

**ARTIFICIAL TURF LANDSCAPE CODE AMENDMENT**

<b>Applicant</b>  City of Orlando  <b>Project Planner</b>  Terrence Miller, Planner II	<b>Property Location:</b> City wide  <b>Summary—</b> Land Development Code Amendment to Chapter 60 (Subdivisions and Landscaping) and Chapter 66 (Definitions) to provide specific regulations for artificial turf and providing standards for the installation and maintenance of artificial turf.  <b>Staff’s Recommendation:</b> Approval  <b>Public Comment</b>  The notice of the public hearing for this proposed amendment was posted in the Orlando Sentinel. Staff did outreach to major builders and found no issues with this proposal.
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**ANALYSIS**
**OVERVIEW**

The City updated the Landscaping Code in November 2013, which seeks to provide a lush, sub-tropical landscaping scheme for the City. It also specified requirements specifically for single family/duplex properties. Further non-living materials are specifically limited and discouraged in the Code – such as rocks, mulch, and arguably artificial turf. Among the reasons listed for the intent of the City landscape code is to enhance the city’s appearance, provide habitats for urban wildlife, improve air and water quality, mitigate heat and glare, and increase land values by providing landscaping as a capital asset; some of these objectives cannot be met with a substantial amount of artificial turf. Therefore, staff is proposing a regulation that allows some installation of artificial turf, spells out the permitting process, and places some limitations on it so that it fits within the context of a sub-tropical environment.

**ANALYSIS**

Many homeowners have turned to artificial turf as a means of replacing their existing lawns with a similar green surface that does not require irrigation or maintenance. The City has received code enforcement complaints regarding installation of artificial turf without a permit. Other residents have inquired about the approval process to install artificial turf. Right now, because the code is relatively silent, staff issued a determination that allows for artificial turf, but requires it to be counted toward the maximum amount of impervious surface on the lot (LDC2019-10020).

Healthy lawns clean and cool the air by absorbing carbon dioxide, releasing oxygen, and collecting dust and dirt. They filter stormwater runoff, facilitate groundwater recharge, and reduce erosion, glare, heat island effect and noise. Turfgrass plays a significant role, when compared to artificial turf, in reducing water runoff in urban and suburban environments that have significant areas of impervious surfaces such as sidewalks and driveways. Because it is not living and made of plastic and rubber - not plant material – artificial turf doesn’t offer any benefits of plants in a sub-tropical environment, such as abating the urban heat island effect. Artificial turf does not provide the cooling effect of a living lawn and becomes quite warm on a sunny day. Soil health is another factor. Instead of increasing the life of your soil, it compacts soil and creates an inhabitable environment for the living organisms in your soil, rendering it unable to grow other plant materials until that soil has been brought back to life.

While some artificial turf systems are designed with a permeable base layer, the 90% required compaction does not permit water absorption into the subgrade. This can cause runoff onto adjacent properties or into the streets/sewers instead of being absorbed into the ground like with turf grass.

As a result, artificial turf will be considered a non-living, impervious material that shall and does not emphasize the natural beauty of Central Florida and meeting the intent of establishing and maintaining living plant ecosystem. While artificial turf may be more appropriate for other biomes, such as an arid or semi-arid environment, it may not make as much sustainability sense in the humid environment of Central Florida.

The landscape code regulations are to protect the general welfare of Orlando residents and visitors by promoting water conservation and enhancing the city's appearance. As stated in the purposes of the Landscaping Code, this is done in part by improving the appearance of Orlando and perpetuate its image as "The City Beautiful," emphasizing the natural beauty of Central Florida and the unique flora of the region. The landscape code regulations also provide support of habitats for urban wildlife and protect endangered or threatened plant species, habitats, and rare or endangered ecosystems.

Because artificial turf lacks the ability to filter stormwater runoff, setbacks are established to protect waterfront swales natural bodies of water such as lakes, ponds and other drainage features (such as prohibiting the installation of artificial turf in swales). The appearance of artificial turf is another important aspect. Artificial turf must have an appearance of natural turf grass when visible from rights-of-way, adjacent properties and open space. The material must appear natural in appearance and color and must not be installed in a public or private rights-of-way, or natural features (wetlands, lakes, parks, common areas etc.).

A functional amount of artificial turf might still be obtained, depending on its location in a site's landscaping when limited as proposed. This code update is to address the growing desire to install artificial turf in residential zoning districts where artificial turf is not specifically allowed or prohibited as part of the residential landscape code requirements.

### **SUMMARY OF PROPOSED CHANGES**

Staff is proposing to establish and adopt specific regulations for artificial turf standards, installation and maintenance. This code update also provides additional landscape definitions and minor code reorganization.

- Removed duplicate information from sec 60.223 that will be used in an updated/revised section 60.223 (Part G) Site Specific Plantings and Material Requirements
- New heading name for part 2G
- Added artificial turf requirements
- Moved code language to new sections
- Provide additional definitions in relation to artificial turf

## **REVIEW/APPROVAL PROCESS—NEXT STEPS**

1. MPB minutes scheduled for review and approval by City Council.
2. Forward to City Attorney's Office for Legal Review
3. 1st reading of the Ordinance
4. Advertisement
5. 2nd reading of the Ordinance

### **CONTACT INFORMATION**

For questions regarding Land Development review, please contact Terrence Miller at (407) 246-3292 or [terrence.miller@orlando.gov](mailto:terrence.miller@orlando.gov).

### **DRAFT ORDINANCE**

The following is a draft Ordinance (subject to legal review) that establishes the draft changes. The struck through text are words that will be removed from the code. Text that is underlined will be words that are added to the code. Text that is neither is existing code let to remain.

**PROPOSED CODE LANGUAGE**

The draft code changes are as follows and are subject to final review and approval by the City Attorney's Office. New language is underlined and eliminated language is ~~struck through~~.

**Sec. 60.223. - One-Family and Two-Family Residential Development Standards**

All landscaping improvements and modifications must conform to the below requirements. Landscaping upgrade to the below standards is required for new development or upon substantial enlargement of an existing property; in such cases, the Building Official shall not issue a Certificate of Occupancy until compliance is achieved. During the permitting process, the requirements of this section shall be noted on the development plan; however this section shall not require the submittal of a separate landscape plan unless required by other provisions in this Code or any other development order.  
PART 2G

6. Non-Vegetative Materials. Stone, gravel, artificial turf and rock beds may be used as an accent, but shall not be considered permanent landscaping, and does not meet the intent of this code when a substantial portion of the landscape is non-vegetative material.

(f) Irrigation Systems. Landscape irrigation systems are not required on one-family and two-family lots.

If installed, irrigation systems shall meet the requirements of Part 2I ~~be grouped according to high, medium and low water needs, with separate zones for turf and landscaping beds, without mixed heads to maximize water application efficiency. All irrigation systems must have a properly installed, set and maintained rain shutoff device per state law. Irrigation systems that are provided must be indicated on the building plans for the applicable lot and the site must comply with one of the following methods:~~

- ~~1. There is no turf on the site.~~
- ~~2. Water for irrigation is only provided from non-potable or non-well sources.~~
- ~~3. Irrigation is provided by a low-volume system that incorporates micro-irrigation or drip emitters, or multiple-trajectory rotating stream nozzles.~~
- ~~4. Install soil moisture sensors or a weather-based evapotranspiration (ET) controller.~~
- ~~5. Irrigation system is certified by Florida Water Star, by the appropriate water management district.~~

**Renaming Part 2G****2G. - NON-RESIDENTIAL AND MULTIFAMILY LANDSCAPING REQUIREMENTS SITE SPECIFIC PLANTINGS AND MATERIAL REQUIREMENTS****Sec. 60.224. - ~~General Requirements Artificial Turf~~**

The use of artificial turf is permitted subject to obtaining permit from the Permitting Division and compliance with the provisions of this Section. All artificial turf shall, at a minimum, be installed according to the manufacturer's specifications and may be subject to further City stormwater requirements.

- (a) Location. The installation of artificial turf is permitted on residential, private parks and schools, commercial sites and limited to play areas of public parks and institutions subject to the requirements of this Section. Installation of artificial turf within public and private rights-of-way is prohibited. Artificial turf may not be installed within 50 feet of any artificial or natural water body. Within Historic Preservation Districts, artificial turf may not be installed where it is visible from any rights-of-way; further, a major Certificate of Appropriateness is required for its installation. Artificial turf is prohibited within drainage features (e.g. retention ponds, swales, and etc.). Artificial turf must be installed outside of the drip line of any tree.
- (b) Impervious Surface Ratio. The installation of artificial turf shall be calculated as an impervious surface, as the intent of the Landscape Code is the installation of living, sub-tropical materials on pervious areas of the site. Total impervious area calculations shall be submitted with any artificial turf application. The quantity of artificial turf to be incorporated into the landscaping of a property shall be limited by the maximum impervious surface ratio (ISR) for the subject property within the applicable zoning district and location requirements above.
- (c) Appearance. Artificial turf shall consist of materials that appear natural in appearance and color from any public or private rights-of-way, neighboring properties or natural features (wetlands, lakes, parks, common areas etc.). The use of indoor/outdoor plastic or nylon carpeting as an installation of artificial turf is prohibited.

(d) Maintenance. All artificial turf shall be maintained in a fadeless condition and shall be kept free of dirt, mud, stains, weeds, debris, tears, holes and impressions. Maintenance shall include, but not be limited to: cleaning, brushing, debris removal; repairing of depressions and ruts to maintain a visually-level surface; elimination of any odors, flat or matted areas, weeds, and evasive roots; and all edges of the artificial turf shall not be loose and must be maintained with appropriate edging or stakes.

All artificial turf must be replaced if it falls into disrepair with fading, holes or loose areas. Replacement and repairs shall be done with like materials from the same manufacturer and done so in a manner that results in a repair that blends in with the existing artificial turf.

Relocating language from section 2G NON-RESIDENTIAL AND MULTIFAMILY LANDSCAPING REQUIREMENTS . - to 2H. - NON-RESIDENTIAL AND MULTIFAMILY LANDSCAPE WORKSHEET

Applicability. All landscaping on non-residential and multifamily sites shall be designed, installed, and maintained in conformance with this Part and shall meet the minimum points required in Part 2H, Non-Residential and Multifamily Landscape Worksheet, at time of new development, substantial improvement or enlargement, or change of use to a higher intensity class.

Tree Point Requirements. Where a project has a requirement for tree points, tree points shall be calculated to be equal to the following: 1 tree point = 1 installed tree, minimum 10'—12' ht., and 2" caliper. An existing retained tree greater than 4" in caliper (dbh) shall be equal to 3 tree points.

#### Adding Definitions

##### Chapter 66 - DEFINITIONS

Artificial Turf or artificial grass: An artificial grass mat manufactured with manmade materials such as polypropylene, polyethylene, and/or other materials, which is used to replicate the appearance of natural grass.

Florida-friendly landscape(ing): A landscape that incorporates the practices and philosophies promoted by programs such as Florida Yards and Neighborhoods/Environmental Landscape Management. These programs promote quality landscapes that conserve water, utilize water wise principles, protect the environment, are adaptable to local conditions, and are drought tolerant.

Florida Water Star<sup>SM</sup> is a program of the St. Johns River Water Management District that encourages indoor and outdoor water-efficient options and leak prevention by providing technical direction and certification for new construction and residential renovation that meets goals in water efficiency.

Impervious Surface Area: The area of ground covered by any part of a building, street, vehicular use area, or any other structure, improvement, facility or material which prevents or severely restricts natural percolation of moisture. This includes all asphalt and brick surfaces, artificial turf and areas devoted to any outdoor storage and/or display of materials and merchandise, but does not include exterior accessory swimming pools. Wooden patios under Chapter 58 shall be considered pervious.

Irrigation system: A system of pipes or other conduits designed to transport and distribute water to keep plants in a healthy and vigorous condition.