

Sec. 656.1211. - Florida-Friendly Landscape and Irrigation design standards.

- (a) All landscapes shall be designed to achieve water efficiency by:
- (1) Preserving existing plant communities;
  - (2) Re-establishing of native plant communities per Comprehensive Plan objectives and polices;
  - (3) Using Florida-Friendly plant materials which are appropriate for the site conditions;
  - (4) Grouping plant material with similar irrigation requirements;
  - (5) Using pervious paving materials; and
  - (6) Using highly drought tolerant grass species per BMPs.

Existing plant communities should be preserved and native plant communities be re-established wherever possible. Landscaped areas requiring irrigation shall be designed to group trees, shrubs, ground cover and turfgrass together into water use zones. The water use zones are as follows:

High Water Use Zone—areas of the site limited to a maximum of 30 percent of the total landscaped area with plants and turf types which, within this area, are associated with moist soils and require supplemental water in addition to natural rainfall to survive. This zone includes nondrought tolerant turfgrass varieties.

Moderate Water Use Zone—areas of the site with plants, including drought tolerant turfgrass varieties, which survive on natural rainfall with supplemental water during seasonal dry periods.

Low Water Use Zone—areas of the site which shall be designed with a minimum 30 percent of the total landscape area provided with plants which survive on natural rainfall without supplemental water. Because of the tendency to maintain turfgrass with supplemental watering, turfgrass shall not be permitted in this zone. The minimum Low Water Use Zone area required for a single-family residential lot may be reduced one percent for every one percent reduction below the maximum High Water Use Zone area provided on the lot.

Plants with similar water and cultivation requirements (soil, climate, sun and light) shall be grouped together and irrigated according to their water requirements.

- (b) Trees shall not be placed where they interfere with site drainage or where they shall require frequent pruning in order to avoid interference with overhead power lines. Unless otherwise provided in this Section, a minimum number of trees shall be planted or preserved upon each site, pursuant to the following standards which are the minimum requirements for landscaping within the City of Jacksonville.
- (1) Minimum tree planting requirements for all property upon which either a single-family dwelling or a mobile home on an individual lot is located or to be located: One four-inch caliper tree or multiple two-inch minimum caliper trees totaling four caliper inches shall be

planted and/or preserved for every 5,000 square feet of lot area, plus an additional two caliper inches for every 2,500 square feet of lot area (but not a portion thereof) in excess of 5,000 square feet, excluding therefrom preserve areas and water bodies. Trees planted shall meet the general criteria specified in subsection (e)(3) hereunder.

- (2) Minimum tree planting requirements for all property other than property upon which either a single-family dwelling or a mobile home on an individual lot is located:
  - (i) One tree shall be planted and/or preserved for every 5,000 square feet of lot area, or portion thereof, which is located in any residentially-zoned district, AGR (Agricultural) District, PBF-2 (Public Buildings and Facilities) District, excepting public facilities), CRO (Commercial Residential Office) District, RO (Residential Office) District, CN (Commercial Neighborhood) District, CCG-1 (Commercial Community General) District, excluding therefrom preserve areas and water bodies.
  - (ii) One tree shall be planted and/or preserved for every 8,000 square feet of lot area or portion thereof, excluding therefrom preserve areas and water bodies in all commercial districts, except as otherwise provided herein.
  - (iii) One tree shall be planted and/or preserved for every 10,000 square feet of lot area or portion thereof, excluding therefrom preserve areas and water bodies in any industrial district or Public Facilities (PBF) District (except private facilities in each district).
- (c) Trees, excluding palm trees, which are larger than the minimum size may be credited as indicated in Table 1. A minimum of 50 percent of all required trees shall be shade trees.
- (d) Trees required for vehicular use area landscaping may be used to fulfill the tree requirements of this Section.
- (e) Standards for landscape materials.
  - (1) *Quality of plants:* All plant material shall be a minimum of Florida Number One as defined in the most current edition of the Grades and Standards for Nursery Plants, Part I and II, published by the Florida Department of Agriculture and Consumer Services.
  - (2) *Appropriate plant selection:* Plants shall be selected that are best suited to withstand the soil and physical growing conditions which are found in the microclimate of each particular location on a site. Plant species that are freeze and drought tolerant are preferred. Plants having similar water needs shall be grouped in distinct water use zones. Protection and preservation of native species and natural areas shall be provided. The planting of invasive plant species and controlled plant species is prohibited. Information regarding plants classified as prohibited, invasive, exotic, controlled or Florida-Friendly can be obtained from the Florida Department of Environmental Protection, the University of Florida/IFAS Duval County Extension Office and the City of Jacksonville, Building Inspection Division, Landscape Section.

- (3) *General criteria for trees:* Trees shall be a species having an average mature crown spread of no less than 15 feet in northeast Florida. Trees having a mature crown spread of less than 15 feet, if grouped to create an equivalent 15 foot spread, may be substituted for the required tree. Single-trunk trees shall be a minimum of two inch caliper and a minimum of ten feet overall height. Multi-trunk trees shall be a minimum of three trunks eight feet high. Trees shall be planted in no less than 16 square feet of planting area, with a minimum dimension of four feet on any side. Trees shall not be planted closer than two feet from any pavement edge or right-of-way line, as measured from center of trunk. Architectural planters for trees shall be no less than four feet by four feet in width and no less than 24 inches deep. Credits for the use of trees larger than the minimum size will be calculated as indicated in Table 1. Fractional measurements shall be attributed to the next lowest category.
- (i) *Shade trees:* Shade trees shall be a species having an average mature crown spread of no less than 30 feet; provided, trees having an average mature crown spread of less than 30 feet may be grouped so as to create a total average mature crown spread of no less than 30 feet and used in lieu of a shade tree. Shade trees at the time of planting shall be a minimum of two inch caliper and ten feet high. Shade trees shall be planted in no less than 150 square feet of planting area, with a minimum dimension on any side of eight feet. Shade trees shall not be planted closer than four feet from any pavement edge or right-of-way line, as measured from center of trunk. Those species of trees whose roots are known to cause damage to pavement shall not be planted closer than six feet to such pavement.
- (ii) *Palm trees:* Palms shall be a minimum clear trunk height of eight feet, measured from the ground level to the base of the palm fronds. Palms may be substituted for the required trees at the ratio of two palms for each required tree or four palms for each required shade tree, except as provided below for Phoenix Palm. Each palm shall be planted in no less than 16 square feet of planting area, with a minimum dimension of four feet. Phoenix Palm may be used as a non-shade tree without meeting the ratios for other types of palms if the palm has a fifteen foot spread at maturity and a minimum clear trunk height of eight feet.
- (4) *Criteria for shrubs, vines and ground covers:* Hedges and shrubs used to form an opaque screen shall be no less than three-gallon container grown material or equivalent balled and burlap material. All other shrubs, dwarf shrubs and groundcover shall be of a size and spaced in such a manner so as to provide 85 percent coverage within two years after planting. Vines shall be evergreen and shall have a minimum of four stems 12 inches long immediately after planting.
- (5)

*Turfgrass:* The species and location of turfgrass areas shall be selected in the same manner as with all other planting regarding BMPs. Turfgrass areas shall be placed so as to be irrigated using separate zones from non-turf plantings. Turfgrass may be sodded, plugged, sprigged or seeded, except that solid sod shall be used on grass areas within street rights-of-way disturbed by construction, in swales, on slopes of four to one or greater, and on other areas subject to erosion. When permanent seed is sown during its dormant season, an annual winter grass shall also be sown for immediate effect and protection until permanent coverage is achieved.

- (6) *Mulch:* A layer of organic mulch shall be applied and maintained in all tree, shrub, ground cover planting areas and bare preserved natural areas. The mulch layer shall not exceed three inches. The use of sustainably harvested mulches such as melaleuca, eucalyptus, recycled organic mulch; dead leaves and pine straw are highly recommended. Gravel mulch is prohibited in plant beds and shall be used only if required by the National Electric Safety Code or in the bottoms of swales, catchment basins and retention areas. Upon review and approval by the Chief, gravel applied in a maximum 24 inch width may be applied at the foundation of buildings for drainage.
- (7) *General clean up:* At the completion of work, construction trash and debris shall be removed and disturbed areas shall be fine-graded and landscaped with shrubs, groundcover, grass or two inches of mulch.
- (8) *Landscaping materials not required by Subpart C:* Landscaping materials not required by Subpart C shall meet all criteria of Subpart C except for plant size and quality.

Table 1.  
Tree and Understory Vegetation Credits—  
Landscape Regulations

Table 1 identifies credits for landscaping under Subpart C only. Table 1 does not identify credits for mitigation required by Subpart B.

Tree Credits for Existing Trees		Tree Credits for New Trees	
Trunk DBH	No. of Trees Credited	Single Trunk Trunk Caliper	No. of Trees Credited
2 inch and above	1	2 inch and above	1
4 inch and above	2	4 inch and above	2

6 inch and above	3	6 inch and above	3
12 inch and above	4		
18 inch and above	4		

Tree Credits for Existing Trees		Tree Credits for New Trees	
Trunk DBH	No. of Trees Credited	Multi-Trunk Tree Height	No. of Trees Credited
24 inch and above	6	8 feet	1
30 inch and above	7	12 feet	2

#### Understory Vegetation Credits

Area of Preserved Existing Understory	Landscape Area Credited
1 square foot	1½ square feet

- (f) *Standards for efficient irrigation design.* The irrigation system may consist of an automatic underground system, micro irrigation, quick coupling valves, or hose bibs located within 75 feet of any landscaped area. The irrigation system shall be installed according to the landscape plan approved pursuant to Section 656.1217. The Chief may waive any irrigation system requirement where it can be shown that this requirement is not necessary to ensure proper irrigation of the area or that other natural or manmade sources of irrigation are sufficient to provide the required irrigation system. Whenever not required, it is strongly recommended that the design requirements of Part 12, which include the BMP, Water Wise Principles and Efficient Irrigation, be followed for single family residential. These standards include, but are not limited to, the following:

- (1)

Irrigation systems shall be designed to meet the needs of the plants in the landscape and to separately serve turfgrass and non-turfgrass areas; the plans and specifications shall identify the materials to be used and the construction methods;

- (2) The system design shall consider soil, slope, and other site characteristics in order to minimize waste water, including overspray on hardscape and other impervious surfaces and off-site runoff;
- (3) Automatic irrigation controllers, when utilized, shall contain a functional sensor device for rain or soil moisture which shall be capable of being set for one minute run times, days of the week, seasons, and time of day, and which shall maintain a battery backup capability to retain programming in the event of a power failure. The controller shall operate all zones of different precipitation rates independently;
- (4) Sensor devices, when utilized, shall be placed on a stationary structure, free and clear of any overhead obstructions and above the height of the irrigation sprinkler coverage;
- (5) Irrigation zones shall be divided according to available flow rate and matched precipitation rates (inches per hour) for heads within each zone, so that spray heads, rotors, and micro irrigation and shall not be mixed on the same zone; pipelines shall be designed to provide the system with the appropriate pressure required for maximum irrigation uniformity; sprinkler heads in turfgrass areas shall be spaced for head-to-head coverage. Whereby head spacing will not exceed 50 percent spray diameter; irrigation areas shall be no less than four feet wide except when adjacent to a contiguous property or when utilizing micro or drip irrigation;
- (6) Irrigation systems shall be fitted with backflow prevention to protect the water source against backflow using a pressure regulating device;
- (7) Irrigation systems shall not be required for preserved plant communities that are maintained in their natural state and barricaded and not impacted by development. The location and technique for barricading of these areas shall be shown on the site clearing plan. Manual or controlled irrigation systems shall be required on a temporary basis during the re-establishment of native plant communities. Once the native plants are re-established, the system may be removed or abandoned.
- (8) Irrigation systems shall be designed to use the lowest quality water feasible.

(Ord. 91-59-148, § 1; Ord. 91-761-410, § 1; Ord. 93-718-395, § 1; Ord. 97-192-E, § 3; Ord. 1999-775-E, § 3; Ord. 2008-910-E, § 1; Ord. 2009-864-E, § 2; Ord. 2011-74-E, § 2; Ord. 2015-338-E, § 1)