

Seattle Green Factor

Director's Rule xx-2018

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## **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, code requirements prevail.

Landscape improvements accomplish urban design goals:

- helping to fit new buildings into their surroundings,
- buffering 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**

### **I. GENERAL STANDARDS**

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 [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor) (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.

## **1. Tree & 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 [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor)).

## **2. Tree & plant 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.

## **3. 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 [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor). 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. SDCI'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.

## **4. 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. Refer to the maintenance section under Permit Process for more detail.

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 IV.6 of this rule).

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.

## **5. Irrigation**

Establishment of all plants, including drought-tolerant species, requires supplemental water for at least two growing seasons. Where grading allows, curbs should include openings to allow runoff to flow into planting areas.

## **6. Soil**

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:

- i. In planting beds: place 3 inches of compost and till to a depth of 8 inches.
- ii. In turf areas: place 2 inches of compost and till in to an 8 inch depth.
- iii. Scarify (loosen) subsoil 4 inches below amended layer to produce a 12-inch depth of un-compacted soil.
- iv. 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.
- v. Trees have requirements for soil volume. Please see section B.4 of this Rule for required volumes by tree size.

For more detail, see Construction Stormwater Control and Soil Amendment Standard Plan at [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor).

## **7. Mulch**

Mulch is required 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.

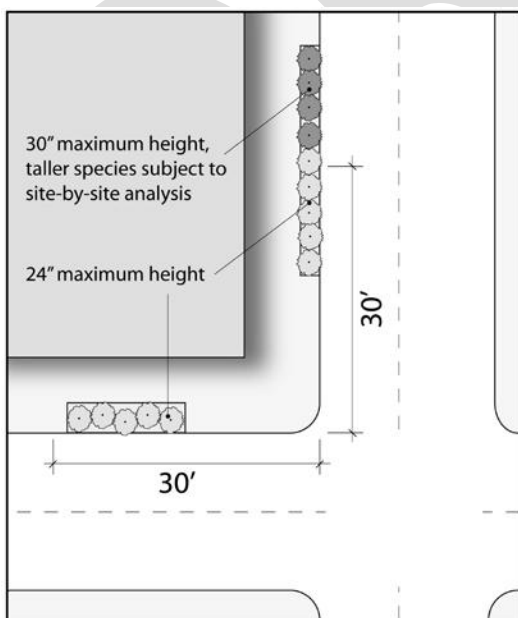
## 8. Landscape elements in the right-of-way

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 <http://www.seattle.gov/transportation/document-library/client-assistance-memos>).

SDOT limits the height of shrubs in rights-of-way. See Figure 1.

- i. 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.
- ii. 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.
- iii. For many species, pruning is required to comply with these standards - note in the Landscape Management Plan if applicable (see subsection IV.6 of this rule).

**Figure 1: Shrub height in the right-of-way**



## 9. 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 II.C is considered a container planting. Container plantings may count toward Green Factor scoring if they provide adequate planting medium for the selected plant species. For shrubs, ground covers, or perennials, this means a minimum of 12-inch soil depth. For trees, please see soil requirements in section II.B.4.e..

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.***

## II. STANDARDS FOR GREEN FACTOR LANDSCAPE ELEMENTS

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

### A. Landscaped areas

#### 1. Mulched landscaped areas with a soil depth of 24" or greater

See sections B through G below for requirements specific to each landscape element.

#### 2. 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 non-infiltrating bioretention planter) (see Figure 2).

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 SDCI Director's Rule 21-

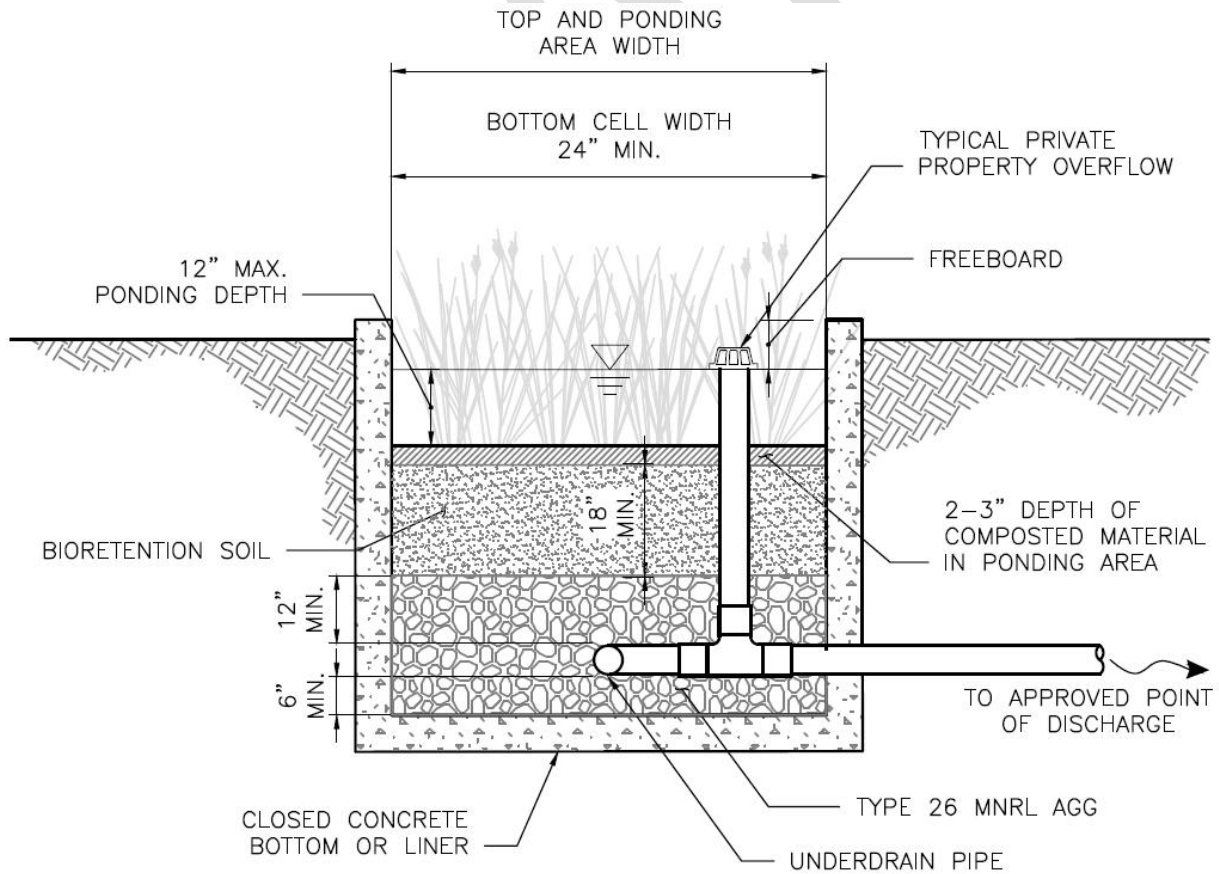
2015). Bioretention facilities in the right-of-way must also meet the standards of the Seattle Right-of-Way Improvements Manual (<http://streetsillustrated.seattle.gov/>).

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 ([http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/stormwater-code](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/stormwater-code)).

**Figure 2: Non-infiltrating bioretention planter**

*Illustration from the City of Seattle Stormwater Manual*



## **B. Plantings**

### **1. Ground covers or other plants less than 2' tall at maturity**

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 IV.6 of this rule.

### **2. Shrubs or perennials 2'+ at maturity and**

### **3. Large shrubs or perennials 4'+ at maturity**

#### *a. Qualifying plantings*

To earn credits as shrubs or perennials under Green Factor scoring (credits B.2 and B.3 on the Green Factor score sheet), plant selections must have a mature height specified and either be evergreen or have year-round structure. Otherwise, they are counted as groundcovers (credit B.1).

#### *b. Size and spacing*

- i. Shrubs and perennials must be at least 9 inches high when planted.
- ii. Shrubs and perennials 2' - 4' at maturity shall be spaced at least 18 inches apart.
- iii. Shrubs and perennials 4'+ at maturity shall be spaced at least 24 inches apart.
- iv. Shrubs and perennials used to meet screening standards must be evergreen and at least 30 inches high when planted.

#### *c. Preserving existing 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. Trees

(Green Factor Scoresheet credits B.4 through B.7)

##### a. Size categories

For purposes of determining the size category of a tree species, the tree must have a mature height of at least the following:

- i. Small Trees — 15 feet
- ii. Small/Medium Trees — 25 feet
- iii. Medium/Large Trees — 30 feet
- iv. Large Trees — 40 feet

A list of suggested tree species is available at [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor).

##### b. Size at the time of installation

###### **On private property**

- i. Deciduous trees with one trunk must be at least 1.5 inches in diameter, measured 6 inches above the ground.
- ii. Multi-stemmed deciduous trees must have at least 3 stems and be at least 6 feet tall.
- iii. Evergreen trees must be at least 4 feet in height.

###### **In the right-of-way**

Because street trees face more difficult growing conditions, SDOT requires larger trees at time of installation.

- i. 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.

##### c. 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.

##### d. Spacing

Trees on private property shall be planted no closer together than the following minimum spacing:

- ii. 10 feet between small trees
- iii. 14 feet between small/medium trees

- iv. 18 feet between medium/large trees
- v. 22 feet between large trees.
- vi. Trees in the right-of-way shall be spaced according to the standards of SDOT.

e. *Soil requirements for planting new and preserving existing trees*

Trees, including those in containers, must be planted in a minimum of 30-inch soil depth and a minimum soil volume. Soil volume must be continuous and may be shared with other plants and trees at appropriate spacing.

**Table A: Minimum soil volume for trees**

Tree size category	Planting area soil volume (current requirement)	Planting area soil volume (proposed requirement)	Example dimensions at 30-inch depth (current req.)	Example dimensions at 30-inch depth (proposed req.)
Small Trees	110 cu ft	200 cu ft	5' x 9'	8' x 10'
Small/Medium Trees	225 cu ft	500 cu ft	6' x 15'	10' x 20'
Medium/Large Trees	375 cu ft	700 cu ft	10' x 15'	14' x 20'
Large Trees	525 cu ft	900 cu ft	7' x 30'	18' x 20'

- i. Note that these are minimum soil volume requirements. Trees will be healthier, bigger, and longer-lived with greater soil volume.
- ii. Assumes 30-inch soil depth. Smaller surface areas can achieve the same volume with greater depth if approved by the Director, or if adjacent paved surfaces are installed over structural soil or similar technologies.

f. *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.

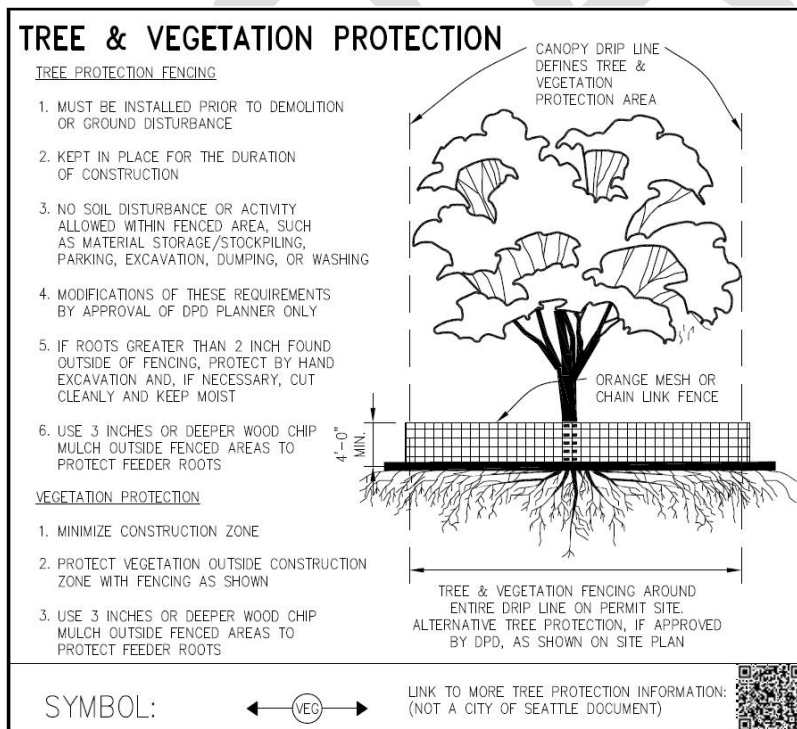
The tree protection area shall be established at the drip line of the tree (i.e. the outer extent of the branches), except that the protection area may be reduced if approved by the Director according to a plan prepared by a tree care professional who has field reviewed the site and

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. 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 3: Detail from City of Seattle Construction Stormwater Control Plan**



### C. Green roofs

(Green Factor Scoresheet credits C.1 through C.3)

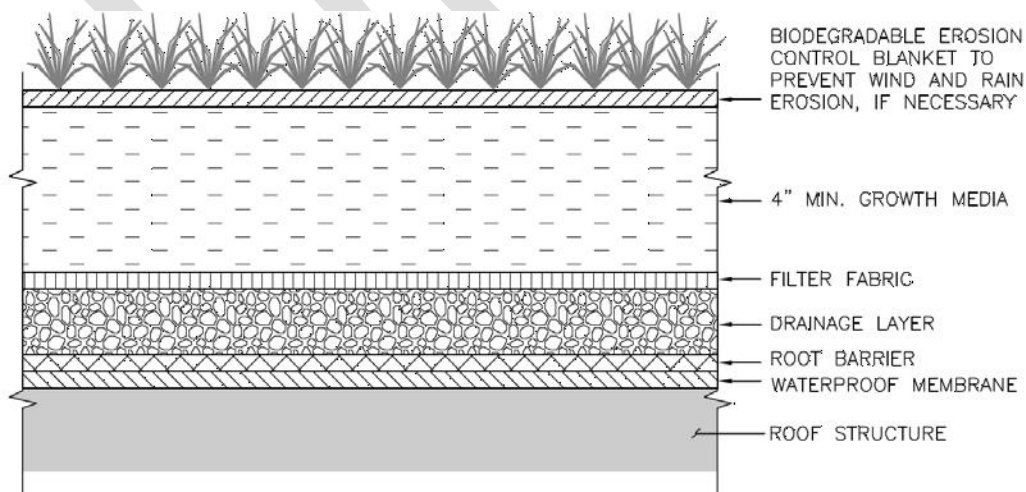
Green roofs (or "vegetated roofs") are plantings on top of a structure at least 10 feet above grade with at least 2 inches of soil, including extensive green roof systems and rooftop gardens (Figure 4). Designs must include plans to provide supplemental water for a minimum of two growing seasons, and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

- I. Green roofs with 2-6 inches of growth medium are eligible for Green Factor credit C.1, but do not count toward meeting stormwater requirements.
- II. Green roofs with at least 6 inches of growth medium and meeting the standards of the Stormwater Manual are eligible for both Green Factor and stormwater credit.
- III. 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, C.2, and C.3 on the Green Factor score sheet. Green roof vegetation is not eligible for groundcover credits, but taller rooftop vegetation (shrubs, perennials, and trees) may be counted for their respective credits

#### Figure 4: Green roof design detail

Illustration from the City of Seattle Stormwater Manual.



## D. Vegetated walls

*(Credit for vegetated walls may be earned in NC, C, and South Downtown Zones only)*

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.

- i. For Green Factor credit, measure the height and width of area to be covered by vegetation within five years.
- ii. Maximum calculated vertical dimension must not exceed 30 feet unless the vegetated wall features built-in growth medium and irrigation.
- iii. 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.

- iv. Vegetated walls earning credit must include 1 cubic foot of soil or planting medium per square foot of vegetated wall counted.
- v. 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.
- vi. Vegetated walls are only eligible for credit where they are 5 or more feet from adjacent, facing structures.
- vii. 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.

## E. Permeable pavement

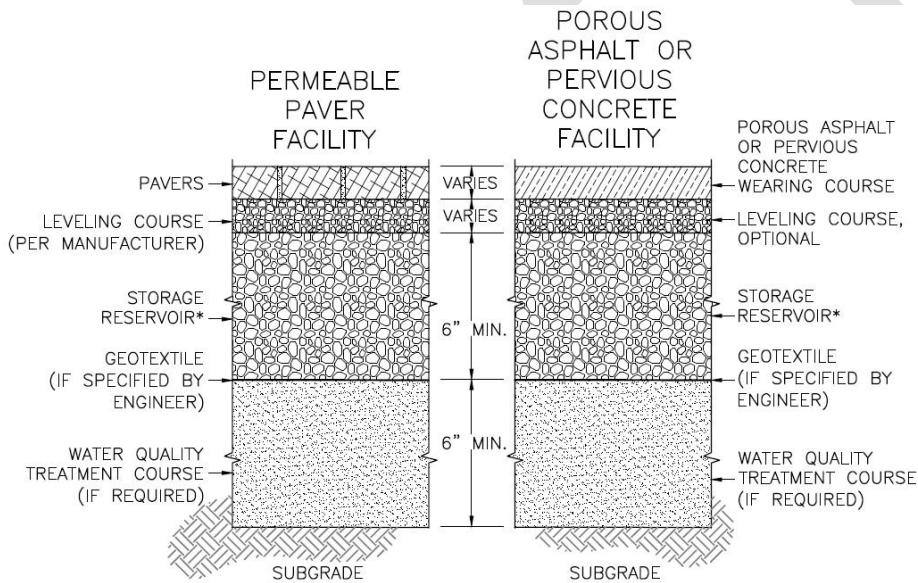
Permeable pavement allows water to pass through voids in the paving material or between pavers while providing a stable, load-bearing surface (Figure 5). Porous asphalt and pervious concrete allow water infiltration. Permeable interlocking concrete pavers can also be used if they are installed with gaps between them to allow stormwater to infiltrate into the subsurface.

- i. 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 - [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/stormwater-code](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/stormwater-code)).

- ii. 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.
- iii. 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.
- iv. 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**

*Illustration from the City of Seattle Stormwater Manual.*



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

**NOTE**

- 1. OVERFLOW AND LATERAL SUBSURFACE IMPERMEABLE BERMS NOT SHOWN.

**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.

- i. For Green Factor credit, these systems must be at least 24 inches deep, under pavement, and adjacent to planting areas.
- ii. Credit is calculated by the square footage of the system's footprint.

- iii. Structural soil systems in the right-of-way must be approved by SDOT.
- iv. 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.

## G. 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.

### 1. *Drought-tolerant, native plant, pollinator, or wildlife habitat species*

To receive bonus credit for this category, plants must be either drought-tolerant meeting the criteria established in I.3, 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

[http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor).

- i. Other plants may be eligible for this credit if the applicant provides two references showing that the plant is drought-tolerant or native.
  - ii. Square footage for this credit is calculated as:
    - a. the area covered by drought-tolerant/native ground covers (the drought-tolerant portion of credit B.1), plus
    - b. the equivalent square footage of drought-tolerant/native shrubs and trees as calculated on the Green Factor score sheet (the drought-tolerant portions of credits B.2 through B.8).
- ### 2. *Landscaped areas where at least 50% of annual irrigation needs are met through the use of harvested rainwater*
- i. For each area claimed under this bonus, 50% of annual irrigation needs must be met through the use of harvested rainwater.
  - ii. This can be demonstrated by drainage or plumbing documents showing a water storage system sized according to the "Rainwater Harvesting Calculation Tool" available at [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor).
  - iii. Square footage for this credit is calculated as the area plumbed for irrigation with rainwater.

3. *Vegetation visible to passersby from adjacent public right-of-way or public open spaces*
  - i. To earn this credit, landscaping must be planted between street- and alley-facing facades and the right-of-way or public open spaces, where the planting medium is no higher than 15' above grade. These plantings are considered "visible".
  - ii. Square footage for this credit is calculated as the area covered by visible groundcovers (the visible portion of credit B.1) and vegetated walls (the visible portion of credit D), plus the equivalent square footage of all visible shrubs and trees as calculated on the Green Factor score sheet (the visible portions of credits B.2 through B.8).

4. *Landscaping in 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; edible-fruit-producing perennials, shrubs, and trees; and/or nut-bearing plants.

- i. 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.
- ii. Food cultivation areas in the right-of-way are subject to approval by SDOT.
- iii. Square footage for this credit is calculated as the equivalent square footage of all edible-food-producing shrubs and trees, as calculated on the Green Factor score sheet (edible-food-producing portions of credits B.2 through B.8).



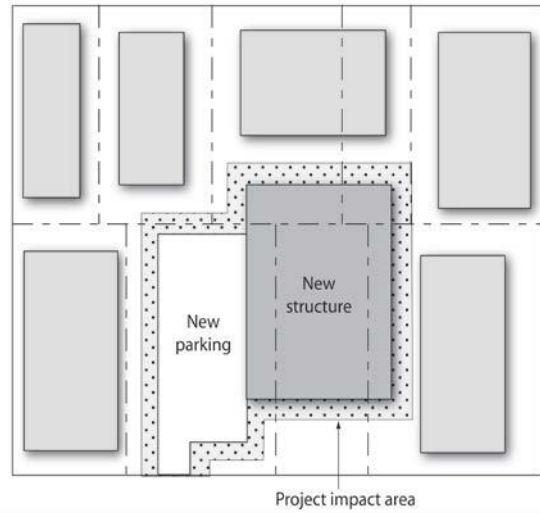
### III. SPECIAL CONDITIONS

#### 1. 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.

**Figure 6: Project impact area**

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



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 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.

### IV. PERMIT REQUIREMENTS

#### 1. Landscape professional qualifications

Landscape areas must be designed by a licensed landscape architect if the proposed project contains:

- i. 10 or more residential units,
- ii. 20 or more new parking spaces,
- iii. 12,000 or more gross square feet of commercial or industrial space, or
- iv. more than 500 square feet of landscaping in containers.

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:

- i. Lot dimensions and size
- ii. Location and areas of all landscaping (and dimensions where required)
- iii. Location, size, and species of all plants used to meet requirements
- iv. Both common and botanical names of all plant material
- v. **For existing trees to be preserved:** location, trunk diameter at breast height (4.5 feet above grade), canopy radius drawn to scale, species, and proposed location of fencing
  - a. 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
- vi. **For trees** (not including those in the right-of-way): soil volume and dimensions assigned to each tree (length, width, depth of soil volume)
- vii. **For trees in the right-of-way:** depth of planting medium; 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
- viii. **For trees to be removed:** location and size of trees
- ix. **For structural soils:** standard section showing soil volume and location under walking paths, sidewalks, etc.
- x. **For container plantings:** size and depth of containers
- xi. **For green roofs:** depth of planting medium, including a standard section for each type of green roof credit earned
- xii. **For vegetated walls:** depth of planting medium for each distinct area of vegetated wall
- xiii. **For parking lots and landscaped areas adjacent to driveways:** location and dimensions of wheel stops, curbs, or other devices to protect landscaping
- xiv. Specifications for soil improvement

- xv. Irrigation needs and what type of system will be used. Applicant may wait to provide irrigation diagrams at the time of building permit application.
- xvi. Signature of landscape professional (defined in subsection IV.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
- xvii. 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:

- xviii. Total square footage of landscaped area required and provided
- xix. 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:

- xx. Landscape plan with Green Factor elements called out by Green Factor category and area. These may be provided as part of the landscape plan or as a separate document.
- xxi. Green Factor Worksheet (Attachment B)
- xxii. Green Factor Score Sheet (Attachment C).

Landscape plan approval notes:

- i. When landscape features in the right-of-way are used to meet Green Factor requirements, plans must be approved by both SDOT and SDCI.
- ii. For projects requiring a MUP, landscape plans for the right-of-way must receive SDOT concept approval before SDCI will approve a MUP application.
- iii. 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).
- iv. 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 SDCI.

### 3. Substitutions and other landscape plan revisions

Revisions to the following features of a landscape plan require a plan revision and approval by SDCI:

- i. Reductions to the number of trees, shrubs, or groundcovers
- ii. Changes to location of plantings required for screening
- iii. Changes to any feature that could decrease total planting area or lower the Green Factor score below code requirements
- iv. Any other change that could fail to meet a specific permit condition.
- v. 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.

- i. *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.

- ii. *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 SDCI 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.

## 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 IV.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 SDCI, 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 [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/seattle-green-factor](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor).

## 7. Verification

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 IV.1 of this rule) and submitted to the building inspector, verifying that landscape features were installed or preserved according to the permit approved by SDCI.

## V. 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 SDCI, at 206-684-8950, prior to issuance of the Certificate of Occupancy. The Code Compliance Division of SDCI, at 206-615-0808, is responsible for responding to complaints about noncompliance after the Certificate of Occupancy is issued.