

2015 Annual Report – Montgomery County Tree Canopy Law

This report is prepared pursuant to Section 55-9 of the Montgomery County Code, which requires the Departments of Permitting Services (DPS) and Environmental Protection (DEP) to jointly submit an annual report on the “County shade tree planting program” established by the Montgomery County Tree Canopy Law.

Background

The *Tree Canopy Law* was passed in July, 2013, and took effect in March, 2014. This law generally applies to any development or redevelopment activity subject to a sediment control permit from Montgomery County that is not subject to mitigation under the Forest Conservation Law. Activities regulated by the Tree Canopy Law are required to plant shade trees on the site where the disturbance occurs. If the required shade trees are not planted for any reason, fees are paid to the County. The fees are deposited into a dedicated fund and can only be used to plant and establish shade trees.

Development of Regulations

Following passage of the Tree Canopy Law, DEP and DPS worked together to draft Executive Regulation 22-13 to address the requirements of the law. The draft Regulation was advertised in the December 2013 County Register and was submitted to the County Council for approval on February 25, 2014. The T&E Committee recommended full council approval on March 10, 2014 and the regulation was approved on March 18, 2014.

Implementation of the Law

The Tree Canopy Law applies to sediment control permit applications submitted on or after March 1, 2014, and the number of trees required is based upon the proposed area of disturbance associated with the development project. To prepare for implementation, DPS created or modified relevant documents pertinent to compliance with the new requirements and placed those on the DPS web site by early February 2014. These include a Tree Planting Area Guideline (Attachment 1), Standard Tree Canopy Notes (Attachment 2), a Tree Canopy Requirements Table (Attachment 3), an Approved Shade Tree List (Attachment 4), and a revised Sediment Control Plan Review Checklist (Attachment 5). In addition, DPS began to send written notice to the development community to make them aware of the pending new requirements and to direct them to the information on the web site.

DPS also trained review staff to prepare them for the new review elements, and modified the Hansen permitting system to add a provision for tracking the numbers of trees proposed for planting and the amount of fees paid in lieu for each permit application, or to note that an application is exempt per the requirements of the law. This information is entered into the system for each sediment control permit application as of the date of implementation of the law.

Since March 1, 2014 DPS has received over 500 applications for sediment control permits. This has resulted (as of January 31, 2015) in a total payment in lieu of planting of \$268,500, and a proposal for 135 developer planted trees. Since planting of trees usually occurs at the end of the permit activity in the field, and since the law has been in place for only one year, few of the proposed trees have been planted thus far. Proposed tree plantings are shown on the approved sediment control plans and planting of required trees is overseen by the sediment control inspection staff as part of their permit administration in the field. Proposed tree plantings must be completed prior to closure of a sediment control permit. DPS has developed a Tree Planting Detail to give field direction for the planting of trees (Attachment 6).

Since implementation of the law, plan compliance has been good and the review procedures are going very well.

Planting Programs

The passage of the Tree Canopy Law and County Bill 6-14 gave rise to a new era for trees in Montgomery County. As required by these two laws, the Department of Environmental Protection (DEP) is developing comprehensive programs to plant shade trees and raise the general awareness of the benefits they provide. To date, DEP's efforts have focused on laying the groundwork for comprehensive tree planting programs. The first tree plantings are anticipated to occur in spring 2015, with full implementation of the planting programs in fall 2015.

In order to develop robust shade tree planting programs, DEP evaluated past and current planting programs within the County and around the region. Additionally, DEP requested input from the Forest Conservation Advisory Committee. The Committee provided recommendations and hosted a panel discussion with representatives from planting programs in nearby jurisdictions. Based on the information gathered, DEP is pursuing the development of three initial planting programs:

- a "backyard" program focused on planting one or a few trees on single-family properties;
- a multi-family program focused on planting multiple trees on multi-family properties; and
- a parking lot program directed to commercial and multi-family properties with available open planting spaces in parking lots.

DEP will purchase, install, and, in some cases, provide up to two years of aftercare to establish shade trees at no cost to the property owners. As the Tree Canopy Law requires, these plantings will be concentrated in areas where development activity is occurring and where the existing canopy is low. These programs will be carefully monitored to assure program objectives are being met, for any improvements that may be warranted, and if the programs can be expanded or new programs added.

Education and Outreach

An outreach and education campaign is essential to successful planting programs, as well as the overall goal of increasing awareness of trees. In conjunction with a communications consultant, DEP is developing a multi-faceted education and outreach campaign, including outreach materials and a website. This campaign, newly named *Tree Montgomery*, focuses on raising awareness of trees and their benefits, improving the long-term care of trees, and implementing the new shade tree planting programs. The website for *Tree Montgomery* is designed to fully support both the awareness campaign and the planting programs; and will include on-line applications for individuals and entities interested in shade tree plantings.

Once the steps necessary to launch planting programs are completed, DEP will collaborate with a wide variety of partners to advertise the program and encourage property owners to sign-up for tree plantings. To assist in this communication, outreach materials in a variety of formats are being developed. DEP will work with community groups, homeowners' associations, environmental organizations, businesses, and others to spread the word about the planting programs.

Developing Database & Mapping Tools

Another critical piece of a tree planting and awareness campaign is developing and maintaining a database and mapping tools to track requests for shade trees; coordinate the activities of the tree planting contractor; map the locations of planted trees; and collect and manage other data to support the tree planting programs. Additionally, DEP will incorporate information about trees planted by owners and developers subject to the Tree Canopy Law. Much of this data will be incorporated in the website allowing anyone who is interested to follow the progress of the campaign and the number of trees planted as a result of the Tree Canopy Law. In the next annual report, DEP will use this data to measure progress on the implementation of planting programs specified under the Tree Canopy Law, as well as the requirements of County Bill 6-14.

Funding

Funding for DEP's efforts towards the *Tree Montgomery* campaign comes from the following sources:

1. Operating Costs – There are two sources of operating funds to support tree programs:
 - a. Under the Tree Canopy Law, regulated entities are required to plant shade trees or pay into the Tree Canopy Conservation Account. Funds in this account can only be used to “plant and maintain shade trees, including costs directly related to site identification, preparation, and other activities that increase tree canopy,” and they must not revert to the General Fund. The fund will fluctuate annually depending on the number of sediment control permits approved and the amount of land disturbed under each permit.

- b. Operating funds were added to DEP's budget as part of the approval of Bill 6-14 for technical and website services, outreach, and other program related costs. The FY15 operating budget included \$66,700. These funds are being used to develop the *Tree Montgomery* campaign, including the development of the program website.
2. Personnel Costs – In FY 15, funds were added to DEP's budget as part of the approval of Bill 6-14 to add a Grade 23 Program Manager I to support tree programs.

Additional Activities Supporting Planting Programs

DEP engaged in other activities, in conjunction with a number of County Departments, critical to launching successful planting programs. These included:

- Procurement of a contractor to purchase, install, and care for newly planted trees.
- Recruitment of the additional staff member authorized under Bill 6-14 for tree programs.
- Development of legal documents necessary to allow tree planting and aftercare activities performed by the County on private property.
- Establishment of the Tree Canopy Conservation Account as part of the DEP budget, along with procedures for spending deposited funds.

Attachment 1

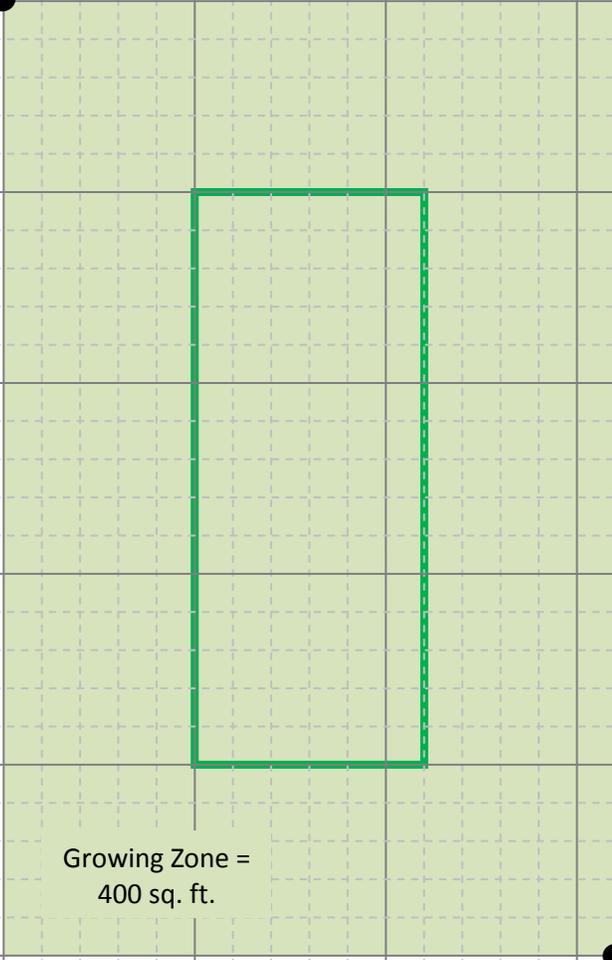
Tree Planting Area Guideline

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Acceptable Growing Zone Configuration

- ☑ The growing zone is greater than 400 square feet.
- ☑ No two points on boundary of the growing zone are further than 30 feet apart.
- ☑ A tree can be planted at least five feet from any boundary of the growing zone.
- ☑ A straight line can be drawn between the stem of a planted tree and any point on the boundary of the growing zone without going outside the growing zone.

A



Tree planted within the dark green border is at least 5 feet from the boundary of the growing zone and a straight line can be drawn from the stem of the tree to any point on the boundary of the growing zone without going outside the growing zone.

Growing Zone =
400 sq. ft.

B

Distance between
Point A and Point B is
less than 30 feet.

Unacceptable Growing Zone Configuration

- The growing zone is greater than 400 square feet.
- No two points on boundary of the growing zone are further than 30 feet apart.
- A tree can be planted at least five feet from any boundary of the growing zone.
- A straight line can be drawn between the stem of a planted tree and any point on the boundary of the growing zone without going outside the growing zone.

A

Tree planted within the red border is at least 5 feet from the boundary of the growing zone and a straight line can be drawn from the stem of the tree to any point on the boundary of the growing zone without going outside the growing zone.

Distance between Point A and Point B is greater than 30 feet.

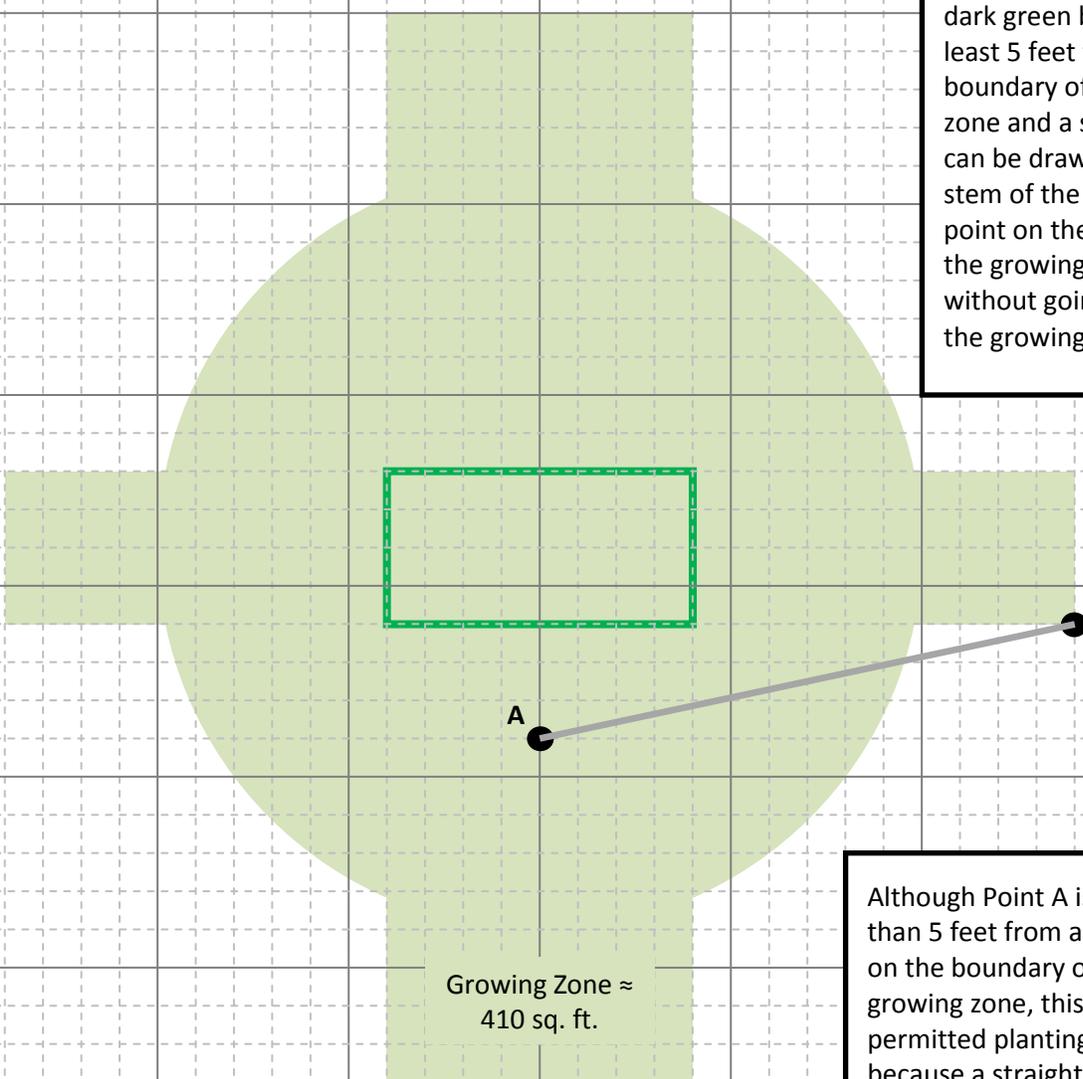
Growing Zone =
420 sq. ft.

B

Acceptable Growing Zone Configuration

- ☑ The growing zone is greater than 400 square feet.
- ☑ No two points on boundary of the growing zone are further than 30 feet apart.
- ☑ A tree can be planted at least five feet from any boundary of the growing zone.
- ☑ A straight line can be drawn between the stem of a planted tree and any point on the boundary of the growing zone without going outside the growing zone.

Tree planted within the dark green border is at least 5 feet from the boundary of the growing zone and a straight line can be drawn from the stem of the tree to any point on the boundary of the growing zone without going outside the growing zone.



Although Point A is more than 5 feet from any point on the boundary of the growing zone, this is not a permitted planting location because a straight line cannot be drawn between Point A and Point B without going outside the growing zone.

Acceptable Growing Zone Configuration

- The growing zone is greater than 400 square feet.
- No two points on boundary of the growing zone are further than 30 feet apart.
- A tree can be planted at least five feet from any boundary of the growing zone.
- A straight line can be drawn between the stem of a planted tree and any point on the boundary of the growing zone without going outside the growing zone.

Tree planted within the dark green border is at least 5 feet from the boundary of growing zone and a straight line can be drawn from the stem of the tree to any point on the boundary of the growing zone without going outside the growing zone.

Growing Zone =
400 sq. ft.

Although Point A is more than 5 feet from any point on the boundary of the growing zone, this is not a permitted planting location because a straight line cannot be drawn between Point A and Points B or C without going outside the growing zone.

Acceptable Growing Zone Configuration

- The growing zone is greater than 400 square feet.
- No two points on boundary of the growing zone are further than 30 feet apart.
- A tree can be planted at least five feet from any boundary of the growing zone.
- A straight line can be drawn between the stem of a planted tree and any point on the boundary of the growing zone without going outside the growing zone.

Tree planted within the dark green border is at least 5 feet from the boundary of growing zone and a straight line can be drawn from the stem of the tree to any point on the boundary of the growing zone without going outside the growing zone.

Growing Zone =
401 sq. ft.

Although Point A is more than 5 feet from any point on the boundary of the growing zone, this is not a permitted planting location because a straight line cannot be drawn between Point A and Point B without going outside the growing zone.

Acceptable Growing Zone Configuration

- ☑ The growing zone is greater than 400 square feet.
- ☑ No two points on boundary of the growing zone are further than 30 feet apart.
- ☑ A tree can be planted at least five feet from any boundary of the growing zone.
- ☑ A straight line can be drawn between the stem of a planted tree and any point on the boundary of the growing zone without going outside the growing zone.

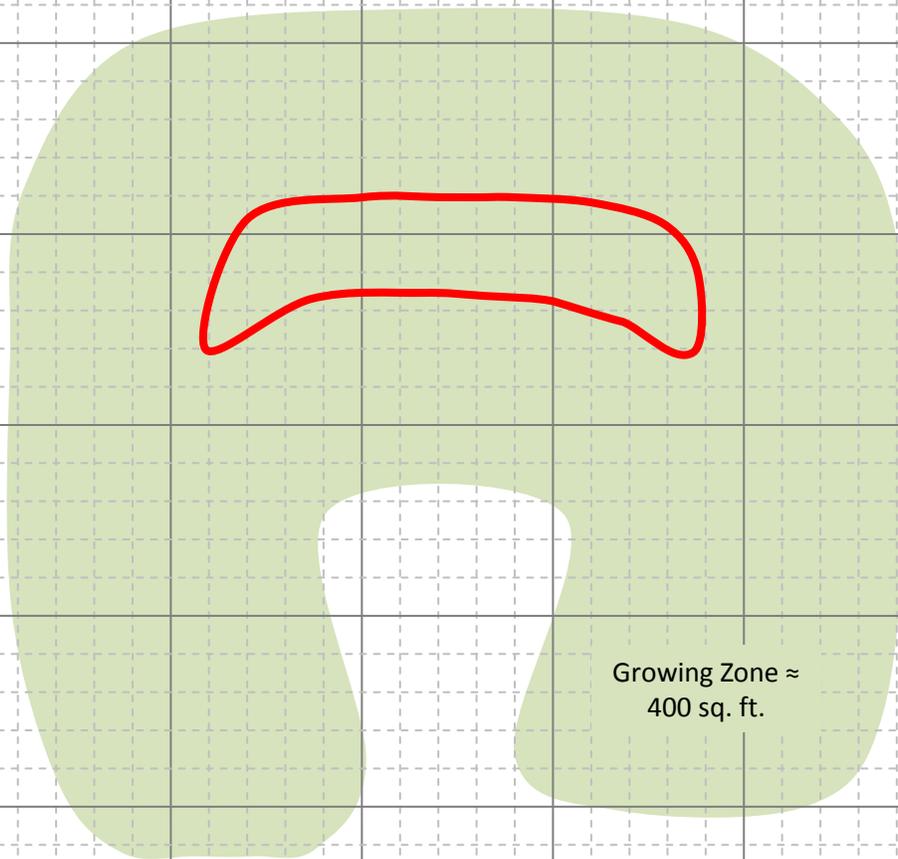
Tree planted within the dark green border is at least 5 feet from boundary of the growing zone and a straight line can be drawn from the stem of the tree to any point on the boundary of the growing zone without going outside the growing zone.

Growing Zone \approx
450 sq. ft.

Although Point A is more than 5 feet from any point on the boundary of the growing zone, this is not a permitted planting location because a straight line cannot be drawn between Point A and Point B without going outside the growing zone.

Unacceptable Growing Zone Configuration

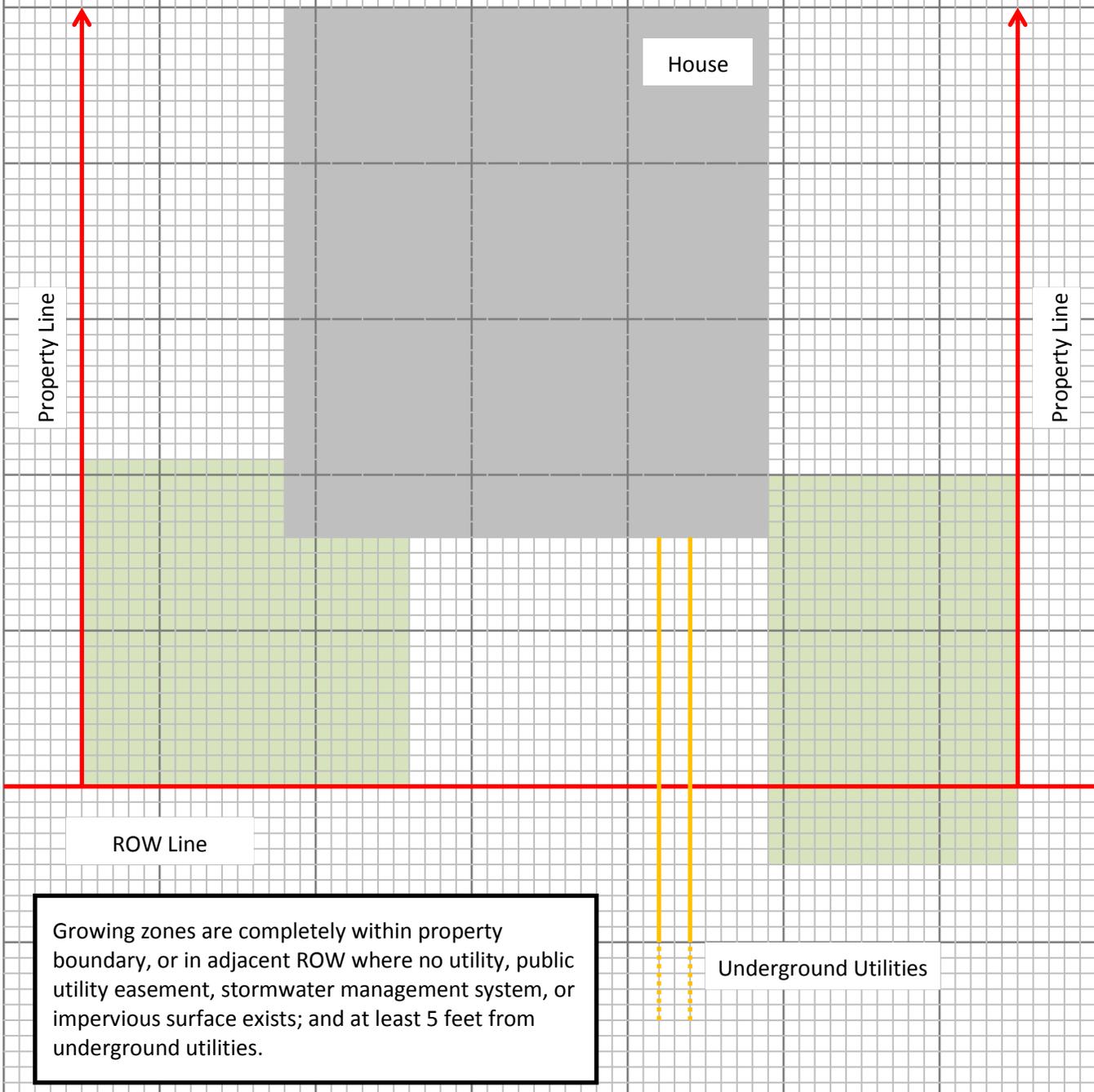
- ☑ Planting area is greater than 400 square feet.
- ☑ No two points on boundary of the growing zone are further than 30 feet apart.
- ☑ A tree can be planted at least five feet from any boundary of the growing zone.
- ☒ A straight line can be drawn between the stem of a planted tree and any point on the boundary of the growing zone without going outside the growing zone.



Although any point within the red border is more than 5 feet from any point on the boundary of the growing zone, there are no points in this area where a straight line can be drawn between the point and every point on the boundary of the growing zone without going outside the growing zone.

Acceptable Growing Zone Locations

- ☑ The entire growing zone must be completely within the boundary of the subject property; except open surface area on an adjacent ROW may be included if no utility, public utility easement, stormwater management system, or impervious surface is located in that part of the ROW.
- ☑ No part of the growing zone can be closer than 5 feet (measured horizontally) from any electric, gas, water, sewer, telephone, cable television, or other overhead or underground utility.
- ☑ No part of the growing zone can be closer than 5 feet (measured horizontally) from any stormwater management system.
- ☑ The growing zone must not include any area within a septic easement or a septic reserve.

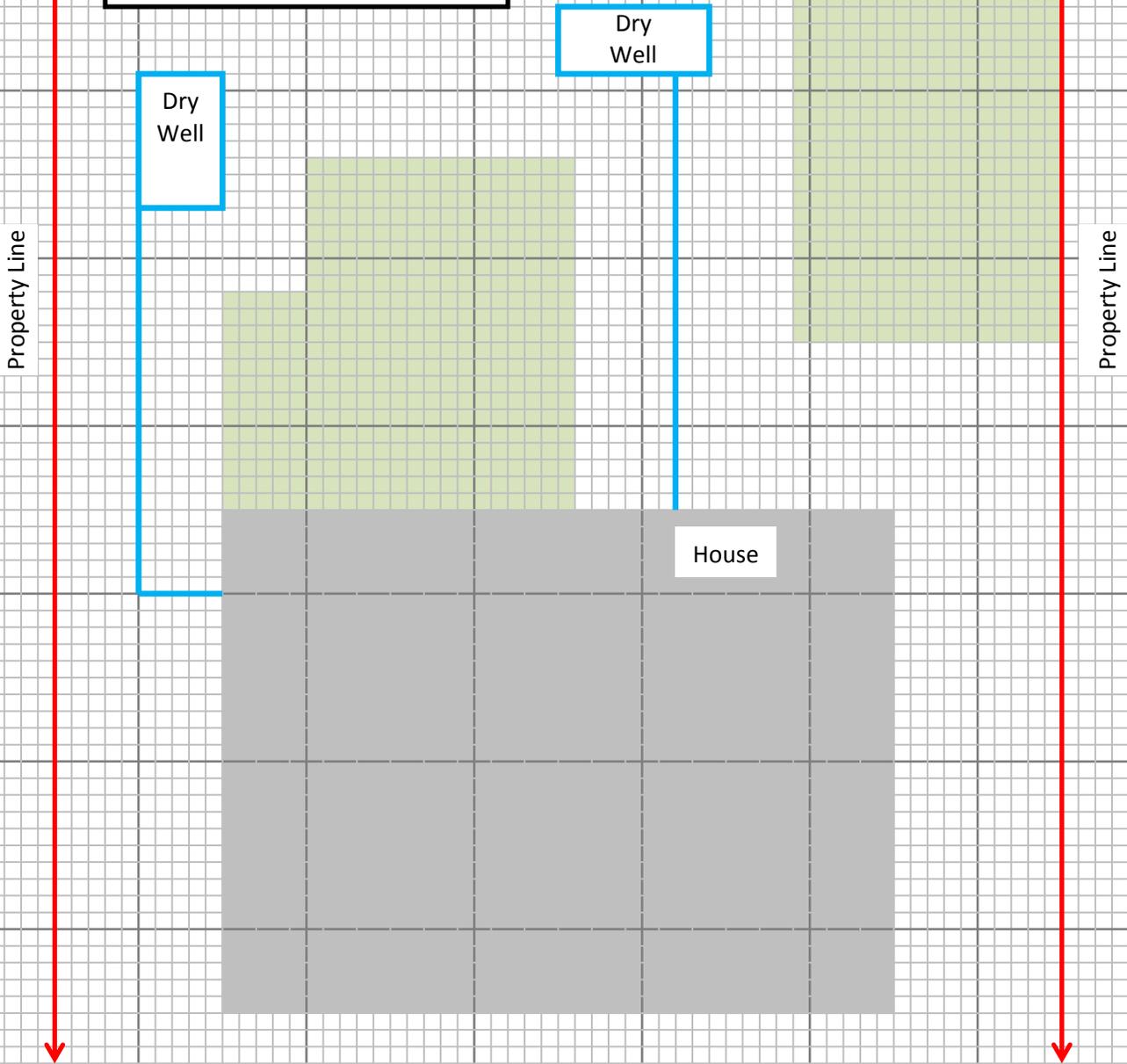


1 square = 1 foot

Acceptable Growing Zone Locations

- ☑ The entire growing zone must be completely within the boundary of the subject property; except open surface area on an adjacent ROW may be included if no utility, public utility easement, stormwater management system, or impervious surface is located in that part of the ROW.
- ☑ No part of the growing zone can be closer than 5 feet (measured horizontally) from any electric, gas, water, sewer, telephone, cable television, or other overhead or underground utility.
- ☑ No part of the growing zone can be closer than 5 feet (measured horizontally) from any stormwater management system.
- ☑ The growing zone must not include any area within a septic easement or a septic reserve.

Growing zones are at least 5 feet from stormwater management structures.



1 square = 1 foot

Acceptable Planting Areas

- ☑ A straight line can be drawn from the stem to any point on the growing zone boundary without going outside the growing zone.
- ☑ No closer than 5 feet from any point on the growing zone boundary.
- ☑ No closer than 10 feet from the foundation of any building.
- ☑ No closer than 15 feet (measured horizontally) from the closest point on the ground directly below an electric, telephone, cable television, or other overhead wire.

Dry Well

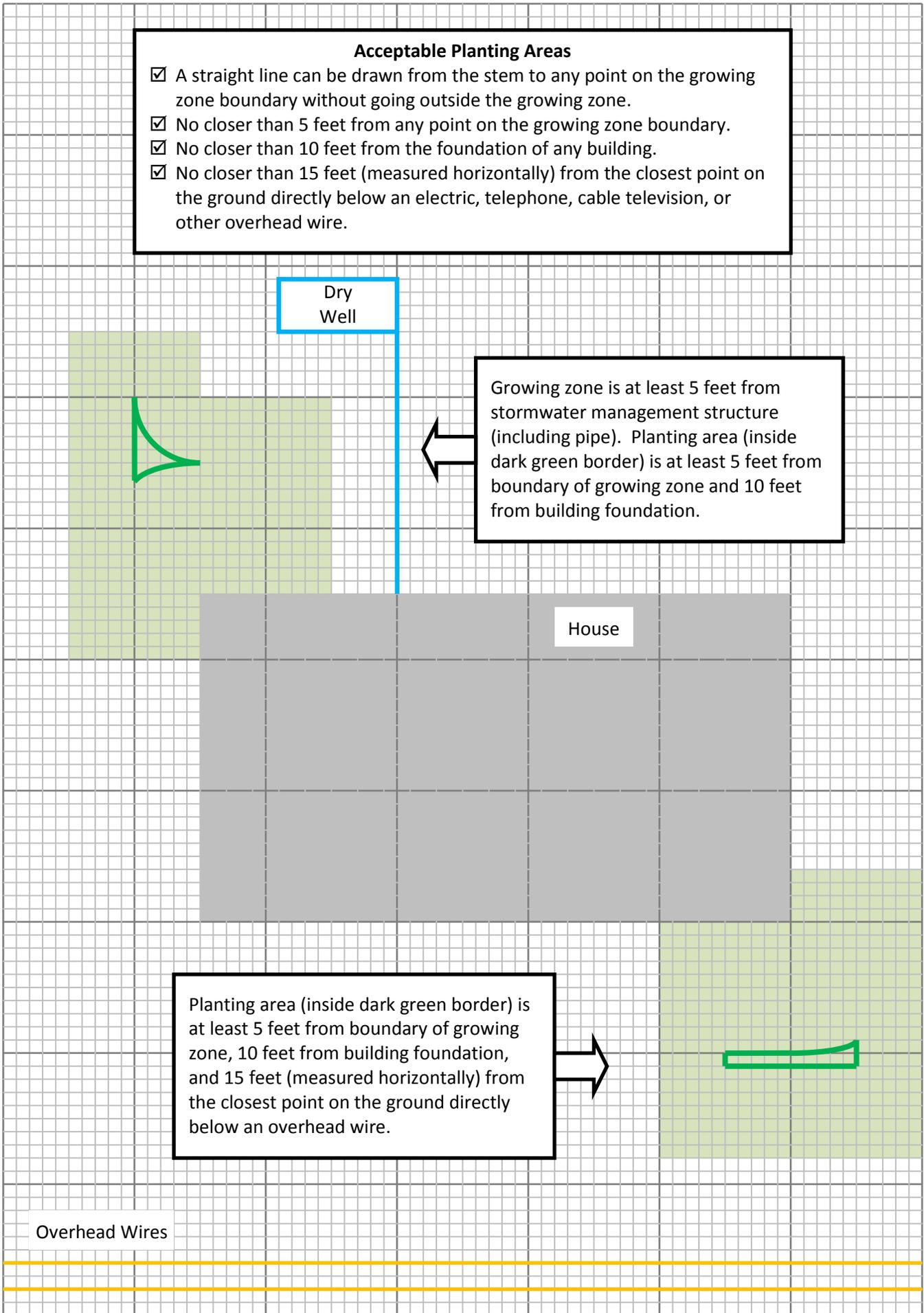
Growing zone is at least 5 feet from stormwater management structure (including pipe). Planting area (inside dark green border) is at least 5 feet from boundary of growing zone and 10 feet from building foundation.

House

Planting area (inside dark green border) is at least 5 feet from boundary of growing zone, 10 feet from building foundation, and 15 feet (measured horizontally) from the closest point on the ground directly below an overhead wire.

Overhead Wires

1 square = 1 foot



Attachment 2

Standard Tree Canopy Notes

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Standard Tree Canopy Notes

Any shade tree planted to comply with Chapter 55 of the County Code must conform to the following:

1. Each shade tree must meet the requirements for plant material in ANSI Z60.1;
2. Each shade tree must be a minimum of 2" caliper;
3. Installation of each shade tree must meet all requirements of ANSI A300;
4. At the time of planting:
 - a. Tree guards to protect trees from deer rubbing, mowers, weed eaters, other equipment and large rodents must be installed on all shade trees;
 - b. Mulch must be applied;
 - c. Sufficient water must be applied to aid in proper planting.
5. Shade trees must be installed between October 15th and May 15th as long as the ground is not frozen, saturated, or covered with snow such that a suitable hole cannot be dug;
6. Shade trees must not be installed between May 16th and October 14th of each year. If installation cannot occur between October 15th and May 15th for any reason, or if proposed trees are not planted for any other reason, the permittee must pay the required fee in lieu.
7. If shade trees are installed prior to final stabilization of the land disturbing activity then no additional disturbance must occur within five feet of the stem of the tree. Protective fencing must be installed at the edge of this area at the same time the tree is installed and must remain in place until final stabilization occurs.
8. The location of growing zones and planting areas must be clearly marked in the field prior to installation of any shade tree.
9. A copy of the approved sediment control plan showing all approved growing zones and planting areas must be available on the site at all times.
10. At least one inspection must occur after all construction activities are completed to determine the level of compliance with shade tree planting requirements.

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Attachment 3

Tree Canopy Requirements Table

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TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

Exempt: Yes No If exempt under Section 55-5 of the Code, please check the applicable exemption category below.

Total Property Area	Total Disturbed Area
_____ square feet	_____ square feet
Shade Trees Required	Shade Trees Proposed to be Planted
_____	_____
Fee in Lieu (Trees Required – Trees Planted) x \$250	\$ _____

Required Number of Shade Trees

Area (sq. ft.) of the Limits of Disturbance	Number of Shade Trees Required																	
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><u>FROM</u></td> <td style="text-align: center;"><u>TO</u></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">6,000</td> </tr> <tr> <td style="text-align: center;">6,001</td> <td style="text-align: center;">8,000</td> </tr> <tr> <td style="text-align: center;">8,001</td> <td style="text-align: center;">12,000</td> </tr> <tr> <td style="text-align: center;">12,001</td> <td style="text-align: center;">14,000</td> </tr> <tr> <td style="text-align: center;">14,001</td> <td style="text-align: center;">40,000</td> </tr> </table>	<u>FROM</u>	<u>TO</u>	1	6,000	6,001	8,000	8,001	12,000	12,001	14,000	14,001	40,000	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">9</td> </tr> <tr> <td style="text-align: center;">12</td> </tr> <tr> <td style="text-align: center;">15</td> </tr> </table>	3	6	9	12	15
<u>FROM</u>	<u>TO</u>																	
1	6,000																	
6,001	8,000																	
8,001	12,000																	
12,001	14,000																	
14,001	40,000																	
3																		
6																		
9																		
12																		
15																		

If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula:

$$(\text{Number of Square Feet in Limits of Disturbance} \div 40,000) \times 15$$

EXEMPTION CATEGORIES:

- | | |
|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> 55-5(a) any activity that is subject to Article II of Chapter 22A; <input type="checkbox"/> 55-5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A; <input type="checkbox"/> 55-5(f) any activity conducted by the County Parks Department; <input type="checkbox"/> 55-5(g) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the | <p style="margin-left: 20px;">maintenance has obtained all required permits;</p> <ul style="list-style-type: none"> <input type="checkbox"/> 55-5(h) any stream restoration project if the person performing the work has obtained all necessary permits; <input type="checkbox"/> 55-5(i) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams; <input type="checkbox"/> OTHER: Specify per Section 55-5 of the Code.
_____ |
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Attachment 4

Approved Shade Tree List

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Approved Shade Tree List

For meeting requirements of Chapter 55-6, Tree Canopy Conservation - February 5, 2014

	Common Name	Botanical Name	Typical Height & Width at Maturity	Soil Moisture Tolerances
1	American beech	<i>Fagus grandifolia</i>	100 x 75 ft	F, M
2	American elm	<i>Ulmus americana</i>	70 x 50 ft	F, M
3	American linden	<i>Tilia americana</i>	60 x 30 ft	F, M
4	Bald cypress	<i>Taxodium distichum</i>	75 x 40 ft	W, F, M, D
5	Black gum	<i>Nyssa sylvatica</i>	60 x 35 ft	M
6	Bur oak	<i>Quercus macrocarpa</i>	70 x 50 ft	M
7	Chestnut oak	<i>Quercus prinus</i>	75 x 50 ft	M, D
8	Cucumber tree	<i>Magnolia acuminata</i>	65 x 40 ft.	W, F
9	Hackberry	<i>Celtis occidentalis</i>	60 x 60 ft	F, M, D
10	Loblolly pine	<i>Pinus taeda</i>	70 x 40 ft	, F, M
11	Northern red oak	<i>Quercus rubra</i>	90 x 75 ft	M
12	Pin oak	<i>Quercus palustris</i>	90 x 40 ft	F, M
13	River birch	<i>Betula nigra</i>	60 x 40 ft	W, F, M
14	Scarlet oak	<i>Quercus coccinea</i>	75 x 50 ft	M, D
15	Shingle oak	<i>Quercus imbricaria</i>	60 x 60 ft	F, M
16	Shumard oak	<i>Quercus shumardii</i>	55 x 40 ft	F, M, D
17	Southern magnolia	<i>Magnolia grandifolia</i>	50 x 25 ft	F, M
18	Sugar maple	<i>Acer saccharum</i>	70 x 45 ft	F, M
19	Swamp chestnut oak	<i>Quercus michauxii</i>	70 x 50 ft	W, F, M
20	Swamp white oak	<i>Quercus bicolor</i>	60 x 60 ft	W, F, M, D
21	Sweetgum	<i>Liquidambar styraciflua</i>	75 x 50 ft	F, M
22	Sycamore	<i>Platanus occidentalis</i>	100 x 100 ft	F, M
23	Thornless honeylocust	<i>Gleditsia triacanthos inermis</i>	50 x 40 ft	F, M, D
24	Tulip poplar	<i>Liriodendron tulipifera</i>	100 x 50 ft	F, M
25	Virginia pine	<i>Pinus virginiana</i>	50 x 30 ft	M, D
26	White oak	<i>Quercus alba</i>	80 x 100	F, M, D
27	Willow oak	<i>Quercus phellos</i>	60 x 45 ft	F, M, D

Notes: Chapter 55 defines a "shade tree" as "a tree of large stature that is capable of growing to heights greater than 50 feet." Additional species can be considered for use as shade trees but must meet standards for structural integrity, health and biodiversity set by the Dept of Permitting Services.

Soil Moisture Tolerance Key:

- W = Soil remains wet throughout year, usually due to poor drainage
- F = Soil is well drained, but remains moist due to frequent saturation
- M = Soil contains moderate levels of moisture throughout year
- D = Soil remains dry for long periods

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Attachment 5

Sediment Control Plan Review Checklist

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Department of Permitting Services
 255 Rockville Pike, 2nd Floor
 Rockville, MD 20850-4166
 Phone: 311 in Montgomery County or (240)-777-0311
 Fax (240)-777-6262
<http://www.montgomerycountymd.gov/permittingservices/>



Sediment Control Plan and Environmental Site Design (ESD) Review Checklist

Project Name: _____ **Engineer/Phone No.** _____

Sediment Control Permit No : _____

SWM File No.: _____ **Assigned/Phone No.** _____

Plan Type: _____

Legend:

INC	Incomplete/Incorrect	<i>Submittal Date</i>	<i>Review Date</i>	<i>Initial</i>
N/A	Not Applicable			
SC	Sediment Control	_____	_____	_____
SWM	Stormwater Management	_____	_____	_____
FPDP	Floodplain District Permit	_____	_____	_____
DA	Drainage Area	_____	_____	_____
SPA	Special Protection Area			
ESD	Environmentally Sensitive Design			

_____ *Design Acceptable* _____ *Date*

These checklists have been designed to provide specific instruction to engineers. All items are expected to be addressed in the first submittal. Failure to do so will result in less than a full first review. If any items marked with an asterisk (*) are not addressed, no further review of the first submittal will be made. The plan will be returned to the engineer for completion and will have to be resubmitted for a new first review. (Review fees already paid will be credited).

TO THE ENGINEER:

Your submission for plan approval has been reviewed. The review was made per the following checklists. **Please return the checklists and plan comment sheets with your resubmittal.** If you do not address a checklist item, including comments on the sediment control plan sheets, explain your reasoning in your transmittal letter.

Supporting Information

- * _____ Transmittal **specifically** explaining the purpose of the submission.
- * _____ Stormwater Management Requirements: MCDPS concept approval letter on plan.
- _____ Copy of the storm drain plans to be used by the storm drain contractor, to check consistency with the sediment control and stormwater management plans.

Sediment Control Plan

- ___ ___ ___ Scale (1" = 50' maximum), north arrow.
- * ___ ___ ___ Existing and proposed topography (2' contour intervals maximum).
- ___ ___ ___ No permanent cut or fill slope with gradient steeper than 3:1 is permitted in lawn maintenance areas or anywhere on private residential lots. A slope gradient of up to 2:1 is permitted in non residential low maintenance areas provided that those areas are clearly indicated on the SC plan and specific low-maintenance ground cover is called for by plant name.
- ___ ___ ___ Composite sheet for plans covering two or more separate sheets, showing schematic SC.
- ___ ___ ___ Title Block: Legal subdivision and common name with lots/blocks, parcels, liber/folio, or other legal references; station numbers for road projects; indicate **grading only** or **streets only**, as applicable. Include Standard Rough Grading Notes if applicable.
- ___ ___ ___ 3" x 10" MCDPS Approval Block in the lower right-hand corner of all sheets.
- ___ ___ ___ Owner/Permit Applicant name, address, phone number, and contact person on first sheet.
- ___ ___ ___ Vicinity map with site outlined (1:2,000 scale) on first sheet.
- ___ ___ ___ All sheets of final SC/SWM package numbered consecutively: SC/SWM Sheet # ___ of # ___.
- ___ ___ ___ Sealed by P.E., L.S., or architect on the first page of the plans, with date and signature.
- ___ ___ ___ Property lines and owner/legal description for adjacent properties.
- ___ ___ ___ Match lines corresponding sheet to sheet.
- ___ ___ ___ Certifications: Owner/Developer; Design; Cut/Fill/Disturbed Area. Include Stormwater Management Maintenance certification as appropriate. Plan revisions which increase the disturbed area require an updated Cut/Fill/Disturbed Area certification.
- ___ ___ ___ Disturbed area outlined and labeled. All SC devices must be shown within the disturbed limits.
- ___ ___ ___ Existing and proposed tree lines or individual trees labeled on all SC plan view sheets. Show Forest Conservation Easement and tree save areas per the approved Forest Conservation plan.
- * ___ ___ ___ Existing and proposed drainage divides on SC plan view sheets.
- ___ ___ ___ Label offsite drainage area amount (acres) entering site on SC plan view sheets.
- ___ ___ ___ Show and label existing and proposed improvements (utilities, streets, buildings, etc.) on SC plan view.
- ___ ___ ___ Any designated wetlands (including 25-foot buffer) delineated on the SC plan view sheets.
- ___ ___ ___ Copy of approved State Wetlands permit.
- ___ ___ ___ 100-year floodplain and 25-foot BRL delineated on SC plan view sheets for any drainage way with >30 acre drainage area. No disturbance or structures permitted in this floodplain or floodplain buffer without MCDPS Floodplain District Permit (FPDP).

- _____ Approved MCDPS Floodplain District Permit, if applicable. Also if applicable, need State Waterway Construction Permit prior to FPDP issuance. **NOTE:** SC plans may be approved, but no permit will be issued until FPDP is issued.
- _____ “Related Required Permits” table completed and placed on the first SC plan sheet.
- _____ Label all SC devices.
- _____ Sediment trap(s): need safety fence; inflow point protection (PSD’s required for drainage areas >3 acres), proper outlet location (maximizing flow length from inflow points); dewatering as necessary (include MCDPS dewatering device detail); and baffles (required for drainage areas >3 acres: include MCDPS baffle detail). Provide trap data information on the SC plan sheet as follows: trap type; existing DA; developed DA; storage required; storage provided; weir crest elevation; storage depth; bottom dimensions; cleanout elevation; channel depth of flow; maximum side slopes (specify cut and/or fill); bottom elevation; embankment elevation; riser dimensions; barrel dimensions. Pipe outlet traps require separate dewatering device. Stone Outlet Sediment Traps (ST-II, ST-IV) are not allowed in Montgomery County.
- _____ Sediment basin(s): include sediment basin design and construction information as required by “Maryland State Standards and Specifications”; Low Hazard Class assured; barrel outfall cross-section; MCDPS CMP band and dewatering device detail; inflow point protection; safety fence. Show baffles as necessary. Show and address construction access and stockpiling on the SC plan and address sediment control during basin installation. Limit initial disturbance to installation of the principle spillway. If there is a base flow, provide a clean water diversion; if there is no base flow, provide diversion dikes above the disturbed area.
- _____ No SC devices are to be located within 20 feet of building foundations.
- _____ Protection of interior tree save and undisturbed areas shown on plans.
- _____ Temporary storm drain diversion: detail in Sequence of Construction, show profile, give invert elevations of temporary pipe into trap on plan view, profile, and details; and show the diversion on the storm drain plan.
- * _____ Sequence of Construction: use MCDPS Standard Sequence [Forest Conservation Law (FCL) and Non-FCL] and expand to fit the specific needs of each site.
- _____ Project sequence complies with 20 acre grading unit limitation. Grading areas clearly sequenced on plans.
- _____ Standard Sediment Control Notes including **MISS UTILITY** note.
- _____ Standard details for SC devices.
- _____ Offsite grading requires documentation of permission from owner (letter of permission on plan or recorded grading easement document submitted).
- _____ Work on MNCPPC property, or on property being dedicated to MNCPPC, must have Parks Engineer approval.
- _____ Adequate access, staging, and stockpile areas shown on the plan with appropriate sediment control for each.
- _____ “On-site Concrete Washout Structure” detail on plans.

Storm Drain System (Show Items on SC Plan)

- ___ ___ ___ Plan view of storm drain system with topography to 100-feet below each outfall, showing dimensions, Q_{10} , V_{10} , d_{50} , and MSHA class.
- ___ ___ ___ All outfalls must release runoff to an existing system, adequate receiving channel, or slope $\leq 2\%$. Provide profiles of outfalls showing rip-rap slope, length, d_{50} , MSHA class, and V_{10} at pipe outfall.
- ___ ___ ___ Provide outfall cross-section detail(s) with the following information specific to each outfall: shape conforms to receiving channel; outfall dimensions, rip-rap size (d_{50}) and MSHA class; embedded depth ($2.0 \times d_{50}$); and filter cloth underneath.

ESD Review Criteria

- ___ ___ ___ Stormwater management easements provided for all ESD practices for non residential projects. Submit executed documents for approval, and show easements on the SC plan.
- ___ ___ ___ ESD target volume computed per "Water Resources Technical Policy No. 5".
- ___ ___ ___ "Record Drawing Certification" and "Inspection Checklists" on one plan sheet, as required.
- ___ ___ ___ All ESD practices clearly labeled on SC plan. Include a drainage area map for ESD practices.
- ___ ___ ___ All ESD practices conform to maximum drainage area limitations.
- ___ ___ ___ Dry Wells for roof runoff only.
- ___ ___ ___ Soil Testing as required. Testing location(s) shown on plans. Soil testing report submitted.
- ___ ___ ___ Pervious Paving $\geq 10,000$ square feet, see "Infiltration" requirements.
- ___ ___ ___ Grassed Swale for roadway or driveway only.
- ___ ___ ___ Bio Swale maximum 4-feet wide in public right-of-way.
- ___ ___ ___ Landscaped practices require seal and signature of Maryland RLA.
- ___ ___ ___ Disregard mulch layer when computing storage volume in landscaped practices.
- ___ ___ ___ "Sand Specifications" on plan.

Change of Ownership

- ___ ___ ___ Sediment control maintenance agreement completed and a copy placed on the SC plan.
- ___ ___ ___ All areas pertaining to new ownership clearly identified on plan.
- ___ ___ ___ Title blocks reflect revised legal description.

Miscellaneous

- ____ ____ ____ Site in conformance with preliminary plan and/or site plan requirements and forest conservation plan. Copy of approved preliminary plan, site plan with opinion, and forest conservation plan or exemption letter must be received prior to plan approval.
- ____ ____ ____ Stormwater management waiver fee: Submit a plan showing the waived area(s), and give the percent impervious and total waiver area in acres (if not using pre-set fees for single family zones).
- ____ ____ ____ For SPA sites, stream monitoring fee and BMP monitoring paid. NOTE: Fees must be paid prior to permit issuance.
- ____ ____ ____ For SPA sites, place a copy of the SPA notice on the first plan sheet.

Tree Canopy Requirements (Effective for New Applications March 1, 2014)

- ____ ____ ____ "Tree Canopy Requirements" table complete and placed on first plan sheet.
- ____ ____ ____ "Growing Zone" and "Planting Areas" are per Executive Regulation 22-13.
- ____ ____ ____ Tree planting detail.
- ____ ____ ____ "Standard Tree Canopy Notes" on plans.
- ____ ____ ____ Proposed shade trees labeled on plan, with species name and caliper
- ____ ____ ____ Tree protection shown on plan if required

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Attachment 6

Tree Planting Detail

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Use of staking and guying is not recommended unless trees will be planted in areas subject to sustained wind, vandalism, or higher level of pedestrian and vehicular traffic. All staking and guying materials should be removed within six months to one year.

See Department of Permitting Services Staking and Guying Detail for more information.

At least one-eighth of root ball should be above grade (or up to one-third for poorly drained sites)

A raised ring of soil may be formed to increase the percolation of water on dry or sloped sites

Slope sides of planting hole and breakup glazed surfaces on slopes

Leave soil at base of planting hole undisturbed to avoid over-settlement of rootball

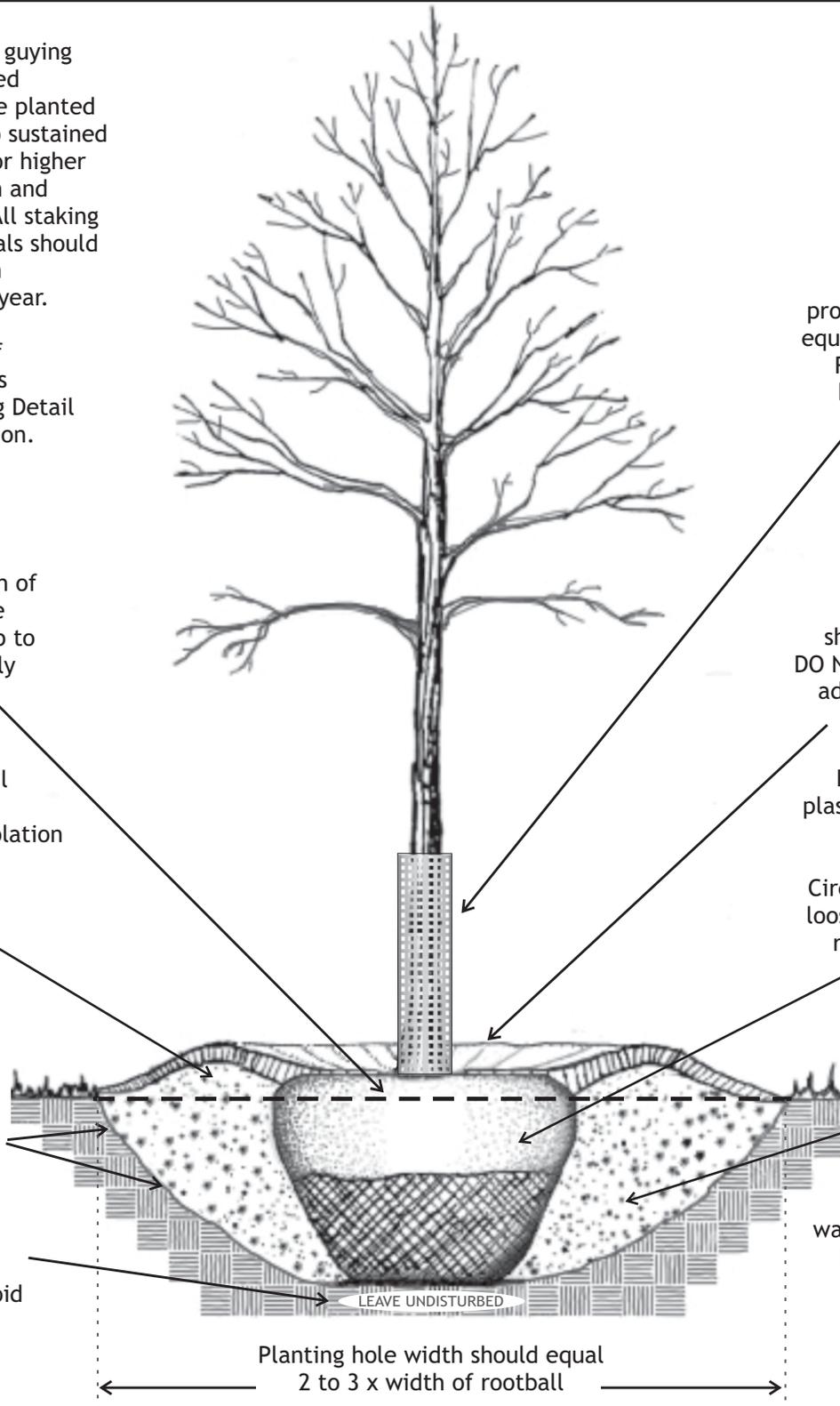
Trees shall meet all requirements for plant materials in ANSI Z60.1 (American Standard for Nursery Stock)

Install tree guard to protect trunk from sun, equipment and animals. Remove before trunk becomes constricted

Apply maximum of 2-3 inches of shredded wood mulch DO NOT place any mulch adjacent to tree trunk

Remove basket wire, plastic, rope, twine and burlap from top half of root ball. Circling roots should be loosened, spread out or removed if necessary

Use original soil for backfill. Do not add soil amendments unless needed to improve drainage, soil structure or water-holding capacity. Do not add fertilizer or nutrients unless prescribed by soil test



This detail is based on ANSI A300 (Part 6) 2012 *Planting and Transplanting*, and its companion publication, *Best Management Practices: Tree Planting*, copyright 2005 by the International Society of Arboriculture



MONTGOMERY COUNTY
DEPARTMENT OF PERMITTING
SERVICES

TREE PLANTING
DETAIL
FOR BALLED AND BURLAP
NURSERY STOCK

DATE: 6 /14

SCALE: NONE