City of Laurel

Landscape Manual

ADOPTED BY THE

MAYOR AND CITY COUNCIL OF LAUREL

March 28, 2011 – Resolution No. 3-11

8103 SANDY SPRING ROAD

LAUREL, MARYLAND 20707

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CHAPTER I
INTRODUCTION

PURPOSE

The City of Laurel Unified Land Development Code and this Landscape Manual establish the requirements for landscaping of all new developments within the City. The purposes of these requirements are:

- To protect, preserve and enhance the appearance and value of neighborhoods, and provide a safe environment.
- To buffer potentially incompatible land uses from one another and to screen undesirable views.
- To prevent the unnecessary removal of vegetation during the land development process.
- To provide parking lots with landscaped areas that facilitate movement of traffic, break up large areas of impervious surfaces, provide shade, and buffer and to screen parking lots from adjacent properties and roadways.
- To promote energy conservation through the cooling and wind buffering effects of trees.
- To contribute to the processes of air purification, oxygen regeneration, water absorption, and abatement of noise, glare and heat.
- To protect the health, safety and general welfare of the general public.
- The City of Laurel Landscape Manual is the technical manual used to establish minimum standards of performance for preparing landscape plans. The manual and amendments to it are prepared by the Department of Community Planning and Business Services and adopted by resolution of the Mayor and City Council.

CHAPTER II
GENERAL INFORMATION

APPLICABILITY AND EXEMPTIONS

Landscaping requirements are established in the City of Laurel Unified Land Development Code, the Maryland State Forest Conservation Technical Manual, and the City Landscape Manual. The basic landscaping requirements are established in Article I. Zoning, Division 15. Landscaping, Buffering, and Screening of the City of Laurel Unified Land Development Code

A landscape plan must accompany all final plans or site development plans, with the following exemptions:

- A subdivision that has been granted preliminary plan approval prior to the effective date of the 2010 edition of the City of Laurel Unified Land Development Code. This exception does not apply to site development plans for build-out of exempt non-residential subdivisions.

- Any parcel not requiring subdivision, yet requiring a site development plan that has site development plan approval prior to the effective date of the Code.

- Resubdivisions that create no new lots, parcel divisions and plat corrections.

Partial exemptions to the landscape requirements apply to expansion of existing uses under certain criteria:

- Resubdivisions involving an existing dwelling(s) are required to provide landscaping for only the new buildable lots.

- Expansion of an existing parking lot or loading area that increases the area or number of spaces by fifty-percent (50%) or more shall be required to provide landscaping for the entire parking lot or loading area in accordance with these regulations. Expansions of less than fifty-percent (50%) shall be required to provide landscaping for the additional development only.

- Expansion to existing development that increases the number of residential units or the square footage of a non-residential building by fifty-percent (50%) or more shall be required to provide landscaping for the entire site in accordance with these regulations. Expansion of less than fifty-percent (50%) shall be required to provide landscaping for the additional development only.

As administrator of the subdivision and site development plan review process, the Department of Community Planning and Business Services will be responsible for the review and approval of landscape plans. When compliance with this Manual is not possible, and there is no feasible proposal for alternative compliance, then the applicant may apply for an appropriate waiver from the City of Laurel Unified Land Development Code.

INSTALLATION, SURETY AND CERTIFICATION

Installation

Plant installation must conform to the minimum standards cited in the latest edition of "Landscape Specification Guidelines" published by the Landscape Contractors Association.

Surety for Landscape Installation

Bonding or posting of other surety for required landscaping is mandatory. The bonding for required landscaping shall be added to the right-of-way improvements for the subdivision site development plan or development site and landscape plan.

If no bond is required for a project that requires a site and landscape plan, the grading permit and surety shall be modified to incorporate surety for the landscaping requirements.

Release of surety will not be granted until all landscaping shown on the approved final plan or site development plan has been completed in accordance with the approved landscape plan. Surety for landscaping shall be based on the total number of required new trees (shade, ornamental, and evergreen) or comparable elements shown on the landscape plan. The unit prices to be used for establishing surety requirements shall be one hundred dollars ($100.00) per landscape tree. The value of each street tree shall be two hundred dollars ($200.00). No surety is required for existing landscaping that is credited towards landscaping requirements. The cost estimate for fencing provided to meet the landscaping requirements shall be ten dollars ($10.00) per linear foot and the value of walls shall be twenty dollars ($20.00) per linear foot.

Certification

To obtain a release of surety, a professional qualified to prepare a landscaping plan must submit written certification to the Department of Community Planning and Business Services that healthy plant materials were properly installed in accordance with the approved landscaped plan and that a one (1) year guarantee has been executed. *Appendix "C"* includes a sample certification and copy of the guarantee must be included with the certification.

If the original landscape plan preparer is not able to provide the required certification, another qualified professional may be approved by the Department of Community Planning and Business Services to submit the required certification.

MAINTENANCE

The developer is responsible for maintenance of the landscaping during construction and is responsible for obtaining a one (1) year guarantee that ensures the survival or replacement of all required plant materials for one (1) year from the date on the landscape certification.

At the end of the maintenance period, it is the developer's responsibility to transfer formally the long-term responsibility for the required landscaping to the owner, tenant, homeowners

association, or other agent responsible for long-term maintenance of the development. Maintenance responsibilities include, but are not limited to, pruning, fertilizing, watering, mowing, weeding, and other such activities necessary to the health and survival of the landscaping. The required plantings should be maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with landscape regulations.

In addition to planting, berms, or other landforms, fences and walls installed, as part of the landscape requirements should be permanently maintained in good condition and, whenever necessary, repaired, or replaced.

To ensure public safety, plant material should not be allowed to encroach on rights-of-way and easements and impede motorists' vision of vehicular traffic. See Chapter V for a discussion of planting in sight triangles and for guidelines on maintaining appropriate sight lines.

CHAPTER III
LANDSCAPE PLANS

PREPARATION OF PLANS

All landscape plans must be prepared and sealed by a landscape architect registered in the State of Maryland, or by any other registered or licensed professional who is authorized by the State to prepare landscape plans.

The Department of Community Planning and Business Services may approve the preparation of a landscape plan by an experienced landscape designer under the following circumstances:

- Landscape planting plans for small commercial sites and small residential developments.

- Landscape plans prepared as an exhibit to a waiver petition that requests a waiver to the requirement to submit a site development plan.

A qualified landscape designer should meet one or more of the following criteria:

- Have a degree or certificate from a recognized program in horticulture, landscape design or a related field, and have two years experience preparing planting plans and landscape construction drawings.

- Have five (5) years experience in preparing planting plans and landscape construction drawings.

SCHEMATIC LANDSCAPE PROGRAM

It is important to take landscaping requirements into consideration in the earliest stages of plan preparation. Landscaping requirements must be identified schematically on the preliminary subdivision plan or preliminary site plan. At this phase of the development process, a forest delineation plan is also required and forest conservation requirements and priorities are determined. Required landscape edges and the type of landscape planting for each edge should be identified. Preservation of existing vegetation, planting, or other alternative solutions should be identified and tabulated in a series of landscapes notes or charts. The general landscaping requirements for projects should be included on the preliminary subdivision plan or preliminary site plan.

The preliminary subdivision plan or preliminary site plan must identify whether the developer or builder will be responsible for installation of specific elements of the overall landscape plan. In addition, whether the landscaping will be shown on the final subdivision plan or final site plan must also be specified. The information provided on a preliminary subdivision plan or preliminary site plan will be considered the schematic landscape program for the property. The schematic landscape program is not unconditionally binding and may be revised during later stages in the planning process to respond to development plan revisions or to unique site or program elements.

SUBMITTAL REQUIREMENTS

The landscape plan shall be part of a final subdivision plan or final site plan submission. In general, landscaping requirements that shall be part of each type of plan are as follows:

- *Final Subdivision Plan*

    - Street trees
    - Perimeter landscaped edges, if the responsibility of the developer
    - Storrnwater management areas
    - Parking lot landscaping for single family attached projects

- *Site Development Plans*

    - Perimeter landscaped edges, if the responsibility of the builder
    - Parking and loading area perimeter edges
    - Parking lot internal planting
    - Stormwater management areas
    - Internal planting for mobile homes, single family attached units and apartments

Original final subdivision plans and original final site plans shall include original landscape plans as part of the original plan submissions and shall include required signature blocks. The landscape plan may be shown on a separate sheet or superimposed on another sheet within the set of original plans. If the landscaping is shown on a separate sheet and is limited to on-site requirements, the only agency signature block that will be required is the Department of Community Planning and Business Services. Separate planting plan sheets that include street trees and on-site landscaping must include Department of Public Works and Department of Community Planning and Business Services signature blocks. Landscaping that is required for a final subdivision plan shall be shown on the road construction plans. Planting required for minor subdivisions shall be shown on a supplemental sheet that shall be submitted with the final plat.

The submittal package must include the following information:

- Existing base information required for the final subdivision plan or final site plan;

- Proposed grading, structures, parking and loading areas, pedestrian areas, roads, driveways and access areas, easements, utilities, storm drains and stormwater management areas, signs, lighting, etc;

- Location, general type and quality of existing vegetation and specimen trees;

- The location and type of all existing freestanding trees on the property over six inches (6”) in caliper and all small tree groups or hedgerows that do not meet the definition of a forest;

- Existing vegetation to be saved; existing forest areas to be saved in accordance with the forest conservation plan shall be identified;

- Sedimentation and erosion control plan identifying methods and details for protection of exiting vegetation during construction;

- Location and identification by symbol (graphic, letter and/or number) of all proposed plants;

- Plant list to include botanical and common name, quantity, spacing and size at time of planting of all proposed plant materials and other landscaping elements;

- Location and description of other landscape improvements, such as earth berms, walls, fences, screens, street furniture, lights and courts or paved areas;

- Planting installation details;

- Schedules showing required and proposed quantities of landscape elements. Schedules "A", "B", and "C" are based on the landscape types and planting requirements described in Chapter IV; and

- Certification and signature of the owner and signature of the plan preparer.

SCHEDULE "A" PERIMETER LANDSCAPE EDGE		
Category	**Adjacent to Roadways**	**Adjacent to Perimeter Properties**
Landscape Type		
Linear Feet of Roadway Frontage/Perimeter		
Credit for Existing Vegetation (Linear Feet)		
Credit for Wall, Fence, or Berm (Linear Feet)		
Number of Plants Required Shade Trees Evergreen Trees Shrubs		
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below, if necessary)		

Comments: _____

_____

Note: Complex projects may require expansion of the schedule to accommodate multiple land uses on-site or on adjacent properties.

SCHEDULE "B" PARKING LOT INTERNAL LANDSCAPING	
Number of Parking Spaces	
Number of Trees Required	
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	

SCHEDULE "C" RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
Number of Dwelling Units	
Number of Trees Required (1:DU SFA; 1:3 DU APTS	
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	
Note: SFD – Single Family Detached SFA – Single Family Attached APTS – Multi-Family	

PLANT SUBSTITUTIONS

Minor plant substitutions may be made to an approved planting plan at time of installation within the following limits:

- The number, size, and location of plants are not changed.

- The general type of plant remains the same (large shade tree, evergreen tree, deciduous tree) and the substitute plant is included in the recommended plant list in *Appendix "B"*.

When equal substitutions are made, no prior approval is needed from the Department of Community Planning and Business Services; however, a revised plant list must be submitted with the Certification of Installation.

If changes in the general type of plant material are to be made or if a change in an optional treatment is proposed, written authorization must be requested from the Department of Community Planning and Business Services. In such a case, the Department may require the landscape plan be revised.

CHAPTER IV
LANDSCAPE REQUIREMENTS

GENERAL LANDSCAPE REQUIREMENTS

Article I. Zoning, Division 15 of the Unified Land Development Code requires landscaping in the following situations:

- Perimeter planting between adjacent land uses;
- Perimeter planting along public roads;
- Internal and perimeter planting of parking lots;
- Perimeter planting of loading areas;
- Internal planting for residential developments of single-family attached units and apartments; and
- Street trees along new internal roads and existing City roads.

The primary requirements for landscaping stipulate the quantity of plant materials that shall be provided to meet the requirements of the regulations. However, optional landscape treatments may be substituted in full or in part for the required planting. Optional treatments include preservation of existing forests and trees, use of berms, or other landforms, and the installation of fences and walls.

The major focus of the regulations is on perimeter landscaping. This type of landscaping, required around the perimeter of a new development, is based on the type of land use proposed and the compatibility of the proposed land use with adjacent land uses. Table 1 identifies the range of perimeter landscape treatments, from buffer to screen, by letter designation. Buffering is the use of landscape materials to lessen the visual impact of a use, or to visually or physically separate uses, while not necessarily shielding a structure or use from view. Screening is the use of landscape materials to substantially shield a structure or use from view.

The planting requirements for each landscape type call for planting a specific minimum number of shade trees, evergreen trees, and/or shrubs. Plant material requirements are based on linear feet of property line. Calculations of required plant quantities are to be rounded to the nearest whole number.

TABLE 1
PERIMETER LANDSCAPE TYPES - BASED ON ADJACENT LAND USE

Landscape Edge Type	Landscape Character	Shade Trees/ Linear Feet	Evergreen Trees/ Linear Feet	Shrubs/ Linear Feet
A	Light Buffer	1:60	0	0
B	Moderate Buffer	1:50	1:40	0
C	Heavy Buffer	1:40	1:20	0
D	Screen	1:60	1:10	0

TABLE 1 PERIMETER LANDSCAPE TYPES - BASED ON ADJACENT LAND USE				
Landscape Edge Type	**Landscape Character**	**Shade Trees/ Linear Feet**	**Evergreen Trees/ Linear Feet**	**Shrubs/ Linear Feet**
E	Buffer – Parking Adjacent to Roadway	1:40	0	1:4

When the property line is crossed by a right-of-way, use-in-common access area or non-residential driveway, the width of these areas shall not be computed as part of the total linear footage of the required edge. No more than fifteen percent (15%) of the required strip shall be covered with an impervious surface for pedestrian circulation or use.

All landscape types (perimeter and internal) require planting of shade or canopy trees. In many categories evergreen trees are also required. Shrub planting is required only for buffering of parking from adjacent roadways. Except as otherwise noted in this manual, the following plant substitutions may be allowed in lieu of the requirements listed in Table 1, provided the substitutions meet the intent of the regulations:

- Two (2) small deciduous trees may be substituted for one (1) shade tree.
- Two (2) evergreen trees may be substituted for one (1) shade tree.
- Ten (10) shrubs may be substituted for one (1) shade tree or evergreen tree.

Examples of landscape edge calculations and illustrations of planting schemes that fulfill the requirements of the regulations are provided throughout this chapter.

DESIGN GUIDELINES

Plant materials should be chosen and located to achieve the desired landscape character of the edge type. The landscaped edge treatment may be formal or informal, naturalistic or architectural, depending on the character desired by the project designer. Guidelines for spacing of plants to achieve an effective screen or buffer are as follows:

- Planting requirements listed in Table 1 are <u>not</u> spacing requirements; they are the means to calculate the quantities required.

- Plant materials may be clustered in groups or planted in rows.

- To create an effective dense screen, evergreen trees should be ten to fifteen feet (10’-15’) on center. Trees should be clustered in locations that are the most effective in screening undesirable views.

- Shade trees create a light buffer, open at ground level but with canopies that may eventually touch, if clustered at a spacing of twenty-five feet (25’) on center.

- Clusters of flowering trees are generally an effective buffer when planted fifteen to twenty feet (15’-20’) on center.

The sizes of plants to achieve an acceptable screen or buffer are noted in *Appendix "C"* and as follows:

- Shade trees should be a minimum of 2½" caliper unless otherwise noted in *Appendix "C"*.

- Small deciduous trees should be in the size range listed in *Appendix "C"* and must be at least eight to ten feet (8'-10') tall.

- Evergreen trees must be six to eight feet (6'-8') tall, except for less commonly available or more expensive species as noted in *Appendix "C"*.

Shrub planting in a Type E landscape buffer for a parking lot adjacent to a right-of-way must be a minimum of twenty-four to thirty inches (24"-30") tall at installation.

Shrub planting to supplement a land use perimeter buffer must be a minimum of twenty-four to thirty inches (24"-30") tall for evergreen materials and thirty to thirty-six inches (30"-36") tall for deciduous materials unless otherwise noted in *Appendix "C"*.

Required planting in any landscaped edge may be transferred to another landscaped edge or to another area elsewhere within the project boundary, if such transfer meets the intent of the regulations as approved by the Department of Community Planning and Business Services.

FOREST CONSERVATION AND LANDSCAPE REQUIREMENTS

Reforestation and afforestation may not be credited towards landscaping requirements.

TREE PRESERVATION AND LANDSCAPE REQUIREMENTS

Existing trees which do not meet the definition of a forest for the purpose of the forest conservation program may be used to fulfill landscaping requirements if such trees are in a healthy growing condition and if the trees are of an appropriate size and type.

Subdivision and site plans should make all feasible attempts to accommodate existing trees. Relocation of existing trees within the site is also encouraged and all available measures should be taken to ensure the life and good health of the tree.

In determining which trees shall be preserved during the development process, consideration shall be given to preserving those which exhibit the following characteristics:

- Are significant specimen trees of six inches (6") caliper or larger;

- Are part of small groves or clusters of trees or hedgerows that do not qualify as a forest stand (10,000 square feet minimum);

- Can tolerate environmental changes or stresses that may be caused by development (i.e.: increased sunlight, heat, wind and alteration of water regime);

- Have strong branching and rooting patterns, are in a healthy, vigorous growing condition, are disease and insect resistant; and

- Are located in required buffer areas.

The area below the drip line of an existing tree to be saved should remain undisturbed by either cutting or filling in the development process. No impervious material should be placed under the drip line and a tree protection fence will be required to be installed around the trees at the limit of disturbance (LOD). Specific guidelines for tree protection during the construction process can be found in the Maryland State Forest Conservation Technical Manual. Tree protection symbols, notes, and details must be shown on the sediment and erosion control plan.

Should any tree designated for preservation, for which landscaping credit is given, die prior to release of bonds, the owner will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of three inches (3") in caliper and installed as required in the Landscape Manual.

PERIMETER LANDSCAPED EDGES

Perimeter landscaped edges are required along the outside boundary of a property. The regulations do not require landscaped edges, buffering, or screening between internal lots or parcels within the same development. For cluster subdivisions the perimeter-landscaped edge shall be located at the perimeter of the cluster subdivision, not at the perimeter of the entire parcel. It is not intended that the preservation parcel be buffered or screened from adjacent properties.

Landscaped edges for buffering or screening and their required treatment are based on land use. The type and character of a required buffer or screen is determined by the degree of compatibility between the site uses and adjacent land uses. For example, two fairly compatible residential land uses would only need a light buffer whereas a commercial use adjacent to a residential community should be more heavily screened.

Where possible, the landscaped edge should be planted within the required setbacks established by the City Zoning Regulations. In any event, a landscape edge of at least twenty feet (20') wide in width is required, except in districts where zoning setbacks permit parking or principal structures in closer proximity to property lines. In such instances, the Department of Community Planning and Business Services may approve a narrower landscaped edge, a fence, hedge or wall, or relocation of landscaping elsewhere on site. Buildings, parking, loading areas, stormwater management facilities, utility easements, storm drainage channels, play areas, drive aisles, parking spaces and similar uses <u>may</u> <u>not</u> be located in landscaped edges. Necessary pedestrian circulation, utility easements, and access driveways may cross the landscape edges perpendicularly. Upon approval of the Department of Community Planning and Business Services and the Department of Public Works, necessary utility or other easements may overlap with up to twenty-five percent (25%) of the required edge, provided that the required landscaping may be placed in the reduced area.

The landscape edges required along public and private roads, based on land use, are shown in Table 2. The landscape edges required between adjacent properties based on land use and zoning, are shown in Table 3. Required planting for the landscaped edge types identified in Tables 2 and 3 can be found in Table 1.

Figure 1 illustrates the method of calculating landscape obligations for various residential landscaped edges. Sample calculations for perimeter landscaped edges for non-residential properties as shown in Figure 2, Figure 3, and Figure 4 depict examples of various landscape treatments that comply with the requirements for landscape edge types A, B, C, D, and E.

TABLE 2
LANDSCAPED EDGES ADJACENT TO ROADWAYS

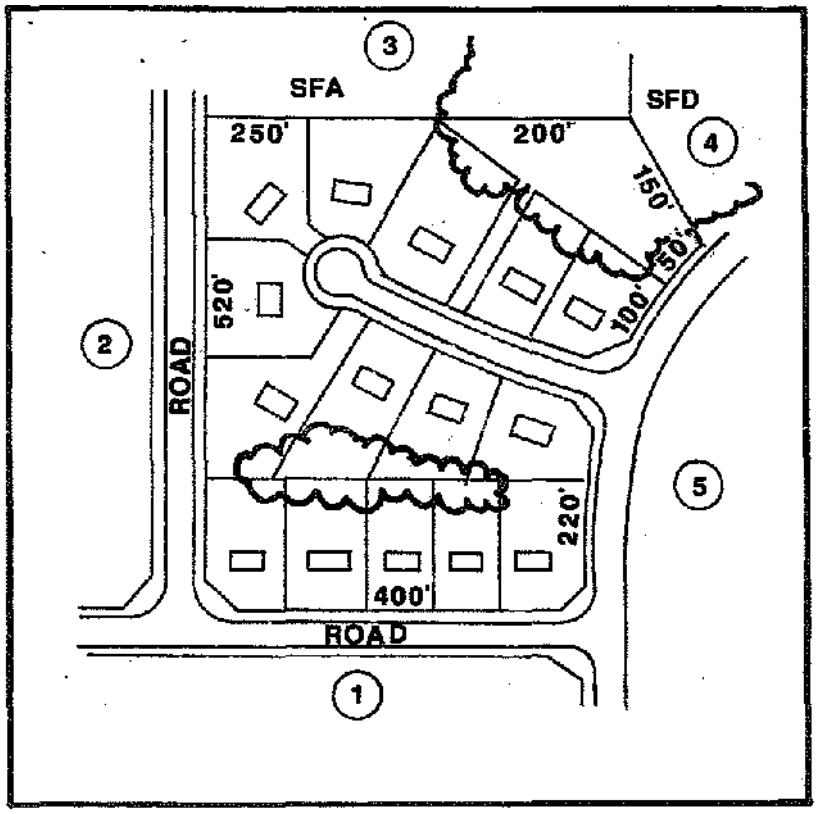
Land Use*	Orientation of Structure or Use to Roadway	Landscape Edge Type
Single Family Detached	Front Side/Rear	None B
Single Family Attached	Front Side/Rear	None C
Apartments	All Sides	B
Non-Residential	Front/Side Rear Rear – If loading	B C D
Parking	N/A	E

TABLE 3
LANDSCAPE EDGES ADJACENT TO PERIMETER PROPERTIES

Land Use*	Adjacent Land Use*	Landscape Type
Single Family Detached	All uses	A
Single Family Attached and Apartments	SFD SFA All Other Uses	C B A
Non-Residential	Residential All Other Uses	C A
Loading	Residential All Other Uses	D C

*****Residential open space and un-built areas of a non-residential development are considered to have the same land-use as the principal use.

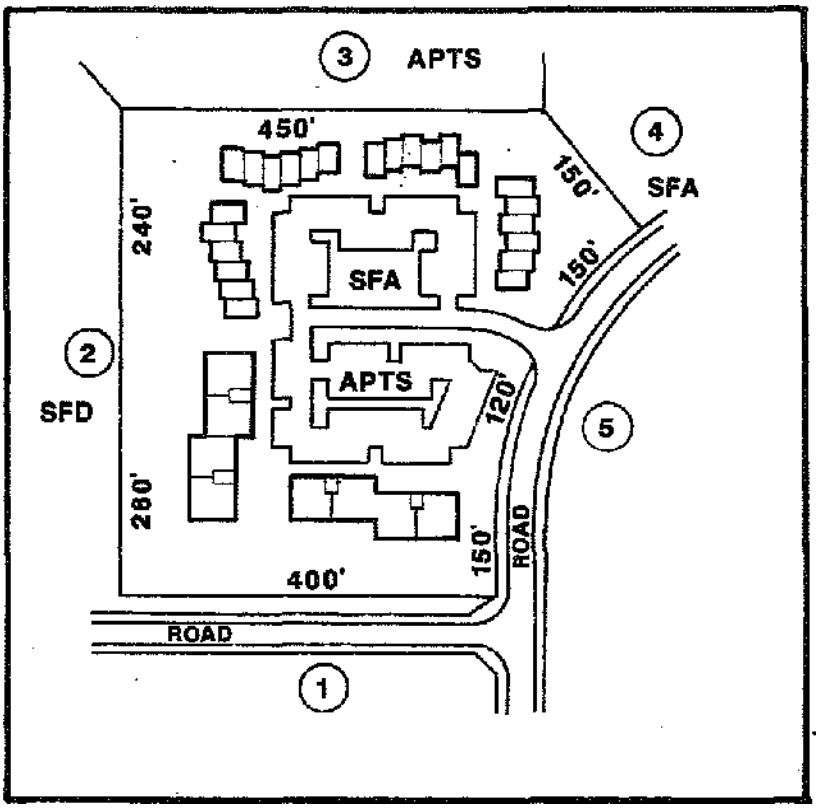
FIGURE 1 RESIDENTIAL PERIMETER LANDSCAPED EDGE CALCULATIONS



PERIMETER	EDGE TYPE
Perimeter I	
SFD Front to Road – 400 LF	N/A
Perimeter 2	
SFD Side/Rear to Road – 520 LF	B
1 Shade Tree/50 LF = 10	
1 Evergreen Tree/40 LF = 13	
Perimeter 3	
SFD to SFA – 250 LF	A
1 Shade Tree/60 LF = 4	
SFD to SFA – 200 LF	A
Existing Trees to Remain	
Perimeter 4	
SFD to SFD -150 LF	A
Existing Trees to Remain	
Perimeter 5	
SFD to Road – 50 LF	A
Existing Trees to Remain	
SFD Side to Road - 320 LF	B
1 Shade Tree/50 LF = 6	
1 Evergreen Tree/40 LF = 8	

TOTAL PLANTING OBLIGATION
Shade Trees = 20
Evergreen Trees = 21

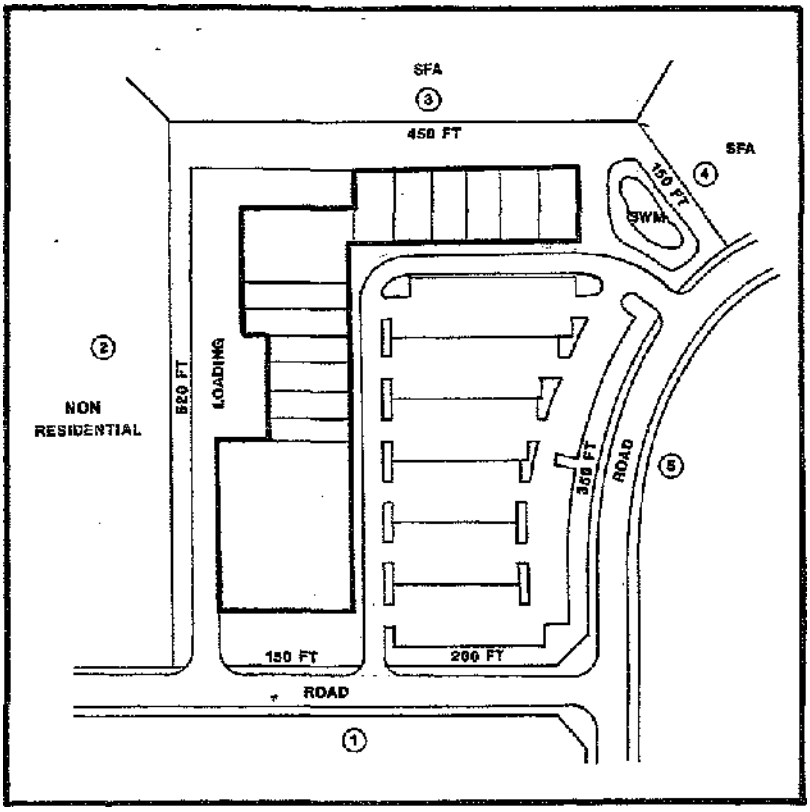
Note: SFD – Single Family Detached
SFA – Single Family Attached
APTS – Multi-Family



PERIMETER	EDGE TYPE
Perimeter I	
APTS to Road – 400 LF	B
1 Shade Tree/50 LF = 8	
1 Evergreen Tree/40 LF = 10	
Perimeter 2	
APTS and SFA to SFD – 520 LF	C
1 Shade Tree/40 LF = 13	
1 Evergreen Tree/20 LF = 26	
Perimeter 3	
SFA to APTS – 450 LF	A
1 Shade Tree/60 LF = 8	
Perimeter 4	
SFA to SFA – 150 LF	B
Existing Trees to Remain	
Perimeter 5	
SFA Rear to Road – 150 LF	C
Existing Trees to Remain	
Parking to Road – 120 LF	E
1 Shade Tree/40 LF = 3	
1 Shrub/4 LF = 30	
APTS to Road – 150 LF	B
1 Shade Tree/50 LF = 3	
1 Evergreen Tree/40 LF = 4	

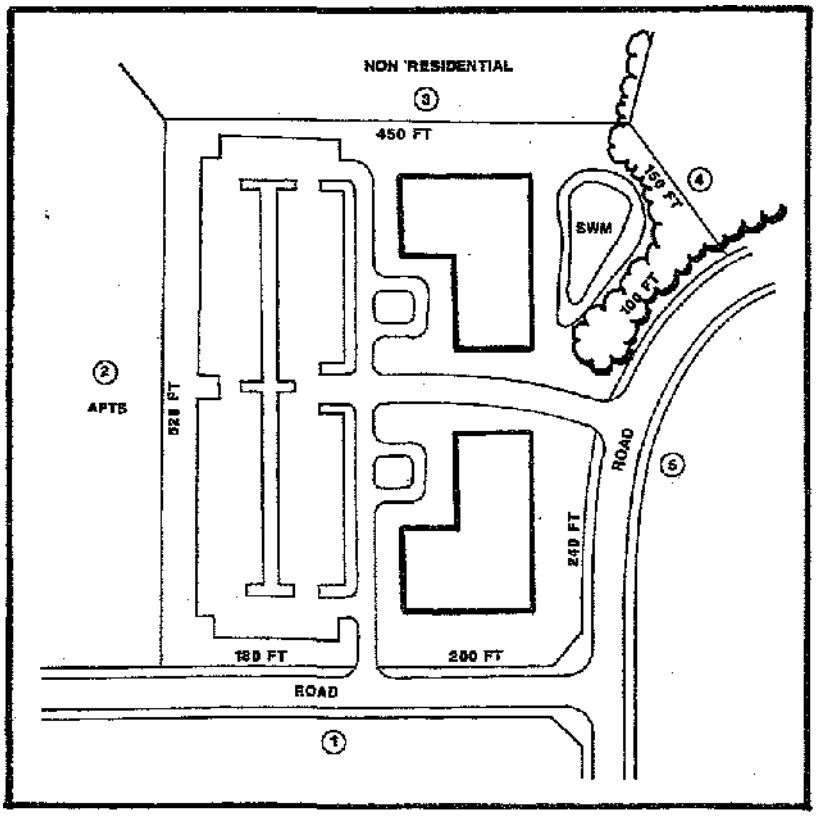
TOTAL PLANTING OBLIGATION
Shade Trees = 35
Evergreen Trees = 40
Shrubs = 30

FIGURE 2 NON-RESIDENTIAL LANDSCAPED EDGE CALCULATIONS



PERIMETER	EDGE TYPE
Perimeter 1	
Parking to Road – 200 LF	E
1 Shade Tree/40 LF = 5	
1 Shrub/4 LF = 50	
Non-Res. Side to Road – 150 LF	B
1 Shade Tree/50 LF = 3	
1 Evergreen Tree/40 LF = 4	
Perimeter 2	
Loading to Non-Res. – 520 LF	C
1 Shade Tree/40 LF = 13	
1 Evergreen Tree/20 LF = 26	
Perimeter 3	
Non-Res. & Loading to Res. – 450 LF	D
1 Shade Tree/60 LF = 8	
1 Evergreen Tree/10 LF = 45	
Perimeter 4	
Non-Res. to Res.-150 LF	C
1 Shade Tree/40 LF = 4	
1 Evergreen Tree/20 LF = 8	
Perimeter 5	
Non-Res. Side to Road – 70 LF	B
1 Shade Tree/50 LF = 1	
1 Evergreen Tree/40 LF = 2	
Parking to Road – 350 LF	E
1 Shade Tree/40 LF = 9	
1 Shrub/4 LF = 88	

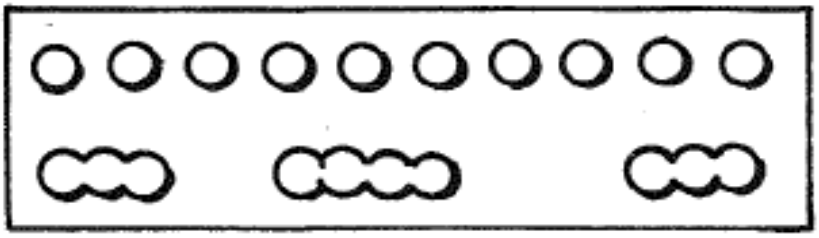
TOTAL PLANTING OBLIGATION
Shade Trees = 43
Evergreen Trees = 85
Shrubs = 138



PERIMETER	EDGE TYPE
Perimeter 1	
Non-Res. to Road – 200 LF	B
1 Shade Tree/50 LF = 4	
1 Evergreen Tree/40 LF = 5	
Parking to Road – 180 LF	E
1 Shade Tree/40 LF = 5	
1 Shrub/4 LF = 45	
Perimeter 2	
Non-Res. to Res. – 520 LF	C
1 Shade Tree/40 LF = 13	
1 Evergreen Tree/20 LF = 26	
Perimeter 3	
Non-Res. to Non-Res. – 450 LF	C
1 Shade Tree/40 LF = 11	
1 Evergreen Tree/20 LF = 23	
Perimeter 4	
Non-Res. to Non-Res. – 150LF	A
Existing Trees to Remain	
Perimeter 5	
Non-Res. to Road – 180 LF	B
Existing Trees to Remain	
Non-Res. to Road – 240LF	B
1 Shade Tree/50 LF = 5	
1 Evergreen Tree/40 LF = 6	

TOTAL PLANTING OBLIGATION
Shade Trees = 38
Evergreen Trees = 60
Shrubs = 45

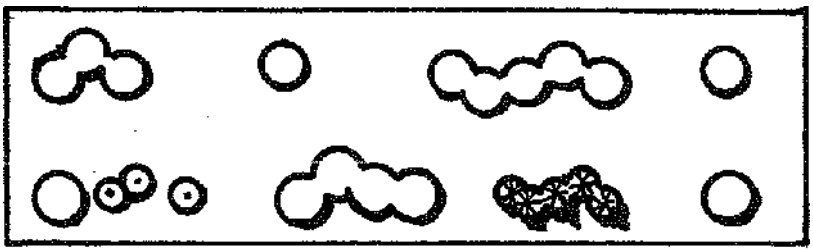
FIGURE 3 EXAMPLES OF LANDSCAPED EDGE TYPES



TYPE A BUFFER – 600 LF
1 Shade Tree/60 LF = 10

A. 10 Shade Trees

B. 10 Shade Trees

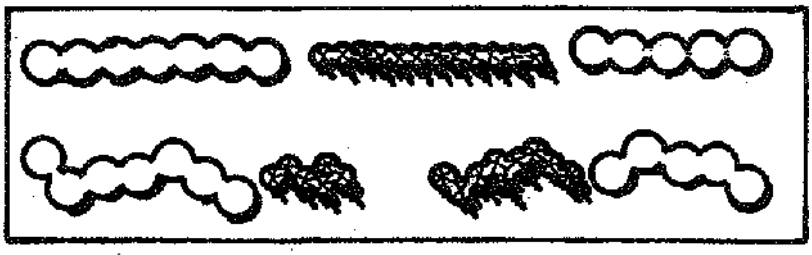


A. 10 Shade Trees

B. 6 Shade Trees
8 Other Trees (2/1 Shade Tree = 4)
5 Evergreen Trees
3 Small Deciduous Trees

A. 20 Evergreen Trees
(2/1 Shade Tree = 10}

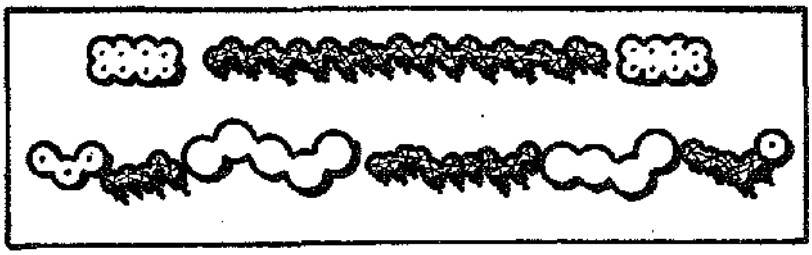
B. 0 New Trees Provided
Existing Woods Preserved



TYPE B BUFFER – 600 LF
1 Shade Tree/50 LF = 12
1 Evergreen Tree/40 LF = 15

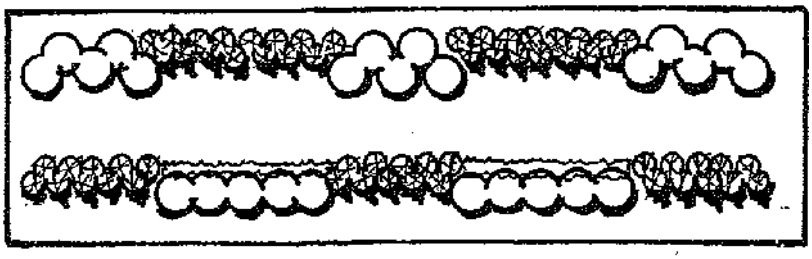
A. 12 Shade Trees
15 Evergreen Trees

B. 12 Shade Trees
15 Evergreen Trees



A. 7 Shade Trees
10 Other Trees (2/1 Shade Tree = 5)
4 Small Deciduous Trees
6 Evergreen Trees
15 Evergreen Trees

B. 24 Other Trees (2/1 Shade Tree 12)
16 Small Deciduous Trees
8 Evergreen Trees
15 Evergreen Trees

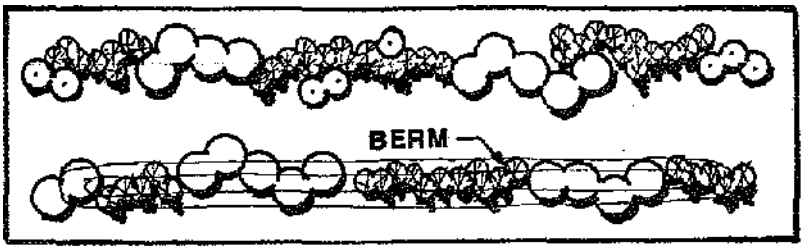


TYPE C BUFFER - 600 LF
1 Shade Tree/40 LF = 15
1 Evergreen Tree/20 LF = 30

A. 15 Shade Trees
30 Evergreen Trees

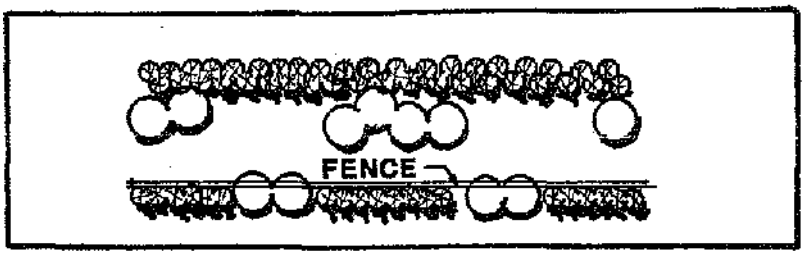
B. 10 Shade Trees
50 Shrubs (10/1 Shade Tree = 5)
30 Evergreen Trees

FIGURE 4 EXAMPLES OF LANDSCAPED EDGE TYPES



TYPE C BUFFER - 600 LF
A. 9 Shade Trees
12 Other Trees (2/1 Shade Tree) = 6
8 Small Deciduous Trees
4 Evergreen Trees
15 Evergreen Trees

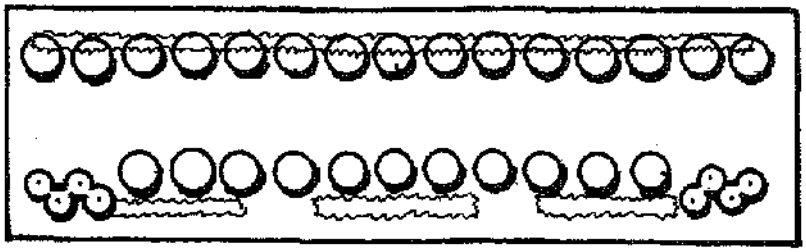
B. Berm – 30% Credit for Required Trees
11 Shade Trees (70% of 15)
21 Evergreen Trees (70% of 30)



TYPE D BUFFER - 400 LF
1 Shade Tree/60 LF = 7
1 Evergreen Tree/10 LF = 40
A. 7 Shade Trees
40 Evergreen Trees

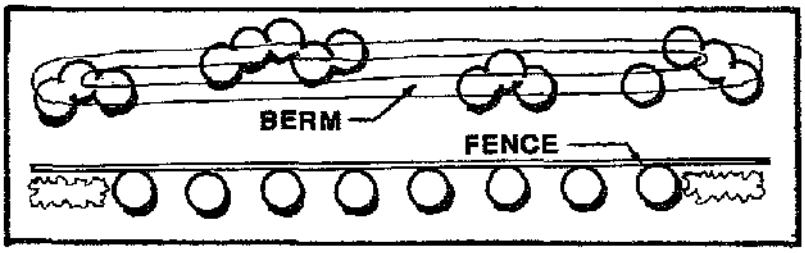
B. Solid Wall or Fence – 50% Credit
C. 4 Shade Trees (50% of 7)
20 Evergreen Trees (50% of 40)

A. 4 Shade Trees
6 Flowering Trees (2/1 Shade Tree = 3)
40 Evergreen Trees
B. Existing Trees to Remain
C. No Shade Trees Required
50% Credit for Required Evergreen Trees
20 Evergreen Trees Provided



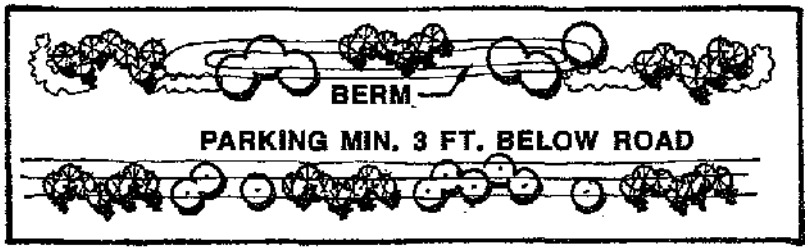
TYPE E BUFFER - 600 LF
1 Shade Tree/40 LF = 15
1 Shrub/4 LF = 150
A. 15 Shade Trees
150 Shrubs

B. 11 Shade Trees
8 Small Deciduous Trees
(2 /1 Shade Trees = 4)
150 Shrubs



A. Berm – No Shrubs Required
15 Shade Trees

B. Solid Wall or Fence
11 Shade Trees Required (1/60 LF)
0 shrubs Required
8 Shade Trees Provided
30 Shrubs (10/1 Shade Tree = 3)



A. 6 Shade Trees
18 Evergreen Trees (2/1 Shade Tree = 9)
63 Shrubs
350 LF Berm – No Shrubs
250 LF Shrubs (1/4 LF)
B. 30 Other Trees (2/1 Shade Tree = 15)
9 Small Deciduous Trees
21 Evergreen Trees

Optional Treatments

A variety of landscape treatments other than the planting stipulated in Table 1 may satisfy landscaping requirements. Optional treatments that may satisfy the landscape requirements include:

- *Preserving Existing Vegetation*

  Up to one-hundred percent (100%) of the planting requirement may be met by preserving existing vegetation. A minimum buffer width of twenty feet (20') of existing vegetation must be preserved in single-family detached developments and business districts; twenty-five feet (25') in single family attached, or apartments developments; and thirty feet (30') in all other non-residential districts. For preservation areas of lesser widths, a tree preservation plan showing the location of trees within the preserved area must be provided. The Department of Community Planning and Business Services may require the applicant to provide supplemental planting if existing vegetation cannot provide adequate screening or buffering.

- *Providing a Berm or Grade Change*

  A berm that is a minimum of three feet (3') high, or a change in grade that causes a parking lot to be located lower than the adjacent roadway by three feet (3') or more, may be substituted for shrub planting in a Type E landscape buffer. Berms may be substituted for evergreen trees or shrubs in meeting other perimeter landscaping requirements. In general, berms that buffer new development from an adjacent roadway should be a minimum of three feet (3') high if the front or side of the structure(s) abuts the roadway, and a minimum of six feet (6') high if the rear of the structure or a loading area abuts the roadway. Berms between similar uses (i.e. residential to residential or non-residential to non-residential) should be a minimum of three feet (3') high. Non-residential uses adjacent to residential properties should provide berms that are a minimum of six feet (6') high to obtain a credit towards provision of required plant materials. In no instances will berms be substituted for required shade tree plantings.

- *Erecting a Fence, Hedge or Wall*

  Landscaped edges may be reduced to a width of ten feet (10) if a masonry wall, hedge, or solid fence is provided. Walls, hedges, and fences may be credited towards meeting one-hundred percent (100%) of the required landscape planting; however the Department of Community Planning and Business Services may require at least one (1) tree per sixty (60) linear feet of wall or one shrub or vine per ten (10) linear feet of wall or fences if the fence or wall does not have architectural articulation. Where walls or fences abut a public or private road right-of-way, the planting should be on the street side of the wall.

  A masonry wall or solid fence at least five feet (5') high must be provided between adjacent land uses or where rears of residential buildings or loading areas abut - roadways. A wall or fence at least 3½-feet high is needed where parking lots abut

roadways or where the fronts or sides of buildings abut roadways. In the latter case a solid or semi-transparent fence or wall may be approved.

Requirements and Guidelines for Parking Lots and Loading Areas

The requirements for buffering of parking areas are intended to reduce the visual impact of vehicles and large expanses of paving from adjacent roadways and from abutting properties.

For parking lots adjacent to roadways, a Type E landscaped buffer is required. This combination of low shrubs and canopy trees generally provides for some visual penetration of a site while partially screening car parked immediately adjacent to the roadway. The goal of creating a buffer at the edge of a roadway that is a minimum buffer of three feet (3') high can be accomplished with shrubs, change in grade, berm, fence, or a wall.

In most commercial areas, the desire to identify buildings from the roadway requires that eye level sight lines be preserved. Thus, the use of evergreen trees or small deciduous trees with low canopies may not be desirable. However, when commercial parking lots abut residential land uses, required planting should be clustered in the areas where it is most needed to buffer or screen objectionable views. In such instances, it may be appropriate to substitute evergreen trees, small deciduous trees, or shrubs for the required perimeter shade trees.

In residential areas, the preservation of existing vegetation as a buffer between parking areas and roadways or other perimeter land uses is strongly recommended. Substitution of evergreen trees or small deciduous trees for required shade trees may be appropriate to buffer residential communities from surrounding roadways. When residential parking lots abut other residential properties, clustering of evergreen trees or use of dense mixed plantings between the parking areas and the property perimeter is recommended.

Loading and service areas include dumpster and compactor areas as well as truck loading facilities such as dock areas, drive-in loading bays and at grade service entrances to structures. For all loading and service areas adjacent to roadways or residential properties, a landscaped edge with a Type D screen shall be provided between the loading or service area and any public or private road, residential structure or lot. For loading area adjacent to perimeter boundaries other than those specified above, a Type C landscaped edge shall be provided. As mentioned previously, landscaping of perimeter boundaries is not required for adjacent parcels within the same property.

Perimeter landscaping of parking lots and loading areas for Special Exception uses may exceed those specified in the landscaping regulation if required by the decision and resolution issued by the Board of Appeals.

PARKING LOT INTERNAL LANDSCAPING

All parking lots must provide permanently landscaped areas consisting of planted islands, peninsulas, or medians within the interior of the lot. Landscaped areas should divide lots into groups of parking spaces to relieve the monotony of large expanses of paving and contribute to efficient and safe circulation of traffic in the parking areas.

Expansion of an existing parking lot or loading area that increases the area or number of spaces by fifty percent (50%) or more shall be required to provide landscaping for the entire parking lot or loading area in accordance with these regulations. Expansions of less than fifty percent (50%) shall be required to provide landscaping for the additional development only.

Required screening along the perimeter of any parking lot cannot be credited as part of the interior landscaping requirements. Moreover, where a parking lot abuts buildings on the site, plantings adjacent to those buildings shall not be considered as part of the interior landscaping requirements.

Landscaped islands shall be a minimum of twelve feet (12') in width (face of curb to face of curb) and completely curbed or otherwise protected. The minimum size of an internal landscaped area shall be two-hundred (200) square feet. Walkways will be permitted within the landscaped island, but cannot be counted as part of the minimum width or minimum size.

The primary trees to be used in parking lots shall be large shade trees. Small deciduous trees or evergreen trees may be used if it can be demonstrated that they will not inhibit visibility and safe circulation of pedestrians and vehicles. When allowed, small deciduous trees and evergreen trees must be substituted for shade trees at a 2:1 ratio.

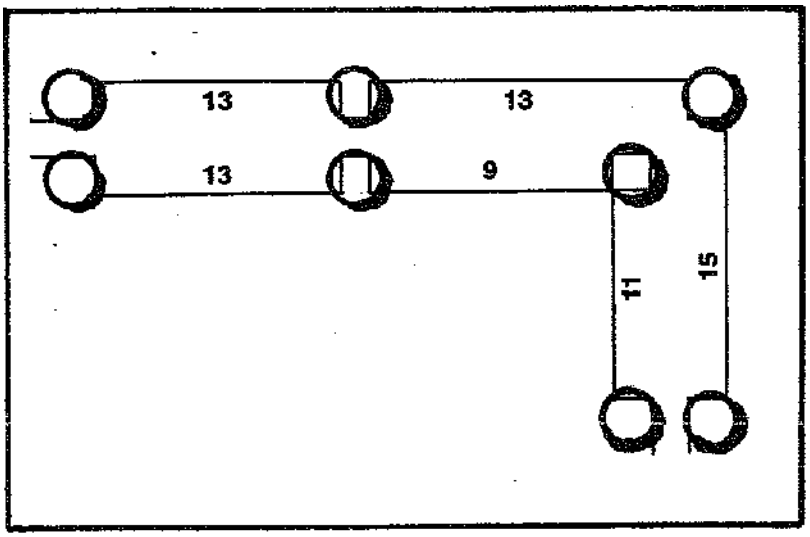
Internal parking lot landscaping shall be shown on the site development plan.

Residential Parking Lots

Parking lots for single family attached and apartment dwelling units shall have one (1) landscaped island per ten (10) parking spaces and one (1) shade tree per ten (10) parking spaces. This requirement does not necessarily mean that there must be an island with a shade tree every ten (10) spaces; the requirement is a means of calculating planting requirements. Grouping of parking spaces should generally not exceed twelve (12) in a row for residential land uses. Landscaped areas in residential parking lots may be internal islands and peninsulas, perimeter corner green areas formed where two (2) rows of parking spaces abut or peninsula areas formed where parking areas and access roads or entrance driveways abut. Trees provided to meet internal planting requirements may be located in internal landscaped areas, perimeter corner areas, or entrance area peninsulas. Figure 5 shows how to compute requirements for internal islands and trees for residential parking lots and depicts parking lot planting plans that satisfy the regulations.

As described in Chapter V, Street Trees, and internal parking lot landscaping provided in single-family attached developments will satisfy the street tree obligations for internal public rights-of-way. In such cases, plantings within the public right-of-way need not be shown on the road construction drawings, but must be included on the site plan.

FIGURE 5 RESIDENTIAL PARKING LOT INTERNAL PLANTING

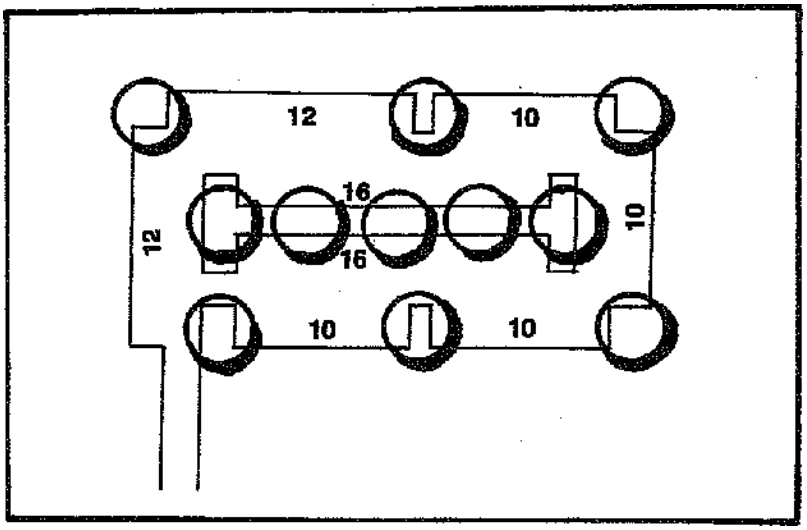


EXAMPLE 1

Number of Parking Spaces 74

Islands Required (1/9 spaces) = 8
Islands Provided = 8

Shade Trees Required (1/9 spaces) = 8
Shade Trees Provided = 8

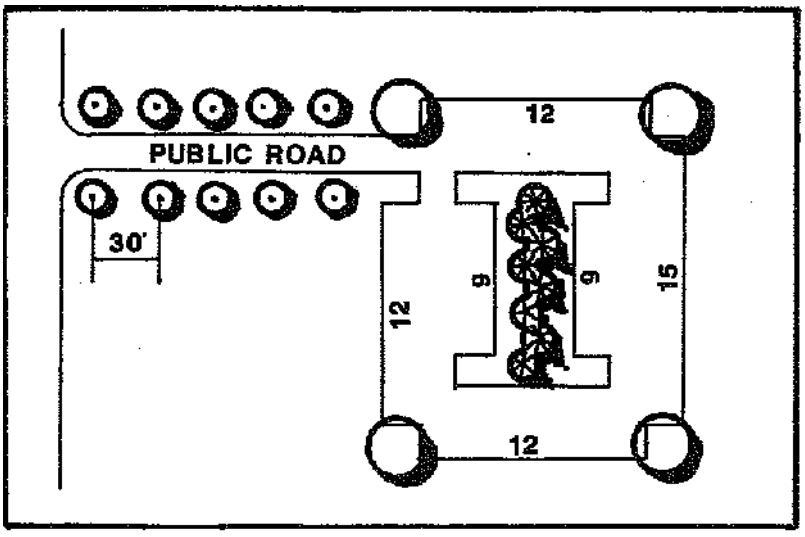


EXAMPLE 2

Number of Parking Spaces 96

Islands Required 1(1/9 spaces) = 11
Islands Provided (200 Sq. Ft. /Island) = 20

Shade Trees Required (1/9 spaces) = 11
Shade Trees Provided = 11



EXAMPLE 3

Number of Parking Spaces = 69

Islands Required (1/9 spaces) = 8
Islands Provided (200 Sq. Ft./Island) = 28

Shade Trees Required (1/9 spaces) = 8
Trees Provided
Shade Trees (50% required) = 4
Evergreen Trees (2/1 Shade = 4) = 8

PUBLIC ROAD

No Parking Spaces Along Road
Street Trees Required = 10
Small Deciduous Trees (30 feet apart)

Non-Residential Parking Lots

Parking lots for office, industrial, retail, institutional and related commercial use shall have one (1) landscaped island per twenty (20) parking spaces and one (1) shade tree per twenty (20) parking spaces. This requirement is a means of calculating planting obligations. Grouping of parking spaces should generally not exceed twenty-four (24) in a row for commercial and institutional lands uses but may be permitted at up to thirty (30) in a row for large regional shopping centers and malls. In large parking lots, the creation of large islands that permit the planting of groups or rows of trees is encouraged.

Landscaped areas may be internal islands and peninsulas. For non-residential parking lots, perimeter green areas formed where two rows of parking spaces abut or where parking areas and access roads or driveways abut may not be counted as internal islands. Trees provided to meet internal planting requirements must be located in internal landscaped areas. Figure 6 shows how to compute requirements for internal islands and trees for non-residential parking lots. It also depicts parking lot planting plans that satisfy the intent of the regulations.

RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

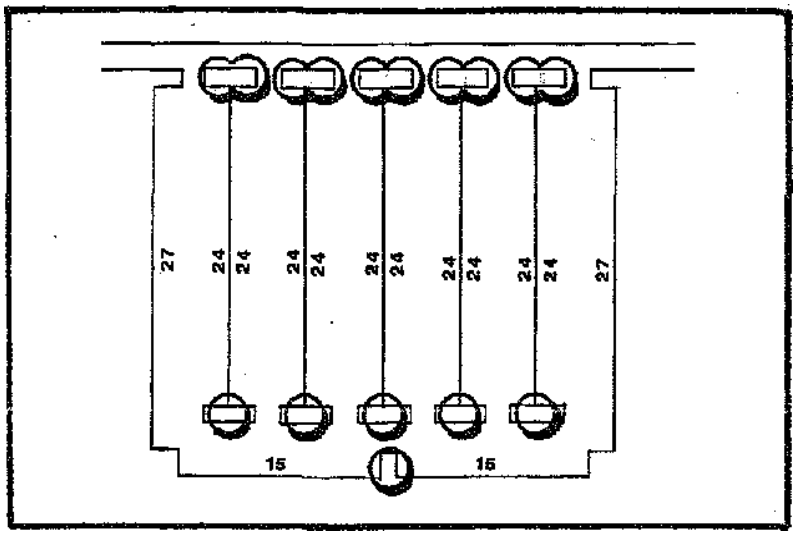
Internal landscaping is required within all new single family attached and apartment developments. Expansion to existing development that increases the number of single family attached units or apartments by fifty-percent (50%) or more shall be required to provide landscaping for the entire site in accordance with these regulations. Expansion of less than fifty-percent (50%) of the number of existing units shall be required to provide landscaping for the additional development only.

Single Family Attached

The following requirements apply for single-family attached projects in any district or for mobile home projects:

- One (1) shade tree per unit.
- Small deciduous or evergreen trees may be substituted for shade trees at a 2:1 ratio up to a maximum of fifty-percent (50%) of the required shade trees.
- Trees may be placed on residential lots, in open space lots or at other on-site locations that meet the intent of the regulations.
- Landscape planting requirements shall be shown on the site plan.
- A minimum fifteen feet (15') wide landscaped area shall be provided between common parking areas and any adjacent residential structure.

FIGURE 6 NON-RESIDENTIAL PARKING LOT INTERNAL LANDSCAPING

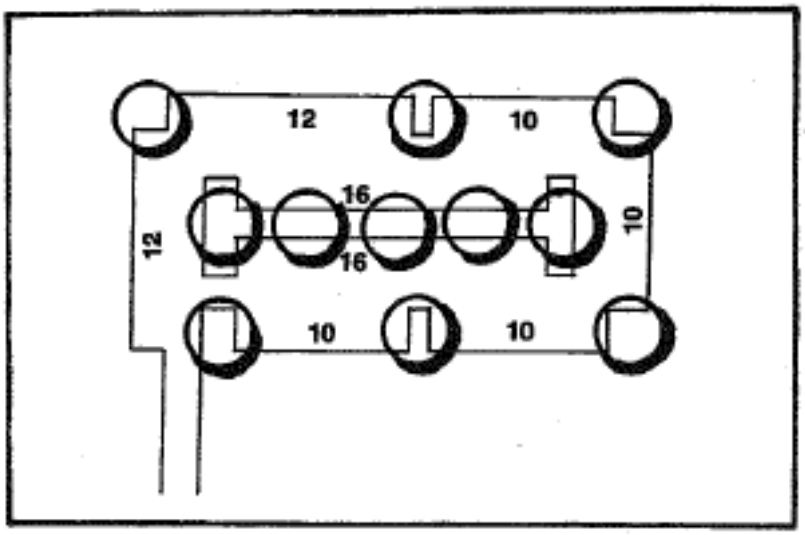


EXAMPLE 1

Number of Parking Spaces = 324

Internal Islands Required (1/20 spaces) = 16
Internal Islands Provided = 21

Shade Trees Required (1/20 spaces) = 16
Shade Trees Provided = 16

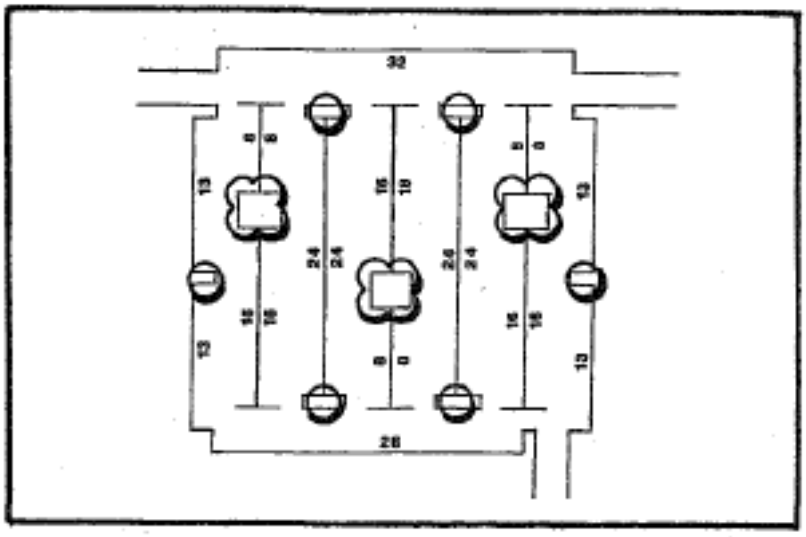


EXAMPLE 2

Number of Parking Spaces = 216

Internal Islands Required (1/20 spaces) = 11
Internal Islands Provided (200 Sq. Ft. /Island) =28

Shade Trees Required (1/20 spaces) = 11
Trees Provided
Shade Trees = 8
Evergreen Trees (2/1 Shade = 3) = 6



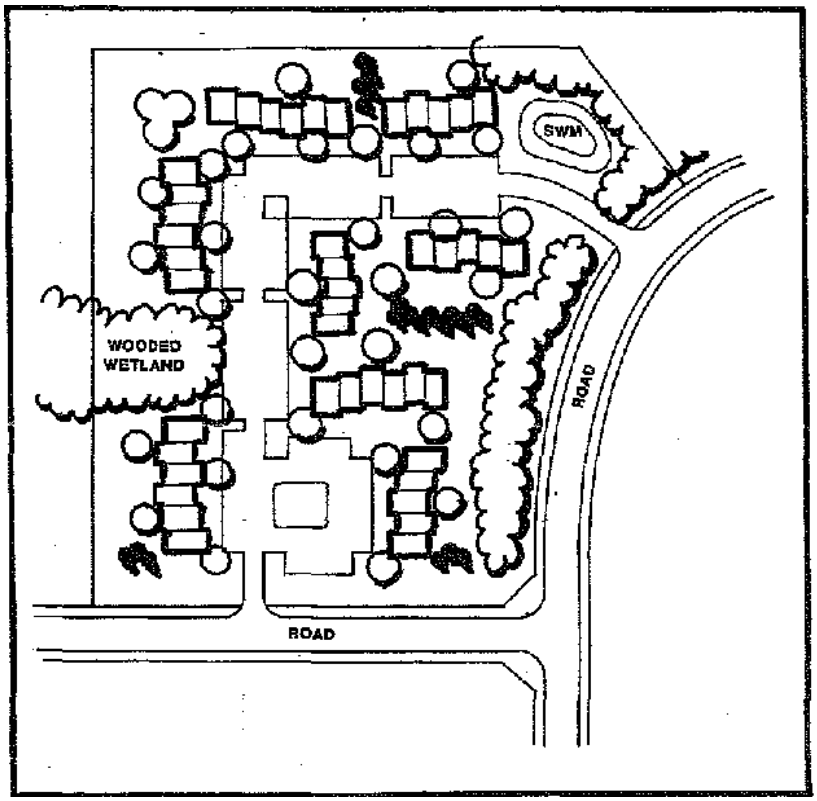
EXAMPLE 3

Number of Parking Spaces = 352

Internal Islands Required (1/20 spaces) = 18
Internal Islands Provided (200 Sq. Ft. /Island) = 29

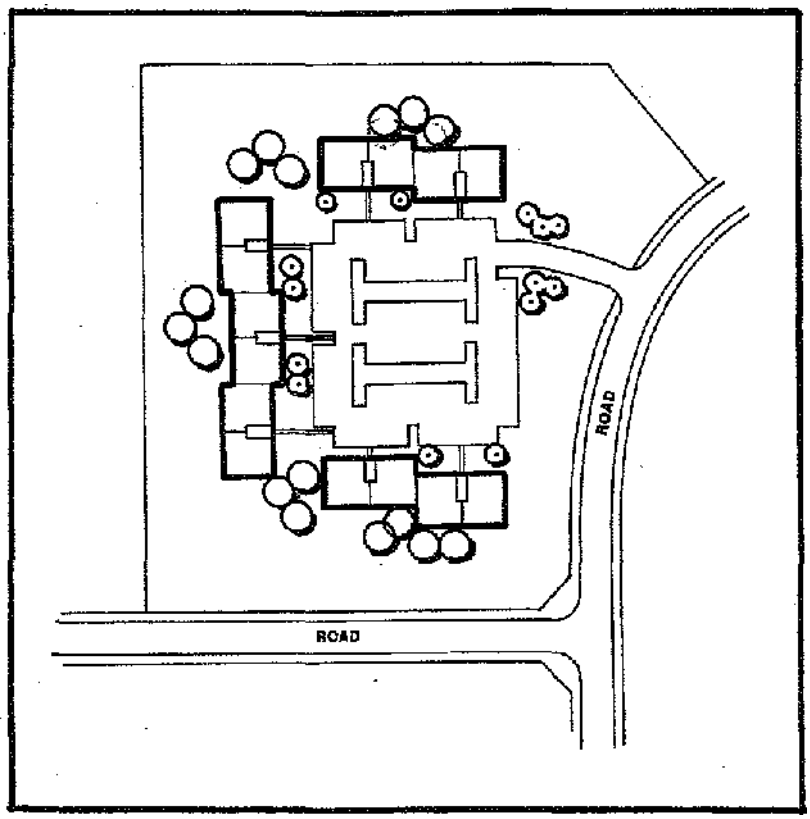
Shade Trees Required (1/20 spaces) = 18
Shade Trees Provided = 18

FIGURE 7 RESIDENTIAL INTERNAL LANDSCAPING



SINGLE FAMILY ATTACHED
Number of Units = 44
Shade Trees Required (1/3 Units) = 44
Trees Provided
Shade Trees = 33
Evergreen Trees (1/2 Shade Trees = 11) = 33

Internal Landscaping Provided:
In 15' Wide Landscaped Area
Between Parking and Building
Between Buildings
In Rear Yards
Screening Rear Yards



APARTMENTS
Number of Units = 70
Shade Trees Required (1/3 Units) = 23
Trees Provided
Shade Trees = 16
Small Deciduous Trees (1/2 Shade Trees) = 14

Internal Landscaping Provided:
Along Entrance Road
In 15' Wide Landscaped Area
Between Parking and Building
Between Buildings
Behind Buildings

Apartments

The following requirements apply for apartments projects in any district:

- A minimum of one (1) shade tree per three (3) units shall be provided.
- Small deciduous trees or evergreen trees may be substituted at a 2:1 ratio for up to fifty percent (50%) of the required shade trees.
- A minimum fifteen feet (15') wide landscaped area shall be provided between common parking areas and any adjacent residential structure.
- Figure 7 exhibits calculations for and internal landscaping of a residential development with townhomes and apartment units.

STORMWATER MANAGEMENT AREA LANDSCAPING

Landscaping of new or expanded stormwater management areas is regulated by Prince George's County Department of Environment.

CHAPTER V
STREET TREES

STREET TREES AND OTHER LANDSCAPING REQUIREMENTS

Street trees are required by the City of Laurel Unified Land Development Code. Street tree requirements must be met in addition to the requirements for perimeter and internal landscaping required in Article I. Zoning, Division 15 of the Unified Land Development Code. Street tree obligations and other landscape obligations must always be computed separately.

Street trees should preferably be located in the road right-of-way either adjacent to the road pavement or within a landscaped median. However, if utilities cannot be configured to provide sufficient space for street tree planting within the right-of-way, the Department of Community Planning and Business Services may approve location in a street tree maintenance easement adjacent to the right-of-way. Trees required to satisfy perimeter-landscaping requirements may be planted within the public right-of-way if approved by the Department of Community Planning and Business Services and the Department of Public Works. Street trees planted adjacent to the right-of-way may be clustered with existing trees or proposed perimeter landscaping to provide a more effective buffer or screen to satisfy the intent of the Unified Land Development Code. This option must also be approved by the Department of Public Works and the Department of Community Planning and Business Services.

In single family attached or apartment developments where internal roads are designed as part of the parking lots, internal parking lot landscaping provided in accordance with the requirements of Article I. Zoning, Division 15 of the Unified Land Development Code and Chapter IV of the Landscape Manual shall satisfy street tree obligations. Internal parking lot landscaping will be allowed to fulfill street tree requirements only for those segments of the roadway that are lined with parking spaces perpendicular to the roadway (see Figure 5, Example 3).

GENERAL REQUIREMENTS

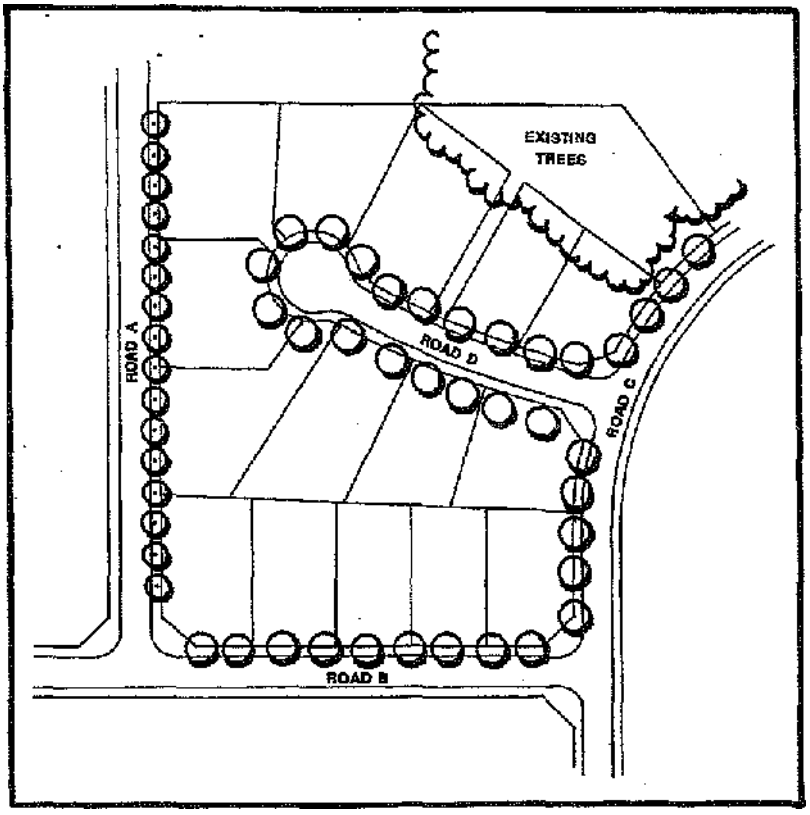
Roadway alignments should seek to preserve existing forests, stands of mature trees and specimen trees on all development sites. Furthermore, the preservation of vegetation adjacent public rights-of-way is encouraged. The Maryland State Forest Conservation Technical Manual, arborists and tree specialists, and/or texts listed in *Appendix "E"*, Bibliography, should be consulted for methods of tree preservation. Credit for up to one-hundred percent (100%) of the street tree-planting requirement may be granted for preservation of existing trees immediately adjacent to the right-of-way.

Street trees of at least 2½-inch caliper must be provided for public and private rights-of-way in all districts. Spacing for required street trees shall be as follows:

- Small trees shall be planted a maximum of thirty feet (30') apart.
- Medium or large trees shall be planted a maximum of forty feet (40') apart.

If the number of street trees provided in a subdivision or development meets the intent of the minimum spacing requirements (i.e., approximately one (1) tree per thirty feet (30') or one (1) tree per forty (40'), the Department of Public Works and the Department of Community Planning and Business Services may approve clustering of street trees. Clustering of street trees could result in the location of trees within the right-of-way and in street tree maintenance easements adjacent to the right-of-way. Spacing of trees in clusters could result in the spacing of small trees at fifteen to twenty feet (15'-20') apart and the spacing of medium or large trees at twenty-five to thirty feet (25'-30') feet apart. In such cases, gaps between clusters could be double the minimum spacing required above. Figure 8 depicts layout of street trees.

FIGURE 8 STREET TREE PLANTING



STREETSCAPE

Road A
No Sidewalks
Small Deciduous Trees
30 Feet Apart
In Right-of-Way

Road B
No Sidewalks
Large Street Trees
40 Feet Apart
In Right-of-Way

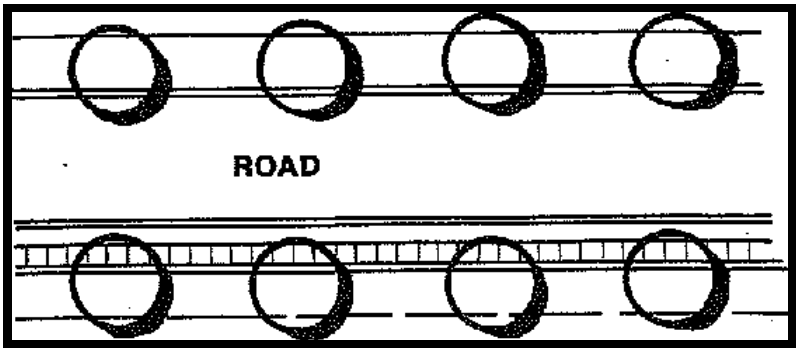
Road C
Sidewalks
Large Street Trees
40 Feet Apart
In 6 Foot Wide Planting Strip
In Right-of-Way

Road D
Sidewalks
Large Street Trees
40 Feet Apart
In 10 Feet Wide Street Tree Maintenance Easement

For recommended tree species that are acceptable for adaptability and survivability see *Appendix "A"*. Alternates to these species may be proposed by a registered landscape architect or professional horticulturalist subject to approval by the Department of Public Works and the Department of Community Planning and Business Services.

All street trees and plant materials installed in a public right-of-way must conform to the "AAN STANDARDS FOR NURSERY STOCK", latest edition, and be installed in accordance with Department of Public Works standards and specifications.

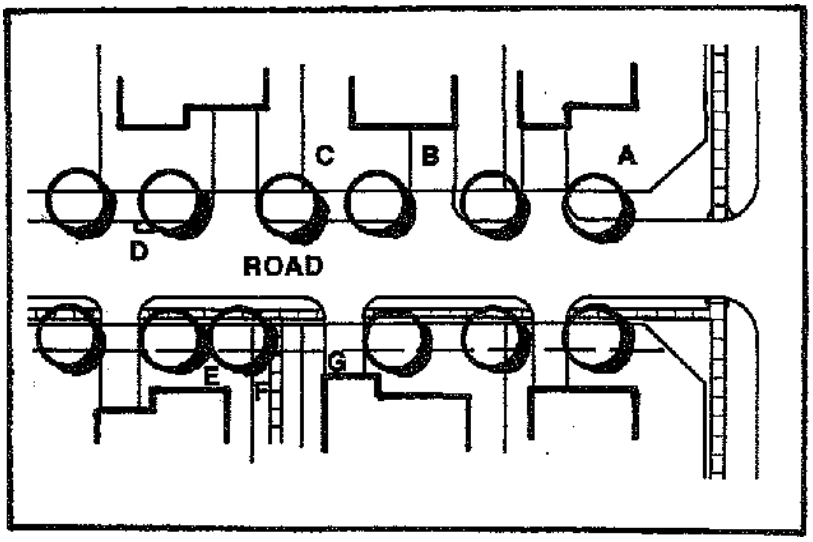
FIGURE 9 STREET TREE LOCATION CRITERIA



A. No Sidewalk in Right-of-Way
Street Trees 40 Feet Apart in Right-of-Way
Minimum 6 Feet from Curb

B. Sidewalk in Right-of-Way
Less than 6 Feet from Curb to Sidewalk
Street Trees Permitted Only with Root Barrier or Container

C. Street Trees 40 Feet Apart in 10 Feet Wide Street Tree Easement
Minimum 3 Feet from Sidewalk



A. Street Trees Minimum 30 Feet from Right-of-Way Intersection
Minimum 10 Feet from Driveway

B. Street Trees 45 Feet Apart Due to Driveway Location

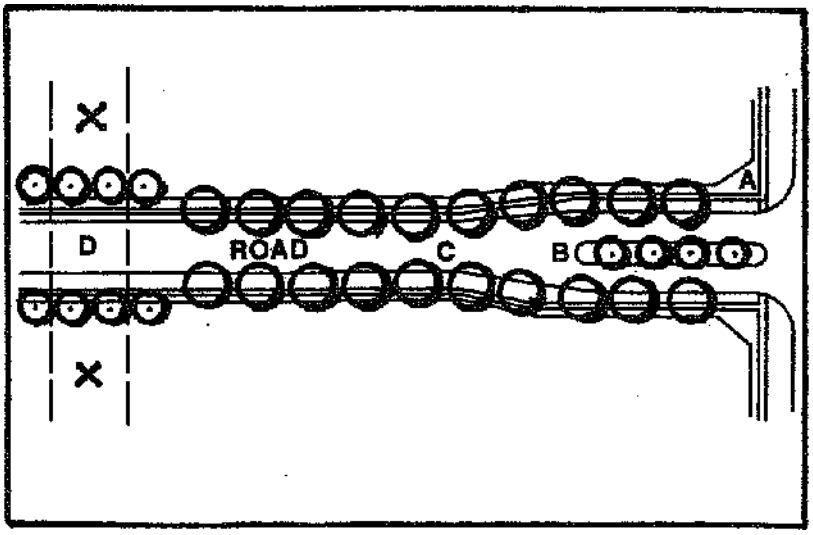
C. Street Trees 35 Feet Apart Due to Driveway Location

D. Street Tree 5 Feet from Drain Inlet

E. Street Trees 30 Feet Apart Due to Driveway and Open Space

F. Street Trees 5 Feet from Open Space Access Strip

G. Street Trees 60 Feet Apart Due to Driveway and Open Space



A. Sidewalk in Right-of-Way

B. Small Trees in Median Strip
20 Feet from ends of Median

C. Street Trees 40 Feet Apart in Right-of-Way

D. Small Trees Beneath Power Lines
Trees 30 Feet Apart
In 10 Feet Wide Street Tree Maintenance Easement

STREET TREE LOCATION REQUIREMENTS

Figure 9 illustrates alternatives for layout of street trees. The following standards shall govern the placement of street trees in public rights-of-way:

- When the distance between the curb and sidewalk is six feet (6') or greater, trees shall be located within the right-of-way and shall be centered between the curb and the sidewalk.

- When the distance between the curb and the sidewalk is less than six feet (6'), and where trees are planted closer than three feet (3') to the sidewalk, a biologic root inhibitor barrier or physical container barrier shall be required.

- When the distance between the curb and the sidewalk is less than six feet (6'), trees may be planted three feet (3') from the sidewalk in the direction away from the road. A ten feet (10') wide tree maintenance easement shall be required if the right-of-way is limited. Trees shall be planted six feet (6') behind the curb when there are no sidewalks.

- Trees shall be placed a minimum of thirty feet (30') from all signs and intersections when planted between sidewalk and curb, and be located with consideration of underground utilities and structures. Street trees may not be planted within five feet (5') of a drain inlet structure, five feet (5') of an open space access strip, or ten feet (10') of a driveway.

TREE SELECTION CRITERIA

The following criteria must be addressed when selecting street trees for a particular location:

- Trees must fit the space limitations when mature. The species, ultimate size of the tree and the canopy desired should be appropriate to the size of the right-of-way and the road classification (i.e., local, collector, or arterial road).

- Trees must survive the environmental stresses of the proposed location. The recommended street tree list includes trees selected for appropriate branching habits, tolerance of local environmental conditions such as soil and rainfall, and has relatively low susceptibility to pests and disease. Medium and large trees are preferred as street trees. Small trees are desirable as they provide variety in the streetscape.

- Small trees are not permitted in situations where they inhibit sight distance, conflict with pedestrian circulation or create maintenance problems. Small trees will be permitted under the following conditions and in the following locations:

    - Within street rights-of-way when:

        - no sidewalk is required; the distance between the curb and the sidewalk is eight feet (8') or greater; or

        - the tree may be pruned to eight feet (8') clear trunk without destroying the shape of the crown of the tree.

- In street tree easements adjacent to the right-of way.

- In median strips of divided highways, provided that trees are located a minimum of twenty feet (20') from the nose of the median island and will not interfere with travel lanes.

- Small trees must be selected for planting under power lines.

- No needle evergreen trees will be permitted in a public right-of way. No thorn bearing trees or trees with rigid, sharply pointed leaves (such as holly trees) will be permitted adjacent to sidewalks.

- Every effort shall be made to diversify species and cultivars of species of trees planted on different streets or between blocks on very long streets. This practice provides for long-term survival of the landscape, should one species suffer blight.

- Street trees should be selected so that the City's roadway network exhibits a variety of species with differing colors, textures, and forms.

SIGHT TRIANGLES

When a driveway or private roadway intersects a public right-of-way or when the site abuts the intersection of two or more public rights-of-way, all-landscaping within the sight triangle areas shall provide unobstructed across-visibility.

Nothing at an elevation greater than the top of curb plus three feet (3') shall be allowed in any sight triangle area except single trunk trees whose lower branches are pruned to a height of seven feet (7').

CHAPTER VI
ALTERNATIVE COMPLIANCE

ALTERNATIVE COMPLIANCE

Site conditions or a specific set of project design criteria may justify approval of an alternative method of compliance with the landscaping standards by the Department of Community Planning and Business Services.

Examples of conditions which justify alternative compliance include situations where:

- Topography, soil, vegetation or other site conditions that make full compliance impossible or impractical; or when improved environmental quality would result from the alternative compliance.

- Space limitations, unusually shaped lots, and existing conditions on adjacent properties may justify alternative compliance for in-fill sites, and for improvements or redevelopment of sites in older communities.

- Expansion or change of use on an existing site requires a larger buffer or screen than is feasible due to the lack of available space.

- Safety considerations make alternative compliance necessary.

The proposed alternative compliance landscaping must be equal to or better than normal compliance in terms of quantity, quality, effectiveness, durability, and ability to fulfill the intent of the regulations and the manual.

A request for alternative compliance shall be submitted to the Department of Community Planning and Business Services at the time the plan is submitted. Requests for alternative compliance shall be accompanied by sufficient written or graphic explanation and justification to allow appropriate evaluation and decision.

Alternative compliance shall be limited to the specific project under consideration and shall not establish precedents for acceptance in other cases.

APPENDIX "A"
RECOMMENDED STREET TREE LIST

<u>Small Trees</u> – Plant a maximum of thirty feet (30') apart.

Botanical Name	Common Name
Acer campestre	Hedge Maple
Acer griseum	Paperbark Maple
Crataegus crusgalli 'inermis'	Thornless Cockspur Hawthorn
Crataegus phaenopyrum	Washington Hawthorne*****
Crataegus viridis 'Winter King'	Winter King Hawthorne*****
Crataegus laevigata 'Crimson Cloud'	Crimson Cloud Hawthorn*****
Malus baccata 'Jackii'	Jackii Crabapple
Malus baccata 'Columnaris'	Columnar Siberian Crabapple
Malus floribunda 'Harvest Gold'	Flowering Crabapple
Malus x 'Snowdrift'	Snowdrift Crabapple
Malus x zumi 'Calocarpa'	Redbud Crabapple
Prunus cerasifera atropurpurea 'Thundercloud'	Thundercloud Purpleaf Plum
Prunus serrulata 'Kwanzan'	Kwanzan Cherry
Prunus yedoensis	Yoshino Cherry
Styrax japonica	Japanese Snowbell

*****Trees with thorns are permitted in median strips only.

<u>Medium Trees</u> – Plant a maximum of forty feet (40") apart.

Botanical Name	Common Name
Cercidiphyllum japonica	Katsura Tree
Cladrastis lutea	Yellowwood
Prunus sargentii	Sargent Cherry
Pyrus calleryana 'Aristocrat'	Aristocrat pear
Pyrus calleryana 'Chanticleer''	Chanticleer Pear
Pyrus calleryana 'Cleveland Select'	Cleveland Select Pear
Pyrus calleryana 'Fauriei'	Fauriei Pear
Pyrus calleryana 'Redspire'	Redspire Pear
Pyrus calleryana 'Rancho'	Rancho Pear
Sophora japonica 'Regent'	Regent Japanese Pagoda Tree Princeton
Sophora japonica 'Princeton Upright'	Upright Japanese Pagoda Tree

<u>Large Trees</u> – Plant a maximum of 40 feet apart*

Botanical Name	Common Name
Acer rubrum 'Armstrong'	Armstrong Columnar Red Maple
Acer rubrum 'Autumn Flame'	Autumn Flame Red Maple
Acer rubrum 'Bowhall'	Bowhall Red Maple

Botanical Name	Common Name
Acer rubrum.'October Glory'	October Glory Red Maple
Acer rubrum 'Red Sunset'	Red Sunset Red Maple
Aesculus hippocastanum 'Baumann'	Baumann Horsechestnut
Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple*
Fraxinus 33anadensi 'Autumn Purple'	Autumn Purple White Ash
Fraxinus 33anadensi 'Rosehill'	Rosehill White Ash
Fraxinus pennsylvanica 'Patmore'	Patmore Green Ash
Fraxinus pennsylvanica 'Marshall's Seedless'	Marshall's Seedless Green Ash
Ginkgo biloba 'Autumn Gold'	Autumn Gold Ginkgo (male only)
Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo (male only)
Gleditsia triacanthos inermis 'Imperial'	Imperial Thornless Honeylocust
Gleditsia triacanthos inermis	Shademaster Thornless Honeylocust 'Shademaster'
Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane
Platanus x acerifolia 'Columbia'	Columbia London Plane
Quercus acutissima	Sawtooth Oak
Quercus coccinea	Scarlet Oak
Quercus phellos	Willow Oak*
Quercus rubra	Northern Red Oak
Quercus robur 'Fastigiate'	Columnar English Oak
Tilia 33anadensi 'Redmond'	Redmond American Linden
Tilia cordata 'Chancellor'	Chancellor Littleleaf Linden
Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden
Zelkova serrate 'Village Green'	Village Green Japanese Zelkova
Ulmus parvifolia	Chinese Elm

*****Large trees permitted in areas with a minimum of eight (8) feet between curb and sidewalk.

Note: Do not mix different cultivars of Malus genus or Pyrus species as they cross- pollinate.

APPENDIX "B"
RECOMMENDED PLANT LISTS

Deciduous Trees – Large to medium, shade, or canopy.

Botanical/Common Name	Size
Acer platanoides 'Emerald Queen'/ Emerald Queen Norway Maple	2½" – 3" cal.
Acer rubrum 'October Glory'/ October Glory Red Maple	2½" – 3" cal.
Acer rubrum 'Red Sunset'/ Red Sunset Red Maple	2½" – 3" cal.
Acer saccharum 'Green Mountain'/ Green Mountain Sugar Maple	2½" – 3" cal.
Betula nigra 'Heritage'/ Heritage Clump Birch	10' – 12' ht.
Cercidiphyllum japonicum/ Katsuratree	2½" – 3" cal.
Fagus grandifolia/ American Beech	2½" – 3" cal.
Fagus sylvatica/ European Beech	2½" – 3" cal.
Fraxinus 34anadensi 'Autumn Purple'/ Autumn Purple White Ash	2½" – 3" cal.
Fraxinus pennsylvanica 'Marshall's Seedless'/ Marshall's Seedless Green Ash	2½" – 3" cal.
Gleditsia triacanthos inermis 'Imperial'/ Imperial Thornless Honeylocust	2½" – 3" cal.
Liquidambar styraciflua/ American Sweetgum	2½" – 3" cal.
Platanus x acerifolia 'Bloodgood'/ Bloodgood London Plane	2½" – 3" cal.
Prunus sargentii/ Sargent Cherry	2½" – 3" cal.
Quercus acutissima/ Sawtooth Oak	2½" – 3" cal.
Quercus coccinea/ Scaret Oak	2½" – 3" cal.
Quercus phellos/ Willow Oak	2½" – 3" cal.
Quercus rubra/ Red Oak	2½" – 3" cal.
Quercus robur 'Fastigiate'/ Columnar English Oak	2½" – 3" cal.
Salix babylonica/ Weeping Willow	1½" – 2" cal.

Salix niobe/ Niobe Weeping Willow	1½" – 2" cal.
Sophora japonica/ Japanese Pagoda Tree	2½" – 3" cal.
Tilia cordata 'Greenspire'/ Greenspire Littleleaf Linden	2½" – 3" cal.
Tilia tomentosa/ Silver Linden	2½" – 3" cal.
Zelkova serrata 'Village Green'/ Village Green Japanese Zelkova	2½" – 3" cal.

Deciduous Trees – Small to medium, ornamental, or understory.

Botanical/Common Name	Size
Acer griseurn/ Paperbark Maple	1½" – 2" cal.
Amelanchier 35anadensis/ Shadblow Serviceberry	8' – 10' ht.
Carpinus caroliniana/ American Hornbeam	1½" – 2" cal.
Crataegus phaenopyrum/ Washington Hawthorne	1½" – 2" cal.
Crataegus virdis 'Winter King'/ Winter King Hawthorne	1½" – 2" cal.
Crataegus Laevigata 'Crimson Cloud'/ Crimson Cloud Hawthorn	1½" – 2" cal.
Cornus florida/ White Flowering Dogwood	8' – 10' ht.
Cornus florida 'rubra'/ Red Flowering Dogwood	8' – 10' ht.
Cornus kousa/ Kousa Dogwood	8' – 10' ht.
Magnolia stellata/ Star Magnolia	6' – 8' ht.
Magnolia x soulangiana/ Saucer Magnolia	6' – 8' ht.
Prunus cerasifera atropupurea 'Thundercloud'/ Thundercloud Purpleaf Plum	1½" – 2" cal.
Prunus serrulata 'Kwanzan'/ Kwanzan Cherry	1½" – 2" cal.
Prunus subhirtella 'Pendula Pink Cloud'/ Pink Cloud Weeping Higan Cherry	1½" – 2" cal.
Prunus Yedoensis/ Yoshino Cherry	1½" – 2" cal.

Evergreen Trees.

Botanical/Common Name	Size
Cedrus deodora/ Deodar Cedar	6’ – 8’ ht.
Cuppressocyparis leylandi/ Leyland Cypress	5’ – 6’ ht.
Ilex opaca/ American Holly	5’ – 6’ ht.
Picea abies/ Norway Spruce	6’ – 8’ ht.
Picea omorika/ Serbian Spruce	6’ – 8’ ht.
Pinus nigra/ Austrian Pine	6’ – 8’ ht.
Pinus strobus/ Eastern White Pine	6’ – 8’ ht.
Pinus thunbergiana/ Japanese Black Pine	6’ – 8’ ht.

Shrubs, broadleaf evergreen.

Botanical/Common Name	Size
Abelia x grandiflora/ Glossy Abelia	2½” – 3” ht.
Azalea ‘Blaaw's Pink’/ Blaaw's Pink Azalea	18” – 24” sp.
Azalea ‘Delaware Valley White’/ Delaware Valley White Azalea	18” – 24” sp.
Azalea ‘Gumpo Pink’/ Gumpo Pink Azalea	18” – 24” sp.
Azalea ‘Gumpo White’/ Gumpo White Azalea	18” – 24” sp.
Azalea ‘Hershey Red’/ Hershey Red Azalea	18” – 24” sp.
Azalea ‘Hino Crimson’/ Hino Crimson Azalea	18” – 24” sp.
Azalea poukhanensis/ Korean Azalea	18” – 24” sp.
Berberis thunbergii atropurpurea ‘Crimson Pygmy’/ Crimson Pygmy Barberry	18” – 24” sp.
Euonymus kiautschovicus ‘Manhattan’/ Manhattan Euonymus	2½’ – 3’ ht.
Euonymus kiautschovicus ‘Siebodiana’/ Siebold Euonymus	2½’ – 3’ ht.

Botanical/Common Name	Size
Ilex cornutal/ Chinese Holly	2½' – 3' ht.
Ilex x cornuta 'Burfordii'/ Burford Holly	2½' – 3' ht.
Ilex crenata 'Green Lustre'/ Green Lustre Holly	2½' – 3' ht.
Ilex x crenata 'Compacta'/ Compact Japanese Holly	2½' – 3' ht.
Ilex crenata 'Steeds Upright'/ Steed's Upright Holly	2½' – 3' ht.
Ilex glabra 'Compacta'/ Compact lnkberry	2½' – 3' ht.
Ilex crenata 'Helleri'/ Helleri Holly	18" – 24" sp.
Ilex x Meserveae 'Blue Prince'/ Blue Prince Holly	3 ½'' – 4' ht.
Ilex x Meserveae 'Blue Princess'/ Blue Princess Holly	3 ½'' – 4' ht.
Ilex attenuata 'Fosterii'/ Foster Holly	5' – 6' ht.
Ilex 'Nellie R. Stevens'/ Nellie Stevens Holly	5' – 6' ht.
Kalmia latifolia/ Mountain Laurel	2½' – 3' ht.
Leucothoe axillaris/ Coast Leucothoe	18" – 24" sp.
Mahonia aquifolium/ Oregon Grapeholly	2½' – 3' ht.
Mahonia bealei/ Leatherleaf Mahonia	18" – 24" sp.
Pieris japonica/ Japanese Andromeda	2' – 2½' ht.
Pyracantha coccineata 'Lowboy'/ Lowboy Firethorn	18" – 24" sp.
Pyracantha coccineata 'Lalande'/ Lalandei Scarlet Firethorn	2½' – 3' ht.
Prunus laurocerasus 'Schipkaensis'/ Skip Cherrylaurel	2½' – 3' ht.
Prunus laurocerasus 'Otto Lutyken'/ Otto Lutyken Cherrylaurel	2' – 2½' ht.
Photinia x fraserii/ Frasers Photinia	3 – 3½' ht.
Rhododendron catawbiense album/ White Catawba Rhododendron	2' – 2½' ht.
Rhododendron catawbiense 'Roseum Elegans'/	2' – 2½' ht.

Botanical/Common Name	Size
Roseum Elegans Catawba Rhododendron	
Rhododendron ‘P.J.M.’/ P.J.M. Rhododendron	2’ – 2½’ ht.
Skimmia japonica/ Japanese Skimmia	18” – 24” sp.
Viburnum rhytidophyllum/ Leatherleaf Viburnum	2½’ – 3’ ht.

Shrubs, deciduous and semi-evergreen.

Botanical/Common Name	Size
Azalea ‘Exbury’/ Exbury Azalea (red, pink, yellow, orange, white)	18” – 24” sp.
Chaenomeles speciosa ‘Texas Scarlet'/ Flowering Quince	18” – 24” sp.
Cornus stolonifera/ Red-Osier Dogwood	2½’ – 3’ ht.
Clethra alnifolia/ Summersweet Clethra	2½’ – 3’ ht.
Cotoneaster salicifolius ‘Repens’/ Willowleaf Cotoneaster	18” – 24” sp.
Cotoneaster dammerii ‘Coral Beauty’/ Coral Beauty Cotoneaster	18” – 24” sp.
Euonymus alatus ‘Compacta’/ Dwarf Winged Euonymus	2’ – 2½’ ht.
Forsythia intermedia ‘Spectabilis’/ Showy Border Forsythia	2’ – 2½’ ht.
Forsythia suspensa var. sieboldii/ Siebold Weeping Forsythia	2½’ – 3’ ht.
Ilex verticillata/ Winterberry	3’ – 4’ ht.
Myrica pennsylvanica/ Northem Bayberry	2’ – 2½’ ht.
Nandina domestica/ Heavenly Bamboo	2’ – 2½’ ht.
Nandina domestica ‘Harbour Dwarf’/ Harbour Dwarf Nandina	18” – 24” sp.
Virburnum carlesii/ Korean Spice Viburnun	2½’ – 3’ ht.
Viburnum dentatum/ Arrowwood Viburnum	2½’ – 3’ ht.
Virburnum x Juddi/ Judd Virburnum	2½’ – 3’ ht.
Virburnum plicatum 'Mariessi'/	2½’ – 3’ ht.

Botanical/Common Name	Size
Marie's Doublefile Viburnum	
Virburnum prunifolium/ Blackhaw Virburnum	2½' – 3' ht.

Shrubs, needle evergreen.

Botanical/Common Name	Size
Juniperus chinensis 'Pfitzeriana Compacta'/ Compact Pfitzer Juniper	2' – 2½' ht.
Juniperus chinensis 'Sargentil'/ Sargent Juniper	18" – 24" sp.
Juniperus chinensis 'Sea Green'/ Sea Green Juniper	18" – 24" sp.
Juniperus horizontalis 'plumose'/ Andorra Juniper	18" – 24" sp.
Juniperus horizontalis 'Prince of Wales'/ Prince of Wales Juniper	18" – 24" sp.
Taxus baccata 'Repandens'/ Spreading English Yew	18" – 24" sp.
Taxus cuspidata 'Nana'/ Dwarf Japanese Yew	18" – 24" sp.
Taxus media 'Hicksii/ Hicks Yew	2½' – 3' ht.
Taxus media "Densiformie"/ Densiformis Yew	2½' – 3' ht.

APPENDIX "C"
CERTIFICATION OF LANDSCAPE INSTALLATION

Project Name: _____

Site Location: _____

Preparer: _____

1. Existing landscaping credited towards requirements has been retained as shown on the approved plans. Explain any deviations.

   _____

   _____

   _____

   _____

2. Landscape planting included in site and landscape plan.

LANDSCAPING	REQUIRED	PROVIDED
Shade Trees		
Evergreen Trees		
Small Deciduous Trees		
Other		
Total		

3. Attach as-built plant list and approved plant list. Explain any plant substitutions or any relocation.

   _____

   _____

   _____

   _____

4. Attach a copy of the 1-year guarantee bond.

5. If the original landscape plan preparer does not provide certification, attach a statement of qualifications for the certifying professional. The certifying professional may not be employed by the installing contractor.

_____

Signature, Qualified Professional

APPENDIX "D"
GLOSSARY

Afforestation - the establishment of new forest on an area presently without forest cover, by planting in accord with the practices specified in the Maryland State Forest Conservation Technical Manual.

Berm - an earthen mound designed to buffer adjacent uses, screen undesirable views, reduce noise, etc.

Buffer - the use of landscape materials to lessen the visual impact of a use, or to visually or physically separate uses, while not necessarily shielding a structure or use from view.

Caliper - tree diameter measured above the root collar in accordance with American Association of Nurserymen standards.

Deciduous - a plant with foliage that is shed annually.

Department - the City of Laurel Department of Community Planning and Business Services.

Development - the establishment of a principal use of a site; a change in a principal use of a site; or the improvement or alteration of a site by the construction, enlargement, or relocation of a structure; the provision of stormwater management or roads; the grading of existing topography; the clearing or grubbing of existing vegetation; or any other nonagricultural activity that results in a change in existing site conditions.

Evergreen - a plant with foliage that persists and remains green year-round.

Forest - a biological community dominated by trees and other woody plants covering an area of 10,000 square feet or greater. Forest includes:

1) Areas with a tree cover ratio one-hundred (100) trees per acre with at least fifty percent (50%) of these trees being at least two inches (2") in diameter at a height of 4½ feet above ground; or

2) Areas meeting the criteria above that have been cut but not cleared. Forest does not include orchards, tree nurseries, Christmas tree farms, or other types of forest crops.

Forest Conservation - the retention of existing forest or the creation of new forest at the levels set by Article V. Forest Conservation of the Unified Land Development Code.

Forest Conservation Plan - a plan which shows the impacts of a proposed development on existing forest resources. A forest conservation plan includes existing forest areas to be removed or retained; the location, extent, and specifications for any reforestation or afforestation required; and legal measures to protect forest resources after completion of development.

Forest Conservation Program - a City of Laurel program developed under the authority of the State Forest Conservation Act and is consistent with the intent, requirements and standards of the Act, Natural Resources Article, §5-1601 through 5-1613, Annotated Code of Maryland.

Forest Stand Delineation - the evaluation of existing forests and other vegetation on a site proposed for development.

Landscaped Edge - the area around the perimeter of a development reserved for buffer or screen plantings that is twenty feet (20') wide unless a lesser zoning setback is allowed.

Limit of Disturbance (LOD) - the boundary of permitted changes to existing site conditions due to clearing and grading, as well as other activities associated with site development such as parking of vehicles and equipment, storage of materials, and disposal of construction debris.

Maintenance Agreement - a legally binding agreement to ensure the survivability of all sites afforested, reforested or landscaped.

Permanent Tree Protection Devices - structural measures, such as retaining walls or aeration devices that are designed to protect the tree and its root systems throughout its lifetime.

Reforestation - the establishment, in accordance with the Maryland State Forest Conservation Technical Manual, of new forest cover to replace forest resources lost because of development activities.

Roadway - a public road or public right-of-way; also, a private road within an access easement or right-of-way.

Screen - the use of landscape materials to substantially shield a structure or use from view.

Shade Tree - a deciduous (or rarely, an evergreen) tree planted primarily for its high crown of foliage or overhead canopy.

Shrub - a woody plant, smaller than a tree, which consists of a number of small stems from the ground or small branches near the ground. May be deciduous or evergreen.

Small Deciduous Tree - a deciduous tree planted primarily for its ornamental value, or for screening. May be any size at maturity, but will tend to be smaller than a shade tree.

Specimen Tree - a particularly impressive or unusual example of a species due to its size, shape, age, or any other trait that epitomizes the character of the species.

Street Tree - a tree planted within a public right-of-way or within a street tree maintenance easement adjacent to a roadway, in order to provide shade over the street or sidewalk and to give the street a sense of spatial definition. A large street tree at maturity reaches a height of at least seventy feet (70'). A medium sized street tree generally does not exceed a height of forty feet (40').

Tree - a large, branched, woody plant having one or several self-supporting stems or trunks that reach a height of at least twenty feet (20') at maturity.

APPENDIX "E"
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