

Preliminary Land Use Service (PLUS)
Comprehensive Plan Amendments and Municipal Ordinances

Delaware Office of State Planning Coordination
122 Martin Luther King Jr. Blvd. South • Dover, DE 19901 • Phone: 302-739-3090 • Fax: 302-739-5661

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Date of Most Recently Certified Comprehensive Plan: 2012

Application Type:
Comprehensive Plan Amendment: _____
Unified Development Code (UDC) Amendments
Ordinance: Ordinance No. 18-016 and 18-017
Other: _____

Comprehensive Plan Amendment or Municipal Ordinance prepared by:	
Address: 87 Reads Way New Castle, DE 19720	Contact Person: Richard E. Hall
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Please describe the submission: The submission consists of two (2) text amendments to New Castle County's Unified Development Code (UDC). The proposed language provides clarifications, corrections, improvements and other changes necessary to enhance the UDC's design standards and development review process.

Introduced by: Mr. Tackett
Ms. Kilpatrick
Date of introduction:

ORDINANCE NO. 18-

TO AMEND NEW CASTLE COUNTY CODE CHAPTER 40 (ALSO KNOWN AS THE UNIFIED DEVELOPMENT CODE OR “UDC”), REGARDING ARTICLE 1 (“TITLE AND APPLICABILITY”), ARTICLE 3 (“USE REGULATIONS”), ARTICLE 10 (“ENVIRONMENTAL STANDARDS”), ARTICLE 12 (“SEWER AND WATER IMPACT”), ARTICLE 20 (“SUBDIVISION AND LAND DEVELOPMENT DESIGN PRINCIPLES”), ARTICLE 22 (“DRAINAGE, UTILITIES, SEPTIC SYSTEMS, PARKING, LOADING, AND LIGHTING”), ARTICLE 27 (“MAINTENANCE ORGANIZATIONS, OPEN SPACE, AND COMMON FACILITIES”), ARTICLE 31 (“PROCEDURES AND ADMINISTRATION”), ARTICLE 33 (“DEFINITIONS”), APPENDIX 1 (“APPLICATION AND PLAN REQUIREMENTS”) AND APPENDIX 2 (“FEES”)

WHEREAS, New Castle County (“County”) has engaged in a comprehensive review of the Unified Development Code (“UDC”) to identify standards that need revision for technical compliance, internal consistency, or consistency with current development practices; and

WHEREAS, the County has undertaken a robust public review process with stakeholders including County residents, developers and homebuilders, engineers, landscape architects, and a professional planning consultant, which included at least eleven meetings comprised of six focus group sessions, four stakeholder meetings, and a public workshop; and

WHEREAS, based on a comprehensive review of the UDC by the professional staff in the County’s Department of Land Use, a professional planning consultant, and comments by stakeholders, applicants and local experts in land use issues, the County has developed updated standards for sunsetting, water resource protection areas, sewer capacity/connections/easements, community outreach, record plan modification, code enforcement and resubdivision plans; and

WHEREAS, the Department of Land Use has continued to review, interpret, and monitor the continued application of the UDC with regard to land development and has identified additional clarifications, corrections, improvements and changes necessary to further enhance the land development process; and

WHEREAS, County Council has determined that the provisions of this Ordinance substantially advance, and are reasonably and rationally related to, legitimate government interests, including, but not limited to, the protection and preservation of the public health, safety, prosperity, general welfare, and quality of life.

NOW, THEREFORE, THE COUNTY OF NEW CASTLE HEREBY ORDAINS:

Section 1. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 1 (“Title and Applicability”), Division 40.01.100 (“Applicability”), Section 40.01.130 (“Sunsetting of recorded subdivision or land development plans”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.01.130. Sunsetting of recorded subdivision or land development plans.

A. Plans recorded after adoption of these regulations. Construction of development or improvements shown on [an approved] a recorded major land development plan [for a subdivision or land development] shall commence within five (5) years of the date of recordation of the [first] original record plan for the [subdivision or] land development [plan].

B. Plans recorded before the adoption of these regulations. Construction of development or improvements shown on a recorded major land development plan [for a major subdivision or major land development] shall commence within five (5) years from December 31, 1997; except that, as provided in Section 40.01.120, any approved record plan for:

1. Any [major subdivision or] major land development plan that was unbuildable immediately prior to the adoption of this Chapter for any reason (including, without limitation, zoning changes after plan approval and the expiration of any period of protection under former Code provisions); and,
2. Any resubdivision plan . . .

C. The applicant shall bear the burden of . . .

D. If construction has not commenced within five (5) years, the record plan shall be resubmitted and reviewed by the Department to determine if the conditions of approval of the original record major [subdivision or] land development plan have changed or have been altered by the subsequent adoption of, or amendments to, this Chapter. The resubmission must occur prior to the five (5)-year deadline for commencement of construction. Plans recorded prior to July 1, 2014 shall have until July 1, 2019 to resubmit for review. Plans not resubmitted in the required timeframe will expire and any subsequent plan for the subject property must comply with the zoning and subdivision regulations in effect at the time of application. The Department shall either:

1. Reapprove the record plan, and give written notice to the owner of reapproval. Such approval shall allow the issuance of building permits subject to the provisions of the original record major subdivision or land development plan and/or any recorded resubdivision plans. The owner shall then have five (5) years from the date of such notice of reapproval to obtain building permits and commence construction. If construction has not commenced within five (5) years, the record plan shall expire.

2. Disapprove the record plan and give written notice to the owner of the specific areas of noncompliance. The modifications necessary to bring the plan into compliance with this Chapter shall be incorporated into a revised exploratory plan and resubmitted. Upon approval of a revised exploratory plan, a new major [subdivision or] land development plan may be submitted for approval. The new plan approved and recorded pursuant to this Section shall have the effect of superseding the original record major [subdivision or] land development plan. The owner shall then have five (5) years from the date of notice made pursuant to this subsection to obtain building permits and commence construction. If construction has not commenced within five (5) years, the record plan shall expire. . .

Section 2. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.100 (“Use regulations”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Division 40.03.100. Use regulations.

All land uses or structures shall be permitted . . .

- A. "Y" indicates a permitted use . . .
- B. "N" indicates a prohibited use.
- C. "L" indicates a use permitted only if a limited use is approved pursuant to Section 40.31.210. The limited use review determines whether the locational, design, or other criteria of Table 40.03.210, Division 40.03.300 and other sections of this Chapter have been met for the proposed site or specific land use. Not all properties may meet these requirements, thus limiting the sites upon which the use may be established. Where the limited use standards apply to only a specific use, all other uses in the general use category are permitted by right and without the need for [a] limited use [permit] review. [A-4]Limited use [permit] approval must be issued by the Department certifying compliance before the limited use is lawfully permitted. . . .

Section 3. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.300 (“Additional limited and special use standards”), Section 40.03.330 (“Public interest and special events”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.03.330. Public interest and special events.

- A. A limited use permit . . .
- D. All display areas and temporary structures shall comply with the minimum required yard setbacks for the zoning district in which the public interest/special event is being proposed and may not displace required parking for the primary use of the property, except that the

Department may permit the displacement of required parking for parking lots containing no fewer than 500 parking spaces when the applicant demonstrates that sufficient parking will be available throughout the event.

Section 4. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.300 (“Additional limited and special use standards”), Section 40.03.331 (“Temporary miscellaneous sales”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.03.331. Temporary miscellaneous sales.

A. A limited use permit shall be required . . .

E. ~~[A letter of credit, or other acceptable surety, shall be required by the Department. The amount shall be based on the estimated cost of cleaning the site at the cessation of the limited use permit. Upon approval of the Department, a signed contract with a disposal firm, which covers the cleanup of the site after the cessation of the temporary use, may satisfy the surety requirement.] Reserved.~~

F. A copy of the DelDOT . . .

G. No display, sales or parking . . .

H. All display areas and temporary structures shall comply with the minimum required yard setbacks for the zoning district in which the temporary sales event is being proposed and may not displace required parking for the primary use of the property, except that the Department may permit the displacement of required parking for parking lots containing no fewer than 500 parking spaces when the applicant demonstrates that sufficient parking will be available throughout the event. . . .

Section 5. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 5 (“Site Capacity and Concurrency Regulations”), Division 40.05.000 (“Purpose”), Section 40.05.050 (“Applicability”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Section 40.05.050. Applicability.

At the preapplication stage . . .

A. A site resource capacity analysis . . .

E. A site resources capacity analysis pursuant to Division 40.05.400 need not be conducted where a parcel is to be subdivided into not more than five (5) residential lots~~taking direct access to an existing street, and where the depth does not permit constructing streets from the development~~. However, all resources . . .

Section 6. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 10 (“Environmental Standards”), Division 40.10.100 (“Resource protection standards”), Section 40.10.115 (“Additional resource standards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.10.115. Additional resource standards.

The following Sections set forth additional standards that protect natural resources or permit mitigation. For all protected resources, stormwater outfalls shall be permitted, provided that the discharge [velocity from the terminal end of the pipe or the associated energy dissipation practice does not exceed two (2) feet per second (fps) for the two (2) year frequency storm event] complies with the standards for adequate conveyance established by Chapter 12 of the *New Castle County Code*. Green technology stormwater best management practice[s] methods shall be used to convert concentrated flow to uniform, shallow sheet flow, filter sediments, and control erosion.

Section 7. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 10 (“Environmental Standards”), Division 40.10.100 (“Resource protection standards”), Section 40.10.160 (“Water Resources Protection Areas”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.10.160. Water Resources Protection Areas (WRPA).

A. Water resource protection areas . . .

B. No development shall be permitted to have more than twenty (20) percent impervious surface ratio [unless] without an environmental impact assessment report and a recommendation from RPATAC supporting a greater than twenty (20) percent impervious surface ratio. The environmental impact assessment report shall be certified by a State-registered professional geologist or professional engineer with [a—baekground] technical expertise in hydrogeology[indicates that additional development would not endanger the public or the environment. All environmental impact assessment reports performed pursuant to this Section shall be reviewed in accordance with Section 40.10.385 and the procedures set forth in Articles 30 and 31 for environmental impact assessment reports]. The impervious surface ratio and open space ratio operate independently and are based on the base site area.

C. The Department may permit . . .

D. The Department may consider, with the recommendation of RPATAC, the transfer of development rights of a Recharge Area WRPA to another Recharge Area WRPA. [the contribution of like land by the applicant to be preserved in other WRPA's.] A conservation easement [or the outright acquisition of the like land or resource] shall [occur which will] be established to prohibit the disturbance of the [like land] WRPA in perpetuity. [Like lands are those lands within a Recharge or Wellhead WRPA that have infiltration rates that are equal to or

~~greater than those found on the subject property. The minimum area of the restricted land shall be the area that would otherwise be required by this Chapter.]~~

Section 8. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 10 (“Environmental Standards”), Division 40.10.100 (“Resource protection standards”), Section 40.10.162 (“Wellhead protection areas (public water supply wells”)), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.10.162. Wellhead protection areas (public water supply wells).

A. Wellhead protection areas . . .

D. ~~[A stormwater system's discharge to wellhead WRPA's shall be by sheet flow through a grassland or discharged from a stormwater management facility having a wetland or aquatic bench.] Stormwater runoff from [all parking areas shall be directed to a stormwater management facility before it is discharged] developed impervious areas must be managed by a best management practice before discharge into a wellhead WRPA. . . .~~

Section 9. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 10 (“Environmental Standards”), Division 40.10.100 (“Resource protection standards”), Section 40.10.165 (“Uniform standards and criteria”), is hereby amended by deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.10.165. Uniform standards and criteria.

A. The following standards and criteria shall be applicable to any limited use, special use or other use requiring an environmental impact assessment report permitted pursuant to this division:

1. Stormwater management facilities . . .

2. With the exception of floodplain and erosion-prone slope water resource protection areas, stormwater management and recharge facilities shall be designed with the goal of maintaining the quantity and quality of groundwater recharge at predevelopment levels. ~~[To facilitate the design of recharge facilities, a manual of best management practices for the design, construction and maintenance of recharge structures shall be developed. The manual shall be approved by the resource protection area technical advisory committee (RPATAC) and may be revised as necessary to reflect advances in recharge technology.]~~

. . .

Section 10. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 12 (“Sewer and Water Impact”), Division 40.12.100 (“Sewer capacity”), Section 40.12.110 (“Sewer service areas”), is hereby amended by adding the material that is underscored, as set forth below.

Sec. 40.12.110. Sewer service areas.

The County sewer model is based on the analysis of sewer capacities in lines, pump stations and treatment plants. A map reflecting . . .

Section 11. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 12 (“Sewer and Water Impact”), Division 40.12.100 (“Sewer capacity”), Section 40.12.111 (“Capacity”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.12.111. Capacity.

The capacity of sewer service areas is identified [~~in the New Castle County Sewer Capacity Report~~] on the Capacity Status Map and is available for review at the Department of Special Services. [~~The report provides the capacity of the interceptors, pumping stations, and treatment plants.~~] The [~~County Sewer Capacity Report~~] Capacity Status Map is prepared using the County model to determine the existing capacity of the sewer in the County. The methodology in Section 40.12.310 shall be adhered to by the County in its determination of sewer capacity. The capacity of the various units shall be in gallons per day (~~[gpd]~~gpd) or millions of gallons per day (mgd).

Section 12. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 12 (“Sewer and Water Impact”), Division 40.12.100 (“Sewer capacity”), Section 40.12.112 (“Sewer treatment facilities”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.12.112. Sewer treatment facilities.

[A. In the Suburban zoning districts, sewer improvements may include the use of spray irrigation, provided that such system has a minimum processing capacity of one hundred thousand (100,000) gallons per day and so long as the capacity of the system can be increased at a later time by an additional fifty thousand (50,000) gallons per day. Other types of large scale treatment systems may be permitted if approved by DNREC and the Department of Special Services. Such facilities shall only be permitted in Suburban zoning districts and shall only be constructed in accordance with the rules and regulations governing such systems as promulgated by DNREC and the Department of Special Services. All such systems shall be turned over to the County upon their completion and formal acceptance by the Department of Special Services.]

[B. In the Suburban Reserve zoning districts, private nonresidential spray irrigation may be permitted subject to approval by the Department of Special Services and DNREC and subject to any restrictions deemed necessary by the Department of Special Services or DNREC. All such facilities shall be subject to regular inspection by the County and shall be charged an inspection fee by the Department of Special Services based upon the type and amount of discharge.]

[C]The Department of Special Services may sell treated effluent from any County owned or operated sewer treatment facility to the public.

Section 13. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 12 (“Sewer and Water Impact”), Division 40.12.300 (“Service capacity calculations”), Section 40.12.310 (“Sewer capacity calculations”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.12.310. Sewer capacity calculations.

In determining sewer capacities pursuant to this Article, the following methodology shall be used.

- A. [Service]Capacity. ~~[Service]Capacity~~ is measured in gallons per day (~~[gpd]~~gpd) or millions of gallons per day (mgd), beginning at the plant. Each element of the system has a rated average daily capacity for processing, pumping, or flow.
- B. *Available capacity determination*. The ~~[current]~~proposed loads are compared against the capacity of the system component. The available capacity is determined by subtracting the existing and obligated volumes from the capacity of the component. If the number is positive, then the resultant is the available capacity.

Section 14. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 20 (“Subdivision and Land Development Design Principles”), Division 40.20.200 (“Subdivision layout”), Section 40.20.242 (“Easements”), is hereby amended by adding the material that is underscored, as set forth below.

Sec. 40.20.242. Easements.

Where required, all lots shall provide easements for sewer, water, drainage, gas, telephone, or cable TV necessary to serve the subdivision. Such easements shall be located in either street rights-of-way, alleys, side or rear yards. The following standards shall apply to easements:

- A. The utility easements shall be a minimum . . .
- G. The Department of Special Services shall determine the size of required sewer easements. No other utility, tree, shrub, fence, structure or other man-made improvements (excluding paving) may be planted, erected, or constructed within a sewer easement, without the written approval of the Department of Special Services.

Section 15. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 22 (“Drainage, Utilities, Septic Systems, Parking, Loading, and Lighting”), Division 40.22.200 (“Grading and drainage”), Section 40.22.230 (“As-built drawings”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.22.230. As-built ~~drawings~~documents.

As-built drawings shall be provided in accordance with Chapter 12 and as follows:

- A. Where field modifications . . .
- E. As-built plans for the sanitary sewer system, including pump stations and force mains, shall be required in accordance with standards established by the Department of Special Services. As-built plans shall be submitted to the Department of Special Services prior to construction acceptance.

Section 16. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 22 (“Drainage, Utilities, Septic Systems, Parking, Loading, and Lighting”), Division 40.22.300 (“Sanitary sewer”), Section 40.22.320 (“Wastewater disposal connections”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.22.320. Wastewater disposal connections.

- A. All lots that discharge sanitary sewage . . .
- B. All current and future lots discharging sanitary sewage shall be connected to the public system [upon the occurrence of any of the following:]either at the time of construction of a building, or at the time of septic system failure for an existing building, if the building is located in a recognized sewer service area, where sewer capacity is available, and where a suitable sanitary sewer line is accessible to the property as determined by the Department of Special Services.
 - [1. At the time of construction of a building or dwelling if the lot is located in a recognized County sewer service area, where sewer capacity is available and where a suitable sanitary sewer line is located within two hundred (200) feet of the lot property line as measured along a street right-of-way or an appropriate utility easement or right-of-way as may be applicable.]
 - [2. At the time of septic system failure if the lot is located within a County sewer service area where sewer capacity is available and a sanitary sewer collector line is located within two hundred (200) feet of the lot property line as measured along a street right-of-way or an appropriate utility easement or right-of-way as may be applicable and within four hundred (400) feet of the building or dwelling. Septic system failure is defined as any condition that necessitates work on a septic system (including construction, alteration, or repair) for which a DNREC permit is required; and, where such permit is denied in whole or in part by DNREC because a central wastewater system is legally and physically available as defined in DNREC’s Regulations Governing the Design, Installation, and Operation of On-site Wastewater Treatment and Disposal Systems.]
- C. [Failure to connect to the sanitary sewer system as required above shall result in the connection fee becoming due and payable. Failure to pay the connection fee within a one (1) year period shall result in a lien against the property pursuant to the provisions of

Section 38.02.105.]The Department of Special Services shall review all plans which propose to connect to the public sanitary sewer system and shall inspect the construction thereof. No certificates of occupancy shall be provided unless the Department of Special Services confirms that all construction conforms to approved plans and has been accepted for operation.

Section 17. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 27 (“Maintenance Organizations, Open Space, and Common Facilities”), Division 40.27.300 (“Construction, completion and inspection requirements”), Section 40.27.310 (“Construction of open space and common facilities”), is hereby amended by adding the material that is underscored, as set forth below.

Sec. 40.27.310. Construction of open space and common facilities.

A. All areas designated . . .

B. All areas designated on the record plan as open space and/or common facilities including, but not limited to, streets or rights-of-way, parking areas, stormwater management facilities, drainage facilities, and active or passive recreation areas, shall be constructed, installed, or dedicated by developers, at no expense to the County. Construction, installation, and dedication of such open space or common facilities shall be subject to approval by the appropriate officials at the developer's expense.

1. All active recreation areas and structured recreational facilities (clubhouses, pavilions, etc.) shall be completed prior to the issuance of fifty (50) percent of the total building permits within the subdivision.
2. The developer shall be responsible for the maintenance of such open space and facilities until all of the conditions set forth in Section 40.27.510 are satisfied.

C. Unless waived by the Department . . .

D. Prior to the issuance of both fifty (50) percent and seventy-five (75) percent of the building permits, the developer shall submit a[n] certified open space status report to the Department. ~~[Prior to the issuance of seventy five (75) percent of the permits for the subdivision, the developer shall submit an open space status report to the Department certified]~~ Certification shall be provided by the professional(s) who designed and prepared the plan depicting the condition of each aspect of the completed open space. At the request of the developer ~~[with good cause shown]~~, another professional may certify this report with the prior approval of the Department....

Section 18. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 27 (“Maintenance Organizations, Open Space, and Common Facilities”), Division 40.27.700 (“Annual registration requirement”), Section 40.27.710 (“Registration requirement”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.27.710. Registration requirement.

A maintenance organization must register Registration shall include[~~:~~]

- [A.] [T]the names, addresses, email addresses, and telephone numbers of the board of directors and any officers of the maintenance corporation.
- [B. ~~Minutes of any annual or special meeting.~~
- C. ~~A copy of the governing documents, including the maintenance declaration, certificate of incorporation and the bylaws. The articles of incorporation shall contain provisions requiring full membership votes on financial issues and land use matters.~~
- D. ~~Any amendments to the maintenance corporation's governing documents.~~
- E. ~~A copy of its franchise tax receipt, provided the corporation has been in existence for a period of sufficient length to have incurred liability for the tax.]~~

Section 19. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 27 (“Maintenance Organizations, Open Space, and Common Facilities”), Division 40.27.700 (“Annual registration requirement”), Section 40.27.720 (“Failure to register and/or to perform minor maintenance”), is hereby amended by deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.27.720. Failure to register and/or to perform minor maintenance.

[A.] Maintenance organizations that are not registered

[B. As a one time exception to the registration requirement set forth above, any maintenance organization that registered with the County and agreed thereafter in perpetuity to perform minor maintenance at its own expense, qualifies for financial assistance from the County, subject to the availability of funds, even if the major maintenance is due to past failure to perform minor maintenance. The one-time exception to the registration requirement is extended until December 31, 2006 for maintenance organizations which are not in legal possession of the stormwater facility/land as of June 30, 2006 due to legal ownership and/or transfer issues, as determined by the law department, provided that the maintenance organizations once in possession of the facility/land and prior to the expiration of the amnesty period agrees thereafter in perpetuity to perform minor maintenance at its own expense.]

[C. To qualify for the exception, maintenance organizations or property owners must execute a binding agreement in a form approved by the law department, if they have not already done so, expressly granting to the County the authority to enter upon premises to perform maintenance at the expense of the maintenance association or property owners and to impose a lien upon the property if required minor maintenance is not performed.]

Section 20. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 30 (“County Council and Administrative Bodies”), Division 40.30.400

(“Administrative agents”), Section 40.30.430 (“Resource Protection Area, Technical Advisory Committee”), is hereby amended by adding the material that is underscored, as set forth below.

Sec. 40.30.430. Resource Protection Area, Technical Advisory Committee.

The purposes and duties of the RPATAC are to:

- A. Provide technical support . . .
- H. Provide technical support and recommendations to the Department concerning the transfer of development rights from one WRPA to another.

Section 21. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.100 (“Application review procedures”), Section 40.31.110 (“Rezoning/major and minor plan review”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.110. Rezoning/major and minor plan review.

<i>Stage/Steps</i>	<i>Rezoning</i>	<i>Major Plan</i>	<i>Minor Plan</i>
Pre-application Sketch Plan Review			
Submission	Y	Optional, Y for major residential plans	Optional
Conference	Y	Optional, Y for major residential plans	Optional
<u>Community Meeting</u>	<u>Optional</u>	<u>Optional</u>	<u>Optional</u>
Exploratory Plan Review Stage . . .			

Section 22. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.100 (“Application review procedures”), Section 40.31.112 (“Pre-application sketch plan review/conference”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.112. Pre-application sketch plan review/conference.

- A. *Applicability.* A pre-application sketch . . .
- D. *Community Outreach.*
 - 1. Community Outreach consists of a community meeting that occurs after the pre-application sketch plan review conference and prior to exploratory plan submission for plans that propose a rezoning, major or minor land development plan. This outreach is optional.

2. The purpose of the community meeting is to:
 - a. Encourage the applicant to pursue early and effective communications with members of the community that may be impacted by the application and the resident council person, providing the applicant an opportunity to understand and attempt to mitigate adverse impacts of a proposed project on the community, and to educate and inform the public.
 - b. Provide property owners of impacted areas with an opportunity to learn about an application and an opportunity to work with an applicant to resolve concerns at an early stage of the process.
3. The applicant shall notify the Department of Land Use and the resident council person of the date and location of the community meeting at least ten (10) business days prior to the event.

E. Subsequent submission. For all rezonings . . .

Section 23. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.100 (“Application review procedures”), Section 40.31.113 (“Exploratory plan review stage”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.113. Exploratory plan review stage.

- A. *Applicability . . .*
- B. *Exemptions . . .*
- C. *Submission requirements.*
 1. The applicant shall . . .
 2. Traffic impact study (TIS). For all major plans and plans with rezonings where the Department has not waived traffic analysis requirements, the applicant shall submit traffic information pursuant to Article 11. If a traffic impact study is required, a scoping meeting shall be scheduled pursuant to Article 11 to identify concurrency issues. For all major plans and plans with rezonings, exploratory plans shall not be noticed for Planning Board public hearing until the Department is in receipt of DelDOT's comments and recommendations on the final TIS. For all major plans and plans with rezonings, [N]no record plan submission shall occur until such time that the TIS is approved and the plan meets the concurrency requirements of Article 11.
 3. It is the applicant’s responsibility . . .

4. The Department of Special Services shall review sanitary sewer system plans in accordance with the engineering checklist. The Department of Special Services shall determine sewer feasibility based on the submitted plan.

5. The Department will return to the applicant . . .

D. *Exploratory plan initial report . . .*

E. *Public hearing requirements . . .*

G. *County Council rezoning hearing and decision.* Upon receipt of a rezoning recommendation . . . Any [The] record plan submitted after County Council adopts a rezoning shall be in general conformance with the development depicted on the approved exploratory or preliminary plan that was relied upon by County Council when it granted the rezoning. . . .

Section 24. *New Castle County Code Chapter 40* (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.100 (“Application review procedures”), Section 40.31.114 (“Record plan review stage”), is hereby amended by adding the material that is underscored, as set forth below.

Sec. 40.31.114. Record plan review stage.

A. *Record plan requirements . . .*

B. *Record plan review report . . .*

C. *Department review/approval.* If the record plan and all supporting documents . . . Supporting documents shall include, but are not limited to:

1. Letter of approval from DelDOT . . .

2. Letter of approval from the State Fire Marshal.

3. Approval from the Engineering Section . . .

4. Approval from the Department of Special Services regarding sanitary sewer design and easements. . . .

Section 25. *New Castle County Code Chapter 40* (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.100 (“Application review procedures”), Section 40.31.130 (“Deed restriction changes”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.130. Deed restriction changes.

Any amendment to a declaration of restrictions . . .

- A. *Applicability.* This Section applies . . .
- B. *Submission requirements.* The applicant shall submit all deed restriction change request materials to the Department pursuant to the provisions contained in Appendix 1 to this Chapter. Such materials shall include:
 - 1. The application, consisting of a copy of the existing recorded declaration of restrictions, the proposed declarations, and the reasons for the change. Upon receipt of the application, the Department of Land Use shall forward the [same] application to the Clerk of County Council[,] and the district Council member[, ~~and the President of County Council~~]. With the exception of the County, the proposed declarations shall be signed by all parties subject to the restrictions.
 - 2. A draft resolution for County Council's consideration which is to also be provided in electronic form. After review and correction if necessary, the Department of Land Use will forward same to the Clerk of County Council[,] and the district Council member[, ~~and the President of County Council~~].
 - 3. The applicable Departmental filing fee . . .
- E. *Department report.*
 - 1. After consideration of the deed restriction change application, the Department and the Planning Board shall forward their recommendations in one (1) report to the Clerk of County Council[, ~~the sponsor, the sponsor's legislative aide, and the applicant~~] and the district council member. The written recommendations by the Department and the Planning Board shall contain specific findings of fact resulting from the PLUS report, the public hearing and Department analysis.
 - 2. If the Department recommends conditional approval of the application, declarations and resolution, or if the Department finds that the original declarations or resolution must otherwise be revised to meet the current recommendation, the applicant may submit revised documents in conformance with the Department's recommendation. All revised documents shall be submitted to the Department within sixty (60) days of the issuance of the written recommendation report and shall include[, ~~which shall submit to County Council after review and correction if necessary]~~:
 - a. Revised declarations approved by the Department as meeting such conditions or necessary revisions and signed by all parties subject to the restrictions with the exception of the County; and
 - b. A substitute draft resolution in both written and electronic form[; ~~and~~

- e. ~~Recorder of Deeds filing fees, before the application will be placed on the agenda for County Council's consideration].~~
- F. Upon the Department's review of the application, declarations and resolution, as may be revised, the Department shall forward the documents and the recommendation report to the Clerk of Council and the district Council member to be placed on the agenda for County Council's consideration.
- G. *County Council hearing and action.* Upon receipt of the documents and the recommendation report from the Department [~~containing the recommendations of the Department and the Planning Board~~], County Council shall act on the resolution, or any substitute resolution, at one of its next ~~[two]~~three [(2)](3) regularly scheduled public meetings. A simple majority . . .

[G.]H. The applicant shall be responsible for all Recorder of Deeds filing fees.

- I. *Exceptions.* An amendment of a declaration of restrictions . . .

Section 26. *New Castle County Code Chapter 40* (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.200 (“Miscellaneous application and other reviews”), Section 40.31.210 (“Limited or special use”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.210. Limited or special use.

A limited or special use shall require the submission of a site plan unless a land development plan or parking plan is otherwise required. The Department may at its discretion waive ~~[the]~~any site plan ~~[submission review]~~requirement[s] where in the opinion of the Department the proposed use will have a limited impact on the surrounding property and roads. The Department shall consider the traffic, parking, lighting, noise, litter, event duration, event hours, and other similar criteria when considering this waiver.

Section 27. *New Castle County Code Chapter 40* (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.200 (“Miscellaneous application and other reviews”), Section 40.31.230 (“Reserved”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.230. [Reserved]Property line adjustments.

A property line adjustment is limited to the relocation of a common property line between two (2) residentially-zoned parcels that are proposed for residential use, provided the resulting lots are in conformance with this Chapter or with a variance granted by the Department or Board of Adjustment.

- A. *Applicability.* A property line adjustment shall not be processed if:
1. The subject parcels were created on an open space subdivision plan, planned unit development or alternative development option.
 2. The adjustment would result in the transfer of a dwelling from one parcel to the other.
 3. Buildings, structures or uses on either of the subject parcels do not conform with this Chapter and do not have confirmed nonconforming status under Article 8.
- B. *Submission requirements.* The submission shall include an SLD-1 application and other materials as set forth in Appendix 1 to this Chapter to include a property line adjustment survey.
- C. *Department review.* If the property line adjustment survey complies with the requirements of this section, the General Manager of the Department or his or her designee shall sign the survey.
- D. *Deed Recordation.* Upon approval of the application and survey, new deeds with revised legal descriptions of the two subject parcels must be recorded with the New Castle County Recorder of Deeds. The deeds shall include the approved survey as an exhibit. Department approval of the property line adjustment shall expire in one year from the date the General Manager signs the survey unless both deeds are revised consistent with the approved survey and recorded.

Section 28. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.300 (“Provisions of general applicability”), Section 40.31.320 (“Applications generally”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.320. Applications generally.

- A. *Forms . . .*
- F. *Public notice of land development plans.*
1. *Notice in newspapers.* The Department shall . . .
 2. *Posted notice.* The applicant shall . . .
 - a. Location. The posted sign . . .
 - b. Size. The posted sign . . .

- c. Plan information. The sign shall depict the lot configuration of residential applications or building footprint with square footage, paving, and landscaping in the case of nonresidential applications. The application number, the applicant's name and phone number, the name of the plan, and the tax parcel number(s) shall be prominently displayed on the sign. [The applicant shall affix the Department application number to the posted sign as soon as it becomes known.] The applicant shall be responsible [to] for cleaning and replacing any posted sign (no more than once) which has been defaced to the extent that the information to be conveyed is no longer legible. . . .

Section 29. *New Castle County Code* Chapter 40 (Unified Development Code or "UDC"), Article 31 ("Procedures and Administration"), Division 40.31.700 ("Reviews and types of plans"), Section 40.31.711 ("Resubdivision plan"), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.711. Resubdivision plan.

Proposed revisions to previously recorded plans and previously platted parcels that will not result in any new lots or additional gross floor area shall be considered resubdivisions and shall be reviewed as minor plans for any of the following purposes.

- A. Lot line changes.
- B. E[stablishment, e]limination or relocation of any easements depicted on a record plan or the establishment of an easement that qualifies as a subdivision, except that revisions to establish, eliminate or relocate a private storm drainage easement or publicly-maintained and funded storm drainage or sewer easement shall not be required to be depicted on a record plan unless otherwise required by this Chapter or Chapter 12.
- C. Changes to parking . . .
- D. Changes in the design . . .
- E. Minor changes to stormwater . . .
- F. [Corrections or a]Amendments to notes or other data shown on a plan.

Section 30. *New Castle County Code* Chapter 40 (Unified Development Code or "UDC"), Article 31 ("Procedures and Administration"), Division 40.31.700 ("Reviews and types of plans"), Section 40.31.712 ("Reserved"), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.712. [Reserved]Modifications to Diversified Planned Unit Developments (DPUD).

Revisions to Diversified Planned Unit Developments (DPUD) shall be reviewed in accordance with the standards set forth in this Chapter. A new rezoning ordinance shall be submitted for reintroduction and hearing if the revisions constitute one of the following:

- A. An increase in overall density.
- B. An increase in the number of units of any dwelling unit type by fifteen (15) percent or more.
- C. A decrease in open space.
- D. Major changes in the location of use types on the site which amend the concepts or original intent of the design represented by the exploratory sketch plan.

Section 31. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.700 (“Reviews and types of plans”), Section 40.31.716 (“Reserved”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.716. [Reserved]Record plan modification.

The General Manager of the Department shall have the authority to approve record plan modifications to correct errors and to allow minor revisions to previously-recorded plans.

- A. A record plan modification shall be permitted for any of the following purposes.
 - 1. To correct typographical errors or missing or incorrect bearings and distances or building restriction lines.
 - 2. To adjust lot lines to correct surveying errors or omissions.
 - 3. To adjust plan phasing for plans that are of a single use category, with the exception of mixed use projects.
 - 4. To correct site data and plan notes that were made in error.
 - 5. To eliminate or relocate any private easements depicted on a record plan
- B. Record plan modifications shall be reviewed as minor plans.
 - 1. The record plan modification shall retain the original plan application number.
 - 2. Only modifications for permitted revisions and the required supersedes note may be depicted on the plan.

3. The Department shall forward the record plan modification to outside agencies for review and approval as it deems necessary.
4. Upon Department approval, the plan shall be recorded in the Office of the Recorder of Deeds.

Section 32. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.800 (“Performance guarantee”), Section 40.31.820 (“Land Development Improvement Agreement (LDIA”)), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.820. Land Development Improvement Agreement (LDIA).

Except for minor residential subdivisions or plans for which a governmental entity is the applicant or property owner, [A]all improvements contemplated in minor or major land development plans as required by this Chapter for sewer, drainage and detention, as well as for other improvements such as stormwater management facilities, parking, curbing, paving, sidewalks, open space improvements and common facilities, property monuments, earthwork, lighting, landscaping and bufferyards (except for replacement of on-lot residential landscaping), shall be subject to a performance guarantee.

A. The developer's engineer . . .

Section 33. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 31 (“Procedures and Administration”), Division 40.31.800 (“Performance guarantee”), Section 40.31.840 (“Release of surety”), is hereby amended by adding the material that is underscored, as set forth below.

Sec. 40.31.840. Release of surety.

A. Upon completion of all or part of the improvement, the developer may request a reduction or closure of the surety or performance guarantee. The Department shall have the development inspected. Any deficiencies shall be identified and the developer notified in writing of the deficiencies. If all work is complete and a maintenance bond provided, the surety shall be closed. For work proceeding in stages, the developer may request partial release. Prior to release, a maintenance guarantee shall be required.

B. When a resubdivision plan is recorded to eliminate all improvements shown on a previously recorded land development plan or revert subdivided property to its status prior to the most recent recorded land development plan, or when a plan sunsets in accordance with Section 40.01.130, the Department may release the required surety.

Section 34. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Division 40.31.900 (“Prohibitions, enforcement, and penalties”), Section 40.31.920

(“Enforcement”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Sec. 40.31.920. Enforcement.

A. *Administrative enforcement:*

1. ~~[Code violations. Health, safety, welfare of public not in jeopardy.]~~ Pre-deprivation show cause hearing: Except as provided in subsections 2 and 3 below, if such violations are not remedied within the time specified in the notice, the General Manager of the Department or his or her designee, shall schedule a rule to show cause hearing and provide the person an opportunity to defend his, her, or its conduct at a show cause hearing prior to any penalty being imposed. After such rule to show cause hearing, the General Manager of the Department or his or her designee, shall render a decision within ten (10) days and send a written letter to the person informing him, or her of his or her decision and detail the reasons for any adverse action taken.
2. The General Manager, or his or her designee, may issue a citation that imposes a civil penalty for violation of any code provision delineated herein. A pre-deprivation show cause hearing shall not be required prior to the issuance of the citation if the property owner or responsible party is provided an opportunity to contest the citation within ten (10) business days of its issuance.
 - a. Citations may be issued for a violation of:
 - i. Sections 40.03.420.A.6, 40.03.420.A.8, and 40.03.420.A.9 (concerning home occupations).
 - ii. Section 40.03.440 (concerning sale of motor vehicles as an accessory use).
 - iii. Sections 40.06.030.B.6.c and 40.06.030.B.6.d.iii (concerning Electronic Variable Message Sign (EVMS)).
 - iv. Section 40.06.040.E (concerning prohibited signs).
 - b. The civil penalty may not exceed \$50.00 for each violation that remains after the tenth (10th) calendar day of issuance of the notice of violation. However, any civil penalty not paid within thirty (30) calendar days from the date of the citation shall double.
 - c. After the property owner or responsible party has an opportunity to contest the citation through an administrative appeal process, the violation shall constitute a continuing violation if it is not remedied. A notice of violation shall not be required for a continuing violation and the General Manager, or his or her designee, may issue a citation and impose an additional \$50.00 penalty each day the violation continues.

- d. The owner of a property or the responsible party aggrieved by any citation issued pursuant to this section may, within ten (10) business days of the date of the citation, follow any one of the following administrative appeal processes to contest the citation:
 - i. Request a show cause hearing as described in subsection A. Requests shall be made in writing to the General Manager, or his or her designee, unless a different method is delineated in the notice of violation or citation.
 - ii. Submit a detailed written explanation of the grounds for the appeal to the General Manager, or his or her designee.
 - f. Stay. An appeal of a violation under this Section shall act as an automatic stay of the action being appealed.
 - g. The General Manager, or his or her designee, shall issue a written decision affirming, modifying, reversing, revoking or vacating the citation. The decision may be appealed pursuant to Division 40.31.500.
3. [a. Exceptions.]In the event a violation of [Division 40.06.000.D] Section 40.06.040.E is reasonably believed to exist by the Department or a Code Enforcement Officer, the Department or Code Enforcement Officer may [shall] immediately confiscate the sign, display, or device. Any[H] sign[s], display[s], or device[s immediately] shall become the property of the County if the property owner or responsible party does not claim it within ten (10) calendar days from the date of its[upon] confiscation. No hearing shall be provided to the [violator] property owner or responsible party unless additional penalties are pursued.
- 4[2]. [Unsafe work or work being done in the absence of necessary approval(s), plan(s), or permit(s).] Post-deprivation show cause hearing: whenever the General Manager of the Department
- 5[3]. Penalties that may be imposed after hearing:
- a. Refusal to issue any further building permits [and/or certificates of occupancy] . . .
 - c. Administrative fines. Notwithstanding any other section of this Chapter, the General Manager of the Department, or his or her designee, may assess a civil penalty to the property owner or person responsible for the property for violation of any code provision delineated in is Chapter, or violation of any permit, certificate, approved plan, or directive of the General Manager, or his or her designee. The civil penalty may be up to one to one hundred (\$100.00) dollars for each day the violation continues. The General Manager of the Department, or his or her designee, may also assess the property owner or person responsible for the property any expense incurred by the County for the removal, abatement or

~~correction of such violation.[any person who is found to have violated any provision of this Chapter, permit, certificate, approved plan, or directive of the General Manager of the Department or his or her designee, in addition to any expense incurred by the County for the removal or abatement of such violation, will be assessed an administrative fine of up to one hundred (\$100.00) dollars for each day the violation continues.] If the amount is not paid within such time stated in a notice, decision, order or directive of the General Manager, or his or her designee, such amount, together with a penalty of ten (10) percent of expenses incurred and interest of six (6) percent per annum shall be assessed against the land or improved premises.~~

6. Service of notices and citations issued pursuant to these administrative enforcement provisions shall be pursuant to Section 40.31.910.B.

- B. *Civil Enforcement:* Any person violating . . .

Section 35. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 33 (“Definitions”), Division 40.33.300 (“General definitions”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

Division 40.33.300. General definitions.

This Division contains the definition of words used in this Chapter . . .

Height, building. The maximum height of a building permitted on a lot. Building height is determined from the vertical distance as measured from the [~~median~~]average level of the finished grade adjacent to [~~the~~]each exterior wall of the building to the highest point of the building, excluding chimneys and antenna. See Section 40.04.110. . . .

Lot line. A property line dividing . . .

- A. *Front lot line.* The street lot line from which the unit takes access; or where more than one (1) street yard could safely provide this access, the street serving the smallest traffic volume[,-]unless otherwise determined by the Department. . . .

Section 36. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Appendix 1 (“Application and Plan Requirements”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

APPENDIX 1. APPLICATION AND PLAN REQUIREMENTS

1. Land development application submission requirements.

- A. *Pre-application sketch plan (planning and engineering).*

1. SLD - 1 form; . . .
5. Estimated [S]sanitary sewer flows, sewer location and all possible tie-ins; . . .

B. *Exploratory Plan.*

1. Planning.
 - a. A completed application . . .
 - i. Sewer feasibility plan [~~for minor subdivision plans.~~] for plans that contemplate connection to the County sewer.
 - j. All current County taxes . . .
 - m. Digital CAD file (DWG or DXF) for the plan.
2. Engineering . . .
3. For land development applications that contemplate connection to County sewer, a letter from the Department of Special Services indicating that sewer capacity is or will be available for the proposed development.
4. The Land Development Improvement Agreement (LDIA) Information Sheet[-] (may be submitted anytime prior to recordation). The sanitary sewer agreement will not be executed until the sewer design plan is approved and the required sanitary sewer easements have been recorded.
5. For sewer only plans, the sanitary sewer agreement will not be executed until the sewer design plan is approved and required sanitary sewer easements have been recorded.

C. *Site construction plans . . .*

1. Planning.
 - a. Record check prints . . .
 - e. The applicable filing fee in accordance with Appendix 2.
2. Engineering.
 - a. One (1) copy . . .
 - b. [The applicable filing fee in accordance with Appendix 2.]

- [e.] The applicable engineering filing fee in accordance with Appendix 2.
- [d]c. One (1) copy of the stormwater and drainage analysis in accordance with Chapter 12 of the *New Castle County Code*.
- [e]d. One (1) copy of all Department's approved Engineering Construction Checklists, signed and sealed by the responsible design professional in charge.
- [f]e. One (1) Notice of Intent to Discharge Stormwater during Construction Activity (NOI) form, approved by DNREC.

D. *Record plans (planning)*.

- 1. A completed application . . .
- 13. [Reserved]Approval of sewer design plans and required sanitary sewer easements by the Department of Special Services.
- 14. [Reserved]Digital CAD file (DWG or DXF) for the plan.
- 15. For Resubdivision Plans that revise lot lines, an original deed reflecting the proposed configuration of the subject parcels. The deed will be transmitted to the Recorder of Deeds with the record plan.
- 16. All other information and items . . .

2. Land Development Plan Requirements . . .

3. Other Reports and Applications . . .

A. *Floodplain permit application . . .*

M. Record plan modification. The following items must be submitted:

- 1. A completed application form.
- 2. The applicable filing fee in accordance with Appendix 2.
- 3. Two (2) folded paper prints.
- 4. All current school taxes, county taxes and sewer service fees must be paid or not delinquent at the time of application.
- 5. Approval letters from DelDOT, State Fire Marshal, DNREC and Engineering Section, Licensing Division, as determined by the Department.

6. Two (2) film reproducibles following final approval of plan.
- N. Property Line Adjustment. The following items must be submitted:

 1. A completed application form.
 2. The applicable filing application fee in accordance with Appendix 2.
 3. One (1) copy of any deed restrictions to which New Castle County is a party.
 4. All current school taxes, county taxes and sewer service fees must be paid or not delinquent at the time of application.
 5. Property line adjustment survey. The property line adjustment survey must be drawn to scale and include the following information:
 - a. Tax parcel numbers for all subject properties.
 - b. Lot lines described with bearings and distances in accordance with professional Delaware State surveying standards.
 - c. Identification, location, and distance of all improvements (stick-built or manufactured structures, pole-buildings, or any other structures) from property lines after adjustment.
 - d. Delineation of all protected resources established by Article 10.
 - e. Dimensions and size (square feet or acres) of all proposed tracts prior to and after the proposed property line adjustment.
 - f. Legend.
 - g. All abutting streets (noting whether public or private), including name.
 - h. All existing easements, including widths and types, specifically noting the use, whom they serve and deed recording information.
 - i. Location of any wells or septic systems.
 - j. The survey shall be signed, sealed and dated by a Delaware P.E./P.L.S.

Section 37. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Appendix 2 (“Fees”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below.

APPENDIX 2. FEES

1. Land Development and Rezoning Processing...

- A. Subdivision/Land Development Plans/Rezoning>Title/Utility and Condominium Conversion Plans
 - 1. Minor/Resubdivision Exploratory Sketch Plan . . .
 - 4. Record Check Print - \$850.00 each submission . . .

K. Record Plan Modification - \$1,000.00

2. Engineering Section . . .

4. Other

- A Zoning Permit . . .
- V. ~~[Any other permit required by Chapter 40 – \$575.00]~~Property Line Adjustment – \$500.00
- W. Unified Development Code . . .
- X. Any other permit required by Chapter 40 – \$575.00

Section 38. New Castle County Council finds that the provisions of this Ordinance are consistent with the spirit and intent of the New Castle County Comprehensive Development Plan.

Section 39. All ordinances or parts of ordinances and all resolutions or parts of resolutions that may be in conflict herewith are hereby repealed except to the extent they remain applicable to land use matters reviewed under previous Code provisions as provided in Chapter 40 of the *New Castle County Code*.

Section 40. The provisions of this Ordinance shall be severable. If any provision of this Ordinance is found by any court of competent jurisdiction to be unconstitutional or void, the remaining provisions of this Ordinance shall remain valid, unless the court finds that the valid provisions of this Ordinance are so essentially and inseparably connected with, and so dependent upon, the unconstitutional or void provision that it cannot be presumed that County Council would have enacted the remaining valid provisions without the unconstitutional or void one, or unless the court finds that the remaining valid provisions, standing alone, are incomplete and incapable of being executed in accordance with County Council's intent. If any provision of this Ordinance or any zoning map or portion thereof is found to be unconstitutional or void, all applicable former ordinances, resolutions, zoning maps or portions thereof shall become applicable and shall be considered as continuations thereof and not as new enactments regardless if severability is possible.

Section 41. This Ordinance shall become effective immediately upon passage by New Castle County Council and signature of the County Executive or as otherwise provided in *9 Del. C* § 1156 and shall only apply to Land Use applications submitted after such date unless the applicant by written request agrees to submit to the provisions of this Ordinance.

Adopted by County Council of
New Castle County on:

President of County Council
New Castle County

Approved on:

County Executive
New Castle County

SYNOPSIS: The following is a summary of the revisions contained in this ordinance broken down by New Castle County Code Division or Section number.

Sec. 40.01.130. This amendment clarifies that minor land developments are not subject to sunsetting regulations. Construction must commence within 5 years of plan recordation or the plan will expire.

Div. 40.03.100. This amendment clarifies the process for limited use review.

Sec. 40.03.330. This amendment clarifies when required parking may be used for public interest and special events.

Sec. 40.03.331. This amendment clarifies when required parking may be used for temporary miscellaneous sales and eliminates the surety requirement for such uses.

Sec. 40.05.050. This amendment provides that site capacity calculations are not required for minor residential subdivisions.

Sec. 40.10.115. This amendment clarifies that the standard for adequate conveyance of stormwater is found in Chapter 12 of the *New Castle County Code*.

Sec. 40.10.160. This amendment removes the reference of like land and specifically addresses the standards applicable for the transfer of development rights between WRPA's. The minimum area of restricted land is defined in Table 40.10.010. Subsection B is clarified to require a review

and recommendation from RPATAC where an applicant proposes impervious cover to exceed twenty percent. The standards for an environmental impact assessment report are found in Section 40.10.701.

Sec. 40.10.162. This amendment allows the use of best management practices rather than requiring specific methods of discharge to WRPAs.

Sec. 40.10.165. This amendment removes the reference to a manual of best practices. Stormwater management facility design standards are promulgated by DNREC.

Sec. 40.12.110. This amendment includes pump stations in the analysis of sewer capacity.

Sec. 40.12.111. This amendment clarifies that sewer capacity status is now represented in map format.

Sec. 40.12.112. This amendment removes the option for spray irrigation and other large scale treatment systems as a sewer treatment facility.

Sec. 40.12.310. This amendment provides clarification of terminology used in sewer capacity calculations.

Sec. 40.20.242. This amendment adds standards for sewer easements.

Sec. 40.22.230. This amendment establishes submission requirements for as-built plans.

Sec. 40.22.320. This amendment provides standards for when a lot must connect to the public sewer system and removes references to specific distances that trigger mandatory connection.

Sec. 40.27.310. This amendment establishes a new requirement for completion of active open space and structured recreational facilities by the issuance of fifty percent of building permits. The open space status report must be certified by each professional that designed and prepared the plan depicting the open space, including, if applicable, the landscape architect.

Sec. 40.27.710. This amendment reduces the number of documents a maintenance organization provides to the Department of Special Services when registering.

Sec. 40.27.720. This amendment removes exceptions that have since expired. Communities completed after 2006 have registered with the Department of Special Services.

Sec. 40.30.430 This amendment authorizes RPATAC to provide recommendations and support for the transfer of development rights referenced in Section 40.10.160.

Sec. 40.31.110. This amendment adds a reference to an optional community meeting under the Pre-application Sketch Plan Review step.

Sec. 40.31.112. This amendment establishes a process for when an applicant engages in community outreach after the pre-application sketch plan review conference and prior to exploratory plan submission.

Sec. 40.31.113. This amendment requires final TIS review by DelDOT prior to notice of the Planning Board public hearing for rezoning and major plan applications. This amendment also provides for Special Services review of sewer plans. All record plans submitted after a rezoning will be subject to general conformance with the previously approved plan, eliminating the inconsistent application of strict conformity review to a limited number of older plans.

Sec. 40.31.114. This amendment requires approval from Special Services for sewer design and easements at the record plan stage.

Sec. 40.31.130. This amendment simplifies submission requirements for deed restriction change applications. The application need only be sent to the Department and the district Council person. The Department will forward to County Council a draft resolution when the recommendation report is complete. When revisions are required, they must be submitted within sixty days of the issuance of the written recommendation. The time for County Council to act on the resolution is expanded from two to three regularly scheduled meetings after receipt of the documents and recommendation report.

Sec. 40.31.210. This amendment provides that the Department can require a parking plan for limited and special use review and clarifies the scope of the Department's discretion regarding review of a limited or special use.

Sec. 40.31.230. This amendment provides a process for property line adjustments outside of the resubdivision process.

Sec. 40.31.320. This amendment requires the application number to be included on posted signs. The Department now provides an application number upon a complete electronic submission.

Sec. 40.31.711. This amendment clarifies which easements qualify for a resubdivision plan, and removes the reference to corrections, which references the record plan modification procedure and provides that plans to vacate improvements are considered resubdivision plans.

Sec. 40.31.712. This amendment provides a procedure for amending Diversified Planned Unit Developments consistent with the procedure outlined in the Former Code.

Sec. 40.31.716. This amendment provides a simplified process for correcting errors and making other minor adjustments to existing record plans.

Sec. 40.31.820. This amendment creates an exception for minor residential plans and plans for which a governmental body is the applicant or property owner.

Sec. 40.31.840. This amendment clarifies that the Department may release a performance guarantee when a plan sunsets or is resubdivided to eliminate improvements subject to a guarantee.

Sec. 40.31.920. This amendment provides authority to enforce certain UDC provisions through civil citations and penalties.

Div. 40.33.300. The amendment clarifies how maximum building heights are calculated and provides flexibility for designation of a front lot line.

Appendix 1. This amendment provides additional submission requirements for Engineering and Special Services review, and establishes application requirements for Record Plan Modification and Property Line Adjustments.

Appendix 2. This amendment establishes revised fees for resubdivisions, establishes fees for record plan modification and property line adjustment processes and clarifies the requirement of the Record Check Print fee.

FISCAL NOTE:

Introduced by: Mr. Tackett
Ms. Kilpatrick
Date of introduction:

ORDINANCE NO. 18-

TO AMEND NEW CASTLE COUNTY CODE CHAPTER 40 (ALSO KNOWN AS THE UNIFIED DEVELOPMENT CODE OR “UDC”), REGARDING ARTICLE 3 (“USE REGULATIONS”), ARTICLE 4 (“DISTRICT INTENSITY AND BULK STANDARDS”), ARTICLE 5 (“SITE CAPACITY AND CONCURRENCY CALCULATIONS”), ARTICLE 7 (“TRANSFER OF DEVELOPMENT RIGHTS AND OTHER INCENTIVES AND BONUSES”), ARTICLE 10 (“ENVIRONMENTAL STANDARDS”), ARTICLE 20 (“SUBDIVISION AND LAND DEVELOPMENT DESIGN PRINCIPLES”), ARTICLE 21 (“IMPROVEMENT AND DESIGN STANDARDS”), ARTICLE 22 (“DRAINAGE, UTILITIES, SEPTIC SYSTEMS, PARKING, LOADING, AND LIGHTING”), ARTICLE 23 (“LANDSCAPING, TREES, AND EROSION”), ARTICLE 33 (“DEFINITIONS”), AND APPENDIX 3 (“PLANT LISTS”)

WHEREAS, New Castle County has engaged in a comprehensive review of the Unified Development Code (“UDC”) to identify standards that need revision for technical compliance, internal consistency, or consistency with current development practices; and

WHEREAS, New Castle County has undertaken a robust public review process with stakeholders including County residents, developers, homebuilders, engineers, landscape architects, and a professional planning consultant, which included at least eleven meetings comprised of six focus group sessions, four stakeholder meetings, and a public workshop; and

WHEREAS, based upon this comprehensive review of the UDC, the County has updated certain design standards as provided herein; and

WHEREAS, the Department of Land Use has continued to review, interpret, and monitor the application of the UDC with regard to land development and has identified additional clarifications, corrections, improvements and changes necessary to further enhance the UDC’s design standards; and

WHEREAS, County Council has determined that the provisions of this Ordinance substantially advance, and are reasonably and rationally related to, legitimate government interests, including, but not limited to, the protection and preservation of the public health, safety, prosperity, general welfare, and quality of life.

NOW, THEREFORE, THE COUNTY OF NEW CASTLE HEREBY ORDAINS:

Section 1. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.100 (“Use regulations”), Section 40.03.110 (“Use Table”), Table 40.03.110 (“General Use Table”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Table 40.03.110A General Use Table									Table 40.03.110B General Use Table						Table 40.03.110 C General Use Table		
Zoning District (Urban and Suburban-Transition Character) Y=permitted, N=prohibited, L=limited review, S=special use review, A=accessory,									Zoning District (Suburban and Special Character)						Additional Standards (all districts)		
Land Use	* TN	ST	M M	ON	OR	CR	BP	I	CN	*** S	SE	** NC	HI	EX	SR	Parking	Limited & Special Use Standards
... Residential									Residential						Residential		
... Open space planned	Y	Y	N	N	N	N	N	N	N	Y	N	N	N	N	N	2.25/du.	---
Apartments	Y	Y	N	N	N	N	N	N	N	N	N	L	N	N	N	[2.25/du.] <u>Table 40.03.522</u>	Section 40.03.303
Apartment conversions	L	L	N	N	N	N	N	N	N	L	N	L	N	N	N	2.0/du.	Section 40.03.304

Section 2. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.300 (“Additional limited and special use standards”), Section 40.03.316 (“Drive-in facility”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.03.316. Drive-in facility.

- A. When a drive-in facility is located within, or adjacent to, [Adjoining S, ST, TN, NC, SE or SR] residential zoning [D]districts or residential uses, talk boxes must be screened by a sound barrier, such as a solid fence or masonry wall and landscaping.
- B. In the BP District, . . .
- C. There shall be a bypass lane to maintain vehicular circulation if required by the Department. Drive-in lanes shall be separated from other aisles by a curbed island.
- D. Except for bank and pharmacy uses, [T]the circulation design must accommodate on site an additional four (4) vehicles for stacking that may be within parking aisles.
- E. Required stacking lanes . . .
- F. Additionally, when a drive-in facility is placed adjacent to the public right-of-way or other public access thoroughfare, the drive-in cartway shall be screened from view with a combination of structures and landscaping as deemed appropriate by the Department.

Section 3. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.400 (“Individual use standards”), Section

40.03.410 (“Accessory uses, residential”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.03.410. Accessory uses, residential.

Residential uses may . . .

- A. *General standards.* Unless otherwise provided in Subsections B through [J] L of this section, all accessory structures (e.g., detached garages, sheds, pergolas, and similar structures) shall meet the following standards:

1. For lots less than two (2) acres, [F]freestanding accessory structures shall not be permitted in front of the principal structure or within the street or front yard setback. [However, I]Lots two (2) acres or larger may locate one (1) freestanding accessory structure in front of the principal structure, so long as the freestanding structure is not within the front or street yard setback. Lots ten (10) acres or larger may locate a freestanding accessory structure(s) in front of the principal structure, so long as the freestanding structure(s) is not within the front or street yard setback.
2. Freestanding accessory structures . . .

- D. *Fences.* Fences may be permitted in all yards and all yard setbacks and shall be constructed of materials specifically designed for fences and [shall] may not include barbed or razor wire. Fence panels and fence materials may not [No fence shall] exceed six (6) feet in height[, except as permitted in Subsection F]. To account for installation on sloping ground and any necessary space between the ground and the bottom of the fence panels or materials, the top of the fence panels, materials, and posts may not exceed seven (7) feet in height when measured from the ground, except as permitted in Subsection F.

Section 4. *New Castle County Code Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.400 (“Individual use standards”), Section 40.03.430 (“Accessory uses, nonresidential”)*, is hereby amended by adding the material that is underscored, as set forth below:

Sec. 40.03.430. Accessory uses, nonresidential.

Nonresidential uses (not including agricultural uses) . . .

- C. *Fences.* Where barbed or razor wire fence is used in a nonresidential zoning district, a minimum three-tenths (0.3) opacity bufferyard shall be provided between the fence and any street or residential use. A fence may not exceed eight (8) feet in height in a nonresidential zoning district. To account for installation on sloping ground and any necessary space between the ground and the bottom of the fence panels or materials, the top of the fence panels, materials, and posts may not exceed nine (9) feet in height when measured from the ground...

Section 5. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.500 (“Loading and parking standards”), Section 40.03.510 (“Loading standards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.03.510. Loading standards.

All uses shall provide . . .

A. *Number of required loading bays.*

1. For retail stores, shopping centers, supermarkets, restaurants, and storage warehouses, the number of bays shall be provided as follows:
 - a. One (1) bay for buildings with [three thousand five hundred (3,500)] five thousand and one (5,001) to [eight thousand (8,000)] fifteen thousand (15,000) square feet of gross floor area ("GFA").
 - b. Two (2) bays for buildings with [eight thousand and one (8,001)] fifteen thousand and one (15,001) to [twenty thousand (20,000)] fifty thousand (50,000) square feet of GFA.
 - c. One (1) additional bay for each additional twenty thousand (20,000) square feet of GFA, not to exceed four (4) required bays.
 - d. For buildings smaller than five thousand and one (5,001) square feet, loading shall take place such that access to the site and fire lanes is not impeded.
2. For office buildings, automobile dealerships, motels and hotels, the number of loading bays shall be provided, as follows:
 - a. One (1) bay for buildings with [eight thousand (8,000)] ten thousand and one (10,001) to [twenty thousand (20,000)] fifty thousand (50,000) square feet of GFA.
 - b. One (1) additional bay for each additional fifty thousand (50,000) square feet of GFA, not to exceed three (3) required bays.
 - c. For buildings smaller than ten thousand and one (10,001) square feet, loading shall take place such that access to the site and fire lanes is not impeded.

Section 6. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.500 (“Loading and parking standards”), Section

40.03.522 (“Off-street parking”), Table 40.03.522 (“Off-street parking for specific uses”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Table 40.03.522. OFF-STREET PARKING FOR SPECIFIC USES		
Uses	Parking Spaces Required	
	Per 1,000 sf. of Gross Floor Area	Other Standard
PARKING STANDARDS		
Institutional: Community, Neighborhood, and Residential		
Places of public assembly and churches	---	1 per 4 permanent seats or 10/1000 sf. of public assembly area, whichever is greater
Clubs & associations (no food service)	6.0	---
Clubs & associations (with food service)	10.0	---
Fire station	---	4 per vehicle bay plus 10/1000 sf. of public assembly area
Library or museum	3.5	calculate public assembly areas separately at [0.75 rate] 7.5/1000 sf.
Nursing homes	---	0.33 per bedroom
Day care, kindergarten, preschool	3.5	---
Schools: elementary & junior high	---	2 per classroom, calculate public assembly areas at [0.75 rate] 7.5/1000 sf.
Schools: senior high, trade and vocational, college and university	---	10.0 per classroom, calculate public assembly areas at [0.75 rate] 7.5/1000 sf.
Age-restricted residential developments	---	1.50 per dwelling unit
[Group homes,+] Institutional, residential, monasteries & convents	---	0.75 per bedroom
Rooming & boarding houses	---	1.25 per guestroom
Police station	4.0	---
Post office	4.0[5.0]	---
Residential Uses: Multifamily		
Apartments	---	<u>1.5 per 1 bedroom dwelling unit, 1.75 per 2 bedroom dwelling unit,</u> <u>2.0 per 3 bedroom dwelling unit, 2.25 per 4 bedroom dwelling unit,</u> <u>2.5 per 5+ bedroom dwelling unit; 1 additional guest parking space per 5 dwelling unit</u>
Commercial Uses: Office		
General	3.5	---
Government offices	4.0	---
Medical	4.5	---
Bank/financial	3.0 [4.0]	plus [6] 3 stacking spaces per drive-in window
Commercial Uses: Commercial Retail		
General	4.0	Up to and including 100,000 sf. of GFA —

Table 40.03.522. OFF-STREET PARKING FOR SPECIFIC USES

Uses	Parking Spaces Required	
	Per 1,000 sf. of Gross Floor Area	Other Standard
PARKING STANDARDS		
	<u>3.0</u>	<u>Greater than 100,000 sf. of GFA</u>
Shopping center	4.5 <u>4.25</u> <u>3.0</u>	<u>Up to and including 50,000 sf. of GFA</u> <u>Greater than 50,000 sf. up to and including 100,000 sf. of GFA</u> <u>Greater than 100,000 sf. of GFA</u>
Furniture & carpet stores	---	5.0 space minimum, plus 1 per 1000 sf. of GFA
Commercial temporary outdoor sales	---	1 off-street parking space per 250 sf. of sales and display area (exclusive of production area), minimum 4 spaces
Roadside stand (permanent or temporary)	---	1 per 250 sf. of sales and display area (exclusive of production area)
Hardware, paint & home improvement	4.0 <u>3.0</u>	<u>Up to and including 100,000 sf. of GFA</u> <u>Greater than 100,000 sf. of GFA</u>
Pharmacy	<u>3.0[4.0]</u>	plus 3 stacking spaces per drive-in window
Commercial Uses: Light Auto Service		
General	1.5	or 4 per bay, whichever is greater
Carwashes (single car, automatic bay)	2.0	plus 6 stacking spaces per bay and 1 drying
Carwashes (multiple car, automatic bay)	4.0	plus 12 stacking spaces per bay and 2 drying
Carwash (self-wash bay)	---	3 per bay
Gas station	1.5	or 4 per bay, whichever is greater
Commercial Uses: Services		
Drive-in facility	---	six (6) stacking spaces per window unless a stricter standard applies
Personal service businesses	4.0	---
Funeral homes	8.0	---
Fitness center/health club	<u>7.0[10.0]</u>	---
Restaurants	<u>8.0[9.0]</u>	plus parking for one-quarter of the area of outdoor seating
Fast food restaurants with twenty (20) or fewer seats, or take-out	<u>8.0[9.0]</u>	plus parking for one-quarter of the area of outdoor seating
Fast food restaurants with more than twenty (20) seats	<u>13.0[15.0]</u>	plus parking for one-quarter of the area of outdoor seating
Veterinary services, pet grooming	3.5	---
Kennels	---	5 space minimum plus 0.5 per 1000 sf. of GFA
All others	4.0	--- . . .

Section 7. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.500 (“Loading and parking standards”), Section 40.03.525 (“On-street parking”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.03.525. On-street parking.

A. For commercial, commercial mixed-use, or institutional uses in ~~[the Traditional Neighborhood (TN)] any [D]district, the Department may allow~~ the developer ~~[may]~~to deduct from the required off-street parking their share of available parking in the defined development area~~[on street parking spaces and any common public lot parking]~~ in accordance with the following formula:

$$\text{Parking Credit} = S_a \times P$$

Where

S_a = Share of the area in the ~~[district]~~ defined development area.

P = Total available parking spaces for the proposed use in the defined development area~~[on streets and in common lots]~~. These values would be taken from the development plan.

B. The Department may consider the following factors in defining the development area:

1. Existing buildings and structures with similarly-proximate setbacks are located on the same street.
2. Existing or proposed pedestrian facilities or transit stops are nearby on adjacent streets.
3. Institutional, public assembly or similar uses are nearby or may be accessed by pedestrians.
4. The proposed development is in or near existing development that exhibits pedestrian-scale streetscapes.
5. On-street parking on adjacent streets is permitted.
6. Compatibility with Guiding Principles – Character Area standards for building design, site design and amenities.
7. The proposed development utilizes concurrent modification of street bufferyard opacity standards.
8. The proposed development is identified in any area or corridor master plan for land use or transportation.

9. Natural or man-made boundaries are present.

Section 8. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 3 (“Use Regulations”), Division 40.03.500 (“Loading and parking standards”), Section 40.03.527 (“Bicycle parking”), is hereby amended by adding the material that is underscored, as set forth below:

Sec. 40.03.527. Bicycle parking.

All parking facilities containing more than ten (10) parking spaces, excluding spaces for vehicle storage, fleet vehicles, and special vehicle types such as trucks, buses, trailers, and vans, shall provide one (1) bicycle parking space or locker for each ten (10) parking spaces [~~in the lot~~]. No more than twenty (20) bicycle parking spaces shall be required in any one (1) facility.

Section 9. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 4 (“District Intensity and Bulk Standards”), Division 40.04.100 (“District performance standards”), Section 40.04.110 (“District and bulk standards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.04.110. District and bulk standards.

This Section contains the basic district standards . . .

E. Exceptions.

1. *Projections into required yards.* The following exceptions are permitted for residential dwellings.
 - a. Bay windows. . .
 - f. An uncovered porch or deck or any part thereof elevated above ground level may project half the distance of the minimum required yard but no more than fifteen (15) feet. Stairs leading from the deck, with a landing not greater than [~~twenty-five (25)fifty (50) square feet, may project half the distance of the minimum required yard but not more than twelve (12) feet.~~
 - g. [~~Uncovered~~] Covered entrance ways, stairs, and [~~eovered~~] enclosures [~~of basement stairs~~]providing entry directly to a dwelling and including a landing of not more than [~~twenty-five (25)~~ fifty (50) square feet may project half the distance of the minimum required yard but not more than twelve (12) feet.

F. Street yard build-to line in ON, CN, ST and CR zoning districts. [~~Where determined to be appropriate~~] If required by the Department, the minimum street yard setback shall be

established as a [fifteen (15) foot] build-to [(or maximum setback)] line for the principal structure(s) on the lot. The build-to line may be less than the required minimum street yard setback. [In its evaluation] The Department shall consider [any of] the following criteria when determining the location of the build-to line:

1. Existing buildings and structures with similarly proximate setbacks are located on the same street; particularly, institutional, public assembly or similar uses are nearby or may be accessed by pedestrians.
2. Standards for building design, site design and amenities follow the Guiding Principles in Appendix 7 and e[E]xisting or proposed pedestrian facilities or transit stops or on-street parking are nearby on adjacent streets.
3. [Institutional, public assembly or similar uses are nearby or may be accessed by pedestrians.] The proposed development is in or near existing neighborhoods or development(s) that exhibit pedestrian-scale streetscapes.
4. [The proposed development is in or near existing neighborhoods or development that exhibit pedestrian scale streetscapes.] The proposed development utilizes concurrent modification of street bufferyard opacity standards pursuant to Article 23.
5. [On street parking on adjacent streets is permitted.] The proposed development is identified in any area or corridor master plan for land use or transportation.

Section 10. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 4 (“District Intensity and Bulk Standards”), Division 40.04.100 (“District performance standards”), Section 40.04.111 (“Landscape and illumination standards”), Table 40.04.111 (“Use and Lot Standards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Table 40.04.111A. USE AND LOT STANDARDS						
Zoning District & Development Type	Landscaping Plant Units per (See Division 40.23.100)			Bufferyard Opacity Standards		
				Adjoining Streets		
	Lot	Acre Open Space	Parking Spaces	Arterial	Collector	Minor
<u>... Suburban (S)</u>						
Farmstead	*	na.	na.	-	-	-
Single-family	2/du *	4	none	0.4	0.3	0
Open space subdivision, option 1 and 2	1/du *	4	none			
Open space planned	1/du *	5	1/12[46]			

Table 40.04.111A. USE AND LOT STANDARDS

Zoning District & Development Type	Landscaping Plant Units per (See Division 40.23.100)			Bufferyard Opacity Standards					
				Adjoining Streets					
	Lot	Acre Open Space	Parking Spaces	Arterial	Collector	Minor			
Hamlet/Village	1/du *	6	1/12						
	1/du *	6	1/12						
Institutional residential	5/ac.	4	1/12[46]			0.2			
Other permitted uses	5/ac.	4	1/12[46]						
Suburban Transition (ST)									
Single-family	2/du	5	none	0.3	0.3	0.3			
Single-family attached	1/du		1/12[20]						
Open space planned	1/du								
Apartments	1/du								
Other permitted uses	6/ac.								
Traditional Neighborhood (TN)									
Single-family village house	1/du	5	1/12[20]	0.3	0.3	0.3			
Single-family attached	1/du								
Open space planned	1/du								
Mixed use	6/ac.								
Other permitted uses	5/ac.								
Neighborhood Conservation (NC)									
NC2a	2/du	4	none	0.3	0.3	0			
NC40									
NC21									
NC15									
NC10									
NC6.5	1/du								

Table 40.04.111A. USE AND LOT STANDARDS

Zoning District & Development Type	<i>Landscaping Plant Units per (See Division 40.23.100)</i>			Bufferyard Opacity Standards		
				Adjoining Streets		
	Lot	Acre Open Space	Parking Spaces	Arterial	Collector	Minor
NC5	6/ac					
NCsd						
NCth						
NCga		6	1/12[20]	0.4	0.4	0.2
NCap						
Other permitted uses**	6/ac					
Manufactured Home (MM) District						
Single wide	1/du	6	1/16	0.5	0.5	0.4
Double wide						
Other permitted uses	6 ac					
Office Neighborhood (ON)						
Offices	10/ac.	6	1/12[46]	0.3	0.3	0.2
Mixed use						
Other permitted uses						
Office Regional (OR)						
Offices	10/ac.	7	1/12[20]	0.3	0.3	0.2
Commercial lodging						
Mixed use						
Other permitted uses						
Commercial Neighborhood (CN)						
Offices	8/ac	8	1/12[46]	0.3	0.3	0.3

Table 40.04.111A. USE AND LOT STANDARDS

Zoning District & Development Type	Landscaping Plant Units per (See Division 40.23.100)			Bufferyard Opacity Standards		
				Adjoining Streets		
	Lot	Acre Open Space	Parking Spaces	Arterial	Collector	Minor
Commercial retail						
Other commercial uses						
Mixed use						
Other permitted uses						
Commercial Regional (CR)						
Offices						0.3
Commercial lodging						
Commercial retail						
Vehicular sales, rentals and service						
Other commercial uses						
Mixed uses						
Other permitted uses						
Heavy retail and service						
Business Park (BP)						
Offices, commercial lodging					0.3	...
Industrial						
Restaurants						
Other permitted uses						

Section 11. *New Castle County Code Chapter 40 (Unified Development Code or “UDC”), Article 4 (“District Intensity and Bulk Standards”), Division 40.04.200 (“Landscaping”), Section 40.04.210 (“Required landscaping”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:*

Sec. 40.04.210. Required landscaping.

A. Landscaping is required....

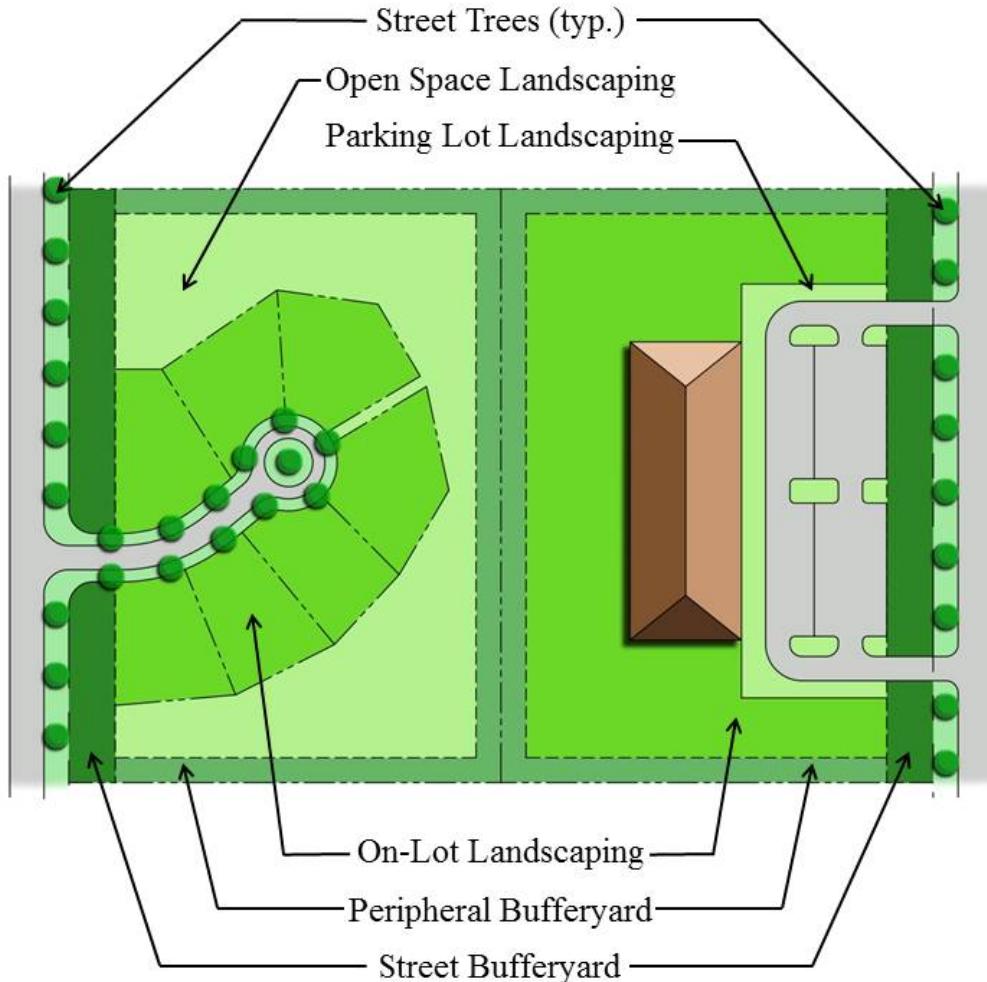
B. Figure 40.04.210 shows how a property is divided into planting areas for peripheral bufferyards, street bufferyards, on-lot landscaping, open space landscaping, street trees and

~~parking lot landscaping. [Each area must be measured to determine the amount of landscaping required. A scenic corridor would replace the street bufferyards. The landscaping areas do not overlap.]~~

1. Each planting area must be measured to determine the amount of landscaping required.
2. Where scenic corridors exist, such scenic corridor standards shall apply instead of the applicable street bufferyards.
3. On-lot and parking lot planting areas may overlap on parcels one (1) acre or smaller. All other planting areas may not overlap.

Section 12. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 4 (“District Intensity and Bulk Standards”), Division 40.04.200 (“Landscaping”), Section 40.04.210 (“Required landscaping”), Figure 40.04.210 (“Landscaping Areas”), is hereby amended by adding the material that is underscored, deleting the material that is bracketed and stricken, removing the current Figure 40.04.210, all of which shall be considered bracketed and stricken, and adding the below Figure 40.04.210, which shall be considered underscored in its entirety, as set forth below:

Figure 40.04.210 – [LANDSCAPING AREAS] PLANTING AREAS



Section 13. *New Castle County Code Chapter 40* (Unified Development Code or “UDC”), Article 4 (“District Intensity and Bulk Standards”), Division 40.04.200 (“Landscaping”), Section 40.04.220 (“Landscaping standards for lots and parking lots”), is hereby amended by adding the material that is underscored, as set forth below:

Sec. 40.04.220. Landscaping standards for lots and parking lots.

Table 40.04.111A establishes the required landscaping . . .

- C. Where more than forty (40) parking spaces are provided, parking lot landscaping must be distributed within parking lot areas so there are no more than twelve (12) consecutive parking spaces in a row between landscaped parking peninsulas or islands.

Section 14. *New Castle County Code Chapter 40* (Unified Development Code or “UDC”), Article 4 (“District Intensity and Bulk Standards”), Division 40.04.300 (“Bufferyard performance standards”), Section 40.04.330 (“Bufferyard use”), is hereby amended by adding

the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.04.330. Bufferyard use.

Only the following uses are permitted in required bufferyards: [A bufferyard may be used for passive recreation. It may contain pedestrian, bike, or equestrian trails, provided the plant material amount is not reduced because of the trail, the total width of the bufferyard is maintained or increased by the width of the trail, and all other regulations in this Code are met. However, in no event shall swimming pools, tennis courts, sports fields, or other active recreational facilities be permitted in bufferyards. Where a golf course is installed in the bufferyard location, it shall be considered an adequate bufferyard provision.]

A. Sidewalks, shared-use pathways and trails.

1. Opacity may be reduced within frontage or street bufferyards as provided in Section 40.23.142.
2. Opacity may not be reduced within side or rear bufferyards.

B. Passive recreation.

C. Golf courses. Where a golf course is installed in the bufferyard location, it shall be considered an adequate bufferyard provision. All other active recreation, such as swimming pools, tennis courts, and sports fields, shall be prohibited.

Section 15. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 5 (“Site Capacity and Concurrency Regulations”), Division 40.05.000 (“Purpose”), Section 40.05.050 (“Applicability”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.05.050. Applicability.

At the preapplication stage for a rezoning or a major or minor subdivision or land development proposal, the applicant shall comply with the requirements of this Article and shall submit a complete site carrying capacity analysis pursuant to Section 40.05.510, except as follows.

A. A site resource capacity analysis . . .

[K. The floor area of parking structures shall not be considered as part of the floor area required in the site capacity calculation in this Article.]

Section 16. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 10 (“Environmental Standards”), Division 40.10.100 (“Resource protection standards”), Section 40.10.136 (“Standards for mitigation of forests”), is hereby amended by

adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.10.136. Standards for mitigation of forests, old fields and meadows.

In low-quality forests, old fields and meadows (where [~~the majority~~] over fifty (50) percent of [~~canopy trees~~] existing plants are listed as "[~~invasive exotics~~] Plants to Avoid" in Appendix 3 to this Chapter), mitigation shall be required. The developer shall submit a mitigation plan by a qualified forester or landscape architect. At a minimum, the plan shall provide for the following:

- A. Elimination of invasive non-native species (see Appendix 3 to this Chapter).
- B. Under planting [~~with fifty (50) whips per acre of canopy trees~~] with native plants in accordance with Section 40.23.240 and the planting rates listed in Table 40.23.240 (see Appendix 3 to this Chapter).
- C. Long-term management program including, initial action, follow-up in first three (3) years, and a long-term maintenance[s] plan. This should focus on the ultimate [~~less~~] eradication of [~~exotic~~] non-native invasive species that interrupt growth of newly-planted stock.
- D. Planting of an indigenous herbaceous forest or meadow groundcover (see Section 40.23.240 and Appendix 3 to this Chapter).
- E. ~~The plant material in the mitigation area shall be determined based on a tree survey of the disturbed area (Table 40.10.351.E.)~~

[Table 40.10.351E.
STANDARDS FOR FOREST MITIGATION

DBH of Canopy Trees Removed	Replacement Canopy Trees	
	Amount	Caliper
36" or larger	5	3"
24"-35"	3	3"
16"-23"	3	2.5"
8"-15"	2	2.5"
4"-8"	1	2"

STANDARDS FOR FOREST MITIGATION		
<i>DBH of Canopy Trees Removed</i>	<i>Replacement Canopy Trees</i>	
	<i>Amount</i>	<i>Caliper</i>
Undesirable species	2	6 ft. whips
Area requirement per acre	40	4 ft. whips]

[F]E. The plant types (trees, shrubs, etc.) used in mitigation shall be similar to those [destroyed]removed and be of native or indigenous[except those undesirable species shall be replaced by other]species as approved by the Department (see Appendix 3 to this Chapter).

Section 17. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 20 (“Subdivision and Land Development Design Principles”), Division 40.20.200 (“Subdivision layout”), Section 40.20.210 (“Blocks”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.20.210. Blocks.

Standards for blocks in subdivisions shall be as follows:

- A. Where possible, blocks shall be laid out to have their short length abutting arterials, collectors, or the development's major road. [The blocks should not in general exceed fifteen (15) lots in length as measured on one (1) side of the street.] The length, width and shape of blocks should be determined with due regard to the provision of adequate sites for buildings of the type proposed, zoning requirements, topography, [fire access,] emergency services, utilities, and interconnection to adjacent parcels[and police protection].
- B. Blocks should be, at minimum....
- C. Blocks for commercial, office and industrial areas, [may vary from the e]Elements of design contained in this Section may vary if the nature of the use requires other treatment. In such cases, safe and convenient multi-modal access to the street system shall be required. Space for off-street parking also may require similar access for employees and customers. Extension of streets and utilities should be provided as necessary.
- D. Blocks for residential, commercial, office or mixed-use style subdivisions or developments. [In the Traditional Neighborhood Districts,]

1. [a]A grid or other formal system is desired in which open spaces are integrated into the block design. Exceptions would be made for green spaces along drainage or stream channels, or where other natural resources make the grid difficult or cost prohibitive.
2. Alleys are considered desirable [for these] in areas where lot sizes are less than twenty thousand (20,000) square feet in area. Where possible, alleys should be used to provide increased vehicular, bicycle, and pedestrian circulation and access, provide areas for utility installation, and allow interconnections to adjacent parcels.
3. No sides less than two-hundred forty (240) feet in length and no sides greater than six-hundred (600) feet in length with a maximum perimeter of one-thousand eight hundred (1,800) feet shall exist. These distances will be measured from either right-of-way and parcel lines or development envelopes as appropriate.
4. Shared use pathways may be placed generally perpendicular to the longest block dimension at mid-block in lieu of a street or roadway, with the approval of the Department. Landscaping along mid-block shared use pathways shall be provided as required by this Chapter.

Section 18. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 20 (“Subdivision and Land Development Principles”), Division 40.20.200 (“Subdivision layout”), Section 40.20.230 (“Streets”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.20.230. Streets.

All new streets....

F. *Street connectors.* Subdivisions shall be connected to each other to provide reasonable access within a superblock. The street connections shall follow the local circulation plan (Section 40.21.111). Whenever a street interconnection is proposed[~~and shown on a plan to be recorded~~], the following notification requirements [shall apply]must be noted on the applicable plan:

1. The developer [and]or its assigns shall, during construction and before the first lot is sold, install a street sign to provide notice to potential purchasers of property along a proposed or planned interconnecting street that said interconnection is planned or proposed.
 - a. Such signs shall be of a metal DelDOT regulation street sign and shall be placed at the end of the stub street in the right-of-way.

- b. The sign shall indicate "Street Connection to Future Development" [."~~The sign shall also~~, as well as reference "New Castle County Department of Land Use" and the respective "instrument number" of the recorded plan depicting the interconnection.
 - c. For projects where the interconnecting street is not constructed until future phases, the developer shall move the sign as necessary (to be determined by the Department) to the end of the stub street as construction occurs. The sign shall be removed once the interconnection is made.
 - d. Photographic proof of installation and a signed affidavit must be provided to the Department prior to issuance of the first building permit.
 - 2. The developer ~~[and]~~ or its assigns shall obtain
- G. *Private streets.* Private streets shall be....
- H. *Marginal access streets. . .*
- I. *Alleys. . .*
- J. *Culs-de-sac.* ~~[A cul-de-sac's length shall be dictated by the number of lots with street frontage. Cul-de-sacs shall not serve a total of more than sixteen (16) lots, except where topography, open space, or resource protection dictates. Lengths of six (6) to fourteen (14) lots are preferred.]~~
- 1. A cul-de-sac proposed on a residential, commercial, office or mixed-use major land development plan shall be no greater than three-hundred (300) feet in total length when measured from the right-of-way of the intersecting street to the right-of-way at the end of the cul-de-sac. The cul-de-sac may not serve more than sixteen (16) lots.
 - 2. A cul-de-sac proposed on an industrial or business park major land development plan shall be no greater than one-thousand (1,000) feet.
 - 3. The length of the cul-de-sac abutting an area subject to essential access approval may be deducted from the calculation of the standard.

Section 19. *New Castle County Code Chapter 40* (Unified Development Code or "UDC"), Article 21 ("Improvement and Design Standards"), Division 40.21.100 ("Streets"), Section 40.21.111 ("Local circulation plans"), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.21.111. Local circulation plans.

To [minimize] coordinate vehicular access points on arterial and collector roads, the Department and DelDOT may, when [the first] development occurs in an area, develop a local circulation plan. The local circulation plan shall identify desired local or collector [or residential collectors] roads within a superblock, areas for frontage-type roads or reverse frontage, and preferred intersection locations. The local circulation plan shall be based on property maps, zoning, and environmental, topographic and alignment information. [All landowners] Land development plans shall conform to [this] the local circulation plan [in order to obtain subdivision approval]. The following criteria shall be used in developing the local circulation plan:

- A. Collectors [shall serve only the superblock and not] may provide alternative [or cut-through] routes for [regional or sub-regional] traffic. Where superblocks [are too large]-exceed two thousand (2,000) feet, new arterial or collector alignments may be designated.

....

Section 20. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 21 (“Improvement and Design Standards”), Division 40.21.100 (“Streets”), Section 40.21.141 (“Culs-de-sac”), is hereby amended by underlining that material to be added as set forth below:

Sec. 40.21.141. Culs-de-sac and other turnarounds.

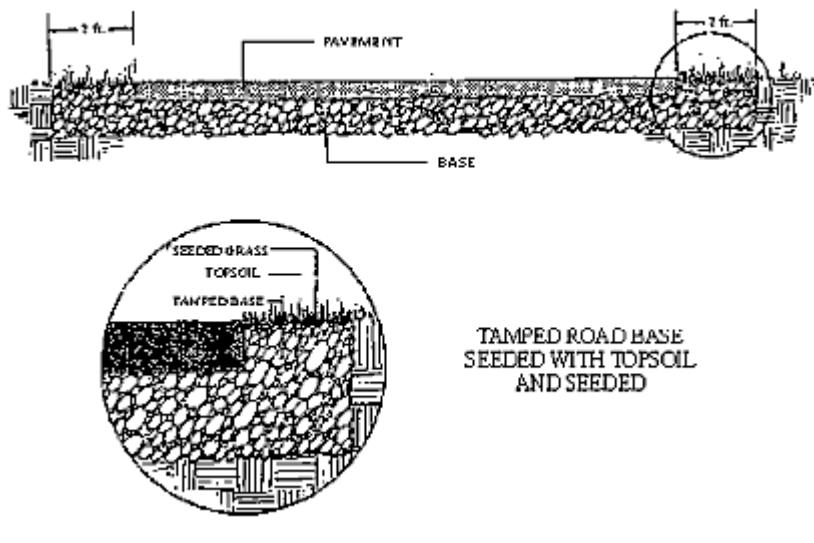
All culs-de-sac and other turnarounds, including required turnarounds on dead-end streets shall be designed to meet DelDOT standards. In circular, loop or courtyard-style culs-de-sac, landscaped central islands for open space or stormwater management shall be provided, subject to DelDOT and Fire Marshall approval. New driveways that access streets on the Highway Functional Classification Map shall have internal turnarounds pursuant to DelDOT standards.

Section 21. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 21 (“Improvement and Design Standards”), Division 40.21.100 (“Streets”), Section 40.21.161 (“Curbs”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.21.161. Curbs.

Curbs shall be installed where required to provide stormwater management and drainage conveyance[or to prevent erosion]. Upon written Department approval, [T]he curbs [shall] may be eliminated in areas where [they will promote] drainage can be conveyed [over] directly to natural areas or approved stormwater management facilities, and [pose no]where elimination of curbing will not cause increased risk to buildings, structures or homes. [Where no curbs are provided, the aggregate base shall be extended two (2) feet beyond the edge of the cartway or pavement. The base shall be filled to the pavement level with aggregate, spread with topsoil, and seeded to provide a structure to support the pavement edge and eliminate damage from vehicles running off the pavement (see Figure 40.21.161).] Curbs shall also meet DelDOT standards if the roadway is intended to be dedicated to the State.

**[Figure 40.21.161
CURBLESS PAVEMENT DETAIL]**



]

Section 22. *New Castle County Code Chapter 40* (Unified Development Code or “UDC”), Article 21 (“Improvement and Design Standards”), Division 40.21.100 (“Streets”), Section 40.21.162 (“Sidewalks”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.21.162. Sidewalks and shared-use pathways.

A. Subdivision and land developments shall contain sidewalks along both sides of the interior streets and accessways. Such interior sidewalks shall connect to existing or proposed sidewalks fronting their sites. The Department may grant a modification to [permit a street or accessway to] reduce the amount of sidewalk under the following conditions:

1. Construction of the sidewalk . . .
2. Where lots are one (1) acre or larger . . .
3. Where deemed appropriate by either the Department or DelDOT, shared-use pathways, or other bicycle and pedestrian facilities, may be constructed in addition to or instead of sidewalks.

B. In the vicinity of schools and other public facilities, the Department may require sidewalks [~~even~~] and shared-use pathways where they would not be required by Subsection A.

C. The Department shall have the right to require additional sidewalks, shared-use pathways and other bicycle and [+]pedestrian facilities [ways] where necessary to provide safe, direct, and otherwise adequate pedestrian and bicycle access to surrounding neighborhoods, open spaces and public facilities.

D. All required sidewalk, shared-use pathway and other bicycle and [+]pedestrian way facility locations and [~~their~~] construction details, as specified by the Department, shall be identified on the record plan and landscape plan.

1. Where required, bicycle and [+]pedestrian [ways]facilities through open spaces shall be located such that they are not less than twenty (20) feet from the side or rear property line of an adjacent private lot or, if placed closer, buffered by an additional 0.1 opacity landscape screen.
2. Other required landscaping (e.g., open space, on-lot or bufferyard) shall be placed adjacent to bicycle and pedestrian facilities to the greatest extent practicable.

E. Where a public bus stop exists or is proposed, sidewalks may include a bus pad or other improvement provided [~~built~~] at the request of and to the standards of the Delaware Transit Corporation.

Section 23. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 21 (“Improvement and Design Standards”), Division 40.21.100 (“Streets”), Section 40.21.163 (“Sidewalk construction standards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.21.163. Sidewalk and shared-use pathway construction standards.

A. A [~~minimum five (5) foot wide planting or~~] landscape buffer strip, tree pit or landscape area shall be provided between back of curb and front edge of sidewalk serving as the principal pedestrian access route or shared-use pathway along all arterial and collector streets and where deemed appropriate by the Department or DelDOT. Sidewalks and shared-use pathways are to be constructed within the right-of-way of the street, [~~or~~] within a permanent easement, or located within open space. Required street trees shall be placed within the landscape buffer strip in accordance with Article 23.

B. All sidewalks and shared use pathways shall be constructed to DelDOT standards unless the Department approves an alternative standard. All applicable standards shall be designated on the record plan[~~Sidewalks shall be constructed of portland cement concrete. Other pedestrian ways and crosswalks may be of any suitable material approved by the Department.~~]

C. [~~Sidewalks shall provide a minimum travelway width of five (5) feet, except that at overpasses or underpasses this may be reduced to four (4) feet. Sidewalks shall also include curb cuts for handicap accessibility.]~~

[D.] Where existing vegetation, topography, or other constraint dictates, the Department may require that sidewalks and shared-use pathways be located to protect resources or function in the best manner possible. This also could result in a larger right-of-way or public access easement being required.

[E.] D. Prior to issuance . . .

[F.] E. ~~All sidewalks shall be constructed to DelDOT standards if the roadway is intended to be dedicated to the State.~~ All applicable design and accessibility standards shall be referenced on the record plan.

Section 24. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 22 (“Drainage, Utilities, Septic Systems, Parking, Loading and Lighting”), Division 40.22.600 (“Parking and loading”), Section 40.22.610 (“Parking”), is hereby amended by adding the material that is underscored, as set forth below:

Sec. 40.22.610. Parking.

A. *Applicability*. . .

B. *Waiver of parking lot design standards.* The Department may, upon request in writing, waive or reduce any of the requirements listed in this Division where the standard is determined to not be applicable. When a particular standard is waived or the requirements are reduced, the Department shall require that a note be placed on the parking facility plan or record plan identifying the reasons why a particular standard was reduced or waived. The Department may also may require an area to be land banked if that parking ultimately proves to be needed. If a waiver is granted, the applicant shall be required to mitigate the impacts of the waiver with proportional site improvements consistent with the Guiding Principles for Development.

Section 25. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 22 (“Drainage, Utilities, Septic Systems, Parking, Loading and Lighting”), Division 40.22.600 (“Parking and loading”), Section 40.22.611 (“Parking lot design standards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.22.611. Parking ~~lot~~ area design standards.

A. *Surfacing.* All parking spaces, aisleways and access/egress lanes shall be [paved and] permanently maintained.

1. All parking spaces, aisleways and access/egress lanes shall be paved with asphalt, concrete or any other all-weather ~~[impervious]~~paved surface approved by the Department.
2. Alternative means of surfacing materials [may] also may be authorized by the Department where the alternative means:

- a. Provide environmental or stormwater management benefits; or
- b. Are appropriate due to infrequent parking demands [in remote areas of large parking lots serving places of public assembly].

B. *Striping.* All parking spaces...

C. *Arrangements and markings.* All off-street parking areas shall be arranged and marked so as to provide for the orderly and safe loading, unloading, parking and storage of vehicles, where necessary. Incidental parking spaces, aisleways, approach lanes, and maneuvering areas shall be clearly marked with directional arrows and pavement lines and other markings to properly direct traffic. All such markings shown on plans shall be provided on the site. Each space or area for specialized parking (i.e., handicapped, employee, loading/unloading) or movement (fire lanes) shall be clearly marked or signed to indicate the intended use and shall be designed in accordance with the appropriate regulations. Dead-end parking aisles shall not be permitted, unless there are no alternatives.

D. *Curbs and wheel stops.* A continuous minimum. . .

E. *Pedestrian circulation,[and] walkways and outdoor seating or dining areas.* All parking areas shall provide attractive, direct and safe pedestrian access to all parking spaces. The layout of the parking aisles shall be perpendicular to principal building entrances, where appropriate. Such walkways and sidewalks shall be protected from vehicular encroachment by wheel stops, curbs, bollards, landscaping or other methods approved by the Department, where necessary, for pedestrian safety. When outdoor seating or dining areas are proposed adjacent to off-street parking lots, additional landscaping may be required in the form of both low-level buffers delineating and screening the seating or dining areas and an arrangement of understory or canopy trees that are appropriate for shading.

F. *Parking spaces in garages[driveways].* Garages may be considered as required off-street parking spaces for all detached housing types. For attached dwellings, [required parking shall be provided on driveways] one (1) required off-street parking space may be considered within a garage located on the same lot.

G. *Backing movements.* With the exception. . .

H. *Structures within parking areas.* All permanent or temporary structures. . .

I. *Vehicular circulation and access.* Parking areas shall be designed to safely, conveniently and efficiently accommodate the maneuvering of all vehicles including delivery, emergency and public transit vehicles where appropriate. The Department may require a conceptual drawing showing that anticipated vehicle types properly can maneuver in parking areas. For parking lots with fifty (50) or more spaces, a minimum forty (40) feet deep channeled entrance/exit driveway, free of turning movements, shall be provided as measured from property lines. To minimize off-site travel, cross-access easements may be required.

J. *Location of off-street parking spaces.* All off-street parking shall be located on land zoned for the use which the parking is intended to serve. Required parking spaces shall be located not more than six hundred (600) feet from the building or use to which they are assigned. However, with the approval of the Department, a maximum of [ten (10)] twenty-five (25) percent of the spaces may be located beyond six hundred (600) feet. Valet parking [~~may~~] also may be located [~~ever~~] more than six hundred (600) feet away with Department approval. Where feasible, parking lots shall be separated and dispersed across a site to break up large areas of contiguous impervious cover and be placed toward the side or rear of principal structures. Design considerations for parking lots shall include integration with stormwater management, multi-modal access, resource protection, landscaping, site uses and site access.

K. *Shared parking.* The parking spaces for separate buildings or uses may be combined in [~~a~~] single parking lot(s), provided that the number of parking spaces in the lot(s) shall be equal to or greater than the sum of the parking spaces required for each building and use or if a parking demand and needs analysis (PDNA) indicates that reduced parking can accommodate multiple buildings or uses.

L. *Parking structure.* Structured parking may. . .

M. *Bicycle parking.* [~~Bike~~] Bicycle racks shall be located so that they are highly visible from the street or main building entrances, under cover such as a building overhang or other structure where possible, and located so that bicycles will not obstruct pedestrian access. No [~~bike~~] bicycle rack shall be installed in an isolated location. Bicycle parking areas shall be separated from motor vehicle parking areas by at least a curb barrier, which would prevent vehicles from damaging bicycles. A hard-surfaced parking area is required, and bicycle racks shall be secured and designed for the lockage of bicycle frames and wheels. For sites with multiple buildings, the required bicycle parking spaces shall be distributed in multiple locations to encourage their use. Bicycle parking areas shall be identified on plans by a label or distinct symbol shown in the legend.

N. *Park-and-ride.* For parking lots. . .

O. *On-street parking.* On-street parking refers to parking, in any angular configuration, that may be located along a street within or adjacent to a public right-of-way or access easement or along a vehicular cartway emulative of a public street within a variety of development types. Design and dimensional standards apply to both public streets and private cartways. Provisions for perpetual maintenance of the parking spaces shall be determined to the satisfaction of the Department or DelDOT and annotated on the record plan.

Section 26. *New Castle County Code Chapter 40 (Unified Development Code or “UDC”), Article 22 (“Drainage, Utilities, Septic Systems, Parking, Loading and Lighting”), Division 40.22.600 (“Parking and loading”), Section 40.22.612 (“Parking stall dimensions”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:*

Sec. 40.22.612. Parking stall dimensions.

Table 40.22.612 and Figure 40.22.612 specify[ies] . . .

- A. Parking spaces located . . .
- B. Compact parking spaces [Stall width reduction]. Subject to Department approval, stall dimensions [width] may be reduced in accordance with Table 40.22.612.B [to eight and one half (8 1/2) feet] in parking lots for office, institutional, [and] industrial/manufacturing type uses [provided that the parking area with the reduced widths is for the exclusive use of the on-site employees]. Parking spaces available for the general public shall be clearly identified for public use and must be clearly separated from employee parking spaces with reduced widths. In] and in shopping developments with more than seventy-five thousand (75,000) [two hundred fifty thousand (250,000)] square feet of gross floor area dedicated to retail uses, [stall width may be reduced to eight and one half (8 1/2) feet] for not more than twenty-five (25) [fifteen (15)] percent of the total required parking spaces. These reduced stall dimension [width] parking spaces shall be located in [a] separate portions of a site and clearly identified with permanent signage and demarcated with special striping or symbols on the ground [in the most remote portion of the site.] The Department shall determine the location of those parking spaces that may qualify for [reduced stall width] compact parking spaces.

Table 40.22.612 A
Minimum Dimensions for Required Parking Spaces

<i>Dimension Indicator</i>	0° <i>(Parallel)</i>	30°	45°	60°	90° <i>(Perpendicular)</i>
a	8'	9'	9'	9'	9'
b	21'	18'	18'	18'	18'
c (one-way aisle)	12'	14'	16'	18'	22'
c (two-way aisle)	22'	22'	22'	22'	22'

Table 40.22.612 B
Minimum Dimensions for Optional Compact Parking Spaces

<i>Dimension Indicator</i>	0° <i>(Parallel)</i>	30°	45°	60°	90° <i>(Perpendicular)</i>
a	<u>8'</u>	<u>8'</u>	<u>8'</u>	<u>8'</u>	<u>8'</u>
b	<u>20'</u>	<u>16'</u>	<u>16'</u>	<u>16'</u>	<u>16'</u>
c (one-way aisle)	<u>12'</u>	<u>14'</u>	<u>15'</u>	<u>16'</u>	<u>20'</u>
c (two-way aisle)	<u>22'</u>	<u>22'</u>	<u>22'</u>	<u>22'</u>	<u>22'</u>

Section 27. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 22 (“Drainage, Utilities, Septic Systems, Parking, Loading and Lighting”), Division 40.22.600 (“Parking and loading”), Section 40.22.614 (“Existing nonconforming parking”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.22.614. Existing nonconforming parking.

The standards and requirements . . .

A. *New parking area . . .*

D. Notwithstanding the foregoing, restriping or reconfiguration of existing nonconforming parking must comply with ADA standards.

Section 28. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 22 (“Drainage, Utilities, Septic Systems, Parking, Loading and Lighting”), Division 40.22.600 (“Parking and loading”), Section 40.22.621 (“Outdoor loading bay area standards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.22.621. Outdoor loading bay area standards.

A. *Dimensions . . .*

F. Screening. A loading bay, including all cartways, loading platforms, and structures shall be screened from view from adjacent residential zoning districts, residential uses, public rights-of-way and public access thoroughfares. Screening shall consist of a combination of structures, walls, and landscaping and shall provide year-round screening.

Section 29. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), is hereby amended by adding the material that is underscored, as set forth below:

Article 23. LANDSCAPING, TREES, PLANT MAINTENANCE, AND EROSION AND SEDIMENT CONTROL

Section 30. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.000 (“Purpose”), Section 40.23.010 (“Applicability”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.010. Applicability.

All developments shall comply with Divisions 40.23.100, 40.23.200, 40.23.300, [and] 40.23.400 and 40.23.500. Minor residential subdivisions shall be required only to comply with

street tree and tree replacement requirements, except for residential developments in the NC2a zoning district, which [~~is~~are] exempted. Major subdivisions and land developments, minor nonresidential subdivisions, and minor land developments shall comply with all divisions.

Section 31. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.110 (“Standard plant units”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.110. Standard plant units.

A. ~~[Each]~~ The plant unit types [~~alternative~~] in Table 40.23.110 ~~are~~ [is] generally interchangeable with each other [~~the standard plant unit~~].

B. The landscape architect [~~developer~~] may use any one (1) or a combination of plant unit types [~~alternatives~~]. However, some types [~~alternatives~~] are preferred given certain objectives. For example, plant unit type 5 [~~Alternative Unit D~~] is best suited for the interior of parking lots or other places where clear, low-level views are desired or where fences exist, and may not be used for bufferyard plantings.

C. Where year-round screening is required, plant unit types 3 or 4 [~~Alternative Unit B or C~~] ~~are~~ [is] preferred. In some cases, this chapter or a condition of land development or site plan review may specify a specific plant unit type [~~, or an alternative plant unit may be required during land development or site plan review~~].

D. The Department may approve a proposed alternative plant unit type(s) if they address a unique situation and provide screening or plant coverage equivalent to plant unit type 1. The total calculated area of the alternative plant unit type(s) as shown in the Bufferyard Model shall be greater than plant unit type 1 and utilize at least two different plant types.

E. When creating an alternative plant unit type, a note or graphic exhibit must be included on the landscape plan that describes or depicts the unique situation and demonstrates how the alternative plant unit meets the requirements of subsection D above.

Section 32. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Table 40.23.110 (“Plant Unit Alternatives”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Table 40.23.110 PLANT UNIT TYPES [ALTERNATIVES]		
<u>Plant Unit</u> [Alternative] <u>Type</u>	<u>Quantity, Size & Type of Plants</u> <u>Required</u>	<u>Illustration</u>

Table 40.23.110
PLANT UNIT TYPES [ALTERNATIVES]

<i>Plant Unit [Alternative] Type</i>	<i>Quantity, Size & Type of Plants Required</i>	<i>Illustration</i>
[Standard] <u>Plant Unit Type 1</u>	1 [€]canopy tree*** 2 1-1/2" to 2" caliper understory 13 1-1/2' to 3' high shrubs****	
[Alternative Unit A] <u>Type 2*</u>	1 [€]canopy tree*** 1 1-1/2" to 2" caliper understory 1 5' to 6' high evergreen trees 12[44] 1-1/2' to 3' high shrubs****	
[Alternative Unit B] <u>Type 3*</u>	2 1-1/2" to 2" caliper understory 3 5' to 6' high evergreen trees 7 1-1/2' to 3' high shrubs****	
[Alternative Unit C] <u>Type 4*</u>	4 5' to 6' high evergreen trees 15 1-1/2' to 3' high shrubs****	
[Alternative Unit D] <u>Type 5**</u>	2 [€]canopy trees*** [3]6 1-1/2' to 3' high shrubs****	

* Preferred for year-round screen.

** May be required where visibility is required for safe automobile operation.

*** [Whenever canopy trees are required in any one of the plan alternatives, the following minimum percentages for each size group shall be required:] Canopy trees within plant unit types shall be planted greater than 2" in caliper size as measured 6" above the established ground level.

[60% 2" to 2 1/2" caliper]
[20% over 2 1/2" caliper]

**** The Department may permit approved herbaceous vegetation in lieu of required woody shrubs [in those areas subject to approved conservation design practices]. The ratio of 5, one-gallon medium to large growing herbaceous perennials or grasses that reach a mature height of greater than 18" may be substituted for one shrub in any plant unit configuration not to exceed 50% of the shrubs required in any given planting area.

Section 33. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.120 (“On-lot landscaping”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.120. On-lot and open space landscaping.

A. In general, the on-lot landscaping shall be distributed around the lot, planted close to the buildings where foundation plantings are appropriate to create visual interest, planted to provide shading or stormwater management benefits, or [be] distributed in some combination [of] as part of a [these] planting scheme[s].

B. In general, open space landscaping shall be distributed throughout open space to delineate areas, augment buffer plantings, create visual interest and design continuity, provide shading and spatial guidance for multi-modal transportation systems, integrate with stormwater management areas, or be distributed in some combination as part of a planting scheme.

C. [However,] Landscape design for front yards [are]is particularly important to preserving community character. Certain residential development unit types require additional planting material [to be planted between front load garages and the right of way], as indicated in Section 40.23.121.

D. The Department may grant a partial on-lot or open space landscape credit where planting for green technology stormwater best management practices is in excess of the planting requirements contained in Articles 4 and 23.

E. Turf and meadow grass areas within open space shall be delineated on the landscape plan and be referenced to a corresponding maintenance matrix defining the seed mixture and mowing frequency for each designated area.

Section 34. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.130 (“Parking lot landscaping”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.130. Parking lot landscaping.

Parking lot landscaping shall be one (1) plant unit per number of parking spaces specified in Table 40.04.111. Each plant unit shall be planted in a planting island(s) or space with a minimum total area of three hundred twenty-four (324) square feet. The plant unit may be distributed between two (2) landscaping islands or in larger continuous islands. If two (2) smaller islands are selected, each shall contain a minimum of one hundred sixty-two (162) square feet in area. In small parking lots, the island(s) may be the lot's corners. The landscaping required by Table 40.04.111 shall be located within the parking lot or adjoining entrance drives and circulation

drives. [~~Existing trees that can be preserved by not disturbing the area under their canopy shall count towards the landscaping requirements.~~] Figure 40.23.130 illustrates appropriate planting areas, preservation of existing trees, and several configurations of one (1) plant unit per twenty-four (24) parking spaces.

- A. Parking lot landscaping plants shall be capable of tolerating difficult growing conditions such as deicing salts, soil compaction, drought, mechanical damage/heavy pruning, and reflected heat.
- B. Soils in parking lot planting areas shall be amended backfill as deemed necessary in accordance with Tree Care Industry Association ANSI A300-2011 guidance, as may be amended.
- C. Irrigation in the form of an automated system, regular watering schedule, integrated stormwater management system or other method shall be provided for the long-term health and viability of parking lot landscaping.

Section 35. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.140 (“Standards for bufferyard plantings”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.140. Standards for bufferyard plantings.

A. Table 40.23.140 depicts the narrowest permitted bufferyard at the top of each opacity category. This is the minimum width of buffer permitted. ~~[and, if a wall is shown, that is the maximum height permitted. The second standard is wider and may also be used to satisfy the opacity requirement. Both provide]~~ The widths of bufferyards, the plant materials in plant units, and any proposed structures or berms shall be analyzed collectively ~~[necessary]~~ to reach given levels of opacity or buffer type required by Table 40.04.111.

B. ~~[While this t]Table 40.23.140 presents [only] two (2) [combinations of] bufferyard parameters (minimum and maximum width and number of plant units)[,]~~ ~~[a]~~ A wide range of other combinations ~~[would]~~ also would meet the respective opacity rating. Flexibility and creativity are ~~[is]~~ encouraged. By using the interactive bufferyard system in Section 40.23.141, the designer may create and test a buffer.

C. These standards are based on ~~[require]~~ a one hundred (100) linear foot ~~[feet of]~~ buffer measured at the bufferyard's centerline.

D. Figure 40.23.140 is an example that shows the two (2) bufferyard options set forth to achieve a five-tenths (0.50) opacity using Section 40.23.141.

E. Some limited or conditional uses have requirements (Table 40.03.110) that increase bufferyards; these requirements ~~[shall]~~ must be met by adding the opacities of the district

bufferyard and the limited or conditional use. For example, if the district requires a three-tenths (0.3) bufferyard and the specific use requires a two-tenths (0.2) bufferyard, then a five-tenths (0.5) bufferyard shall be selected. . . .

Section 36. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.140 (“Standards for bufferyard plantings”), Table 40.23.140 (“Bufferyard requirements per 100 linear feet”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Table 40.23.140
BUFFERYARD REQUIREMENTS PER 100 LINEAR FEET

<i>Opacity</i>	<i>Min/Max Bufferyard Width (ft.)</i>	<i>Number of Plant Units (per Plant Unit Type 1)</i>	<i>[Type of Structure Required]</i>
.10	10 <u>min.</u>	0.85	
	[20] <u>30 max.</u>	[0.65] <u>0.46</u>	
.20	15 <u>min.</u>	[1.55] <u>1.53</u>	
	[25] <u>30 max.</u>	[1.30] <u>1.13</u>	
.30	15 <u>min.</u>	[1.80] <u>2.43*</u>	[2 ft. berm]
	[25] <u>30 max.</u>	[2.10] <u>1.86</u>	
.40	20 <u>min.</u>	[2.45] <u>3.18*</u>	[4 ft. masonry wall]
	[30] <u>40 max.</u>	[2.70] <u>2.20</u>	
.50	[20] <u>25 min.</u>	[2.05] <u>3.91*</u>	[8 ft. fence – 100% opaque]
	60 <u>max.</u>	[1.40] <u>2.01</u>	[3 ft. berm]
.60	[25] <u>30 min.</u>	[2.90] <u>4.61*</u>	[8 ft. fence – 100% opaque]
	<u>110 max.</u>	[2.65] <u>1.00</u>	
.70	[30] <u>40 min.</u>	[3.75] <u>4.81*</u>	[8 ft. fence – 100% opaque]
	[50] <u>130 max.</u>	[4.00] <u>1.00</u>	
.80	40 <u>min.</u>	[4.10] <u>5.99*</u>	[8 ft. fence – 100% opaque]

<i>Opacity</i>	<i>Min/Max Bufferyard Width (ft.)</i>	<i>Number of Plant Units (per Plant Unit Type 1)</i>	<i>[Type of Structure Required]</i>
	<u>150 max.</u>	[2.90] <u>1.00</u>	
.90	50 <u>min.</u>	[4.30] <u>6.00*</u>	[8 ft. masonry wall]
	<u>170 max.</u>	[2.60] <u>1.00</u>	
1.00	50 <u>min.</u>	[3.90] <u>7.46*</u>	[8 ft. berm]
	<u>200 max.</u>	[2.55] <u>1.00</u>	[3 ft. berm]

See Section 40.23.141 for developing intermediate buffers.

Note: Where indicated by an * in this table, berms, fences, walls, hedges or other screening structures are recommended to be provided in conjunction with plant materials; otherwise the minimum bufferyard width should be expanded.

Section 37. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.141 (“Bufferyards”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.141. Bufferyards.

A. The standards in Table 40.23.140 have been tested to ensure they meet the opacity standard. Numerous other mixes can meet the standard. The bufferyards were created using the Bufferyard Model. This model is available within the [Computerized Land Development Code] Unified Development Code available online.

B. Any bufferyard that meets the required opacity rating within the width limits in Table 40.23.140 is permitted. The Bufferyard Model [can] also can be used. Table 40.23.141 lists the settings that shall be used in running the model. This model determines whether or not the tested bufferyard is adequate. The plant type settings are shown, but are not to be altered. The number of plant units may be revised. The width of the buffer may be increased above the minimum for each opacity given in Table 40.23.140. The height of the structure may be varied only if modifying the parking buffer. Users shall supply the Department with a printout of the model run for a buffer that is proposed which shall be verified by the Department. Flexibility and creativity with respect to buffer width, utilization of plant unit types and the utilization of berms, fences, walls and hedges are encouraged.

Table 40.23.141
BUFFERYARD MODEL SETTINGS . . .

[B.]C. Buffers over fifty (50) feet . . .

D. A visual screen consisting of a planted hedge may be used as an alternative to a wall or a fence. Hedges may be comprised of evergreens, deciduous plants or a mix of plant species.

1. In the Bufferyard Model, the following standards shall apply:

- a. For an evergreen hedge, the Structure Solidity category may equal up to a 90% solidity rating and must be a minimum of four (4) feet tall at the time of planting.
 - b. For a deciduous hedge, the Structure Solidity category may equal up to a 70% solidity rating and must be a minimum of four (4) feet tall at the time of planting.
 - c. The Structure Height category shall be set no greater than two (2) feet above the height of the hedge at installation.
 - d. The Structure Placement category shall correspond to the centerline location of the hedge with respect to the bufferyard property line.
2. Each plant component of a hedge shall be planted no further than four (4) feet on-center from one another. A reduction in spacing may be required depending on the plant species or cultivar selected.
 3. Individual plants used in a hedge may be counted toward portions of the required plant units within the same bufferyard. However, the minimum number of plants required in Table 40.23.110 shall be provided.
 4. The selection of other required bufferyard plant units and the placement of plants adjacent to the hedge shall take into account any spatial or shading conflicts with the hedge planting.
 5. A detailed description of the size, shape and plant species of any proposed hedge and perpetual maintenance responsibilities shall be placed on the landscape plan.

Section 38. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.142 is hereby added, as indicated by the underscored material set forth below:

Sec. 40.23.142. Bufferyard opacity reduction.

Where the build-to line is permitted to be less than the required minimum street yard setback, the Department may approve a reduction in opacity standards. Reductions shall:

- A. be calculated on a percentile basis commensurate to the reduction of the bufferyard width plus the width of any publicly-accessible pedestrian or bicycle facility physically located within the bufferyard; and
- B. only be permitted directly along those portions of the façade adjacent to the build-to line.

Section 39. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.100 (“Plant units and materials”), Section 40.23.151 (“Street trees”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.151. Street trees.

- A. In new subdivisions, or when the development of property occurs, the Department shall review for approval proposed landscaping plans, and shall require street trees to be planted [~~in any of the~~] within or alongside any of the rights-of-way of streets and parkways and other public places abutting lands henceforth developed [and] or subdivided as required in Article 31.
- B. [When proposed by an applicant,] Large canopy street trees shall be planted on each side of the right-of-way at the minimum rate of one (1) tree per forty (40) linear feet of right-of-way. [Where lot frontages are less than forty (40) feet wide along the right of way, trees shall be planted at the minimum rate of one (1) tree per lot, and on corner lots, a minimum of two (2) trees per lot.] There is an exception for[Except that on] interior streets in nonresidential subdivisions not designated as arterials or collectors, wherein trees shall be planted on each side of the right-of-way at the minimum rate of one (1) tree per fifty (50) linear feet of right-of-way.
- C. When street trees [are proposed by an applicant,] are located in center medians [boulevards], the median shall have a minimum width of [sixteen (16) feet] ten (10) feet and shall have one (1) additional large or medium canopy tree planted for every forty (40) linear feet [in the landscaped island]. Medians[Boulevards] having a width greater than twenty (20) feet shall have[plant] one and one-half (1 $\frac{1}{2}$) large or medium canopy trees planted every forty (40) linear feet.
- D. No one (1) [right of way] tree species utilized for street tree plantings may make up more than twenty (20) percent of the planting stock of the entire development.
- E. Tree quality and size[Tree quality and size]. All large or medium canopy street trees [planted within rights of way] shall be balled and burlapped, single-stemmed trunks, branched no lower than six (6) feet above ground or when adjacent to vehicular cartways or parking facilities and pedestrian or bicycle facilities, eight (8) feet above ground, and no less than [two and one half (2 1/2) inches] three (3)-inch caliper [in diameter] as measured six (6) inches above the established ground level. Small canopy or understory trees may be planted at two (2)-inch caliper.
- 1. Small canopy or understory trees with multi-stemmed trunks are permitted to be planted within center medians.

2. All plant[s] classifications, measurement of plants and planting methods shall be in accordance with the American Standard for Nursery Stock [ANSI Z60.1-[1996]2014], as may be amended.

F. Minimum Spacing. Outside of reforestation or afforestation situations, [N]no large canopy trees may be planted closer together than thirty (30) feet and no medium or small canopy or understory trees may be planted closer together than fifteen (15) feet, except that special plantings may be clustered [as determined appropriate by] if the Department determines that the long-term survivability of the trees will not be impaired.

G. Substitution. In certain situations, such as the presence of overhead utility wires or constrained planting areas, each required large canopy street tree may be substituted with one (1) medium canopy or one and one-half (1 ½) small canopy or understory trees suitable for street tree planting. See Appendix 3 to this chapter for a list of recommended tree species and further street tree planting guidance.

Section 40. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.200 (“Landscaping installation requirements”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Division 40.23.200. Landscaping installation requirements.

To ensure plant materials are installed and properly maintained, a landscape plan will be required of all developments. This plan shall show the location of all required plant materials and provide planting details for all proposed plant types and planting situations. A plant list shall accompany the plan, indicating species, size, and number provided. Appendix 3 to this Chapter provides a list of unacceptable and suggested plant species. [The source of all plant material for the site shall be from the same hardiness zone as defined by the United States Department of Agriculture.]

- A. The source of all plant material for the site shall be from within one whole number hardiness zone as defined by the United States Department of Agriculture (USDA) of the zone that covers the majority of New Castle County.
- B. The handling, planting and perpetual maintenance of all tree and plant material shall conform to Tree Care Industry Association ANSI A300-2011 standards.

Section 41. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.200 (“Landscaping installation requirements”), Section 40.23.230 (“Planting locations”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.230. Planting locations.

The exact placement of required plants and structures shall be the decision of each user, except for the following requirements that shall be met:

- A. Trees and shrubs . . .
- B. Evergreen[s] trees and evergreen shrubs shall be planted with [a fifteen (15) foot] appropriate spacing in accordance with their habit and growth to maximize their chance for long-term survival.
- C. Location. No large [street or] canopy tree[s] species shall be planted, as measured from the center of the tree trunk, under or within ten (10) lateral feet of any existing overhead utility wire, or over or within five (5) lateral feet of any existing underground water line, sewer line, transmission line, or other utility. [The distance from the curb and sidewalk shall be determined by the Department based upon specific planting conditions and species of trees.] Medium canopy tree or small canopy or understory tree species may be permitted. Additional mitigation such as specific cultivar selection, special planting and pruning techniques may be required.
- D. All trees and shrubs shall be placed so that they will not block or obstruct necessary sight-lines or rights-of-way.

Section 42. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.200 (“Landscaping installation requirements”), Section 40.23.240 (“Reforestation requirements”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.240. Reforestation requirements.

All forest mitigation areas or open spaces to be reforested shall be planted [according to] pursuant to one or a combination of alternatives set forth in Table 40.23.240 using the plant species listed in [Table 40.23.240] Appendix 3 to this Chapter.

- A. The area around each tree shall be mulched. The entire area may be mulched or seeded in a perennial grass mix with a minimum thirty (30) percent indigenous herbaceous forest, or grassland species.
- B. [Canopy t]Trees shall be selected to provide a diversity of native plants. All plants and trees used for reforestation must consist only of species native and indigenous to Delaware. Selected plants and trees may not include cultivars or hybrids of species or State rare or endangered species.
- C. Plants and trees shall be selected and arranged within the reforestation area in accordance with site conditions.

- D. Reforestation [P]plantings shall include a minimum of [four (4)] six (6) species. Where more than [~~one hundred (100)~~] two hundred (200) [canopy] trees are [~~required~~] provided, a minimum of [~~six (6)~~] eight (8) species shall be [~~provided~~] used; no one (1) species shall have less than five (5) or more than [~~thirty (30)~~] twenty (20) percent of the total trees.
- E. Appendix 3 to this Chapter provides a list of unacceptable and suggested plant species and reforestation planting guidelines.
- F. A plan for perpetual maintenance of any reforestation area must be provided with the landscape plan and approved by the Department. The plan must include methodology for removing invasive plants while protecting reforestation plantings and facilitating the establishment of a leaf-litter layer on the ground within the reforestation area.
- G. The survival rate for reforestation areas shall be a minimum of one hundred (100) trees per acre or at least seventy-five (75) percent of the total number of trees planted per acre under the approved plan, whichever is greater. Replanting shall be required to meet this minimum standard for sites where the survival threshold is not met. Infill planting also may be required where planting fails in large contiguous areas, resulting in tree spacing greater than twenty five (25) feet.

Section 43. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.200 (“Landscaping installation requirements”), Section 40.23.240 (“Reforestation requirements”), Table 40.23.240 (“Reforestation Requirements Per Acre”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Table 40.23.240
REFORESTATION ~~[REQUIREMENTS]~~ PLANTING RATE ALTERNATIVES PER ACRE

<u>No. of [Plants] Trees per Acre</u>	<u>[Types of Plants] Minimum Size and Approximate Spacing</u>
[+] 100	[4" caliper canopy]
[4] 100	[3" caliper canopy]
[10] <u>120*</u>	1-1/2" caliper [canopy] trees (20' x 20' spacing)
[6] <u>200*</u>	[1-1/2]3/4" caliper [or 5-6 ft. understory] trees (15' x 15' spacing)
[50] <u>300*</u>	3' to 6' tall whip [canopy] trees (11' x 11' spacing)
[30] <u>700*</u>	<u>Container or bare root [shrubs or 1 gallon pots] seedling trees** (8' x 8' spacing)</u>

* Includes canopy and understory tree species with understory trees constituting a minimum of 5%, and a maximum of 10% of the total (see Appendix 3).

** Seedlings are trees installed at less than 2' tall.

Note: spacing indicated does not imply that trees must be planted in a grid pattern.

Section 44. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.200 (“Landscaping installation requirements”), Section 40.23.250 (“Existing vegetation”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.250. Existing vegetation.

Where natural vegetation will be preserved on-lot or within open space, scenic easements, bufferyards, [or] parking lots, or along roadway frontages, that plant material shall be credited towards that specific landscaping requirement in accordance with Table 40.23.250. [Note: Preserved vegetation shall count for only one (1) landscaping requirement. For example, a sixteen (16) inch tree to be preserved along a property line may count for three (3) open space trees or three (3) bufferyard trees. Also, preserved tree types (canopy, understory, or evergreen) shall only be credited for same tree type requirement, except in forests where preservation of forest areas of at least fifty (50) feet in width shall count where all trees in the preserved forest are protected as required in Subsection B]

Table 40.23.250
PRESERVED TREES CREDITED TOWARDS REQUIREMENTS

Preserved Tree Size <i>(DBH in inches)</i>	Number of Trees For	
	<i>Open Space [or], Bufferyards, Parking Lots, Lots or Street Trees</i>	<i>[Parking Lots or Lots]</i>
<u>42.00 or greater</u>	7	
<u>32.00 to 41.99</u>	5	
<u>24.00 to 31.99 [inches +]</u>	4	[2.5]
<u>16.00[-24] to 23.99 [inches]</u>	3	[2]
<u>8.00 to [-]15.99 [inches]</u>	2	[1.75]

<i>Preserved Tree Size (DBH in inches)</i>	<i>Number of Trees For</i>	
	<i>Open Space [or], Bufferyards, Parking Lots, Lots or Street Trees</i>	<i>[Parking Lots or Lots]</i>
<u>3.00 to [-]7.99 [inches]</u>	1	[4]

Also, the following requirements . . .

- A. A tree survey . . .
- B. Individual trees described in the tree survey as healthy and intended to count toward the landscaping requirements shall count only if sufficient protection is provided as follows:
 - 1. Trees greater than ~~twenty-four (24)~~ sixteen (16) inches DBH:
 - a. No area within ~~five (5) feet of~~ the drip line shall be disturbed. No topographic change greater than eighteen (18) inches shall occur at the edge of the protected area.
 - b. A ~~tree expert~~ qualified forester, arborist or landscape architect shall provide professional judgment as to [indicate] the probability that the tree will survive in a healthy and vigorous condition following the completion of construction activities.
 - c. This [and] may include recommendations for [require trimming] pruning, fertilization and other means to ensure the tree's survival both [prior] during and after completion of [to the] construction activities. Only those trees with a high probability of survival [will] may be credited.
 - 2. ~~Trees between sixteen (16) inches and less than twenty-four (24) inches DBH: No area under the drip line is to be disturbed.]~~
 - [3.] ~~[Trees between eight (8) and less than sixteen (16) inches DBH: No area within the drip line is to be disturbed.]~~
 - [4.] Trees between three (3) and less than ~~eight (8)~~ sixteen (16) inches DBH: No more than thirty (30) percent of the area within the drip line shall be disturbed.
- C. Trees sixteen (16) inches or greater DBH whose natural drainage is cut off by ~~reeontouring~~ re-grading or exposed to heavier drainage shall not be credited toward a landscaping requirement unless a management plan approved by a qualified forester, arborist or landscape architect is established to protect the tree.

- D. Areas classified. . .
- E. Existing trees used. . .
- F. Preserved vegetation shall count for only one (1) landscaping requirement. For example, a sixteen (16)-inch tree to be preserved along a property line may count for three (3) open space trees or three (3) bufferyard trees.
- G. Preserved tree types (canopy, understory, or evergreen) shall only be credited for the same tree type requirement, except in forests where preservation of forest areas of at least fifty (50) feet in width shall count where all trees in the preserved forest are protected as required in Subsection B of this section.

Section 45. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.200 (“Landscaping installation requirements”), Section 40.23.270 (“Tree quality”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.270. Tree and plant material quality.

Unless approved by the Department, [A]all trees planted [within rights of way] shall be [balled and burlapped, single stemmed trunks, branched no lower than six (6) feet above ground and] grown in nurseries from [the same] within one whole number hardiness zone as the development site as defined by the United States Department of Agriculture (USDA). All plants, plant sizes and planting methods shall be in accordance with the American Standard for Nursery Stock (ANSI Z60.1-[1996]2014), as may be amended. All plants used to fulfill the landscape requirements shall come from the permitted plant list in Section 40.23.280, unless the Department approves a different, non-invasive species that it determines is comparable in terms of its ability to accomplish the purpose of this Article, its survivability, and any offsetting environmental or stormwater management benefits.

Section 46. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.200 (“Landscaping installation requirements”), Section 40.23.280 (“Plant material species”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.280. Plant lists [~~material species~~].

Appendix 3 to this Chapter contains three (3) [~~four (4)~~] plant lists as guidance for plant selection[-]: Part 1: Recommended Plant List [~~Invasive Exotics are not to be planted under any circumstances.~~]; Part 2: Plants to Avoid [~~Street Trees~~]; and Part 3: [~~Riparian Buffer Areas are recommended for use in these circumstances. Part 4 is a list of~~] Native Plant Species of Special Interest[s]. These lists are not intended to be comprehensive, nor does the use of these plants guarantee Department approval or availability at plant nurseries.

Section 47. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.300 (“Tree protection”), is hereby amended by adding the material that is underscored, as set forth below:

Division 40.23.300. Tree protection.

Specimen trees shall be located and identified to the species taxonomic level on the site plan or land development plan. The development design shall preserve specimen trees wherever practical. The County may require plan revision where additional preservation is possible without affecting density. Where preservation is not feasible, tree replacement shall be required as mitigation. Any mitigation shall be in addition to the other landscaping requirements of this Code.

Section 48. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.300 (“Tree protection”), Section 40.23.310 (“Preserving specimen trees”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.310. Preserving specimen trees.

A specimen tree is preserved by . . .

- A. During construction, t[he tree's drip line shall be fenced with [~~three (3)five (5)~~ foot [orange snow] temporary fencing, and no earth moving, material storage, vehicular storage or vehicular incursions shall be permitted inside the fenced area. Existing impervious cover within the drip line may be removed with limited disturbance, provided measures are taken to minimize root disturbance and soil compaction.
- B. Development design . . .
- C. Horizontal road alignments . . .
- D. Building pads . . .
- E. Multi-story buildings may be required to reduce or reconfigure building footprints. ~~[Where the site contains steep slopes, the Department may require parking under the building.]~~

Section 49. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.300 (“Tree protection”), Section 40.23.320 (“Tree replacement”) is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Sec. 40.23.320. Tree replacement.

A. Where specimen trees are removed, they shall be replaced in accordance with Table 40.23.320. The replacement trees shall be planted on the same parcel as the tree being removed. [However, t]The Department may allow some or all of the replacement trees to be planted on an adjacent or nearby parcel with the establishment of a conservation easement and provisions to ensure the perpetual maintenance of the trees. Off-site replacement trees shall be planted at a ratio of two to one (2:1).

B. The Growth Categories of individual tree species are provided in Appendix 3 of this Chapter.

1. Tree species that generally exhibit slower annual growth rates are accorded a smaller size threshold for specimen tree status.
2. Tree species that generally exhibit faster annual growth rates are accorded a larger size threshold for specimen tree status.
3. For tree species not listed in Appendix 3, the applicant may provide appropriate arboricultural justification for Growth Category assignment.

C. Upon Department approval, if the site or an adjacent parcel or nearby parcel cannot accommodate the number of required replacement trees, the applicant may meet the requirements of this section by increasing the caliper of trees required by other sections of this Chapter. Determining the size of the caliper shall be calculated as follows and as illustrated in Appendix 3:

1. The sum total of the cross-sectional area of the trunks for all required replacement trees as calculated pursuant to Table 40.23.320 divided by the number of larger trees.
2. This figure is then added to the trunk cross-sectional area for each of the larger trees.
3. New caliper figures for each of the larger trees are then calculated from their respective increased cross-sectional areas. Caliper figures shall be rounded up to the nearest one-half (1/2) inch.

D. A note indicating the reason for planting trees with larger minimum calipers shall be placed on the landscape plan and referenced to each planting location.

Section 50. *New Castle County Code Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.300 (“Tree protection”), Section 40.23.320 (“Tree replacement”), Table 40.23.320 (“Specimen Tree Replacement”), is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:*

Table 40.23.320
SPECIMEN TREE REPLACEMENT

<i>Size of Specimen Tree (DBH in inches)</i>	<i>Tree Species Growth Category (see Appendix 3)</i>	<i>Number of Replacement Trees</i>	<i>Size and Type</i>
<u>16.00 to 23.99</u>	<u>1</u>	<u>5</u>	<u>3" canopy trees</u>
<u>24.0[4]0 to 31.99</u>	<u>1 and 2</u>	<u>7</u>	<u>[2½]3" canopy trees</u>
<u>32.00 to [42.00]39.99</u>	<u>1, 2 and 3</u>	<u>9</u>	<u>3" canopy trees</u>
<u>[42.00]40.00 or greater</u>	<u>1, 2 and 3</u>	<u>12</u>	<u>6 - 4" and 6 - 3" canopy trees</u>

Section 51. *New Castle County Code Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.500 (“Reserved”)*, is hereby amended by adding the material that is underscored and deleting the material that is bracketed and stricken, as set forth below:

Division 40.23.500. [Reserved] Tree and plant material maintenance and replacement.

This Division establishes standards for tree and plant material maintenance and replacement.

Section 52. *New Castle County Code Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.500 (“Reserved”)*, is hereby amended by adding the material that is underscored as set forth below:

Sec. 40.23.510. Tree and plant material maintenance.

All trees, shrubs and woody plantings required to be planted by this Chapter shall be maintained in a natural growing condition. Pruning or trimming may not alter the general growth habit, appearance or form of a tree, shrub or woody planting, beyond what is typically found in arboricultural or horticultural practices for the given planting context or as designated on the approved landscape plan.

Section 53. *New Castle County Code Chapter 40 (Unified Development Code or “UDC”), Article 23 (“Landscaping, Trees, and Erosion”), Division 40.23.500 (“Reserved”)*, is hereby amended by adding the material that is underscored, as set forth below:

Sec. 40.23.520. Tree and plant material replacement.

Tree and plant material required by this Chapter shall be maintained in a healthy manner. After the warranty against defect period, a level of attrition of tree and plant material is allowable.

- A. Allowable attrition rates for total number of plants located within the planting areas defined in Article 4 shall be:

1. Zero (0) percent for street trees and parking lots;
 2. Five (5) percent for street and peripheral bufferyards;
 3. Ten (10) percent for open space; and
 4. Fifteen (15) percent for on-lot.
- B. Any dead, damaged or diseased tree or plant material exceeding the allowable attrition rates shall be replaced unless, as documented by a professional arborist, forester or landscape architect, such tree or plant material can be made healthy.
- C. The Department may consider a limited amount of plant species substitutions for plant material shown on a landscape plan, as amended by a professional landscape architect, without the filing of a new landscape plan.

Section 54. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 33 (“Definitions”), Division 40.33.100 (“Word usage”), Section 40.33.110 (“County terms”), is hereby amended by adding the material that is underscored, as set forth below:

Sec. 40.33.110. County terms.

- A. The word "Council" shall mean . . .

M. The words "Guiding Principles" shall mean the Guiding Principles for Development (Appendix 7) of the UDC.

Section 55. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Article 33 (“Definitions”), Division 40.33.300 (“General definitions”), is hereby amended by adding the material that is underscored and by deleting the material that is bracketed and stricken, as set forth below.

Division 40.33.300. General definitions.

This Division contains the definition of words used in this Chapter . . .

Gross floor area (GFA). The sum of the total horizontal areas of every floor of every building on a lot. The measurement of gross floor area shall be computed by applying the following criteria:

- A. The horizontal square footage . . .
- B. Cellars, basements, penthouses . . .
- C. Except upper floor areas in open atriums . . .

D. Parking structures and parking areas shall not count toward GFA except for the purpose of calculating the processing fee for such structure as delineated in Appendix 2 of this Chapter.

E. Unheated structures or buildings . . .

Native plant. A plant or tree species native and indigenous to the State of Delaware is one that has, over time, evolved and adapted to the environmental conditions of the area and is understood to have occurred in Delaware prior to the time of human settlement, or has established itself within the state independent of direct human activity. . . .

Parking structure. An above-ground structure designed to accommodate vehicular parking spaces which are fully or partially enclosed or located on the deck surface of a building. [This definition shall include parking garages, and deck parking and underground or under building parking areas.] A parking area located under a building that is entirely at or below-grade, and single-story garages accessory to a residential use shall not be considered a parking structure. . . .

Shared-use pathway. A transportation facility, serving non-motorized users, including pedestrians, cyclists and equestrians, typically located within an easement or right-of-way for public access and physically separated from motor vehicle traffic. . . .

Specimen tree. [Trees listed in the State Big Trees Program, or trees in good health that are not in woodland but have diameters in excess of twenty four (24) inches DBH.] Any tree or arborescent plant (i.e., a perennial woody plant with a treelike habit that resembles a tree in growth or appearance) in good health that is not in a forest and having a single trunk diameter in accordance with Table 40.23.320 and Appendix 3, or having 75% or more of the trunk diameter of the current state champion tree as identified by the Delaware Forest Service. Non-native tree species considered invasive shall not be designated as specimen trees.

Section 56. *New Castle County Code* Chapter 40 (Unified Development Code or “UDC”), Appendix 3 (“Plant Lists”), is hereby revised by deleting the matter which is included in the material attached hereto as “Exhibit A” and made a part hereof as if fully set forth herein, all of which shall be considered bracketed and stricken. Appendix 3 (“Plant Lists”) is further revised by adding the material set forth in “Exhibit B” which is attached hereto and made a part hereof as if fully set forth herein, all of which shall be considered underlined.

Section 57. New Castle County Council finds that the provisions of this Ordinance are consistent with the spirit and intent of the New Castle County Comprehensive Development Plan.

Section 58. All ordinances or parts of ordinances and all resolutions or parts of resolutions that may be in conflict herewith are hereby repealed except to the extent they remain applicable to land use matters reviewed under previous Code provisions as provided in Chapter 40 of the *New Castle County Code*.

Section 59. The provisions of this Ordinance shall be severable. If any provision of this Ordinance is found by any court of competent jurisdiction to be unconstitutional or void, the remaining provisions of this Ordinance shall remain valid, unless the court finds that the valid provisions of this Ordinance are so essentially and inseparably connected with, and so dependent upon, the unconstitutional or void provision that it cannot be presumed that County Council would have enacted the remaining valid provisions without the unconstitutional or void one, or unless the court finds that the remaining valid provisions, standing alone, are incomplete and incapable of being executed in accordance with County Council's intent. If any provision of this Ordinance or any zoning map or portion thereof is found to be unconstitutional or void, all applicable former ordinances, resolutions, zoning maps or portions thereof shall become applicable and shall be considered as continuations thereof and not as new enactments regardless if severability is possible.

Section 60. This Ordinance shall become effective immediately upon passage by New Castle County Council and signature of the County Executive or as otherwise provided in 9 Del. C § 1156 and shall only apply to Land Use applications submitted after such date(s) unless the applicant by written request agrees to submit to the provisions of this Ordinance.

Adopted by County Council of
New Castle County on:

President of County Council
of New Castle County

Approved on:

County Executive
New Castle County

Table 40.03.110. The purpose of this amendment is to modify parking standards for apartments.

Sec. 40.03.316. This amendment creates additional screening requirements and guidance for drive-in facilities, including flexibility with respect to bypass lanes.

Sec. 40.03.410. This amendment provides more latitude in the placement of accessory structures on lots ten acres or more and clarifies fence height limitations.

Sec. 40.03.430. This amendment establishes an eight foot height restriction for fences in nonresidential districts and allows for up to an additional foot for installation on sloping ground.

Sec. 40.03.510. This amendment adjusts requirements for loading areas.

Table 40.03.522. This amendment reduces required minimum parking standards.

Sec. 40.03.525. This amendment establishes criteria for determining when off-site, on-street parking can be counted towards required parking.

Sec. 40.03.527. This amendment clarifies the bicycle parking calculation.

Sec. 40.04.110. This amendment provides for a larger landing associated with a deck that projects into a required yard. It also adds guidelines for the placement of build-to lines.

Table 40.04.111. This amendment increases the require landscaping plant units for certain parking facilities.

Sec. 40.04.210. This amendment clarifies the requirements for planting area designations.

Figure 40.04.210. This amendment replaces the term “landscaping area” with “planting area” to match new text in other sections, and replaces the graphic depicted in Figure 40.04.210.

Sec. 40.04.220. This amendment provides additional landscaping standards for lots with more than 40 parking spaces.

Sec. 40.04.330. This amendment clarifies the uses allowed in required bufferyards and provides opacity standards for sidewalks, shared-use pathways and trails located in required bufferyards.

Division 40.05.050. This amendment removes the reference to parking structures because the exception is already addressed in the definition of the term gross floor area.

7.800 skipped

Sec. 40.10.136. This amendment clarifies the requirement to eliminate non-native, invasive plant species from low-quality forests, old fields and meadows. It also references the new guidance and standards in Appendix 3 and Section 40.23.240.

Sec. 40.20.210. This amendment modifies block standards and provides additional guidance for the use of bicycle and pedestrian accessways and alleys. (amend???)

Sec. 40.20.230. This amendment clarifies existing code language, provides an additional requirement for proof of posting for interconnecting streets, and adds standards for cul-de-sac length.

Sec. 40.21.111. This amendment provides improved roadway system design flexibility by allowing for the creation of circulation plans whenever development occurs, clarifies that local streets should be included in such plans, and allows collectors to serve as alternative routes for traffic.

Sec. 40.21.141. This amendment clarifies existing code language and provides additional standards for cul-de-sac design.

Sec. 40.21.161. This amendment provides design flexibility and allows the elimination of curbing when the curbing would not provide necessary drainage conveyance. Figure 40.21.161 is removed.

Sec. 40.21.162. This amendment provides for the use of shared-use pathways, and provides additional standards for sidewalks.

Sec. 40.21.163. This amendment clarifies sidewalks standards and adds standards for shared-use pathways. DelDOT issues design and construction standards for sidewalks and shared use pathways.

Sec. 40.22.610. This amendment provides additional requirements regarding parking lot design waiver and reduction requests.

Sec. 40.22.611. This amendment provides additional guidance regarding numerous facets of parking lot design, including landscaping buffers for outdoor seating and dining areas, separation of large areas of off-street parking, additional bicycle rack standards and requirements for on-street parking.

Sec. 40.22.612. This amendment provides guidance for compact parking spaces including new Table 40.22.612.B that establishes minimum compact parking space dimensions.

Sec. 40.22.614. This amendment requires conformance with ADA standards for restriping and reconfiguration of nonconforming parking.

Sec. 40.22.621. This amendment provides standards for screening of outdoor loading bays.

Article 23. This amendment expands the title to clarify the scope of Article 23.

Sec. 40.23.010. This amendment adds additional division citations and minor plan guidance to this section.

Sec. 40.23.110. This amendment divides the section into subsections, clarifies plant unit type nomenclature and allows an alternative plant unit type in specified situations.

Table 40.23.110. This amendment clarifies language in the table to match nomenclature used within other sections and adds additional planting guidance.

Sec. 40.23.120. This amendment provides additional guidance for both on-lot and open space planting categories.

Sec. 40.23.130. This amendment provides additional standards to promote the long-term health of parking lot landscaping. The reference to existing trees is removed. Existing tree standards are addressed in Sections 40.23.250 and 40.23.310.

Sec. 40.23.140. This amendment clarifies language for bufferyard planting standards.

Table 40.23.140. This amendment clarifies and provides additional guidance for bufferyard planting requirements, including the establishment of maximum bufferyard widths. The “Type of Structure” column is removed. The additional note highlights the use of screening structures to avoid the over-crowding of plants in a bufferyard.

Sec. 40.23.141. This amendment clarifies bufferyard standards language and adds standards for the implementation of hedges within bufferyards.

Sec. 40.23.142. This amendment allows bufferyard opacity reduction where a plan proposes a build-to line rather than a street yard setback.

Sec. 40.23.151. This amendment provides that street trees may be planted alongside of a right-of-way, removes the requirement for street tree placement closer than forty feet for smaller lots, provides additional detail for street tree type, size, quality and spacing, allows for substitution of trees in certain situations, and provides additional text for clarity.

Division 40.23.200. This amendment provides additional landscaping installation and maintenance requirements.

Sec. 40.23.230. This amendment provides additional standards for the placement of street trees.

Sec. 40.23.240. This amendment adds additional standards for reforestation including greater species diversity, the provision of a plan for maintenance and expected survival rates to increase the potential for success in reforestation.

Table 40.23.240 This amendment provides additional flexibility for reforestation within the table and requires a greater density of plant material for reforestation.

Sec. 40.23.250. This amendment reorganizes the Section and provides a wider range of credits for existing trees, while creating a uniform standard for trees preserved within all landscape planting areas.

Sec. 40.23.270. This amendment adds additional guidance on tree and plant material quality.

Sec. 40.23.280. This amendment clarifies language for plant lists in accordance with Appendix 3.

Division 40.23.300. This amendment adds a requirement to identify the species of specimen trees on a site plan or land development plan.

Sec. 40.23.310. This amendment provides additional guidance on specimen tree preservation and removes an unnecessary reference to steep slopes.

Sec. 40.23.320. This amendment clarifies that off-site replacement trees shall be provided at a higher ratio. Growth Categories are provided to highlight the value of slower growing trees. This amendment also provides flexibility to use larger tree calipers on-site where such trees satisfy other required tree planting standards such as the requirements for street trees, bufferyards, on-lot/open space and parking lot landscaping.

Table 40.23.320. This amendment adds a column for growth categories and modifies standards for specimen tree replacement within the table.

Division 40.23.500. This amendment provides a new Division regarding tree and plant material maintenance and replacement.

Sec. 40.23.510. This amendment provides standards for tree and plant material maintenance to prevent inappropriate alteration of the planting.

Sec. 40.23.520. This amendment provides standards for tree and plant material replacement. Dead, damaged or diseased tree or plant material may not need to be replaced where it does not affect buffering, stormwater management or beautification attributes, when so documented by a professional. This amendment also allows limited substitutions pursuant to Department approval.

Sec. 40.33.110. This amendment provides a definition for “Guiding Principles.”

Division 40.33.300. This amendment clarifies that all parking facilities, not just parking structures, will not count toward gross floor area, provides that certain parking facilities do not fall under the definition of the term parking structure, clarifies the definition for specimen tree and adds new definitions for the terms native plant and shared-use pathway.

Appendix 3. This amendment modifies the lists of recommended, invasive and native plant species.

FISCAL NOTE:

Exhibit A

APPENDIX 3. PLANT LISTS

The following plant lists are provided for reference purposes, and are not intended to be comprehensive. Use of plants listed herein does not guarantee approval by the Department. It is the designer's responsibility to determine which plant is appropriate based on individual characteristics of the plant, location, or situation. Inclusion on these lists does not guarantee availability of particular species.

Part 1: Invasive Exotics

The following plants are not to be planted under any circumstances, except as noted by an asterisk. Where a plant is marked by an asterisk (*), some cultivars proven to be sterile may be acceptable subject to the approval of the Department.

Trees.

<i>Acer platanoides</i>	Norway maple
<i>Acer pseudoplatanus</i>	Sycamore maple
<i>Ailanthus altissima</i>	Tree of heaven
<i>Albizia julibrissin</i>	Mimosa
<i>Elaeagnus angustifolia</i>	Russian-olive
<i>Evodia danielli</i>	Korean Evodia
<i>Morus alba</i>	Mulberry
<i>Paulownia tomentosa</i>	Empress tree
<i>Phellodendron amurense</i>	Amur cork tree
<i>Populus alba</i>	White poplar
<i>Prunus avium</i>	Sweet cherry
<i>Styrax japonica</i>	Japanese snowbell
<i>Ulmus pumila</i>	Siberian elm

Shrubs.

<i>Berberis thunbergii</i>	Asian barberry
<i>Berberis vulgaris</i>	European barberry
<i>Elaeagnus umbellata</i>	Autumn-olive
<i>Euonymus fortunei</i>	Wintercreeper
<i>Ilex crenata*</i>	Japanese holly*
<i>Ligustrum</i> species	Privet
<i>Lonicera maackii</i>	Amur honeysuckle
<i>Lonicera morrowi</i>	Morrow honeysuckle
<i>Lonicera tatarica</i>	Tatarian honeysuckle
<i>Rhamnus cathartica</i>	Common buckthorn
<i>Rhamnus frangula</i>	Alder buckthorn
<i>Rosa multiflora</i>	Multiflora rose
<i>Rubus phoenicolasius</i>	Wineberry
<i>Viburnum seiboldii</i>	Seibold viburnum

Vines/Ground Cover.

<i>Akebia quinata</i>	Five-leaf akebia
<i>Ampelopsis brevipedunculata</i>	Porcelainberry
<i>Celastrus orbiculatus</i>	Oriental bittersweet
<i>Coronilla varia</i>	Crown vetch
<i>Hedera helix</i>	English ivy
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Phalaris arundinacea</i>	Reed canary grass
<i>Poa trivialis</i>	Annual bluegrass
<i>Polygonum cuspidatum</i>	Japanese knotweed
<i>Polygonum perfoliatum</i>	Mile-a-minute
<i>Pueraria lobata</i>	Kudzu

Herbaceous.

<i>Chrysanthemum leucanthemum</i>	Oxeye daisy
<i>Daucus carota</i>	Queen Anne's lace
<i>Hemerocallis fulva*</i>	Common daylily*
<i>Hesperus matronalis</i>	Dame's rocket
<i>Lysimachia nummularia</i>	Moneywort
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Ornithogalum umbellatum</i>	Star of Bethlehem
<i>Perilla frutescens</i>	Perilla
<i>Phragmites australis</i>	Phragmites
<i>Saponaria officinalis</i>	Bouncing Bet

Part 2: Recommended Street Trees

Large trees (over 40 feet). Should be planted forty (40) feet on center.

<i>Acer rubrum "Red Sunset"</i>	Red maple
<i>Acer saccharum "Green Mountain"</i>	Sugar maple
<i>Celtis occidentalis</i>	Common hackberry
<i>Gleditsia triacanthos "inermis"</i>	Thornless honey locust
<i>Platanus acerifolia (Liberty or Columbia varieties)</i>	London plane tree
<i>Quercus macrocarpa</i>	Willow oak
<i>Quercus rubra</i>	Northern red oak
<i>Quercus shumardii</i>	Shumard oak
<i>Tilia cordata</i>	Littleleaf linden
<i>Zelkova serrata</i>	Japanese zelkova

Note: maples to be planted in a minimum eight (8) foot wide green strip, or, behind the sidewalk.

Medium trees (30 to 40 feet). Should be planted thirty (30) feet on center.

<i>Acer campestre</i>	Hedge maple
<i>Carpinus betulus</i>	European hornbeam
<i>Carpinus caroliniana</i>	American hornbeam
<i>Crataegus crus-galli inermis</i>	Thornless cockspur hawthorn
<i>Koelreuteria paniculata</i>	Goldenrain tree
<i>Prunus serrulata "Kwanzan"</i>	Kwanzan cherry
<i>Prunus sargentii</i>	Sargent Cherry
<i>Pyrus calleryana (Aristocrat or Redspire varieties)</i>	Flowering pear
<i>Sophora japonica</i>	Scholar tree
<i>Syringa reticulata</i>	Japanese tree lilac

Part 3: Recommended Plant Material for Riparian Buffer Areas

The following list contains plant materials recommended for New Castle County riparian buffer areas (RBA's). Unless specifically stated, all plant species listed are native to this geographic area.

The decision as to what to plant where largely depends on hydrologic soil conditions, individual site factors, and vegetative functions. Zone 1 vegetation should consist of native streamside trees and shrubs on soils of Hydrologic Groups D and C and native upland species on soils of Groups A and B. Such considerations also apply to Zone 2. Deciduous species are important in Zone 2 due to the sequestering of nutrients during the growth process and the production of carbon leachate from leaf litter that drives the bacterial processes that remove nitrogen. In both zones, a variety of species is important to meet the habitat needs of insects important to the aquatic food chain. Given that the functions of the outer edge of Zone 2 are to control sedimentation, provide for nutrient uptake and maintain sheet flow, vegetation should consist largely of dense perennial grasses and forbs.

Other general considerations include evaluating the type and quantity of potential pollutants that will migrate through the drainage area and planning for wildlife habitat improvement and visual amenities.

Native trees for general use.

Acer saccharum	Sugar maple
Aralia spinosa	Devil's walking-stick
Cercis canadensis	Redbud
Cornus alternifolia	Pagoda dogwood
Cornus florida	Flowering dogwood
Crataegus phaenopyrum	Washington hawthorn
Diospyrus virginiana	Common persimmon
Fagus grandifolia	American beech
Fraxinus americana	White ash
Ilex opaca	American holly
Liriodendron tulipifera	Tulip poplar
Oxydendron arboreum	Sourwood
Prunus serotina	Black cherry
Quercus alba	White oak
Quercus coccinea	Scarlet oak
Quercus falcata	Spanish oak
Quercus prinus	Chestnut oak
Quercus rubra	Red oak
Quercus velutina	Black oak
Robinia pseudoacacia	Black locust
Sassafras albidum	Sassafras

Native trees for moist soils and streambanks.

Acer negundo	Box-elder
Acer rubrum	Red or swamp maple
Acer saccharinum	Silver maple
Alnus serrulata	Common alder
Amelanchier canadensis	Downy shadblow or serviceberry
Asimina triloba	Pawpaw
Betula lenta	Sweet birch
Betula nigra	River birch
Carpinus caroliniana	American hornbeam (ironwood)
Carya cordiformis	Bitternut hickory
Chamaecyparis thyoides	Atlantic white cedar
Chionanthus virginicus	Fringe-tree
Crataegus punctata	Thicket hawthorn
Crataegus viridis	Green hawthorn
Fraxinus pennsylvanica	Green ash
Liquidambar styraciflua	Sweetgum
Magnolia virginiana	Sweetbay magnolia
Malus coronaria	Wild crab apple
Nyssa sylvatica var. biflora	Swamp black gum
Nyssa sylvatica	Black gum
Pinus serotina	Pond pine
Pinus taeda	Loblolly pine
Platanus occidentalis	American sycamore, buttonwood
Populus heterophylla	Swamp cottonwood
Quercus bicolor	Swamp white oak
Quercus lyrata	Overcup oak
Quercus nigra	Water oak
Quercus palustris	Pin oak
Quercus phellos	Willow oak
Salix nigra	Black willow
Taxodium distichum	Baldcypress
Thuja occidentalis cv. nigra	Dark American arborvitae

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Tilia americana
Tsuga canadensis

American linden
Canadian hemlock

Native shrubs for general use.

Aesculus parviflora
Callicarpa americana
Corylus americana
Fothergilla major
Gaylussacia brachycera
Hamamelis virginiana
Hydrangea quercifolia
Kalmia latifolia
Leucothoe fontanesiana
Myrica cerifera
Rhododendron arboreascens
Rhododendron atlanticum
Rhododendron bakeri
Rhododendron calendulaceum
Rhododendron carolinianum
Rhododendron catawbiense
Rhododendron fortunei
Rhododendron periclymenoides/nudum
Rhododendron prinophyllum
Rhododendron vaseyi
Rhus copallina
Rhus glabra
Rhus typhina
Sambucus canadensis
Staphylea trifolia
Symporicarpos albus
Vaccinium angustifolium
Viburnum acerifolium
Viburnum dentatum
Viburnum trilobum

Bottlebrush buckeye
Beautyberry
American hazelnut
Large fothergill
Box huckleberry
Witch-hazel
Oakleaf hydrangea
Mountain laurel
Drooping leucothoe
Waxmyrtle
Sweet azalea
Coast azalea
Cumberland azalea
Flame azalea
Carolina rhododendron
Catawba rhododendron
Fortune rhododendron
Pinxterbloom azalea
Roseshell azalea
Pinkshell azalea
Shining sumac
Smooth sumac
Staghorn sumac
Elderberry
American bladdernut
Snowberry
Lowbush cranberry
Mapleleaf viburnum
Arrowwood
American cranberry

Native shrubs for moist soils and stream banks.

Aronia arbutifolia
Aronia melanocarpa
Aronia prunifolia
Baccharis halimifolia
Calycanthus floridus
Cephalanthus occidentalis
Clethra alnifolia
Cornus amomum
Cornus racemosa
Cornus sericea
Fothergilla gardenii
Ilex glabra
Ilex verticillata/laevigata
Itea virginica
Leucothoe racemosa
Lindera benzoin
Lyonia ligustrina
Myrica pensylvanica
Physocarpus opulifolius
Potentilla fruticosa
Rhododendron canescens

Red chokeberry
Black chokeberry
Purple chokeberry
Groundsel tree
Sweetshrub
Buttonbush
Summersweet (sweet pepperbush)
Silky dogwood
Grey dogwood
Red-osier dogwood
Dwarf fothergill
Inkberry
Winterberry holly
Sweet-spires
Sweetbells fetterbush
Spicebush
Staggerbush
Bayberry
Ninebark
Bush cinquefoil
Piedmont azalea

Rhododendron maximum	Rosebay
Rhododendron viscosum	Swamp azalea
Rosa palustris	Swamp rose
Salix discolor	Glaucus willow, pussy willow
Salix interior	Sandbar willow
Vaccinium corymbosum	Highbush blueberry
Vaccinium macrocarpon	American cranberry
Viburnum cassinoides	Witherod
Viburnum nudum	Smooth witherod
Viburnum lentago	Nannyberry
Viburnum prunifolium	Blackhaw
Viburnum recognitum	Northern arrowwood
<i>Native wildflowers for moist and wet soils.</i>	
Acorus calamus	Sweet flag
Arisaema draconitum	Green dragon
Asclepias incarnata	Swamp milkweed
Aster novae-angliae	New England aster
Aster novae-belgii	New York aster
Aster puniceus	Purple-stemmed aster
Bidens conata	Swamp beggar's tick
Caltha palustris	Marsh marigold
Cassia marilandica	Senna
Chelone glabra	Turtlehead
Coreopsis rosea	Pink coreopsis
Eupatorium fistulosum	Hollow Joe-Pye weed
Eupatorium dubium	Joe-Pye weed, boneset
Helenium autumnale	Yellow-headed sneezeweed
Helianthus angustifolia	Narrow-leaved sunflower
Helianthus giganteus	Giant sunflower
Hibiscus moscheutos (palustris)	Swamp rose mallow
Impatiens biflora	Spotted jewel weed
Impatiens pallida	Pale jewel weed
Iris versicolor	Blue flag
Lilium canadense	Canada lily
Lobelia cardinalis	Cardinal flower
Lobelia siphilitica	Blue lobelia
Ludwigia alternifolia	Seedbox
Lysimachia ciliata	Loosestrife
Mimulus ringens	Monkeyflower
Mitella diphylla	Mitrewort
Peltandra virginica	Arrow arum
Phlox divaricata	Blue phlox
Phlox maculata	Wild Sweet William
Phlox subulata	Moss pink
Pycnanthemum muticum	Mountain mint
Rhexia virginica	Meadow beauty
Rudbeckia laciniata	Green-headed coneflower
Sarracenia purpurea	Pitcher plant
Senecio aureus	Golden ragwort
Solidago graminifolia	Lance-leaved goldenrod
Solidago sempervirens	Seaside goldenrod
Teucrium canadense	Germander
Thalictrum polygamum	Tall meadow rue
Tradescantia virginiana	Spiderwort
Vernonia noveboracensis	Ironweed

<i>Viola cucullata</i>	Blue marsh violet
<i>Grasses for wet soils.</i>	
<i>Andropogon virginiana</i>	Broomsedge
<i>Carex species</i>	Sedges
<i>Eleocharis species</i>	Spike rushes
<i>Equisetum hyemale</i>	Rough horsetail
<i>Juncus species</i>	Rushes
<i>Leersia oryzoides</i>	Rice cutgrass
<i>Panicum virgatum</i>	Switch grass
<i>Scirpus species</i>	Bulrushes
<i>Sorghastrum nutans</i>	Indian grass
<i>Typha angustifolia</i>	Narrow-leaf cattail
<i>Typha latifolia</i>	Common cattail
<i>Zizania aquatica</i>	Wild rice
<i>Native ferns and vines.</i>	
<i>Athyrium felix-femina</i>	Lady fern
<i>Campsis radicans</i>	Trumpet vine
<i>Celastrus scandens</i>	Climbing bittersweet
<i>Dryopteris marginalis</i>	Marginal shield fern
<i>Menispermum canadense</i>	Moonseed vine
<i>Lonicera sempervirens</i>	Trumpet honeysuckle
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda cinnamomea</i>	Cinnamon fern
<i>Osmunda claytonia</i>	Interrupted fern
<i>Osmunda regalis</i>	Royal fern
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Polystichum acrostichoides</i>	Christmas fern
<i>Woodwardia virginica</i>	Virginia chainfern

FOOTNOTE: For plant sources and availability, applicants are encouraged to consult the following publications: 1) "Nursery Sources - Native Plants and Wildflowers" published by the New England Wildflower Society, Inc., Garden in the Woods, Hemenway Road, Framingham MA 01701, and 2) The American Association of Nurserymen Plant Locator Guide.

Part 4: Native Species of Special Interest

These plants, compiled from Rare Native Plants of Delaware, Delaware Natural Heritage Program, are of special interest to our region. The County would like to encourage the use of these plants in appropriate situations. This is not an exhaustive list of native plant species.

Trees.

<i>Acer saccharum</i>	Sugar maple
<i>Amelanchier laevis</i>	Smooth serviceberry
<i>Betula alleghaniensis</i>	Yellow birch
<i>Betula populifolia</i>	Gray birch
<i>Castanea dentata</i>	American chestnut
<i>Cercis canadensis</i>	Eastern redbud
<i>Fraxinus nigra</i>	Black ash
<i>Juglans cinerea</i>	White walnut
<i>Malus coronaria</i>	Wild crab
<i>Ostrya virginiana</i>	Eastern hophornbeam
<i>Pinus echinata</i>	Shortleaf pine
<i>Prunus americana</i>	Wild plum
<i>Prunus virginiana</i>	Choke cherry
<i>Quercus bicolor</i>	Swamp white oak

<i>Quercus lyrata</i>	Overcup oak
<i>Quercus prinoides</i>	Dwarf chinkapin oak
<i>Taxodium distichum</i>	Baldcypress
<i>Shrubs.</i>	
<i>Aralia racemosa</i>	American spikenard
<i>Ceanothus americanus</i>	New Jersey tea
<i>Comptonia peregrina</i>	Sweet fern
<i>Cornus racemosa</i>	Grey dogwood
<i>Corylus cornuta</i>	Beaked hazelnut
<i>Diervilla lonicera</i>	Northern bush honeysuckle
<i>Euonymus atropurpurea</i>	Wahoo
<i>Gaylussacia brachycera</i>	Box huckleberry
<i>Hydrangea arborescens</i>	Wild smooth hydrangea
<i>Hypericum prolificum</i>	Shrubby Saint-Johns-wort
<i>Kalmia angustifolia</i>	Sheeplaurel
<i>Lyonia mariana</i>	Staggerbush
<i>Physocarpus opulifolius</i>	Eastern ninebark
<i>Symphorocarpos albus</i>	Snowberry
<i>Vaccinium angustifolium</i>	Late lowbush blueberry
<i>Vaccinium macrocarpon</i>	Large cranberry
<i>Viburnum lentago</i>	Nannyberry
<i>Vines/Ground Cover.</i>	
<i>Andropogon gerardii</i>	Big bluestem
<i>Calamagrostis canadensis</i>	Blue-joint reed grass
<i>Celastrus scandens</i>	American bittersweet
<i>Chasmanthium latifolium</i>	Indian sea-oats
<i>Clematis occidentalis</i>	Purple clematis
<i>Passiflora incarnata</i>	Purple passion flower
<i>Passiflora lutea</i>	Yellow passion flower
<i>Poa sylvestris</i>	Woodland bluegrass
<i>Herbaceous and Ferns.</i>	
<i>Actaea pachypoda</i>	White baneberry
<i>Adiantum pedatum</i>	Northern maidenhair fern
<i>Aquilegia canadensis</i>	Canadian columbine
<i>Arisaema dracontium</i>	Green dragon
<i>Boltonia asteroides</i>	Boltonia
<i>Caltha palustris</i>	Marsh marigold
<i>Coreopsis rosea</i>	Pink tickseed
<i>Eupatorium maculatum</i>	Spotted Joe-Pye weed
<i>Eupatorium purpureum</i>	Purple Joe-Pye weed
<i>Gentiana andrewsii</i>	Fringe-tip closed gentian
<i>Helianthus angustifolius</i>	Swamp sunflower
<i>Iris prismatica</i>	Slender blue flag
<i>Liatris spicata</i>	Spike gay-flower
<i>Lilium canadense</i>	Canada lily
<i>Mertensia virginica</i>	Bluebells
<i>Monarda fistulosa</i>	Wild bergamoot
<i>Oenothera fruticosa</i>	Sundrops
<i>Penstemon hirsutus</i>	Hairy beardtongue
<i>Penstemon laevigatus</i>	Smooth beardtongue
<i>Phlox maculata</i>	Wild Sweet William
<i>Polygonatum biflorum</i>	Solomon's seal
<i>Solidago speciosa</i>	Showy goldenrod
<i>Tradescantia virginiana</i>	Spiderwort

Trillium cernuum
Trillium erectum
Viola pedatum
(Ord. No. 97-172, § 3(ch. 13, app. 3), 12-31-1997)

Nodding trillium
Purple trillium
Birdfoot violet

Exhibit B

APPENDIX 3: PLANT LISTS AND PLANTING GUIDANCE

1. Recommended Plant List - Plant species generally suitable for or native and indigenous to the State of Delaware. This list is for general guidance only and does not serve as an exhaustive accounting of all suitable plants. For plant species proposed that are not listed, the applicant shall provide arboricultural and botanical information as requested by the Department.

A. Large Canopy Trees (50'+)

Botanical Name	Common Name	Street Tree	Urban Tolerance	C/V/H	Foliage	Native	RBA Usage	Growth Category	Notes
<i>Acer nigrum</i>	Black Maple	L	N	N	D	Y	Y	3	Lawn or border tree. Well-drained, acidic soils.
<i>Acer pseudoplatanus</i>	Sycamore Maple	Y	Y	Y	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Acer rubrum</i>	Red Maple	L	L	Y	D	Y	Y	2	Lawn or border tree. Avoid areas subject to salt spray.
<i>Acer rubrum var trilobum</i>	Trident Red Maple	L	L	N	D	Y	Y	3	Lawn or border tree. Well-drained, acidic soils.
<i>Acer saccharum</i>	Sugar Maple	L	N	Y	D	Y*	Y	3	Lawn or border tree. Well-drained, acidic soils.
<i>Aesculus flava</i>	Yellow Buckeye	N	L	N	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Aesculus hippocastanum</i>	Horsechestnut	N	L	Y	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Aesculus x carnea</i>	Red Horsechestnut	L	L	Y	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Carya cordiformis</i>	Bitternut Hickory	N	N	N	D	Y	Y	1	Lawn or border tree. Well-drained, acidic soils.
<i>Carya glabra</i>	Pignut Hickory	N	N	N	D	Y	Y	1	Lawn or border tree. Well-drained, acidic soils.
<i>Carya ovalis</i>	Sweet Pignut Hickory	N	N	N	D	Y	Y	1	Lawn or border tree. Well-drained, acidic soils.
<i>Carya ovata</i>	Shagbark Hickory	N	N	N	D	Y*	Y	1	Lawn or border tree. Well-drained, acidic soils.
<i>Carya tomentosa</i>	Mockernut Hickory	N	N	N	D	Y	Y	1	Lawn or border tree. Well-drained, acidic soils.
<i>Castanea dentata</i>	American Chestnut	N	N	N	D	Y	Y	2	Lawn or border tree. Disease resistant available.
<i>Castanea mollissima</i>	Chinese Chestnut	N	N	Y	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Celtis laevigata</i>	Sugar Hackberry	Y	Y	N	D	Y	Y	3	Lawn or border tree. Wide range of soils.
<i>Celtis occidentalis</i>	Hackberry	L	Y	N	D	Y	Y	3	Lawn or border tree. Wide range of soils.
<i>Cercidiphyllum japonicum</i>	Katsura Tree	Y	L	N	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Cladrastis kentukea</i>	American Yellowwood	Y	Y	Y	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Fagus grandifolia</i>	American Beech	N	L	N	D	Y	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Fagus sylvatica</i>	European Beech	N	L	Y	D	N	N	2	Lawn or border tree. Hedge tree with heavy pruning.
<i>Ginkgo biloba</i>	Ginko	Y	Y	Y	D	N	N	2	Diocious. Use male plants near infrastructure.
<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	Y	Y	Y	D	Y	N	3	Lawn or border tree. Select cultivars for street trees.
<i>Gymnocladus dioicus</i>	Kentucky Coffeetree	L	Y	Y	D	Y	Y	1	Lawn or border tree. Produces large seed pods.
<i>Juglans nigra</i>	Black Walnut	N	L	N	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Liquidambar styraciflua</i>	Sweetgum	Y	Y	Y	D	Y	Y	2	Lawn or border tree. Utilize fruitless cultivar on streets.
<i>Liriodendron tulipifera</i>	Tuliptree	N	L	Y	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Magnolia acuminata</i>	Cucumbertree Magnolia	L	Y	Y	D	Y	Y	3	Lawn or border tree. Well-drained, acidic soils.
<i>Metasequoia glyptostroboides</i>	Dawn Redwood	N	Y	Y	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Nyssa sylvatica</i>	Blackgum	Y	L	Y	D	Y	Y	1	Lawn or border tree. Wide range of soils.
<i>Platanus x acerifolia</i>	London Planetree	Y	Y	Y	D	N	N	2	Lawn or border tree. Wide range of soils.
<i>Platanus occidentalis</i>	American Sycamore	N	Y	L	D	Y	Y	3	Lawn or border tree. Wide range of soils.
<i>Picea abies</i>	Norway Spruce	N	L	Y	E	N	N	3	Border or hedge tree. Wide range of soils
<i>Picea omorika</i>	Serbian Spruce	N	L	Y	E	N	N	2	Border or hedge tree. Wide range of soils
<i>Picea pungens</i>	Colorado Spruce	N	L	Y	E	N	N	2	Border or hedge tree. Wide range of soils
<i>Pinus echinata</i>	Yellow Pine	N	Y	N	E	Y	N	3	Border or hedge tree. Wide range of soils
<i>Pinus rigida</i>	Pitch Pine	N	Y	L	E	Y	Y	3	Border or hedge tree. Wide range of soils
<i>Pinus strobus</i>	White Pine	N	Y	Y	E	Y	Y	3	Border or hedge tree. Wide range of soils
<i>Pinus taeda</i>	Loblolly Pine	N	Y	L	E	Y	Y	3	Border or hedge tree. Wide range of soils
<i>Pinus virginiana</i>	Virginia Pine	N	Y	N	E	Y	N	3	Border or hedge tree.
<i>Populus deltoides</i>	Eastern Cottonwood	N	Y	Y	D	Y	Y	3	Lawn or border tree. Wide range of soils.
<i>Populus grandidentata</i>	Large Toothed Aspen	N	Y	N	D	Y	Y	3	Lawn or border tree. Wide range of soils.
<i>Populus tremuloides</i>	Quaking Aspen	N	Y	N	D	Y	Y	3	Lawn or border tree. Wide range of soils.
<i>Pseudotsuga menziesii</i>	Douglas Fir	N	L	Y	E	N	N	3	Border or hedge tree. Wide range of soils
<i>Quercus acutissima</i>	Sawtooth Oak	L	L	N	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Quercus alba</i>	White Oak	N	N	N	D	Y	Y	1	Lawn or border tree. Well-drained, acidic soils.
<i>Quercus bicolor</i>	Swamp White Oak	Y	Y	Y	D	Y*	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus coccinea</i>	Scarlet Oak	L	L	L	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Quercus falcata</i>	Southern Red Oak	L	Y	N	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus imbricaria</i>	Shingle Oak	Y	Y	N	D	Y	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Quercus macrocarpa</i>	Bur Oak	L	L	Y	D	Y	N	2	Lawn or border tree. Wide range of soils.
<i>Quercus michauxii</i>	Swamp Chestnut Oak	L	L	N	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus muehlenbergii</i>	Chinquapin Oak	L	L	N	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus phellos</i>	Willow Oak	Y	Y	Y	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus prinus</i>	Chestnut Oak	N	L	N	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus nigra</i>	Water Oak	N	L	N	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Quercus robur</i>	English Oak	Y	Y	Y	D	N	N	2	Lawn, border or hedge tree. 'Fastigiata' narrow cultivar
<i>Quercus rubra</i>	Northern Red Oak	Y	Y	Y	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus shumardii</i>	Shumard Oak	L	Y	N	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Quercus velutina</i>	Black Oak	N	L	N	D	Y	Y	2	Lawn or border tree. Wide range of soils.
<i>Salix alba</i>	White Willow	N	L	Y	D	N	N	3	Lawn or border tree. Wide range of soils.

<i>Taxodium ascendens</i>	Pondcypress	Y	Y	Y	D	Y*	Y	2	Lawn or border tree. Wide range of soils.
<i>Taxodium distichum</i>	Baldcypress	Y	Y	Y	D	Y*	Y	2	Lawn or border tree. Wide range of soils.
<i>Thuja plicata</i>	Western Arborvitae	N	L	Y	E	N	N	2	Border or hedge tree. Well-drained, acidic soils.
<i>Tilia americana</i>	Basswood	Y	Y	Y	D	Y	Y	2	Lawn or border tree. Select cultivars for street trees.
<i>Tilia cordata</i>	Littleleaf Linden	Y	Y	Y	D	N	N	2	Lawn or border tree. Select cultivars for street trees.
<i>Tilia tomentosa</i>	Silver Linden	Y	Y	Y	D	N	N	2	Lawn or border tree. Select cultivars for street trees.
<i>Ulmus americana</i>	American Elm	Y	Y	Y	D	Y	Y	3	Lawn or border tree. Dutch Elm resistance cultivar
<i>Ulmus carpinifolia</i>	Smoothleaf Elm	Y	Y	Y	D	N	N	3	Lawn or border tree. Dutch Elm resistance cultivar
<i>Ulmus parvifolia</i>	Lacebark Elm	Y	Y	Y	D	N	N	3	Lawn or border tree. Tolerant of a wide range of soils.
<i>Ulmus rubra</i>	Red Elm	L	N	N	D	Y	Y	3	Lawn or border tree. Dutch Elm resistance cultivar
<i>Zelkova serrata</i>	Japanese Zelkova	Y	Y	Y	D	N	N	2	Lawn or border tree. Tolerant of a wide range of soils.

B. Medium Canopy Trees (30' to 50')

Botanical Name	Common Name	Street Tree	Urban Tolerance	C/V/H	Foliage	Native	RBA Usage	Growth Category	Notes
<i>Abies balsamea</i>	Balsam Fir	N	L	Y	E	Y	Y	2	Border or hedge tree. Well-drained, acidic soils.
<i>Abies concolor</i>	White Fir	N	L	Y	E	N	N	2	Border or hedge tree. Well-drained, acidic soils.
<i>Abies fraseri</i>	Fraser Fir	N	L	Y	E	Y	N	2	Border or hedge tree. Well-drained, acidic soils.
<i>Acer negundo</i>	Boxelder	Y	Y	Y	D	Y	Y	3	Lawn or border tree. Tolerates flooding.
<i>Aesculus glabra</i>	Ohio Buckeye	L	N	L	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Alnus glutinosa</i>	Black Alder	Y	Y	Y	D	N	N	3	Lawn or border tree. Wide range of soils.
<i>Betula alleghaniensis</i>	Yellow Birch	N	N	N	D	Y	Y	2	Lawn or border tree.
<i>Betula lenta</i>	Black Birch	N	N	N	D	Y	Y	2	Lawn or border tree.
<i>Betula nigra</i>	River Birch	N	N	Y	D	Y	Y	2	Lawn or border tree. Cultivars for disease resistance.
<i>Betula populifolia</i>	Gray Birch	N	L	N	D	Y	Y	2	Lawn or border tree.
<i>Carpinus betulus</i>	European Hornbeam	Y	Y	Y	D	N	N	1	Upright cultivar for street trees. Lawn tree or hedges.
<i>Catalpa bignonioides</i>	Southern Catalpa	N	N	Y	D	N	N	2	Lawn or border tree. Ornamental
<i>Catalpa speciosa</i>	Northern Catalpa	N	Y	Y	D	N	N	2	Lawn or border tree. Ornamental
<i>Chamaecyparis nootkatensis</i>	Nootka Falsecypress	N	L	Y	E	N	N	2	Border or hedge tree. Tolerant of wet sites.
<i>Chamaecyparis obtusa</i>	Hinoki Falsecypress	N	L	Y	E	N	N	2	Border or hedge tree. Tolerant of wet sites.
<i>Chamaecyparis thyoides</i>	Atlantic Whitecedar	N	L	Y	E	Y	Y	2	Border or hedge tree. Tolerant of wet sites.
<i>Cedrus atlantica</i>	Atlas Cedar	N	Y	Y	E	N	N	1	Lawn or border tree.
<i>Corylus colurna</i>	Turkish Filbert	Y	Y	Y	D	N	N	2	Lawn or border tree. Wide range of soils.
<i>Cryptomeria japonica</i>	Japanese Cryptomeria	N	Y	Y	E	N	N	3	Border or hedge tree.
<i>Diospyros virginiana</i>	Common Persimmon	N	N	Y	D	Y*	Y	1	Diocious. Patio, border or lawn tree.
<i>Ilex opaca</i>	American Holly	N	L	Y	E	Y	Y	1	Diocious. Border or hedge tree. Wide range of cultivars.
<i>Juniperus scopulorum</i>	Colorado Redcedar	N	Y	Y	E	N	N	1	Border or hedge tree. Wide range of cultivars.
<i>Juniperus squamata</i>	Flaky Juniper	N	Y	Y	E	N	N	1	Border or hedge tree. Wide range of cultivars.
<i>Juniperus virginiana</i>	Eastern Redcedar	N	Y	Y	E	Y	Y	2	Border or hedge tree. Wide range of cultivars.
<i>Maclura pomifera</i>	Osage-orange	L	Y	Y	D	Y	N	3	Lawn, border or hedge tree. Tolerant of various soils.
<i>Magnolia grandiflora</i>	Southern Magnolia	L	Y	Y	E	Y	Y	2	Lawn or border tree. Select cultivar for street tree.
<i>Magnolia macrophylla</i>	Bigleaf Magnolia	N	N	N	D	Y	Y	3	Lawn or border tree. Well-drained, acidic soils.
<i>Magnolia tripetala</i>	Umbrella Magnolia	N	N	N	D	Y	Y	1	Lawn or border tree.
<i>Morus rubra</i>	Red Mulberry	N	Y	N	D	Y	Y	3	Lawn or border tree.
<i>Ostrya virginiana</i>	American Hop-hornbeam	Y	Y	L	D	Y*	N	2	Lawn tree or hedges. Naturalistic areas.
<i>Pinus bungeana</i>	Lacebark Pine	N	L	Y	E	N	N	2	Border or patio tree. Attractive bark.
<i>Pinus serotina</i>	Marsh Pine	N	L	N	E	Y	Y	3	Border or hedge tree. Wide range of soils.
<i>Pistacia chinensis</i>	Chinese Pistache	Y	Y	N	D	N	N	2	Lawn or border tree. Wide range of soils.
<i>Prunus pensylvanica</i>	Wild Red Cherry	L	Y	N	D	Y	Y	3	Lawn or border tree. Wide range of soils
<i>Prunus serotina</i>	Wild Black Cherry	L	Y	N	D	Y	Y	3	Lawn or border tree. Wide range of soils
<i>Prunus virginiana</i>	Chokecherry	L	Y	Y	D	Y	Y	3	Lawn or border tree. Wide range of soils
<i>Quercus lyrata</i>	Swamp Post Oak	N	L	N	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Quercus marilandica</i>	Blackjack Oak	L	Y	N	D	Y	N	2	Lawn or border tree. Wide range of soils
<i>Quercus stellata</i>	Post Oak	L	L	N	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Salix babylonica</i>	Weeping Willow	N	N	Y	D	N	N	3	Lawn or border tree. Wide range of soils.
<i>Sassafras albidum</i>	Common Sassafras	N	N	N	D	Y	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Sorbus x intermedia</i>	Swedish Whitebeam	Y	Y	Y	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Styrax japonicum</i>	Japanese Pagoda Tree	Y	Y	Y	D	N	N	2	Lawn or border tree. Well-drained, acidic soils.
<i>Thuja occidentalis</i>	Eastern Arborvitae	N	L	Y	E	Y	Y	2	Border or hedge tree. Well-drained, acidic soils.
<i>Ulmus alata</i>	Winged Elm	Y	Y	N	D	Y	Y	3	Lawn or border tree. Well-drained, acidic soils.

C. Small Canopy/Understory Trees (15' to 30')

Botanical Name	Common Name	Street Tree	Urban Tolerance	C/V/H	Foliage	Native	RBA Usage	Growth Category	Notes
<i>Acer burgerianum</i>	Trident Maple	Y	Y	Y	D	N	N	3	Patio, border or hedge tree. Wide range of soils.
<i>Acer campestre</i>	Hedge Maple	L	Y	Y	D	N	N	2	Lawn tree or hedges. Wide range of soils.
<i>Acer carpinifolium</i>	Hornbeam Maple	L	L	N	D	N	N	2	Patio or border tree. Well-drained, acidic soils.

<i>Acer circinatum</i>	Vine Maple	L	Y	N	D	N	N	3	Patio, border or hedge tree. Wide range of soils.
<i>Acer ginnala</i>	Amur Maple	L	Y	Y	D	N	N	3	Patio, border or hedge tree. Wide range of soils.
<i>Acer griseum</i>	Paperbark Maple	L	L	Y	D	N	N	1	Patio or border tree.
<i>Acer japonicum</i>	Fullmoon Maple	N	L	N	D	N	N	1	Patio or border tree.
<i>Acer palmatum</i>	Japanese Maple	N	L	Y	D	N	N	1	Patio or border tree.
<i>Acer pensylvanicum</i>	Striped Maple	N	N	Y	D	Y	Y	1	Patio or border tree. Highly shade tolerant.
<i>Acer spicatum</i>	Eastern Mountain Maple	N	N	N	D	Y	Y	1	Patio or border tree. Well-drained, acidic soils.
<i>Acer tataricum</i>	Tatarian Maple	L	L	N	D	N	N	2	Patio or border tree.
<i>Acer truncatum</i>	Shantung Maple	Y	Y	Y	D	N	N	2	Patio, border or lawn tree. Wide range of soils.
<i>Amelanchier arborea</i>	Downy Serviceberry	L	N	N	D	Y	Y	2	Patio or border tree. Tolerates wet soils.
<i>Amelanchier canadensis</i>	Shadblow Serviceberry	L	N	Y	D	Y	Y	2	Patio or border tree. Tolerates wet soils.
<i>Amelanchier laevis</i>	Smooth Serviceberry	L	N	Y	D	Y*	Y	2	Patio or border tree. Tolerates wet soils.
<i>Aralia spinosa</i>	Devils Walking Stick	N	Y	N	D	N	N	2	Border tree.
<i>Asimina triloba</i>	Pawpaw	L	L	Y	D	Y	Y	2	Patio or border tree. Tolerates wet soils.
<i>Carpinus caroliniana</i>	American Hornbeam	Y	N	N	D	Y	Y	1	Lawn, border or hedge tree. Well-drained, acidic soils.
<i>Castanea pumila</i>	Allegheny Chinquapin	N	N	N	D	Y	N	1	Lawn or border tree. Well-drained, acidic soils.
<i>Cercis canadensis</i>	Eastern Redbud	L	L	Y	D	Y*	Y	2	Patio or border tree. Well-drained, acidic soils
<i>Chionanthus retusus</i>	Chinese Fringetree	N	Y	Y	D	N	N	2	Border tree for naturalistic groupings.
<i>Chionanthus virginicus</i>	White Fringetree	N	Y	Y	D	Y	Y	2	Border tree for naturalistic groupings.
<i>Cornus alternifolia</i>	Pagoda Dogwood	N	N	Y	D	Y	Y	2	Border tree. Well-drained, acidic soils. Shade tolerant.
<i>Cornus florida</i>	Flowering Dogwood	N	N	Y	D	Y	Y	2	Border tree. Intolerant of salt or reflected heat.
<i>Cornus kousa</i>	Kousa Dogwood	N	N	Y	D	N	N	2	Border tree. Intolerant of salt or reflected heat.
<i>Cornus mas</i>	Cornelian Cherry Dogwood	L	L	Y	D	N	N	2	Border tree. Limb-up to reveal bark.
<i>Cotinus coggygria</i>	Common Smoketree	L	Y	Y	D	N	N	2	Dieocious. Border tree. Adaptable to difficult sites.
<i>Cotinus obovatus</i>	American Smoketree	L	Y	N	D	Y	Y	2	Dieocious. Border tree. Adaptable to difficult sites.
<i>Crataegus crus-galli</i> var. <i>inermis</i>	Cockspur Hawthorn	Y	Y	Y	D	Y	L	2	Patio, border or hedge tree. Wide range of soils.
<i>Crataegus phaeopyrum</i>	Washington Hawthorn	Y	Y	Y	D	Y	L	2	Patio, border or hedge tree. Wide range of soils.
<i>Crataegus spp.</i>	Hawthorns	L	Y	Y	D	Y	Y	2	Thornless for street trees. Native only for RBA.
<i>Franklinia alatamaha</i>	Franklinia	N	N	N	D	Y	Y	2	Patio or border tree. Well-drained, acidic soils
<i>Halesia carolina</i>	Carolina Silverbell	N	N	Y	D	Y	Y	2	Patio, border or hedge tree. Well-drained, acidic soils.
<i>Ilex aquifolium</i>	English Holly	N	Y	Y	E	N	N	1	Dieocious. Border/hedge tree. Wide range of soils.
<i>Ilex cornuta</i>	Chinese Holly	N	Y	Y	E	N	N	1	Dieocious. Border/hedge tree. Wide range of soils.
<i>Ilex latifolia</i>	Lusterleaf Holly	N	L	Y	E	N	N	1	Dieocious. Border/hedge tree. Wide range of soils.
<i>Ilex pendunculosa</i>	Longstalk Holly	N	Y	Y	E	N	N	2	Dieocious. Border/hedge tree. Well-drained soils.
<i>Ilex vomitoria</i>	Yaupon Holly	N	L	Y	E	Y	L	1	Dieocious. Border/hedge tree. Well-drained soils.
<i>Juniperus chinensis</i>	Chinese Juniper	N	Y	Y	E	N	N	2	Border or hedge tree. Wide range of cultivars.
<i>Koelreuteria paniculata</i>	Goldenraintree	Y	Y	Y	D	N	N	3	Patio or border tree.
<i>Laburnum x watereri</i>	Goldenchaintree	L	Y	Y	D	N	N	2	Patio or border tree.
<i>Lagerstroemia indica</i>	Crape Myrtle	Y	Y	Y	D	N	N	3	Lawn or border tree.
<i>Maackia amurensis</i>	Amur Maackia	L	L	L	D	N	N	1	Patio or border tree.
<i>Magnolia salicifolia</i>	Anise Magnolia	L	L	Y	D	N	N	1	Lawn, patio or border tree. Well-drained, acidic soils.
<i>Magnolia stellata</i>	Star Magnolia	N	N	Y	D	N	N	1	Lawn, patio or border tree. Well-drained, acidic soils.
<i>Magnolia virginiana</i>	Sweetbay Magnolia	N	N	Y	D	Y	Y	2	Lawn, patio or border tree. Well-drained, acidic soils.
<i>Magnolia x loebneri</i>	Loebner Magnolia	L	L	Y	D	N	N	2	Lawn, patio or border tree. Well-drained, acidic soils.
<i>Magnolia x soulangeana</i>	Saucer Magnolia	L	Y	Y	D	N	N	2	Lawn, patio or border tree. Tolerant of various soils.
<i>Malus hupehensis</i>	Tea Crabapple	L	L	Y	D	N	N	2	Lawn, patio or border tree. Single stem for street trees.
<i>Malus spp.</i>	Flowering Crabapples	L	L	Y	D	Y	Y	2	Lawn, patio or border tree. Single stem for street trees.
<i>Oxydendrum arboreum</i>	Sourwood	Y	N	N	D	Y	Y	1	Patio tree & for small areas. Acidic, well-drained soils.
<i>Parrotia persica</i>	Persian Parrotia	Y	Y	Y	D	N	N	2	Lawn, patio or border trees. Wide range of soils.
<i>Persea palustris</i>	Swampbay	N	N	N	E	Y	Y	2	Border or hedge tree. Acidic, well-drained soils.
<i>Pinus bungeana</i>	Lacebark Pine	N	N	Y	E	N	N	1	Patio or border tree. Well-drained, acidic soils
<i>Pinus pungens</i>	Table-Mountain Pine	N	Y	N	E	Y	N	1	Border tree. Dry, well-drained soils.
<i>Prunus spp.</i>	Flowering Cherry Trees	L	L	Y	D	Y	N	2	Lawn, patio or border tree. Single stem for street trees.
<i>Prunus americana</i>	American Wild Plum	N	Y	N	D	Y*	Y	2	Lawn or border tree. Well-drained, acidic soils.
<i>Prunus serrulata</i>	Oriental Flowering Cherry	Y	Y	Y	D	N	N	2	Lawn, patio or border tree. Wide range of soils.
<i>Ptelea trifoliata</i>	Hop Tree	N	Y	Y	D	Y	Y	1	Lawn or border tree. Wide range of soils
<i>Pyrus fauriei</i>	Asian Pear	Y	Y	Y	D	N	N	2	Lawn or border tree. Wide range of soils
<i>Quercus ilicifolia</i>	Scrub Oak	N	Y	N	D	Y	Y	1	Lawn or border tree. Wide range of soils
<i>Quercus prinoides</i>	Dwarf Chinquapin Oak	N	L	N	D	Y*	Y	1	Lawn or border tree. Wide range of soils
<i>Rhus typhina</i>	Staghorn Sumac	N	Y	Y	D	Y	Y	3	Lawn or border tree. Wide range of soils
<i>Salix bebbiana</i>	Gray Willow	N	N	N	D	Y	Y	3	Lawn or border tree. Well-drained acidic soils.
<i>Salix caroliniana</i>	Carolina Willow	N	N	N	D	Y	Y	3	Lawn or border tree. Well-drained acidic soils.
<i>Stewartia pseudocamellia</i>	Japanese Stewartia	N	L	Y	D	N	N	2	Lawn, patio or border tree.
<i>Staphylea trifolia</i>	American Bladdernut	N	N	N	D	Y	Y	3	Lawn or border tree. Well-drained acidic soils.
<i>Syringa reticulata</i>	Japanese Tree Lilac	Y	Y	Y	D	N	N	2	Lawn, patio or border tree. Single stem for street trees.
<i>Syringa vulgaris</i>	Common Lilac	L	N	Y	D	N	N	2	Lawn, patio or border tree.
<i>Taxus baccata</i>	English Yew	N	Y	Y	E	N	N	1	Border or hedge tree. Well-drained, acidic soils.
<i>Taxus cuspidata</i>	Japanese Yew	N	Y	Y	E	N	N	1	Border or hedge tree. Well-drained, acidic soils.
<i>Thuja orientalis</i>	Oriental Arborvitae	N	L	Y	E	N	N	1	Border or hedge tree. Well-drained, acidic soils.

D. Woody Shrubs, Vines and Groundcovers

Botanical Name	Common Name	Urban Tolerance	C/V/H	Foliage	Native	RBA Usage	Notes
<i>Abelia x grandiflora</i>	Hybrid Glossy Abelia	L	Y	D/E	N	N	Medium border or hedge shrub. Wide range of soils.
<i>Alnus serrulata</i>	Smooth Alder	L	Y	D	Y	Y	Medium to large shrub or small tree. Well-drained, moist, acidic soils.
<i>Amelanchier alnifolia</i>	Alder-Leaved Serviceberry	L	Y	D	N	N	Small to large border or hedge shrub. Wide range of soils.
<i>Aronia arbutifolia</i>	Red Chokeberry	Y	Y	D	Y	Y	Medium border or hedge shrub. Wide range of soils.
<i>Aronia melanocarpa</i>	Black Chokeberry	Y	Y	D	Y	Y	Small border or hedge shrub. Wide range of soils.
<i>Aronia x prunifolia</i>	Purple Chokeberry	Y	Y	D	Y	Y	Medium border or hedge shrub. Wide range of soils.
<i>Aesculus parviflora</i>	Bottlebrush Buckeye	L	Y	D	Y	Y	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Bignonia capreolata</i>	Crossvine	L	Y	E	Y	N	Self-clinging/tendril vine. Well-drained, moist, acidic soils.
<i>Buddleia davidii</i>	Butterfly-bush	Y	Y	D	N	N	Small to large border or hedge shrub. Wide range of soils.
<i>Buxus microphylla</i>	Littleleaf Boxwood	N	Y	E	N	N	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Buxus sempervirens</i>	Common Boxwood	N	Y	E	N	N	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Callicarpa americana</i>	American Beautyberry	N	N	D	Y	Y	Medium border or hedge shrub. Wide range of soils.
<i>Callicarpa dichotoma</i>	Purple Beautyberry	N	N	D	N	N	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Calycanthus floridus</i>	Carolina Allspice	L	Y	D	Y	Y	Medium border or hedge shrub. Wide range of soils.
<i>Camellia japonica</i>	Japanese Camellia	Y	Y	D	N	N	Medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Campsis radicans</i>	Trumpet Vine	Y	Y	D	Y	N	Self-clinging vine. Tolerant of a wide range of soils.
<i>Ceanothus americanus</i>	New Jersey Tea	Y	N	E	Y*	Y	Small border or hedge shrub. Wide range of soils.
<i>Celastrus scandens</i>	American Bittersweet	Y	N	D	Y*	N	Dioecious. Fast growing, twining vine. Wide range of soils.
<i>Cephalanthus occidentalis</i>	Buttonbush	L	N	D	Y	Y	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Clematis lanuginosa</i>	Lanuginosa Clematis	Y	Y	D	N	N	Self-clinging/tendril vine. Well-drained, moist, acidic soils.
<i>Clematis virginiana</i>	Virginia Clematis	Y	Y	D	Y	N	Self-clinging/tendril vine. Well-drained, moist, acidic soils.
<i>Clematis viticella</i>	Purple Clematis	Y	Y	D	N	N	Self-clinging/tendril vine. Well-drained, moist, acidic soils.
<i>Clethra alnifolia</i>	Summersweet Clethra	Y	Y	D	Y	Y	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Comptonia peregrina</i>	Sweetfern	L	Y	D	Y	Y	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Cornus alba</i>	Tatarian Dogwood	Y	Y	D	N	N	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Cornus amomum</i>	Silky Dogwood	Y	Y	D	Y*	Y	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Cornus racemosa</i>	Gray Dogwood	Y	Y	D	Y*	Y	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Cornus sericea</i>	Red Osier Dogwood	Y	Y	D	N	N	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Corylus americana</i>	American Filbert	L	L	D	Y	Y	Large border or hedge shrub. Wide range of soils.
<i>Corylus avellana</i>	European Filbert	N	Y	D	N	N	Large border or hedge shrub. Wide range of soils.
<i>Deutzia gracilis</i>	Slender Deutzia	L	Y	D	N	N	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Diervilla sessilifolia</i>	Southern Bush Honeysuckle	L	Y	D	Y	Y	Groundcover or small shrub. Wide range of soils.
<i>Euonymus atropurpureus</i>	Eastern Burning Bush	N	N	D	Y*	Y	Large border or hedge shrub. Wide range of soils.
<i>Forsythia suspensa</i>	Weeping Forsythia	L	Y	D	N	N	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Forsythia x intermedia</i>	Hybrid Border Forsythia	L	Y	D	N	N	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Fothergilla gardenii</i>	Dwarf Fothergilla	Y	Y	D	Y	Y	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Fothergilla major</i>	Large Fothergilla	Y	N	D	Y	Y	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Hamamelis vernalis</i>	Vernal Witchhazel	L	Y	D	N	N	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Hamamelis virginiana</i>	Common Witchhazel	L	N	D	Y	Y	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Hamamelis x intermedia</i>	Hybrid Witchhazel	Y	Y	D	N	N	Large border or hedge shrub. Wide range of soils.
<i>Hydrangea arborescens</i>	Smooth Hydrangea	N	Y	D	Y	Y	Small to medium border shrub. Well-drained, moist, acidic soils.
<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea	Y	Y	D	N	N	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Hydrangea paniculata</i>	Panicle Hydrangea	Y	Y	D	N	N	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea	Y	Y	D	Y	Y	Large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Hypericum androsaemum</i>	Tutsan	Y	Y	D	N	N	Groundcover to small shrub. Wide range of soils.
<i>Hypericum frondosum</i>	St. John's Wort	Y	Y	D	Y	Y	Small to medium border or hedge shrub. Wide range of soils.
<i>Hypericum prolificum</i>	Shrubby St. John's Wort	Y	Y	D	Y*	Y	Small border or hedge shrub. Wide range of soils.
<i>Ilex crenata</i>	Japanese Holly	Y	Y	E	N	N	Groundcover or small to large shrub. Wide range of soils.
<i>Ilex glabra</i>	Inkberry	L	Y	E	Y	Y	Dioecious. Small to large shrub. Well-drained, acidic soils.
<i>Ilex verticillata</i>	Winterberry	L	Y	D	Y	Y	Dioecious. Small to large shrub. Well-drained, acidic soils.
<i>Ilex x meserveae</i>	Hybrid Meserve Hollies	Y	Y	E	N	N	Dioecious. Small to large shrub. Wide range of soils.
<i>Itea virginica</i>	Virginia Sweetspire	L	Y	D	Y	Y	Small to medium shrub. Well-drained, moist, acidic soils.
<i>Juniperus communis</i>	Common Juniper	Y	Y	E	Y	Y	Groundcover. Wide range of soils.
<i>Juniperus conferta</i>	Shore Juniper	Y	Y	E	N	N	Groundcover. Wide range of soils.
<i>Juniperus horizontalis</i>	Creeping Juniper	Y	Y	E	N	N	Groundcover. Wide range of soils.
<i>Juniperus procumbens</i>	Japanese Garden Juniper	Y	Y	E	N	N	Groundcover to small shrub. Wide range of soils.
<i>Juniperus sabina</i>	Savin Juniper	Y	Y	E	N	N	Groundcover to small shrub. Wide range of soils.
<i>Kalmia latifolia</i>	Mountain Laurel	N	Y	E	Y	Y	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Lindera benzoin</i>	Spicebush	L	Y	D	Y	Y	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Lindera glauca</i>	Asian Spicebush	L	Y	D	N	N	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Lonicera sempervirens</i>	Trumpet Honeysuckle	L	Y	D	Y	N	Self-clinging/twining vine. Well-drained, moist, acidic soils.
<i>Leucothoe axillaris</i>	Coast Leucothoe	L	Y	E	Y	Y	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Leucothoe fontanesiana</i>	Drooping Leucothoe	N	Y	E	Y	N	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Menispermum canadense</i>	Canadian Moonseed	L	Y	D	Y	N	Self-clinging/twining vine. Well-drained, moist, acidic soils.
<i>Morella pensylvanica</i>	Northern Bayberry	Y	Y	D	Y	Y	Medium to large border or hedge shrub. Wide range of soils.
<i>Morella cerifera</i>	Southern Bayberry	Y	Y	E	Y	Y	Medium to large border or hedge shrub. Wide range of soils.
<i>Nandina domestica</i>	Nandina	Y	Y	E	Y	Y	Medium border or hedge shrub. Wide range of soils.
<i>Osmanthus americanus</i>	Devilwood	L	N	E	Y	Y	Large border or hedge shrub. Wide range of soils.
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	Y	Y	D	Y	N	Self-clinging/tendril vine. Wide range of soils.
<i>Parthenocissus tricuspidata</i>	Boston Ivy	Y	Y	D	N	N	Self-clinging/tendril vine. Wide range of soils.
<i>Physocarpus opulifolius</i>	Ninebark	Y	Y	D	Y*	Y	Groundcover or small border shrub. Wide range of soils.

<i>Pieris japonica</i>	Japanese Pieris	N	Y	E	N	N	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Prunus laurocerasus</i>	Cherry Laurel	Y	Y	E	N	N	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Prunus lusitanica</i>	Portugal Laurel	Y	Y	D	N	N	Large border or hedge shrub or small tree. Well-drained, moist, acidic soils.
<i>Prunus maritima</i>	Beach Plum	Y	Y	D	Y	L	Medium to large border or hedge shrub. Dry, sandy soils.
<i>Prunus x cistena</i>	Purple-Leaf Sand Cherry	Y	Y	D	N	N	Small to medium shrub. Well-drained, moist, acidic soils.
<i>Pyracantha coccinea</i>	Scarlet Firethorn	Y	Y	D	N	N	Medium to large border or hedge shrub. Wide range of soils.
<i>Rhododendron atlanticum</i>	Coast Azalea	Y	Y	D	Y	Y	Small border or hedge shrub. Wide range of soils.
<i>Rhododendron carolinianum</i>	Carolina Rhododendron	L	Y	E	Y	Y	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Rhododendron catawbiense</i>	Catawba Rhododendron	L	Y	E	Y	Y	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Rhododendron maximum</i>	Rosebay Rhododendron	N	Y	D	Y	Y	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Rhododendron periclymenoides</i>	Pinxterbloom Azalea	Y	Y	D	Y	Y	Medium to large border or hedge shrub. Well-drained, moist, acidic soils.
<i>Rhododendron prinophyllum</i>	Roseshell Azalea	N	Y	D	Y	Y	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Rhus aromatica</i>	Fragrant Sumac	Y	Y	D	Y	Y	Groundcover to medium shrub. Wide range of soils.
<i>Rhus copallina</i>	Winged Sumac	Y	Y	D	Y	L	Large border or hedge shrub. Wide range of soils.
<i>Rosa palustris</i>	Swamp Rose	Y	N	D	Y	Y	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Rosa rugosa</i>	Rugosa Rose	Y	Y	D	N	N	Small to medium border or hedge shrub. Wide range of soils.
<i>Rosa virginiana</i>	Virginia Rose	Y	N	D	Y	N	Small to medium border or hedge shrub. Wide range of soils.
<i>Rosa x spp</i>	Hybrid Roses	Y	Y	D	N	N	Small to medium border or hedge shrub. Wide range of soils.
<i>Salix discolor</i>	American Pussy Willow	N	N	D	Y	Y	Medium to larger border or hedge shrub. Well-drained, moist, acidic soils.
<i>Sambucus canadensis</i>	Elderberry	L	Y	D	Y	Y	Small to large border or hedge shrub. Wide range of soils.
<i>Sambucus racemosa</i>	Red Elderberry	L	Y	D	Y	Y	Small to large border or hedge shrub. Wide range of soils.
<i>Spiraea alba</i>	Meadowsweet	L	Y	D	Y	Y	Small border or hedge shrub. Well-drained, moist, acidic soils.
<i>Spiraea spp</i>	Spiraeas	L	Y	D	N	N	Small to large border or hedge shrub. Wide range of soils.
<i>Stewartia malacodendron</i>	Silky Camellia	N	N	D	Y	Y	Large border or hedge shrub. Wide range of soils.
<i>Syringa meyeri</i>	Korean Lilac	Y	Y	D	N	N	Small border or hedge shrub. Wide range of soils.
<i>Syringa pubescens</i>	Manchurian Lilac	L	Y	D	N	N	Small to large border or hedge shrub. Wide range of soils.
<i>Taxus canadensis</i>	Canadian Yew	L	L	E	Y	Y	Groundcover to small shrub. Well-drained, acidic soils.
<i>Taxus cuspidata</i>	Japanese Yew	L	L	E	N	N	Groundcover or small to large shrub. Well-drained, acidic soils.
<i>Taxus x media</i>	Anglojap Yew	Y	Y	E	N	N	Groundcover or small to large shrub. Well-drained, acidic soils.
<i>Vaccinium angustifolium</i>	Lowbush Blueberry	N	Y	D	Y*	Y	Groundcover shrub. Well-drained, moist, acidic soils.
<i>Vaccinium corymbosum</i>	Highbush Blueberry	N	Y	D	Y*	Y	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Vaccinium macrocarpon</i>	American Cranberry	N	Y	D	Y*	Y	Groundcover shrub. Well-drained, moist, acidic soils.
<i>Viburnum acerifolium</i>	Mapleleaf Viburnum	L	Y	D	Y	Y	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Viburnum x burkwoodii</i>	Burkwood Viburnum	Y	Y	D	N	N	Medium to large border or hedge shrub. Wide range of soils.
<i>Viburnum carlesii</i>	Koreanspice Viburnum	Y	Y	D	N	N	Medium to large border or hedge shrub. Wide range of soils.
<i>Viburnum dentatum</i>	Arrowwood Viburnum	Y	Y	D	Y	N	Medium to large border or hedge shrub. Wide range of soils.
<i>Viburnum lentago</i>	Nannyberry	Y	Y	D	Y	N	Medium to large border or hedge shrub. Wide range of soils.
<i>Viburnum opulus</i>	European Cranberrybush	Y	Y	D	N	N	Medium to large border or hedge shrub. Wide range of soils.
<i>Viburnum nudum</i>	Possomhaw Viburnum	L	Y	D	Y*	Y	Small to medium border or hedge shrub. Well-drained, moist, acidic soils.
<i>Viburnum plicatum</i>	Snowball Viburnum	Y	Y	D	N	N	Small to medium border or hedge shrub. Wide range of soils.
<i>Viburnum rhytidophyllum</i>	Leatherleaf Viburnum	Y	Y	E	N	N	Small to medium border or hedge shrub. Wide range of soils.
<i>Vitex agnus-castus</i>	Chastetree	L	Y	D	N	N	Medium to large border or hedge shrub. Wide range of soils.

E. Herbaceous Plants, Vines, Groundcovers and Grasses

Botanical Name	Common Name	Urban Tolerance	C/V/H	Foliage	Native	RBA Usage	Wetlands Indicator	Notes
<i>Achillea millefolium</i>	Common Yarrow	L	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities
<i>Actaea racemosa</i>	Black Cohosh	L	N	D	Y	Y	NI	Herb. Wide range of soils. SWM facilities
<i>Acorus americanus</i>	Sweetflag	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Ageratina altissima</i>	White Snakeroot	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils. Do not plant in livestock feeding areas.
<i>Ajuga reptans</i>	Carpet Bugleweed	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Agastache foeniculum</i>	Anise Hyssop	L	Y	D	Y	Y	NI	Herb. Moist soils. SWM facilities.
<i>Agrimonia gryposepala</i>	Tall Hairy Agrimony	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Agrostis gigantea</i>	Redtop	L	Y	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Agrostis perennans</i>	Perennial Bentgrass	Y	Y	D	Y	Y	FACU	Grass. Wide range of soils. SWM facilities.
<i>Alchemilla mollis</i>	Lady's Mantle	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Alisma subcordatum</i>	Broadleaf Water-Plantain	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Allium canadense</i>	Meadow Onion	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Allium cernuum</i>	Nodding Onion	L	Y	D	Y	Y	NI	Herb. Wide range of soils.
<i>Allium nigrum</i>	Black Garlic	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Allium atropurpureum</i>	Twinscrest Onion	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Allium tricoccum</i>	Wild Ramps	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Amorpha canescens</i>	Lead Plant	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Amsonia ciliata</i>	Fringed Bluestar	L	Y	D	Y	Y	NI	Herb. Wide range of soils.
<i>Amsonia hubrichtii</i>	Threadleaf Bluestar	L	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Amsonia tabernaemontana</i>	Eastern Bluestar	Y	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Andropogon gerardii</i>	Big Bluestem	Y	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Andropogon glomeratus</i>	Bushy Bluestem	L	N	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Andropogon virginicus</i>	Broomsedge Bluestem	Y	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Anemone americana</i>	Roundlobed Hepatica	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Anemone quinquefolia</i>	Wood anemone	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Antennaria plantaginifolia</i>	Hairy Plantain-leaf Pussytoes	Y	Y	D	Y	L	UPL	Herb. Dry soils. Mat-forming groundcover.

		L	L	D	Y	N	FACW	Vine. Moist soils.
<i>Apios americana</i>	American Groundnut	L		D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities.
<i>Aquilegia canadensis</i>	Eastern Red Columbine	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Aralia nudicaulis</i>	False Sarsaparilla	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Aralia racemosa</i>	American Spikenard	N	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Arisaema triphyllum</i>	Jack-in-the-Pulpit	N	N	D	Y*	Y	FACW	Herb. Moist soils.
<i>Aristolochia macrophylla</i>	Dutchman's Pipe	L	N	D	Y*	N	NI	Vine. Moist soils.
<i>Asarum canadense</i>	Canadian Wildginger	N	N	D	Y*	Y	FACW	Herb. Moist soils.
<i>Asclepias incarnata</i>	Swamp Milkweed	L	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities. Attracts Monarch butterflies.
<i>Asclepias syriaca</i>	Common Milkweed	Y	Y	D	Y	L	UPL	Herb. Dry soils. Attracts Monarch butterflies.
<i>Asclepias tuberosa</i>	Butterfly Milkweed	Y	Y	D	Y	L	FACU	Herb. Wide range of soils. Attracts Monarch butterflies.
<i>Astilbe biternata</i>	Native False Goatsbeard	L	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Astilbe spp</i>	Astilbes	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Avenella flexuosa</i>	Wavy Hairgrass	Y	N	D	Y	Y	NI	Grass. Wide range of soils. SWM facilities.
<i>Baptisia australis</i>	Blue False Indigo	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Bidens cernua</i>	Nodding Bur-Marigold	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Bidens discoidea</i>	Swamp Tickseed	N	N	D	Y	Y	FACW	Herb. Moist soils.
<i>Bidens laevis</i>	Large Bur-Marigold	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Bigelowia nuttallii</i>	Rayless Goldenrod	Y	Y	D	N	N	UPL	Herb. Dry soils.
<i>Boehmeria cylindrica</i>	False Nettle	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Calamagrostis x acutifolia</i>	Feather Reedgrass	L	Y	D	N	N	OBL	Grass. Moist soils. SWM facilities.
<i>Calamagrostis canadensis</i>	Canadian Reedgrass	L	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Callitricha verna</i>	Vernal Water-Starwort	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities
<i>Caltha palustris</i>	Yellow Marsh Marigold	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities
<i>Campanula glomerata</i>	Clustered Bellflower	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Cardamine bulbosa</i>	Bulbous Bitter-Cress	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities
<i>Cardamine concatenata</i>	Cutleaf Toothwort	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Carex laxiculmis</i>	Spreading Sedge	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Carex pensylvanica</i>	Pennsylvania Sedge	L	Y	D	Y	Y	FAC	Herb. Moist soils. SWM facilities.
<i>Carex stricta</i>	Upright Sedge	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Caulophyllum thalictroides</i>	Blue Cohosh	N	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Chelone glabra</i>	White Turtlehead	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Chelone lyonii</i>	Pink Turtlehead	L	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Cardamine impatiens</i>	Narrowleaf Bittercress	N	N	D	Y	Y	FAC	Herb. Moist soils. SWM facilities.
<i>Chasmanthium latifolium</i>	Indian Woodoats	L	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Cinna arundinacea</i>	Stout Wood Reedgrass	N	N	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Circaea lutetiana</i>	Enchanter's Nightshade	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Claytonia virginica</i>	Narrowleaf Springbeauty	N	N	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Collinsonia canadensis</i>	Canada Horse-Balm	N	N	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Conoclinium coelestinum</i>	Blue Mistflower	N	Y	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities.
<i>Convallaria majalis</i>	Lily of the Valley	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Coreopsis verticillata</i>	Whorled Tickseed	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Crocus chrysanthus</i>	Snow Crocus	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Crocus vernus</i>	Dutch Crocus	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Cryptotaenia canadensis</i>	Canada Honewort	N	N	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Cynoglossum virginianum</i>	Wild Comfrey	N	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Danthonia spicata</i>	Poverty Oatgrass	N	N	D	Y	Y	NI	Grass. Wide range of soils. SWM facilities.
<i>Dennstaedtia punctilobula</i>	Hay-Scented Fern	N	N	D	Y	Y	UPL	Herb. Dry soils.
<i>Deschampsia cespitosa</i>	Tufted Hairgrass	L	Y	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Deschampsia flexuosa</i>	Crinkled Hair Grass	L	Y	D	Y	Y	UPL	Grass. Dry soils. SWM facilities.
<i>Desmodium glabellum</i>	Dillen's Tick-Trefoil	N	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Dicentra cucullaria</i>	Dutchman's Breeches	N	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Dicentra eximia</i>	Wild Bleeding Heart	L	Y	D	Y	Y	NI	Herb. Wide range of soils.
<i>Dichanthelium boscii</i>	Bosc's Witchgrass	N	N	D	Y	Y	NI	Grass. Wide range of soils. SWM facilities.
<i>Dichanthelium clandestinum</i>	Deertongue	L	Y	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Dichanthelium dichotomum</i>	Forked Witchgrass	N	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Dichanthelium lucidum</i>	Bog Witchgrass	N	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Dichanthelium microcarpon</i>	Branched Witchgrass	N	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Dichanthelium sphaerocarpum</i>	Roundfruit Witchgrass	N	N	D	Y	Y	FACU	Grass. Wide range of soils. SWM facilities.
<i>Dryopteris carthusiana</i>	Wood Fern	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Echinacea purpurea</i>	Eastern Purple Coneflower	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities.
<i>Echinacea spp</i>	Coneflowers	L	Y	D	Y	L	NI	Herb. Wide range of soils. SWM facilities.
<i>Elephantopus carolinianus</i>	Carolina Elephant-Foot	N	N	D	Y	Y	FACU	Grass. Wide range of soils. SWM facilities.
<i>Elymus riparius</i>	River Wild Rye	N	N	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Elymus villosus</i>	Hairy Wild Rye	L	N	D	Y	Y	FACU	Grass. Wide range of soils. SWM facilities.
<i>Elymus virginicus</i>	Virginia Wild Rye	N	N	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Eragrostis spectabilis</i>	Purple Lovegrass	L	N	D	Y	L	UPL	Grass. Wide range of soils. SWM facilities.
<i>Erythronium americanum</i>	Yellow Trout-Lily	N	N	D	Y	Y	NI	Herb. Moist soils. SWM facilities.
<i>Eurybia divaricata</i>	White Wood Aster	N	N	D	Y	Y	NI	Herb. Moist soils.
<i>Eutrochium fistulosum</i>	Trumpet Weed	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Eutrochium purpureum</i>	Joe-Pye Weed	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Euthamia caroliniana</i>	Slender Goldentop	N	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Festuca subverticillata</i>	Nodding Fescue	L	N	D	Y	Y	FACU	Grass. Wide range of soils. SWM facilities.
<i>Galium circaeans</i>	Forest Bedstraw	L	N	D	Y	L	UPL	Herb. Dry soils.
<i>Galium lanceolatum</i>	Lance-Leaf Bedstraw	L	N	D	Y	L	NI	Herb. Dry soils.
<i>Galium obtusum</i>	Blunt-Leaf Bedstraw	L	N	D	Y	L	UPL	Herb. Dry soils.

<i>Galium odoratum</i>	Sweet Woodruff	L	Y	D	N	N	NI	Herb. Moist soils.
<i>Galium tinctorum</i>	Marsh Bedstraw	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Galium triflorum</i>	Sweet-Scent Bedstraw	L	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Geranium maculatum</i>	Wild Geranium	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Geum canadense</i>	White Avens	L	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Glyceria septentrionalis</i>	Floating Mannagrass	N	N	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Glyceria striata</i>	Fowl Mannagrass	N	N	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Hackelia virginiana</i>	Virginia Stickseed	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Helianthus annuus</i>	Common Sunflower	L	Y	D	Y	Y	FAC	Herb. Wide range of soils. Crop plant.
<i>Helelenium autumnale</i>	Common Sneezeweed	L	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Helianthus angustifolius</i>	Swamp Sunflower	L	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Helianthus decapetalus</i>	Thinleaf Sunflower	N	N	D	Y	Y	FACU	Herb. Moist soils. SWM facilities.
<i>Helianthus microcephalus</i>	Small Woodland Sunflower	Y	Y	D	Y	L	UPL	Herb. Dry soils.
<i>Helianthus giganteus</i>	Tall Sunflower	L	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Hemerocallis spp</i>	Daylilies	Y	Y	D	N	N	NI	Herb. Moist soils. Plant where it cannot escape cultivation.
<i>Heracleum maximum</i>	Cow-Parsnip	L	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Heuchera americana</i>	Coral Bells	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Hieracium paniculatum</i>	Panicled Hawkweed	L	Y	D	Y	Y	NI	Herb. Wide range of soils.
<i>Hieracium venosum</i>	Rattlesnake Hawkweed	L	Y	D	Y	Y	NI	Herb. Wide range of soils.
<i>Hibiscus laevis</i>	Halberd-leaf Rosemallow	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Hibiscus moscheutos</i>	Eastern Rosemallow	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Hydrastis canadensis</i>	Golden Seal	N	N	D	Y	Y	NI	Herb. Moist soils. SWM facilities.
<i>Hydrocotyle americana</i>	American Water-Pennywort	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Hydrophyllum virginianum</i>	Eastern Waterleaf	N	N	D	Y*	Y	FAC	Herb. Wide range of soils.
<i>Hylotelephium spectabile</i>	Showy Stonecrop	Y	Y	D	N	N	NI	Herb. Wide range of soils. (Genus was formerly <i>Sedum</i>)
<i>Hypericum densiflorum</i>	Bushy St. John's Wort	L	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Hypericum walteri</i>	Walter's St. John's Wort	L	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Ipomoea batatas</i>	Sweet Potato	Y	Y	D	N	N	FACU	Vine. Wide range of soils.
<i>Ipomoea pandurata</i>	Man of the Earth	L	Y	D	Y	Y	FACU	Vine. Wide range of soils.
<i>Ipomoea spp</i>	Morning Glory Vines	L	L	D	N	N	NI	Vine. Wide range of soils.
<i>Impatiens capensis</i>	Orange Jewelweed	L	Y	D	Y	Y	FACW	Herb. Moist soils.
<i>Impatiens pallida</i>	Pale Jewelweed	L	Y	D	Y	Y	FACW	Herb. Moist soils.
<i>Iris cristata</i>	Dwarf Crested Iris	L	Y	D	Y	Y	FAC	Herb. Moist soils.
<i>Iris pseudacorus</i>	Yellowflag Iris	L	Y	D	N	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Iris sibirica</i>	Siberian Iris	L	Y	D	N	N	NI	Herb. Moist soils.
<i>Iris versicolor</i>	Blueflag Iris	L	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Juncus canadensis</i>	Canda Rush	N	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Juncus effusus</i>	Soft Rush	N	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Laportea canadensis</i>	Canada Wood-Nettle	N	N	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Leersia virginica</i>	Virginia Cutgrass	N	N	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Leucanthemum x superbum</i>	Shasta Daisy	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Liatris spicata</i>	Dense Blazing Star	N	Y	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities
<i>Lilium superbum</i>	Turk's Cap Lily	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Liriope muscari</i>	Lilyturf	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Liriope spicata</i>	Creeping Lilyturf	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Lobelia cardinalis</i>	Cardinal Flower	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Lobelia siphilitica</i>	Great Blue Lobelia	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Lupinus perennis</i>	Sundial Lupine	L	Y	D	Y	Y	NI	Herb. Wide range of soils.
<i>Luzula bulbosa</i>	Bulbous Woodrush	N	N	D	Y	Y	FACU	Grass. Moist soils. SWM facilities.
<i>Luzula echinata</i>	Hedgehog Woodrush	N	N	D	Y	Y	FAC	Grass. Moist soils. SWM facilities.
<i>Luzula multiflora</i>	Common Woodrush	L	N	D	Y	Y	FACU	Grass. Moist soils. SWM facilities.
<i>Lycopus americanus</i>	American Bugleweed	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Lycopus rubellus</i>	Taperleaf Bugleweed	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Lycopus uniflorus</i>	Northern Bugleweed	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Lycopus virginicus</i>	Virginia Bugleweed	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Lysimachia ciliata</i>	Fringed Loosestrife	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Maianthemum canadense</i>	Canada Mayflower	N	N	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Maianthemum racemosum</i>	Solomon's Plume	L	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Maianthemum stellatum</i>	Starflower	L	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Matteuccia struthiopteris</i>	Ostrich Fern	N	N	D	Y	Y	FACW	Herb. Moist soils.
<i>Medeola virginiana</i>	Indian Cucumber-Root	N	N	D	Y*	Y	UPL	Herb. Dry soils.
<i>Meehania cordata</i>	Meehan's Mint	L	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Mertensia virginica</i>	Virginia Bluebells	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Michelia repens</i>	Partridgeberry	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Micranthes virginica</i>	Virginia Saxifrage	N	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Mondarda didyma</i>	Bee Balm	L	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Monarda fistulosa</i>	Wild Bergamot	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Muhlenbergia capillaris</i>	Hair-Awn Muhly	Y	Y	D	Y	Y	FACU	Grass. Wide range of soils.
<i>Nepeta cataria</i>	Catnip	Y	Y	D	N	N	FACU	Herb. Wide range of soils.
<i>Ophiopogon japonicus</i>	Dwarf Lilyturf	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Osmorrhiza longistylis</i>	Scented Sweet-Cicely	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Osmunda regalis</i>	Royal Fern	N	N	D	Y	Y	FAC	Herb. Moist soils. SWM facilities.
<i>Osmundastrum cinnamomeum</i>	Cinnamon Fern	N	Y	D	Y	Y	FACW	Herb. Moist soils.
<i>Oxalis violacea</i>	Violet Woodsorrel	N	Y	D	Y	Y	NI	Herb. Moist soils.
<i>Packeria aurea</i>	Golden Ragwort	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.

<i>Paeonia spp</i>	Peonies	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Panicum amarum</i>	Coastal Panic Grass	Y	Y	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Panicum anceps</i>	Beaked Panicgrass	Y	Y	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Panicum virgatum</i>	Switchgrass	Y	Y	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Papaver orientale</i>	Oriental Poppy	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Passiflora incarnata</i>	Passion Vine	L	Y	D	Y	N	NI	Vine. Moist soils.
<i>Passiflora lutea</i>	Yellow Passion Vine	L	Y	D	Y	N	NI	Vine. Moist soils.
<i>Pachysandra procumbens</i>	Allegheny Pachysandra	L	Y	D	Y	Y	NI	Herb. Wide range of soils.
<i>Peltandra virginica</i>	Arrow Arum	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Penstemon digitalis</i>	Foxglove Beardtongue	L	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Penthorum sedoides</i>	Ditch Stonecrop	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Persicaria virginiana</i>	Virginia Smartweed	L	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Phacelia bipinnatifida</i>	Forest Phacelia	L	N	D	Y	Y	FAC	Herb. Moist soils.
<i>Phedimus spurius</i>	Caucasian Stonecrop	Y	Y	D	N	N	FACU	Herb. Wide range of soils. (Genus was formerly <i>Sedum</i>)
<i>Phlox divaricata</i>	Woodland Phlox	N	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Phlox paniculata</i>	Perennial Phlox	N	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Phlox subulata</i>	Moss Phlox	N	Y	E	Y	Y	FACU	Herb. Wide range of soils.
<i>Physostegia virginiana</i>	Obedient Plant	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Pilea fontana</i>	Spring Clearweed	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Pilea pumila</i>	Canada Clearweed	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Poa autumnalis</i>	Autumn Bluegrass	N	N	D	Y	Y	FAC	Grass. Wide range of soils.
<i>Poa sylvestris</i>	Forest Bluegrass	N	N	D	Y	Y	FACW	Grass. Wide range of soils.
<i>Podophyllum peltatum</i>	Mayapple	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Polemonium reptans</i>	Jacob's Ladder	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Polygala paucifolia</i>	Gaywings	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Polygonatum biflorum</i>	Solomon's-Seal	N	N	D	Y	Y	FACU	Herb. Moist soils.
<i>Polygonatum odoratum</i>	Scented Solomon's Seal	N	Y	D	N	N	NI	Herb. Moist soils.
<i>Polygonatum pubescens</i>	Downy Solomon's Seal	N	N	D	Y	Y	FACU	Herb. Moist soils.
<i>Polystichum acrostichoides</i>	Christmas Fern	L	N	E	Y	Y	FACU	Herb. Wide range of soils.
<i>Pontederia cordata</i>	Pickerelweed	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Prosartes lanuginosa</i>	Yellow Mandarin	N	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Prunella vulgaris</i>	Native Self-Heal	N	Y	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities
<i>Pycnanthemum muticum</i>	Blunt Mountain-Mint	N	Y	D	Y	Y	FACW	Herb. Wide range of soils. SWM facilities
<i>Pycnanthemum tenuifolium</i>	Slender Mountain-Mint	N	Y	D	Y	Y	FACW	Herb. Wide range of soils. SWM facilities
<i>Onoclea sensibilis</i>	Sensitive Fern	N	Y	D	Y	Y	FACW	Herb. Wide range of soils. SWM facilities
<i>Ranunculus acris</i>	Meadow Buttercup	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Ranunculus pusillus</i>	Pursh's Buttercup	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Ranunculus sceleratus</i>	Cursed Buttercup	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Rhexia virginica</i>	Handsome Harry	L	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Rudbeckia fulgida</i>	Orange Coneflower	L	Y	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities
<i>Rudbeckia hirta</i>	Black-Eyed Susan	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities
<i>Rudbeckia laciniata</i>	Green-Head Coneflower	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Ruellia humilis</i>	Wild Petunia	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities
<i>Salvia x sylvestris</i>	Salvia	Y	Y	D	N	N	NI	Herb. Dry soils.
<i>Sagittaria latifolia</i>	Duck Potato	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Sanguinaria canadensis</i>	Bloodroot	N	Y	D	Y	L	UPL	Herb. Dry soils.
<i>Sanicula canadensis</i>	Canadian Black Snakeroot	N	N	D	Y	L	UPL	Herb. Dry soils.
<i>Sanicula odorata</i>	Cluster Black Snakeroot	N	N	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities
<i>Saururus cernuus</i>	Lizard's Tail	N	Y	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Sedum ternatum</i>	Woodland Stonecrop	L	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities
<i>Schizachyrium scoparium</i>	Little Bluestem	L	Y	D	Y	L	FACU	Grass. Wide range of soils.
<i>Schoenoplectus acutus</i>	Hardstem Bulrush	N	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Schoenoplectus pungens</i>	Threesquare Bulrush	N	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush	N	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Scirpus atrocinctus</i>	Blackgirdle Bulrush	N	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Scirpus cyperinus</i>	Woolgrass	N	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Scrophularia lanceolata</i>	Lance-Leaf Figwort	L	N	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities. Attracts hummingbirds
<i>Scrophularia marilandica</i>	Maryland Figwort	L	N	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities. Attracts hummingbirds
<i>Scutellaria elliptica</i>	Hairy Skullcap	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Scutellaria incana</i>	Downy Skullcap	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Scutellaria serrata</i>	Showy Skullcap	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Silene virginica</i>	Fire Pink	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Silphium mohrii</i>	Mohr's Rosinweed	L	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Smallanthus uvedalius</i>	Yellow-Flowered Leafcup	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Solidago caesia</i>	Bluestem Goldenrod	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities.
<i>Solidago canadensis</i>	Canada Goldenrod	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities.
<i>Solidago flexicaulis</i>	Broad-Leaf Goldenrod	Y	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities.
<i>Solidago rugosa</i>	Rough-Leaf Goldenrod	Y	Y	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities.
<i>Solidago sempervirens</i>	Seaside Goldenrod	Y	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Solidago sphacelata</i>	Autumn Goldenrod	L	Y	D	Y	Y	FACU	Herb. Wide range of soils. SWM facilities.
<i>Sogeastrum nutans</i>	Indian Grass	Y	Y	D	Y	Y	FACU	Grass. Wide range of soils. SWM facilities.
<i>Spartina pectinata</i>	Prairie Cord Grass	Y	Y	D	Y	Y	OBL	Grass. Moist soils. SWM facilities.
<i>Sphenopholis intermedia</i>	Slender Wedgescale Grass	N	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.
<i>Sphenopholis nitida</i>	Shiny Wedgescale Grass	N	N	D	Y	L	UPL	Grass. Dry soils.
<i>Sphenopholis obtusata</i>	Prairie Wedgescale Grass	N	N	D	Y	Y	FAC	Grass. Wide range of soils. SWM facilities.

<i>Spigelia marilandica</i>	Indian Pink	L	N	D	Y	Y	FACW	Herb. Moist soils.
<i>Sporobolus heterolepis</i>	Prairie Dropseed	L	N	D	Y	L	UPL	Grass. Dry soils.
<i>Stellaria longifolia</i>	Longleaf Starwort	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Sympyotrichum lanceolatum</i>	Narrow-Leaf Panicled Aster	Y	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Sympyotrichum nove-agliae</i>	New England Aster	Y	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Sympyotrichum nove-belgii</i>	New York Aster	Y	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Sympyotrichum puniceum</i>	Swamp Aster	Y	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Symplocarpus foetidus</i>	Skunk Cabbage	N	N	D	Y	Y	OBL	Herb. Moist soils. SWM facilities.
<i>Thalictrum pubescens</i>	Tall Meadowrue	N	N	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Thalictrum thalictroides</i>	Rue Anemone	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Tiarella cordifolia</i>	Heartleaf Foamflower	N	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Tradescantia hirsuticaulis</i>	Hairystem Spiderwort	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Tridens flavus</i>	Purpletop	L	Y	D	Y	Y	FACU	Grass. Wide range of soils. SWM facilities.
<i>Trillium luteum</i>	Wood Lily	L	Y	D	Y	Y	FACU	Herb. Dry soils.
<i>Trillium grandiflorum</i>	Large-Flowered Trillium	L	Y	D	Y	Y	FACU	Herb. Dry soils.
<i>Tripsacum dactyloides</i>	Eastern Gamagrass	L	Y	D	Y	Y	FACW	Grass. Moist soils. SWM facilities.
<i>Tulipa humilis</i>	Tulip Flower	Y	Y	D	N	N	NI	Herb. Wide range of soils.
<i>Uvularia perfoliata</i>	Perfoliate Bellwort	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Uvularia sessilifolia</i>	Sessile-Leaf Bellwort	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Veratrum viride</i>	American False Hellebore	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Verbena urticifolia</i>	White Verbain	N	N	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Verbena spp</i>	Verbena	L	Y	D	N	N	NI	Herb. Wide range of soils. Attract butterflies
<i>Vernonia gigantea</i>	Giant Ironweed	Y	N	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities.
<i>Vernonia glauca</i>	Woodland Ironweed	L	N	D	Y	Y	NI	Herb. Wide range of soils.
<i>Vernonia noveboracensis</i>	New York Ironweed	Y	N	D	Y	Y	FAC	Herb. Wide range of soils. SWM facilities.
<i>Veronicastrum virginicum</i>	Culver's Root	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Viola blanda</i>	Sweet White Violet	N	N	D	Y	Y	FACW	Herb. Moist soils.
<i>Viola cucullata</i>	Blue Marsh Violet	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.
<i>Viola hirsutula</i>	Southern Blue Wood Violet	N	N	D	Y	Y	FACW	Herb. Moist soils.
<i>Viola pedata</i>	Birdfoot Violet	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Viola pubescens</i>	Downy Yellow Violet	L	Y	D	Y	Y	FACU	Herb. Wide range of soils.
<i>Viola riviniana</i>	European Dog Violet	N	Y	D	N	N	FAC	Herb. Wide range of soils. Matt-forming.
<i>Viola sororia</i>	Common Blue Violet	L	Y	D	Y	Y	FAC	Herb. Wide range of soils.
<i>Viola striata</i>	Striped Cream Violet	N	Y	D	Y	Y	FACW	Herb. Moist soils. SWM facilities.

F. Definitions

Border Tree/Shrub - A tree/shrub species appropriate for the edges of spaces, such as lawns, or integrated among combinations of understory and screening or hedge plantings.

C/H/V - Indicates whether cultivars, hybrids or varieties of the plant species are commonly available in regional plant nurseries. Analysis may be needed per the differing habits and environmental tolerances of each cultivar, hybrid or variety. Y - Yes, N - No, L - Limited availability

Dioecious - Plant species that have both male and female plants. The nearby presence of male plants are usually necessary to produce significant fruiting in female plants.

Foliage - Indicates whether a plant species is D - deciduous or E -evergreen in the Mid-Atlantic (coastal plain and piedmont) region.

Groundcover - Low-growing woody or herbaceous plants.

Growth Category - General annual growth rates in height exhibited by each tree species under optimal growing conditions. 1) 12 inches or less, 2) Between 12 inches and 24 inches, 3) Greater than 24 inches. (Refers to Table 40.23.320)

Hedge Tree/Shrub - A tree/shrub species that can be utilized in naturalistic or clipped hedges or planting screens. Trees are typically multi-stemmed or fastigate (upright and narrow) species and cultivars.

Lawn Tree - A tree species appropriate for open lawns or requiring large open spaces.

Native - Indicates whether a plant species is a "native plant" per the definition in Article 33. All plants and trees used for reforestation shall consist only of species native and indigenous to Delaware. Additionally, they shall not include cultivars or hybrids of the species nor shall State rare or endangered species be utilized. (Delaware Department of Natural Resources and Environmental Control)

Patio Tree - A smaller tree species appropriate for settings that are typically enclosed or don't require high clearance heights to branches.
RBA Usage - Plants generally appropriate for usage in Riparian Buffer Areas (RBA). Y - Yes, N - No, L - Limited requiring greater investigation per plant selected and site constraints.

Shrub sizes - Approximate sizes attained by unpruned woody shrubs at maturity under optimal growing conditions. Small - Less than 5 feet, Medium - Between 5 feet and 10 feet, Large - Between 10 feet and 15 feet.

Street Tree - Appropriateness for typical street tree applications. Y - Yes, N - No, L - Limited requiring greater investigation per tree species/cultivar selected and site conditions.

Wetland Indicator Status - A Classification for hydrophytic plant species per the National Wetland Plant List.

OBL (Obligate Wetland) - Almost always occurs in wetlands

FACW (Facultative Wetland) - Ususally occurs in welands, but may occur in non-wetlands

FAC (Facultative) - Occurs in wetlands and non-wetlands

FACU (Facultative Upland) - Usually occurs in non-wetlands, but may occur in wetlands

UPL (Obligate Upland) - Almost never occurs in wetlands

NI (No Indicator) - Insufficient information available to determine indicator status

Urban Tolerance - General degree to which a plant can tolerate conditions in an urban environment, particularly within parking lots and along streetscapes. Y - Yes, N - No, L- Limited requiring greater investigation per tree or plant species/cultivar selected and site conditions.

APPENDIX 3: PLANT LISTS AND PLANTING GUIDANCE

2. Plants to Avoid - Plant species that should be avoided or not planted within New Castle County due to invasive tendencies, disease or pest susceptibility, danger to human or livestock welfare or for other reason(s) indicated.

A. Trees

Botanical Name	Common Name	Invasive Tendency	Notes
<i>Acer platanoides</i>	Norway Maple	H	Do not plant.
<i>Acer saccharinum</i>	Silver Maple		Over-used, weak wooded, short-lived. May use in riparian environment.
<i>Ailanthus altissima</i>	Tree of Heaven	I	Plant where it cannot escape cultivation.
<i>Albizia julibrissin</i>	Mimosa Trees	I	Plant where it cannot escape cultivation
<i>Aralia elata</i>	Korean Angelica-tree	I	Plant where it cannot escape cultivation.
<i>Betula papyrifera</i>	Paper/White Birch		Susceptible to bronze birch borer.
<i>Cupressus x leylandii</i>	Leyland Cypress		Over-used, short-lived, numerous diseases. Select alternative.
<i>Evodia daniellii</i>	Korean Evodia	I	Plant where it cannot escape cultivation.
<i>Fraxinus spp.</i>	Ash Trees		Susceptible to emerald ash borer. Do not plant.
<i>Maclura pomifera</i>	Osage Orange	I	Plant where it cannot escape cultivation.
<i>Magnolia kobus</i>	Kobus Magnolia	I	Plant where it cannot escape cultivation
<i>Malus baccata</i>	Siberian Crabapple	I	Plant where it cannot escape cultivation
<i>Mimosa spp.</i>	Mimosa Trees	I	Plant where it cannot escape cultivation.
<i>Morus alba</i>	White Mulberry	I	Weak-wooded, numerous diseases. Hybridizes with native <i>Morus rubra</i> .
<i>Morus rubra</i>	Red Mulberry		Weak-wooded, messy/staining fruits.
<i>Paulownia tomentosa</i>	Empress Tree	I	Plant where it cannot escape cultivation
<i>Phellodendron amurense</i>	Amur Cork Tree	I	Plant where it cannot escape cultivation
<i>Photinia villosa</i>	Christmas Berry	I	Plant where it cannot escape cultivation
<i>Pinus nigra</i>	Austrian Pine		Susceptible to pinewood nematode.
<i>Pinus parviflora</i>	Japanese White Pine		Susceptible to pinewood nematode.
<i>Pinus thunbergiana</i>	Japanese Black Pine		Susceptible to pinewood nematode.
<i>Populus alba</i>	White Poplar	I	Weak-wooded. Plant where it cannot escape cultivation.
<i>Pyrus calleryana</i>	Callery Pear	H	Weak-wooded, over-used, short-lived. Do not plant.
<i>Robinia pseudoacacia</i>	Black Locust	I	Invasive. Plant where it cannot escape cultivation.
<i>Quercus palustris</i>	Pin Oak		Over-used. Select alternative.
<i>Styrax japonica</i>	Japanese Snowbell	I	Invasive. Plant where it cannot escape cultivation.
<i>Tsuga spp.</i>	Hemlock Trees		Susceptible to woolly adelgid.
<i>Ulmus pumila</i>	Siberian Elm	I	Invasive. Plant where it cannot escape cultivation.

B. Woody Shrubs, Vines and Groundcovers

Botanical Name	Common Name	Invasive Tendency	Notes
<i>Akebia quinata</i>	Five-leaf Akebia	I	Vine. Plant where it cannot escape cultivation.
<i>Ampelopsis brevipedunculata</i>	Porcelainberry	I	Shrub. Plant where it cannot escape cultivation.
<i>Berberis thunbergii</i>	Asian Barberry	I	Shrub. Plant where it cannot escape cultivation.
<i>Berberis vulgaris</i>	European Barberry	I	Shrub. Plant where it cannot escape cultivation.
<i>Buddleia davidii</i>	Butterflybush	I	Shrub. Plant where it cannot escape cultivation.
<i>Celastrus orbiculatus</i>	Oriental Bittersweet	H	Vine. Do not plant. Use native species.
<i>Clematis terniflora</i>	Sweet Autumn Clematis	H	Vine. Do not plant. White flowers
<i>Elaeagnus angustifolia</i>	Russian Olive	H	Shrub. Do not plant.
<i>Elaeagnus umbellata</i>	Autumn Olive	H	Shrub. Do not plant.
<i>Euonymus alata</i>	Winged Euonymus	H	Shrub. Do not plant.
<i>Euonymus fortunei</i>	Wintercreeper	I	Vine. Use alternatives. Do not plant.
<i>Hedera helix</i>	English Ivy	I	Herb. Plant where it cannot escape cultivation.
<i>Hedera hibernica</i>	Atlantic Ivy	I	Herb. Plant where it cannot escape cultivation.
<i>Ilex crenata</i>	Japanese Holly	I	Shrub. Plant where it cannot escape cultivation.
<i>Leucothoe axillaris</i>	Coastal Doghobble	I	Shrub. Plant where it cannot escape cultivation.
<i>Ligustrum japonicum</i>	Japanese Privet	H	Shrub. Do not plant.
<i>Ligustrum obtusifolium</i>	Border Privet	H	Shrub. Do not plant.
<i>Ligustrum ovalifolium</i>	California Privet	H	Shrub. Do not plant.
<i>Ligustrum sinense</i>	Chinese Privet	H	Shrub. Do not plant.
<i>Ligustrum vulgare</i>	Common Privet	H	Shrub. Do not plant.
<i>Lonicera fragrantissima</i>	Chinese Honeysuckle	I	Shrub. Plant where it cannot escape cultivation.
<i>Lonicera japonica</i>	Japanese Honeysuckle	H	Vine. Do not plant.
<i>Lonicera maackii</i>	Amur Honeysuckle	H	Vine. Do not plant.
<i>Lonicera morrowii</i>	Morrow's Honeysuckle	H	Shrub. Do not plant.
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	I	Vine. Plant where it cannot escape cultivation.
<i>Mahonia bealei</i>	Beales Barberry	I	Shrub. Plant where it cannot escape cultivation.
<i>Mahonia repens</i>	Creeping Mahonia	I	Shrub. Plant where it cannot escape cultivation.
<i>Philadelphus coronarius</i>	European Mock-orange	I	Shrub. Plant where it cannot escape cultivation.
<i>Pueraria montana</i>	Kudzu	H	Vine. Do not plant.

<i>Rhamnus cathartica</i>	Common Buckthorn	H	Shrub. Do not plant. Mildly poisonous berries.
<i>Rhamnus frangula</i>	Alder Buckthorn	H	Shrub. Do not plant.
<i>Rhodotypos scandens</i>	Jetbead	I	Shrub. Plant where it cannot escape cultivation.
<i>Robinia hispida</i>	Bristly Locust	I	Shrub. Plant where it cannot escape cultivation.
<i>Rosa multiflora</i>	Multiflora Rose	H	Shrub. Do not plant.
<i>Rubus laciniatus</i>	Evergreen Blackberry	I	Shrub. Plant where it cannot escape cultivation.
<i>Rubus parvifolius</i>	Australian Raspberry	I	Shrub. Plant where it cannot escape cultivation.
<i>Rubus phoenicolasius</i>	Wineberry	H	Shrub. Do not plant.
<i>Viburnum dilatatum</i>	Linden Viburnum	I	Shrub. Plant where it cannot escape cultivation.
<i>Viburnum lantanoides</i>	Hobblebush	I	Shrub. Plant where it cannot escape cultivation.
<i>Viburnum seiboldii</i>	Seibold Viburnum	I	Shrub. Plant where it cannot escape cultivation.
<i>Viburnum setigerum</i>	Tea Viburnum	I	Shrub. Plant where it cannot escape cultivation.
<i>Wisteria sinensis</i>	Chinese Wisteria	I	Vine. Plant where it cannot escape cultivation.

C. Herbaceous Plants, Vines, Groundcovers and Grasses

Botanical Name	Common Name		Notes
<i>Acorus calamus</i>	European Sweetflag	H	Herb. Do not plant.
<i>Ageratina altissima</i>	White Snakeroot		Herb. Causes milk sickness. Do not plant in livestock feeding areas.
<i>Alliaria peiolata</i>	Garlic Mustard	I	Herb. Plant where it cannot escape cultivation.
<i>Allium vineale</i>	Field Garlic	I	Herb. Plant where it cannot escape cultivation.
<i>Ampelopsis glandulosa</i>	Porcelain-berry	I	Herb. Plant where it cannot escape cultivation.
<i>Arthraxon hispidus</i>	Joint-head Arthraxon	I	Herb. Plant where it cannot escape cultivation.
<i>Bambusa spp.</i>	Bamboo	H	Woody, clumping bamboo. Highly invasive. Do not plant.
<i>Bidens polylepis</i>	Tickseed Sunflower	I	Herb. Plant where it cannot escape cultivation.
<i>Bromus inermis</i>	Awnless Brome	I	Grass. Plant where it cannot escape cultivation.
<i>Bromus japonicus</i>	Japanese Brome	I	Grass. Plant where it cannot escape cultivation.
<i>Bromus sterilis</i>	Poverty Brome	I	Grass. Plant where it cannot escape cultivation.
<i>Bromus tectorum</i>	Cheat-grass Brome	I	Grass. Plant where it cannot escape cultivation.
<i>Cabomba caroliniana</i>	Carolina Fanwort	I	Herb. Plant where it cannot escape cultivation.
<i>Centaurea maculosa</i>	Spotted Knapweed	I	Herb. Plant where it cannot escape cultivation.
<i>Cicuta maculata</i>	Water Hemlock		Herb. Highly poisonous to humans and livestock. Do not plant.
<i>Cirsium arvense</i>	Creeping Thistle	I	Herb. Plant where it cannot escape cultivation.
<i>Commelina communis</i>	Asiatic Dayflower	I	Herb. Plant where it cannot escape cultivation.
<i>Conium maculatum</i>	Poison Hemlock	I	Herb. Highly poisonous to humans and livestock. Do not plant.
<i>Coronilla varia</i>	Crownvetch	H	Vine. Do not plant.
<i>Cynanchum louiseae</i>	Black Swallow-wort	I	Herb. Do not plant.
<i>Datura stramonium</i>	Jimsonweed	I	Herb. Poisonous. Do not plant.
<i>Dioscorea polystachya</i>	Chinese Yam	I	Vine. Plant where it cannot escape cultivation.
<i>Egeria densa</i>	Brazilian Waterweed	I	Herb. Plant where it cannot escape cultivation.
<i>Eichhornia crassipes</i>	Water Hyacinth	I	Herb. Plant where it cannot escape cultivation.
<i>Endodeca serpentaria</i>	Virginia Snakeroot		Herb. Poisonous. Do not plant.
<i>Eragrostis curvula</i>	Weeping Lovegrass	I	Grass. Plant only where it cannot escape cultivation.
<i>Fallopia japonica</i>	Japanese Knotweed	H	Herb. Do not plant.
<i>Ficaria verna</i>	Lesser Celandine	I	Herb. Plant where it cannot escape cultivation.
<i>Galanthus nivalis</i>	Common Snowdrop	I	Herb. Plant where it cannot escape cultivation.
<i>Glechoma hederacea</i>	Ground-Ivy	I	Herb. Plant where it cannot escape cultivation.
<i>Hemerocallis spp</i>	Daylilies	I	Herb. Plant where it cannot escape cultivation.
<i>Hesperis matronalis</i>	Dame's Rocket	I	Herb. Plant where it cannot escape cultivation.
<i>Hordeum jubatum</i>	Foxtail Barley	I	Grass. Plant where it cannot escape cultivation.
<i>Humulus japonicus (scandens)</i>	Japanese Hop	H	Vine. Do not plant.
<i>Hydrilla verticillata</i>	Hydrilla	H	Aquatic herb. Do not plant.
<i>Iris pseudacorus</i>	Yellow Flag Iris	I	Herb. Plant where it cannot escape cultivation.
<i>Lespedeza cuneata</i>	Chinese Bushclover	I	Herb. Plant where it cannot escape cultivation.
<i>Leucojum aestivum</i>	Summer Snowflake	I	Herb. Plant where it cannot escape cultivation.
<i>Ludwigia peploides</i>	Creeping Primrose	I	Herb. Plant where it cannot escape cultivation.
<i>Lysicachia nummularia</i>	Creeping Jenny	I	Vine. Plant where it cannot escape cultivation
<i>Lythrum salicaria</i>	Purple Loosestrife	I	Herb. Plant where it cannot escape cultivation.
<i>Matteuccia struthiopteris</i>	Ostrich Fern	I	Herb. Plant where it cannot escape cultivation.
<i>Microstegium vimineum</i>	Japanese Stiltgrass	H	Grass. Do not plant.
<i>Miscanthus sinensis</i>	Chinese Silvergrass	I	Grass. Plant where it cannot escape cultivation.
<i>Murdannia keisak</i>	Marsh Dayflower	I	Herb. Plant where it cannot escape cultivation.
<i>Myriophyllum aquaticum</i>	Parrott Feather	I	Herb. Plant where it cannot escape cultivation.
<i>Myriophyllum spicatum</i>	Eurasian Watermilfoil	I	Herb. Plant where it cannot escape cultivation.
<i>Narcissus pseudonarcissus</i>	Daffodil	I	Herb. Plant where it cannot escape cultivation.
<i>Ornithogalum nutans</i>	Dropping Star-of-Bethlehem	I	Herb. Plant where it cannot escape cultivation.
<i>Ornithogalum umbellatum</i>	Star-of-Bethlehem	I	Herb. Plant where it cannot escape cultivation.
<i>Oxalis rigidior</i>	Cowbane		Herb. Highly poisonous to humans and livestock. Do not plant.
<i>Pachysandra terminalis</i>	Japanese Pachysandra	I	Herb. Plant where it cannot escape cultivation.
<i>Pennisetum orientale</i>	Oriental Fountain Grass	I	Grass. Plant where it cannot escape cultivation.
<i>Perilla frutescens</i>	Beefsteak Plant	I	Herb. Plant where it cannot escape cultivation.
<i>Persicaria longiseta</i>	Oriental Lady's Thumb	I	Herb. Plant where it cannot escape cultivation.
<i>Persicaria perfoliata</i>	Mile-a-minute Weed	H	Vine. Do not plant.
<i>Phalaris arundinacea</i>	Reed Canary Grass	I	Grass. Plant where it cannot escape cultivation.

<i>Phyllostachys spp.</i>	Bamboo	H	Large, woody, running bamboo. Do not plant.
<i>Phragmites australis</i>	Common Reed	H	Grass. Do not plant.
<i>Pistia stratiotes</i>	Water Lettuce	I	Herb. Invasive. Plant where it cannot escape cultivation.
<i>Pseudosas spp.</i>	Bamboo	H	Medium, woody, running bamboo. Do not plant.
<i>Saponaria officinalis</i>	Bouncing Bet	I	Herb. Invasive. Plant where it cannot escape cultivation.
<i>Solanum carolinense</i>	Carolina Horsenettle	I	Herb. Poisonous to humans and livestock. Do not plant.
<i>Sorghum halepense</i>	Johnson Grass	I	Grass. Invasive. Plant where it cannot escape cultivation.
<i>Urtica dioica</i>	Stinging Nettle	I	Herb. Invasive. Histamine-injecting thorns.
<i>Trapa natans</i>	Water Chestnut	I	Herb. Invasive. Plant where it cannot escape cultivation
<i>Vinca minor</i>	Periwinkle	I	Herb. Invasive. Plant where it cannot escape cultivation

D. Definitions

Highly Invasive - Plants that are currently invasive, cause serious management concerns or pose a serious threat to the biological diversity of the State of Delaware. Any "highly invasive" plant that is found on-site shall be eradicated as part of a long-term maintenance plan as required by the Department.

Invasive - Plants that are currently invasive, but cause a lesser degree of management concerns or pose a lesser threat to the biological diversity of the State of Delaware. Any invasive plant found on-site shall be controlled to prevent further spread or be removed as part of a long-term maintenance plan as required by the Department.

Invasive Species - A species that is non-native to the local ecosystem and whose introduction causes or is likely to cause economic or environmental harm to human health or the health of native flora and fauna.

Invasive Tendency - General degree to which a plant species has been deemed to be invasive to the State of Delaware by the Delaware Invasive Species Council (DISC), the Delaware Department of Natural Resources and Environmental Control (DNREC), the Delaware Department of Agriculture or other similar arboricultural or botanical authority. Invasive tendency is apportioned into two tiers. H - Highly Invasive, I - Invasive.

APPENDIX 3: PLANT LISTS AND PLANTING GUIDANCE

3 Native Plant Species of Special Interest - Plant species listed below in this Section or annotated in Section 1 with an asterix (*) encountered on site may require additional protections pursuant to Articles 5, 10 and 23. These plant species may be considered rare or endangered within the State of Delaware or require additional arboricultural and botanical information as requested by the Department.

A. Trees

Botanical Name	Common Name	Notes
<i>Asimina triloba</i>	Common Pawpaw	Edible fruit
<i>Carya lacinosa</i>	Shellbark Hickory	
<i>Carya pallida</i>	Sand Hickory	Tolerates dry, upland, sandy soils.
<i>Fraxinus nigra</i>	Black Ash	
<i>Juglans cinerea</i>	Butternut	Found along well-drained stream banks.
<i>Malus coronaria</i>	Wild Crabapple	
<i>Prunus virginiana</i>	Choke Cherry	
<i>Quercus laurifolia</i>	Laurel Oak	
<i>Quercus lyrata</i>	Overcup Oak	Tolerates poorly-drained bottomland soils.
<i>Quercus stellata</i>	Post Oak	Tolerates dry, upland, sandy soils.

B. Wood Shrubs, Vines and Groundcovers

Botanical Name	Common Name	Notes
<i>Aralia racemosa</i>	American Spikenard	
<i>Clematis occidentalis</i>	Purple Clematis	
<i>Comptonia peregrina</i>	Sweet Fern	
<i>Corylus cornuta</i>	Beaked Hazelnut	
<i>Diervilla lonicera</i>	Northern Bush Honeysuckle	
<i>Glycyrrhiza lepidota</i>	Box Huckleberry	
<i>Hydrangea arborescens</i>	Wild Smooth Hydrangea	
<i>Kalmia angustifolia</i>	Sheep Laurel	
<i>Lyonia mariana</i>	Staggerbush	
<i>Rhododendron viscosum</i>	Swamp Azalea	

C. Herbaceous Plants and Grasses

Botanical Name	Common Name	Notes
<i>Actaea pachypoda</i>	White Baneberry	
<i>Adiantum pedatum</i>	Northern Maidenhair Fern	
<i>Andropogon gerardii</i>	Big Bluestem	
<i>Aquilegia canadensis</i>	Canadian Columbine	
<i>Arisaema dracontium</i>	Green Dragon	
<i>Boltonia asteroides</i>	White Doll's Daisy	
<i>Calamagrostis canadensis</i>	Bluejoint Reedgrass	
<i>Caltha palustris</i>	Marsh Marigold	
<i>Chasmanthium latifolium</i>	Indian Sea Oats	
<i>Coreopsis rosea</i>	Pink Tickseed	
<i>Eupatorium purpureum</i>	Joe-Pye Weed	
<i>Gentiana andrewsii</i>	Bottle Gentian	
<i>Helianthus angustifolius</i>	Swamp Sunflower	
<i>Iris prismatica</i>	Slender Blue-flag Iris	
<i>Liatis spicata</i>	Spike Gay-flower	
<i>Lilium canadense</i>	Canada Lily	
<i>Mertensia virginica</i>	Bluebells	
<i>Monarda fistulosa</i>	Wild Bergamot	
<i>Oenothera fruticosa</i>	Sundrops	
<i>Panax quinquefolius</i>	American Ginseng	
<i>Panax trifolius</i>	Dwarf American Ginseng	
<i>Passiflora incarnata</i>	Purple Passion Flower	
<i>Passiflora lutea</i>	Yellow Passion Flower	
<i>Penstemon hirsutus</i>	Hairy Beardtongue	
<i>Penstemon laevigatus</i>	Smooth Beardtongue	
<i>Phlox maculata</i>	Wild Sweet William	
<i>Poa sylvestris</i>	Woodland Bluegrass	
<i>Polygonatum biflorum</i>	Solomon's Seal	

<i>Tradescantia virginiana</i>	Spiderwort	
<i>Trillium cernuum</i>	Nodding Trillium	
<i>Trillium erectum</i>	Purple Trillium	
<i>Viola labradorica</i>	Blue American Dog Violet	
<i>Viola pedatum</i>	Birdfoot Violet	

APPENDIX 3: PLANT LISTS AND PLANTING GUIDANCE

4. Street Tree Selection - Supplemental guidance for Article 23 for street tree selection. Street tree species selected should conform to the size categories of Appendix 3 Section 1 as required by the Department or DelDOT, where necessary.

A. Street Tree Selection - Subdivision Streets

Street Type	Planting Area Width		
	>6'	>8'	>10'
Type I	Sm*	Sm or Md*	Sm/Md/Lg
Type II	N/A	Sm or Md*	Sm/Md/Lg
Type III	N/A	Sm or Md*	Sm/Md/Lg

* - Root barrier protection or other tree planting construction techniques may be required by the Department or DelDOT.

B. Street Tree Selection - Other Streets

Street tree selection and associated planting area width along non-subdivision streets (generally roads with three-digit numbers assigned to them by DelDOT), should generally follow the contextual guidance for subdivision streets in accordance with the street type. However, certain areas, particularly those with urban-style development with on-street parking and pedestrian activity, may require additional professional design judgement regarding tree selection, planting area width, special planting construction techniques and long-term maintenance. Both Department and DelDOT approval shall be required.

C. Definitions

Planting Area Width - Planting area width is measured from the back of curbing or edge of cartway pavement and edge of sidewalk or pathway. It may also consider the total width of special under-pavement planting structures placed to provide uncompacted soil for tree root dispersal. Street trees should be placed such that the center of the tree trunk is located within the center of the planting area, unless being adjusted for safety, access, utility avoidance, or stormwater conveyance and infiltration. For scenarios where tree pits are utilized, tree grates or the opening to tree pits shall be a minimum of 5 feet wide. Guidance for clear zones or lateral offsets may also factor in the locations of street trees.

Street Tree Sizes - Sm = Small (15' - 30' tall); Md = Medium (30' - 50' tall); Lg = Large (>50' tall). Tree heights listed are typically reached at maturity under optimal growing conditions. See Appendix 3 Section 1.

Street Type - Subdivision street types in accordance with DelDOT's Development Coordination Manual: Type I (<500 ADT), Type II (501 - 3000 ADT), Type III (>3000 ADT).

5. Reforestation planting - Supplemental guidance for reforestation plantings.

A. It is customary to plant trees of a single size for one contiguous reforestation area within a site. In some cases, it may be appropriate to plant a mixture of plant sizes, so long as the planting density is achieved. The following should be considered:

1. Larger initial planting sizes may be more effective than whips and seedlings in areas proximate to high human activity and/or encroachment by mechanized equipment.
2. Place larger trees around the perimeter in order to protect interior smaller plants.
3. Use smaller plants for understory species and larger plants for canopy/overstory species.

B. It is recommended that a means for delineating reforestation areas with temporary or permanent signage or markers be utilized to prevent accidental removal, cutting or disturbance of reforestation plantings.

C. It is recommended that tree whips and seedlings be marked with wooden or bamboo stakes for the duration of the establishment period so that they can be easily identified for maintenance and avoided by equipment.

APPENDIX 3: PLANT LISTS AND PLANTING GUIDANCE

6. Tree Replacement Calculation - Supplemental guidance for tree replacement located in Sec. 40.23.320.C.

A. Steps to determine new caliper figures for trees to be enlarged:

Step 1 - Calculate the sum cross-sectional area of all replacement trees (c): $(\pi r_1^2) \times c = y$

Step 2 - Divide (y) by the number trees (g) on the development plant to be enlarged: $y/g = n$

Step 3 - Add (n) to the cross-sectional area of each canopy tree to be enlarged: $n + (\pi r_2^2) = f$

Step 4 - Determine the new caliper figure of each enlarged tree by solving for (r_3): $f = (\pi r_3^2)$ or $\sqrt{f/\pi} = r_3$

Step 5 - Multiply r_3 by 2 to determine the new caliper figures for trees to be enlarged: $r_3 \times 2 = t$

B. New caliper figures shall be rounded up to the nearest one-half (1/2) inch.

Step 6 - Round new caliper figure (t) up to nearest 1/2 inch