

TREE CANOPY LANDSCAPING & SCREENING

9

9.1 PURPOSE & INTENTION

The purpose and intent of this ordinance¹ is to establish minimum standards for the preservation of existing and the planting of new trees and shrubbery in order to:

- Better control soil erosion;
- Protect and improve the existing tree canopy in order to enhance the health and quality of life of citizens;
- Maintain or increase the tree cover in all areas of the planning jurisdiction;
- Preserve and enhance the natural environment;
- Increase species and age diversity of the urban forest;
- Protect specimen trees;
- Provide habitat resources to native plants and animals;
- Promote use of non-invasive and native plant materials;
- Ensure compatibility between vegetation and adjacent infrastructure or utility systems;
- Better control soil erosion;
- Reduce the hazards of flooding;
- Stabilize ground water tables;
- Capture, treat, or store carbon dioxide, particulate matter, and other pollutants;
- Provide shade for cooling;

¹ As used herein, "ordinance" shall refer to Section 9, including all subsections thereof, of the Davidson Planning Ordinance, unless specifically noted otherwise.

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- Screen noise, dust, and glare;
- Provide architectural interest and human scale;
- Maintain and/or improve aesthetic values;
- Enhance property values
- Balance preservation of tree canopy with recognition of private property rights.

9.2 APPLICABILITY & ADMINISTRATION

9.2.1 APPLICABILITY

Except as set forth in exemptions specified in this ordinance, the provisions of this ordinance shall apply to all land within the town's zoning jurisdiction, both public and private, according to the following:

- A. New Development:** All provisions of this ordinance shall apply.
- B. Existing Development:** All provisions of this ordinance shall apply to changes of use and/or expansions of existing conforming and non-conforming development. For tree removal on individual lots, see 9.3.3.

9.2.2 ADMINISTRATION

- A. Administration:** The Public Works Department shall assist the Planning Director and Board of Commissioners in the above Purposes & Intention. Additionally, an advisory board(s) shall assist in the periodic review and update of the standards in this section. As needed, the Planning Director may allocate responsibilities to town staff, authorized representatives, and/or the Arborist (as defined below) in order to administer this ordinance.
- B. Arborist:** The town may retain one or more certified arborists ("Arborist") to assist with maintaining a town-wide tree inventory, developing and approving plans for the development of property (both public and private) consistent with the provisions of this ordinance, conducting inspections, and such other matters related to the administration of this ordinance as the Planning Director may request.
- C. Documents & Approvals:**
 - 1. Permits and Inspections:** Permits and inspections shall be required for the activities as set forth in this ordinance.
 - 2. Landscape Plans:** Site work proposed as part of a Conditional Planning Area, Master Plan, or Individual Building process requires approval of plans and participation in activities as described in this ordinance.
 - a. Plan:** All plans shall meet the documentation standards set forth in this ordinance and, to the extent required by Section 14, the criteria for Landscape Schematic Design or Landscape Construction Documents set forth in Section 14. Depending on site conditions or characteristics, the documents may

require additional site or building information to be displayed.

b. Specimen Tree Preservation: In addition to the required landscape plan, any specimen trees as defined in this ordinance shall require a specific care plan developed in concert with the Arborist. The care plan shall be consistent with the practices set forth by the International Society of Arboriculture.

3. Revisions to Approved Landscape Plans: Revisions may be requested by a property owner or required by the Town of Davidson prior to release of landscape bonds. All revisions to landscape plans must be approved by the Planning Director, who may consult with the Arborist.

All revisions should ensure that:

- There is no significant change in quantity, size, or location of plant materials, as determined in the discretion of the Planning Director or the Arborist; and
- The new plants are of the same general category (i.e., shade tree, ornamental tree, evergreen, or shrub) and have the same general features (mature height, crown spread) as the materials being replaced.

1. Major Revisions: Include but are not limited to: grading changes, buffer alterations, and/or changes to more than 20% of the approved plant quantities, types, or species. These changes may require approval by Mecklenburg County in addition to approval by the Planning Director.

2. Minor Revisions: Include but are not limited to: seasonal planting problems, lack of plant availability, and/or any identified site issues (i.e., dead and/or diseased trees, constrained/inadequate planting conditions).

D. Final Plat: Final Plat documents shall reflect all relevant site details pertaining to trees and vegetation in accordance with DPO 14, including: Designated tree save and/or open space areas; buffers; and, easements.

E. Landscape Maintenance Bond:

1. Bond: Prior to the approval of Final Plat documents or the Initial Inspection for Certificate of Occupancy, a landscape maintenance bond shall be posted to ensure timely and proper completion of improvements identified in the approved landscape plan. The following projects and/or permits require bonds: All Conditional Planning Area, Master Plan, or Individual Building projects; site plan approvals; or, as determined by the Planning Director in consultation with the Arborist, building permits involving site work and/or features that must meet the requirements of this ordinance. Note: Per DPO 14.3.D, single-family houses are not considered Individual Building projects.

2. Requirements: The bond shall meet all applicable bonding requirements of Mecklenburg County, as well as the following criteria:

- The bond shall be obtained from an AA-rated surety bonding company authorized to do business in North Carolina and approved by the Planning Director or their designee; and

- The bond shall be payable to the town or its designee and shall be in an amount equal to 125% of the estimated cost to complete the improvements identified in the approved landscape plan.

F. Inspections:

1. **Site Visits:** Both before and after occupancy the Planning Director, the Arborist or authorized representatives of the town may periodically inspect sites subject to the provisions of this ordinance to confirm compliance therewith.
2. **Initial Inspection for Certificate of Occupancy:** After initial improvements required by the approved plans are complete, the Arborist shall inspect the tree and vegetative installations to confirm compliance with this ordinance and, as applicable, the American Standard for Nursery Stock, published by the American Association of Nurserymen. A Certificate of Occupancy for the building(s) or final plat for the development shall not be issued unless:
 - a. The landscaping required under this section is installed in accordance with these standards and in accordance with the approved permit, landscape plan or preliminary plat, as certified by the Arborist; and,
 - b. A Landscape Maintenance Bond is posted as required by section 9.2.2.E, above.
3. **Warranty Period:** After initial installation of all required plantings, a twenty-four (24) month warranty period for trees and eighteen (18) month warranty period for all other plantings shall commence from the date of notification to the town that initial installation of all required plantings is complete. Required replantings will not trigger the commencement of a new warranty period, but remain subject to the original warranty.
4. **Second Inspection & Release of Bond:** At the end of the warranty period, the Arborist shall re-inspect the required improvements for continued compliance with the approved landscape plan and to ensure that the landscaping is properly maintained. If any installations or areas require remedy, the town shall notify the owner in writing of (i) the necessary remedies, and (ii) a reasonable time period within which such remedies shall be completed by the owner (such time period to be determined by the Arborist or Planning Director or designee, but it shall in no event be less than 30 days or a timeline agreed to by all parties). If no remedies are required, the bond shall be released to the owner.
5. **Remedies:** If the owner fails to complete the requested remedies within the time period determined by the Arborist or Planning Director in accordance with section 9.2.2.E.4, above, the town may obtain and use such portion of the bond funds as necessary to complete the remedies based on actual costs. The town shall return any bond funds not spent in completing such work. Prior to using any bond funds, the town shall notify the owner, in writing, of its intention to do so if the owner fails to complete the required remedies within ten (10) days. If the owner has not completed the required remedies (or, in the case that the required

remedies reasonably cannot be completed within such time, has commenced and is diligently continuing work toward completing them) within ten (10) days of such notice, the town may obtain and use bond funds for the required remedies.

- G. Replacement of Disturbed, Removed or Damaged Vegetation (Post-Warranty):** Any landscape areas and vegetation preserved or planted as part of an approved landscape plan or permit shall be continually maintained in good condition by the property owner. Failure to adequately maintain approved vegetation, including trees, or to comply with the replacement provisions of this ordinance may result in a civil penalty. Replacement requirements, processes, and civil penalties are listed in Section 15.3 Landscaping Violations.

9.3 TREE COVERAGE & PRESERVATION

9.3.1 TREE COVERAGE

- A. Minimum Tree Coverage:** All Conditional Planning Area, Master Plan, or Individual Building projects shall maintain or establish a minimum tree coverage according to their planning area classification as listed in Table 9-1. The minimum project canopy coverage can be met through a combination of preserved areas, required plantings (e.g., street trees, etc.), and other plantings. For the purposes of this requirement, project area refers to the entire area within the project scope that is not encumbered by easements, uses, or other features that prohibit tree plantings.

TABLE 9-1: TREE COVERAGE REQUIREMENT	
PLANNING AREA	MINIMUM PROJECT CANOPY COVERAGE
RPA	60%
NE	50%
EC1/EC2/CC	40%
NG	30%
VI	20%
LK/VC/VE/VCOM/NC1/ NC2/CBD/NS	15%

- B. Requirements:**
 - 1. Applicability:** The tree coverage standards listed in Table 9-1 apply to all Conditional Planning Area, Master Plan, and Individual Building development proposals. The following are exempt from the tree coverage standards: Permitted work related to single-family detached and duplex houses outside of the aforementioned processes; Recreation Facility - Outdoor; Stable/Riding Academy, Horse Farm, Agriculture, Farm and substantially similar uses as determined by the Planning Director. For these uses, the tree coverage standards shall serve as a guide for each Planning Area.
 - 2. Measurement:** The table assumes an average canopy area of: 1,000 square feet for large maturing trees; 800 square feet for medium maturing trees; and, 200 square feet for small maturing trees. Proposals must utilize these values unless the Arborist approves alternative values. For a description of each tree type, see 16.3 Definitions under Tree.

3. **Caliper & Height:** Trees planted to satisfy the Tree Coverage Requirement must have a minimum caliper of at least 2.5-3 inches and a minimum height of eight feet at the time of planting.
4. **Canopy Coverage:** For canopy preservation requirements see 9.3.2.
 - a. **Minimum:** No more than 50% of the minimum project canopy coverage in Table 9-1 may come from required preservation areas listed in 9.3.2. This requirement does not apply in the following planning areas: LK/VC/VE/VCOM/NC1/NC2/CBD/NS.
 - b. **Payment-in-Lieu :** For projects located in the LK/VC/VE/VCOM/NC1/NC2/CBD/NS Planning Areas, the minimum project canopy coverage may be met through payment-in-lieu so long as all applicable street tree and parking lot planting requirements are met and the payment-in-lieu option is approved by the Planning Director based on existing and proposed site features and the provisions of this ordinance. For payment-in-lieu values, see the Town of Davidson Fee Schedule. Note: In calculating the payment-in-lieu value a 1:1 credit per square foot shall be given for the following: Areas eradicated of invasive species (as determined by the Arborist) and replanted; or areas eradicated of invasive species and preserved for viewsheds as part of an approved plan. The decision to award credit shall be made by the Planning Director in consultation with the Arborist.

C. Credit Toward Coverage Requirement:

1. **Preserved/Planted Species:** All trees preserved or planted to satisfy the requirements of this ordinance, as well as other tree plantings included as part of an approved plan, may count toward the minimum project canopy coverage requirements established above. This means that the requirements may be met through the preservation of existing tree vegetation, new tree plantings, or a combination of both; however, every reasonable effort shall be made to meet the coverage requirement through the preservation of existing trees.
2. **Viewshed Preservation:** In calculating the canopy coverage requirement, areas maintained or restored to preserve a publicly-accessible viewshed documented as part of an approved plan may receive a 1:1 credit per square foot, not to exceed 10 percent of the total project area.

9.3.2 PRESERVATION OF EXISTING VEGETATION FOR CONDITIONAL PLANNING AREA, MASTER PLAN, AND INDIVIDUAL BUILDING DEVELOPMENT PROPOSALS

A. Required Preservation Areas: The following shall be preserved:

1. Trees and undergrowth (excluding invasive species and/or other vegetation that compromises the health of the surrounding ecosystem) in designated open space and primary conservation areas in an approved plan (see DPO 7.5), except for permitted pathways or site features as approved by the Planning Director in consultation with the Arborist.

2. Mature trees as defined by this ordinance within the right-of-way or shading the street. If the preservation of mature trees is in conflict with setback requirements, exceptions may be granted on a case-by-case basis by the Planning Director in consultation with the Arborist.
3. Specimen trees as defined by this ordinance and approved by the Planning Director in consultation with the Arborist.
4. A minimum percent of the existing mature tree canopy shall be preserved as specified in Table 9-2.

TABLE 9-2 : TREE PRESERVATION REQUIREMENT	
PLANNING AREA	MINIMUM PRESERVATION AREA
NE/RPA	40%
EC1/EC2/CC	30%
NG/MI	20%
LK/VC/VE/VCOM/NC1/ NC2/CBD/NS	10%*

*Payment-in-Lieu : For projects located in the LK, VC, VE, VCOM, NC1, NC2, CBD, NS Planning Areas, the minimum preservation area requirement may be met through payment-in-lieu if approved by the Planning Director based on existing and proposed site features and the provisions of this ordinance. For payment-in-lieu values , see the Town of Davidson Fee Schedule.

- B. Other Preservation Areas:** Existing vegetation in other areas shall be preserved whenever feasible according to the following standards:
1. The decision to preserve trees and vegetation shown on the Environmental Inventory shall be made jointly by the Planning Director, the Arborist, the developer, and design team during the project approval process.
 2. When selecting which trees and vegetation to preserve, the following shall be considered: Existing grading; age, condition and type of tree; whether the tree is invasive; proximity to water bodies and similar features; and, location of site improvements and utility connections.
 3. Properties in the Local Historic District are subject to the Historic District Design Guideline’s tree preservation requirements.
- C. Prohibited Locations:** No tree save area may be located within a utility right-of-way or easement without written permission from the utility agency. Additionally, preservation areas may not be located on portions of private lots unless: 1. Approved by the Planning Director based on site conditions; and, 2. Protected by a permanent easement.
- D. Credit Toward Required Plantings:** Existing vegetation which is designated for preservation may be applied toward the requirements of this ordinance.
- E. Construction Standards :**
1. **Access:** Construction access to a site should occur where an existing or proposed

entrance/exit is located. Except for driveway access points, sidewalks and curb and gutter, land disturbance within a tree dripline is prohibited as outlined below.

2. Prohibited Activity:

- Trenching, placing backfill in the critical root zone (CRZ), driving or parking equipment in the CRZ, and dumping of trash, oil, paint or other materials detrimental to plant health in close proximity of the trees to be preserved is prohibited.
- Construction traffic, storage of vehicles and materials, grading, and unapproved site disturbance shall not take place within the CRZ of the existing trees. The areas shall remain free of all building materials, stockpiled soil or other construction debris.

3. Protection Requirements:

- a. Location:** Protective barricades shall be placed around all trees designated to be saved prior to the start of development activities or grading. Such barricades shall be erected at a radial recommended minimum distance of 1.5 feet for every inch of trunk diameter at breast height (DBH) or the dripline, whichever is greater and outside the CRZ as approved by the Arborist, unless the Arborist approves a different distance based on the approved development plan or site circumstances. For example, a 12-inch diameter tree trunk at breast height should have a minimal radial protection zone of 18 feet. The circular diameter of protection around the trunk would be 36 feet from the base of the tree. Prior to approval of construction beginning, the Arborist must approve and inspect the barricade designs and installation.
- b. Materials:** Protective barricades shall consist of 2" x 4" posts with 1" x 4" rails or orange safety fence.
- c. Duration:** Protective barricades shall remain in place until development activities are complete.
- d. Grading Protocol:** Where grading within a tree dripline cannot be avoided and is approved by the Planning Director and/or Arborist, cut and fill shall be limited to 1/4 to 1/3 of the area within the dripline. Tree roots must be pruned with clean cuts at the edge of the disturbed area, and no fill shall be placed within the dripline of a tree without venting to allow air and water to reach the roots. In the case of an approved construction or grading permit within the CRZ, the Arborist shall provide and ensure recommendations to protect the affected trees are implemented.

- F. Replacement of Preserved or Planted Trees:** The proper care and protection of trees throughout and beyond the development process is critical. Penalties for violations range from \$50.00 to \$ 1,000.00 or more per tree or \$ 5.00 to \$10.00 per square foot disturbed and, depending on the penalty, may be enforced on landowners as well as parties executing work. For information on replacement plantings and civil penalties, see Section 15.3 Landscaping Violations.

9.3.3 TREE REMOVAL FOR LOTS NOT SUBJECT TO AN APPROVED PLAN

A. Applicability: The following standards apply to lots (whether existing or created subsequent to this ordinance's effective date) within the town's incorporated limits (i.e., excluding the extraterritorial jurisdiction) that are not subject to an approved Conditional Planning Area, Master Plan, or Individual Building development proposal. Notwithstanding the foregoing, lots located on Catawba Ave. but outside the town's incorporated limits are subject to these standards, and all lots are subject to the prohibitions listed in 9.3.3.B.7.

1. **General/Purpose:** No tree larger than twelve inches in diameter at breast height (DBH) may be removed without a permit from the town. A removal permit shall be issued by the Planning Director only after an applicant has met with the Arborist and received site-specific information on tree protection, care, and removal.
2. **Local Historic District:** Removal of a mature tree(s) within in a locally designated historic district requires a tree permit in accordance with this ordinance. **Additionally,** a Certificate of Appropriateness shall be required for removal of a mature tree within a locally designated historic district wherein the subject tree is specifically identified as significant in a historic district report or in the landmark designation ordinance (see Section 22). Mature trees shall be replaced by a tree of similar species, type, and must meet the requirements of Section 9.8.

B. Approval Process:

1. **Permit Required:** An approved permit, including fee payment (if applicable), shall be required for the removal or destruction of a tree(s) larger than twelve inches on any property, whether publicly or privately owned, as described above.
2. **Fee:** Development and permitting fees are as set forth in the Town of Davidson Fee Schedule . Note: A fee is not required for a tree removal permit unrelated to any other building activity on a site.
3. **Site Information:** The permit shall include a site plan illustrating the lot area, building and development footprints, and subject tree(s) intended for removal or that may be impacted by work. Work impacting the critical root zone (CRZ) of any tree over twelve inches must be described and/or shown on the plan. Based on site conditions the Arborist may require dimensions/measurements, an official survey, and/or other relevant information such as existing conditions, topography, easement location, etcetera.
4. **Site Visit:** The permit approval may require an on-site consultation between the applicant and Arborist in order to identify existing conditions and exploration of best practices for preservation and/or removal. The site visit should occur within 14 days of the receipt of a complete application (including fee, if applicable).
5. **Arborist Findings:** Within 14 days of the site visit the Arborist shall prepare and issue a written report describing the applicant's intended work, site and tree characteristics, and recommended practices or potential alternatives to the proposed scope of work (if applicable). Emergency situations may warrant expedited review or, in select cases, removal prior to permit approval. The Planning

Director, in consultation with the Arborist, shall determine whether a civil penalty is assessed in those situations.

Factors that may be considered in the Arborist's findings include but are not limited to whether the tree(s):

a. Health/Endangerment:

- Is dead, diseased, irreparably damaged, or the tree imminently endangers the health or safety of the general public or structures on the property or adjacent properties;
- Has not been appropriately maintained such that its current condition is compromised and cannot be corrected through reasonable care practices;

b. Characteristics:

- Is not a specimen tree, as defined by this ordinance;
- Has officially-documented historic or cultural value and requires approval by the Historic Preservation Commission.

c. Location:

- Is within a designated conservation area, such as common open space or property protected by conservation easement;
- Is located within the permitted building envelope;
- If removed will negate the lot's ability to meet the minimum tree canopy coverage listed in Table 9-1;
- Is part of a greater development plan for which an approved landscape plan has been issued pursuant to this section; an approved development plan for which an approved grading and landscape plan has been issued shall serve as the tree removal permit.

6. Permit Issued: The permit shall be issued when the Planning Director, in consultation with the Arborist, has determined that the process requirements set forth in Section 9.3.3.B have been satisfied.

7. Prohibitions:

a. Tree-Topping: The topping of trees and similar practices is strictly prohibited in areas regulated by approved plans; outside of site areas approved for pre-application clearing; in designated tree save or preservation areas or, within the public right-of-way. Topping is the practice of reducing a tree's size using heading cuts that shorten limbs or branches back to a predetermined crown limit (ANSI A300 Part 1 Pruning, Tree Care Industry Association).

b. Root Zone Disturbance: No activity affecting the critical root zone of a tree(s) in a conservation easement or dedicated open space areas may proceed without a tree permit.

c. Unapproved Tree Removal: The removal of a tree larger than twelve inches without an approved tree permit is strictly prohibited. This includes clear-

cutting or selective tree removal without an approved plan or permit. Tree removal related to site survey or development work must be approved by the Planning Director in consultation with the Arborist prior to the work beginning, and the removal of trees to avoid ordinance requirements is prohibited. See Section 15 Violations for further information.

C. Violations: See Section 15.3 Violations.

9.3.4 TREE REMOVAL FOR LOTS OR OPEN SPACE SUBJECT TO AN APPROVED PLAN

A. Applicability: The following standards apply to lots (whether existing or created subsequent to this ordinance's effective date), common areas, and/or open spaces subject to an approved Conditional Planning Area, Master Plan, or Individual Building development proposal (or any site plan requiring approval by the Town of Davidson).

1. General/Purpose:

- a. Lots:** Lots created pursuant to an approved plan are subject to the conditions of that plan approval until the lot is sold (i.e., after Final Plat approval), at which point a lot becomes subject to the provisions of Section 9.3.3.

Note: Unless otherwise specified, lots created pursuant to an approved plan as noted above are subject to any enduring conditions and/or easements associated with that development and recorded on the plat that pertain to tree and vegetation preservation/removal.

- b. Open Space/Common Areas:** Vegetation and trees within areas designated as open space and/or common areas are required to be maintained continually per the approved plan and/or applicable easements. Such areas and plantings must meet the post-warranty provisions of this ordinance, maintain approved buffers and easements, and are subject to Section 15.3 Violations.

- 2. Local Historic District:** Lots within a local historic district are subject to the approved plan standards and the applicable historic district criteria as described in 9.3.3.A.2 above.

B. Approval Process:

- 1. Permit Required:** Designated common areas/open spaces and lots created pursuant to an approved plan are subject to the permit approval process outlined in Section 9.3.3. above.

2. Prohibitions:

- a. Tree-Topping:** The topping of trees and similar practices is strictly prohibited in areas regulated by approved plans; outside of site areas approved for pre-application clearing; in designated tree save or preservation areas or, within the public right-of-way. Topping is the practice of reducing a tree's size using heading cuts that shorten limbs or branches back to a predetermined crown limit (ANSI A300 Part 1 Pruning, Tree Care Industry Association).

- b. Root Zone Disturbance:** No activity affecting the critical root zone of a tree(s) in a conservation easement or dedicated open space areas may proceed

without a tree permit.

- c. **Unapproved Tree Removal:** The removal of a tree larger than twelve inches without an approved tree permit is strictly prohibited. This includes clear-cutting or selective tree removal without an approved plan or permit. Tree removal related to site survey or development work must be approved by the Planning Director in consultation with the Arborist prior to the work beginning, and the removal of trees to avoid ordinance requirements is prohibited. See Section 15 Violations for further information.

C. **Violations:** See Section 15.3 Violations.

9.4 STREET TREE PLANTINGS

9.4.1 STREET TREE REQUIREMENTS

- A. **Location:** Except along a rural road, alley, or the park side of a parkway (See Section 6 - Town Street Classifications), trees shall be planted wherever a new street right-of-way is constructed, or where new construction occurs along an existing street right-of-way. For certain street types, as specified in the Town Street Classifications in Section 6, street trees must be planted in tree wells in the sidewalk.
- B. **Minimum Number:**
 - 1. Where at least an eight-foot planting strip has been permitted and no overhead power lines are located within 15 feet of the on-center planting location, a minimum of one large maturing tree shall be planted every 40-50 feet on average linear feet, or as otherwise approved by the Arborist. With Arborist approval, existing trees may be applied toward this requirement.
 - 2. For planting strips four to less than eight feet wide or those on-center planting locations within 15 feet of an overhead power line, trees shall consist of one small maturing tree per 25-30 feet on average, or as otherwise approved by the Arborist.
 - 3. Large maturing trees may be planted on the back side of sidewalk when the planting strip is less than eight feet.
- C. **Planting Strip:** In general, the minimum planting strip width for street trees shall be the width indicated for the applicable street type in Section 6. However, the Planning Director in consultation with the Arborist may require a minimum planting strip width of eight feet to accommodate large canopy trees, including but not limited to willow oaks and red maples.
- D. **Planting Specifications:** Street trees shall be installed in accordance with Section 9.8 Installation and Maintenance Standards, Section 9.10 Tree Specification List, and the American Standard for Nursery Stock, published by the American Association of Nurserymen. Additionally, street trees shall be planted in amended soils and, where determined necessary by the Arborist, in tree pits. Large and medium maturing trees shall have a minimum caliper of three inches; small maturing trees shall have a minimum caliper of two inches. The Arborist may approve or require varying caliper sizes as appropriate.

- E. Species:** Street tree species shall be selected from the Tree Specification List in consultation with the Arborist as follows:
1. Streets in commercial areas shall have trees which complement the face of the buildings and which shade the sidewalk.
 2. Streets in residential areas shall provide for an appropriate canopy, which shades both the street and sidewalk.
 3. High canopy trees are preferred for emergency vehicle maneuvering.
 4. A diversity of tree species shall be utilized to prevent the spread of pests and disease.

9.5 SITE LANDSCAPING

9.5.1 APPLICABILITY

The following standards apply to Conditional Planning Area, Master Plan, or Individual Building development proposals. These provisions for site landscaping shall apply to all buildings with a setback less than five feet as defined in Section 2, except where such buildings have a zero-foot setback from the public sidewalk.

9.5.2 MINIMUM REQUIREMENTS

- A. Documentation Standards:** New landscape materials and preserved vegetation shall be noted on the Landscape Schematic Design as part of the Preliminary Plat and shall include at a minimum the following information:
1. **Scale:** Landscape plan shall be drawn to scale no smaller than 1-inch equals 100 feet and include a north arrow and necessary interpretive legends.
 2. **Existing Vegetation:**
 - a. Location: General location, type and quantity of existing plant materials.
 - b. Undisturbed & Protected Areas: Existing plant materials, areas to be left undisturbed, and areas that will be protected.
 - c. Protection Requirements: Methods and details for protecting the critical root zone (CRZ) of existing plant materials and areas to be left undisturbed.
 3. **Proposed Vegetation:**
 - a. Identification: Locations, size and labels for all proposed plant materials.
 - b. Table/Schedule: Plant lists with common name, botanical name, quantity, and spacing and size of all proposed landscape material at the time of planting.
 - c. Planting and installation details as necessary to ensure conformance with all required standards.
 4. **Other Landscape Improvements:** Location and description of all other landscape improvements, including but not limited to earth berms, walls, fences, screens,

sculptures, fountains, lights, courtyards, walks or paved areas.

5. Other Site Improvements/Features:

- a. Connections & Limits: Connections to existing and future properties, along with property boundaries.
- b. Site Features: Location of any proposed buildings, driveways, parking areas, required parking spaces, roads and other hard surface elements; location of signage; and, location of overhead and underground utilities.

6. Certification: Notes indicating compliance with the ordinance.

B. Minimum Required Area: A minimum five-foot wide area, measured perpendicular from the building, shall be provided for landscaping along any side of the building facing a public right-of-way way or park. This does not apply to portions of buildings featuring a zero-foot setback from the public sidewalk as listed in Section 2. Buildings with frontage along a street or park may, at the discretion of the Planning Director, be exempt from this requirement in order to provide entrance walkways and/or plazas.

C. Minimum Required Landscaping: The minimum required landscaping shall consist of one of the following every 40 linear feet along the property boundary where a buffer is not required:

- 1. Two small maturing trees;
- 2. 10 shrubs; or
- 3. Any equivalent combination thereof, subject to Planning Director or Arborist approval.

D. Location of Plantings: In locating the minimum required landscaping care shall be taken to ensure that adequate space is provided for the width of tree spread, height and root system requirements.

E. Preferred Species: Native plants and wildlife supporting species are generally preferred in all landscape settings; however, at the discretion of the Arborist, alternative species may be planted. See the Tree Specification List and Shrub Specification List for approved species.

9.6 PARKING AREA LANDSCAPING

Parking lots are necessary features of the built environment. However, they shall be designed to integrate natural features within parking areas in order to mitigate environmental impacts and create welcoming places for vehicles and pedestrians.

9.6.1 APPLICABILITY

The parking area landscaping standards of this section shall apply according to the following standards. For a list of tree specifications, approved tree species and prohibited vegetation, see the Tree & Shrub Specification Lists.

- A. Existing Parking Lots:** All expansions of impervious surfaces in existing parking lots with five or more spaces shall comply with this ordinance.
- B. New Parking Lots:** All new parking lots shall comply with this ordinance.
- C. Small Parking Lots:** For small lots (36 spaces or less), landscaping shall be required at the perimeter only, according to the standards of Section 9.6.2.
- D. Large Parking Lots:** For large lots (more than 36 spaces), landscaping shall be at the perimeter and the interior, according to the standards of Sections 9.6.2 and 9.6.3. In large lots, the landscaping shall be placed to break the lot into parking modules of not more than 36 spaces.
- E. Other Areas:** All other components of parking lot areas not specifically dedicated to vehicular parking or circulation shall be landscaped in accordance with this ordinance.

9.6.2 PARKING LOTS - PERIMETER LANDSCAPING & SCREENING

- A. Minimum Width:** Perimeter landscape areas shall be a minimum of eight feet in width adjacent to all parking spaces and travel areas.
- B. Required Trees:** Large maturing canopy trees shall be planted not more than 40 feet on center. Any deviation from this standard, including the use of alternative planting intervals and/or small maturing trees if necessitated by site conditions, must be approved by the Planning Director in consultation with the Arborist.
- C. Required Shrubs:** A continuous row or staggered row of evergreen shrubs, with a minimum expected height at maturity of three feet, shall be installed at not more than six feet on center. If used in addition to a wall or fence, the evergreen shrubs shall be planted on the exterior side of such features. See wall and fence requirements below.
- D. Additional Requirements for Parking Lots Adjacent to Street Frontage:** A masonry wall or garden hedge (minimum three feet in height) shall be installed along any street frontage adjacent to parking areas and the finished side of the wall or fence shall face the exterior right-of-way or neighboring property. At sidewalks with extensive pedestrian use, the masonry wall installed at the back of the sidewalk, is required but an alternate location may be approved based on site conditions.
- E. Additional Requirements for Parking Lots Adjacent to Detached and Attached Houses:** Off-street parking areas adjacent to Detached and Attached Houses, shall be screened from such uses by one of the following:
 1. A garden wall, fence or hedge (minimum six feet in height); or
 2. Evergreen shrubs planted at no more than of six feet on center and a minimum of three feet in height at the time of planting with an expected maturity height of at least six feet; or
 3. A combination of the above options.
- F. Natural Buffers:** Where a natural buffer exists adjacent to parking areas, it is to remain undisturbed. Generally, only dead wood is allowed to be removed. The removal of undergrowth and limbing up of trees is prohibited unless approved by the Planning

Director in consultation with the Arborist. All buffers required by the watershed protection regulations in Section 17 and the stream buffer overlay standards in Section 21 shall remain completely undisturbed, except as provided for in those sections .

- G. Existing Vegetation:** Existing vegetation located in the perimeter landscape area which is designated for preservation may be applied toward the requirements of this section.

9.6.3 PARKING LOTS - INTERIOR LANDSCAPING

A. Landscape Islands

1. Landscape islands within parking lots shall be located so as to define and direct vehicular movement.
2. When located adjacent to parking spaces on both sides, landscape islands shall have a minimum width of eight feet.
3. Landscape islands with large maturing trees shall include a minimum of 200 square feet of pervious space per tree.
4. In large lots, the landscaping shall be placed to break the lot into parking modules of not more than 36 spaces.

- B. Minimum Spacing:** Large maturing trees shall be planted within the interior landscape islands of parking lots so that no part of any parking space is more than 40 feet from a tree.

- C. Other Landscaping Areas:** All other components of parking lot areas not specifically dedicated to vehicular parking or circulation shall be landscaped in accordance with this ordinance.

9.7 SCREENING

The following requirements apply to landscape screens. See Section 4 Site & Building Design Standards for non-landscape screening requirements.

9.7.1 LANDSCAPE SCREENS

- A. Applicability:** Landscape screens shall be required anywhere Section 3 - Uses with Additional Requirements specify a requirement for a landscape screen. Where landscape screens are required, they shall be installed in accordance with the provisions below.
- B. Minimum Width:** For a landscape screen, a minimum 15-foot wide pervious space shall be provided, unless based on site conditions another width is deemed appropriate by the Planning Director in consultation with the Arborist.

C. Minimum Required Landscaping:

1. A minimum of six large maturing trees and 40 shrubs shall be planted for each 100 linear feet of landscape screen area to provide continuous coverage.
2. Trees shall be a minimum 50 percent evergreen.
3. Shrubs shall be a minimum 75 percent evergreen.

D. Existing Vegetation: Existing vegetation located in the required landscape screen area may be counted toward the minimum required landscaping for landscape screens provided it is:

1. Designated for preservation; and,
2. Approved by the Planning Director in consultation with the Arborist.

9.8 INSTALLATION & MAINTENANCE STANDARDS

All trees and shrubs required by this ordinance shall meet the planting specifications provided below.

9.8.1 GENERAL STANDARDS

- A. Quality of Plantings:** All new plant material shall be of good quality, installed in a sound, workmanlike manner and meet the standards set forth in the American Standard for Nursery Stock by AmericanHort.
- B. Contractor Warranty:** The contractor shall warrant all new plant material as follows: Twenty-four (24) month warranty period for trees and eighteen (18) month warranty period for all other plantings.
- C. Soil Compaction:** Installation and construction practices shall be utilized which preserve existing topsoil or amend the soil to reduce compaction.
- D. Staking and Groundcover:** All trees shall be properly guyed or staked and mulched (3-4 inch layer) in accordance with accepted practices in the landscape industry, to prevent winds from loosening the roots.
- E. Chain Link Fencing:** Chain link and similar fencing materials, if used, shall be landscaped on their exterior side with evergreen shrubs minimum three feet in height and six feet on center at installation.
- F. Sight Distance Triangles:** No plants shall be planted within the sight distance triangle at an intersection, or driveway access points unless an unobstructed view between 30 inches and 72 inches in height is maintained.
- G. Overhead Utility Lines:** Public and private utilities which install overhead and underground utilities shall be subject to this ordinance and the industry's best pruning and trenching specifications. Where large maturing trees are required and overhead utility lines exist, small maturing trees planted one per 30 linear feet shall be substituted with the approval of the Planning Director.
- H. Encroachment Agreement:** No irrigation lines may be installed within the planting

strip, or other portions of the public right-of-way, without an encroachment agreement executed by the town or NCDOT as appropriate.

9.9 ALTERNATE METHODS OF COMPLIANCE

9.9.1 ADMINISTRATION

Select circumstances may warrant alternative approaches to meeting the intent and purpose set forth in this ordinance. In such cases, the following shall apply:

- A. Alternate Compliance Conditions:** Alternate landscaping plans, plant materials, or planting methods may be used where the strict application of landscaping requirements set forth in this ordinance would be unreasonable or impractical, or where it is necessary to protect existing vegetation. Such situations may result from streams, natural rock formations, topography, or other physical conditions; or from lot configuration, utility easements, unified development design, or unusual site conditions.
- B. Plan Standards:**
 - 1. Intent:** All proposed alternate landscaping plans shall be evaluated by the Planning Director, in consultation with the Arborist, to determine if the alternate plan meets the intent and purpose of this ordinance. This determination shall take into account the land use classification of adjacent property, number of plantings, species, arrangement and coverage, location of plantings on the lots, and the level of screening height, spread, and canopy of the planting(s) at maturity.
 - 2. Equivalency:** The Planning Director, in consultation with the Arborist, may approve an alternate plan that proposes different plant materials or methods provided that quality, effectiveness, durability, and performance are equivalent to those required by this ordinance.
 - 3. Administration & Documentation:** All administration, documentation, and other pertinent standards of this ordinance shall be met through the approval process for projects pursuing an alternate method of compliance, unless otherwise approved by the Planning Director in consultation with the Arborist.

9.10 PLANTING SPECIFICATIONS & APPENDICES

9.10.1 ADMINISTRATION

The following documents inform this ordinance's standards and shall apply to all proposals unless otherwise determined by the Planning Director in consultation with the Arborist.

9.10.2 PLANTING SPECIFICATIONS

- A. Tree Specification List:** This document contains a list of approved species, including growth characteristics and features, permitted to be considered for proposals.
- B. Shrub Specification List:** This document contains a list of approved species, including growth characteristics and features, permitted to be considered for proposals.

- C. **DPO Tree Planting & Mix Guidelines:** This document contains guidance on the appropriate distribution of trees, shrubs, and vegetation based on canopy coverage, square footage, and other factors.

9.10.3 APPENDICES

- A. **Tree Care Guidelines:** This document contains a list of terms, methodologies, and best practices related to tree establishment, maintenance, and preservation.
- B. **American Standard for Nursery Stock:** Produced by AmericanHort, this document establishes common techniques for managing the cultivation, sale, and installation of plants. Among other things, this includes standards for: Measuring plants; specifying and stating the size of plants; and determining the proper relationship between height and caliper, or height and width. <https://www.americanhort.org/page/standards>