

GOVERNMENT OF THE DISTRICT OF COLUMBIA

District Department of the Environment



**MEMORANDUM**

**TO:** District of Columbia Stakeholders

**FROM:** Hamid Karimi   
Deputy Director, Natural Resources Administration

**DATE:** March 3, 2015

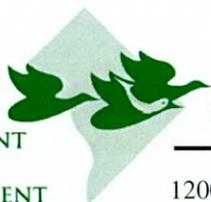
**SUBJECT:** Errata for the Preliminary Draft Green Area Ratio Guidebook

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Attached are clarifications of issues that stakeholders or the District Department of the Environment have noted in the Preliminary Draft Green Area Ratio (GAR) Guidebook. The Preliminary Draft GAR Guidebook provides technical guidance on compliance with the GAR regulation, which was published in the *D.C. Register* on July 12, 2013. The Preliminary Draft GAR Guidebook is maintained on the DDOE webpage, <http://ddoe.dc.gov/gar>.

Entries are organized by the page number where the original text is located in the Preliminary Draft GAR Guidebook and include an explanation of the reason for the change and the date of publication to this document. Each entry is designated as an omission or an edit. An omission (denoted as O) publishes clarifying information that was inadvertently excluded from the original document. An edit (denoted as E) is a substitution or deletion to clarify original intent or improve consistency. Excerpted text is shown in green. Changes are shown as strikethroughs and underlines.

DDOE will update these errata as issues surface that require clarification and post the updated version at [ddoe.dc.gov/gar](http://ddoe.dc.gov/gar). DDOE anticipates posting the updated Green Area Ratio GAR Guidebook in the *D.C. Register* for public comment after final action is taken upon the Zoning Regulations Review.





# **Errata for the Preliminary Draft Green Area Ratio Guidebook**

**District Department of the Environment**

**March 3, 2015**



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## Errata

Entries are organized by the page number where the original text is located in the Preliminary Draft Green Area Ratio Guidebook that is currently posted on DDOE’s website at <http://ddoe.dc.gov/gar>.

Each entry includes an explanation of the reason for the change and the date of publication to this document. Each entry is designated as an omission or an edit. An omission (denoted as O) publishes clarifying information that was inadvertently excluded from the original document. An edit (denoted as E) is a substitution or deletion to clarify original intent or improve consistency.

Description of Change	Page	Date Published	Type				
<b>5.2 BIORETENTION</b>							
<p>► <b>CALCULATING THE SCORE</b>                      Square footage is determined by measuring the extents of bioretention <del>soil area, including the pretreatment area where applicable.</del> <u>filter bed and pretreatment area. Do not include side slopes in area calculation.</u> ◀</p> <table border="1" data-bbox="323 917 1062 1101"> <thead> <tr> <th data-bbox="323 917 636 1008">GAR Landscape Elements</th> <th data-bbox="636 917 1062 1008">Multiplier</th> </tr> </thead> <tbody> <tr> <td data-bbox="323 1008 636 1101">Bioretention facilities</td> <td data-bbox="636 1008 1062 1101">0.4</td> </tr> </tbody> </table> <p>To clarify the extent of credited bioretention area, remove the text “soil area, including the pretreatment area where applicable” and replace with “filter bed and pretreatment area. Do not include side slopes in area calculation.”</p>	GAR Landscape Elements	Multiplier	Bioretention facilities	0.4	35	03/03/2015	E
GAR Landscape Elements	Multiplier						
Bioretention facilities	0.4						

Description of Change	Page	Date Published	Type
<b>5.4 TREE PRESERVATION</b>			
<p>▶ PLAN SUBMITTAL</p> <p>In addition to complying with the design standards, submitted GAR plans shall include the following:</p> <ul style="list-style-type: none"> <li>▪ Submit a tree survey for all trees to be preserved, including: location, species, trunk DBH, estimated canopy radius (or critical root zone). It is recommended this work be done by a certified arborist or MD or VA licensed landscape architect with related experience, to properly assess the condition of the tree and critical root zone</li> <li>▪ Prepare a tree preservation plan for all phases of construction activity. The tree preservation plan should be prepared and signed by a certified arborist or qualified MD or VA licensed landscape architect.</li> <li>▪ <u>Provide civil site plans (demolition, grading, utilities, layout) illustrating extent of site work.</u> ◀</li> </ul> <p>To determine the appropriateness of tree preservation measures in relation to proposed construction, add the following text to the bulleted list: “Provide civil site plans (demolition, grading, utilities, layout) illustrating extent of site work.”</p>	49– 50	03/03/2015	O

Description of Change	Page	Date Published	Type
<b>5.6 VEGETATED ROOFS</b>			
<p>▶ <b>CALCULATING THE SCORE</b></p> <ul style="list-style-type: none"> <li>▪ Vegetated roofs are calculated by first determining the square footage of vegetated surface area. The vegetated roofs’ landscape features are divided into two categories, extensive and intensive.</li> <li>▪ Each category, listed below, is assigned a multiplier. An intensive vegetated roof is assigned a larger value than an extensive roof due to the increased depth and associated environmental benefits (e.g., greater stormwater retention, greater plant diversity, higher rate of evapotranspiration).</li> <li>▪ Groundcover plants less than 2-foot height on the green roof are ineligible for additional credit beyond the green roof landscape element. Plants greater than 2-foot height will provide additional credit if adequate soil media depth is provided to specified plantings.</li> <li>▪ <u>To calculate credited depth, the drainage layer may be credited in addition to the growth medium. Growth medium must be a minimum 2-inch depth.</u> ◀</li> </ul> <p>The drainage/reservoir layer contributes to plant evapotranspiration and stormwater detention. Therefore, add the following text to the bulleted list: “To calculate credited depth, the drainage layer may be credited in addition to the growth medium. Growth medium must be a minimum 2-inch depth.”</p>	59	03/03/2015	E
<p>▶ <b>PLAN SUBMITTAL</b></p> <p>In addition to complying with the design standards, submitted GAR plans shall include the following:</p> <ul style="list-style-type: none"> <li>▪ Dimensions of soil media, showing area and depth</li> <li>▪ Plant species, size, and location</li> <li>▪ Source and location of supplemental water to vegetated roof</li> <li>▪ <u>Detail illustrating the depth of growth medium and drainage layer; specify drainage layer material.</u></li> </ul> <p>◀</p> <p>To illustrate the depth requirement, add the following text to the bulleted list: “Detail illustrating the depth of growth medium and drainage layer; specify drainage layer material.”</p>	60	03/03/2015	O

Description of Change	Page	Date Published	Type
<b>5.7 PERMEABLE PAVING</b>			
<p>► DESIGN</p> <ul style="list-style-type: none"> <li>▪ Examples of acceptable practices include: porous asphalt, porous concrete, porous pavers, vegetated permeable pavement, or other proprietary practices.</li> <li>▪ Vegetated permeable paving should only be used in low-traffic situation, such as temporary overflow parking. Do not specify vegetated permeable paving for areas with high traffic, as turfgrass will perform poorly.</li> <li>▪ <u>Permeable pavement over structures (example: rooftop, parking deck) require controlled flow drains. If the flow path of stormwater from permeable pavement to drain travels through a vegetated roof, then controlled-flow roof drains are not required.</u> ◀</li> </ul> <p>To provide design parameters for permeable pavement over structure, add the following text to the bulleted list: “Permeable pavement over structures (example: rooftop, parking deck) require controlled flow drains. If the flow path of stormwater from permeable pavement to drain travels through a vegetated roof, then controlled-flow roof drains are not required.”</p>	63	03/03/2015	O
<p>► PLAN SUBMITTAL</p> <p>In addition to complying with the design standards, submitted GAR plans shall include the following:</p> <ul style="list-style-type: none"> <li>▪ Plan and details, with dimensions, showing depth, area, and type of permeable paving</li> <li>▪ <u>Detail illustrating the permeable pavement profile with pavement type, as well as reservoir depth and material type. For permeable pavements over structure, additionally provide a schematic plan illustrating flow path of stormwater with location and type of controlled-flow roof drains.</u> ◀</li> </ul> <p>To illustrate the depth requirement, add the following text to the bulleted list: “Detail illustrating the permeable pavement profile with pavement type, as well as reservoir depth and material type. For permeable pavements over structure, additionally provide a schematic plan illustrating flow path of stormwater with location and type of controlled-flow roof drains.”</p>	64	03/03/2015	O

Description of Change	Page	Date Published	Type				
<b>5.11 NATIVE PLANTS</b>							
<p>CALCULATING THE SCORE</p> <p>►</p> <p>The cumulative square footage is then computed against the 0.1 multiplier.</p> <table border="1" data-bbox="323 462 1066 683"> <thead> <tr> <th data-bbox="323 462 701 553">GAR Landscape Elements</th> <th data-bbox="701 462 1066 553">Multiplier</th> </tr> </thead> <tbody> <tr> <td data-bbox="323 553 701 683">Native plant species listed in §3403.9 (Bonus credit)</td> <td data-bbox="701 553 1066 683">0.1</td> </tr> </tbody> </table> <p><u>For example, the native bonus for 1000 ft<sup>2</sup> groundcover, 20 shrubs, 5 trees (3-inch cal.), and 1 preserved tree (13-inch DBH) would be as follows: [(1000 ft<sup>2</sup>) + (20 shrubs × 9 ft<sup>2</sup>) + (5 trees × 50 ft<sup>2</sup>) + (1 preserved tree × 600 ft<sup>2</sup>)] = 2030 ft<sup>2</sup> entered into Scoresheet. The native bonus would be (2030 ft<sup>2</sup>) × (0.1 multiplier) = 203 ft<sup>2</sup> bonus.</u> ◀</p> <p>To clarify calculation of the native plant bonus, add the paragraph, “For example, the native bonus for 1000 ft<sup>2</sup> groundcover, 20 shrubs, 5 trees (3-inch cal.), and 1 preserved tree (13-inch DBH) would be as follows: [(1000 ft<sup>2</sup>) + (20 shrubs × 9 ft<sup>2</sup>) + (5 trees × 50 ft<sup>2</sup>) + (1 preserved tree × 600 ft<sup>2</sup>)] = 2030 ft<sup>2</sup> entered into Scoresheet. The native bonus would be (2030 ft<sup>2</sup>) × (0.1 multiplier) = 203 ft<sup>2</sup> bonus.”</p>	GAR Landscape Elements	Multiplier	Native plant species listed in §3403.9 (Bonus credit)	0.1	81	03/03/2015	O
GAR Landscape Elements	Multiplier						
Native plant species listed in §3403.9 (Bonus credit)	0.1						