

## **LANDSCAPING STANDARDS**

## Chapter 6. Landscaping Standards

### WC 16.06.010 - General Landscaping Provisions

- A. Purpose and Intent - This Chapter establishes regulations for the preservation of natural features and minimum standards for the provision, installation, and maintenance of landscape materials. The regulations specified herein are intended to promote the health, attractiveness, and safety of the community; foster aesthetically pleasing and environmentally sensitive development that protects and preserves the appearance and character of the community; and encourages the preservation of natural areas such as mature tree stands and stream corridors.

This Chapter establishes standards to manage and control drainage and erosion; to increase the compatibility of development with the natural environment and adjacent developments; to encourage connectivity through the use of a pedestrian network; and to maintain and increase the value of land by requiring landscaping to be incorporated into developments. The standards set forth herein promote important physical and psychological benefits through the use of landscaping to reduce noise and lighting; promote innovative and cost conscious approaches to the design, installation, and maintenance of landscaping; and establish procedures and standards for the administration and enforcement of this Chapter.

### B. Applicability

1. This Chapter shall apply to all zoning districts and all public, private, and institutional developments, except those approved prior to the enactment of this Chapter and those that have fulfilled filing requirements at the time of the enactment of this Chapter.
2. This Chapter shall apply to nonresidential uses, residential subdivisions, or other residential developments that require site development plan approval or a special exception.
3. This Chapter shall not apply to previously-authorized building permits, a previously-approved site development plans, or previously-approved subdivision plats.
4. This Chapter shall not apply to detached single-family residences not located within subdivisions.

### C. Content of Landscape Plan - Landscaping plans shall comply with the following standards:

1. Landscape plans shall be submitted for all required green belt buffer areas, buffer yards, conservation easements, landscape easements, and areas owned in common within proposed developments. It is recommended that landscape plans be

- prepared by licensed landscape architects, nurserymen, or other professionals experienced in landscape design, installation, and maintenance. A narrative describing ownership, use, and maintenance responsibilities of these areas should be specified in the submittal.
2. Landscape plans shall show the entire project drawn to scale on standard sized sheets (minimum 24" x 36") and shall contain the following information:
    - a. Names and addresses of owners, developers, plan preparers, plan preparation dates, scale of drawings, and north arrows;
    - b. Locations and dimensions of all existing and proposed structures, parking lots, driveways, roadways, rights-of-way, sidewalks, pedestrian pathways, bicycle pathways, ground signs, refuse disposal areas, bicycle parking areas, freestanding electrical equipment, recreation facilities, utility lines, easements, freestanding structural features, landscape improvements, earth berms, walls, fences, screens, sculptures, fountains, street furniture, lights, courts, paved areas, buffer yards, primary and secondary green space areas, and green belt space;
    - c. Locations, quantities, sizes, and names (botanical names and common names) – of planting materials;
    - d. Existing and proposed grading plans, indicating contours at not more than two-foot intervals;
    - e. Locations of barriers to be placed at or beyond driplines of trees to be preserved and types of materials to be used for barriers;
    - f. Planting and installation details as necessary to ensure conformance with required standards;
    - g. Details indicating specific grading measures or protective devices to be utilized where trees are to be preserved in areas of cut and fill; and
    - h. Tables clearly displaying relevant statistical information, including numbers of existing trees and numbers of trees preserved, for example.
  3. Standard size sheets at the same scale as landscape plans that display locations, sizes, and common names of existing individual trees that measure twelve (12) inches or more in caliper, areas of dense trees or shrubs, and other natural areas.
- D. Modifications - When a change in use occurs, or when modifications that require a building permit are made to existing structures, landscaping shall be required to be installed in a manner that is comparable in nature and extent to the impact of the proposed change or modification.

WC 16.06.020 - Preservation and Replacement of Trees

- A. Developers shall take reasonable measures to design and locate proposed structures in a manner that minimizes the destruction of significant tree specimens.
- B. Prior to site development plan approval or the issuance of a building permit, developers shall inventory all trees which possess a caliper measure of at least twelve (12) inches. Tree inventories shall depict locations, sizes, and common names of existing trees and individual shrubs; areas containing dense trees or shrubs; and other natural site features. Existing trees that are to be preserved shall be credited toward required landscaping requirements based on the sizes of such preserved trees.
- C. The following considerations shall be made in regard to tree preservation efforts:
  - 1. The practicability of arranging site plan components around existing features. Plans for groups of structures should be designed so as to preserve areas of high tree concentrations, desirable individual tree specimens, and desirable stands of trees and shrubs;
  - 2. The condition of vegetation with respect to continued vitality;
  - 3. The possibility of preserving vegetation through pruning rather than removal.
  - 4. The desirability of a particular tree or species by reason of its appearance; historic or ecological significance; botanical characteristics; and the function the vegetation would fulfill as a site plan component;
  - 5. The practical and economic possibility of designing the location and grades of proposed structures and paving to preserve existing vegetation; and
  - 6. The potential for interference with utility services along the use of roads and walkways.
- D. Tree preservation plans shall be submitted with site plans that detail locations, sizes, and common names of preserved trees; individual shrubs; areas of dense tree or shrub concentrations, and other natural features which are to be preserved or removed. No disturbance shall be permitted in the critical root zones of preserved trees. Disturbances include trenching, backfilling, driving or parking equipment, and dumping trash, oil, paint, or other materials detrimental to plant health.
- E. Should any tree designated for preservation die within five (5) years of project completion, the owner shall replace such tree with a tree (or trees) of equal tree preservation value within 180 days (see following paragraph for value calculation).
- F. Incentives to Preserve Trees – Existing trees that are preserved shall contribute to required on-site landscaping, based proportionally on their caliper measure. Certain “cull” species and deformed trees may not be permitted to be credited. Preserved trees under eight (8) inches in caliper shall be credited at the rate of one (1) times the caliper measure of such trees. However, trees with a caliper of less than two (2)

inches shall not qualify for credit. Preserved trees between eight (8) and sixteen (16) inches in caliper shall be credited at the rate of two (2) times the caliper measure of such trees. If preserved trees possess caliper measures of sixteen (16) inches or greater, credit shall be calculated at the rate of four (4) times the caliper measure of such trees. A qualifying six (6) inch caliper preserved tree shall be credited as three (3) required two (2) inch caliper trees. A qualifying fourteen (14) inch caliper preserved tree shall be credited as twenty-eight (28) required two (2) inch caliper trees. And, a qualifying eighteen (18) inch caliper preserved tree shall be credited as thirty-six (36) required two (2) inch caliper trees.

- G. Barriers shall be used to protect trees during site development. Barriers shall be specified on landscape plans and shall be placed at or beyond the driplines of trees to be preserved. Such barriers shall remain in place during site construction. No vehicles, machinery, tools, chemicals, construction materials, or temporary soil deposits shall be permitted within such barriers. No notices or other objects shall be nailed or stapled to preserved trees.
- H. Grading measures or protective devices, such as tree wells, tree walls, or specialized fill and pavement designs, shall be installed when necessary to preserve identified tree specimens.

WC 16.06.030 - Selection, Installation, and Maintenance of Plant Materials

A. Selection

1. Shade Trees - Shade trees shall be a minimum of eight (8) feet in height and have a caliper measure of at least two (2) inches, measured twelve (12) inches above finished grade. Shade trees shall be of a variety that will attain an average mature spread greater than twenty (20) feet.
2. Evergreen Trees - Evergreen trees shall be a minimum height of six (6) feet.
3. Ornamental Trees - Ornamental trees shall have a minimum trunk size of two (2) inches in caliper, measured six (6) inches above finished grade.
4. Shrubs shall possess a minimum height of eighteen (18) inches at the time of planting.
5. Substitutions – If plant substitutions become necessary due to seasonal planting problems or a lack of plant availability, revisions to planting plans shall be permitted based on the substitution list below. For on-site requirements only, substitutions may be made for up to one-half (50%) of required plants. If plant substitutions do not fulfill the following criteria, changes to previously-approved plans shall be resubmitted and reviewed for new approval.
  - a. 1 shade tree = 2 ornamental trees = 2 evergreen trees
  - b. 1 ornamental tree = 1 evergreen tree

B. Installation

1. Landscaping materials shall be installed in accordance with planting procedures established by the American Association of Nurseryman.
2. Required landscaping of development projects shall be completed prior to the issuance of Certificates of Occupancy for non-residential and multi-family projects, and prior to the issuance of building permits for more than fifty percent (50%) of the lots within each section of residential subdivisions. Landscaping installation may be delayed up to 120 days due to the following:
  - a. Periods of adverse weather, or
  - b. Conflicts between construction scheduling and proper planting conditions.

C. Maintenance

1. All newly planted vegetative material shall meet minimum American Standard for Nursery Stock Standards.
2. Landscaping shall be maintained in healthy growing condition. This includes:
  - a. Regular irrigation, weeding, fertilizing, pruning, mowing, and other maintenance of outside plant materials on the property;
  - b. Mature trees shall not be topped. They shall be pruned according to procedures established in the National Arborist Association Standards, published by the National Arborist Association;
  - c. Treating plant materials that exhibit evidence of insect pest or disease damage;
  - d. Replacement of dead or dying plant materials with specimens in good, healthy, growing condition. Replacement shall be completed using the same plant materials approved on landscape plans.
  - e. Replenishing natural landscape materials such as rock, stone, bark chips and shavings that no longer cover the area in which they were originally deposited.
  - f. Repairing, replacing, or maintaining structural landscaping features including, but not limited to fountains, reflecting pools, outdoor art work, screening walls, retaining walls, fences, benches or other street furniture elements, as necessary to maintain these items in good condition.
  - g. Any other action necessary to maintain landscaping installed in accordance with an approved landscape plan.
3. Plantings and landscaping features required by this Chapter shall be subject to inspection to verify continued compliance with this Chapter.

WC 16.06.040 - General Landscape Design Standards

- A. Consultation - A landscape architect, nurseryman, or other professional experienced in the installation and care of plant materials shall be consulted to ensure that proposed plants are appropriate and will survive.
- B. Scale and Nature of Landscaping - The scale and nature of landscaping materials shall be appropriate to the size of proposed structures. Large-scale buildings should be complemented by large-scale plants. Form, texture, color, pattern of growth, and adaptability to local conditions shall be considered when selecting plant materials.
- C. Clearance - Trees shall be planted so that when they reach maturity, there will be a minimum of ten (10) feet of clearance between tree trunks and structures, building overhangs, walls, fences, and other trees.
- D. Materials - Grass and other vegetative ground cover shall be used in all green space areas, including parking lot islands, except for decorative mulch planting beds containing trees and/or shrubs; and inert stabilization in areas subject to severe runoff or erosion.
- E. Lines of Sight – Plantings in landscaped areas shall not obstruct sight lines as per WC 16.04.230 2.v).
- F. Energy Conservation - Plantings shall be arranged to promote energy conservation wherever practical. This includes using deciduous trees on the south and west sides of buildings to provide shade from summer sun and planting evergreens on the north of buildings to insulate against winter winds.
- G. Noise Reduction - Properties adjacent to highly trafficked roads or businesses shall arrange landscaping to reduce the intensity of noise by reflecting, deflecting, or absorbing sound. Some techniques to accomplish this include using earth berms, walls, fences, or plantings to provide physical separation and to absorb noise. When a berm is used to form a visual screen in lieu of or in conjunction with a hedge or wall, it shall not exceed a slope of thirty (30) degrees and shall be completely covered with shrubs, grass, or other living ground cover.
- H. Landscape plans shall clearly identify areas where stone or other inert materials are to be used as ground cover. Areas not so designated shall be required to have grass or other vegetative ground cover.
- I. Trash and Loading Facilities - Trash dumpsters, trash pads, loading areas consisting of two or more loading spaces, loading docks, service areas, and maintenance areas shall be screened from residential uses and public roads. Screening of such facilities shall be achieved by using a six (6) feet high, completely opaque fence or wall, a six (6) feet high berm, or a six (6) feet high evergreen screen planted nine (9) feet on center in a double staggered row.
- J. Heating and Cooling Facilities - Ground-mounted heating and cooling units for nonresidential or multi-family structures shall be completely screened.

- K. Softening of Walls and Fences - Plant materials other than ground cover shall be placed intermittently (approximately every 40 feet) against long expanses (over 80 feet) of building walls, fences, and other barriers to create a softening effect. However, ground cover plants may supplement the plant materials required by this paragraph.
- L. Detention/Retention Basins and Ponds - Detention/retention basins and ponds shall be landscaped in a manner that replicates the natural form of ponds. Such landscaping shall include shade trees, ornamental trees, evergreens, shrubbery, hedges, and/or other plant materials.

WC 16.06.050 - On-Site and Street Frontage Landscaping Requirements

A. On-Site Standards

- 1. Yards, setback areas, and green space areas within developments shall be landscaped with live vegetation.
- 2. The minimum numbers of shade trees, evergreen trees, ornamental trees, and shrubs required to be planted are set forth in Table 16.06.050-01.

Table 16.06.050-01: Minimum On-Site Requirements

| Land Use Type                         | Plant Materials     |                               |                     |
|---------------------------------------|---------------------|-------------------------------|---------------------|
|                                       | Shade Trees         | Ornamental or Evergreen Trees | Shrubs              |
| Single-Family Residential             | 4 per dwelling unit | 2 per dwelling unit           | 4 per dwelling unit |
| Multi-Family in MF 1&2 districts only | 1 per dwelling unit | 1 per dwelling unit           | 4 per dwelling unit |
| Institutional Uses                    | 2 per acre          | 3 per acre                    | 10 per acre         |
| Business Uses                         | 10 per acre         | 10 per acre                   | 25 per acre         |
| Industrial Uses                       | 5 per acre          | 5 per acre                    | 25 per acre         |

A proportional decrease in the required number of trees is allowed if larger caliper trees are planted. Trees with caliper measures of four (4) inches may replace two (2) required two (2) inch caliper trees.

- 3. Institutional uses include, without limitation, schools, churches and government offices.

4. For Institutional uses:
  - Trees required to be planted in interior parking lot landscaping areas may be counted toward meeting on-site landscaping requirements as set forth in the table above.
  - Identified acreage for constructed athletic fields and courts (including the adjacent perimeter for coaching and spectator viewing), and constructed playgrounds with equipment may be subtracted from the total acreage before computing on-site requirements.
5. Trees should be grouped together whenever possible to simulate natural tree stands, versus trees being planted in straight rows.
6. Required trees and plantings within residential land uses must be planted somewhere within such residential land uses. Required trees and plantings within such land uses are not intended to be requirements per each lot, but are intended to be aggregate requirements per subdivision section or per multi-family development.
7. Required trees and plantings within non-residential land uses must be planted per each lot requirement. Trees and plantings are not credited to overall development requirements.
8. Existing trees or woodlands that are preserved may be counted toward minimum planting requirements.

#### B. Road Frontage Standards

1. In residential developments, where property abuts primary arterials, secondary arterials, or collector roads not internal to subdivisions, at least one shade tree per thirty (30) linear feet of road frontage shall be planted adjacent to road rights-of-way. Trees planted along road frontage in residential developments may be credited toward overall on-site landscaping requirements set forth in Table 16.06.050-01.
2. In non-residential developments where property abuts any public right-of-way, at least one shade tree per forty (40) linear feet of road frontage shall be planted adjacent to road rights-of-way. Trees planted along road frontage in non-residential developments may be credited toward overall on-site landscaping requirements set forth in Table 16.06.050-01.
3. Shade trees required to be planted along road frontage shall be located outside drainage and utility easements, shall be located in a manner that mitigates interference with infrastructure located within such easements and may be clustered or grouped in order to attain creative site design.

4. When evergreen and/or ornamental trees are preserved along road frontage and qualify for preservation credit, they may count 1:1 toward road frontage requirements.

WC 16.06.060 - Buffer Yard Requirements

- A. Plantings in buffer yards should physically separate and visually screen different land uses and/or zoning districts from one another without precluding connectivity between uses. Plants used for screening must reach a minimum height of forty-eight (48) inches within three years of installation, and be at least eighteen (18) inches tall when planted. Plantings in buffer yards shall consist of two (2) or more species of both trees and shrubs.
- B. Buffer sizes shall be determined by adjacent zoning districts and/or land uses in accordance with Table 16.06.060-01. If adjacent properties possess a mix of land uses, then the highest intensity use shall determine the required buffer yard size.

Table 16.06.060 – 01 : Minimum Required Buffer Yard

| Land Uses | Adjoining  |  |  |                  |                                |    |  |            |                         |                         |    |
|-----------|--|--|--|------------------|--------------------------------|----|--|------------|-------------------------|-------------------------|----|
|           | AG   | SF<br><i>AG-SF1</i><br><i>AG-SF1-I</i> | SF<br><i>SF1</i><br><i>SFA</i><br><i>SF2</i> | SF<br><i>SF3</i> | SF<br><i>SF4</i><br><i>SF5</i> | MF | Institutional<br><i>Churches</i><br><i>Schools</i><br><i>Gov't Offices</i> | Commercial | Industrial<br><i>EI</i> | Industrial<br><i>OI</i> |    |
| Proposed  | AG   | -                                      | 40   | 40               | 40                             | 40 | 40   | 15         | 15                      | 15                      | 15 |
|           | SF<br><i>AG-SF1</i><br><i>AG-SF1-I</i>                                     | 40                                     | -  | 20               | 20                             | 20 | 20   | 40         | 40                      | 40                      | 40 |
|           | SF<br><i>SF1</i><br><i>SFA</i><br><i>SF2</i>                               | 40                                     | 20   | -                | 20                             | 20 | 20   | 40         | 40                      | 40                      | 40 |
|           | SF<br><i>SF3</i>   | 40                                     | 20   | 20               | -                              | 20 | 20   | 40         | 40                      | 40                      | 40 |
|           | SF<br><i>SF4</i><br><i>SF5</i>   | 40                                     | 20   | 20               | 20                             | -  | 20   | 40         | 40                      | 40                      | 40 |
|           | MF   | 40                                     | 20   | 20               | 20                             | 20 | -  | 40         | 40                      | 40                      | 40 |
|           | Institutional<br><i>Churches</i><br><i>Schools</i><br><i>Gov't Offices</i> | 15                                     | 40   | 40               | 40                             | 40 | 40   | -          | 15                      | 40                      | 40 |
|           | Commercial   | 15                                     | 40   | 40               | 40                             | 40 | 40   | 15         | -                       | 15                      | 15 |
|           | Industrial<br><i>EI</i>  | 15                                     | 40   | 40               | 40                             | 40 | 40   | 40         | 15                      | -                       | 15 |
|           | Industrial<br><i>OI</i>  | 15                                     | 40   | 40               | 40                             | 40 | 40   | 40         | 15                      | 15                      | -  |

1. Institutional uses include, without limitation, schools, churches and government offices.
2. For primary institutional structures on lots of record (as of December 10, 2001, when Ordinance 01-16 was adopted) less than ten (10) acres in size adjacent to residential uses, the Plan Commission may approve a buffer yard width of less than 40 feet (but no less than 15 feet) provided that:

- The proposed structure shall be finished in a manner that is in character with the adjacent neighborhood.
- The buffer yard landscaping may be required to be supplemented with a fence or masonry wall to assist in addressing the impact of the proposed use on adjacent existing uses.

No drives or parking areas shall be permitted in the reduced buffer yard area.

- C. Within buffer yards, at least one (1) evergreen tree per thirty (30) linear feet and five (5) evergreen shrubs per thirty (30) linear feet shall be planted. Such plantings should be arranged in a manner that creates a visual barrier between uses without precluding connectivity between uses. In order to create a more effective buffer, the Plan Commission may approve evergreen trees to be substituted in lieu of evergreen shrubbery on a 1:3 basis (tree:shrub). Up to 60% of shrubbery may be substituted for trees. (Staff note: Additional trees may be substituted to lessen required shrubbery planting, but additional shrubbery may not be substituted to reduce required tree plantings).
- D. If woodlands are located within buffer yards, preserved trees may be substituted for required plants in buffer yards (see WC 16.06.030, Selection, Installation, and Maintenance of Plant Materials for substitution guidelines).
- E. In residential districts, plantings required to be placed in buffer yards shall not be credited toward total on-site landscaping requirements set forth in Table 16.06.050-01.
- F. In non-residential districts, trees required to be planted in buffer yards shall be credited toward total on-site landscaping requirements set forth in Table 16.06.050-01.
- G. Buffer yards shall not be required between uses within planned developments or within subdivisions.

#### WC 16.06.070 - Parking Area Landscaping

The following landscape requirements shall be applied to parking lots to screen parking areas from streets, to prevent the creation of large expanses of paving, and to provide shade to paved areas.

##### A. Interior Parking Lot Landscaping

1. Area Required - A portion of vehicular use areas shall be maintained as landscaped area. The total amount of interior parking lot area that must be landscaped shall be based on the total number of proposed parking spaces. Such standards are set forth in Table 16.06.070-01:

Table 16.06.070 – 01 : Percentage of Parking Lot Landscaping

| <b>Number of Parking Spaces</b> | <b>Percentage of Vehicular Use Area to Be Landscaped</b> |
|---------------------------------|--|
| 0 to 4                          | 0 %  |
| 5 to 24                         | 5 %  |
| 25 to 49                        | 7.5 %  |
| 50 or more                      | 10 %   |

2. Parking Lot Islands

- a. Parking lot islands shall be dispersed throughout parking lots in a design and configuration that aesthetically corresponds to the size and shape of parking lots. Combining or placing parking lot islands together such that more than one tree may be planted in the island shall be considered when possible.
- b. Parking lot islands shall be constructed at least six (6) inches above the surface of parking lots; they shall be a minimum of one hundred twenty (120) square feet in area; and they shall be a minimum of seven (7) feet in width, measured from back of curb to back of curb.
- c. Interior landscaped areas shall be curbed in a manner that restricts vehicles from driving over landscaped areas.
- d. Interior landscaped areas shall be dispersed so as to define aisles and limit unbroken rows of parking spaces to a maximum of two hundred (200) feet in length.
- e. Parking lot islands shall include at least one (1) tree and four (4) shrubs per parking lot island. One hundred (100) percent of every parking island shall be covered with permitted groundcover material to achieve complete coverage.
- f. No landscaping within parking lot islands may unreasonably obstruct visibility for vehicles entering, maneuvering in, or exiting parking areas. Such landscaping shall be constructed in compliance with visibility standards set forth in WC 16.04.230 2.v).

B. Perimeter Parking Lot Landscaping

1. Application

- a. Perimeter landscaping is required for parking lots with ten (10) or more spaces where:
  - 1.) the parking lot is located within a required yard; or
  - 2.) the parking lot is located within twenty (20) feet of a lot line or right-of-way line.

- b. Perimeter parking lot landscape areas shall be at least five (5) feet wide and shall extend along the perimeter of parking lots. Plantings should be grouped in an aesthetically pleasing manner.
  - c. Trees required to be planted in perimeter parking lot landscape areas may be counted toward meeting total on-site landscaping requirements as set forth in Table 16.06.050-01.
2. Requirements - Perimeter parking lot landscape areas shall include the following landscape improvements:
- a. There shall be one tree per thirty (30) linear feet of parking lot length. Trees may be clustered.
  - b. There shall be one shrub per three (3) feet of parking lot length. Shrubs may be clustered.
  - c. Perimeter parking lot landscape areas not planted with trees or shrubs shall be covered with grass or other permitted groundcover or mulch.

WC 16.06.080 - Recommended Plant Materials

- A. Table 16.06.080-01, Table of Recommended Plant Materials, lists plant materials recommended for use in fulfilling landscaping requirements.
- B. Table 16.06.080-02, Plant Use Table, suggests appropriate uses for each species of tree, shrub, ground cover, and vine.
- C. A minimum of three (3) different species of shade trees shall be used per each development site.