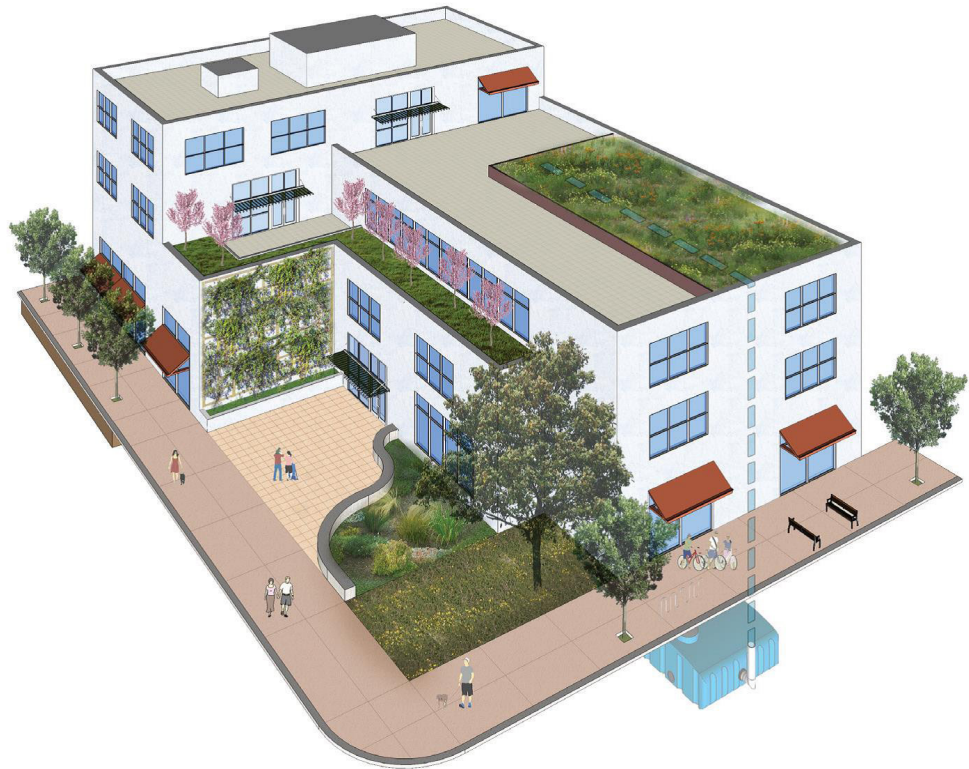


23-3D-3110 Functional Green**(A) Description.**

- (1) Functional Green Landscape is a two-tiered approach to fulfilling the purpose of the landscape code. The first tier requires landscape elements to be placed in specified areas of a site, thus protecting private and public investment, providing visual buffering, limiting overcrowding, and enhancing property values. The second tier is a scoring system that measures the ecosystem service value created by landscape; it is intended to improve ecological balance, replenish native vegetation, and enhance public health, safety, and welfare.
- (2) The Functional Green Score measures the total amount of ecosystem services provided by the landscape elements proposed for a development site. Landscape plans are required to reach a total target Functional Green Score based on the assigned value per square foot area of each landscape element in relation to the area of the site.

(B) Applicability.

- (1) Functional Green Score applies to all sites that allow an impervious cover total exceeding 80 percent.
- (2) Functional Green Score may also apply to a site that is restricted to an impervious cover less than 80 percent and elects to use this approach to meet requirements of the landscape code.

(C) Requirements.

- (1) A Functional Green Landscape plan is required to:
 - (a) Comply with all applicable landscape and buffer types (Sections 23-3D-3030 through 23-3D-3100);
 - (b) Comply with Planting and Soil Standards in the ECM;
 - (c) Reach the Functional Green Target Score (prescribed in the ECM); if the target score cannot be reached by providing the applicable landscape and buffer types, Functional Green Landscape Elements must be added in order to reach the Functional Green Target Score;
 - (d) Be designed to accommodate the minimum space requirements for each landscape element proposed to meet the Functional Green Score.
 - (e) Provide 100 percent of plant selections as prescribed in the ECM;
 - (f) Provide 100 percent drought tolerant plants, as prescribed in ECM Appendix N;
 - (g) Ensure that Functional Green landscapes provide a variety of ecosystem services by providing a minimum of 3 different Functional Green Landscape Elements, 2 which must be living elements; trees and shrubs/ornamental grasses of different sizes may count independently as different elements; and
 - (h) Prepare and submit an Integrated Pest Management (IPM) plan for the proposed development, as prescribed in the ECM.
 - (i) The following note shall be added to the landscape plan: "This landscape plan uses the Functional Green scoring system. A site plan revision is required to modify any element of the landscape plan."

(D) Functional Green Score.

- (1) To calculate the Functional Green Score, the total square foot area of each landscape element is measured and then multiplied by the Functional Green Multiplier, as prescribed in the Environmental Criteria Manual. The weighted-area value of each landscape element is then summed and divided by the total area of the site. (Landscape elements may be planted in the public right-of-way, but the site-area denominator does not include the area of the public right-of-way.) The City will provide a Functional Green Score calculation spreadsheet.

Functional Green Score	=	(Area [sq. ft.] of Landscape Element A x Multiplier A)	(Area [sq. ft.] of Landscape Element B x Multiplier B)	(Area [sq. ft.] of Landscape Element C x Multiplier C)
Total Area [sq. ft.] of Site ¹				

¹Landscape Elements integrated into the right-of-way can be used for Functional Green credit; however, the right-of-way is not included in the total site area.

23-3D-3120 Functional Green Landscape Elements**(A) Existing tree.**

(1) Definition: A living tree in healthy condition existing on-site or in the public right-of-way prior to construction of the project under review.

(2) Requirements.

(a) Only existing Appendix F trees are eligible for Functional Green credit.

(b) Tree canopy map must be produced by professional engineer, landscape architect, or a qualified arborist.

(3) Additional Opportunities:

(a) Division 23-3D-4 (Open Space).

(B) Newly planted tree.

(1) Definition: A tree planted on site or in the public right-of-way.

(2) Requirements.

(a) Soil volume requirement must be met, including for trees planted above ground, as prescribed in the ECM.

(b) Trees planted in the right-of-way must have a continuous bed, unless restricted by required utility crossings.

(c) Only trees listed in the ECM Appendix F are eligible for Functional Green credit.

(3) Additional Opportunities.

(a) Section 23-4D-6030 (Water Quality Control and Green Stormwater Infrastructure Standards). Restrictions on trees allowed for use in green stormwater infrastructure controls apply.

(b) Division 23-3D-4 (Open Space).

(C) Shrubs, Ornamental Grasses, and Perennial Forbs.

(1) Definition: Vegetation that is woody, evergreen, bunch-like, clumping, or has a year-round structure and is greater than 2 feet in height.

(2) Requirements.

(a) Only plants listed in the ECM Appendix N are eligible for Functional Green credit.

(3) Additional Opportunities.

(a) Section 23-4D-6030 (Water Quality Control and Green Stormwater Infrastructure Standards).

(b) Division 23-3D-4 (Open Space).

(D) Groundcover.

- (1) Definition: Low spreading vegetation less than 12 inches in height.
- (2) **Requirements.**
 - (a) Plant spacing must be 18 inches, on center.
 - (b) Turf grass will not receive ground cover credit.
 - (c) Only plants listed in the ECM Appendix N are eligible for Functional Green credit.
- (3) **Additional Opportunities.**
 - (a) Section 23-4D-6030 (Water Quality Control and Green Stormwater Infrastructure Standards).
 - (b) Division 23-3D-4 (Open Space).

(E) Turf.

- (1) Definition: Grass that is regularly mowed or maintained for aesthetic or athletic applications.
- (2) **Requirements.**
 - (a) Provide a planting plan illustrating the area of turf grass.
 - (b) Turf may not be replaced with artificial turf or aggregate.

(F) Vegetated Wall.

- (1) Definition: Vertical surfaces created by climbing vines, trailing plants, or espaliered trees, installed at ground level or in green roof media. They can grow upwards or cascade down.
- (2) **Requirements.**
 - (a) Minimum width of bed is 18 inches. Maximum spacing between plants is 18 inches.
 - (b) Plantings must be designed to reach a minimum height of 12 feet.
 - (c) Specify support structure along vertical element for vegetation that cannot attach itself to the wall naturally.
 - (d) A panel of plants grown vertically, sometimes called a living wall or vertical garden, does not qualify for Functional Green credit.
 - (e) Provide elevation drawing with key.

(G) Irrigation with alternative water source.

- (1) Definition: Irrigation of landscape with any non-potable source of water. Functional Green recognizes two categories of alternative water sources: On-Site, which is any non-potable water sourced from the site, including but not limited to graywater, rainwater, A/C condensate, and process water; and Reclaimed, which is distributed through a centralized system.
- (2) **Requirements.**
 - (a) Provide a water budget, with zones.
 - (b) Describe make-up potable water source.

(H) Vegetated (Green) roof.

- (1) Definition: An assembly or system that supports an area of planted media, built up on a waterproofed surface at any level that is contained separately from the natural ground by a human-made structure.
- (2) **Requirements.**
 - (a) Provide maintenance access (including for transport of needed replacement materials in future, e.g., plants, soil, etc.).
 - (b) Provide landscape inspector with letter of concurrence demonstrating adequate structural loading capability of roof.
 - (c) Add a note to landscape sheet: "Vegetated roof will be designed in compliance with the codes and ordinances of the City of Austin."
- (3) **Additional Opportunities.**
 - (a) Section 23-4D-6030 (Water Quality Control and Green Stormwater Infrastructure Standards).
 - (b) Subsection 23-4D-3040(B)(12) impervious cover calculations exclude subsurface portion of a parking structure if requirements of the section are met.
 - (c) Subsection 23-4E-2060(F)(9) Green Roof Community Benefit.
 - (d) Section 23-3D-4040 (Design).
 - (e) Subsection 23-3C-10100(H)HD Overlay and Preservation Plan Standard.
 - (f) Subsection 23-3D-6040(C)(3) (Sustainable Roof) Local Amendments to the Energy Code, 5.4.4 Roof Solar Reflectance and Thermal Emittance.
- (4) **Resources:**
 - (a) City of Austin Green Roof website: <http://www.austintexas.gov/department/green-roofs>

(I) Rain garden.

- (1) Definition: A vegetated, depressed landscape area designed to capture and infiltrate and/or filter stormwater runoff.
- (2) **Requirements.**
 - (a) Rain gardens must be designed to water quality and drainage standards of the LDC, ECM, and DCM.
 - (b) If trees are proposed, species and placement must comply with LDC & ECM.
- (3) **Additional Opportunities.**
 - (a) Section 23-4D-6030 (Water Quality Control and Green Stormwater Infrastructure Standards).
 - (b) Division 23-3D-4 (Open Space).

(J) Porous pavement.

(1) Definition: Paving material or pavers that allow water to pass through voids in the paving material or between pavers while providing a stable, load-bearing surface.

(2) Requirements.

(a) Porous pavement must be designed to water quality and drainage standards of the LDC, ECM, and Drainage Criteria Manual.

(3) Additional Opportunities.

(a) Section 23-4D-6030 (Water Quality Control and Green Stormwater Infrastructure Standards).

(K) Suspended Pavement System.

(1) Definition: Paving techniques designed to transfer the load from pavement directly to the subsoil rather than the topsoil media. These systems promote additional soil volume for trees than is otherwise available under conventional pavement systems.

(L) Pollinator Resources.

(1) Definition: Pollinator plants identified as such in ECM Appendix N.

(2) Requirements.

(a) In order to count as pollinator resources, a single species of pollinator plants must cover a minimum of nine contiguous square feet.

(M) Publicly Accessible Green

(1) Definition: Vegetation planted in the right-of-way or adjacent to a publicly accessible sidewalk.

(2) Requirements.

(a) Turf may not receive credit for this element.

23-3D-3130 Submittal Requirements

(A) A landscape plan shall be submitted as part of a site plan and shall:

(1) Be sealed by a landscape architect licensed to practice in the State of Texas;

(2) Be drawn to scale and include property boundaries, north arrow, engineer or architect's graphic scale, and date;

(3) Delineate existing and proposed structures, parking bays/stalls, access ways and other vehicular use areas, sidewalks, utilities, easements, and height and voltage of power lines on the property or adjacent property;

(4) Show the specific location, species, size and quantities of proposed trees, shrubs, ornamental grasses, and perennial forbs;

(5) Depict proposed measures for stormwater control;

(6) Include a "landscape legend" that identifies the common and scientific name of plants, quantities of the plants to be installed, sizes of plants to be installed, and complies with the format established in the Environmental Criteria Manual;