

# HOWARD COUNTY LANDSCAPE MANUAL

ADOPTED (TBD)

*50% DRAFT – 7/7/2025*

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# I. Introduction and General Information

*[Legislation, purpose and intent]*

## A. Introduction

*DPZ Letter*

## B. Version History

First Edition – March 12, 1993

Amendment to First Edition – March 2, 1998

Updates – July 1, 2010

Updated – 2025

*Enactment Date & Bill Number*

## C. Applicability

Landscaping requirements are established in the Howard County Subdivision and Land Development Regulations, Zoning Regulations, the Howard County Forest Conservation Manual, and the Howard County Landscape Manual. The basic landscaping requirements are established in Section 16.124 of the Howard County Subdivision and Land Development Regulations.

A landscape plan must accompany all final plans or site development plans. Landscape requirements must also be identified schematically in preliminary plan and preliminary equivalent sketch plan submissions.

Refer to **Section II.E** for exemptions.

## D. Purpose & Intent

### a. Purpose statement

The Howard County Landscape Manual is the technical manual used to establish minimum standards of performance for preparing landscape plans, including the amount of landscape plantings required, suitable landscape materials, and alternative means of meeting the regulations. The Landscape Manual and amendments to it are prepared by the Department of Planning and Zoning and adopted by resolution of the County Council.

The Howard County Zoning and Subdivision and Land Development Regulations and the Landscape Manual establish the requirements for landscaping of all new developments within the County. The purposes of these requirements are to:

- Protect, preserve and enhance the appearance and value of neighborhoods, and provide a safe environment.
- Buffer potentially incompatible land uses from one another and to screen undesirable views.
- Prevent the unnecessary removal of vegetation during the land development process.
- Provide parking lots with landscaped areas that facilitate movement of traffic, break up large areas of impervious surfaces, provide shade, and buffer or screen parking lots from adjacent properties and roadways.

- Promote energy conservation through the cooling and wind buffering effects of trees.
- Contribute to the processes of air purification, oxygen regeneration, water absorption, and the reduction of glare and heat.
- Protect the health, safety and general welfare of the general public.

Additionally, the Landscape Manual furthers Howard County policies and goals, including those set forth in the Climate Action Plan, the Green Infrastructure Network, and the County's pollinator initiative Howard County Bee City. In addition to aesthetic and functional objectives, landscaping in the built environment serves as a climate adaptation and mitigation strategy by:

- providing shade
- reducing urban heat island effects
- sequestering carbon
- supporting biodiversity
- improving stormwater management

## b. Using the Landscape Manual

Plant material requirements are based on linear feet of property line.

Calculations of required plant quantities are to be rounded up to the nearest whole number.

Use appropriate schedules and include schedules on landscape plan

Terms/words defined in zoning and subdivision and land development regulations

***Terms/words*** defined in landscape manual glossary.

## II. Landscape Plans & Development Process

### A. Qualifications to Prepare Plans

#### a. Licensed Landscape Architect

With the exceptions noted in **Section II.A.b** below, all landscape plans shall be prepared and sealed by a licensed Landscape Architect registered in the State of Maryland. Landscape plans shall be signed and sealed at each submission.

#### b. Certified Professional Horticulturist OR Chesapeake Bay Landscape Professional

Landscape plans accompanying the following plan types may be prepared by a Certified Professional Horticulturist or a Chesapeake Bay Landscape Professional (Level 1):

- Minor subdivision
- Site development plan for an existing lot

A Certified Professional Horticulturist (CPH) must be certified by the Maryland Nursery, Landscape and Greenhouse Association, Inc. and hold a valid certification at the time of each landscape plan submission. (<https://mnlga.org/page/CPH>)

A Chesapeake Bay Landscape Professional (CBLP) must be certified by the Chesapeake Bay Landscape Professional Program and hold a valid Level 1 certification at the time of each landscape plan submission. (<https://cblpro.org/>)

### B. Development Process Overview

As administrator of the subdivision and site development plan review process, the Department of Planning and Zoning will be responsible for the review and approval of landscape plans.

Refer to the Department of Planning and Zoning website for current development process information.

<https://www.howardcountymd.gov/planning-zoning/resource/general-land-development-process>

### C. Types of Landscape Plans Required by Plan Submission

#### a. Schematic Landscape Plans

Landscape requirements shall be considered in the earliest stages of plan preparation. Landscape requirements must be identified schematically on the preliminary plan or preliminary equivalent sketch plan.

The following must be included on Preliminary Plans or Preliminary Equivalent Sketch Plans:

- Required landscape edges and the type of plantings for each edge should be identified.
- Identify preservation of existing vegetation, proposed plantings, or other alternative solutions. Tabulate in a series of landscape notes or charts.

- Identify whether the developer or builder will be responsible for installation of specific elements of the overall landscape plan.

The landscape information provided on a Preliminary Plan or Preliminary Equivalent Sketch Plan 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.

Refer to the Department of Planning and Zoning checklists for each plan type submittal. <https://www.howardcountymd.gov/planning-zoning/projectdox#development-plan-checklists>

## b. Complete Landscape Plan

The Landscape Plan shall be part of a Final Plan or Site Development Plan submission. In general, landscaping requirements that shall be part of each type of plan are as follows:

- Final Plan
  - Street trees
  - Perimeter landscaped edges, if the responsibility of the developer
  - Stormwater 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 Plans and original Site Development 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. Separate planting plan sheets that include street trees and on-site landscaping must include Department of Public Works and Department of Planning and Zoning signature blocks. Landscaping that is required for a Final Plan shall be shown on the Road and Storm Drain construction drawings. Planting required for minor subdivisions shall be shown on a supplemental sheet that shall be submitted with the Final Plat.

Refer to the Department of Planning and Zoning checklists for each plan type submittal. <https://www.howardcountymd.gov/planning-zoning/projectdox#development-plan-checklists>

Refer to **Appendices F and G** for *[landscape installation and maintenance guidelines and specifications.]*

## D. Other Design Manuals & New Town Zoning District

### a. Other Design Manuals

Where discrepancies occur between requirements outlined in the Howard County Design Manuals for Route 1, Route 40, and Route 108 and requirements described in the Landscape Manual, requirements of the Design Manuals prevail.

[Route 1 Manual](#)

[Route 40 Manual](#)

## b. New Town Guidelines and Additional Review

Property in the New Town Zoning District may be subject to review rights beyond that of Howard County Department of Planning and Zoning. Please refer to the Architectural Review Committee (ARC) Review Map maintained on the ProjectDox Plan Submittal Portal. As part of the plan submittal, projects subject to ARC Review require a letter from Howard Research and Development (HRD), the Village Board Architectural Review Committee (ARC), or other association identified on the ARC Review Map stating that the plan has been prepared in accordance with their guidelines.

Properties not subject to ARC review should meet the requirements outlined in the Landscape Manual.

Surety for New Town planting shall be based on the approved landscape plan.

## E. Exemptions

A landscape plan must accompany all preliminary, preliminary equivalent sketch, final or site development plans, with the following exemption:

- Resubdivisions that create no new lots or parcel divisions, and revision plats.

Partial exemptions to the landscape requirements apply to the 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 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 50% shall be required to provide landscaping for the additional development only.
- Expansion to existing development shall be required to provide landscaping in accordance with this manual as follows:
  - Residential development that increases the number of built dwelling units shall be required to provide perimeter landscaping for the project area. This requirement shall also apply to redevelopment of existing lots meeting the definition of a recorded subdivision as defined in the Subdivision and Land Development Regulations.
  - A non-residential building that increases the existing floor area by 50% or more shall be required to provide landscaping for the entire site. Expansion of less than 50% shall be required to provide landscaping for the additional development only.
  - A mixed-use development that increases the existing building footprint by 50% or more shall be required to provide landscaping for the entire site. Expansion of less than 50% shall be required to provide landscaping for the additional development only.

## F. Installation, Surety & Inspections

Plant installation must conform to the current industry standards. Landscape Architects should be familiar with current best practices cited in reputable trade publications such as the "Landscape Specification Guidelines" published by the Landscape Contractors Association MD DC VA, and the American Standard for Nursery Stock published by AmericanHort.org. Sample plant installation guidelines and details can also be found in [Appendix E](#). To ensure a thriving landscape, Landscape Architects should provide customized details and specifications based on unique conditions of each site and proposed plantings.

### a. Posting of Surety

Bonding or posting of other surety for required landscaping is mandatory. Surety may be posted as follows:

- Developer's Agreement for road and storm drain improvements (Final Supplemental and Road Drawings) or for the site development plan (SDP).
- When there is no Developers Agreement, landscape surety may be posted with the grading permit agreement.
- In some instances, such as redline revision, when there is no Developers Agreement or Grading Permit, a surety may be posted with an exempt grading permit. When this option is necessary, DPZ staff will coordinate communications with HCSCD and DILP for approval.

If the responsibility for landscape installation is transferred from the developer to another party, the surety information attached to the Developer's Agreement or Grading Permit shall be amended to reflect this change.

Surety for landscaping shall be based on the total number of required<sup>1</sup> plantings (shade trees, small deciduous trees, evergreen trees, and shrubs) or comparable elements shown on the landscape plan. Unit prices to be used for establishing surety requirements are approved by the County Council and are subject to change each year. Refer to the [Department of Planning and Zoning website](#) for current Landscape Inspection Fees and Surety amounts.

The Department of Planning and Zoning (DPZ) shall coordinate inspections with the authorized County Landscape Inspector. Upon inspection, DPZ will notify the bond holder of the inspection results. 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.
- A copy of the one-year warranty has been provided to DPZ

The bond holder provides documentation on how the developer(s) has formally transferred long-term responsibility for the required landscaping to the owner, tenant, homeowners association, or other agent responsible for long-term maintenance of the development per subsection b. below.

### b. Owners and tenant responsibility after release

The developer is responsible for maintenance of the landscaping during construction and is responsible for obtaining a 1-year warranty for the installed plant materials. The developer is

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<sup>1</sup> Note: Surety is placed for total required plantings, not the plantings provided after credit taken for existing trees and vegetation.



responsible for transferring responsibility for the required landscaping to the owner, tenant, homeowner's association, or other agent responsible for maintenance.

Maintenance responsibilities include, but are not limited to, pruning, fertilizing, watering, mowing, mulching, weeding, and other such activities necessary for the planting to thrive.

Plantings, berms or other landforms, fences and walls installed as part of the landscape requirements shall be permanently maintained in good condition and, whenever necessary, replaced or repaired.

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 **Section III.B.c.vii** for guidance on planting in sight triangles and maintaining appropriate sight lines.

Review of redline revisions to site development plans (SDP) will include verification that the site is in conformance with the approved SDP. Redlines will not be approved for modifications or changes in use until the site is brought into compliance with the approved SDP.

## G. Other Options to Meet the Regulations

Unique site conditions or a specific set of project design criteria may justify approval by the Department of Planning and Zoning of an alternative proposal that meets the intent of the landscape requirements.

Examples of conditions which justify alternatives 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.
- Space limitations, unusually shaped lots, and existing conditions on adjacent properties, 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.

The proposal must be equal to or better than standard compliance in terms of quantity, quality, effectiveness, durability, and ability to fulfill the intent of the regulations and the Manual.

### a. Options within Manual

Acceptable alternative methods to meet standard landscape requirements are included in the applicable site condition sections.

Alternative methods proposed in lieu of standard requirements shall be noted on the landscape plan and included in applicable required Schedules (e.g. Schedule A for perimeter landscape edge requirements).

### b. Landscape Architect Proposed Alternative Methods

Landscape Architects may propose alternative plans that meet the intent of the Subdivision and Land Development Regulations and Landscape Manual Intent as stated within. The landscape architect shall request consideration of an alternative proposal by including a request letter to the Department of Planning and Zoning (DPZ) with the plan submittal. The request must include written justification and plan exhibits illustrating how the alternative better meets the intent of the regulations. Include sufficient written and graphic explanation for evaluation by DPZ. Follow up meetings and discussions with DPZ may be appropriate as DPZ evaluates the request.

Approval of alternate proposals shall be limited to the specific project under consideration and shall not establish precedents for acceptance in other cases.

If approved, include a narrative note on the landscape plans summarizing the request and final approval decision by DPZ.

## H. Deferring

Projects requesting deferral of the landscape plan to a later plan submittal stage will still be required to meet the full on-site landscape requirements outlined in the Landscape Manual. The granting by the Department of Planning and Zoning of a deferral of landscape requirements to a future plan submittal shall not be construed as justification for altering or eliminating landscape requirements.

When deferring landscape requirements to a future plan stage, the development team shall consider that any design decisions that do not address the landscape requirements may risk future, additional design modifications to previously approved plans. Additional review cycles may be necessary for the project to meet the regulations and achieve approvable status.

### III. Landscape Requirements

#### A. Intent by Land Use / Development Type

This section includes the intent and guidelines for each land use type as they relate to landscape character and requirements. These expectations can also be referenced when proposing an alternative method to meet the landscape requirements.

##### a. Residential

Residential land use spans a wide range of density levels and required landscaping should be for the specific project and scaled to the density and character of the residential zone and surrounding built and/or natural environment. For example, subdivisions with large lot sizes should establish a more open feel with views when compared to those with higher densities. Smaller lot subdivisions and many single family attached or apartment communities may warrant landscapes designed for a more urban context.

The following are objectives for all residential land uses:

- Preserve existing vegetation, particularly non-invasive healthy trees and shrubs
- Vary the location of trees as necessary to provide the best design for each lot, while meeting the intent of the landscape regulations
- Screen public view of private yard space and provide attractive views from the street, particularly on corner lots
- Shield side and rear yards from visual impacts from streets
- Design open space as amenity open space for use by neighborhoods and communities, rather than a fragmented mix of leftover green areas

In addition to these objectives, refer to the following sections for more guidance based on the project's type of residential land use.

##### i. Single Family Detached

Low-to-medium density residential areas should include naturalistic landscape edges to create a balance between residential communities and their natural surroundings, while also allowing the opportunity for lawns and gardens surrounding single family detached buildings. Residents may have the option to occasionally stroll down their neighborhood's open space via trails or sidewalks.

##### ii. Single Family Attached

Medium-to-high-density residential areas that may be within or adjacent to mixed-use zones should provide consistent tree plantings along sidewalks and streets to encourage livability among its single-family-attached residents. The narrow street network with wide sidewalks, shallow to medium building setbacks, and substantial tree coverage allows residents to experience a sense of place and safety.

In addition to the objectives listed above:

- Provide inviting landscaped common areas such as entrances to common buildings, walking paths, courtyards, playground and picnic areas

### iii. Apartments

High-density residential areas located in mixed-use zones should have street trees along sidewalks and plantings along apartment buildings to enhance the overall experience of pedestrians. Additionally, low-to-medium density residential areas may provide apartment buildings with walking paths leading to landscaped open space areas, such as in playgrounds and courtyards, that encourage residents to create a sense of community amongst neighbors.

In addition to the objectives listed above:

- Provide inviting landscaped common areas such as entrances to apartment buildings, walking paths, courtyards, playground and picnic areas

### iv. Mobile Homes

Low-density residential within or adjacent to rural areas should provide mobile home developments with landscape design that allows for both privacy and flexibility to promote a sense of place while allowing occasional removal and replacement of mobile homes.

## b. Open Space & Amenity Open Space

The purpose of open space requirements is for developments to provide usable areas for the residents and/or public. Open space should be designed to provide useable, landscaped, and attractive space that serves as an amenity for the community.

Landscaping of these areas can further this goal by:

- Clearly identifying these areas as common spaces or public spaces
- Separating the public space from private or utilitarian spaces such as private patios and refuse collection areas
- Enhancing the visual quality of the neighborhood or development
- Providing buffer from active recreation areas/facilities (such as play areas or tennis courts) to residential rear or side yards and adjacent properties
- Providing amenities for office and commercial employees, retail shoppers, residents of high-density, multifamily housing, and the public such as casual dining or eating areas
- Defining the entrances to and specific features of open spaces with plantings and other landscape elements to create a sense of place
- Providing comfortable areas for active recreation spectators and passive recreation users
- Providing visibility and pedestrian access into open space areas from streets and parking areas to encourage use and safety

Stormwater management (SWM) facilities, such as micro-bioretenion, should be landscaped, located, and integrated into the site design in such a way as to positively impact the development beyond the required purpose of managing stormwater. When treated as an integral feature of the practical and aesthetic site design, SWM facilities can become community amenities by supporting passive recreation, bird watching, providing pollinator habitat, etc.

Additionally, landscape plans can encourage future residents to participate in other county initiatives by providing open space designated for a Homeowners Association (HOA) or similar community groups to use for future plantings. For example, the Bee City Program may provide grants and/or planning assistance to create pollinator gardens in the open space. Notes should be included on the

landscape plan encouraging future HOAs or community members to contact the Bee City Coordinator for more information and guidance on current programming.

### c. Ground-mount Solar Collectors

- Use landscape design in a coordinated manner to buffer/screen ground-mounted solar collectors and associated mechanical equipment from public view
- Place and screen ground-mounted solar collectors in a manner that cannot be readily seen from the public right-of-way or adjacent properties in residential or office-residential districts
- Screen with a principal or accessory structure, fence, wall, landscape elements, or a combination thereof to enclose or block the view of ground-mounted solar collectors and associated mechanical equipment

### d. Commercial

Low-to-medium density commercial uses within peri-urban and rural areas should use landscape edges to soften transitional uses between zones. Medium-to-high-density commercial development, particularly in urban areas, should provide consistent tree plantings along sidewalks and streets with additional plantings alongside buildings. Landscape should consist of hardy plant species tolerant of soil compaction and minimal space.

Site and landscape design for commercial developments should address the following objectives:

- Provide landscape to enhance the economic vitality of commercial development along travel ways, by softening views rather than screening
- Allow views into retail properties to assist wayfinding while softening parking lots from public space/sidewalks
- Provide tree lines along the main travel routes that connect people from work, school, and shopping to their homes
- Provide formal rows of trees along travel ways to define travel ways, create a green edge, and provide continuity and scale
- Provide landscape areas between commercial properties to allow coordinated planting schemes
- Design landscaping to emphasize shading/cooling for pedestrians and patrons

### e. Industrial

The intent of landscape requirements for industrial developments is primarily focused on buffering incompatible adjacent land uses. Industrial land uses include heavy to light industrial, manufacturing, auto repair and similar, and of all the non-residential land use types, industrial uses are least compatible with residential uses, institutional uses, and public rights-of-way.

Site design shall use a coordinated combination of landscape elements to meet the following objectives:

- Provide a compatible transition or buffer between residential, commercial, or office uses and more intense industrial uses

- Mitigate the environmental impacts associated with incompatible land uses, for example, berms and sound walls are encouraged when sound is a concern or potential concern
- Shield residential uses and public open space from industrial uses and associated nuisances – both real and perceived – regarding views, light trespass, odors, and noise

## f. Mixed Use, Institutional and Government Uses

Medium-to-high-density mixed-use, institutional, and government uses within urban areas should provide consistent tree plantings along sidewalks and streets with planting alongside buildings. Landscape should consist of hardy plant species tolerant of soil compaction and minimal space. Additionally, institutional and government uses in lower density areas should use landscaping to provide appropriate transitions between surrounding residential and/or commercial areas. The connections from mixed-use, institutional and government developments to public open space can be highlighted by required landscaping and encourage legitimate users.

Consider the following objectives during design:

- Ensure green areas, streets and drive aisles, and the spaces around and between buildings are attractively landscaped
- Promote green infrastructure, species diversity, and tree canopy in these areas
- Establish an enhanced visual relationship between civic, institutional, commercial, mixed-use, and industrial structures and their surrounding environments
- Landscape for passive energy conservation
- Reduce the negative effects of reflection and glare from paving, structures, or direct light from the sun, headlights, street lights, etc.
- Enhance the aesthetic appearance of civic, institutional, and commercial areas and concentrations of industrial uses to increase economic viability for the surrounding neighborhoods
- Enhance the quality of public spaces and streets, especially in civic, institutional, mixed-use, and commercial development, to be pedestrian-friendly and engaging to the public
- Use Crime Prevention Through Environmental Design (CPTED) principles to increase safety by designing spaces that are more clearly visible and inviting to a wide range of uses, activating spaces and encouraging legitimate uses.

## g. Scenic Roads

The Howard County Scenic Road regulation intent is to preserve the scenic character of the landscape and the features of the road right-of-way that contribute to the road's character. Because scenic landscapes vary greatly, design solutions for development will vary and should:

- Minimize tree and vegetation removal, emphasize the protection of vegetation adjacent to the scenic road, as well as mature trees and hedgerows visible from the road.
- Use vegetation commonly found on the site or in the area for landscaping.
- Minimize grading; retain existing slopes along the scenic road frontage.

- Maintain visual character and minimize impacts to scenic views. For areas with open views, preserve the foreground meadow, pasture or cropland and place development in the background as viewed from the road. For areas with forested or wooded views, preserve a buffer of existing forest or wooded area between the scenic road and new development.

## h. Historic Structures & Areas

Howard County's Historic Preservation Commission has review authority over Historic Properties. When conflicts arise between Landscape Manual requirements and HPC Design Guidelines and/or requirements, those of HPC prevail. Refer to the Historic Preservation Commission resources page for more information: <https://www.howardcountymd.gov/planning-zoning/historic-planning>.

For properties of all land use types that are adjacent to historic properties, the historic character of adjacent historic properties should be respected when applying the landscape requirements in this manual. The following objectives should be considered during site and landscape design

- Preserve the setting and frame significant views of historic properties and unique scenery from the road
- Buffer and screen historic structures from new development to separate incompatible uses visually and physically
- Retain significant landscapes and vegetation associated with historic properties

## B. Landscape Edges & Site Conditions

This section includes the description of and requirements for a range of landscape edge types and the landscape requirements for various site conditions. Rates and calculations for the requirements are provided within each site condition listed, including any applicable variations to required rates based on different land uses or development type.

These requirements stipulate the quantity of plant materials that shall be provided to meet the requirements of the regulations. Alternative methods to meet the intent are provided – refer to specific site conditions for any applicable alternatives.

### a. Landscape Edges

Several site conditions outlined in the following subsections require landscape edge plantings. The intent of the required landscape edge types, which include varying levels of buffering and screening, is to address the compatibility of a project's land use or development type with adjacent land uses.

#### i. Landscape Edge Types

The planting requirements for each landscape edge type call for planting a specific minimum number of shade trees, evergreen trees and/or shrubs.

Table 1 identifies the range of landscape edge treatments, from buffer to screen. All landscape edge types require planting shade trees. In many categories evergreen trees are also required. Shrub planting is required only for buffering parking from adjacent roadways.

Table 1 – Landscape Edge Types				
Edge Type	Description	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
E	Parking Adjacent to Roadway (buffer)	1:40	0	1:4



(a) Allowed Plant Type Substitutions

Except as otherwise noted, the following plant type substitutions may be allowed in lieu of the requirements listed in Table 1 provided the substitutions meet the intent of the regulations:

Required Plant Type	Substitution
1 Shade tree	2 Small deciduous trees, or 2 Evergreen trees, or 10 Shrubs
1 Evergreen tree	10 Shrubs
1 Shrub	3 <i>perennial grasses</i> , or 10 <i>herbaceous perennials</i> *
* 1 gallon or #1 container installation size; only allowed as a substitution for _____ site conditions; only allowed as a substitution for up to xx% of shrub requirement	

ii. Calculations & Plant Spacing Guidelines

Plant material requirements are based on linear feet of property line or other applicable site condition.

Calculations of required plant quantities shall be rounded up to the nearest whole number.

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 perimeter landscape edge (see **Section III.B.b**). No more than 15% of the required strip shall be covered with an impervious surface for pedestrian circulation or use.

Examples of landscape edge calculations and illustrations of planting schemes that fulfill the requirements of the regulations are provided in Appendix A.

Plant materials should be chosen and located to achieve the desired level of buffer or screen per the edge type descriptions in Table 1.

Guidelines for plant spacing to achieve an effective screen or buffer is as follows:

- Planting requirements listed in Table 1 are not 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 generally be 10-15 feet on center unless a particularly narrow species or cultivar is used. 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 25 feet on center.
- Clusters of small deciduous trees are generally an effective buffer when planted 15-20 feet on center.

The sizes of plants to achieve an acceptable screen or buffer are generally as outlined below:

- Shade trees must be a minimum of 2-1/2" caliper.
- Small deciduous trees (single-stem and multi-stem species) must be at least 8' height at installation. Single stem species must also be a minimum of 1-1/2" caliper.
- Small deciduous trees used to meet street tree requirements must be single-trunk specimens and a minimum of 2-1/2" caliper.
- Evergreen trees must be at least 6' height at installation.
- Shrub plantings for Type E landscape edges must be a minimum of 24" height at installation.
- Shrub planting to supplement a perimeter buffer must be a minimum of 24" height for evergreen shrubs and a minimum of 30" height for deciduous shrubs.

Required planting in any landscape edge may be transferred to another area elsewhere within the project boundary, if such transfer meets the intent of the regulations. This method may be evaluated and approved on a project-by-project basis by the Department of Planning and Zoning.

## b. Perimeter Landscape

Perimeter landscape edges are required for all land uses and development types. This section describes the standard requirements and alternative methods for meeting the landscape requirements for a property's perimeter landscape plantings.

Landscape Plans shall include Schedule A (see Appendix B).

### i. Standard Requirements

Perimeter landscape edges are required along the outside boundary of a property. The regulations do not require landscape edges between internal lots or parcels within the same development. However, perimeter landscaping is required for the redevelopment of internal lots within recognized subdivisions (as defined in Section 16.108(b)(44)(iii)<sup>2</sup> of the Subdivision and Land Development Regulations) that were recorded prior to the Howard County approval requirements as defined in subsection (i) and (ii) of Section 16.108(b)(44).

- For cluster subdivisions in the Rural Conservation and Rural Residential districts, the perimeter landscape 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.

Perimeter landscape edges for buffering or screening and their required edge type are based on land use. The type of required buffer or screen is determined by the degree of compatibility between the site uses and adjacent land uses.

- Where possible, the perimeter landscape edge should be planted within the required setbacks established by the County Zoning Regulations.

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<sup>2</sup> See also Section II.E. Expansions to existing developments that increase the number of residential units shall be required to provide landscaping.

- Buildings, parking, loading areas, stormwater management facilities, utility easements, storm drainage channels, play areas, drive aisles, parking spaces and similar uses may not be located in perimeter landscape edges.
- Necessary pedestrian circulation, utility easements and access driveways may cross the perimeter landscape edges perpendicularly.
- Upon approval of the Department of Planning and Zoning and the Department of Public Works, necessary utility or other easements may overlap with up to 25% of the required edge, provided that the required landscaping may be placed in the reduced area.

(b) Tables – Perimeter Adjacencies

<b>Table 2 – Landscape Edge Adjacent to Roadways</b>		
Land Use*	Orientation of Structure or Use to Roadway	Landscape Edge Type
Single Family Detached (SFD)	Front Side / Rear	None B
Single Family Attached (SFA) & Mobile Homes	Front Side / Rear	None C
Apartments	All Sides	B
Non-Residential	Front / Side Rear Rear – if Loading	B C D
Parking	N/A	E

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

<b>Table 3 – Landscape Edge Adjacent to Perimeter Properties</b>		
Land Use*	Adjacent Land Use*	Landscape Edge Type
Single Family Detached (SFD)	All Uses Rural Preservation Easement	A x
Single Family Attached (SFA), Mobile Homes & Apartments	SFD SFA & Mobile Homes All Other Uses Rural Preservation Easement	C B A x
Non-Residential (Commercial, Institutional) & Mixed Use	Residential All Other Uses Rural Preservation Easement	C A x
Non-Residential (Industrial)	Residential Public Open Space All Other Uses Rural Preservation Easement	C C A x
Loading	Residential All Other Uses Rural Preservation Easement	D C x

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

## ii. Alternative Methods

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

### (a) Preserving Existing Trees

The landscape planting requirement may be met by preserving existing trees, except for invasive species. Individual trees may be credited toward meeting part or all of the landscape edge requirements. The existing trees under consideration for preservation shall be an equivalent tree type as required in the applicable landscape edge table. An existing landscape buffer may completely satisfy the landscape edge requirements if the existing buffer contains an equal number and type of trees as required in the applicable landscape edge table. Existing trees intended to satisfy the landscape edge requirements must be in good or better condition (as determined by a licensed arborist, forester, Certified Professional Horticulturist or Landscape Architect and must not be an invasive species.

Existing trees proposed for credit shall be shown and labeled on the landscape plan and planting schedules for clarity in the plan review and for landscape inspection purposes. The species, condition, and caliper of the existing trees must be provided to receive credit. The existing trees must also be protected prior to and during construction with the current best practices for tree preservation. Include protection details and specifications on the landscape plans and in the sequence of construction in the grading and sediment and erosion control plan sheets.

Posting of surety is not required for preservation of existing trees for landscape credit; however, as part of an approved plan, existing trees must be maintained and replaced as necessary in perpetuity.

(b) Development adjacent to Forest Conservation Easement

(i) *Existing Forest Conservation Easement*

An existing forest conservation easement located along the property boundary may meet perimeter landscape edge requirements. The easement may be on-site or off-site along the shared property line and must be recorded and in good standing (i.e. has no issues with bond, no complaints, and no unresolved violations)

(ii) *Proposed Forest Conservation Easement*

Tree plantings proposed to meet Forest Conservation reforestation and/or afforestation requirements may be used to meet perimeter landscape edge requirements provided that:

- Tree size at time of installation is a minimum of 2-1/2" caliper
- Tree plantings meet location criteria described in the Landscape Manual
- Tree plantings meet surety requirements
- Tree plantings are located in a recorded Forest Conservation Easement and the easement remains in good standing

(c) Berm or Grade Change

A berm that is a minimum of 3 feet high, or a change in grade that causes a parking lot to be located lower than the adjacent roadway by 3 feet 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 3 feet high if the front or side of the structure(s) abut the roadway, and a minimum of 6 feet 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 3 feet high. Non-residential uses adjacent to residential properties should provide berms that are a minimum of 6 feet high to obtain a credit towards provision of required plant materials. In no instances will berms be substituted for required shade tree plantings.

(d) Fence, Wall or Hedge

Perimeter landscape edges may be reduced to a width of 10 feet if a masonry wall, hedge, or solid fence is provided. Walls, hedges and fences may be credited towards meeting 100% of the required landscape planting; however the Department of Planning and Zoning may require at least 1 tree per 60 linear feet of wall or one shrub or vine per 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 5 feet 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 3-1/2 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.

c. Street Trees (public & private roads)

Street tree requirements must be met in addition to the requirements for perimeter and internal landscaping required in Section 16.124. **Street tree requirements must be calculated separately from all other landscape requirements.**

Street trees should be located in the road right-of-way either adjacent to the road pavement or within a landscaped median – see **Sections III.B.c.i-iii** and **III.B.c.vi** for more location guidance and requirements.

Street trees must be provided for public and private rights-of-way in all districts and shall be at least 2-1/2 inch caliper at time of installation.

**Required rate and spacing of street trees:**

- **1 shade tree per 40 linear feet of right-of-way**
- **1 small deciduous tree per 30 linear feet of right-of-way (when proposed as a substitute for shade trees)**

Refer to **section III.B.c.v** for streetscape layout and alternative street tree spacing.

Refer to **section IV.A** for Street Tree Selection Criteria.

**i. Existing trees**

Roadway alignments should seek to preserve existing forest, stands of mature trees, and specimen trees on all development sites. The preservation of these types of vegetation adjacent to public rights-of-way is encouraged. The Forest Conservation Manual, arborists and tree specialists should be consulted for appropriate methods of tree preservation. Credit for up to 100% of the street tree planting requirement may be granted for preservation of existing trees, except for invasive species, immediately adjacent to the right-of-way.

**ii. Maintenance easements**

If utilities cannot be configured to provide sufficient space for street tree planting within the right-of-way, the Department of Planning and Zoning may approve location in a street tree maintenance easement adjacent to the right-of-way.

**iii. Interaction with perimeter landscape edge plantings**

Trees required to satisfy perimeter landscaping requirements may be planted within the public right-of way if approved by the Department of Planning and Zoning 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 ordinance. This option must also be approved by the Department of Public Works and the Department of Planning and Zoning.

**iv. Interaction with parking lot plantings**

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 Section 16.124 and **section III.B.d** 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 **Appendix A, Figure 6**).

**v. Typical Layout vs. Informal Clustering**

A typical street tree layout results in regular spacing of trees at the required 30 or 40 feet on center, depending on tree type. Slight variations to this regular spacing may be required due to utility conflicts, access easements, private driveways and roads – see **Section III.B.c.vi** for more guidance.

However, if the number of street trees provided in a subdivision or development meets the intent of the spacing requirements, the Department of Public Works and the Department of Planning and Zoning 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 adjoining the right-of-way. Spacing of trees in clusters could result in the spacing of small deciduous trees at 15-20 feet apart and the spacing of shade trees at 25-30 feet apart. In such cases, gaps between clusters could be double the spacing required above.

**Figure 4 in Appendix A** depicts typical street tree layout and informal clustering of street trees.

#### vi. Street Tree Location Requirements

Trees shall be placed a minimum of 30 feet from all signs and intersections when planted between sidewalk and curb and be located with consideration of underground utilities and structures.

**Figure 5 in Appendix A** illustrates required adjustments to the layout of street trees. The following standards shall govern the placement of street trees in public rights-of-way:

##### (a) Street trees at roads with no sidewalk

Trees shall be planted 6 feet behind the curb.

##### (b) Street trees at roads with sidewalk and required buffer zone

Refer to the applicable street type in Howard County Volume III Design Manual Complete Streets and Bridges for the required buffer zone width.

When the distance between the curb and sidewalk meets the required buffer zone width, trees shall be located within the right-of-way and shall be centered between the curb and the sidewalk.

##### (c) Street tree at roads with sidewalk and less than required buffer zone

Refer to the applicable Complete Streets street type for the required buffer zone width.

When the distance between the curb and the sidewalk is less than the required buffer zone width, trees may be planted 3 feet from the sidewalk in the direction away from the road. A 10 foot wide tree maintenance easement shall be required if the right-of-way is limited.

When the distance between the curb and the sidewalk is less than the required buffer zone width, and where trees are planted closer than 3 feet to the sidewalk, a biologic root inhibitor barrier or physical container barrier is required.

##### (d) Street tree at open space access point

Street trees may not be planted within 5 feet of an open space access strip point.

##### (e) Utility Easements and Overhead / Underground Wires

###### *(iii) Small deciduous trees required under power lines*

Landscape policies for trees located below overhead wires are based on BGE's published 'Planting Zone Concept,' which stipulates the maximum allowable size of plant materials for three defined zones. These zones are defined as follows:

Distance from BGE powerline & Maximum Height per Zone		
BGE Zone	Distance from the BGE power line	Maximum height of mature tree
Green	Up to 20 feet	25 feet
Yellow	20 feet – 40 feet	40 feet
Red	Beyond 45 feet	> 40 feet

(iv) *Small deciduous tree substitution for shade tree requirement (1:1 ratio for overhead wires)*

When requirements for shade trees are located within 20 feet of existing overhead wires, substitutions for the use of small deciduous trees in lieu of shade trees will be accepted at a 1:1 ratio versus the typical 2:1 ratio.

(v) *Underground utilities and utility easements*

Trees shall not be planted in utility easements or within 5 feet of a storm drain inlet structure.

## vii. Sight Triangles

(a) Private driveways and roadways abutting public roadways

Street trees shall not be located within 10 feet of a driveway.

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.

(b) Landscape must be unobstructed across-visibility within sight triangle

Nothing at an elevation greater than the top of curb plus two (2) feet shall be allowed in any sight triangle area except single-trunk trees, provided that the lower branches are pruned to a height of seven (7) feet.

## viii. Scenic Roads

*[Provide some guidance, also mentioned in complete streets. Possibly more descriptive guidance of how to meet the subdivision regulations Section on Scenic Roads - currently 16.1400 and 16.125]*

Hedgerows, existing mature trees and/or forest along the rights-of-way and edges of scenic roads shall be preserved to the maximum extent practical. Refer to the current Complete Streets Manual and Howard County Code Section 16.125 for additional guidance on landscaping and maintenance along scenic roads.

Where sufficient and acceptable vegetation does not exist or cannot be preserved, street trees and perimeter landscape edge plantings(?) proposed to meet requirements along rights-of-way designated as a "scenic road" shall:

- meet the guidelines outlined in the current Complete Streets Manual (?)
- be a native species, commonly found on the site or in the surrounding area (?)
- other?



## d. Parking Lots

Landscape requirements for parking areas should be designed not only to improve aesthetics and traffic flow but also to reduce the urban heat island effect, manage stormwater, and increase climate resilience; and when possible, support other County initiatives and programs such as the Bee City program. Landscaped islands should be prioritized as opportunities to plant large-canopy native trees that maximize shading of impervious surfaces and create a multi-layer plant community. These areas can also be designed to function as stormwater bioretention features that reduce runoff and filter pollutants.

### i. Parking Lot Perimeter

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

**For parking lots adjacent to roadways, a Type E landscape edge is required.**

The combination of low shrubs and shade trees is intended to partially screen parked cars from adjacent roadways, while still allowing for some visibility into the site.

The intent of the Type E landscape edge requirement for this site condition is to create a minimum buffer height of 3 feet through the use of shrubs, or an alternative method, such as a change in grade, a berm, a fence or wall. The alternative methods for perimeter landscape edges can be applied to required landscape edges for parking lots adjacent to roadways – see **Section III.B.b.ii.**

**For parking lots adjacent to adjoining properties, use the required perimeter landscape edge type specified in **Section III.B.b.i.****

Perimeter parking lot landscape requirements for special exception uses may exceed those specified in the landscaping regulation if required by the decision and order issued by the Board of Appeals.

#### (a) Commercial areas

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, for commercial parking lots adjacent to 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.

#### (b) Residential areas

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.

For residential parking lots adjacent to other residential properties, clustering of evergreen trees or use of dense mixed plantings between the parking areas and the property perimeter is recommended.

## ii. 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 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 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 minimum of 12 feet in width (face of curb to face of curb) and a minimum of 200 square feet.
- The island should be completely curbed or otherwise protected from vehicle traffic. Curbs may be constructed to include curb cuts or areas of flush curb allowing stormwater runoff to flow into the landscape island when it also serves as a stormwater management biorientation area.
- Walkways located within a landscaped island are permitted, but shall not be counted as part of the minimum width or area of the island.
- The primary trees to be used in parking lots shall be 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, up to a maximum of 50% of the required shade trees.
- Use of shrubs, perennials and grasses is encouraged to create plant communities, however, substitution for required shade trees does not meet the cooling intent and is not accepted.

Internal parking lot landscaping shall be shown on the Site Development Plan, and Landscape Plans shall include Schedule B (see [Appendix B](#)).

Refer to [Section III.B.j.ii](#) for parking lots with existing or proposed solar canopies.

### (a) Residential Parking Lots

Parking lots for single family attached and apartment dwelling units shall have 1 landscaped island per 10 parking spaces and 1 shade tree per 10 parking spaces. This requirement does not necessarily mean that an island with a shade tree must occur every 10 spaces; the requirement is a means of calculating planting requirements. Grouping of parking spaces should generally not exceed 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 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. See [Appendix A Figure 6](#).

As described in **Section III.B.c Street Trees**, 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 Development Plan.

(b) Non-Residential Parking Lots

Parking lots for office, industrial, retail, institutional and related commercial use shall have 1 landscaped island per 20 parking spaces and 1 shade tree per 20 parking spaces. This requirement is a means of calculating planting obligations. Grouping of parking spaces should generally not exceed 24 in a row for commercial and institutional lands uses but may be permitted at up to 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. A large island should be the equivalent square area of four 200 SF islands and break up a double row of parking strips.

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. See **Appendix A Figure 7**.

e. Parking Garage

f. Loading & Service Areas

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 loading and service areas adjacent to roadways or residential properties:

Provide a Type D landscape edge between the loading or service area and any public or private road, residential structure or lot.

For loading and service areas adjacent to perimeter boundaries other than those specified above:

Provide a Type C landscaped edge

The linear feet of landscape edge shall be measured along all portions of the perimeter of the loading and/or service area facing the adjacent property or roadway. Screen or buffer plantings shall be designed and located in a manner that does not impair sight distances at intersections.

Landscape requirements for loading areas associated with special exception uses may exceed those specified in the landscaping regulation if required by the decision and order issued by the Board of Appeals.

i. Community Refuse Pad for Private Access Place Street

When a developer creates a Private Access Place street in a residential community, an area must be designated on the construction plans for a 4' x 10' community refuse pad. The refuse pad shall include a landscaped buffer and/or fence along the perimeter of the pad.

The buffer shall consist of evergreen shrubs of a height of 3 to 4 feet minimum, and with spacing every 3 feet or so. The desired effect is that of an evergreen hedge. The surety for these shrubs

and any related fence should be posted with that of the Private Access Place landscape “street” trees.

## ii. Residential Community Trash & Recycling Pads

Trash and recycling rules and regulations require collection pads be placed within 5 feet of the public roadway. Residential community trash and recycling pad placements should be located within the County right-of-way to comply with the regulations. Landscaping shall not be located on the side of the trash pad facing or oriented towards the public road to allow for ease of pick-up and accessibility for the trash collection service. However, landscaping is allowable on the ends and back side of the trash pad facing or oriented towards the residential development unless Subdivision Review Committee (SRC) comments prohibit the landscaping. The placement of community trash pads and landscape screening will be reviewed on a case-by-case basis on subdivision and site development plans. Where landscape screening cannot be provided to allow for full and open access and pick-up services for trash and recycling collection, comments received from SRC agencies indicating that landscaping should not be allowed shall supersede the landscape requirements.

## g. Residential Development Internal Landscaping

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

In addition to the requirements outlined in **Table 5**, a landscaped area with a minimum width of 15 feet shall be provided between common parking areas and any adjacent residential structure.

<b>Table 5 - Residential Development Internal Landscaping</b>		
	Required Plantings	Placement
Single Family Attached Mobile Homes	1 Shade Tree <sup>1</sup> per unit	<ul style="list-style-type: none"> <li>• residential lots</li> <li>• open space</li> <li>• other on-site locations meeting the intent of regulations</li> </ul>
Apartments (1-4 stories)	1 Shade Tree <sup>1</sup> per 3 units	<ul style="list-style-type: none"> <li>• open space</li> <li>• other on-site locations meeting the intent of regulations</li> </ul>
Apartments (5+ stories)	1 Shade Tree <sup>1,2</sup> per 160 SF open space <sup>3</sup> , and 10 Shrubs <sup>2,4</sup> per 3 required Shade Trees	<ul style="list-style-type: none"> <li>• open space</li> <li>• other on-site locations meeting the intent of regulations</li> </ul>
<sup>1</sup> Small deciduous or evergreen trees may be substituted for shade trees at a 2:1 ratio, up to a maximum of 50% of the required shade trees. <sup>2</sup> Shall be native species <sup>3</sup> Required open space, including recreation open space <sup>4</sup> Grouped in beds to allow HOA to implement future Bee City Plantings if desired		

Landscape planting requirements shall be shown on the Site Development Plan. Landscape Plans shall include Schedule C (see **Appendix B**).

See **Appendix A Figure 8**.

## h. Open space, amenity open space, recreation

For residential and mixed use developments, the open space required by Section 16.121(a)(2) of the Subdivision and Land Development Regulations shall be amenity open space, not just aggregation of left over spaces. Amenity open space may include such things as playground areas, play lots, community green common areas, community gardens, areas with trails, or other pervious areas designated for recreation.

## i. Native Plants & Biodiversity

The purpose of the following requirements is to increase the use of native plants and to support botanical biodiversity in Howard County. Native plants and plant biodiversity are important factors in supporting a wide range of animal species and influencing vital ecosystem functions like biomass production and soil health.

Native plants are well-adapted to the local environment, which makes them crucial for maintaining biodiversity and supporting the health of the ecosystem. Prioritizing native plants can help with things like:

- **Supporting Wildlife:** Native plants provide food and shelter for local wildlife, such as pollinators (bees, butterflies) and other animals.
- **Soil Health:** Native plants help maintain soil structure and prevent erosion. Their root systems can improve water retention and nutrient cycling in the soil.
- **Invasive Species Control:** Encouraging the growth of native plants can help reduce the spread of invasive species that often disrupt local ecosystems.
- **Climate Resilience:** Native plants are better suited to handle local climate conditions, making them more resilient during changes like droughts or heavy rainfall.

### **Native plant species are required for the following site conditions:**

- Open Space / Amenity Open Space
- Ground-Mount Solar Collectors
- Stormwater Management Facilities
- Internal Residential Development
- Perimeter Landscape Edges

Refer to **Section IV.F** for guidance on determining acceptable native species.

Refer to **Sections IV.D** and **IV.E** for strictly prohibited invasive species and non-native species that are not suitable for certain conditions.

i. Percentage of plant palette required to be native

Requirements are as follows:

<b>Table 6a – Minimum percentage of the total number of plant species proposed that must be native plant species</b>		
	Quantity of different plant species in project's plant palette	
	10 or fewer	More than 10
Open Space / Amenity Open Space	80%	60%
Ground-Mount Solar Collectors	80%	60%
Stormwater Management Facilities	80%	80%
Internal Residential Development	50%	50%
Perimeter Landscape Edges	50%	50%

**OR**

<b>Table 6b – Minimum percentage of plants required to be native species</b>	
Plant Type	Percentage Native
Shade Trees	80%
Small Deciduous Trees	70%
Evergreen Trees	40%
Shrubs	60%
Herbaceous Perennials/Grasses	60%

## ii. Species diversity requirements

By providing a greater number of unique species in a project's proposed plant palette, this requirement is intended to support plant biodiversity and help reduce the negative impacts of monocultures.

These requirements are not intended to discourage appropriate design decisions (i.e. plant massing, cohesive plant palettes, repetitions, etc.)

Requirements for all land use / development types:

<b>Table 7 - Species diversity - Trees</b>	
Number/Qty of Plants per Plant Type - Trees	Maximum Percentage of one species
1-10	100%
11-30	50%
31-60	40%
61-101	25%
101-200	18%
200+	15%

<b>Table 8 - Species diversity - Shrubs</b>	
Number/Qty of Plants per Plant Type - Shrubs	Maximum Percentage of one species
1-10	100%
11-50	50%
51-100	30%
100-250	15%
250+	10%

## iii. Alternative Proposals

DPZ recognizes that there may be some projects for which strict adherence to these requirements may not be feasible or practical. The plan preparer may propose an alternative method of compliance that will be reviewed by DPZ on a project-by-project basis.

## j. Ground-Mount Solar Collectors (*DPZ input needed*)

### i. Commercial Facilities (RR and RC zones)

*[Conditional Use criteria calls out a Type D Buffer, recommend adding understory to create plant community that ultimately will be low maintenance and provide pollinator/wildlife habitat]*

*(SB0931E was approved by the Governor May 20, 2025 and it will take effect July 1, 2025)*

*Per the recent State Bill SB0931E, the landscape buffers around these facilities must “include multilayered, staggered rows of overstory and understory trees and shrubs that: 1) are a mixture of evergreen and deciduous vegetation, 2) are predominantly native to the region, 3) are more than 4ft in height at planting, 4) are designed to provide screening or buffering within 5 years of planting, ...”*

(a) Native Plants & Biodiversity requirement

(b) Meadow Planting Requirement

### ii. Solar Canopies over Parking

(a) Option A

Smaller Shrubs/groundcovers to be planted at a min. of \_\_\_\_ ft. apart from solar canopies

(i) *Native Plants & Biodiversity requirement*

(b) Option B

Tree planting requirements do not apply where a solar canopy is proposed within 10 feet of a perimeter landscape edge or a street frontage with street trees.

## k. Stormwater Management (SWM) Facilities

### i. SWM Ponds and Extended Detention

Landscape requirements for stormwater management (SWM) facilities apply to new or expanded SWM ponds and extended detention facilities. These requirements apply to all zoning districts with some exceptions for parcels zoned M-1 and M-2, as described below.

For SWM facilities that have an internal location within the development:

- A Type B landscape edge shall be provided between the SWM area and any adjacent structure or lot.
- Perimeter length is calculated along the lot or easement boundary.

For SWM facilities adjacent to roadways or perimeter properties:

- A Type B landscape edge shall be provided, unless a Type C buffer is required in **Tables 2 or 3**.

See **Appendix A Figure 9** for illustrations / examples.

(a) M-1 and M-2 zoning districts

SWM areas not adjacent to residential zoning or a public road are exempt from these requirements.



For SWM areas adjacent to a public road, the required buffer should be calculated based on the entire pond perimeter, rather than just the portion directly adjacent to the road.

Alternative methods of meeting the regulations may be proposed and approved.

ii. Allowed plant type substitutions

Required	Substitution
1 Shade tree	For up to 50% of required shade trees: 2 Small deciduous trees, or 2 Evergreen trees
1 Shade tree	For up to 25% of required shade trees: 10 Shrubs

Existing trees to remain, except for invasive species, or perimeter planting provided to meet other landscape requirements may be credited towards fulfilling up to 100% of the requirement for SWM facilities. Existing trees must meet the requirements outlined in **Section B.b.ii(a)**.

iii. Location Requirements for SWM Landscape Edge Plantings

Plantings within the landscape edge may not encroach on maintenance access to the facility as required by the Department of Public Works.

Planting will not be allowed on any SWM facility dam/berm or in any other location that could threaten the structural integrity of the facility. Refer to Maryland Department of the Environment Stormwater Design Manual Appendix A.1 for more information.

These restrictions do not supersede perimeter landscaping requirements. Stormwater management facilities must be located to avoid conflict with perimeter landscape edge plantings. If this conflict cannot be avoided, the required stormwater management perimeter planting shall be relocated elsewhere on site as approved by the Department of Planning and Zoning.

iv. Plantings within a SWM facility

Planting within SWM facility basin is also recommended, provided it does not conflict with County and/or State SWM design requirements. Properly done, such planting can reduce maintenance, enhance wildlife habitat values, encourage the creation of wetland environments and improve the appearance of such facilities. The County's Stormwater Management Committee suggests the following:

- Dams and spillway planting should be limited to grass, crown vetch or similar materials;
- Bottoms should be planted with emergent wetland vegetation if sufficient hydrology is expected (unless specifically approved by all relevant agencies, such planting will not be credited towards wetland mitigation);
- The sides should be planted with crown vetch or similar groundcover if slopes are too steep to mow; and

- Upper slopes should be planted with shrubs, groundcover and/or perennials as long as access is maintained and leaves will not clog outfall pipes.

While such planting is not required, it should be considered. Planting of basins, if authorized by the Department of Planning and Zoning and the Department of Public Works, may be approved to meet the obligations for stormwater management area landscaping.

#### v. Native Plants and Biodiversity

Plantings around SWM areas shall be native vegetation. Plants that are associated with stream, pond or wetland habitat provide an attractive character for such facilities but should be used only if suited to site conditions.

#### vi. Guidelines for ESD Facilities?

### I. Historic Structures and Areas

For developments adjacent to or adjoining historic properties:

- A Type D landscape edge may be required.
  - Evergreen trees create solid buffers between proposed developments and adjoining existing historic properties. Layout of required planting should respond to the site's and adjoining property's historic context, and designers should consider whether a staggered or naturalistic design or a formal hedge is more appropriate.
- Supplemental planting may be required, particularly when there are modifications to the historic environmental setting. Preservation of existing specimen trees, hedge rows, woods, and terrain contribute to the setting of a historic property.

## IV. Plant Selections

Plant material selected should be appropriate to the specific environmental conditions created and/or existing on project sites, including site specific microclimates, and should survive environmental stresses of their proposed location. Additionally, plant materials may be selected to provide screening of potentially objectionable views (e.g. from residential properties), to provide barriers to potentially undesirable relationships (e.g. to pedestrian circulation), or used to enhance an amenity feature. In the first case, evergreen trees may be preferred; in the second case, dense shrubbery might be provided; in the latter case, plants with ornamental characteristics would be preferred.

### A. Street 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 have relatively low susceptibility to pests and disease.
- Shade trees are preferred as street trees.
- Small deciduous trees are desirable as they provide variety in the streetscape. However, small deciduous trees are not permitted in situations where they inhibit sight distance, conflict with pedestrian circulation or create maintenance problems.
- Street trees shall be selected and located to minimize conflict between tree canopy/limbs and tall trucks and buses.
- Small deciduous 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 8 feet or greater; or
    - the tree may be pruned to 8 foot 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 20 feet from the nose of the median island and will not interfere with travel lanes when mature.
- Small deciduous 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 a blight.
- Street trees should be selected so that the County's roadway network exhibits a variety of species with differing colors, textures and forms.

## B. Recommended Street Trees

The Recommended Street Trees list is not comprehensive and is not intended to limit proposed street trees to the species on this list. Other plant species or cultivars may be considered for street tree planting upon a request for approval from the Department of Planning and Zoning (DPZ) and the Department of Public Works (DPW).

Refer to [Section III.B.c.vi](#) for street tree spacing requirements and guidance and for locating street trees beneath overhead wires.

[Recommended Street Tree List](#) (*link to website*)

## C. Recommended Plants

The Recommended Plants list is not comprehensive and is not intended to limit landscape architects or other approved design professionals from choosing plant material not included in this lists. The recommendations are provided for guidance only. Professionals are encouraged to create the best designs for each unique project that meet the intent of the landscape regulations.

[Recommended Plants List](#) (*link to website*)

## D. Prohibited & Limited Plants

Invasive species per [Section V.E](#) of the Landscape Manual are prohibited. For convenience, the Prohibited and Limited Plants list highlights several exotic invasive trees and shrubs that have been historically used and/or are commonly found in the landscape.

Additionally the Prohibited and Limited Plants list includes plants that are prohibited or strictly limited for planting use because of their associated problems with disease, pests, undesirable characteristics, maintenance issues and liability concerns.

These lists are not comprehensive and are subject to change.

[Prohibited & Limited Plants List](#) (*link to website*)

## E. Invasive Species

Invasive species are prohibited and shall not be used on development projects. Any existing tree proposed to meet Landscape Manual requirements shall not be an invasive species.

Additionally, existing vegetated areas to be retained that contain invasive species should conform to the requirements of the Landscape Manual. Invasive species found on site should be removed to allow for long-term health of the landscape, and in some cases, eradication may be required.

The planting schedule on the landscape plan shall not include species identified in “Invasive Species of Concern in Maryland” by the Maryland Invasive Species Council (as updated periodically).

<https://mdinvasives.org/species-of-concern/>

Additional information for invasive species in the Mid-Atlantic can be found below (all updated periodically):

Mid-Atlantic invaders Tool (MAIT) website

<https://www.invasive.org/MidAtlantic/plants.cfm>

University of Maryland Extension’s invasive species webpage

<https://extension.umd.edu/resource/invasive-plants-avoid-buying-your-yard-and-garden-maryland/>

Plant Invaders of Mid-Atlantic Natural Areas Field Guide

<https://dnr.maryland.gov/wildlife/Documents/midatlantic.pdf>

<https://www.invasive.org/midatlantic/fieldguide/>

## F. Native Plants

For the purpose of the Landscape Manual, native plants are generally defined as:

**plant species that occur naturally in their ecoregion and habitat where, over the course of evolutionary time they have adapted to physical conditions and co-evolved with the other species in the system.**

Ecoregions are identified by the US EPA Level IV & III Ecoregions, maps for which can be viewed and downloaded here: <https://www.epa.gov/eco-research/level-iii-and-iv-ecoregions-state>

While straight species of native plants is preferred, to meet the requirements for native plant species per **Section III.B.i**, cultivars of natives as defined above may also be used. However, recommendations for choosing cultivars are as follows:

- **Prioritize straight species:** It is recommended to use straight species of native plants, especially those sourced locally, and it is highly recommended to do so for ecological restoration projects.
- **Choose wisely:** If using cultivars, select those that are as close to the original native species as possible in terms of traits that affect wildlife (e.g., flower color, bloom time).
- **Balance species and cultivars:** When using cultivars in designed landscapes, include a mix of both cultivars and straight species to provide a range of benefits for wildlife.

- Research specific cultivars: Before planting, research the specific cultivar to understand its potential impact on wildlife and the environment.
- Consider local ecotypes: If possible, prioritize plants from local ecotypes (geographic origins) as they are likely to be best adapted to the local environment.
- Encourage nurseries to stock straight species: Support nurseries that offer straight species of native plants to promote biodiversity and genetic diversity

The following are resources for and lists of native plants that generally meet the definition above:

[Native Plants for Wildlife Habitat and Conservation Landscaping, Chesapeake Bay Watershed, by U.S. Fish & Wildlife Service](#)

[Maryland Plant Atlas](#)

## G. Plant Communities

*[Require around commercial ground mounted solar in addition to the Type D required under the Conditional Use criteria]*

## H. 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 has 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 C.

When equal substitutions are made, no prior approval is needed from the Department of Planning and Zoning; 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 Planning and Zoning. In such a case, the Department may require the landscape plan to be revised utilizing the "red-line revision process".

## V. Glossary

*[Likely still missing terms]*

(May need to make a clear distinction between “Internal Road”, “Private Roadway” and “Driveway”)

\*Defined In Code

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

**Biodiversity** – the variety and variability of plant life within a specific region, encompassing the different species of plants, their genetic diversity, and the ecosystems they inhabit. Plant biodiversity is crucial for a healthy ecosystem. Diverse plant communities support a wide range of animal species, provide essential resources like food and medicine, and contribute to ecosystem stability.

**Buffer Zone** – (complete streets term)

**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 (see “Screen”).

**Caliper** – tree diameter measured above the root collar in accordance with ANSI Z60.2 *American Standard for Nursery Stock*, latest edition.

**Deciduous** – a plant with foliage that is shed annually.

**Department** – the Howard County Department of Planning and Zoning.

**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 non-agricultural activity that results in a change in existing site conditions.

\***Driveway** – see Subdivision and Land Development Regulations Sec. 16.108(b)(18.1)

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

**Forest** – see Planning, Zoning and Subdivisions and Land Development Regulations Subtitle 12 Forest Conservation Sec. 16.1201(g)

**Forest Conservation** – see Planning, Zoning and Subdivisions and Land Development Regulations Subtitle 12 Forest Conservation Sec. 16.1201(h)

**Forest Conservation Plan** – see Planning, Zoning and Subdivisions and Land Development Regulations Subtitle 12 Forest Conservation Sec. 16.1201(j)

**Internal lots to the same development** – Existing lots internal to a recorded subdivision that received Howard County approval as defined in Section 16.108(b)(44)(i)&(ii) of the Subdivision and Land Development Regulations which have not been reconfigured or resubdivided and where the number of dwelling units has not increased.

Internal Road -

**Invasive Species** – a non-native species widely recognized to degrade natural ecosystems or negatively affect native species; a non-native species known to have significant economic impacts on agricultural ecosystems, public infrastructure or natural resources, including impact on recreational activities, or have or can have deleterious effects on human health. Invasive species cause harm by outcompeting native species, reducing food sources for native animals, changing nutrient cycling, and causing environmental changes which can lead to a loss in diversity, erosion, degraded soils and reduced water quality in lakes and rivers.

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

**Native Species (Native Plant)** – plant species that occurs naturally in its ecoregion and habitat where, over the course of evolutionary time it has adapted to physical conditions and co-evolved with the other species in the system. Ecoregions as identified by the US EPA Level IV & III Ecoregions.

**Non-native Species (Non-native Plant)** – (also called non-indigenous, alien, or exotic) a plant that was introduced, accidentally or purposefully, into an ecosystem through human activities and did not evolve in or migrate to a specific area. Non-native species can come from other continents, other countries and other parts of the United States.

**\*Open Space** – a separate lot or area which provides for protection of the environment, for recreation or for public use, including public facilities such as schools, libraries, fire stations and parks as shown on the general plan or hiking, biking, and equestrian trails. (16.108(b)(33))

Open Space, Amenity

Open Space Access Point

Parking Canopy

Parking Lot

**Perimeter Landscape Edge** – the area around the perimeter of a development reserved for buffer or screen plantings that is 20 feet wide unless a lesser zoning setback is allowed.

**Plant community** – an assemblage of plants that co-exist in a similar environment. Different communities are defined by their structure, form, and species composition. Plant communities are both spatially and temporally dynamic.

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

**\*Scenic Road** – see Planning, Zoning and Subdivisions and Land Development Regulations Subtitle 14 Scenic Roads (Sec. 16.1402)

**Screen** – ~~the use of landscape materials~~ a type of buffer used to substantially shield a structure or use from view.

**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.



**\*Sidewalk** – see Subdivision and Land Development Regulations Sec.16.108(b)(50)

**Sight Triangle -**

**\*Solar Collector Facility, Commercial Ground-Mount** – see Howard County Zoning Regulations Sec. 103.0

**\*Solar Collector, Accessory Ground-Mount** – see Howard County Zoning Regulations Sec. 103.0

**Specimen Tree** – a tree with a diameter at breast height (dbh) of 30 in. (75 cm) or more, or a tree having 75% or more of the diameter of the current state champion for that species. This includes champion trees, which are the largest trees of their species within the United States, the state, county, or municipality as determined by the Maryland Department of Natural Resources.

**Street Tree** – a shade tree planted within a public right-of-way or within a street tree maintenance easement adjacent to a roadway with the intent to provide shade over the street or sidewalk and to give the street a sense of spatial definition. The minimum caliper of a street tree at time of planting shall be 2½ inches, in accordance with ANSI Z60.2 *American Standard for Nursery Stock*, latest edition.

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

**Tree, Evergreen** – an evergreen plant with a mature height typically exceeding 15 feet. Minimum height at planting shall be 6 feet, in accordance with ANSI Z60.2 *American Standard for Nursery Stock*, latest edition.

**Tree, Multi-stem/Multi-trunk** – tree with multiple stems (trunks) as described in the ANSI Z60.2 *American Standard for Nursery Stock*, latest edition.

**Tree, Shade** – a deciduous (or rarely, an evergreen) tree planted primarily for its high crown of foliage or overhead canopy with a mature height of 30 feet or greater. The minimum caliper at time of planting shall be 2½ inches, and the minimum height for multi-stem/multi-trunk trees shall be 12 feet, both in accordance with ANSI Z60.2 *American Standard for Nursery Stock*, latest edition.

**Tree, Small Deciduous** – a deciduous tree planted primarily for its ornamental value (typically flowers), or for screening, and generally does not exceed a height of 30 feet at maturity. The minimum caliper for single stem trees at the time of planting shall be 1½ inches, and the minimum height for multi-stem/multi-trunk trees shall be 8 feet, both in accordance with ANSI Z60.2 *American Standard for Nursery Stock*, latest edition. A multi-stem small tree must reach a mature height of 15 feet minimum.

## VI. Appendices

### A. Diagrams

Figure 1: Landscape Edge Examples

Figure 2: Residential Perimeter Example

Figure 3. Non-residential Perimeter Example

Figure 4: Typical Street Tree Layout vs. Informal Clustering

Figure 5: Street Tree Location Criteria

Figure 6: Residential Parking Example

Figure 7: Non-residential Parking Example

Figure 8. Residential Internal Example

Figure 9: Stormwater Management Buffer

## B. Schedules (Required / Proposed Landscape Elements)

Schedule A: Perimeter

Schedule B: Street Trees

Schedule C: Parking

Schedule D: Loading & Service Areas

Schedule E: Internal (Residential Development) Landscaping

Schedule F: Open Space / Amenity Open Space

Schedule G: Native Plants & Biodiversity

Schedule H1: Ground-mount Solar Collectors

Schedule H2: Solar Canopies

Schedule I: Stormwater Management Buffer

## C. Requirements for Landscape Plan to Accompany Final Plan or Site Development Plan

The submittal package must include the following information:

- Existing base information required for the final plan or site development 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 6 inches 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 schedule that includes botanical and common name, quantity, spacing and size at time of planting of all proposed plant materials and other landscaping
- Location and description of other landscape improvements, such as earth berms, walls, fences, screens, street furniture, lights and courts or paved areas
- Plant installation details, root barrier details, soil preparation information
- Schedules showing required and proposed quantities of landscape elements. Schedules A, B, C and D are based on the landscape types and planting requirements described in **Section III.B**
- Certification and signature of the owner and signature of the plan preparer

## D. Owner's Certification Block

## E. Landscape Plan Preparer Professional Statement

## F. Landscape Installation Guidelines/Details

*[Landscape Architect should have their own or may use these]*

- a. Planting and staking details
- b. Root barrier details and specifications
- c. Soil prep details and specifications

## G.Maintenance Guidelines

*[LA should have their own specific to plan, but should include first two year watering regime, when to remove stakes, pruning to intent, etc.]*