SDCI | Director's Rule 11-2020

Applicant: City of Seattle Department of Construction and Inspections	Page 1 of 255	**Supersedes:** 30-2015
	Publication:	**Effective:**
Subject: Standards for Landscaping, including Green Factor	**Code and Section Reference:** Ch. 23, Land Use Code	
	Type of Rule: Review Criteria	
	Ordinance Authority: SMC 3.06.040	
Index: Land Use Code/Technical Standards and Procedural Requirements	**Approved** **Date** _____ Nathan Torgelson, Director, SDCI	

BACKGROUND

This Rule details the standards that must be met when landscaping is required according to the Land Use Code (Seattle Municipal Code Title 23), for Green Factor and landscaping requirements in Lowrise, Commercial, Seattle Mixed, Downtown, and Industrial zones. In the event of a conflict between the requirements of the Seattle Municipal Code (including the Shoreline Master Program, Stormwater Code, Environmental Critical Areas, and Land Use Code) and this rule, code requirements prevail.

The City of Seattle promotes urban forest preservation and landscape improvements that enhance community character, improve health and livability, enhance the City's economic viability, protect and restore natural ecosystems, encourage efficient use of water, and help prevent, mitigate, and adapt to climate change.

Landscape improvements provide environmental benefits by:

- slowing the rate of stormwater runoff,
- increasing stormwater infiltration,
- improving air and water quality,
- decreasing the urban heat island effect,
- improving energy efficiency,
- providing urban wildlife habitat and increasing urban biodiversity, and
- reducing soil erosion.

Landscape improvements also accomplish urban design goals by:

- helping new development fit into their surroundings,
- buffering dissimilar land uses,
- providing screening and privacy,
- reducing glare, and
- creating an attractive urban environment.

Green Factor is a landscaping requirement for some land use zone designations within the land use code. Green Factor provides a weighted menu of landscape elements and requires development proposals to meet a minimum score by selecting individual elements from that menu. Landscape features provided to meet other requirements (including but not limited to Land Use Code, Stormwater Code, and environmentally critical areas requirements) may count toward meeting Green Factor requirements.

RULE

The following standards apply to landscaping that is required under Seattle Municipal Code Title 23, the Land Use Code.

I. GENERAL STANDARDS

The intent behind landscape and Green Factor standards is for bare soil to be covered within three years of landscape installation, and these standards encourage the layering of vegetation toward that goal.

A. Tree and plant selection

Tree and plant selection should be based on climatic and topographic conditions as well as design criteria (e.g. visual screening vs. physical buffering, etc.) to ensure compatibility with the site. Lists of acceptable trees and plants are available at http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor.

B. Tree and plant preservation

If an applicant counts existing shrubs, perennials, groundcovers, or trees toward meeting any code requirements (including but not limited to Green Factor), those planted areas must be protected during construction. Preservation must include specific protection measures and/or details on the approved plan set to ensure compliance during construction to make sure preserved trees and plants are adequately protected.

Trees and other plants bordering driveways and parking areas shall be protected from vehicles with wheel stops, curbs, or similar devices, to be shown on the approved plan set.

C. Invasive species

Invasive species are prohibited for new plantings. All invasive species must be removed from planted areas prior to new planting. Additionally, a minimum 10' buffer around all planted areas must be cleared of invasive species, except in portions of the buffer which extend beyond the development site.

Invasive species are those plants included on the King County Noxious Weed Control Program's list of "noxious weeds" or "weeds of concern" (https://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/laws/list.aspx).

D. Drought tolerance

Drought-tolerant plants are species that can thrive under the project conditions (considering for example solar exposure and soil conditions) without supplemental irrigation in required landscape areas, at least 50% of all planted area counting toward Green Factor must be drought-tolerant. Supplemental irrigation is required for an establishment period of five growing seasons. A plant list with information about drought-tolerant plant species is available here: http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor ("Green Factor Plant List").

Other drought-tolerant plants, not included in this list, can be used, provided the applicant provides two references showing each of those plants is both drought-tolerant and appropriate for Seattle's climate. References can include written recommendations from a WSNLA-certified horticulturalist (or equal) practicing in western Washington. Drought-tolerant plants must be separated from non-drought-tolerant plants based on irrigation zone. The Director may 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) based on site documentation provided by the applicant.

E. Maintenance

All plantings and landscape elements required as part of a land use permit or building permit must be maintained by the property owner or designee for the life of the project. Refer to Section IV.5 Permit Requirements for more detail on maintenance.

When planting, ample clearance shall be provided so that plants have enough space and light, considering existing conditions on adjacent lots. All landscape improvements must be designed to allow access for the owner or owner's agent to conduct maintenance specified in the Landscape Management Plan (Section IV.6).

F. Irrigation

Establishment of all plants, including drought-tolerant species, requires supplemental water for at least five growing seasons to ensure successful tree and plant establishment and healthy, vigorous, long-term survival. Where grading allows, curbs should include openings to allow runoff to flow into planting areas.

G. Soil and Mulch

All new planting areas or areas disturbed during construction must meet applicable standards for soil retained and protected from construction impacts following the standards in the Seattle Stormwater Manual. Applicants must include the relevant provisions from the manual in construction details on the approved plan set, including:

a. Decompact (loosen) subsoil at a minimum of 4 inches depth (whether amended or imported soil) to produce a minimum 12-inch depth of un-compacted soil in all planting areas.
b. In planting beds where soil is amended in place: place 3 inches of compost and till to a depth of 8 inches.
c. In turf areas where soil is amended in place: place 2 inches of compost and till to a depth of 8 inches.
d. 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, if it is coarse (arborist wood chips, coarse bark, compost mulch, or mineral mulch), maintained at a depth of 2 to 4 inches, and covers the soil below shrubs and trees. Fine bark is discouraged because it can create hydrophobic conditions at the soil surface.
e. Additional soil requirements for trees are listed in section II.5 of this rule.

For more detail, see the SDCI Standard Construction Stormwater Control and Soil Amendment Plan at http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/stormwater-code.

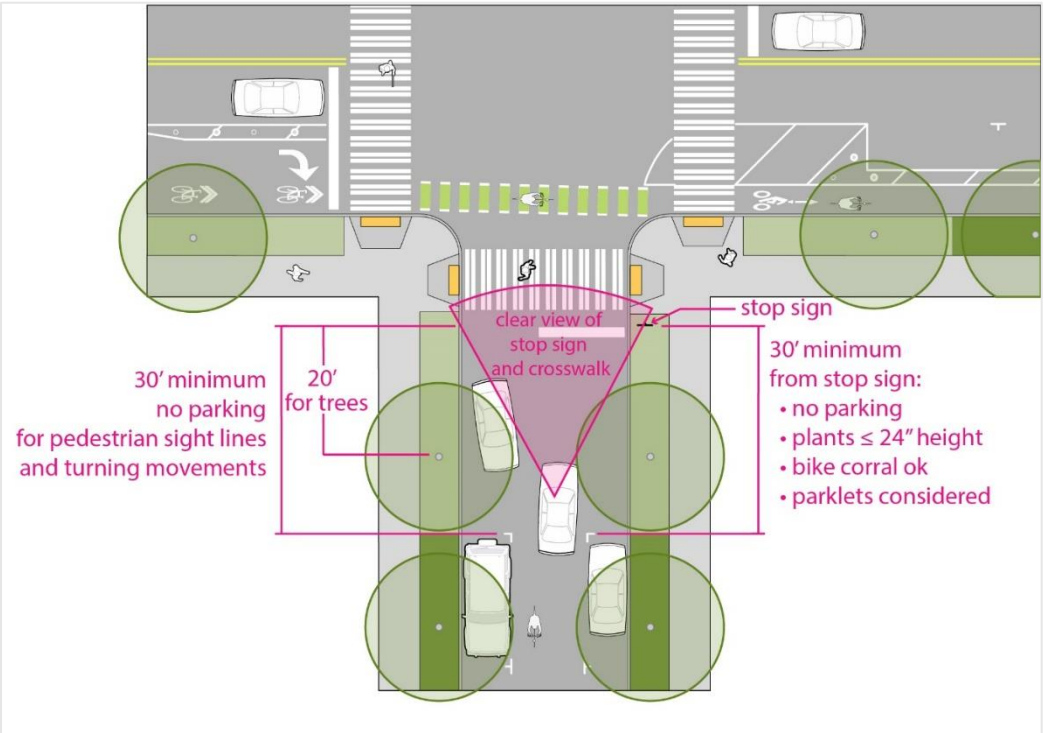
H. Landscape elements in the right-of-way

Installation, pruning, or removal of any landscape element in the right-of-way, including street trees, requires a Seattle Department of Transportation (SDOT) approval and must adhere to SDOT's Right-of-Way Improvements Manual (https://streetsillustrated.seattle.gov/), Client Assistance Memo (CAM) 2306 and CAM 2211.)

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

a. Within 30 feet of the Pedestrian Clear Zone, vegetation must have a mature height of 2 feet or less.
b. For areas more than 30 feet from the Pedestrian Clear Zone, 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.
c. Many plant species require pruning to comply with these standards. If a pruning regime is required, this must be included in the Landscape Management Plan (Section IV.6).

Figure 1: Vegetation height in the right-of-way



I. 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. For shrubs, ground covers, or perennials, this means a minimum of 24-inch soil depth. For trees, please see soil requirements in Section II. B.4.f.

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

II. STANDARDS FOR GREEN FACTOR LANDSCAPE ELEMENTS

The purpose of the standards in this section is to clarify what types of plantings, structures, systems, and fixtures are eligible for Green Factor points as detailed in SMC 23.86.019. Each element has specific requirements for installation, configuration, and maintenance that shall be followed to maintain Green Factor compliance for the life of the project.

A. Planted areas

Drought-tolerant planting areas must be distinct from those requiring supplemental irrigation for plant survivability for the life of the project and be identified as such on the approved plan set. This requirement can be calculated in square feet of planting areas dedicated exclusively to drought-tolerant species.

Plants within each planted 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. Planted areas with a soil depth of 24 inches or greater

(Green Factor Scoresheet credit A.1)

Planted areas earn credits for having a soil with a depth of 24 inches or greater in addition to earning credits for specific plants or features in the planted areas. There is no credit awarded for planted areas with less than 24 inches of soil.

2. Bioretention facilities

(Green Factor Scoresheet credit A.2)

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 the drainage system.
Green Factor credit for bioretention facilities applies to any areas that meet Stormwater Manual standards for either infiltrating or non-infiltrating bioretention facilities. For more detail on bioretention facilities see the Seattle Stormwater Manual Volume 3, Chapter 5, Sections 5.4 and 5.8 (http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/stormwater-code). Bioretention facilities in the right-of-way must also meet the standards of the Seattle Right-of-Way Improvements Manual (http://streetsillustrated.seattle.gov/).

Bioretention facilities also count toward meeting stormwater requirements if they are consistent with SMC 22.800-22.808 (the Seattle Stormwater Code) and associated Director's Rules.

Note that plant foliage needs to be above ponding depth by the time a bioretention facility is functional. Any trees in a bioretention area must be consistent with guidance in the City of Seattle Stormwater Manual, Appendix E (http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/stormwater-code).

Figure 2: Infiltrating Bioretention Facility
Illustration from the City of Seattle Stormwater Manual

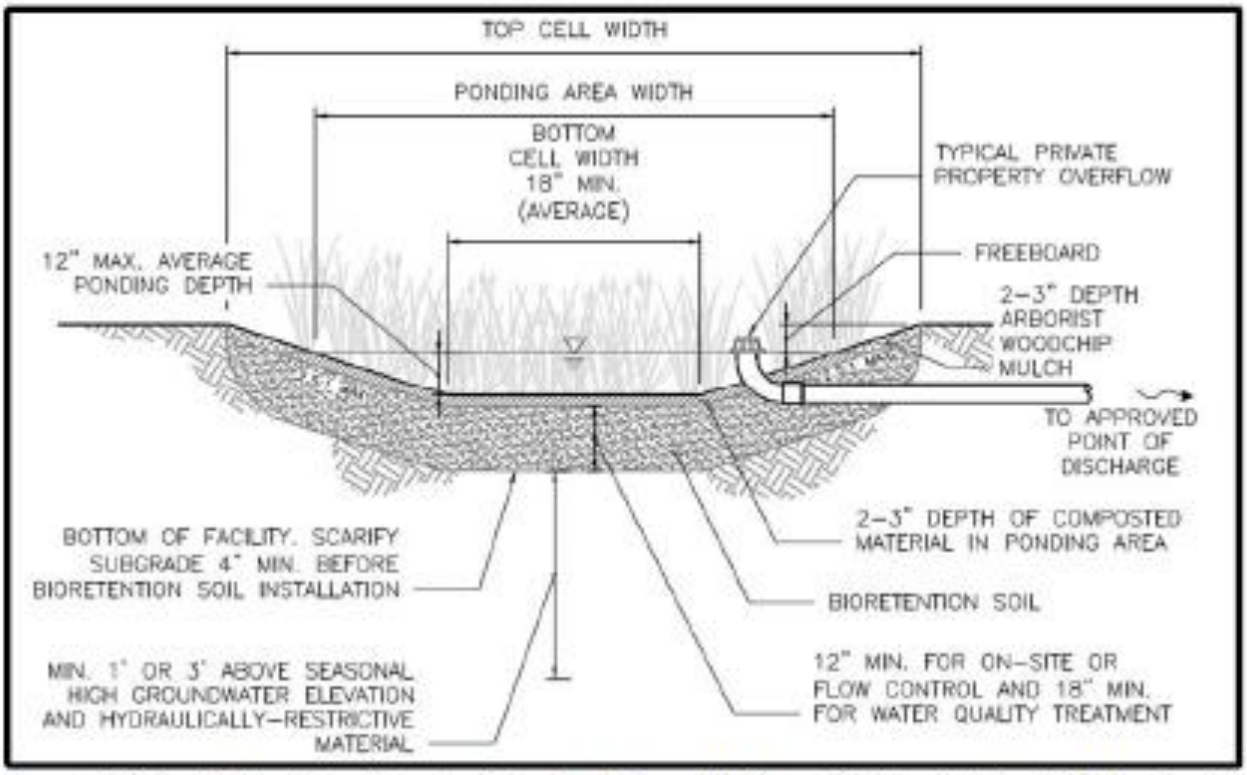
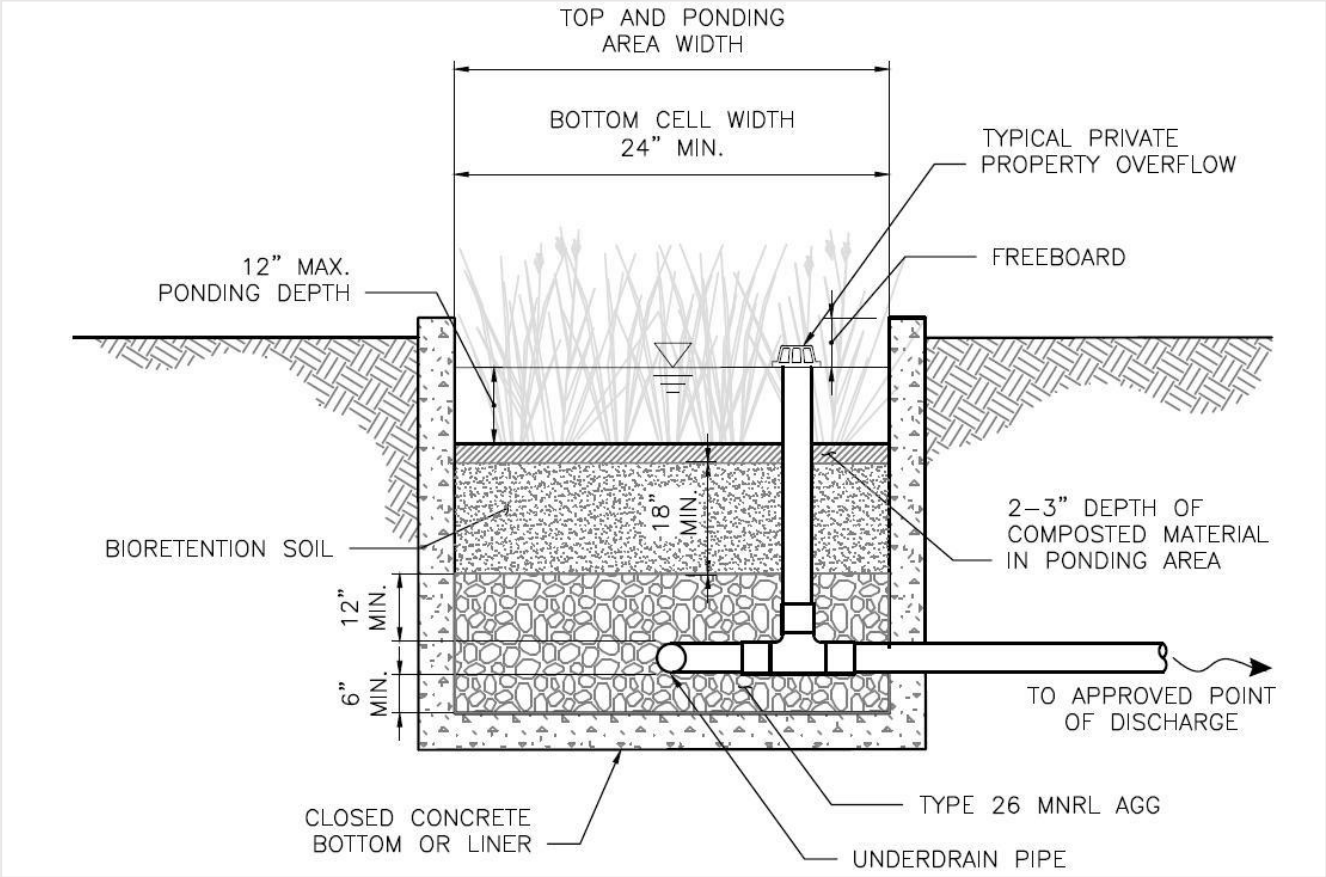


Figure 5.10. Infiltrating Bioretention Facility with Sloped Sides (without Underdrain).

Figure 3: Non-infiltrating bioretention planter
Illustration from the City of Seattle Stormwater Manual



B. Plantings

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

1. Mulch, ground covers, or other plants less than 2 feet tall at maturity

Evergreen ground covers are spreading plants typically less than 12 inches tall which provide year-round soil coverage when established. For Green Factor, areas covered with evergreen perennials or shrubs less than 2 feet tall are awarded the same credit as areas covered with evergreen ground cover. Non-evergreen plants (e.g. grasses) of any height qualify as ground covers so long as they provide soil coverage year-round. Plants that die back below the soil each year do not qualify for Green Factor credit.

To accomplish complete coverage of bare soil by ground cover within three years, spacing of evergreen ground cover plants shall be as follows:

a. Plants transplanted from 4-inch containers shall be spaced no more than 12 inches apart on-center,
b. Plants transplanted from 1-gallon containers shall be spaced no more than 24 inches apart on-center.

2. Medium shrubs or perennials 2 to 4 feet tall at maturity

a. *Height*
To earn credits as shrubs or perennials, plant selections must have a mature height as specified within SMC 23.86.019 Green Factor Measurement and be evergreen. Otherwise, they are counted as groundcovers (Green Factor Scoresheet credit B.1).

b. *Size*
Shrubs and perennials must be at least 9 inches tall when planted;

c. *Preserving existing vegetation*
Preserving existing healthy vegetation on a site counts toward Green Factor requirements. Preserving existing trees counts for more credit than newly planted trees. Fencing and signage requirements are the same as those for tree preservation, and the protection area may not be any smaller than the drip line of affected shrubs and perennials.

d. *Spacing*
Shrubs and perennials 2 to 4 feet at maturity (counting toward Green Factor Scoresheet credit B.2) shall be spaced at least 18 inches apart on-center. Different spacing of species to accomplish complete coverage within three years is acceptable if documentation is submitted by a landscape professional, as defined in Section IV.1.

3. Large shrubs or perennials 4 feet tall or more at maturity

All of the height, size, and preservation standards specific to Medium shrubs or perennials also apply to Large shrubs or perennials. Shrubs and perennials 4 feet or more at maturity (counting toward credit B.3) shall be spaced at least 24 inches apart on-center. Different spacing of species to accomplish complete coverage within three years is acceptable if documentation is submitted by a landscape professional, as defined in Section IV.1.

4. Trees

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

a. *Planting specifications*

New trees planted on a development site and earning Green Factor credit must be planted according to the City of Seattle standard plans and specifications for trees. See Standard Plans number 100a – 100c, and number 101.

See Standard Specifications for Planting Trees 8-02.3(6) B.
http://www.seattle.gov/utilities/construction-and-development/standard-specs-plans

b. *Size categories*

For purposes of determining the size category of a tree species, the tree must have a mature canopy spread of the following:

i. Small Trees — 8 feet to 16 feet
ii. Small/Medium Trees — 16 feet to 21 feet
iii. Medium/Large Trees — 21 feet to 26 feet
iv. Large Trees — 26 feet or more

A list of suggested tree species is available at http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor.
Other trees, not included in this list, can be used, provided the applicant provides two references showing how each tree is appropriate for Seattle's climate. References can include written recommendations from a WSNLA-certified horticulturalist (or equal) practicing in western Washington.

c. *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 tall.

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, measured 6 inches above the ground. The Urban Forestry division of SDOT requires that they inspect and approve street trees before planting.

d. *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.

e. *Spacing*

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

i. 10 feet on center between small trees
ii. 14 feet on center between small/medium trees
iii. 18 feet on center between medium/large trees
iv. 22 feet on center between large trees.

Trees in the right-of-way shall be spaced according to SDOT standards.

f. *Soil requirements for trees in containers*

Soil volume is critical to tree health and survivability. Trees in containers must have a minimum of 30-inch soil depth and a minimum soil volume as follows:

Table A: Minimum soil volume for trees in containers

Tree size category	Planting area soil volume	Example surface area dimensions, 30-inch depth
Small Trees	150 cu ft	6' x 10'
Small/Medium Trees	250 cu ft	10' x 10'
Medium/Large Trees	400 cu ft	10' x 16'
Large Trees	550 cu ft	11' 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.

g. *Preserving trees*

Every development that is proposing to protect trees must include locations and dimensions of the basic tree protection area for all trees six inches or more at standard height to be retained, whose basic tree protection areas would be affected by proposed construction. The basic protection area for trees to be preserved is generally considered to be the area within the dripline and is a no-disturbance area. The basic 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 a subject tree's size, location, and condition, and determined that the proposed encroachment into the dripline will not adversely impact the survival or stability of the tree.

Plans must demonstrate avoidance of all proposed construction impacts—including all ground disturbance, demolition, over-excavation for shoring, access, staging, laydown, paving, structures, etc.—to the basic tree protection area for trees to be retained on adjacent parcels. Plans must show all tree protection measures such as tree protection fencing, and other measures recommended by the project's arborist for all trees to be retained. The basic tree protection area shall be enclosed in fencing at least four 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 signs shall be at least 8.5 inches by 14 inches and explain the purpose of the fencing and the restrictions on activity within the fencing. In addition, the Director may establish conditions for protecting a tree during construction outside the basic protection area to protect feeder roots.

C. Green roofs

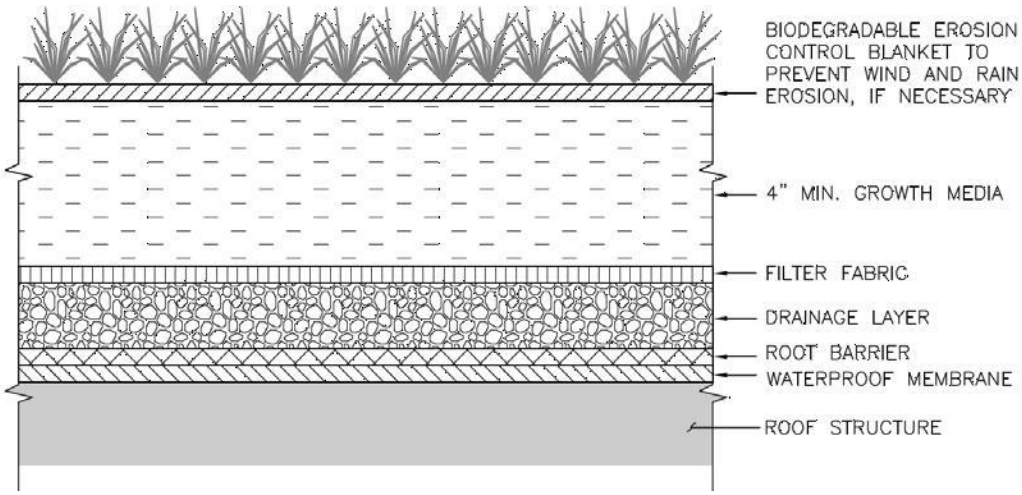
(Green Factor Scoresheet credits C.1 through C.3)

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 irrigation for a minimum of five growing seasons, and green roof specifications must be approved by a licensed architect or landscape architect. Green roof planting areas that are drought-tolerant are eligible for the drought-tolerance bonus credit.

a. Green roofs with 2 to 4 inches of growth medium are eligible for Green Factor credit C.1, but do not count toward meeting stormwater code requirements.
b. 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.
c. For plantings that meet the standards in Section I.1 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 rooftop vegetation taller than 2 feet at maturity (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

(Green Factor Scoresheet credit D)

a. Vegetated walls are vertical surfaces covered by plants. Vegetated walls include walls or screens with climbing vines, trailing plants, espaliered trees, or "living wall" planting systems. Credit for vegetated walls may be earned in Neighborhood Commercial and Commercial Zones only. Square footage for this credit is calculated as the vertical area to be covered by vegetation within three years.
b. Maximum calculated vertical dimension must not exceed 30 feet unless the vegetated wall features built-in growth medium and irrigation.
c. Plantings must not encroach within Seattle City Light safety setbacks
d. To establish successfully, vegetated walls need soil and light. Vegetated walls planted at grade (i.e. where planting medium is not incorporated into the vegetated wall structure) earning credit must include planting medium at least 24 inches deep, with surface dimensions no smaller than 12 inches in any direction.
e. Vegetated walls with planting soil or planting medium at grade adjacent to sidewalks or other surfaces where there will be foot or other soil-compacting traffic require an appropriate mulch to be added to the top of the soil, as well as a permanent barrier surrounding the planting medium to prevent walking, riding, or driving across the soil. Appropriate barriers include tree guards and seat walls, and any similarly performing barrier.

f. Vegetated walls earning credit must include dedicated irrigation for the life of the project as well as drainage suitable for the specified plant species.
g. Vegetated walls may be planted no closer than 8 feet from building exhaust pipes or any other type of forced air exhaust on the development site or adjacent sites.
h. Vegetated walls are only eligible for credit where they are 5' or more feet from adjacent structures.
i. Vegetated walls do not have to be setback from lot lines abutting streets, alleys, or lots with structures already extending to the minimum setback line.
j. When side or rear lot lines abut zero-lot-line undeveloped parcels, vegetated walls facing the neighboring property may not be closer than 5 feet to the property line.

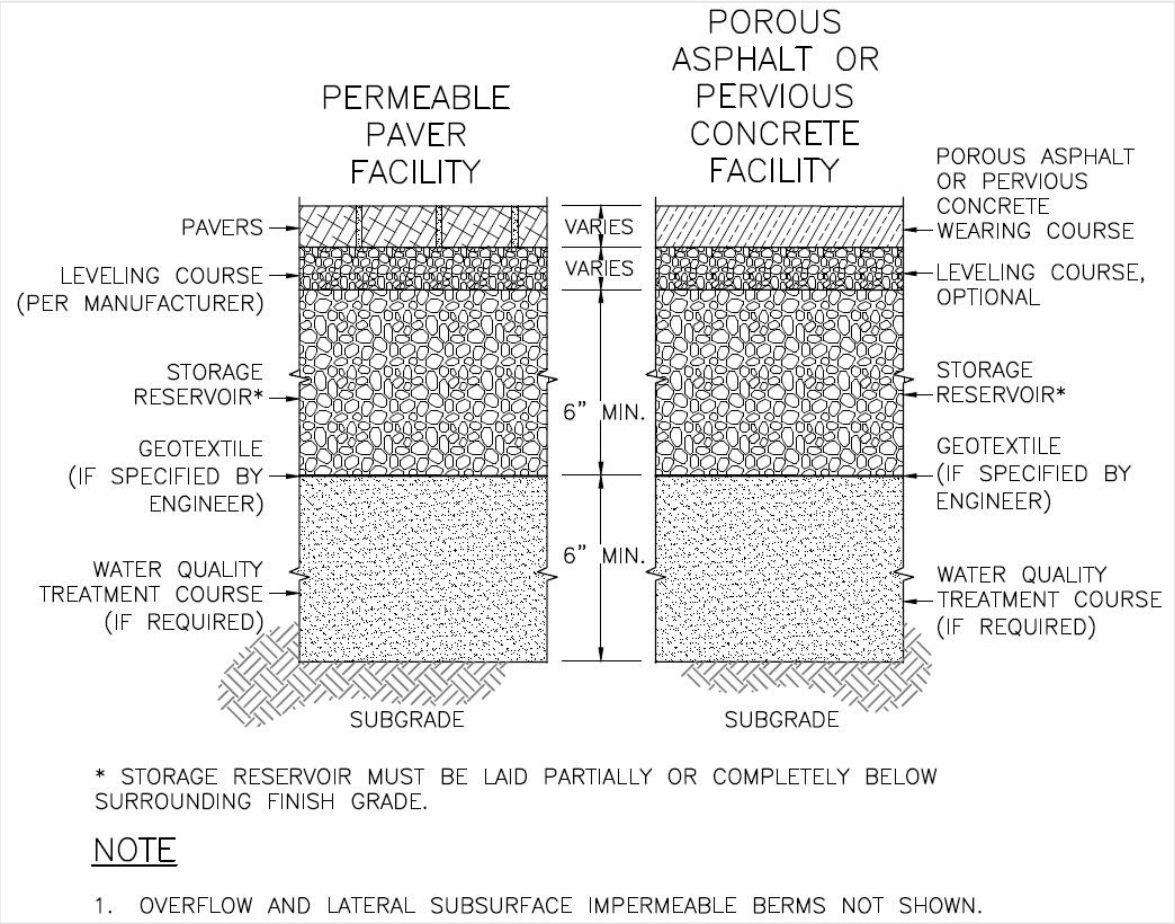
E. Permeable pavement

(Green Factor Scoresheet credits E.1 and E.2)

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.

a. 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).
b. Paving covered by structure does not qualify for this credit unless runoff is directed there from uncovered areas.
c. Permeable pavement in the right-of-way can be counted for credit and requires an SDOT approval.
d. 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.

Figure 5: Permeable pavement design detail
Illustration from the City of Seattle Stormwater Manual.



F. Structural soil systems

(Green Factor Scoresheet credit F)

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.

a. For Green Factor credit, these systems must be at least 36 inches deep, under pavement, and adjacent to and continuous with root zone of one or more planting areas.
b. Green Factor Credit is calculated by the square footage of the system's footprint.
c. Structural soil systems in the right-of-way must be approved by SDOT.
d. 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 applied to Green Factor Landscape Elements

(Green Factor Scoresheet credits G.1 through G.4)

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. Bonus credits cannot total more than Green Factor elements subtotal.

1. **Landscaping that consists entirely of drought-tolerant or native plant species**
   To receive bonus credit for this category, plants must be either drought-tolerant meeting the criteria established in Section I. D, or native to the Pacific Northwest. Native plants range from ground covers (beach strawberry, kinnikinnick, etc.) to trees (Douglas fir, western hemlock, etc.). A plant list including drought-tolerant, native species, pollinator, and wildlife habitat species is available at http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/seattle-green-factor.

   a. Other plants may be eligible for this credit if the applicant provides two references showing that such plants are drought-tolerant, native.
   b. Square footage for this credit is calculated as:
      i. the area covered by drought-tolerant/native ground covers (drought-tolerant planting areas counted toward credit B.1), plus
      ii. 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. **Landscaping that receives at least 50% of annual irrigation needs are met through the use of harvested rainwater or collected greywater**

   a. For each area claimed under this bonus, 50% of annual irrigation needs must be met using harvested rainwater or collected greywater.
   b. 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.
   c. Square footage for this credit is calculated as the area plumbed for irrigation with rainwater or greywater.

3. **Landscaping visible from adjacent public right-of-way or public open spaces**
   a. To earn this credit, landscaping must be planted between the street-facing façade and the street right-of-way or public open spaces, where the planting medium is no higher than 15 feet above grade. These plantings are considered "visible".
   b. 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 to grow 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.

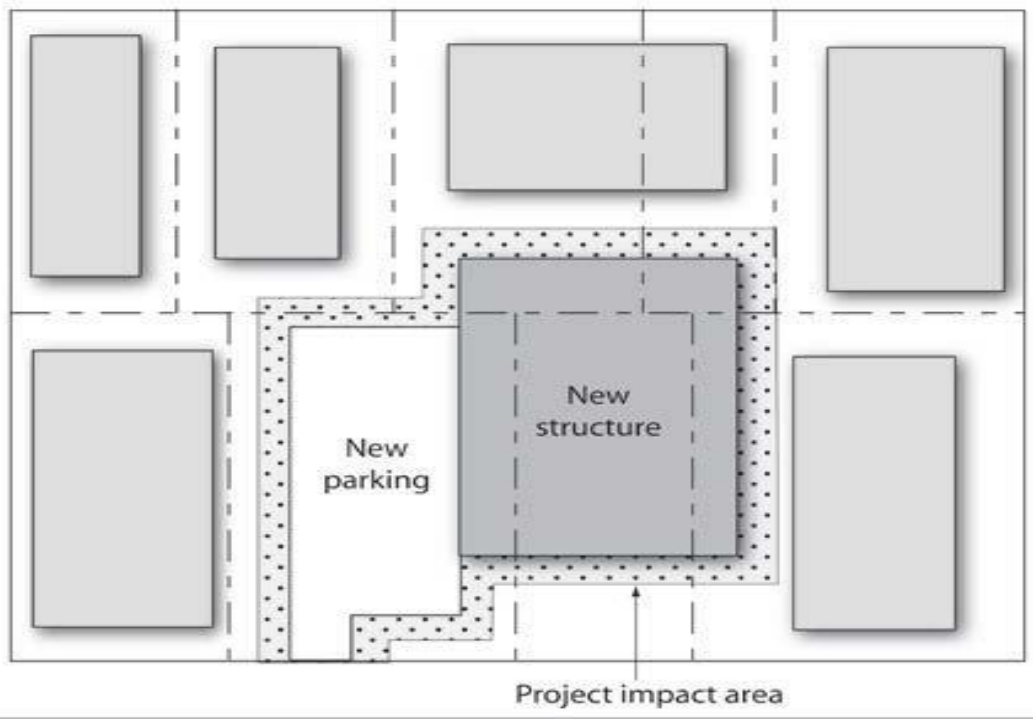
a. All food cultivation areas must be easily accessible to at least some residents or occupants of a building and must have a source of water that can reach all portions of the food cultivation area.
b. Food cultivation areas and proposed plantings in the right-of-way are subject to approval by SDOT.
c. 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 development site or lot. In some situations, a proposed development does not correspond neatly to a defined development site.

Figure 6: Project impact area



The applicant may request to calculate landscaping requirements based on a project impact area rather than the total area of the development site. For Green Factor calculations, the project impact area may be used in place of parcel size on the worksheet. Project impact area shall include new and replaced structures and impervious surfaces, as well as any areas disturbed during construction (at least 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.

IV. PERMIT REQUIREMENTS

1. Landscape professional qualifications

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

a. 10 or more residential units,
b. 20 or more new parking spaces,
c. 12,000 or more gross square feet of commercial or industrial space, or
d. 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 but is not limited to licensed landscape architects, certified professional horticulturalists, and certified landscape designers.

The landscape professional for a project must sign all landscape plan sheets 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 the approved plans (Attachment A).

2. Landscape plan submittal

Landscape plans must be included in approved plan set for land use and building applications and must include the following information:

a. Required statement on landscape drawings: "All plantings and landscape elements, including irrigation as noted, required as part of a land use permit or building permit must be maintained for the life of the project, per the Landscape Management Plan."
b. Total lot size or project area and dimensions
c. Location and size of all planting and landscaping areas, with dimensions
d. Locations, sizes, and species of all plants used to meet Green Factor requirements
e. Both common and scientific names of all existing and proposed plant material
f. For existing trees to be preserved: location, trunk diameter at standard height (4.5 feet above grade), canopy radius drawn to scale, genus and

species, basic and proposed reduced (if any) tree protection areas, and proposed location of tree protection fencing

i. If a proposal intends to reduce the basic tree protection area as allowed by this rule, show the reduced tree protection area and attach an report that describes the reasons the reduction is required and includes a list of additional necessary tree protections related to the proposed reduction.

g. For proposed trees in the right-of-way: depth of planting medium; width of planting strip; location of existing overhead and underground utilities and utility poles, meters, or other structures; and species and diameter of the trees
h. For proposed trees to be removed: locations, genius and species, driplines, and sizes at standard height of trees; mark these trees with an "X" to indicate proposed removal
i. For proposed structural soils: standard section showing soil volume and location under walking paths, sidewalks, etc.
j. For proposed container plantings: size and depth of containers and total soil or planting medium volume for each container
k. For proposed green roofs: depth of planting medium, including a standard section for each type of green roof credit earned
l. For proposed vegetated walls: location, dimensions from adjacent structures, dimensions of planting medium and total soil or planting medium volume for each distinct area of vegetated wall
m. For proposed parking lots and planted areas adjacent to driveways: location and dimensions of wheel stops, curbs, or other devices to protect landscaping
n. Specifications for soil improvement, including decompaction, amendment, and mulching
o. Specifications for soil maintenance that prohibits working or installation of soil when wet, and prohibition of potential compacting activities (e.g. foot traffic) on installed soils
p. Proposed irrigation and what type of system(s) will be used.
q. Signature of landscape professional (defined in Section 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

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

r. Total square footage of planted area required and proposed
s. Number of trees, number of shrubs, and quantity of ground cover required and proposed.

Where Green Factor applies, the following must also be included in the approved plan set:

t. Landscape plan with Green Factor elements called out by Green Factor category and planting area. These may be provided as part of the landscape plan.
u. Green Factor Worksheet (Attachment B)
v. Green Factor Score Sheet (Attachment C).

Landscape plan approval notes:

w. When landscape features in the right-of-way are used to meet Green Factor requirements, building permit plans must be approved by both SDOT and SDCI.
y. For projects requiring a land use permit, landscape plans for the right-of-way must receive SDOT concept approval before SDCI will approve a land use application.

3. Substitutions and other landscape plan revisions

Changes to approved landscape plans that include the following features require a Building Permit revision and approval by SDCI:

a. Reductions in the number of trees, shrubs, or amount of groundcover
b. Changes to the location of plants required for screening
c. Changes to any physical feature that could decrease the total planting area or reduce the Green Factor score below code requirements
d. Any other change that could fail to meet a specific permit condition
e. Substitution of plant species if the substituted plant is smaller, covers less area, or is less drought-tolerant than the species shown in approved plans sets

Revisions under any of these conditions must demonstrate the revised plan continues to be consistent with applicable MUP or building permit conditions. Changes in street tree species from an approved Street Improvement Permit requires a revision to that permit and final 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 set prior to issuance of a Certificate of Occupancy.

a. *Temporary Certificate of Occupancy*
Applicants may request an exception to the installation requirement and a temporary Certificate of Occupancy. To grant an exception, the Director must find that landscape installation work is not currently possible (for example, due to drought conditions, the season, or the phasing of the project). Under such circumstances a temporary Certificate of Occupancy may be granted. When a temporary Certificate of Occupancy is issued, all required landscaping must be installed within four months of occupancy.

5. Maintenance

All plantings, hardscape elements, required irrigation and other fixtures required as part of a land use permit or building permit must be maintained by the property owner or designee 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 landscaping and Green Factor requirements.

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

For each site required to comply with Green Factor, a landscape professional (as defined in Section 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 systems, weed and pest control, control of invasive species, and care and maintenance of water or hardscape features. The maintenance plan is not submitted to SDCI, but the project's landscape professional must sign the Landscape Improvement Checklist (Attachment A) 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.

7. Verification

Prior to issuance of the final Certificate of Occupancy, a Landscape Improvement Checklist (Attachment A) must be signed by the project's landscape professional (Section IV.1) and submitted to the building inspector, verifying that all landscape features have been installed or preserved according to the permit issued 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 per 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.

Attachment A

Landscape Improvement Checklist

I, _____, declare as follows:

□ I am a landscape professional, as defined in Subsection C.1 of Director's Rule 10-2011, 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 the Landscaping Director's Rule (10-2011). 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).

Attachment B

The interactive Excel version of the worksheet can be found on the Seattle Green Factor webpage

Green Factor Worksheet SEATTLE×green factor

Project title:		Planting Area							
		1	2	3	4	5	6	7	
Landscape Elements		Step 1. Enter all values for Green Factor landscape elements here. Values entered here will automatically populate the Score Sheet. Step 2. Go to the Score Sheet and enter the size of the development site. Step 3. Check the Score to make sure your project meets the minimum score for the zone. *Totals on the Green Factor Scoresheet will calculate automatically							
	Measurement								Total
A1	square feet								0
A2	square feet								0
B1	square feet								0
B2	# of plants								0
B3	# of plants								0
B4	# of trees								0
B5	# of trees								0
B6	# of trees								0
B7	# of trees								0
B8	Inches DBH								0
C1	square feet								0
C2	square feet								0
C3	square feet								0
D	square feet								0
E1	square feet								0
E2	square feet								0
F	square feet								0
G1	square feet								0
G2	square feet								0
G3	square feet								0
G4	square feet								0

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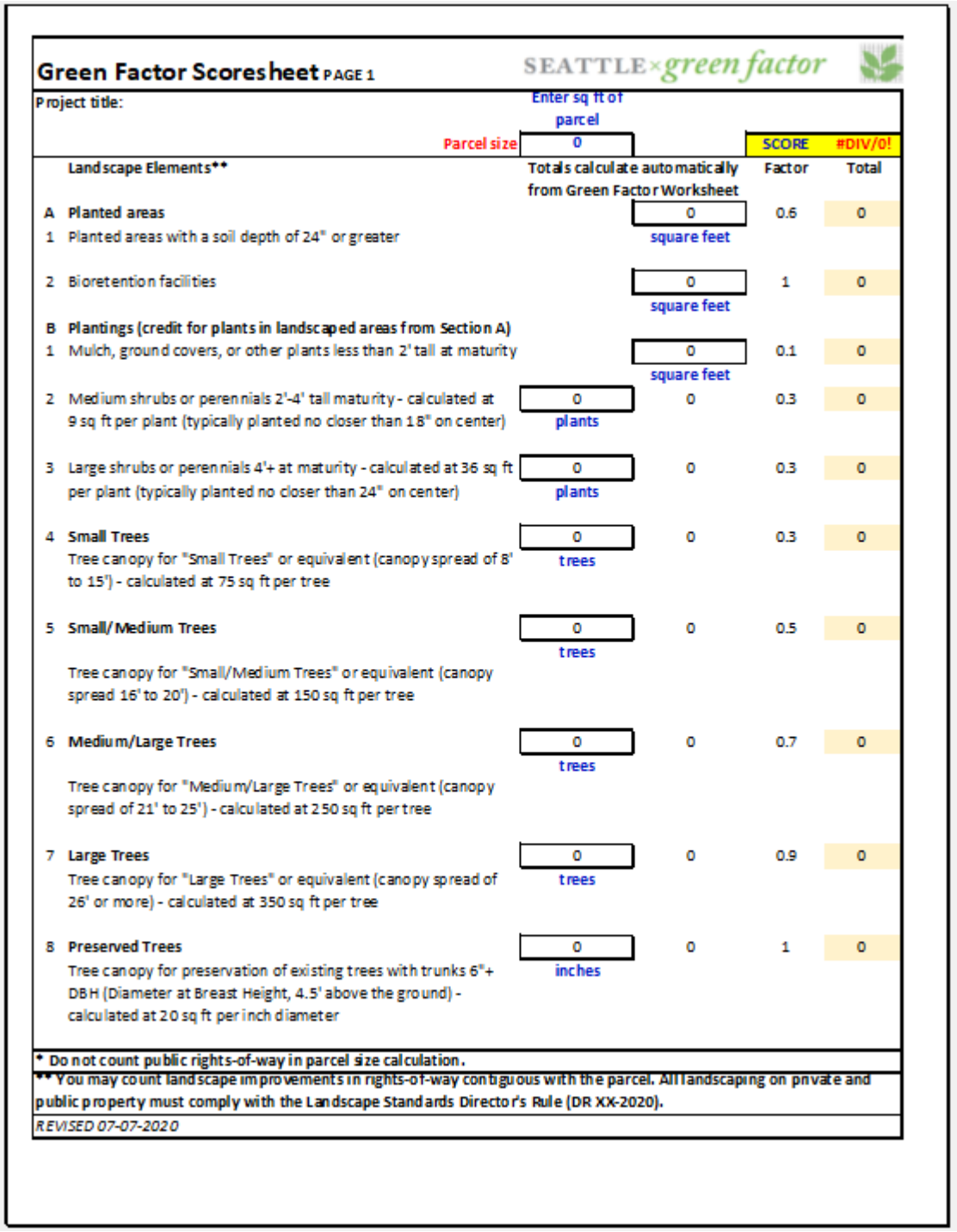
Attachment C

The interactive Excel version of the scoresheet can be found on the Seattle Green Factor webpage



Green Factor Scoresheet PAGE 1 — SEATTLE×green factor

Project title:

Enter sq ft of parcel

Parcel size: 0

	Landscape Elements**	Totals calculate automatically from Green Factor Worksheet		SCORE Factor	#DIV/0! Total
A	**Planted areas**		0 square feet	0.6	0
1	Planted areas with a soil depth of 24" or greater				
2	Bioretention facilities		0 square feet	1	0
B	**Plantings (credit for plants in landscaped areas from Section A)**				
1	Mulch, ground covers, or other plants less than 2' tall at maturity		0 square feet	0.1	0
2	Medium shrubs or perennials 2'-4' tall maturity - calculated at 9 sq ft per plant (typically planted no closer than 18" on center)	0 plants	0	0.3	0
3	Large shrubs or perennials 4'+ at maturity - calculated at 36 sq ft per plant (typically planted no closer than 24" on center)	0 plants	0	0.3	0
4	**Small Trees** Tree canopy for "Small Trees" or equivalent (canopy spread of 8' to 15') - calculated at 75 sq ft per tree	0 trees	0	0.3	0
5	**Small/Medium Trees** Tree canopy for "Small/Medium Trees" or equivalent (canopy spread 16' to 20') - calculated at 150 sq ft per tree	0 trees	0	0.5	0
6	**Medium/Large Trees** Tree canopy for "Medium/Large Trees" or equivalent (canopy spread of 21' to 25') - calculated at 250 sq ft per tree	0 trees	0	0.7	0
7	**Large Trees** Tree canopy for "Large Trees" or equivalent (canopy spread of 26' or more) - calculated at 350 sq ft per tree	0 trees	0	0.9	0
8	**Preserved Trees** Tree canopy for preservation of existing trees with trunks 6"+ DBH (Diameter at Breast Height, 4.5' above the ground) - calculated at 20 sq ft per inch diameter	0 inches	0	1	0

* 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 XX-2020).

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Attachment C continued

Green Factor Scoresheet PAGE 2

SEATTLE×green factor

C	**Green roofs**			
1	Green roofs over at least 2" and less than 4" of growth medium	0 square feet	0.4	0
2	Green roofs 4" - 8" of growth medium	0 square feet	0.6	0
3	Green roofs 8"+ of growth medium	0 square feet	0.8	0
D	**Vegetated walls** NC, C, SM, and South Downtown zones only	0 square feet	0.4	0
E	**Permeable paving**			
1	Permeable paving over at least 6" and less than 24" of soil or gravel	0 square feet	0.2	0
2	Permeable paving over at least 24" of soil or gravel	0 square feet	0.5	0
F	**Structural soil systems**	0 square feet	0.5	0
	sub-total of sq ft =	0		
G	**Bonuses**			
1	Landscaping that consists of drought-tolerant and/or native plant species	0 square feet	0.1	0
2	Landscaped areas where at least 50% of annual irrigation needs are met through the use of harvested rainwater or collected greywater	0 square feet	0.2	0
3	Vegetation visible to passersby from adjacent public right of way or public open spaces	0 square feet	0.2	0
4	Landscaping in food cultivation	0 square feet	0.1	0
		Green Factor numerator =		0

*** 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 XX-2020).**

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