

## Section 409. Preservation and Protection of Existing Vegetation

### A. Preservation of Existing Vegetation.

1. All subdivisions and land developments shall be laid out in such a manner as to minimize the removal and/or disturbance of healthy trees, shrubs, and other vegetation on the site. Special consideration shall be given to mature specimen trees and ecologically significant vegetation.
2. Removal or disturbance of vegetation in environmentally sensitive areas, including wetlands, floodplains, steep slopes, riparian corridors, wildlife habitats, and ecologically significant woodlands as identified in the Montgomery County Natural Areas Inventory or other sources shall be undertaken only as permitted in Section 409 D. 1. to minimize the adverse effects of such actions.
3. The applicant shall prove to the satisfaction of the Springfield Township Board of Commissioners that vegetation removal is minimized. A written document or plan may be requested to be performed by a registered landscape architect or other qualified professional showing that no more desirable layouts are possible and no alternative clearing or grading plan would reduce the loss of mature trees, tree masses, and woodlands.
4. Each freestanding mature tree, tree mass, or woodland on the site shall be designated "TO REMAIN" or "TO BE REMOVED" in accordance with the following criteria:
  - a. A mature tree, tree mass, or woodland may be designated "TO BE REMOVED" only if it meets one or more of the following criteria:
    - 1) The outermost branches of the tree(s) are at least five (5') feet or the trunk of the tree at least twenty (20') feet, whichever is less, from any proposed buildings, structures, paving, parking, or utilities (overhead or underground).
    - 2) The outermost branches of the tree(s) are at least five (5') feet or the trunk of the tree is at least twenty (20') feet, whichever is greater from any proposed changes in grade or drainage such as excavations, mounding, or impoundments.
    - 3) The tree(s) interfere with traffic safety or are located within proposed sight triangles.
    - 4) The tree(s), by its location or apparent health, poses any undue threat to the health, safety, and welfare of the community.
    - 5) The tree does blocks required solar access.
  - b. Mature trees, tree masses, or woodlands that do not fit the above criteria should be designated "TO REMAIN."
  - c. Unique or Specimen Trees should be preserved

### B. Protection of Existing Vegetation

1. Existing vegetation designated "TO REMAIN," in accordance with Section 409 D. 1., as part of the landscaping of a subdivision or land development shall be identified in the field prior to any clearing and shall be physically protected throughout the construction process. A temporary, sturdy physical barrier, such as a snow fence, shall be erected a minimum of one foot outside the drip line or a minimum of twenty (20') feet from the tree's trunk, whichever is greater on all sides of freestanding trees, tree masses, or woodlands prior to major clearing or construction. The barrier shall be placed to prevent disturbance to or compaction of soil inside the barrier and shall remain until construction is complete. The barrier shall be shown on the erosion and sedimentation control plan and the landscape plan. Reference to the installation of tree protection should be included in the sequence of construction notes to insure incorporation of tree protection before the earliest stages of site disturbance.

C. Credit for Preserved Trees Requirements for street trees and buffer plantings may be met, whenever possible, by preserving existing trees. Credit for existing trees which are "To Remain", as determined in Section 409 A 4, to offset either the street tree or buffer planting requirements are to be calculated as follows:

Preserved Tree (dbh)	Number of Trees Credited (2 ½" caliper)
36" or greater	8 Trees
18"-35"	6 Trees
12"-17"	4 Trees
8"-11"	2 Trees

D. Tree Replacement Planting Requirements

1. Any subdivision or land development proposal which will result in the destruction of 25 (%) percent of the existing trees six (6) inches dbh or greater on a lot shall replace the removed trees. The total tree removal impact of woodland areas designated "TO BE REMOVED" shall be measured by a forest density survey that calculates the approximate quantity of trees (with 6" or greater dbh) per square foot area. Calculated woodland tree removals and individual mature tree removals shall be listed on the plan. Tree replacement shall occur in the following manner:
  - a. Each tree six (6) inches dbh or greater that is destroyed shall be replaced with one tree with a caliper of 2½ "inch caliper.
  - b. Replacement trees shall generally comply with the general landscape design criteria in Section 438 of this ordinance.
2. Replacement trees shall be planted on the site to mitigate for the existing trees removed, in addition to other landscaping requirements. Proposed replacement tree plantings shall be listed on the plan.

3. If the site does not reasonably contain enough room for the required replacement trees, the Springfield Township Board of Commissioners may allow the developer to locate some or all of the replacement trees on public lands or accept an equivalent fee-in-lieu of plantings, at their discretion.
4. Calculation and estimation of existing trees shall be performed before any clearing commences and shall be documented on the plan.
5. Calculation and estimation of the existing trees remaining after construction shall be performed and compared with the calculations of the approved plan. Any tree removals additional to those on the approved plan shall be replaced as required by this section prior to the issuing of any occupancy permits.

### **Section 433. Street Trees**

- A. Street trees shall be required along:
  1. All existing streets when they abut or lie within the proposed subdivision or land development except where existing trees serve to meet the planting requirement.
  2. All proposed streets.
  3. Access driveways that serve five (5) or more residential dwelling units.
  4. Access driveways that serve two (2) or more nonresidential properties.
  5. Major walkways through parking lots and between nonresidential buildings, as recommended by the Springfield Township Board of Commissioners.
- B. The street tree requirement may be waived by the Springfield Township Board of Commissioners to maintain scenic views of open space, farmland, hedgerows, natural features, or other valued features.
- C. Street trees shall be located between the ultimate right-of-way line and the building setback line and shall meet the following standards:
  1. Trees shall be planted a minimum distance of five (5') feet and a maximum distance of fifteen (15') feet outside the ultimate right-of-way line. However, in certain cases, as follows, the Springfield Township Board of Commissioners may permit trees to be planted within the ultimate right-of-way:
    - a. In areas, such as existing villages, where planting areas may be located within the ultimate right-of-way
    - b. In cases where closely spaced rows of street trees may be desirable and future street widening is considered unlikely.
    - c. Where there are existing trees along the road, new trees should supplement them.
  2. In nonresidential developments, trees shall be located within a planting area within the front yard setback, at least ten (10') feet in width, planted in grass or groundcover. In areas where wider sidewalks are desirable, or space is limited, tree-planting pits may be used.

3. Trees shall be located so as not to interfere with the installation and maintenance of sidewalks and utilities. Trees shall be planted such that their trunks are a minimum distance of three (3') feet from curbs and sidewalks, twelve (12') feet from overhead utilities, and six (6') feet from underground utilities.
4. Tree species shall be selected based on appropriate growth rates and mature heights for use adjacent to overhead utility lines.
5. Trees shall be planted at a rate of at least one tree per forty (40') feet of street frontage or fraction thereof. Trees shall be distributed along the entire frontage of the property, although they need not be evenly spaced.
6. Trees shall comply with the requirements of Section 438, herein. The use of tree species selected from the List of Recommended Plant Materials is encouraged/required.

**Section 434. Buffer Plantings.**

Use Requirements. Buffer plantings shall be installed in subdivisions and land developments to integrate new development with its surroundings, to separate incompatible land uses by providing screening, to reduce wind, and to minimize or eliminate views to certain site elements in compliance with the following regulations:

- A. Buffer plantings shall be required for the following types of development and as otherwise specified in the Springfield Township Zoning Ordinance:
  1. All nonresidential development.
  2. All single family detached development.
  3. All multi-family, single-family attached, and semi-attached development.
  4. All cluster development.
  5. All mobile home parks.
  6. Active recreational facilities.
  7. Construction of any of the following items which exceeds 400 square feet in ground coverage:
    - a. public utility facilities or structures,
    - b. waste collection, storage and/or treatment facilities
    - c. any other structure of similar character or impact.
- B. An on-site investigation by the applicant shall determine the adjacent land uses along each property boundary. In the case of vacant land, the existing zoning shall be used. The existing or zoned uses shall be noted on the plan. In the case when several uses are allowed on a site, the most restrictive landscaping requirements shall apply as determined by Springfield Township.

Proposed Use	Existing Uses			
	Office/ Institutional/	Commercial / Industrial	Multi-family/ SFA/ MHP	Twins/ Duplexes/SFD

	Private Recreation			
Office/ Institutional	Softening	Softening	Filtering	Screening
Commercial/ Industrial	Filtering	Softening	Screening	Screening
Residential	Softening	Filtering	Softening	Filtering
Active Recreation	Softening	Filtering	Softening	Softening

C. Buffer Area Location and Dimensions

1. A buffer planting area of not less than fifteen (15') feet in width shall be established along all property lines and external street boundaries of the tract proposed for subdivision or land development, unless otherwise specified in the zoning ordinance. Where zoning regulations allow building setbacks less than fifteen (15') feet, the buffer area may be reduced to equal the width of the minimum building setback.
2. The buffer area may be included within the front, side, or rear yard setback.
3. The buffer area shall be a continuous pervious planting area consisting of canopy trees, small understory trees, and shrubs, with grass or groundcover. No paving shall be permitted within the buffer areas except for driveway crossing and/or walkways.
4. Parking is not permitted in the buffer area.
5. Stormwater basins are permitted in the buffer area provided that the visual screening requirements of the buffer is met.

D. Minimum Buffer Planting Requirements. The minimum planting requirements shall be determined by the intensity of the proposed land use and the adjacent land use, vacant land, or zoning district.

E. Minimum Plant Material Requirements. The following requirements are minimum standards; additional plant material, grading treatments, or architectural elements may be included in the plan, at the applicant's discretion. Every 100' linear feet of property line or external street boundaries of the tract proposed for subdivision or land development shall be buffered with the following minimum quantities, types, and sizes of plant material:

1. Softening buffer:
  - a. One canopy trees (two to 2 1/2 inches caliper).
  - b. Two understory trees (1 1/2 inches minimum caliper).
  - c. Two evergreen trees (eight feet minimum height).
- a. Filtering buffer:

- a. Two canopy tree (two to 2 1/2 inches minimum caliper).
    - b. Two understory trees (1 1/2 inches minimum caliper).
    - c. Five evergreen trees (eight feet minimum height).
    - d. Five (mixture of deciduous/coniferous) shrubs (24 inches minimum height).
  - b. Screening buffer: A screening buffer must be adequate to visually screen the proposed land use or development from off-site view. Several different planting options could be used to create an effective buffer. Grading treatments and architectural features, such as walls, fences and/or naturally undulating berms may be necessary in addition to the minimum planting quantities in order to effectively provide a visual screen. The sufficiency of the buffer shall be determined by the Springfield Township Board of Commissioners.
    - a. Eight evergreen trees (eight feet minimum height), two understory trees (1 1/2 inches minimum caliper), two tall canopy trees (two to 2 1/2 inches minimum caliper), 10 (mixture of deciduous/coniferous) shrubs (24 inches minimum height); or
    - b. Thirty upright evergreen shrubs (six feet minimum height); or
    - c. Fifteen upright evergreen shrubs (four feet minimum height), four ornamental trees (1 1/2 inches minimum caliper, or three canopy trees (two to 2 1/2 inches minimum caliper); or
    - d. An alternative planting design that will result in at least an equivalent degree of visual screening to one of the above screening buffers.
  - c. Limited area/buffer: The limited area/buffer can be used in older developed areas where space for planting is severely restricted. The planting screen would be equivalent to an evergreen hedge planting. Alternative planting arrangements such as shade or flowering trees with deciduous shrubs, could be considered in conjunction with a fence or wall, at the discretion of the township. The sufficiency of the buffer shall be determined by the Springfield Township Board of Commissioners
    - a. One upright evergreen shrub per three feet (four feet minimum height).
    - b. Four- to six-foot solid fence or wall with landscaping.
- F. Mitigation of Visual Impacts.
1. The use of a screening buffer planting shall be required to mitigate the adverse visual impacts that the proposed land uses or site elements have on the subject tract, adjoining properties and the community in general. In addition to the requirements for buffer plantings as listed in figure, the following proposed land

uses and site elements shall be screened from off-site with a screening buffer planting:

- a. Dumpsters, trash disposal, recycling areas, and mechanical equipment.
  - b. Service and loading docks.
  - c. Outdoor storage areas.
  - d. Sewage treatment plants and pump stations.
2. Existing topographic conditions, such as embankments or berms, in conjunction with existing vegetation, may be substituted for part or all of the required buffers at the discretion of the Springfield Township Board of Commissioners. The minimum visual effect shall be equal to or exceed that of the required buffer or screen.
  3. Constructed berms or other architectural elements such as walls or fencing may be substituted for part of the landscape buffering requirements.

### **Section 435. Parking Lot Landscaping**

Parking lots should be effectively landscaped with trees and shrubs to reduce the visual impact of glare from headlights, and parking lot lights; to delineate driving lanes; and define rows of parking. Furthermore, parking lots should be adequately landscaped to provide shade in order to reduce the amount of reflected heat and to improve the aesthetics of parking lots.

A. Planting Regulations. All parking lots shall be landscaped according to the following regulations:

1. Parking Stall Rows
  - i. One planting island shall be provided for every fifteen parking stalls. There shall be no more than fifteen contiguous parking stalls in a row without a planting island.
  - ii. As an alternative to the previous planting island requirement (planting islands located every fifteen contiguous parking spaces) the applicant may provide one canopy tree for every ten parking spaces in other planting island areas and in perimeter parking planting areas at the discretion of the Springfield Township Board of Commissioners.
2. The ends of all parking rows shall be divided from drives by planting islands.
3. In residential developments, large parking lots shall be divided by planting strips into smaller parking areas of no more than forty (40) stalls.
4. In nonresidential developments, large parking lots shall be divided by planting strips into smaller parking areas of no more than one hundred (100) stalls.
5. Planting islands shall be the dimensions of one parking stall or a nine (9') feet by eighteen (18') feet area whichever is greater, underlain by soil and shall be protected from vehicle traffic with curbing, wheel stops, or bollards. Each planting island shall contain one shade tree plus low-growing shrubs and/or groundcover over the entire area.

6. All planting strips shall be a minimum of fifteen (15') feet wide. Strips shall run the length of the parking row, underlain by soil, and shall be protected with curbs, wheel stops, or bollards. Planting strips shall contain plantings of one canopy tree every twenty-five (25') feet, plus shrubs and/or groundcover to cover the entire area at maturity.
  7. The placement of light standards shall be coordinated with the landscape plan to avoid a conflict with the effectiveness of light fixtures.
  8. Plant materials shall comply with the requirements of Section 617, herein and shall be selected from the List of Recommended Plant Material.
- B. Screening Requirement. All parking lots shall be screened from public roads and from adjacent properties according to the following:
1. The perimeter of all parking lots shall be planted with a filtering buffer as per Section 434.
  2. The perimeter planting area around all parking lots shall be a minimum of ten (10') feet in width.

### **Section 436. Additional Plantings.**

- A. All proposed non-residential structures shall incorporate the following minimum plant materials in the landscaping areas adjacent to the proposed structure:
1. One canopy tree (2-2 ½" minimum caliper) or two understory trees (8' minimum height) shall be planted for every fifty (50') feet of proposed building façade facing a public street.
  2. Five (5) deciduous or evergreen shrubs (18" minimum height) shall be planted for every twenty (20') feet of proposed building façade facing a public street.
  3. Planting areas shall be a minimum of 150 square feet with a minimum 10-foot width.
  4. A minimum of twenty-five (25%) percent of the area between the building façade and the property frontage shall consist of pervious planting areas.
- B. All proposed residential lots shall plant at least one canopy tree per 10,000 square foot, or a portion thereof, of lot area. Existing trees to remain may satisfy part or all of this planting requirement.
- C. A canopy tree shall be planted for every two dwelling units of an attached residential house.
- D. At the discretion of the Springfield Township Board of Commissioners, if sufficient planting space is not available immediately adjacent to the proposed structure, required building façade plantings may be located on the other areas of the tract.

### **Section 437. Stormwater Basin and Natural Areas Planting.**

Landscaping shall be required in and around all stormwater management basins and natural areas according to the following:



- A. All areas of stormwater management basins, including basin floors, side slopes, berms, impoundment structures, or other earth structures, shall be planted with suitable vegetation such as naturalized meadow plantings or lawn grass specifically suited for stormwater basins.
1. Trees and shrubs shall be planted in and around stormwater basins if they do not interfere in the proper function of the basin and no trees are planted within thirty (30') feet of an outlet/drain structure, emergency spillway, or dam. A minimum of two (2) trees and ten (10) shrubs per 100' linear feet of basin perimeter shall be planted in and around the basin.
  2. Naturalized ground cover plant species, such as wildflowers, meadows, and nonaggressive grasses specifically designed for the permanently wet, intermittently wet, and usually dry areas of stormwater basins, shall be seeded in the floors and slopes of the basin and meet the following requirements:
    - a. The plantings provide a satisfactory continuous cover for all areas of the basin.
    - b. The plantings do not interfere with the safe and efficient function of the basin as determined by the Township Engineer.
  3. Lawn grass areas may be sodded or hydro-seeded to minimize erosion during the establishment period. Once established, these turfgrass areas shall be maintained at a height of not more than six (6") inches.
  4. Stormwater basins shall be screened from adjacent properties using the buffer plantings standards according to Section 434.
- B. Additional vegetation shall be planted in natural resource protection areas including riparian corridors wherever existing trees do not meet the minimum tree planting requirements.
1. Existing trees within natural resource areas shall be preserved and retained. Existing tree cover should be surveyed and inventoried to assess the need for any new plantings. Existing tree species included on the noxious/invasive plant species list, Appendix B, should be removed where conditions warrant.
  2. Planting Requirements.
    - a. New trees shall be planted at a minimum rate of fifteen (15') feet on center or one tree per 225 square feet in staggered rows or an equivalent informal arrangement within the riparian area.
    - b. New trees shall be a variety of sizes ranging from a minimum four (4') to five (5') foot branched whip to an approximate one and a half inch (1 ½") balled and burlapped planting stock.
    - c. New tree plantings shall be composed of native riparian tree species.
    - d. Tree plantings in riparian areas shall be located along the streambank to provide shade for the stream, soil erosion control and stormwater benefits, according to accepted stream bank restoration practices.

- e. Trees planted in natural areas inventory sites should conform to the management requirements the Montgomery County Natural Areas Inventory.

**Section 438. General Landscape Design Criteria.**

- A. Plantings shall be placed in arrangements and locations to best mitigate the adverse impacts of the proposed site development. The required plant material shall be distributed over the entire length and width of any required buffer area.
- B. Plantings shall be spaced to comply with the visual mitigation requirements with consideration given to the provision for the future growth habits and mature sizes of selected plant species.
- C. Plant species selection shall be based on the following considerations:
  - 1. Existing site conditions and their suitability for the selected plants based on the site’s soils, hydrology and microclimate.
  - 2. Specific functional objectives of the plantings which may include but not be limited to visual screening, noise abatement, energy conservation, wildlife habitat, erosion control, stormwater management, and aesthetic value.
  - 3. Maintenance and replacement considerations such as hardiness, resistance to insects and disease, longevity, availability, and cost of plant materials
  - 4. A minimum variety of tree species is required as follows:

Number	Minimum Number of Tree Species	Max % of Any One Species
0-5	1	100%
6-15	2	50%
16-30	3	40%
31-50	4	30%
51+	6	20%

- D. Existing healthy trees, shrubs, or woodlands may be substituted for part or all of the required plant material at the discretion of the Springfield Township Board of Commissioners. The minimum quantities and/or visual effect of the existing vegetation shall be equal to or exceed that of the required buffer. In order for existing vegetation to qualify for required buffer plantings, proof must be provided to demonstrate that adequate protection measures, particularly in the plant’s root zone, are incorporated into the plan.
- E. Plant materials shall meet the specifications of Section 617.