

## **Article 24. Tree Protection**

### **Sec. 22-24-1. Landscape plan -- General provisions for landscaping.**

The purpose of this section is to provide guidelines for landscaping and screening of development sites subject to site plan approval. These requirements are intended to ensure that site development is harmonious with the surrounding properties, to promote the public health, safety and welfare, in accordance with the guidelines in the Comprehensive Plan; to help to conserve energy by providing shade and wind breaks; to encourage recharge of ground water by providing pervious area; to improve and preserve the air quality and minimize noise, dust and glare, and to preserve the rural character of the County.

### **Sec. 22-24-2. Landscape Plan Specifications.**

- I. A certified Landscape Architect, arborist, horticulturist, land surveyor, or other person deemed qualified by the Director of Planning shall prepare the plan.
- II. The plan shall be prepared at a scale of not less than 1"=40' for areas along streets and roads, and not less than 1"=20' for areas around buildings, parking lots, and landscape areas.
- III. All landscape plans shall be on sheets not exceeding twenty-four inches (24") by thirty-six inches (36").
- IV. If the plan is prepared on more than one sheet, match lines shall clearly indicate where the several sheets join.

### **Sec. 22-24-3. Landscape Plan Contents.**

- A. The Landscape Plan shall include the following elements
  1. Existing and proposed contours at intervals of five (5) feet or less.
  2. Property boundary lines.
  3. Limits of grading and clearing.
  4. Tree protection zone(s) as applicable.
  5. All proposed improvements.
  6. Existing and proposed underground and overhead utilities, including heights and/or depths.
  7. Rights-of-way and easements.
  8. Botanical and common name, size, spacing, and location of all trees, shrubs, and ground cover, and the location and extent of planting beds in which they are to be planted, if any.
  9. Plants shall be labeled on the plan by direct call-out method and not by symbols keyed to a plant list.
  10. A planting symbol to illustrate the natural canopy/cover of trees and the extent of growth of shrubs at maturity.

11. A plant list or matrix showing the botanical name, common name, quantity, size, spacing, handling method, and general instruction, if any, specific to each plant.
12. General details illustrating the method of installation of plants, seeding, and sodding, including but not necessarily limited to size of plant pit, method of placement, backfill material, method of support, preparation of beds, mulch, etc.
13. Special details illustrating special conditions such as supplemental plant pit drainage, pruning for special effects, or other conditions requiring illustrated instructions.
14. General notes specifying the care and maintenance of plants for a period of three years following planting and the replacement of any dead, dying, or diseased vegetation required to be installed by this chapter for the life of the project.
15. Any and all information required for tree protection as indicated in Section B of this article.
16. Provide and identify adequate exterior water source.

**Sec. 22-24-4. Minimum Standards.**

A. The following shall be the minimum size of plant materials at installation:

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|---------------------------|---------------|
| 1. Large shade trees      | 2" caliper    |
| 2. Medium shade trees     | 1.5" caliper  |
| 3. Ornamental trees       | 1.5" caliper  |
| 4. Large evergreen trees  | 8' in height  |
| 5. Medium evergreen trees | 6' in height  |
| 6. Small evergreen trees  | 4' in height  |
| 7. Large shrubs           | 2' in height  |
| 8. Medium shrubs          | 2' in height  |
| 9. Small shrubs           | 1' in height  |
| 10. Ground cover          | 1 year plants |

B. All trees to be planted shall meet the specifications of the American Landscape Association. The planting of trees shall be done in accordance with either the standardized landscape specifications jointly adopted by the Virginia Nurserymen's Association, the Virginia Chapter of Landscape Designers, and the Virginia Chapter of the American Society of Landscape Architects, or the Road and Bridge Specifications of the Virginia Department of Transportation. Wheel stops, curbing, or other barriers shall be provided to prevent damage to landscaping by vehicles. Where necessary, trees shall be welled or otherwise protected against change in grade. All pervious areas of the site shall be permanently protected from soil erosion with grass, ground cover, or mulch material.

**Sec. 22-24-5. Requirements.**

- A. It is the specific intent of these requirements to promote landscape design and installation to mitigate the effects of new development on surrounding areas and specifically not to use plantings as a means of drawing attention to new development. To promote the protection and preservation of rural character, a palette of plant materials appropriate to the various zoning districts has been prepared and shall be followed as a general guideline in preparing plant plans for the various zones. The Landscape Plan should utilize those plant species that are best suited for the site. To facilitate this, a list of recommended and prohibited plants are broken down into native, assimilated non-native, exotic, and invasive species is available from the Director of Planning. Applicants may add plants to this list with the prior approval of the Director of Planning.
1. Residential zoning districts: Plantings shall be native and assimilated non-native, except in village or commercial settings. In these settings, where plantings are internal and generally not in view of the public road, street, or adjacent property, exotic species may be used.
  2. Business and Industrial zoning districts: Plantings shall be native and assimilated non-native, except in areas generally not in view of the public road or adjacent properties. In these areas exotic species may be used.
  3. Agricultural and all other districts: Plantings shall be native and assimilated non-native.
- B. Trees shall be required along existing or proposed public streets in any non-residential development, or non-residential part of a mixed-use or multi-family development that is subject to site plan approval, as follows:
1. Two (2) large shade trees per 100 feet, on both sides of the street.
  2. An average of one (1) ornamental tree per one hundred (100) feet, on both sides of the street.
  3. An average of two (2) medium or small evergreen trees per one hundred (100) feet, on both sides of the street. Medium shade trees may be substituted for large shade trees at a ratio of 2 to 1, but may not constitute more than 40% of the total shade trees provided.
- C. No invasive species shall be planted, except in containers or completely enclosed planting areas that will prevent their spreading beyond the planting area. Certain invasive species indicated on the list maintained by the Director of Planning may not be used in any circumstance.

- D. In areas in view of public roads and rights-of-way, landscape plans should specify plants and their spacing so they may grow in their natural habitat, achieving mature size with minor pruning and shaping.
- E. Any minor requirements above may be waived or modified by the Director of Planning on a site-specific basis where conditions peculiar to the site may warrant or the objectives of the ordinance can be better achieved by other means. The Director of Planning may also approve minor spacing variations. The decision of the Director of Planning in this regard is appealable to the Planning Commission.

**Sec. 22-24-6. Parking lot landscaping.**

- A. The intent, in addition to those stated for landscaping in general, is to achieve a minimum of 50% screening of parking areas from public streets and adjacent properties.
- B. All development subject to site plan approval shall include the following required landscaping for parking lots consisting of five (5) spaces or more.
- C. Minimum planting areas are to be provided as follows:
  1. One 9'x 18' planting island for every twenty-five (25) parking spaces in a row and at both ends of a parking bay.
  2. A nine- (9) foot planting strip between each adjacent area of parking of four (4) bays. Where parking bays are adjacent to the nine- (9) foot planting strip, no planting islands are required.
  3. A nine- (9) foot planting strip shall be provided between access roadways and adjacent properties' parking areas and adjacent property of the same use.
  4. A twenty-five (25) foot planting area shall be provided between parking and adjacent properties of a different use and public streets and rights-of-way. The area shall be measured from the closest parking space to the adjacent property or right-of-way line.
- D. Large shade trees shall be planted as follows:
  - a. One (1) large shade tree in each 9'x 19' planting island.
  - b. Large shade trees shall be arranged so that the canopy at maturity will cover thirty-five (35) percent of the parking area placed mainly around the perimeter of the parking area and at the end of parking bays.
  - c. Medium shade trees may be substituted for large shade trees at a ratio of two (2) to one (1), if appropriately spaced and meeting all other canopy criteria. Medium shade trees shall not exceed forty (40) percent of the total number of shade trees.

- E. Internal planting strips shall be planted with large shade trees every thirty-five (35) feet, or medium shade trees as specified in the forgoing section. In addition, ornamental trees, small evergreen trees, evergreen shrubs, deciduous shrubs, and ground covers shall be planted to soften the visual impact of parked cars, create visual relief from expanses of pavement, help direct traffic, and create an aesthetically pleasing environment. The selection and arrangement of plant materials in these strips shall be to achieve these goals while avoiding conflict with sight distance, traffic safety standards, and handicapped accessibility. As a guideline, projecting plants sizes to maturity, thirty (30) percent of the strip should be covered by the canopy of ornamental trees, forty (40) percent by small, evergreen trees and shrubs, ten percent (10) covered by deciduous shrubs, and the remainder in ground cover, grass, or mulch.

**Sec. 22-24-7. Screening.**

- A. When required, screening shall consist of a planting strip, existing vegetation, berms, a wall or fence (fifty (50) percent solid), or a combination thereof to the reasonable satisfaction of the Director of Planning. When only vegetative screening is provided, such screening shall be provided to the reasonable satisfaction of the Director of Planning, but shall in no event be less than twenty-five (25) feet in depth. Vegetative screening shall consist at a minimum of a double staggered row of large or medium evergreen trees planted at appropriate spacing for the species to achieve no less that thirty (30) percent screening at the time of planting. Areas indicated as tree protection zones may satisfy this requirement for screening.
- B. Screening shall be required in the following instances:
1. Commercial and industrial uses shall be screened from view adjacent properties in residential and agricultural zoning districts, except for commercial and industrial uses allowed by right in said districts.
  2. Parking lots consisting of five (5) spaces or more shall be screened from view of public roads, rights-of-way, and adjacent properties.
  3. Objectionable features, including but not limited to the following, shall be screened from the view of public roads, rights-of-way, and adjacent properties:
    - i. Loading areas
    - ii. Refuse areas
    - iii. Storage yards
    - iv. Dry Detention ponds
    - v. Maintenance areas

4. If the required screening is consistent with an approved Master Plan subject to the requirements of the R-3 Residential zoning district.

**Sec. 22-24-8.1: Statement of Intent.**

The purpose of this section is to promote the general health, safety and welfare through the protection and preservation of existing tree stands, individual specimen trees, and understory plants during the land disturbance/site development process. Preservation of existing tree stands, individual specimen trees, and understory plants shall be a primary consideration in the planning for, and implementation of, land development activities. For tree protection, barriers are required to prevent physical damage to trees or understory plants, and to prevent soil disturbance and compaction within tree protection areas. The more intense the development of the site, the greater the need for the protection and preservation of existing trees and understory.

**Sec. 22-24-8.2. When Required.**

Compliance with the tree protection program of this section is required on all site development plans involving land clearance of more than one-half of one acre (21,780 square feet of cleared land) in size, and all activities requiring a land disturbing permit except for the construction of a single or two family dwelling on an individual lot.

All plans prepared for compliance with this chapter shall clearly delineate areas of tree protection and provide construction details of tree protection barriers. Measures for tree protection shall be outlined in the general notes of the plan, including construction, inspection, and maintenance of barriers. The general notes shall also outline prohibited activities within the tree protection zones. The tree protection zone shall, to the extent possible, conform to the drip line of the trees being protected.

**Sec. 22-24-8.3. Tree Protection Plan Contents.**

- A. All tree protection plans shall indicate tree protection zone(s), in accordance with the following guideline:
1. Existing stands of trees or individual specimen trees whose removal is not necessary for the development of the site or the construction of any facility.
  2. Preservation of existing trees to comply with the Landscape Plan requirements.
- B. All areas of tree protection shall be bounded by a tree protection barrier at the perimeter of the tree protection zone. Barriers shall completely surround the tree protection area, except where the area extends more than one hundred (100) yards beyond the construction

zone or routes of access to the construction zone. The tree protection areas, beyond the one hundred (100) yards, must be flagged every one hundred (100) feet with continuous ribbon with "Do Not Enter" signs stating prohibited activity. Barriers and flagging shall be installed prior to any land disturbing activity. Barriers shall be a minimum of five (5) feet in height, stationary, and constructed of rigid or semi-rigid materials that must be dismantled to be moved. Barriers shall be of a color or flagged to be clearly visible by all people in the vicinity, particularly equipment and vehicle operators. Barriers shall be inspected and repaired on a routine basis and shall be completely removed prior to occupancy of the development. The purpose of the barrier shall be to prevent damage to trees or under story plants and to prevent soil disturbance and compaction within the zone.

- C. The following activities are prohibited within tree protection zones:
1. Operation of any vehicle or machinery, except as may be necessary for the installation of utility lines.
  2. Parking of vehicles or equipment.
  3. Storage of any materials or equipment.
  4. Discharge of any substance that may be injurious to trees or understory plants.
- D. Wherever feasible, utilities shall be designed and routed to avoid tree protection zones. If it is necessary to route utilities through tree protection zones, the following shall apply:
1. Route utility trenches outside the drip line of trees or as far as possible from tree trunks.
  2. In areas of multiple trees, where trenches must go between trees, preference should be given to stay away from larger specimen trees.
  3. Equipment that is the lightest weight and makes the least possible impact shall be used to dig trenches and install utilities.
  4. Rubber-tired, rather than track equipment, shall be used whenever possible.
  5. Excavation materials are not to be placed against tree trunks and shall be placed as far away from trunks as possible.
  6. Where excavation materials are to be placed, indicator ribbons shall be placed on undisturbed areas prior to excavation, to facilitate restoring the area to the original grade.
  7. Areas where excavated material have been placed shall be restored to the original grade with the least amount of disturbance possible.
- E. Any damage done to trees within tree protection zones shall be immediately repaired.
- F. Any clearing within tree protection zones shall be done by hand.

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- G. Where grade differences occur between the tree protection area and the finished grade of the adjacent areas, retaining walls and dry wells shall be used to prevent the need for grading in tree protection zones.