

**ZONING COMMISSION FOR THE DISTRICT OF COLUMBIA  
NOTICE OF FINAL RULEMAKING**

**AND**

**Z.C. ORDER NO. 12-10**

**Z.C. Case No. 12-10**

**(Text Amendment – 11 DCMR)**

**New Chapter 34, Green Area Ratio; §§ 412 Pervious Surface Minimum Requirements for  
R-1 through R-4 Zones, and 2115.19 Landscape Standards for Parking Lots**

**June 24, 2013**

The Zoning Commission for the District of Columbia (Commission), pursuant to its authority under § 1 of the Zoning Act of 1938, approved June 20, 1938 (52 Stat. 797; D.C. Official Code § 6-641.01 (2008 Repl.)), hereby gives notice of its adoption of amendments to the Zoning Regulations, Title 11 of the District of Columbia Municipal Regulations (DCMR) that add a new § 412, Pervious Surface Minimum Requirements for R-1 through R-4 zones, a new § 2111, Surface Parking Lots Landscaping Standards, and a new Chapter 34, Green Area Ratio. A conforming amendment is also made to § 3104.1.

The Green Area Ratio (GAR) chapter provides rules for a city-wide requirement for green site design that will vary by zones, except for the R-1 through R-4 Zone Districts. Chapter 34 includes explanation of the system, methods of calculation, terms of measurement, and requirements for review. The GAR chapter is substantially similar to provisions adopted by the Commission as part of the Zoning Regulations Rewrite process. *See* Z.C. Order No. 08-06-E, 58 DCR 5964 (July 15, 2011). Those provisions will not become effective until a new Title 11 is published and will be modified to reflect the changes made by the Commission to the text adopted through this notice.

To address the R-1 through R-4 zone issue, a pervious surface requirement is adopted. This requirement will work in concert with the lot occupancy limitations to ensure not only consistent density characteristics within a zone district, but introduce an environmental standard to ensure that property is not one hundred percent (100%) paved.

A landscape standard is added for surface parking lots by the addition of a new § 2111.

A Notice of Proposed Rulemaking was published in the *D.C. Register* on January 11, 2013 at 60 DCR 224. For the reasons explained below, a Second Notice of Proposed Rulemaking pertaining only to the proposed new Chapter 34 was published in the *D.C. Register* on May 10, 2013, 60 DCR 6734. The comments received will be discussed later in this Order.

The amendments shall become effective upon the publication of this notice in the *D.C. Register*, but pursuant to new § 3401.1 the requirements of new Chapter 34 will not become applicable until October 1, 2013.

## **Procedures Leading to Adoption of Amendments**

### **Setdown and Public Hearing**

The Office of Planning (OP), in a report dated July 20, 2012, petitioned the Commission for text amendments to add a new Chapter 34, Green Area Ratio; add a new § 412, Pervious Surface Minimum Requirements for R-1 through R-4 Zone Districts, and add a new § 2111, Surface Parking Lots Landscaping Standards.

At its regular public meeting held July 30, 2012, the Commission set down this case for a public hearing.

In a report dated October 15, 2012, the Chair of Advisory Neighborhood Commission (ANC) 6C advised the Commission that on October 10, 2012, at a duly noticed, regularly scheduled, meeting with a quorum of 8 out of 9 commissioners present, the ANC voted 7-1-0 to oppose the proposed regulations. The report stated:

The Green Area Ratio regulations are too complicated and would pose a financial burden on many homeowners. There are problems with the Surface Parking requirements. The Pervious Surface regulation is not workable, with a particular burden on the historic district. The commissioners also questioned whether these regulations would be enforceable.

The ANC also provided suggestions on the phrasing of certain provisions and recommended exempting historic resources from the pervious surface requirement in similar circumstances as stated in the proposed GAR rules.

The Commission held a public hearing on the petition on November 5, 2012. In addition to hearing a presentation by OP, the Commission heard the testimony of Ms. Alma Gates on behalf of the Committee of 100 on the Federal City and Mr. Mark Eckenwiler. Ms. Gates' testimony was generally supportive of the rule, but suggested that if a developer is going to get points for planting trees, then the same developer should lose points for removing trees and begin with a negative GAR score. She also questioned the wisdom of permitting special exception relief and the absence of references to the existing tree and slope overlays. Mr. Eckenwiler testified in opposition to the pervious surface requirements based upon the same concerns identified by ANC 6C.

At the conclusion of the hearing, the Commission requested that OP consider options for the pervious surface requirements in R-4 Zone Districts. In response, OP submitted a supplemental proposal through a report dated November 25, 2012. The report indicated that OP had coordinated the drafting of the revised text with representatives of ANC 6C. Among other things, the revised text included the exception for historic resources suggested by the ANC.

## **First Proposed Action**

At its regularly scheduled public meeting on December 12, 2012, the Zoning Commission took proposed action to approve the petition with the revisions offered by the Office of Planning. For the purposes of rulemakings, proposed action authorizes the Office of Zoning to publish a notice of proposed rulemaking in the *D.C. Register* and to refer the proposed text to the National Capital Planning Commission for the thirty- (30) day review period mandated by § 492 of the District of Columbia Home Rule Act.

The Commission received a large number of comments in respect to the Notice of Proposed Rulemaking published on January 11, 2013. Several of the comments suggested that the Commission should allow a period of time between the effective date of the GAR chapter and the date on which its requirements became applicable. It was also suggested that certain types of building permit applications filed after the applicability date not be subject to the GAR provisions. In addition, the Commission received requests to extend the public comment period, including a request filed by the Deputy Mayor for Planning and Economic Development.

Through a memorandum dated February 6, 2013, OP requested that the Commission defer taking final action on the petition until March 11. OP indicated that it would use the additional time to work with stakeholders on resolving the applicability issues raised. OP stated it would provide final comments based upon these discussions no later than March 1, 2013. At its regularly scheduled meeting held February 11, 2013, the Commission agreed to defer final action, but continued the matter until April 8, with OP's final comments due on April 1, 2013.

In its Supplemental Report of April 1, 2013, OP recommended that the GAR rules not apply until October 1, 2013. Although construction rights under zoning do not normally vest until the date a building permit is issued, OP proposed not applying the GAR rules to any compliant building permit application filed prior to that date and to certain applications filed after that date. Tree minor changes were also proposed to the substantive portion of the GAR text.

## **Second Proposed Action and Final Action**

At its regularly scheduled meeting held April 8, 2013, the Commission accepted the recommendations made by OP and authorized the publication of a second notice of proposed rulemaking for the revised GAR text. The Commission received four new comments in response to the notice and one resubmission.

At a regularly scheduled meeting held June 24, 2013, the Commission took final action to adopt the amendments, making no changes to the proposed text of the Chapters 4 and 21 amendments as published in the initial notice of proposed rulemaking. The Commission, however, made clarifying changes to § 3401.4(b)(1) and 3401.4(b)(3) as published in the second notice. Those provisions make GAR inapplicable to building permit applications filed after the October 1, 2013 applicability date if the plans are consistent with an unexpired planned unit development (PUD) depending upon when the PUD was setdown, voted upon, and approved. In its written comments, the George Washington University requested confirmation that the reference to PUDs

included first stage approvals. Since that was the Commission's intent, the two provisions have been revised to refer to first stage, second stage, and consolidated PUDs.

As to the other comments received in response to the second notice, the Commission appreciates the suggestion made but does not believe further changes are required at this time. For the sake of brevity the Commission will not address each and every suggestion made, but offers the following limited response.

As to the suggestion that the impervious surface and GAR rules exceed the Commission's authority, the Commission notes that the rules have the same characteristics and further the same aims as the present tree and slope overlays. The Commission considers it premature to consider whether applications for special exception relief from these requirements should be eligible for the expedited calendar process or subject to a reduced fee. Nor does the Commission agree that chanceries should be exempted. The Commission sees no conflict between the imposition of pervious surface and GAR requirements with § 206 of the Foreign Missions Act, D.C. Official Code § 6-1306. Should a chancery need zoning relief, the BZA can hear and decide the request using the six (6) factors set forth in Subsection (d) of that provision.

No text refinement is needed to assure that row dwellings will be exempted. Chapter 34 exempts buildings for which no certificate of occupancy (C of O) is required. Subsection 3203.1(a) exempts one-family dwellings from obtaining a C of O. A row dwelling is defined as a "*one-family dwelling having no side yards*", 11 DCMR § 199.1 (emphasis added). Therefore, no C of O is required for row dwellings and the GAR exemption applies. Nor is it necessary to amend the provisions concerning nonconforming structures, since the new GAR requirements do not directly affect the size of what can be constructed.

The Commission appreciates the comments concerning staged development on a single record lot and notes that the problem was not raised by the same writer in their earlier submission. The Commission does not believe these proceedings should be further delayed to address these concerns. The same is true for the suggestion that the GAR for Industrial Districts should be reduced from 0.3 to 0.1, which the Commission previously considered when it adopted Z.C. Order No. 08-06-D (Comprehensive Zoning Regulations Rewrite: Subtitle J: Production, Distribution, and Repair Zones), 58 DCR 5766 (July 8, 2011). The Commission concludes that like all zoning measurements, GAR compliance should be limited to the lot of the subject property and not include any landscaping made in the adjacent public space.

### **ANC Great Weight**

In accordance with § 13(d) of the Advisory Neighborhood Commissions Act of 1975, effective March 26, 1976 (D.C. Law 1-21; D.C. Official Code § 1-309.10(d)) the Commission must give great weight to the written issues and concerns of the affected ANCs, which in this case are all ANCs.

As noted, the Commission received a report from ANC 6C that concluded that the GAR rules were too complex and together with that the proposed pervious surface rules would place a

burden on homeowners, particularly those with properties in historic district. The report noted that some of the ANC Commissioners questioned the enforceability of the GAR provisions.

In response to that report, the Commission requested OP to explore options that would ameliorate the ANC's concerns. The Commission concludes that OP's revisions, particularly the express exemption for historic resources, addressed the ANC's principal concerns. The GAR rules are not unduly complex and will not apply to the R-1 through R-4 Zone Districts. The Commission therefore does not agree that the GAR rules will prove burdensome to homeowners. As to enforceability, like any other area requirement all building permit applications subject to these provisions will be reviewed for compliance and noncompliant applications will be denied. The Commission sees no enforcement issue. Having identified the ANC's issues and concerns and explained why the Commission did or did not find the advice persuasive, the ANC was given the great weight to which it is entitled.

**Title 11 DCMR (Zoning) is amended as follows:**

**Chapter 4, RESIDENCE DISTRICTS: HEIGHT, AREA, AND DENSITY REGULATIONS, is amended by adding a new § 412 PERVIOUS SURFACE to read as follows:**

**412 PERVIOUS SURFACE**

412.1 The minimum pervious surface percentage requirement stated below shall be applicable only in conjunction with the following:

- (a) The construction of a new principal structure;
- (b) An addition to a principal or accessory structure, other than a historic resource, that increases the existing lot occupancy at the time of building permit application by ten percent (10%) or more;
- (c) The construction of a new accessory structure that increases the existing lot occupancy at the time of building permit application by ten percent (10%) or more; or
- (d) An addition to a historic resource that increases the existing lot occupancy at the time of building permit application by twenty-five percent (25%) or more.

412.2 For the purposes of § 412.1 a historic resource is a building or structure listed in the District of Columbia Inventory of Historic Sites or a building or structure certified in writing by the State Historic Preservation Officer as contributing to the character of the historic district in which it is located.

412.3 Except as provided in §§412.1 and 412.4 or as otherwise required by this title, the minimum percentage of pervious surface of a lot in a Residence District listed in the table below shall be as set forth in the following table:

<b>ZONE DISTRICT AND STRUCTURE</b>	<b>MINIMUM PERCENTAGE OF PERVIOUS SURFACE</b>
R-1 through R-4 Public recreation and community centers	30%
R-1-A, R-1-B All other structures	50%
R-2 All other structures	30%
R-3 All other structures	20%

412.4 Except as required in § 412.3 for public recreation and community centers or as otherwise required by this title, in the R-4 zone a minimum pervious surface requirement for structures other than those listed in § 412.2 shall be based on lot size as set forth in the following table:

<b>MINIMUM LOT SIZE</b>	<b>MINIMUM PERCENTAGE OF PERVIOUS SURFACE</b>
Less than 1,800 square feet	0%
1,801 to 2,000 square feet	10%
Larger than 2000 square feet	20%

412.5 The percent of pervious surface area shall be calculated by dividing the total area of pervious surfaces on the lot by the total area of the lot.

412.6 Only the following shall be considered pervious surfaces for the purposes of calculating the pervious surface area:

- (a) Grass, mulched groundcover, all areas of a vegetated roof planted with a growing medium, and other planted areas;
- (b) Permeable pavers or paving that facilitate the infiltration of water into the soil; and
- (c) Decks or porches constructed above the surface of the lot that are erected on pier foundations, and that maintain a permeable surface underneath that can facilitate the infiltration of water into the soil.

412.7 The Board of Zoning Adjustment may grant, by special exception, a full or partial reduction in the minimum pervious surface requirement required by this section if, in addition to meeting the general requirements of § 3104, the applicant demonstrates that complying with the minimum pervious surface requirement is impractical because of size of lot, or other conditions relating to the lot or surrounding area that would tend to make full compliance unduly restrictive, prohibitively costly, or unreasonable, or as a result of equivalent measures being implemented on the property that provide the same minimum pervious surface amount.

**Chapter 21 is amended by adding a new § 2111, SURFACE PARKING LOTS LANDSCAPING STANDARDS, to read as follows:**

**2111 SURFACE PARKING LOTS LANDSCAPING STANDARDS**

2111.1 Surface parking areas with ten (10) or more parking spaces shall conform to the landscaping, tree canopy cover, screening, and lighting requirements as set forth in this section:

- (a) A minimum of ten percent (10%) of the total area devoted to parking, including aisles and driveways shall be covered by landscaped areas planted with trees and shrubs;
- (b) The landscaping shall be maintained in a healthy, growing condition; Dead or dying landscaping shall be replaced;
- (c) All end islands of parking rows longer than nine (9) parking spaces, and all areas otherwise not used for ingress and egress, aisles, and parking spaces shall be landscaped;
- (d) Landscaping around the perimeter of the parking area may count toward the area requirement of this subsection up to a distance of six feet (6 ft.) from the pavement;
- (e) All newly planted trees shall have a minimum diameter of two and one-half inches (2.5 in.); all trees shall be planted or retained in a space that provides a minimum of five hundred (500) cubic feet of soil volume per tree; and
- (f) Trees shall be planted a minimum of four feet (4 ft.) from any protective barrier, such as curbs or wheel stops with no horizontal dimension less than four feet (4 ft.) and a minimum depth of three feet (3 ft.).

2111.2 The Board of Zoning Adjustment may grant, by special exception, a full or partial reduction in the landscape standards for parking lots required by this section if, in addition to meeting the general requirements of § 3104, the applicant demonstrates that complying with the landscape standards is impractical because of size of lot, or other conditions relating to the lot or surrounding area that would tend to make full compliance unduly restrictive, prohibitively costly, or unreasonable.

**Chapter 31, BOARD OF ZONING ADJUSTMENT RULES OF PRACTICE AND PROCEDURE, § 3104, SPECIAL EXCEPTIONS, is amended by inserting alphabetically the following new special exception into the chart appended to § 3104.1:**

TYPE OF SPECIAL EXCEPTION	ZONE DISTRICT	SECTIONS IN WHICH THE CONDITIONS ARE SPECIFIED
Green Area Ratio	All Districts where applicable	§ 3405
Minimum Pervious Surface	All Districts where applicable	§ 412
Surface Parking Lots Landscaping Standards	All Districts where applicable	§ 2111

**A new Chapter 34, GREEN AREA RATIO, is added to read as follows:**

- 3400 INTRODUCTION TO GREEN AREA RATIO
- 3401 APPLICABILITY OF GREEN AREA RATIO STANDARDS
- 3402 CALCULATION OF GREEN AREA RATIO
- 3403 LANDSCAPE ELEMENT CONDITIONS FOR GREEN AREA RATIO
- 3404 SUBMITTAL REQUIREMENTS FOR GREEN AREA RATIO
- 3405 SPECIAL EXCEPTIONS FOR GREEN AREA RATIO
- 3406 MAINTENANCE REQUIREMENTS FOR GREEN AREA RATIO

**CHAPTER 34 GREEN AREA RATIO**

**3400 INTRODUCTION TO GREEN AREA RATIO**

3400.1 Green Area Ratio (GAR) is the ratio of the weighted value of landscape elements to land area. The GAR score relates to an increase in the quantity and quality of environmental performance of the urban landscape.

3400.2 Green Area Ratio sets integrated environmental requirements for landscape elements and site design that contribute to the reduction of stormwater runoff, the improvement of air quality, and the mitigation of the urban heat island effect.

3400.3 The purposes of the GAR regulations are to:

- (a) Implement a value-based system of requirements for environmental site design that provides flexibility in meeting environmental performance standards; and
- (b) Promote attractive and environmentally functional landscapes.

3400.4 The purpose of this chapter is to:

- (a) Provide general guidance about the regulation of GAR requirements;



- (b) Define the applicability of GAR;
- (c) Set forth the formula for calculating the GAR and define its component parts;
- (d) Identify those landscape elements that are included in the GAR, explain how their area is measured, and set forth eligibility conditions;
- (e) Establish multipliers for each eligible landscape element;
- (f) Indicate what plans and certifications must accompany an application submitted to demonstrate proof of GAR compliance; and
- (g) Establish maintenance requirements for the landscape elements that are provided as part of a property's GAR requirement.

**3401**

**APPLICABILITY OF GREEN AREA RATIO STANDARDS**

3401.1 The requirements of this chapter shall become applicable October 1, 2013.

3401.2 Except as provided in § 3401.3 and pursuant to the conditions and requirements of this chapter, properties in zones listed in the following table shall provide a GAR as specified in the following table:

ZONE DISTRICT	GREEN AREA RATIO
R-5-A and R-5-B	0.40
R-5-C, R-5-D and R-5-E C-1, C-2-A, C-2-B and C-2-C W-1, W-2, W-3 SP-1, SP-2	0.30
C-3-A, C-3-B	0.25
C-3-C, C-4, C-5, CR and any property within the DDD overlay	0.20
CM-1, CM-2, CM-3 and M, <ul style="list-style-type: none"> <li>• all structures except one story warehouses</li> <li>• one story warehouses</li> </ul>	<ul style="list-style-type: none"> <li>• 0.30</li> <li>• 0.10</li> </ul>

3401.3 The GAR standards set forth in this chapter shall apply to all new buildings and to all existing buildings where any additions within any twelve (12) month period exceed one hundred percent (100%) of the assessed value of the building as set forth in the records of the Office of Tax and Revenue as of the date of the building permit application, except:

- (a) Buildings that do not require certificates of occupancy;

- (b) Municipal wastewater treatment facilities operated by the District of Columbia Water and Sewer Authority;
- (c) The interior renovation of an existing building that:
  - (1) Is located in the Central Employment Area;
  - (2) Has an existing 100% lot occupancy prior to the filing of the building permit;
  - (3) Has an existing roof that cannot support a dead load of four inches (4 in.) of growth medium on the roof; and
  - (4) The work proposed by the building permit application will not result in a roof capable of supporting a dead load of four inches (4 in.) of growth medium on the roof; or
- (d) A historic resource and any additions thereto subject to the provisions of § 3401.7.

3401.4 Notwithstanding §§ 3202.4 and 3401.2, the provisions of this chapter shall not apply to any application for a building permit:

- (a) That has been officially accepted by the Department of Consumer and Regulatory Affairs as being complete prior to October 1, 2013 if the building permit plans are consistent; or
- (b) Filed on or after October 1, 2013 if the building permit plans are consistent with:
  - (1) An unexpired approval of a first stage, second stage, or consolidated planned unit development, variance, special exception, design review under the CG or SEFC overlay, or concept design by the Historic Preservation Review Board or Commission of Fine Arts; provided the vote to approve occurred prior to October 1, 2013;
  - (2) An unexpired approval of a variance, special exception, or design review under the CG or SEFC overlay granted on or after October 1, 2013, for which a public hearing was held prior thereto;
  - (3) An unexpired approval of a first stage, second stage, or consolidated planned unit development that was granted after October 1, 2013, but which was set down for a public hearing prior thereto;

- (4) A Large Tract Review completed prior to July 1, 2012 subject to the following:
  - (A) The application shall be filed no later than July 1, 2014;
  - (B) The application shall be consistent with the conditions of the Large Tract Review;
  - (C) The building shall achieve a GAR of no less than 0.1; and
  - (D) This subparagraph shall expire on July 2, 2014.

3401.5 Any approved change or modification to a permit, project or application in § 3401.3 and 3401.4 that results in an increase in impervious surface or lot occupancy of twenty percent (20%) or more shall cause the GAR to be applicable for that portion of a project that is effected by the modification.

3401.6 In addition to meeting the applicable burden for obtaining further processing approval under a campus plan to construct or add to a building, the college or university applicant shall demonstrate the extent to which the building or addition meets the GAR standards. Further processing approval shall include the determination by the Commission that the proposed building is compliant with the intent of the GAR regulations.

3401.7 A historic resource and any additions thereto are exempt from the requirement of this chapter as a result of a change of use or an increase of intensity of use, except that this chapter shall be applicable when any addition results in an increase in the gross floor area of the historic resource by fifty percent (50%) or more. For the purposes of this chapter a “historical resource” is a building or structure listed in the District of Columbia Inventory of Historic Sites or a building or structure certified in writing by the State Historic Preservation Officer as contributing to the character of the historic district in which it is located.

3401.8 The cost basis for additions, alterations or repairs to an existing building shall be the amount indicated by the applicant on the application for a building permit.

**3402 CALCULATION OF GREEN AREA RATIO**

3402.1 The GAR shall be calculated using the following formula:

$$\text{GAR} = \frac{(\text{area of landscape element 1} \times \text{multiplier}) + (\text{area of landscape element 2} \times \text{multiplier}) + \dots}{\text{Lot Area}}$$

- 3402.2 For the purposes of the above formula and the remainder of this chapter:
- (a) The term “landscape element” refers to one of the elements listed in the table in § 3402.9, and will be hereafter referred to as “landscape element” or “element”;
  - (b) The term “multiplier” refers to the number listed in the Table in § 3402.9 that corresponds to a “landscape element”; and
  - (c) The “area of landscape element” shall be the square feet of a landscape element, unless the element is a tree or large shrub, in which case “area of landscape element” refers to the element’s equivalent square footage as indicated in § 3402.7.

3402.3 The process for calculating a property’s GAR under the formula is as follows:

- (a) The area of each landscape element is multiplied by its corresponding multiplier;
- (b) The resulting numbers for all landscape elements are added together;
- (c) The resulting point total is then divided by the total land area of the lot; and
- (d) The product of the equation equals the property’s GAR.

3402.4 The total points for all permeable paving and enhanced tree growth credits may not count for more than one-third (1/3) of the GAR score for a lot.

3402.5 If multiple landscape elements occupy the same area, for example groundcover under a tree or trees and shrubs on an intensive green roof, the full square footage or equivalent square footage of each element may be counted.

3402.6 A landscape element must meet the eligibility conditions of § 3403.

3402.7 Equivalent square feet of tree canopy and large shrubs are identified in the table below.

<b>GREEN AREA RATIO LANDSCAPE ELEMENTS</b>	<b>EQUIVALENT SQUARE FOOTAGE</b>
Plants, not including grasses, at least 2 feet tall at maturity	9 s.f. per plant
Tree canopy for trees 2.5 inches to 6 inches in diameter	50 s.f. per tree
Tree canopy for trees 6 inches to 12 inches in diameter	250 s.f. per tree
Tree canopy for trees 12 inches to 18 inches in diameter	600 s.f. per tree
Tree canopy for trees 18 inches to 24 inches in diameter	1300 s.f. per tree
Tree canopy for trees larger than 24 inches in diameter	2000 s.f. per tree

3402.8

Landscape elements of the GAR shall be measured in the following ways:

- (a) All trees shall be measured for diameter at a height four feet, six inches (4 ft. 6 in.) above grade when planted and the square footage equivalent based on diameter shall be as established in the table in § 3402.7;
- (b) For vegetated walls, use the vertical square footage of the portion of the wall covered by vegetation; and
- (c) For all other elements other than trees, large shrubs, perennials, and vegetated walls, square footage is determined by the area of a horizontal plane that is over the element.

3402.9

Eligible landscape elements are identified in the table below:

<b>GREEN AREA RATIO LANDSCAPE ELEMENTS</b>	<b>MULTIPLIER</b>
Landscape area (select one of the following for each area)	
Landscape areas with a soil depth of less than 24 inches	0.3
Landscape areas with a soil depth of 24 inches or more	0.6
Bioretention facilities	0.4
Plantings	
Ground covers, or other plants less than 2 feet tall at maturity	0.2
Plants , not including grasses, at least 2 feet tall at maturity	0.3
Tree canopy for all trees 2.5 inches to 6 inches in diameter	0.5
Tree canopy for new trees 6 inches in diameter or larger	0.6
Tree canopy for preservation of existing trees 6 inches to 24 inches in diameter	0.7
Tree canopy for preservation of existing trees 24 inches diameter or larger	0.8
Vegetated wall, plantings on a vertical surface	0.6
Vegetated roofs	
Extensive vegetated roof over at least 2 inches but less than 8 inches of growth medium	0.6
Intensive vegetated roof over at least 8 inches of growth medium	0.8
Permeable paving	
Permeable paving over at least 6 inches and less than 2 feet of soil or gravel	0.4
Permeable paving over at least 2 feet of soil or gravel	0.5
Other	

<b>GREEN AREA RATIO LANDSCAPE ELEMENTS</b>	<b>MULTIPLIER</b>
Enhanced tree growth systems	0.4
Renewable energy generation (area of)	0.5
Water features (using at least 50% recycled water)	0.2
Bonuses	
Native plant species listed in §3403.9	0.1
Landscaping in food cultivation	0.1
Harvested stormwater irrigation	0.1

**3403 LANDSCAPE ELEMENT CONDITIONS FOR GREEN AREA RATIO**

3403.1 No landscape element may be counted towards a property’s GAR unless it meets the applicable conditions stated in this section.

3403.2 Plantings over the specified soil depths shall meet the required conditions listed in the Table of Landscape Elements and Multipliers in § 3402.9.

3403.3 Bioretention facilities shall be landscaped areas that receive rainwater from surrounding areas and use plants and soils to slow, filter, and infiltrate stormwater runoff. *Bioretention facilities* include but are not limited to rain or rainwater gardens, bioretention planters, or linear cells or swales. These do not include structures made of cement or concrete alone.

3403.4 Trees shall meet the following conditions:

- (a) All trees shall be at least two and one-half inches (2.5 in.) in diameter measured at a height four feet, six inches (4 ft. 6 in.) above grade when planted and shall be replaced if damaged or killed by any cause; and
- (b) All trees shall meet the American Standard for Nursery stock, as set forth by the American Nursery and Landscape Association.

3403.5 Vegetated walls shall meet the following conditions:

- (a) The maximum calculated vertical dimension shall not exceed thirty feet (30 ft.) unless the vegetated wall features a built-in growth medium;
- (b) The area calculated for the vegetated wall features shall be fully covered within a period of two (2) to five (5) years from planting;
- (c) The area calculated is the ground coverage area, not the total plant growth area;
- (d) The walls shall be at least five feet (5 ft.) from a side or rear lot line; and

- (e) Where stormwater harvesting for irrigation is proposed, vegetated walls shall contain a connection to the proposed irrigation system.

3403.6 Vegetated roofs shall meet the following conditions:

- (a) Designs for vegetated roofs must include plans to provide supplemental water;
- (b) Where stormwater harvesting for irrigation is proposed, vegetated roofs shall contain a connection to the proposed irrigation system; and
- (c) The groundcover vegetation on a vegetated roof is not additionally eligible for groundcover value towards GAR requirements.

3403.7 Water features shall meet the following conditions:

- (a) Water features must use harvested rainwater for at least fifty percent (50%) of the annual flow; and
- (b) The water features must be under water for at least six (6) months out of twelve (12).

3403.8 Enhanced tree growth systems shall meet the following conditions:

- (a) Be at least twenty-four inches (24 in.) deep, under pavement, and adjacent to planting areas; and
- (b) Be composed of soils that are not considered contaminated or compacted according to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, approved December 11, 1980 (94 Stat. 2767; 42 USC § 9601 *et seq.*).

3403.9 Native plant species shall meet the following conditions:

- (a) The plants are listed in the U.S. Fish and Wildlife Service's Native Plants for Wildlife Conservation Landscaping: Chesapeake Bay Watershed guide; or
- (b) The applicant provides two (2) references in current publications showing that the plant is native to the region; and
- (c) The plant is not listed on the U.S. Fish and Wildlife Service's list of Plant Invaders of Mid-Atlantic Natural Areas.

3403.10 Food cultivation shall meet the following conditions:

- (a) All food cultivation areas must be easily accessible to at least one occupant of the building;

- (b) All food cultivation areas must have a source of water that can reach all portions of the food cultivation area; and
- (c) The cultivation of animals for food is not eligible for GAR credits.

3403.11 Harvesting stormwater for irrigation shall meet the following conditions:

- (a) If the irrigation type is spray, applicants shall follow treatment standards set forth in the current District Department of Environment’s Stormwater Management Guidebook; and
- (b) If the irrigation type is drip, no additional treatment of stormwater is required.

**3404 SUBMITTAL REQUIREMENTS FOR GREEN AREA RATIO**

3404.1 This section lists the submittal requirements for demonstrating compliance with a GAR requirement.

3404.2 For the purposes of this section, the term Certified Landscape Expert means a person who is a:

- (a) State of Virginia certified landscape architect;
- (b) State of Maryland certified landscape architect;
- (c) International Society of Arboriculture Certified Arborist;
- (d) State of Maryland certified Professional Horticulturist; or
- (e) Landscape Contractors Association MD-DC-VA Certified Landscape Technician;

3404.3 Applicants shall submit a GAR score sheet with the GAR calculated for the given lot at the time of building permit application.

3404.4 Applicants shall provide a landscape plan prepared by a Certified Landscape Expert that includes the following information:

- (a) GAR elements called out by category and area, which may be provided as a part of the landscape plan or as a separate document;
- (b) Lot dimension and size;
- (c) Location and areas of all landscape elements with dimensions;
- (d) Location, size, and species of all plants used to meet requirements;
- (e) Both common and botanical names of all plant material;



- (f) Identification of all existing trees that are to be preserved, with their location, trunk diameter at four feet, six inches (4 ft. 6 in.) above grade, canopy radius, and species;
- (g) Plans indicating how preserved trees and other plants will be protected during demolition and construction;
- (h) Location and dimensions of wheel stops, curbs, or other devices to protect landscaping for landscaped areas adjacent to driveways;
- (i) A schematic irrigation and drainage plan and the size and depth of all plant containers for rooftop or container landscaping or areas to be irrigated with rainwater;
- (j) Location and size of any trees to be removed;
- (k) Specifications for soil improvement; and
- (l) Signature of the Certified Landscape Expert who prepared the plans together with verification that plantings and other landscape elements meet the requirements of this chapter.

3404.5 Applicants shall provide a landscape maintenance plan prepared and signed by a Certified Landscape Expert that describes how the plantings, water features and hardscape features will be cared for and maintained including:

- (a) Soil preparation;
- (b) Use of compost;
- (c) Plant replacement;
- (d) Irrigation;
- (e) Weed and pest control; and
- (f) Control of noxious or invasive species.

3404.6 The following modifications or substitutions to the landscape elements of an approved landscape plan require a plan revision and approval:

- (a) Number of trees, shrubs, or groundcovers;
- (b) Location of required plantings or landscape features;
- (c) Substitution of species; or
- (d) Revisions of any feature that could decrease the planting area or lower the GAR score.

- 3404.7 Except as provided below, approved landscape elements shall be installed in accordance with the approved plan prior to the issuance of the certificate of occupancy.
- 3404.8 Prior to the issuance of the certificate of occupancy, a landscape checklist must be signed by a Certified Landscape Expert, verifying that that landscaping was installed according to the building permit approved by DCRA.
- 3404.9 The Zoning Administrator may grant a temporary certificate of occupancy when installation of the required landscaping is not currently possible due to weather, season or site construction subject to the condition that the required landscaping must be installed within four (4) months after the date the temporary certificate is issued.
- 3404.10 The Zoning Administrator may grant up to two (2) extensions of a temporary certificate of occupancy, each for a four (4) month period based on the same conditions of § 3404.9.

### **3405 SPECIAL EXCEPTIONS FOR GREEN AREA RATIO**

- 3405.1 The Board of Zoning Adjustment may grant, by special exception, a full or partial reduction in the GAR required under this chapter if, in addition to meeting the general requirements of § 3104, the applicant demonstrates that providing the GAR is impractical as a result of equivalent sustainability measures already being implemented on the property that achieve the intent of the GAR through methods not available through the GAR requirement.

### **3406 MAINTENANCE REQUIREMENTS FOR GREEN AREA RATIO**

- 3406.1 All plantings and landscape elements used to calculate a property's GAR must be maintained for the life of the project. If, for any reason, the installed landscape elements fall below the minimum required GAR score, new eligible landscape elements shall be added to compensate and result in the required ratio. These elements are not required to be the same as the submitted plans, so long as the GAR achieved is equivalent.

On December 10, 2012, upon the motion of Commissioner Miller, as seconded by Commissioner Turnbull, the Zoning Commission **PROPOSED** the amendments at its public meeting by a vote of **5-0-0** (Anthony J. Hood, Robert E. Miller, Peter G. May, and Michael G. Turnbull to propose; Marcie I. Cohen to propose by absentee ballot).

On June 24, 2013, upon the motion of Vice Chairman Cohen, as seconded by Commissioner Turnbull, the Zoning Commission **ADOPTED** the amendments as proposed at its public meeting by a vote of **5-0-0** (Anthony J. Hood, Marcie I. Cohen, Robert E. Miller, Peter G. May, and Michael G. Turnbull to adopt).

In accordance with the provisions of 11 DCMR § 3028.9, this Order shall become effective upon publication in the *D.C. Register*; that is on July 12, 2013.