

ARTICLE 8

VEGETATION PRESERVATION AND PLANTING

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ARTICLE 8

VEGETATION PRESERVATION AND PLANTING

SECTION 8-100 PURPOSE AND INTENT

8-110 Purpose

The purpose of this Article is to promote the planting and preservation of landscape materials such as trees, shrubs and other vegetation which help to moderate the effects of sun, rain and wind; provide buffers to control erosion and sedimentation; to preserve slopes; and provide aesthetically pleasing screening for developments.

8-120 Intent

The intent of this Article is to regulate the removal and replacement of vegetation within the limits of the Town of Leesburg in order to preserve, protect and enhance one of the most valuable natural resources entrusted to the Commonwealth.

(End of Section)

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SECTION 8-200

APPLICABILITY

The provisions of this Article shall apply to all subdivision plats and development plans submitted pursuant to Division 2 and 3 of The Town of Leesburg Subdivision and Land Development Regulations, and to Article 10 of this manual. It applies to the reconstruction and enlargement of any existing structures as well as enlargement or construction of any parking lot of five spaces or more and or the construction, widening or extension of any public or private street.

(End of Section)

TOWN OF LEESBURG DESIGN & CONSTRUCTION STANDARDS

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SECTION 8-300

CONSERVATION AND LANDSCAPE PLANS

8-310 Existing Trees

1. Existing tree cover within the limits of the proposed plan shall be retained to the greatest extent possible and taken fully into account in the design of the subdivision lots, street layout and developments. Plans shall incorporate techniques described herein, or alternative methods acceptable to the Director, for the protection of those trees to be preserved.

2. Conservation and Landscape Plans.
 - A. Conservation and landscape plans shall provide an indication of areas of tree cover on the property. This delineation of tree cover shall include groups of trees and individual trees standing apart from any woods on the site. All trees with a diameter at breast height (dbh) of 12 inches or greater shall be specifically identified, including but not limited to size, species, spread of the branches at the base and a spot elevation on the Conservation and Landscape Plan within 25 feet of any proposed disturbed area.

[Amended 11/10/09]

3. Critical areas, such as 100-year flood plains, slopes steeper than 25 percent, and wetlands, should be left in their natural condition or only partially developed as open space.

4. Designers should endeavor to locate roadways where they would cause the least damage to valuable stands of trees. The original contours should be followed, where feasible, to minimize cuts and fills.

5. The limits of clearing and the boundaries of the land to be cleared of trees and other vegetation in conjunction with the proposed development or Capital Improvement Plan shall be shown on all plans, off-site as well as on-site.
 - A. Where a tree or stand of trees is to be retained, the limits of clearing shall be located a distance from the trunk, equal to a vertical (drip) line extending from the outermost edge of the tree's canopy to the ground. Refer to details at the end of this Article.
 - (1) The minimum distance shall be five feet from the trunk of trees to be retained.

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- (2) The limits of clearing shall be limited to only the area of construction proposed pursuant to that plan.
 - (3) The minimum limits of clearing shall be 30 feet but in no case greater than two times the required easement width. No trees will be allowed within the utility easement except as allowed by the Director; therefore, location of utilities becomes a critical element of the Conservation and Landscape Plan.
- 6. If existing trees are proposed to be retained in a parking lot area, sufficient ground, 1.5 times the diameter of the drip line shall be left ungraded around each tree. Other preservation methods acceptable to the Director shall be employed and noted on the plan. Such ungraded area shall not be included as required parking area nor shall such area impede the safe circulation or parking of vehicles.
- 7. Should an existing tree intended and marked to be retained, be damaged seriously enough that survival and normal growth are not possible, the tree shall be removed. Replacement shall be required with a tree species that is appropriate for the location. Replacement size shall be four-inch to five-inch caliper balled and burlapped nursery stock.
- 8. The location of all outstanding or monarch trees, shall be accurately shown on the plans. Every attempt shall be made to save these trees.

(End of Section)

SECTION 8-400

PRESERVATION OF VEGETATION

8-410 **General**

1. Preservation of vegetation during clearing and grading operations shall include, but is not limited to the following:
 - A. Heavy equipment, vehicular traffic, or stockpiles of any construction materials including topsoil, shall not be permitted within ten feet or the drip line (whichever is greater) of any tree to be retained.
 - B. Trees being removed shall not be felled, pushed or pulled into trees being retained.
 - C. Equipment operators shall not clean any part of their equipment by striking the trunks of trees to be retained.
 - D. Fires shall not be permitted within 100 feet from the drip line of any trees to be retained.
 - E. Fires shall be limited in size to prevent adverse effects on shrubs and trees, and kept under surveillance.
 - F. No toxic materials shall be stored closer than 100 feet to the drip line of any trees to be retained.
 - G. Paint, acid, nails, gypsum board, wire, chemicals, fuels, and lubricants shall not be disposed of in such a way as to injure vegetation.
 - H. Any device may be used which will effectively protect the roots, trunk and tops of trees retained on the site. However, trees to be retained within 40 feet of a proposed building or excavation shall be protected by fencing.
 - (1) Personnel must be instructed to honor protective devices.

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(2) *Refer to details at the end of this Article* for types and placement details.

- I. In the design and construction of detention and retention ponds, care shall be taken to minimize grading and vegetation removal by taking advantage of natural terrain.

8-420 Impact on Root Zone

1. Trees establish their roots in areas which supply them with sufficient nutrients, water, and oxygen. These root masses maintain the balance between intake of water from the soil and the loss of water through transpiration from the leaves. Disturbing this relationship between the soil and the roots can damage or kill a tree.
2. All conservation and landscape plans which indicate existing trees to be saved, shall demonstrate that measures have been taken during the site design to ensure tree survival to the satisfaction of the Director.
3. Finish grade within an area 1.5 times the diameter of the drip line of any tree to be saved, shall not be six inches higher or lower than the existing ground elevation unless specific alternatives for tree preservation are approved by the Director.
4. Tree wells will be evaluated as a "last resort" design on a case by case basis.
5. No monarch tree which is to be saved shall have more than 25 percent of the area enclosed by a circle two times the diameter of the drip line disturbed by trenching, excavating, or foundations, 1.5 times the diameter of the drip line for other trees to be saved. All areas which are "cut off" from the tree by this work shall be considered disturbed.
6. Water shall not be impounded for longer than 48 hours within the drip line of any tree to be saved.

(End of Section)

SECTION 8-500

TREE AND PLANT SELECTION

SEE ZONING ORDINANCE.

(End of Section)

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SECTION 8-600

FIELD PRACTICE

All field work shall be done in accordance with the standards outlined in the approved plans, the Latest Edition of the *Virginia Erosion and Sediment Control Handbook*, and in accordance with recommendations of the American Association of Nurserymen for the specific species being planted.

(End of Section)

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SECTION 8-700

PLANTING PRACTICE WITHIN EASEMENTS

The following is the procedure for coordinating landscaping, buffers, utility easements and underground pipelines.

1. General.
 - A. Private and public easements are allowed within ordinance- required buffer yards.
 - B. Ordinance-required landscaping materials are allowed in private easements, (electric, telephone, cable TV and gas), unless specifically prohibited by the owner of easement.
 - C. Ordinance-required landscaping materials excluding trees, are permitted in public easements. Ordinance-required trees are permitted with approval of the Director for placement within public easements.
 - D. All landscape planting (trees and shrubs) within drainage swales and ditches is prohibited.

2. Alternatives.

Prior to requesting special approval to locate ordinance-required trees in a public utility easement, the following must be considered in the order shown below:

- A. Relocate proposed public utility lines (water, storm sewer, sanitary sewer) outside of the landscape area, if possible.
- B. Move trees outside of easements if objectives of ordinance required screening are met.
- C. Design required landscaping for screening using shrubbery only (no trees) within public easements.

If any of the three alternatives considered in the order listed above can resolve the conflict between tree locations and utility easements, then no special approval is necessary.

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3. Special Approval.

Special approval from the Director to locate ordinance-required trees in a public easement may be authorized if the following are met:

- A. All options in item 2 above have been fully investigated and do not resolve the location of proposed trees.
- B. Tree species selected for placement within a public easement must be a type which obviates the effect of the root system upon the pipeline.
- C. Trees shall not be placed directly over top of an underground pipeline. Trees must be placed as far as possible from the underground pipeline (recommend minimum clearance of five feet).
- D. Trees placed in public easements by special approval will not be replaced by the Town if damaged by the utility line or maintenance activities.

(End of Section)

**SECTION 8-800 RECOMMENDED PRACTICES FOR RESIDENTIAL LAWN
ESTABLISHMENT****8-810 General**

This section is provided for information only in order to aid in the establishment of turf grass lawns for residential development. The practices outlined herein, while highly recommended, are not mandatory. More complete information is available from the Virginia Cooperative Extension Service publications from which this section is prepared.

Publication 430-011 Lawn Fertilization in Virginia

8-820 Turfgrass Selection**1. Selecting Adapted Turfgrass**

On the northern Piedmont of Virginia, the cool-season species of Kentucky bluegrass or tall fescue will produce the best year-round turf on home lawns. The performance of a Kentucky bluegrass lawn is improved if two or three varieties are blended together.

Additional cool-season turfgrasses that may be used are creeping red fescue and perennial ryegrass. Creeping red fescue has the best shade tolerance of all the cool-season grasses, and it is often included in a mixture of Kentucky Bluegrass varieties.

Perennial ryegrasses produce an acceptable turf under certain limited circumstances; however, they are best used as a nurse grass during establishment of a Kentucky Bluegrass mixture. When less than 20% perennial ryegrass is included in a mixture as a nurse crop, the perennial ryegrasses (which germinate quickly) will help to stabilize the soil until the slower developing Kentucky Bluegrass can become established.

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2. Establishment Methods

Lawn Establishment Options

| <u>Grass</u> | <u>Seed</u> | <u>Sod</u> |
|--------------------|-------------|------------|
| Kentucky Bluegrass | Yes | Yes |
| Tall fescue | Yes | Yes |
| Perennial ryegrass | Yes | No |

3. Establishment Timing

Optimum periods for establishment of Kentucky Bluegrass, tall fescue, fine fescue and perennial ryegrass.

(Cool-season grasses)

| Area of Virginia | Seed | Sod | |
|--|---|-----------------------------------|--|
| Northern Piedmont and areas in and west of the Blue Ridge | 8/15 to 9/15 or March to early April | Anytime soil is not frozen | Sodding cool-season during July and August can endanger successful establishment unless adequate water is provided. |

8-830 Soil Preparation

1. Soil Test

Soil testing is necessary to determine whether the soil pH and nutrient (phosphorus, potassium, calcium and magnesium) levels are suitable for turf, and to determine how much fertilizer or lime to apply.

2. Controlling Weeds

8.1.2

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Undesirable perennial grasses and broadleaf weeds should be controlled prior to tilling the soil. This is essential in order to eliminate their competition with new grass plants as well as to enhance the quality of the new lawn.

3. Soil Grading and Tillage

Prior to lot grading to establish final lot contours save the topsoil by moving it to one side, stockpiling it for later use.

The subgrade should slope away from buildings. All building debris and large rocks should be removed from the site. Stockpiled topsoil should be spread uniformly over the entire lawn area.

Till the soil to a depth of 4 to 6 inches where: 1) soil compaction is severe; 2) large amounts of phosphorus or lime are recommended; 3) surface drainage is inadequate; or 4) the soil is to be modified.

4. Soil Modification

Where the physical properties of the topsoil are not adequate for plant growth, soil modification may be advisable. Organic matter improves soil aeration, water retention and nutrient holding capacity. Sand improves water infiltration and aeration and reduces compaction. Consult the Virginia Extension Service Publications if considering soil modification.

5. Fertilization and Liming

Apply the amounts of fertilizer and lime recommended by the soil test, or in the absence of a soil test the following recommendations often give good results:

A. Lime

80 pounds of ground limestone per 1000 sq. ft. of lawn area.

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B. Fertilizer

1-1/2 to 2-1/2 pounds of actual nitrogen (N) per 1000 sq. ft.

3-1/2 to 5 pounds of phosphate (P₂O₅) per 1000 sq. ft.

1-1/2 to 3-1/2 pounds of potash (K₂O) per 1000 sq. ft.

NOTE 1: Use the lower rate of nitrogen when sodding Kentucky Bluegrass or tall fescue from January to September 1. These nutrients needs not be applied separately, but can be and usually are applied in the form of a complete fertilizer.

NOTE 2: Use the lower rate where the soil has only been surface tilled in the upper 1 and 2 inches.

8-840 Seeding

1. Turfgrasses used for lawns should be sown at the following rates:

| <u>Turfgrass Species</u> | <u>Seeding Rate Pounds/1000 sq. ft.</u> |
|--------------------------|---|
| Kentucky Bluegrass | 2 to 3 |
| Tall fescue | 4 to 6 |
| Fine fescue | 3 to 5 |
| Perennial ryegrass | 3 to 5 |

Sow the first one half of the seed in one direction and the second one half perpendicular to the first. Insure good seed-soil contact by lightly raking and then rolling the seedbed.

8-850 Sodding

1. Cool-season grass sod can be installed throughout the year as long as the soil is not frozen. During the summer, the soil should be dampened just prior to laying the sod to avoid placing the turf roots in contact with excessively dry and hot soil. Sod is perishable; it should not remain on the pallet or stack longer than 36 hours.

Newly transplanted sod should be watered immediately to wet the soil to a 3 inch depth to enhance rooting. During the 2 to 3 week establishment phase, sod should be watered daily to maintain this soil moisture.

8-860 **Mulching**

1. Mulching conserves moisture from rainfall or irrigation and prevents crusting of the soil surface. Jute and wood fiber mulches are available. The most commonly used mulch is straw, but avoid using straw containing objectionable, difficult-to-control weeds. Mulch at 80 to 100 pounds (1-1.2 to 2 bales) per 1000 sq. ft. Straw can be removed when the turf reaches a height of 1 to 1-1/2 inches, or can be left to decompose.

8-870 **Weed Control**

1. There are two basic types of weeds that invade new turf grass lawns. Broadleaf weeds can be a problem in spring, summer or fall plantings. Annual grassy weeds are a problem in spring and summer plantings. Broadleaf weeds can be controlled with broadleaf herbicides after the turf has matured enough to have been mowed two to four times.

Annual grasses such as crabgrass, barnyardgrass and foxtails can be effectively controlled with preemergence herbicide applied at spring planting of new lawns.

Control of annual grass weeds in fall seedings are generally not necessary as they will be killed by the first heavy frost.

8-880 **Mowing**

1. The recommended mowing heights for turfgrasses commonly used in lawns are as follows:

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| | |
|--------------------|-----------------------|
| Kentucky Bluegrass | 1-1/2 to 2-1/2 inches |
| Tall fescue | 2 to 3 inches |
| Perennial ryegrass | 1-1/2 to 2-1/2 inches |

Mowing higher in summer usually benefits cool-season grasses.

8-890 Fertilization

1. Follow a maintenance fertilization program.

| | |
|---------------------|------------------------|
| Cool-season grasses | 90 days after planting |
| Warm-season grasses | 30 days after planting |

2. Refer to Virginia Cooperative Extension publication 430-011 entitled "Lawn Fertilization in Virginia" for fertilizer rates and application timing for established cool-season and warm-season lawns.

(End of Section)