credit calculation.

(D) *Tree Protection Plan:* A landscape plan shall be submitted for all existing trees that are to be saved and protected, and showing new trees required to meet landscape standards and replacement quantities.

(1) A tree credit table shall be included in the tree protection plan, shall conform to the table standards as shown in Appendix E, and shall summarize:

- (a) Trees greater than 6" to be removed
- (b) Trees between 3" and 6" to be saved and used as mitigation
- (c) Trees planted to meet landscape requirements
- (d) Acreage of site excluding building footprint, athletic fields, and courts
- (e) Average number of trees per 3,000 sf

(E) *Tree Planting Standards.* The form, size, quality, and proportions of proposed trees must meet the guidelines outlined in the ANSI Z60.1 American Standard for Nursery Stock. Installation and maintenance must meet ANSI A300 Standards. Existing trees on a property that are to be protected should be healthy and disease free.

(F) *Tree Protection During Construction*

(1) Protective fencing is required for any tree to be retained following construction. Protective fencing shall be a minimum of four feet high and of durable construction; such as wood or metal fencing. Protective fencing shall completely encircle the critical root zone of all trees to be preserved. Protective fencing be in place prior to any earth disturbing activity begins and stay in place for the duration of the project. Fencing shall be required around the critical root

zone of trees on adjacent properties or trees located in a public right-of-way. At no time shall silt fencing be used to provide tree protection.

- (a) Signs shall be installed on the protective fence visible on all sides of the fenced-in area (minimum one on each side and/or every 300 linear feet). The size of each sign must be a minimum of one foot by 1.5 feet and shall contain the following: "TREE PROTECTION ZONE: KEEP OUT."
- (b) Groups of trees may be protected by one perimeter fence meeting the specifications outlined in this section.
- (c) No construction, grading, parking, equipment, or material storage, or any other activity, shall be allowed within the fenced area at any time during the project.
- (d) Trenching and boring within the critical root zone is not allowed without administrator approval.
- (e) Where compaction might occur due to traffic or materials through the tree protection zone, the area must first be mulched with a minimum four-inch layer of processed pine bark or wood chips or a six-inch layer of pine straw. Equipment or materials storage shall not be allowed within tree protection areas.
- (f) Tree protection areas are subject to inspection and enforcement pursuant to 19.10 – Enforcement.

*(G) Inspections and Ongoing Maintenance*

- (1) Final landscape inspections will be conducted to ensure plant material is in good condition and planted correctly, as outlined in ANSI A300 and Z60.1.
- (2) Trees shown on a permitted landscape plan must be maintained to ANSI A300 standards for the duration of the site.
- (3) With approval from the Administrator, a project may bond their landscape for a limited time to allow planting to occur in the dormant season of October through March.
- (4) Rights-of-way dedication - trees not meeting ANSI A300 and ANSI Z60.1 standards at time of dedication will be rejected and require replacement prior to accepting the roadway dedication.
- (5) Trees located within the public right-of-way or on public land are the responsibility of the city and may not be trimmed or maintained by unauthorized personnel.

*(H) Heritage Trees Protections*

- (1) In order to protect significant trees, the city has established the Heritage Tree designation. A heritage tree is a tree that is in healthy and disease free condition, and is:

- (a) 20 inches or greater DBH, located within the setback or buffer area of any property within the city, or
  - (b) 40 inches or greater DBH , located anywhere within the city (excluding developed existing single family residential lots), or
  - (c) determined to be of cultural importance by the Administrator located anywhere within the city (excluding developed existing single family residential lots).
- (2) In addition to the tree mitigation outlined in section 19-6.3.2 (B), a heritage tree which is removed shall be assessed with a fee paid in the amount of \$100 plus \$30 per caliper inch of the tree removed.
- (3) No construction, grading, equipment, material storage, or any other activity, shall be allowed within the critical root zone of a heritage tree unless the steps taken to adequately ensure the health of the tree are submitted to the parks and recreation department in writing.
- (4) A *Heritage Tree Disturbance Form* shall be submitted for the trimming, pruning, encroachment upon, or removal of any Heritage Tree. Forms can be found in Appendix E.
- (a) Heritage Trees shall not be cut, removed, pushed over, killed, harmed, trimmed, sprayed, or destroyed without written approval via the Heritage Tree Disturbance Form.
  - (b) Approval of Heritage Tree disturbance shall be solely at the discretion of the City's arborist, and the city's tree preservation ordinance administrator. Appeals may be made to the city's Land Management Ordinance Administrator.
- (5) For new multi-family developments heritage tree removal fees may be waived at the administrator's discretion with the inclusion of at least 10 percent affordable and/or work-force housing as defined by the Community Development Division.