

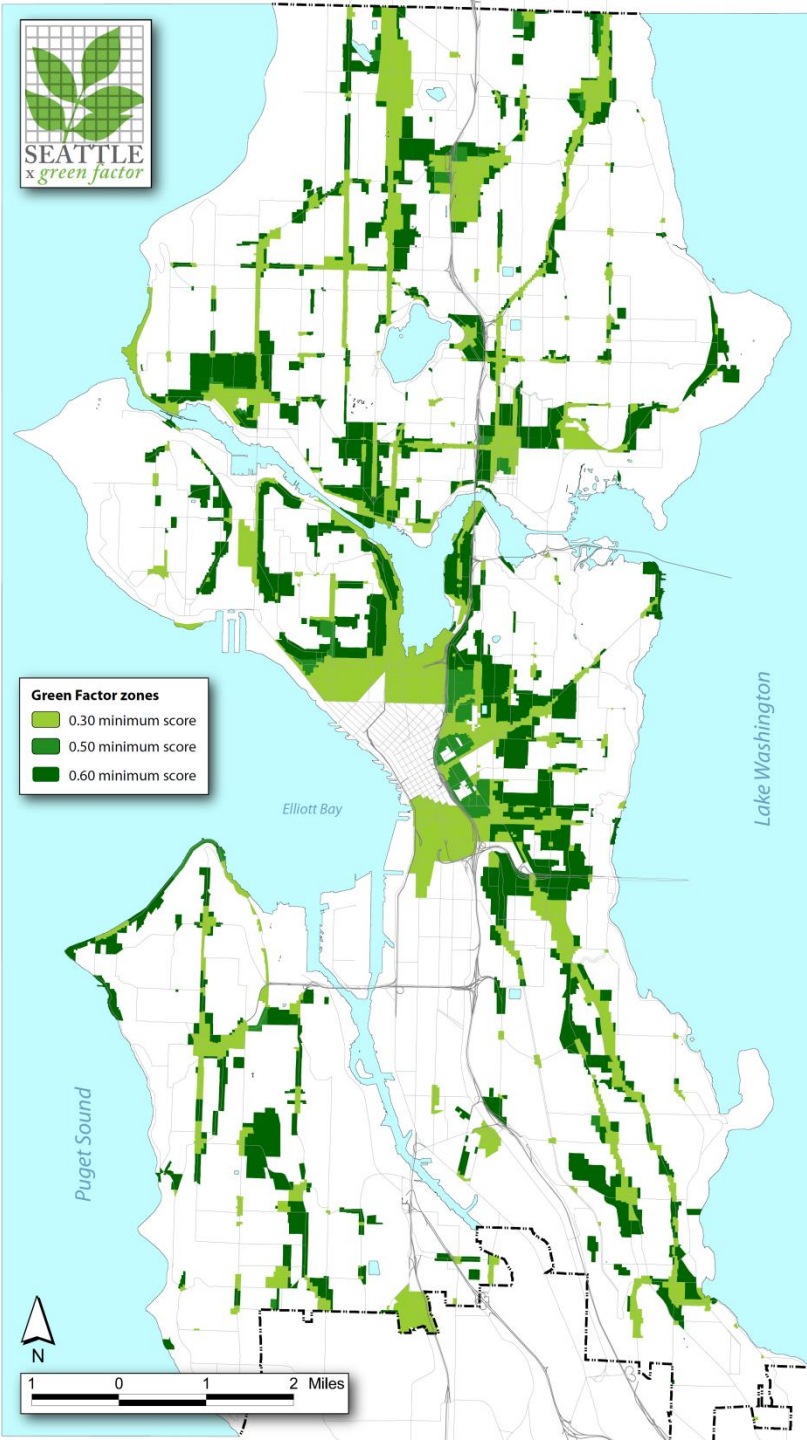
Seattle Green Factor

Improving livability and ecological function
through landscaping standards



Phase IV Terry Plaza Looking East

Dave LaClergue, Urban Designer
Seattle Department of Planning and Development



Overview

- Where did SGF come from?
- How does it work?
- Trends in built projects
- Resources



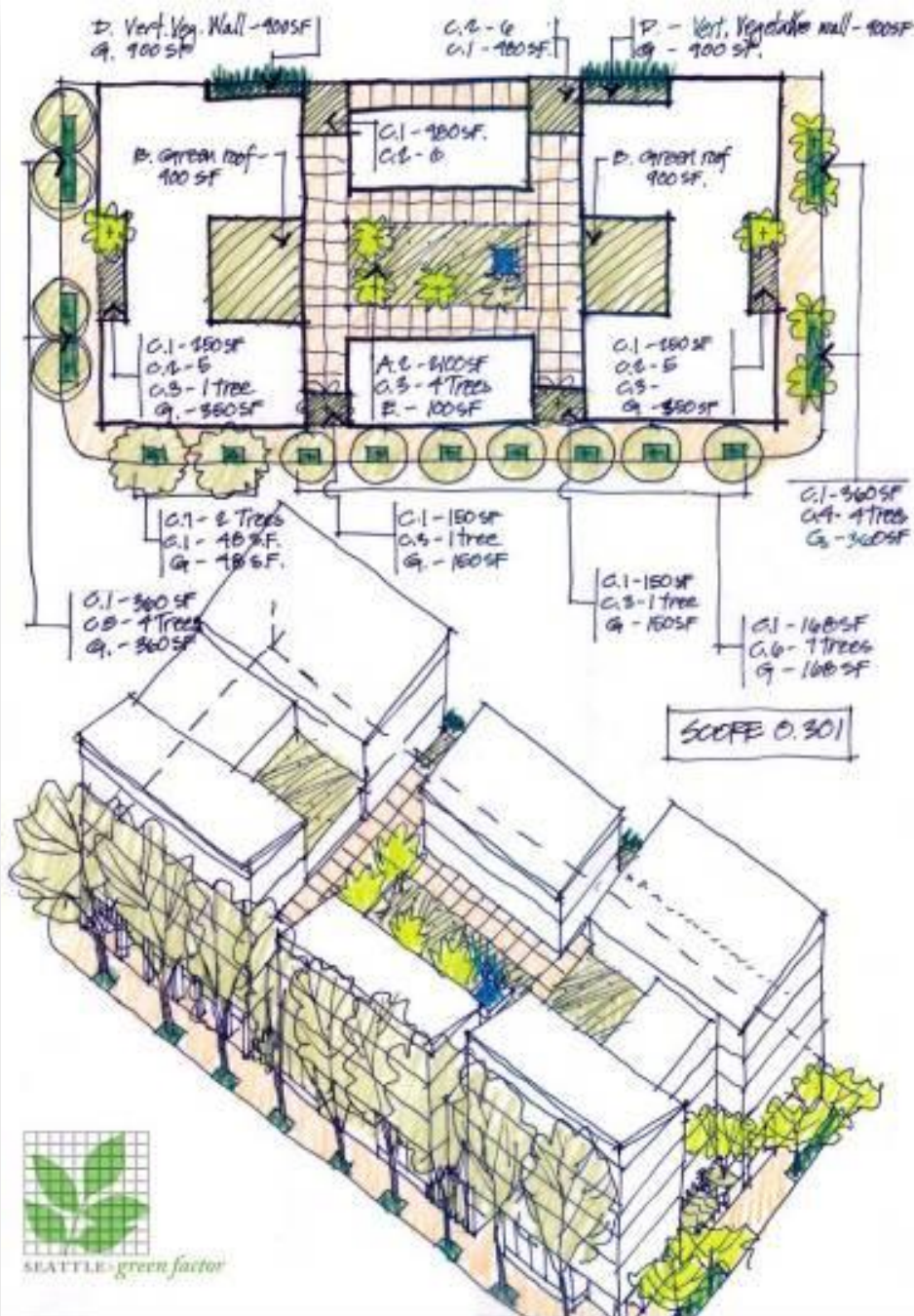
Precedent programs

- Berlin: Biotope Area Factor 1997. Applied to specific neighborhoods throughout the city.
- Malmö: Green Space Factor 2001. Applied to multifamily residential districts.
- Seattle started with Berlin model, modified to reflect Seattle context



How does the Green Factor work?

- Code requirement based on in weighted menu, sets minimum score
- Includes green roofs and walls, bioretention, and permeable paving
- Compliance required for permit approval, can “double-count” toward other requirements



Green Factor Score Sheet

Project title:		enter sq ft of parcel		SCORE	
Parcel size (enter this value first)		5,000		-	
Landscape Elements**		Totals from GF worksheet	Factor	Total	
A Landscaped areas (select one of the following for each area)					
1	Landscaped areas with a soil depth of less than 24"	enter sq ft 0	0.1	-	
2	Landscaped areas with a soil depth of 24" or greater	enter sq ft 0	0.6	-	
3	Bioretention facilities	enter sq ft 0	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	enter sq ft 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 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 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 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 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 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 0	0.8	-	
C Green roofs					
1	Over at least 2" and less than 4" of growth medium	enter sq ft 0	0.4	-	
2	Over at least 4" of growth medium	enter sq ft 0	0.7	-	
D Vegetated walls					
		enter sq ft 0	0.7	-	
E Approved water features					
		enter sq ft 0	0.7	-	
F Permeable paving					
1	Permeable paving over at least 6" and less than 24" of soil or gravel	enter sq ft 0	0.2	-	
2	Permeable paving over at least 24" of soil or gravel	enter sq ft 0	0.5	-	
G Structural soil systems					
		enter sq ft 0	0.2	-	
		sub-total of sq ft =	0		
H Bonuses					
1	Drought-tolerant or native plant species	enter sq ft 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 0	0.2	-	
3	Landscaping visible to passersby from adjacent public right of way or public open spaces	enter sq ft 0	0.1	-	
4	Landscaping in food cultivation	enter sq ft 0	0.1	-	
		Green Factor numerator =			

Score sheet

- Applicant enters number and/or square footage of landscape features
- Score sheet multiplies each feature by a factor (from 0.1 to 1.0)
- Total divided by parcel size, translates to % or Green Factor score
- Favors layered plantings, right-of-way improvements, and "bonuses"

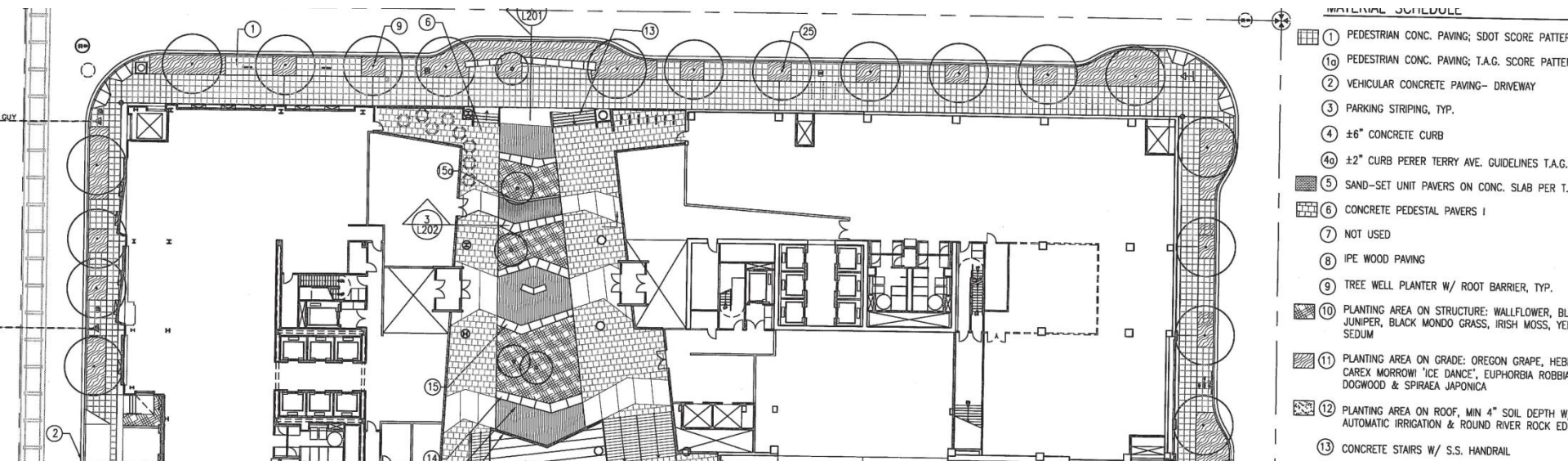
Where does Green Factor apply?

Zone	Minimum score
Commercial & Neighborhood Commercial	0.30 (2006)
Industrial Commercial (in Urban Villages)	0.30 (2010)
Midrise and Highrise Residential	0.50 (2009)
Lowrise Multifamily Residential	0.60 (2010)
South Downtown	0.30 (2011)
South Lake Union	0.30 (2013)

- Same scoresheet used in all zones where GF is required

Qualifications to submit plans

Project size	Minimum designer qualifications
<p><10 housing units <20 new parking spaces <12K sq ft nonresidential development <500 sq ft container plantings</p>	<p>Certified landscape designer, certified professional horticulturalist, licensed landscape architect</p>
<p>Projects exceeding the thresholds above</p>	<p>Licensed landscape architect</p>



Trends in built Green Factor projects

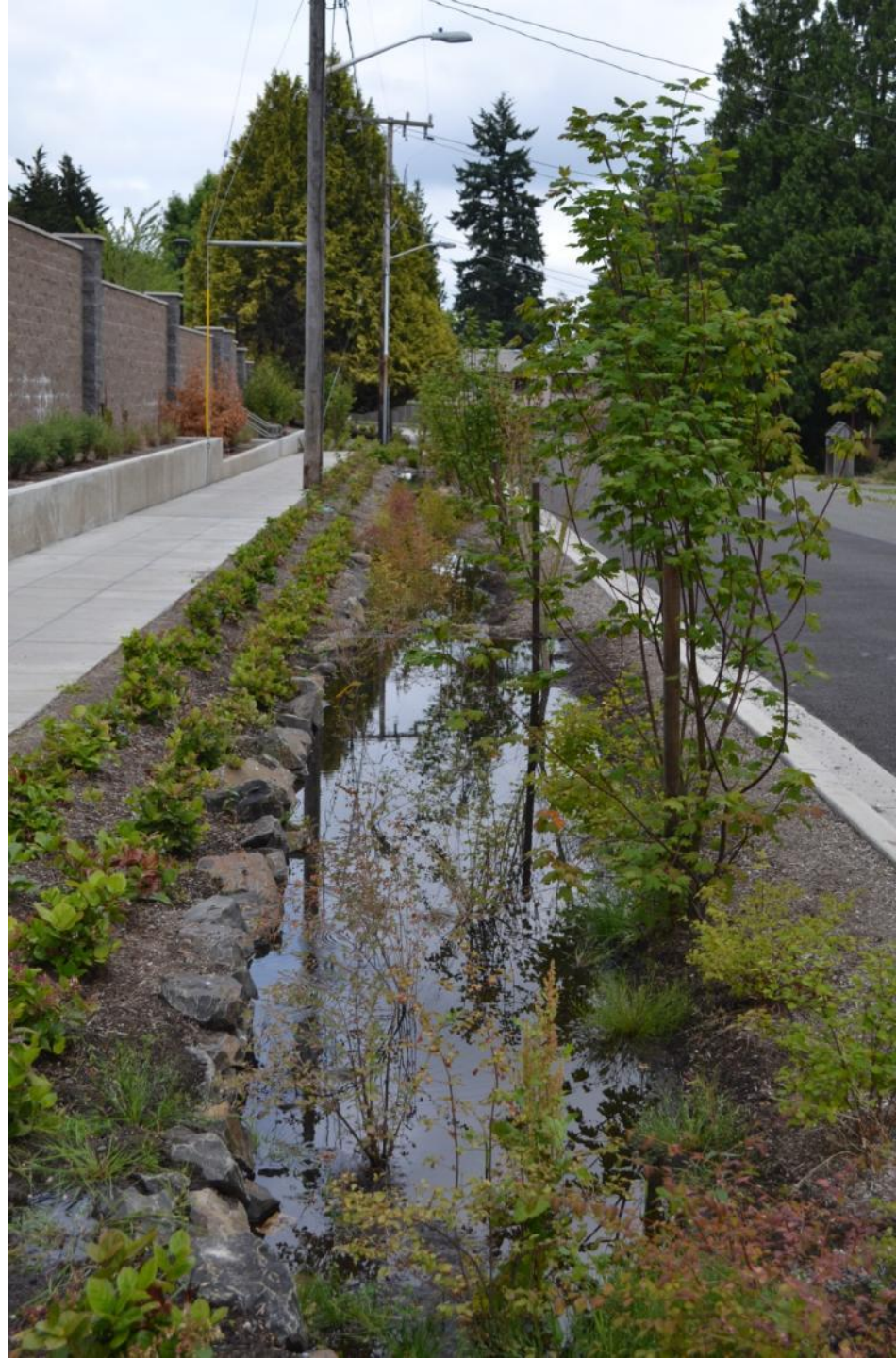


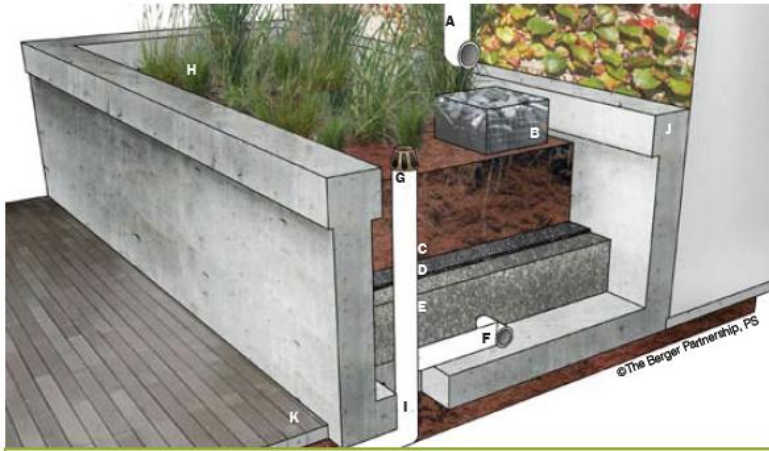
- Higher quality, better-integrated landscape design
- Increased use of permeable paving, green roofs, and green walls
- More landscaping provided in/adjacent to rights-of-way
- Landscaping incorporated with on-structure amenity areas











Stormwater Planters

Stormwater planters are containers designed to capture and either retain or infiltrate stormwater based on their design. The amount and frequency of water captured depends on storm events, so they should be populated with a variety of plants adapted to both wet and dry conditions. Visually they can be striking landscape features providing a high functional value. While more expensive than bioswales, stormwater planters provide many benefits and are appropriate for areas with space constraints or on structure.

Graphic Legend

- Rainwater Source
- Splash Block
- Amended Soil
- Filter Fabric
- Gravel
- Perf. pipe along planter bottom
- Overflow Drain
- Plantings
- Pipe to stormwater system
- Planter wall w/ waterproofing
- Pedestrian area

A3

Element- Stormwater Planter

Functional Benefits

Reduced runoff
Improved runoff quality

Environmental Considerations

Embodied energy and carbon in concrete

Factor - 1.0

1.0



0.1



0.1
GF

tinyurl.com/ greenfactor

- Score sheet & worksheet
- Plant and tree lists
- Landscaping Director's Rule
- Landscape management plan template
- Case studies (landscape plans, photos, scoresheets)
- Rainwater harvesting calculator
- Research, explanatory reports, presentations

BIG PLANTER



LOWER PLANTERS



BENCH NOOK



STREET TREES



NOTES

DOWNSPOUTS AND GREEN ROOFS CONNECT TO LOWER PLANTERS. STREETSIDE PLANTERS RECEIVE SOUTH OREGON ST. RUNOFF. COURTYARD AND UPPER PLANTERS OVERFLOW TO BIG PLANTER.

1" = 10'0"



GREEN WALL



GARDEN OF LIGHT



COURTYARD



UPPER PLANTERS



DOWNSPOUTS & RUNNELS



GREEN ROOFS



Beacon Hill

Recommendations Meeting

SCALE: N.T.S.

APPLICANT:
BRANDON SKINNER

MATERIALS

4351 15th Ave South, Seattle, WA 98108

H+dIT
collaborative, llc

architecture + planning + design
3400 phinney avenue n.
seattle washington 98103
tel: 206.545.0700 fax: 206.545.0700

DATE:
07.23.08