



CITY OF BELLE ISLE, FL

Planning and Zoning: Staff Report

August 30, 2022

Artificial Turf in the City of Belle Isle

OVERVIEW

Recently, the Planning & Zoning Commission requested that the Belle Isle City Council place a six-month moratorium on artificial turf until a decision could be made regarding whether artificial turf should be allowed and included in the Land Development Code. As of now, the city code does not outline requirements for residential landscaping standards. The intent of the City's 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 which these objectives can be met with artificial turf.

While artificial turf is not specifically prohibited in the code, residents are installing synthetic grass because they believe if it is not stated in the Code, then it is acceptable. In the past, residents sought a lush, sub-tropical landscaping scheme for their property. However, the resources, time, and labor devoted toward maintaining lawns have given headway to alternative forms of residential landscaping. For example, non-living materials (such as rocks and mulch) are not explicitly mentioned in the code and are thus limited in their placement and implementation on residential lots. Therefore, Staff is proposing to establish regulatory guidelines to determine a design and material criteria, address installation standards, assess the permitting process for the inorganic product, and set limitations on its usage to fit within the context of a sub-tropical environment.

ANALYSIS

Many homeowners are turning to artificial turf as a means of replacing all or part of their existing lawns with a similar green surface that does not require irrigation or growth management. The City has received code enforcement complaints regarding the 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 baseline determination that allows for artificial turf to have been permitted. The applicant completes an impervious surface ratio worksheet, provide details as to the placement of artificial turf on the property, submits product and contractor information, and measures the sizes of the turf material as part of the zoning review process.

This analysis will probe the pros and cons of a natural landscape to artificial turf as they impact the environment and quality of life for Belle Isle residents. By examining how other Florida municipalities regulate artificial turf within their Land Development Code, the City can gain insight toward evaluating the permitting criteria of this product. Some ordinances feature similar considerations, but the

definition of artificial turf generally varies between permeable or impervious material. While the manufactured material allows water to seep through, ensuring proper drainage is of primary concern for redirecting runoff. The professional expertise and research into artificial turf can also educate local homeowners about the long-term impact this product has on our City.

NATURAL VERSUS ARTIFICIAL LANDSCAPING

When compared to artificial turf, natural grass plays a significant role in reducing water runoff in urban and suburban environments that have significant areas of impervious surfaces such as sidewalks and driveways. Healthy lawns clean and cool the air by absorbing carbon dioxide, releasing oxygen, and collecting dust and dirt. Living turf also filters stormwater runoff, facilitates groundwater recharge, and reduces erosion, glare, heat island effect, and noise.

Artificial turf is not without its faults, but the quality of synthetic product has improved over the years. For instance, specialty companies selling artificial turf have advertised that the level of heat absorption (impacting surface temperature) has decreased, the product's durability has increased, and their products are mindful of children, pets, and environmental safety and wellness. Among these features, the flow of drainage leaves room for scrutiny in a city prone to flooding. The backing of the turf determines the product's drainage rate, measured by inches perforated per hour. If not properly maintained, the water flow through the artificial turf may clog the drainage holes, allow weeds from emerging, and the tuft bind can come undone, which all affect the permeability and function of the product.

COMPARISON OF LOCAL ARTIFICIAL TURF ORDINANCES

Upon reviewing Artificial Turf ordinances from other Florida cities and towns, the following topics are key factors to consider: defining turf as pervious or impervious, outlining the design and material criteria for landscaping, citing standards for installing the product, setting requirements for maintaining turf in good condition, and determining the permitting process for artificial turf. Based on these aspects, City staff and board members may be better equipped to evaluate the parameters of allowing, prohibiting, and implementing artificial turf on public and private land. The guidelines set forth by an Artificial Turf Ordinance may also notate acceptable and unacceptable placements of turf on residential lots, the amount of synthetic turf allowed per total lot area, and impose manufacturer certifications to be mindful of the natural environment.

Among eight different Florida municipalities and their Code for artificial turf ordinances, some cities and towns have established similar methods of regulating the landscaping product. The majority have identified synthetic turf as impervious to distinguish between living and non-living material. While artificial turf systems are designed with a permeable base layer, the required compaction of soil 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 may 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.

As for the design and material standards for artificial turf, ordinances may require a minimum eight-year no fade warranty, the product must also be lead-free, flame retardant, possess pile infill, and a certain pile height. Some of these ordinances specifically reference the artificial material must be manufactured from polyethylene monofilament with pile fibers height ranging from a minimum height of 1.5 inches to a maximum height of 2.5 inches. The infill medium may also be specified. Needless to say, the artificial turf needs to be green to maintain a natural appearance. Following standards for the material and design of the product, the installation and maintenance practices are vital for preserving the desired natural aesthetic.

The installation aspects for artificial turf may refer to designated areas for artificial turf, and the methods used to ensure the material is securely anchored at all edges and seems. Meanwhile, only some Florida municipalities require the installation be completed by a licensed professional, or at a minimum must be installed according to the manufacturer's specifications. Additional requirements for installation entail installation outside the drip line of any tree, the separation of living and nonliving landscape, and site drainage must be provided underneath the artificial turf. Given that the City is home to Lake Conway Chain of Lakes, the turf ordinance should be mindful of distancing artificial turf installations from bodies of water and natural features (such as wetlands, lakes, ponds, canals, swales, etc.). Once the product is installed, the property owner needs to maintain the artificial turf in good, clean condition and cannot have holes, tears, discoloration, seam separations, or excessive wear. If the turf must be replaced, then it should be with like material to blend in with the existing turf. Routine maintenance must be free of weeds, debris, odors, impressions, and flat or matted areas. Code Enforcement can review and enforce the maintenance of the artificial turf as needed, and in necessary cases the City may get involved with the removal of turf if Code Enforcement violations are not resolved.

Artificial Turf: Comparisons of Local Florida Ordinances cites how municipalities process artificial turf during the permit review. Five out of eight municipalities required artificial turf be submitted as a building permit. The involvement of Universal Engineering Sciences can improve the durability and function of artificial turf. With their engineering and building background, UES is better equipped to review the product material, and its installation to determine if the turf project satisfies the proposed City Code requirements.

BENEFITS AND CONSEQUENCES FOR THE CITY

The *SWOT Analysis of Artificial Turf in the City of Belle Isle* lists the strengths, weaknesses, opportunities, and threats presented to allow the product on residential lots. The strengths and weaknesses shown in Table 2 deal with the City's internal capabilities for processing permits for artificial turf, its effect on City resources, and acknowledging the growing demand for artificial turf among residents. The opportunities and threats associated with artificial turf concern external factors (outside of City Hall) that may arise with allowing the nonliving material to be permitted.

ALTERNATIVE LANDSCAPING OPTIONS FOR RESIDENTS

Florida statute 373.185 references educational resources for local governments to utilize as they devise environmentally conscientious landscaping ordinances. Among these educational resources is the

Institute of Food and Agricultural Sciences at the University of Florida. Also known as UF/IFAS, an Orange County extension office is located nearby off Conway and Judge road. After speaking with a Horticulture Specialist at the facility, they shared the following concerns about artificial turf:

“Artificial turf does not provide the benefits of [natural] turfgrass; [that is] significant cooling effect, water filtration, erosion control, and habitat for biodiversity. While artificial turf could serve a purpose similar to that of a concrete patio slab, it is no replacement for the living turfgrass ecosystem. Artificial turf is not Florida Friendly and is not recommended as a turf replacement by UF/IFAS.”

Hannah Wooten, who also serves on the City’s Tree Board committee, shared the importance of natural turf to filter pollutants and its ability to use carbon stored in the soil to cool our air and enrich our oxygen. 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. In her evaluation of artificial turf, she states “from a big picture perspective, to increase sustainability in society, we must increase circularity and decrease linearity.”

Florida statute 373.185 outlines Florida Friendly Landscaping as quality landscape techniques that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The principles of such landscaping include planting the right plant in the right place, efficient watering, appropriate fertilization, mulching, the attraction of wildlife, responsible management of yard pests, recycling yard waste, reduction of stormwater runoff, and waterfront protection. Additional components include practices such as landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

Belle Isle residents, Aaron and Katherine Rogers, at 1743 Colleen Drive are advocates of using Florida native plants as a landscaping option for their front yard. Their Instagram page @BelleIsleNativePlants shares an array of photos featuring their wildlife garden. In their posts, they utilize educative material from UF/IFAS Extension Office, and Tarflower Chapter of the Florida Native Plant Society as their references for landscaping resources. Their passion for native landscaping, coupled with their expertise in engineering, has created a unique, natural aesthetic without the traditional lawn maintenance of continuous grass.

STAFF RECOMMENDATION

In providing this report, Staff has equipped the P&Z Board member with information regarding the pros and cons of artificial turf, and regulatory considerations and practices for allowing synthetic turf within residential districts of the City. If the P&Z Board approves to allow for artificial turf, Staff recommends outlining standard specifications, and Code language. Should the P&Z Board not allow for artificial turf, Staff recommends the Code expressly prohibit the product use on residential lots. Those that have artificial turf must maintain it in good standing, but cannot replace and expand upon its existing use. Staff can enforce and abide by the expectations of the Board once clear instructions and direction for the use of artificial turf in the City is determined.