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[www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor)

## **BACKGROUND AND PURPOSE**

This rule provides information about the City's landscape requirements, including Green Factor. It supplements and interprets landscape requirements in the Land Use Code (SMC Title 23), State Environmental Policy Act (SEPA) regulations (SMC Chapter 25.05), Environmentally Critical Areas (SMC Chapter 25.09) and Tree Protection Code (SMC Chapter 25.11). In the event of a conflict between the requirements of the Seattle Municipal Code (including the Shoreline Master Program, Stormwater Code, Land Use Code, and ECA requirements) and this rule, the code requirements prevail.

Landscape improvements accomplish urban design goals: mitigating visual impacts of a development project, buffering incompatible uses, providing screening and privacy, reducing headlight glare, and creating a pleasant urban environment. They also provide environmental benefits, reducing stormwater runoff, improving air and water quality, decreasing the urban heat island effect, improving energy efficiency, and providing wildlife habitat.

## **RULE**

### **A. GENERAL STANDARDS**

#### **1. Soil quality, depth, and volume**

All new planting areas or areas disturbed during construction must be amended following the standards in the Seattle Stormwater Manual. Applicants must include the relevant provisions in construction details, including:

- In planting beds: place 3 inches of compost and till to a depth of 8 inches.
- In turf areas: place 1.75 inches of compost and till in to an 8 inch depth.
- Scarify (loosen) subsoil 4 inches below amended layer to produce a 12-inch depth of un-compacted soil.
- After planting: apply 2 to 4 inches of arborist wood chip mulch to planting beds. Coarse bark mulch may be used but has fewer benefits to plants and soil. Do not use fine bark because it can seal the soil surface.

For more detail, see Section 5.1 of DPD Director's Rule 21-2015.

#### **2. Plant selection**

Plants shall be selected and sited to ensure compatibility with site conditions. Plant selection shall also take into account the specific purposes of the plantings in their particular locations (e.g., visual screening vs. physical buffering of incompatible uses etc.). Plants identified by King County as "noxious weeds" or "weeds of concern" (including English ivy), are prohibited for new plantings, and must be controlled in the process of installing and maintaining required landscaping (lists are available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor)).

#### **3. Preservation**

In most cases, preserving existing healthy vegetation on a site will count toward landscaping requirements. In the case of Green Factor, preserving trees will count for more credit than newly planted trees. When an applicant proposes to preserve vegetation, they must include specific protection notes and/or details on contract plans to ensure compliance during construction to make sure those plants are adequately protected.

- a. *Preserving Trees.* Trees preserved under city regulations shall be protected during

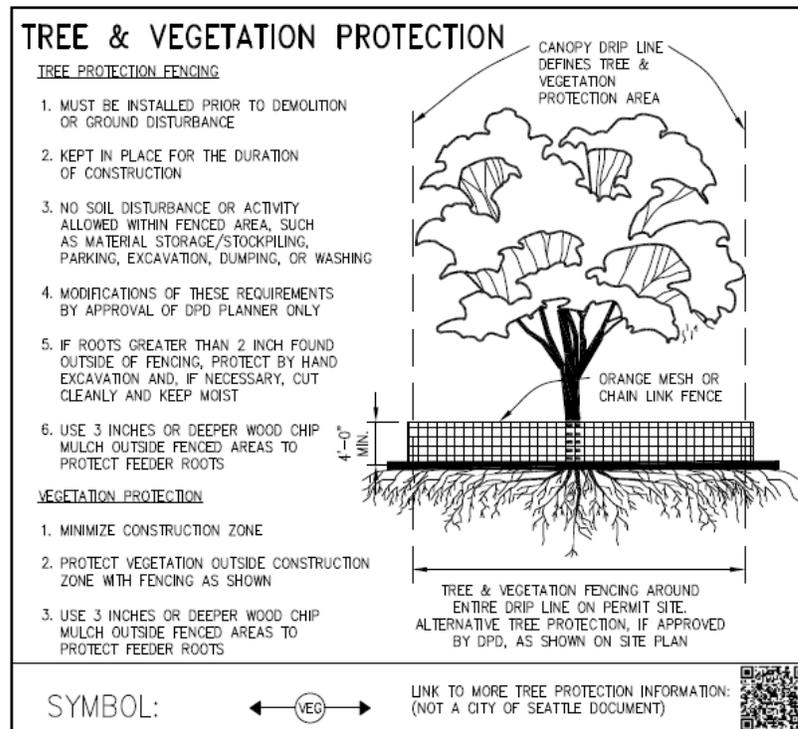
construction. A tree protection area must be established around each preserved tree, pursuant to City of Seattle Stormwater Control Plan standards, and shall be identified on site plans.

The tree protection area shall be established at the drip line of the tree (i.e. the outer extent of the branches), except that the protection area may be reduced if approved by the Director according to a plan prepared by a tree care professional who has field reviewed the site and assessed the tree's size, location, and condition, and determined that the encroachment into the drip line will not adversely impact the survival or stability of the tree.

No excavation, fill, material or equipment storage, or vehicle operation is allowed within the tree protection area during construction. The protection area shall be enclosed in fencing at least 4 feet tall. The fencing shall be made of chain link or orange polyethylene laminar safety netting attached to metal stakes, unless an alternate option is submitted and approved for use. Signs shall be posted on the fence and maintained in place until approved for removal. These shall be at least 8.5 inches by 14 inches in size, explaining the purpose of the fencing and the restrictions on activity within the fencing. A sample sign is available at [link]. In addition, the Director may establish conditions for protecting the tree during construction outside the tree protection area to protect feeder roots.

For the purpose of this rule, tree care professional shall have a minimum of 3 years experience in tree evaluation and the protection of trees during construction and be either an American Society of Consulting Arborists (ASCA) registered consulting arborist or an International Society of Arborists (ISA) certified arborist.

**Figure 1: Detail from City of Seattle Construction Stormwater Control Plan**



- b. *Preserving other vegetation.* If an applicant counts existing shrubs, perennials, or groundcovers toward meeting code requirements, those landscaped areas must be protected during construction. Fencing and signage requirements are the same as those for tree

protection (above), except that the protection area may not be any smaller than the drip line of affected shrubs and perennials.

#### 4. New trees

- b. *Size Categories.* For purposes of determining the size category of a tree species, the tree must have a mature height of at least 15 feet for small trees, 25 feet for medium/small trees, 30 feet for medium/large trees and 40 feet for large trees. A list of suggested tree species is available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor).
- c. *Size at the time of installation.* On private property, deciduous trees with one trunk must be at least 1.5 inches in diameter, measured 6 inches above the ground; multi-stemmed deciduous trees must have at least 3 stems and be at least 6 feet tall; and evergreen trees must be at least 4 feet in height. Because street trees face more difficult growing conditions, SDOT requires larger trees at time of installation: in the right-of-way, deciduous trees with one trunk must be 2 to 2.5 inches in caliper, measured 6 inches above the ground. The Urban Forestry division of SDOT requires that they inspect and approve street trees before planting.
- e. *Identification.* The species identification nursery tag shall remain on at least two trees per species until the final Certificate of Occupancy has been issued. After issuance, the owner must remove the tags to prevent damage to the trees.
- f. *Spacing.* Trees on private property shall be planted according to the following minimum spacing: 8 feet between small trees, 11 feet between small/medium trees, 14 feet between medium/large trees, and 18 feet between large trees. Trees in the right of way shall be spaced according to the standards of SDOT.

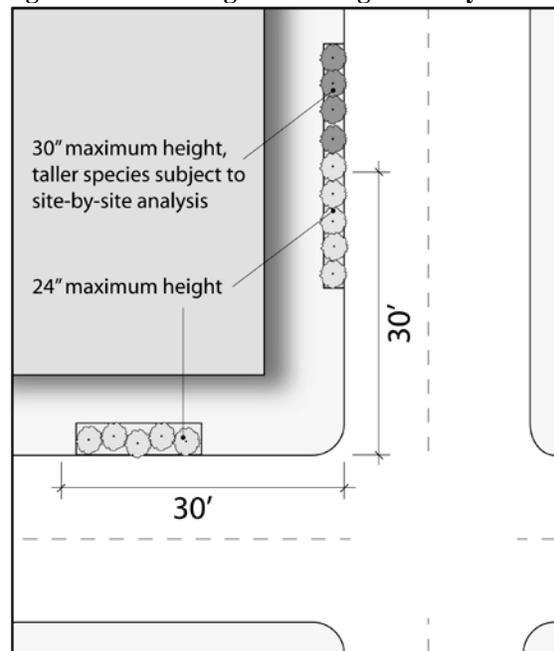
#### 5. Shrubs and large perennials

Shrubs used to meet screening standards must be evergreen and at least 30 inches high when planted. All other required shrubs must be at least 9 inches high when planted. Shrubs shall be spaced at least 18 inches apart.

SDOT limits the height of shrubs in rights-of-way. Within 30 feet of an intersection (measured from the edge of the curb at the street corner), plants must have a mature height of 2 feet or less (Figure 2). For areas more than 30 feet from an intersection, shrubs with a mature height of 30 inches tall are allowed. Taller species may also be allowed but are subject to approval on a site-by-site basis to ensure sight distance, pedestrian safety, and accessibility. For many species, pruning is required to comply with these standards – note in the Landscape Management Plan if applicable (see subsection E.6 of this rule).

To earn credits as large perennials under Green Factor scoring (credit B.2 on the Green Factor score sheet), plant selections must have a mature height of at least 2 feet and either be evergreen or have year-round structure. Otherwise, they are

Figure 2: Shrub height in the right-of-way



counted as groundcovers (credit B.1).

## **6. Ground covers**

Ground covers are low, spreading plants typically less than 12 inches in height. In the Green Factor, areas covered with perennials or shrubs less than 2 feet in height are awarded the same credit as areas covered with ground cover.

In order to accomplish complete coverage of bare soil by ground cover within three years, spacing of ground cover plants shall be as follows: plants transplanted from 4-inch containers shall be spaced no more than 12 inches apart on center, and plants transplanted from 1-gallon containers shall be spaced no more than 24 inches apart on center. Different spacing of particular species to accomplish complete coverage within three years is acceptable if documentation is submitted by a landscape professional, as defined in subsection E.1 of this rule.

## **7. Mulch**

Mulch is encouraged in all planting areas to suppress weeds, conserve water, and improve soil health. Mulch counts for credit on the Green Factor score sheet, provided that it is coarse, maintained at a depth of 2 to 4 inches, and covers the soil below shrubs and trees with appropriate spacing.

## **8. Landscape elements in the right-of-way**

Installation, pruning, or removal of any landscape element in the right-of-way, including street trees, requires a Seattle Department of Transportation (SDOT) permit and must adhere to SDOT's Right-of-Way Improvement Manual. In the event of a conflict between SDOT requirements and this rule, the SDOT requirements prevail. SDOT approval is required for landscape elements in the right-of-way to meet the Green Factor; if SDOT does not approve right-of-way landscape elements, Green Factor credits must be obtained through other means. SDOT requires the preservation and protection of existing trees in the street right-of-way unless otherwise permitted based on inspection and approval (see CAM 2306 at [www.seattle.gov/transportation/stuse\\_docs.htm](http://www.seattle.gov/transportation/stuse_docs.htm)).

## **9. Drought tolerance**

In required landscape areas, at least 25% of all plantings must be drought-tolerant. This requirement can be calculated across an entire lot; rather than applying to each landscape area separately. Drought-tolerant plants are species that can thrive without supplemental watering after establishment. A list of drought-tolerant plants is available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor). Other drought-tolerant plants can be used, provided that the applicant provides two references showing that the plant is both drought-tolerant and appropriate for Seattle's climate.

Drought-tolerant plants must be separated from non-drought-tolerant plants by setting them at least two feet apart, using a physical barrier, or separating the irrigation system's grouping and circuiting. DPD's Director has the authority to reduce the requirement for use of drought-tolerant plants when a site is unsuitable to support drought-tolerant vegetation, such as a poorly drained or marshy site, upon documentation from the applicant of the site conditions. Establishment of all plants, including drought-tolerant species, requires supplemental water for at least two growing seasons.

## **10. Container plantings**

Any planting above an impervious material, such as a pot, roof or concrete floor, that will not be counted as a green roof under Section B is considered a container planting. Container plantings may count toward Green Factor scoring if they provide adequate room for the selected plant species. For shrubs, ground covers, or perennials, this means a minimum of 12-inch soil depth. Trees in containers must have a minimum of 30-inch soil depth and a minimum soil volume as follows:

**Minimum soil volume for trees**

| <b>Tree size category<sup>1</sup></b>  | <b>Planting area soil volume<sup>2</sup></b> | <b>Example dimensions at 30-inch depth<sup>3</sup></b> |
|--|--|--|
| Small trees  | 110 cu ft                                    | 5' x 9'  |
| Small/med trees  | 225 cu ft                                    | 5' x 18'   |
| Med/large trees  | 375 cu ft                                    | 6' x 25'   |
| Large trees  | 525 cu ft                                    | 7' x 30'   |
| 1) Tree size categories are explained in greater detail in Section A of this rule.<br>2) Note that these are minimum soil volume requirements. Trees will be healthier, bigger, and longer-lived with greater soil volume.<br>3) Assumes 30-inch soil depth. Smaller surface areas can achieve the same volume with greater depth, or if adjacent paved surfaces are installed over structural soil or similar technologies. |  |  |

Applicants should be aware of the special design issues involved with planting in containers or over structures: structural weight, drainage, soil mix, irrigation and maintenance, and appropriate plant selection. Irrigation and drainage are required for all container plantings.

**11. Driveways and parking areas**

Trees and plants bordering driveways and parking areas shall be protected from vehicles by wheel stops, curbs or similar devices, which shall be shown on the landscape and site plans. Where grading allows, curbs should include openings to allow runoff to flow into planting areas.

**12. Clearance and access for maintenance**

Clearance shall be provided so that plants have access to sufficient space and light, taking into account foreseeable changes on adjacent lots. All landscape improvements must be designed to allow access for the owner or owner’s agent to perform the maintenance specified in the Landscape Management Plan (see Section E.6 of this rule).

**B. STANDARDS FOR GREEN FACTOR ELEMENTS**

The Green Factor establishes a weighted menu of landscape elements, and requires project proposals to meet a minimum score by selecting features from that menu. Landscape features provided to meet other requirements (including Land Use Code, Stormwater Code, and environmental mitigation requirements) can count toward meeting Green Factor. A Green Factor score sheet and other tools are available for download at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor) (see Attachments B and C). Green Factor scoring encourages layers of vegetation; plants within each planting area earn credits in addition to the planting area itself, so perennials, shrubs, and trees in a planting bed will achieve a higher score than would perennials alone.

The following subsections provide standards for landscape elements particular to the Green Factor.

- a. *Bioretention facilities.* Bioretention facilities use soils and plantings to manage stormwater runoff. They can have either sloped sides (e.g., an earthen depression) or vertical sides of concrete or stone. Stormwater will pond at the surface before it filters through the underlying soil. Most water infiltrates into the underlying soil or, in places with lower infiltration rates, is collected by an underdrain and discharged to the drainage system. Stormwater that exceeds the surface storage capacity overflows to a connected drainage system.

The Green Factor credit for bioretention facilities applies to any areas that meet Stormwater

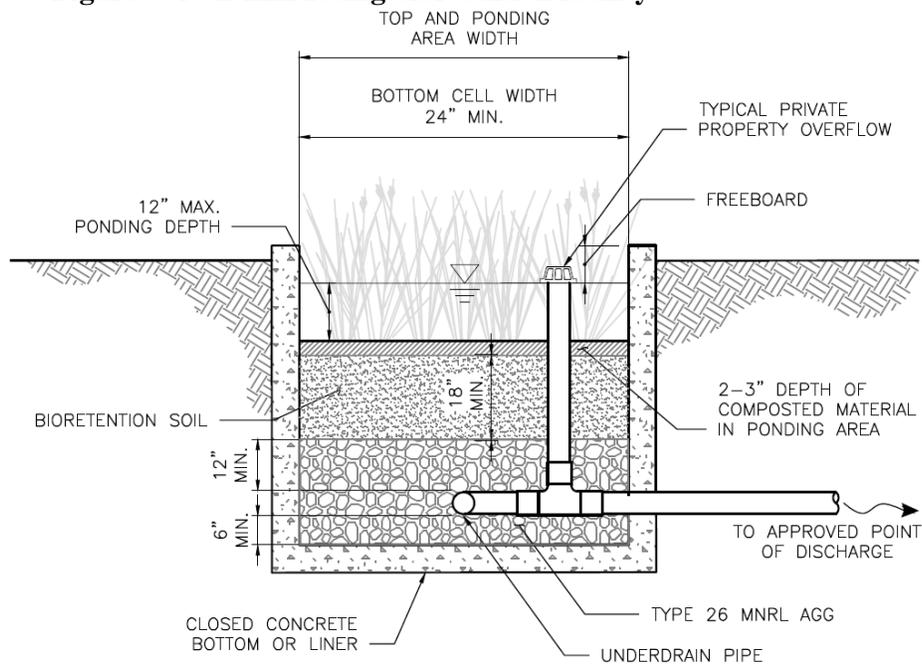
Manual standards for either infiltrating or non-infiltrating bioretention facilities. Bioretention facilities are considered non-infiltrating if they include a liner or other impermeable barrier preventing infiltration to the underlying soil (e.g., a vertical-walled impermeable container, commonly called a bioretention planter) (see Figure 3).

Green Factor applicants receive credit for the total area of all bioretention facilities meeting standards of Seattle's Stormwater Manual (Sections 5.4 and 5.8.2 of DPD Director's Rule 21-2015). Bioretention facilities in the right-of-way must also meet the standards of the Right-of-Way Improvement Manual ([www.seattle.gov/transportation/rowmanual](http://www.seattle.gov/transportation/rowmanual)).

Note that bioretention facilities and some other Green Factor credits also count toward meeting stormwater requirements, provided that they are consistent with SMC 22.800-22.808 and associated Director's Rules. While calculations under the Stormwater Code only provide drainage credit for the bottom area of bioretention facilities, the entire area (sides and bottom) count for Green Factor credit.

Use care when specifying trees for bioretention facilities; not all trees will be healthy in the wet portions. Any trees in a bioretention area must be consistent with the guidance in the City of Seattle Stormwater Manual, Appendix E ([www.seattle.gov/dpd/codesrules/codes/stormwater](http://www.seattle.gov/dpd/codesrules/codes/stormwater)).

**Figure 3: Non-infiltrating bioretention facility**



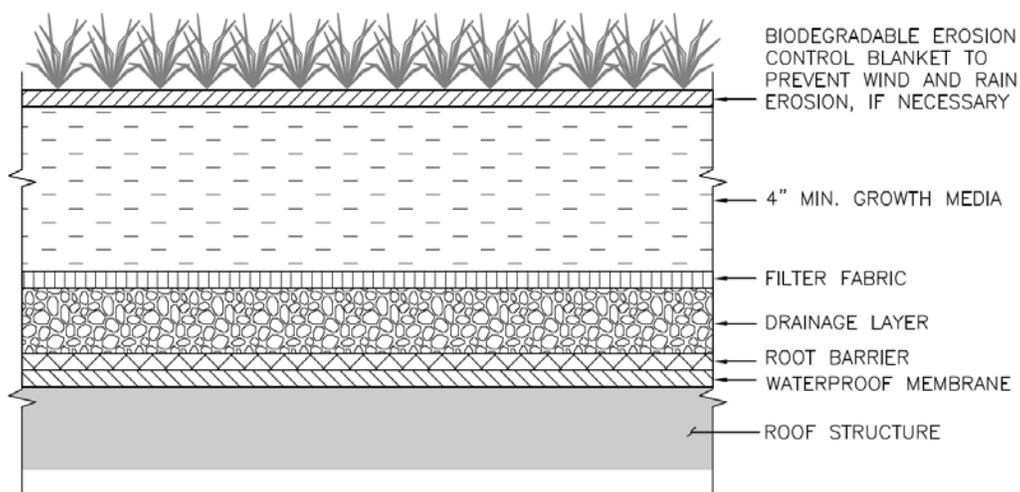
*Illustration from the City of Seattle Stormwater Manual*

- b. **Green roofs.** Green roofs (or “vegetated roofs”) are plantings on top of a structure at least 10 feet above grade with at least 2 inches of soil, including extensive green roof systems and rooftop gardens (Figure 4). Designs must include plans to provide supplemental water for a minimum of two growing seasons, and green roof specifications must be approved by a licensed architect or landscape architect. Assuming that green roofs are planted with drought-tolerant plants, they are eligible for the drought-tolerance bonus credit.

Green roofs with 2-4 inches of growth medium are eligible for Green Factor credit C.1, but do not count toward meeting stormwater requirements. Green roofs with at least 4 inches of growth medium and meeting the standards of the Stormwater Manual are eligible for both Green Factor and stormwater credit. For plantings that meet the standards in Section A.10 of this rule, applicants may choose to treat them as container plantings rather than as a green roof.

Since low-growing vegetation is an integral part of a functioning green roof, it has already been factored into credits C.1 and C.2 on the Green Factor score sheet. Green roof vegetation is not eligible for groundcover credits, but taller rooftop vegetation (shrubs and trees) may be counted.

**Figure 4: Green roof design detail**



*Illustration from the City of Seattle Stormwater Manual.*

- c. *Vegetated walls.* Vegetated walls are vertical surfaces covered by plants. Vegetated walls include walls or screens with climbing vines, trailing plants, espaliered trees, or modular “green wall” planting systems. For Green Factor credit, measure the height and width of area to be covered by vegetation within five years. Maximum calculated vertical dimension must not exceed 30 feet unless the vegetated wall features built-in growth medium and irrigation. Plantings must not encroach within City Light safety setbacks (see TIP 122 for details at <http://web1.seattle.gov/DPD/CAMs/CamList.aspx>).

To establish successfully, vegetated walls need soil and light. They are only eligible for credit where they are 5 or more feet from adjacent, facing structures. When side or rear lot lines abut zero-lot-line parcels with unused development potential, vegetated walls facing the neighboring property may not be closer than 5 feet to the property line. This setback does not apply to lot lines abutting streets, alleys, or lots with structures already extending to the minimum setback line. Additionally, vines growing on trellises or walls must have at least a one-foot-wide planting strip at the base or top of the wall for rooting area and drainage.

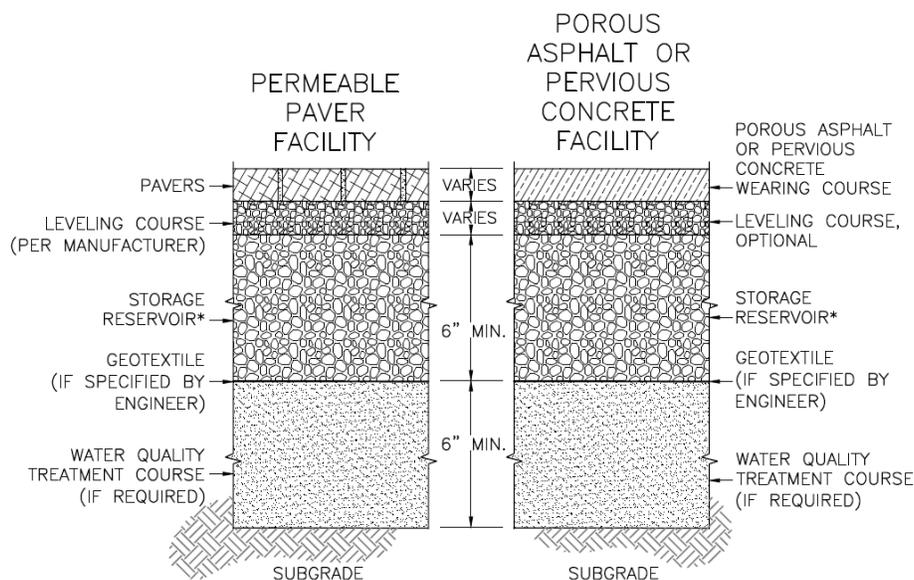
- d. *Water features.* Water features include fountains, pools, or other constructed water amenities. To qualify for Green Factor credit, water features must use harvested rainwater for at least 50% of the annual flow, and must recirculate water to reduce water use and guard against

breeding of mosquitoes. This can be demonstrated by drainage or plumbing documents indicating that rainwater is a major source of water for the water feature. To achieve Green Factor credit, the applicant is only allowed to calculate those areas of the feature that are under water at least six months of the year.

- e. *Permeable pavement.* Permeable pavement allows water to pass through voids in the paving material or between pavers while providing a stable, load-bearing surface (Figure 5). Porous asphalt and pervious concrete allow water infiltration. Permeable interlocking concrete pavers can also be used if they are installed with gaps between them to allow stormwater to infiltrate into the subsurface. Green Factor applicants receive credit for the total area of all permeable pavement meeting standards of the City of Seattle Stormwater Manual (Volume III, Sections 5.4.6 and 5.6.2 - [www.seattle.gov/dpd/codesrules/codes/stormwater](http://www.seattle.gov/dpd/codesrules/codes/stormwater)). Paving covered by structure does not qualify for this credit, unless runoff is directed there from uncovered areas. Permeable pavement in the right-of-way requires an SDOT permit.

Grass pavers are not eligible for permeable paving credit but are eligible for ground cover credit if used in areas with low traffic volume, such as fire lanes or event parking. Grass pavers cannot be counted for credit in any area used to meet parking requirements or with anticipated traffic or parking more than 20% of the time within a given week.

**Figure 5: Permeable pavement design detail**



\* STORAGE RESERVOIR MUST BE LAID PARTIALLY OR COMPLETELY BELOW SURROUNDING FINISH GRADE.

**NOTE**

1. OVERFLOW AND LATERAL SUBSURFACE IMPERMEABLE BERMS NOT SHOWN.

*Illustration from the City of Seattle Stormwater Manual.*

- f. *Structural soil systems.* Structural soil systems, including CU-Structural Soil, Silva Cells, and their performance equivalents, support pavement while avoiding subsurface compaction, allowing air and water infiltration and contributing to larger, healthier plants. For Green Factor credit, these systems must be at least 24 inches deep, under pavement, and adjacent to planting areas. Credit is calculated by the square footage of the system's footprint. Structural soil systems in the right-of-way must be approved by SDOT. In accordance with SMC

23.86.019, permeable paving and structural soil together cannot add up to more than one third of a site's Green Factor score.

### **C. STANDARDS FOR GREEN FACTOR BONUSES**

Any landscape feature that has claimed credit under the regular Green Factor categories can also count for one or more bonus credits if it meets the criteria below. Bonus credits can apply to all landscaping, including elements provided in the right-of-way.

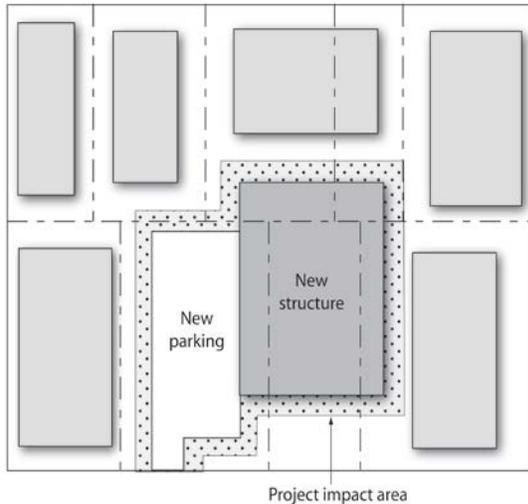
- a. *Drought-tolerant or native plant species.* To receive bonus credit for this category, plants must be either drought-tolerant meeting the criteria established in A.9, or native to the Pacific Northwest. Native plants range from ground covers (beach strawberry, kinnikinnik, etc.) to trees (Douglas fir, hemlock, etc.). A plant list including drought-tolerant and native species is available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor). Other plants may be eligible for this credit if the applicant provides two references showing that the plant is drought-tolerant or native. Square footage for this credit is calculated as the area covered by drought-tolerant/native ground covers plus the equivalent square footage of drought-tolerant/native shrubs and trees as calculated on the Green Factor score sheet – for example, a single native shrub would count for 12 square feet.
- b. *Irrigation with harvested rainwater.* For each area claimed under this bonus, 50% of annual irrigation needs must be met through the use of harvested rainwater. This can be demonstrated by drainage or plumbing documents showing a water storage system sized according to the “Rainwater Harvesting Calculation Tool” available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor). Square footage for this credit is calculated as the area plumbed for irrigation with rainwater.
- c. *Landscape features visible to passersby.* To earn this credit, landscaping must be adjacent to the right-of-way or on building façades visible from the right-of-way or public open spaces. Landscaping is considered visible to the public if reasonable sight corridors allow viewing from adjacent rights-of-way or public open space. Square footage for this credit is calculated as the area covered by visible groundcovers, green walls, and green roofs, plus the equivalent square footage of all visible shrubs and trees (as calculated on the Green Factor score sheet). For example, a single shrub would count for 12 square feet of bonus credit.
- d. *Food cultivation.* Food cultivation areas are designed for the growing of edible plants by the residents or occupants of a building. They can be planted with annual fruits and vegetables; fruit-producing perennials, shrubs, and trees; herbs; and/or nut-bearing plants. All food cultivation areas must be easily accessible to at least some residents or occupants of a building and must have a source of water that can reach all portions of the food cultivation area. Food cultivation areas in the right-of-way are subject to approval by SDOT. Square footage for this credit is calculated as the area covered by food cultivation landscaping plus the equivalent square footage of all food-producing shrubs and trees, as calculated on the Green Factor score sheet – for example, a single blueberry shrub would count for 12 square feet of bonus credit.

### **D. UNUSUAL PROJECT CONFIGURATIONS**

Landscape requirements are typically tied to the size of a lot. But in some situations, a proposed development does not correspond neatly to a particular lot. This can occur on campuses where a large site contains many different developments, or where a new development straddles several lots containing other uses.

In these circumstances, the applicant may request to calculate landscaping requirements based on a project impact area rather than the total area of all impacted lots. Project impact area shall include

**Figure 5: Project impact area**



*For Green Factor calculations on partial redevelopment projects, the project impact area may be used in place of parcel size.*

new and replaced structures and impervious surfaces, as well as any areas disturbed during construction (typically a 10 foot buffer around the construction area). Staging areas must also be included in the project impact area unless they are already paved and will remain unchanged. The Director determines the boundaries of the project impact area. For Green Factor projects, the area of the project impact area should be entered in place of the “parcel size” on the worksheet

## **E. PERMIT REQUIREMENTS**

### **1. Landscape professional qualifications**

If the proposed project (a) contains 10 or more residential units, (b) contains 20 or more new parking spaces, (c) contains 12,000 or more gross square feet of commercial or industrial space, or (d) contains more than 500 square feet of landscaping in containers, landscape areas must be

designed by a licensed landscape architect.

All other required landscape improvements, including improvements for smaller projects not meeting any of the thresholds above, must be designed by a qualified landscape professional. This designation includes licensed landscape architects, certified professional horticulturalists, and certified landscape designers.

The landscape professional for a project must sign all landscape plans submitted with a permit application, and must sign the Landscape Improvement Checklist confirming that the project adheres to City requirements and has been installed according to plans (Attachment A).

### **2. Landscape plan submittal**

Landscape plans must be included in plan sets as part of MUP and construction applications.

The following information must be provided on all landscape plan sets:

- a. Lot dimensions and size;
- b. Location and areas of all landscaping (and dimensions where required);
- c. Location, size, and species of all plants used to meet requirements;
- d. Both common and botanical names of all plant material;
- e. If existing trees will be preserved, show location, trunk diameter at breast height (4.5 feet above grade), canopy radius drawn to scale, species, and proposed location of fencing;
- f. If proposing to reduce tree protection area from dripline, show the modified tree protection area and attach an arborist report including a list of any additional necessary protections;
- g. For parking lots and landscaped areas adjacent to driveways: location and dimensions of wheel stops, curbs, or other devices to protect landscaping;

- h. Size and depth of containers for any proposed container plantings;
- i. For projects earning credits with green roof, container plantings, or areas irrigated with rainwater, note irrigation needs and what type of system will be used – applicant may wait to provide irrigation diagrams at the time of building permit application;
- j. For street trees: width of planting strip; location of existing utility lines, poles, meters or other structures located in the planting strip; and species and diameter of the trees;
- k. Location and size of any trees to be removed (alternately, can be shown in the site plan);
- l. Specifications for soil improvement;
- m. Signature of landscape professional (defined in subsection E.1), verifying that plantings and other landscape elements are appropriately sited and specified, and that landscape elements meet the requirements of this Director's Rule; and
- n. Total square footage of required open space/residential amenity area (if applicable), as well as provided open space/residential amenity area.

Where the Green Factor does not apply, the following must also be provided:

- o. Total square footage of landscaped area required and provided; and
- p. Number of trees, number of shrubs, and quantity of ground cover required and provided.

Where the Green Factor applies, the following must also be included in the required plan sets:

- q. Landscape plan with Green Factor elements called out by Green Factor category and area – may be provided as part of the landscape plan or as a separate document;
- r. Green Factor Worksheet (Attachment B); and
- s. Green Factor Score Sheet (Attachment C).

When landscape features in the right-of-way are used to meet Green Factor requirements, plans must be approved by both SDOT and DPD. For projects requiring a MUP, landscape plans for the right-of-way must receive SDOT concept approval before DPD will approve a MUP application. SDOT concept approval through design guidance is a preliminary analysis to determine whether the Green Factor elements are generally acceptable under right-of-way improvement standards (see SDOT Client Assistance Memo 2211 for more details on the Street Improvement Permit Design Guidance process). Projects requiring building permits, but not MUPs, must initiate the Street Improvement Permit or Beautification Permit application with SDOT (not just design guidance) before submitting building permit plans to DPD.

### **3. Substitutions and other landscape plan revisions**

Revisions to the following features of a landscape plan require a plan revision and approval by DPD: reductions to the number of trees, shrubs, or groundcovers; changes to location of plantings required for screening; changes to any feature that could decrease total planting area or lower the Green Factor score below code requirements; or any other change that could fail to meet a specific permit condition. Substitution of plant species requires a plan revision and approval if the substituted plant is smaller, covers less area, or is less drought-tolerant than the species shown in the approved plans.

Revisions under any of these conditions must demonstrate that the plan continues to be consistent with applicable MUP or building permit conditions. A change in street tree species from an approved Street Improvement Permit requires a revision to that permit and approval by SDOT Urban Forestry. For general information call (206) 684-TREE [8733].

#### **4. Installation**

Except as provided below, landscape improvements must be installed in accordance with the approved plan prior to issuance of a Certificate of Occupancy.

- a. *Temporary Certificate of Occupancy.* Applicants may request an exception to this requirement and a temporary Certificate of Occupancy. In order to grant this exception, the Director must find that landscape installation is not currently possible (for example, due to drought conditions, the season or the phasing of the project). When a temporary Certificate of Occupancy is issued, all required landscaping must be installed within four months of occupancy.
- b. *Bond.* At the Director's sole discretion, the Director may grant an extension beyond four months if seasonal conditions within four months of occupation would decrease plant survival, and if the applicant submits a bond or other financial instrument deemed appropriate by DPD to ensure that requirements are met. The landscape bond form can be obtained from the Construction Inspector, and shall be for an amount covering the cost of installing the required landscaping. An additional amount can be charged to cover administrative costs.

Prior to issuance of the final Certificate of Occupancy, a Landscape Improvement Checklist (Attachment A to this rule) must be signed by the project's landscape professional (see subsection E.1 of this rule) and submitted to the building inspector, verifying that landscape features were installed or preserved according to the permit approved by DPD.

#### **5. Maintenance**

All plantings and landscape elements required as part of a land use permit or building permit must be maintained for the life of the project. If alterations or failures reduce landscape features to a level below the minimum required planting area or Green Factor score, new features must be added to compensate. This requirement also applies to landscape improvements in the right-of-way if used to meet Green Factor requirements.

#### **6. Landscape Management Plan (required for Green Factor projects only)**

For each site required to comply with the Green Factor, a landscape professional (as defined in subsection E.1 of this rule) must prepare a Landscape Management Plan. This Landscape Management Plan shall provide direction on the care and maintenance of plantings, including soil preparation, use of compost, plant replacement, irrigation, weed and pest control, control of invasive species, and care and maintenance of water or hardscape features. The document is not submitted to DPD, but the project's landscape professional must sign the Landscape Improvement Checklist (Attachment A to this rule) verifying that a Landscape Management Plan has been prepared and submitted to the owner or owner's agent. A sample Landscape Management Plan is available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor).

#### **F. ENFORCEMENT**

The property owner is responsible for proper landscape installation and maintenance according to approved landscape plans, including but not limited to replacement of dead or dying plants. Property owners may be subject to legal action, as with any other violation of Land Use Code, if landscape elements are not installed per approved plans or if comparable landscape features are not maintained for the life of the project (SMC 23.40.002). Enforcement is the responsibility of the Construction Inspection Division of DPD, at 206-684-8950, prior to issuance of the Certificate of Occupancy. The Code Compliance Division of DPD, at 206-615-0808, is responsible for responding to complaints

about noncompliance after the Certificate of Occupancy is issued.

Attachment A

**Landscape Improvement Checklist**

I, \_\_\_\_\_, declare as follows:

I am a landscape professional, as defined in subsection D.1 of Director's Rule 28-2015, responsible for the approved landscape plan for development located at

\_\_\_\_\_, Seattle, WA, and developed pursuant to:

Master Use Application Number \_\_\_\_\_

Building Permit Number \_\_\_\_\_

The approved landscape plan meets or exceeds minimum requirements for this property (including landscaped area or Green Factor score, as required by code).

The landscape features from the approved landscaping plan for this property have been installed as approved and in a manner consistent with the standards of Director's Rule (28-2015). This includes soil condition as well as the number, size, and approximate location of plantings.

I understand that any of the following changes to an approved landscape plan requires a plan revision and approval by the Department of Planning and Development:

- a) A reduction to the total number of trees or other plants
- b) Changes to the location of plantings required for screening
- c) Substitution of plant species if the substituted plant is smaller or less drought-tolerant
- d) Any changes that could decrease total planting area or lower the Green Factor score below code requirements, or otherwise fail to meet specific permit conditions.

Any of the revisions described above, if applicable, have been approved by DPD. Revised permit number \_\_\_\_\_

A Street Improvement Permit has been obtained from the Seattle Department of Transportation (SDOT) for any landscaping in the right-of-way, any changes have been approved by SDOT, and all plants in the right-of-way have been planted according to SDOT standards.

A completed Landscape Management Plan has been submitted to the owner (required for Green Factor projects only).

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

\_\_\_\_\_  
**Signature of landscape professional**

\_\_\_\_\_  
**Date**

**NOTE:** If you provide false information in this document, you will subject yourself to criminal liability. You may also subject the property owner to a penalty of \$150-\$500 per day for each day that the landscape features are out of compliance with code requirements (SMC 23.90.018).

The interactive Excel version of this worksheet is available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor).

| Revised 4/8/09          |             | Planting Area |   |   |                               |  |   | TOTAL ** |
|-------------------------|-------------|---------------|---|---|-------------------------------|--|---|----------|
| Green Factor Worksheet* |             | 1             | 2 | 3 | keep adding columns as needed |  |   |          |
| A1                      | square feet |               |   |   |                               |  | 0 |          |
| A2                      | square feet |               |   |   |                               |  | 0 |          |
| A3                      | square feet |               |   |   |                               |  | 0 |          |
| B1                      | square feet |               |   |   |                               |  | 0 |          |
| B2                      | # of plants |               |   |   |                               |  | 0 |          |
| B3                      | # of trees  |               |   |   |                               |  | 0 |          |
| B4                      | # of trees  |               |   |   |                               |  | 0 |          |
| B5                      | # of trees  |               |   |   |                               |  | 0 |          |
| B6                      | # of trees  |               |   |   |                               |  | 0 |          |
| B7                      | # of trees  |               |   |   |                               |  | 0 |          |
| C1                      | square feet |               |   |   |                               |  | 0 |          |
| C2                      | square feet |               |   |   |                               |  | 0 |          |
| D                       | square feet |               |   |   |                               |  | 0 |          |
| E                       | square feet |               |   |   |                               |  | 0 |          |
| F1                      | square feet |               |   |   |                               |  | 0 |          |
| F2                      | square feet |               |   |   |                               |  | 0 |          |
| G                       | square feet |               |   |   |                               |  | 0 |          |
| H1                      | square feet |               |   |   |                               |  | 0 |          |
| H2                      | square feet |               |   |   |                               |  | 0 |          |
| H3                      | square feet |               |   |   |                               |  | 0 |          |
| H4                      | square feet |               |   |   |                               |  | 0 |          |

\* See Green Factor score sheet for category definitions

\*\* Enter totals on the Green Factor score sheet

Attachment C

The interactive Excel version of this score sheet is available at [www.seattle.gov/dpd/greenfactor](http://www.seattle.gov/dpd/greenfactor).

| Green Factor Score Sheet  |                             | SEATTLE <i>green factor</i> |         |
|---|-----------------------------|-----------------------------|---------|
| Project title:  |                             | enter sq ft of parcel       |         |
| Parcel size (enter this value first) *  |                             | 5,000                       | SCORE - |
| Landscape Elements**  | Totals from GF worksheet    | Factor                      | Total   |
| <b>A Landscaped areas (select one of the following for each area)</b>   |                             |                             |         |
| 1 Landscaped areas with a soil depth of less than 24"   | enter sq ft<br>0            | 0.1                         | -       |
| 2 Landscaped areas with a soil depth of 24" or greater  | enter sq ft<br>0            | 0.6                         | -       |
| 3 Bioretention facilities   | enter sq ft<br>0            | 1.0                         | -       |
| <b>B Plantings (credit for plants in landscaped areas from Section A)</b>   |                             |                             |         |
| 1 Mulch, ground covers, or other plants less than 2' tall at maturity   | enter sq ft<br>0            | 0.1                         | -       |
| 2 Shrubs or perennials 2'+ at maturity - calculated at 12 sq ft per plant (typically planted no closer than 18" on center)    | enter number of plants<br>0 | 0                           | 0.3     |
| 3 Tree canopy for "small trees" or equivalent (canopy spread 8' to 15') - calculated at 75 sq ft per tree                     | enter number of plants<br>0 | 0                           | 0.3     |
| 4 Tree canopy for "small/medium trees" or equivalent (canopy spread 16' to 20') - calculated at 150 sq ft per tree            | enter number of plants<br>0 | 0                           | 0.3     |
| 5 Tree canopy for "medium/large trees" or equivalent (canopy spread of 21' to 25') - calculated at 250 sq ft per tree         | enter number of plants<br>0 | 0                           | 0.4     |
| 6 Tree canopy for "large trees" or equivalent (canopy spread of 26' to 30') - calculated at 350 sq ft per tree                | enter number of plants<br>0 | 0                           | 0.4     |
| 7 Tree canopy for preservation of large existing trees with trunks 6"+ in diameter - calculated at 20 sq ft per inch diameter | enter inches DBH<br>0       | 0                           | 0.8     |
| <b>C Green roofs</b>  |                             |                             |         |
| 1 Over at least 2" and less than 4" of growth medium  | enter sq ft<br>0            | 0.4                         | -       |
| 2 Over at least 4" of growth medium   | enter sq ft<br>0            | 0.7                         | -       |
| <b>D Vegetated walls</b>  |                             |                             |         |
|   | enter sq ft<br>0            | 0.7                         | -       |
| <b>E Approved water features</b>  |                             |                             |         |
|   | enter sq ft<br>0            | 0.7                         | -       |
| <b>F Permeable paving</b>   |                             |                             |         |
| 1 Permeable paving over at least 6" and less than 24" of soil or gravel   | enter sq ft<br>0            | 0.2                         | -       |
| 2 Permeable paving over at least 24" of soil or gravel  | enter sq ft<br>0            | 0.5                         | -       |
| <b>G Structural soil systems</b>  |                             |                             |         |
|   | enter sq ft<br>0            | 0.2                         | -       |
|   |                             | sub-total of sq ft = 0      |         |
| <b>H Bonuses</b>  |                             |                             |         |
| 1 Drought-tolerant or native plant species  | enter sq ft<br>0            | 0.1                         | -       |
| 2 Landscaped areas where at least 50% of annual irrigation needs are met through the use of harvested rainwater               | enter sq ft<br>0            | 0.2                         | -       |
| 3 Landscaping visible to passersby from adjacent public right of way or public open spaces                                    | enter sq ft<br>0            | 0.1                         | -       |
| 4 Landscaping in food cultivation   | enter sq ft<br>0            | 0.1                         | -       |
|   |                             | Green Factor numerator = -  |         |

\* Do not count public rights-of-way in parcel size calculation.

\*\* You may count landscape improvements in rights-of-way contiguous with the parcel. All landscaping on private and public property must comply with the Landscape Standards Director's Rule (DR 6-2009)