



CITY OF BELLE ISLE, FL
PLANNING & ZONING BOARD MEETING

Held in City Hall Chambers 1600 Nela Avenue
Held the 4th Tuesday of Every Month
Tuesday, August 30, 2022 * 6:30 PM

AGENDA

Planning and Zoning Board Members

District 5 member – Rainey Lane, Chairman

District 1 – David Woods, VChair

District 2 member – Christopher Shenefelt | District 3 member – Michael Statham

District 4 member – Vinton Squires | District 6 member – Andrew Thompson

District 7 member – Dr. Leonard Hobbs

Welcome to the City of Belle Isle Planning & Zoning meeting. Agendas and all backup material supporting each agenda item are available in the City Clerk's office or on the city's website at cityofbelleislefl.org. Any person desiring to appeal a recommended action of the Board should observe the notice regarding appeals below. CAUTION: Untimely filing by any appellant shall result in an automatic denial of the appeal.

1. **Call to Order and Confirmation of Quorum**
2. **Invocation and Pledge to Flag** – Board Member Hobbs
3. **Discussion on Artificial Turf**
 - a. Staff Report and Supplemental Attachments
4. **Adjournment**

APPEALS: "If a person decides to appeal (Belle Isle's City Code Section 42-71) any decision made by the Board with respect to any matter considered at such meeting or hearing, he/she will need a record of the proceedings, and that, for such purpose, he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based." (F. S. 286.0105). A notice of appeal to the City Clerk should be submitted within fifteen (15) days after such recommendation or decision is made "Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Office (407-851-7730) at least 48 hours in advance of the meeting. --Page 1 of 1



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.

Planning & Zoning Board Meeting
August 30, 2022

City of Belle Isle:
Staff Report on
Artificial Turf



Created by Raquel Lozano, City Planner

Overview

- Planning & Zoning requested 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, 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 these objectives can be met with artificial turf.

Natural Turf vs. Artificial Turf

NATURAL TURF

ADVANTAGES	DISADVANTAGES
Less expensive to install.	More expensive and laborious to maintain.
If maintained, never has to be replaced.	Must be mowed, trimmed, and watered regularly. Maintenance affected by droughts, flooding, and other irregular weather conditions.
Filters water – lowers run-off amount and recharges water tables.	Some fertilizers, pesticides, and herbicides can leach into run-off.
Can easily be repaired with patching and seeding/Easily interspersed and integrated with a range of planting materials.	Can become discolored due to disease and pet waste. Can become muddy without proper drainage.
Generally good for the environment – Cools the air on hot days; takes carbon out of the air and replenishes oxygen; provides habitat for insects (food for birds); microbial life enriches the soil, dead turf is compostable.	Mowers/trimmers can be noisy and throw pollen into the air which irritates many that suffer from seasonal allergies.

ARTIFICIAL TURF

ADVANTAGES	DISADVANTAGES
Less expensive and laborious to maintain.	More expensive to install.
Can withstand significantly more use (used in sports stadiums) and general wear and tear. Good for places with little natural light, or desert climates.	Must be replaced every 8-20 years depending upon quality and usage and typically is land-filled at the end of its useful life.
Conserves water.	When artificial turf is installed the subgrade soil must be compacted, which affects water filtration and drainage. The impervious surface created by the compaction will increase runoff. Compacted soil underneath creates more run-off and "water pillows" can form without proper drainage.
No mowing.	Can absorb sunlight and create "heat islands" that can be much hotter than natural turf – which can be temporarily reduced by the application of water prior to use.
No pesticides or herbicides for pest or disease management required.	Needs occasional cleaning and/or antimicrobial treatments because pathogens are not broken down by natural processes in the same manner as in natural turf – some may also leech silver ions that are toxic to aquatic environments.
Recycled materials are often used as infill.	Reduces habitat for insects (food for birds) and microbial life that enriches the soil.
No noise or emissions from mowers or trimmers, less allergen-pollen in the air to upset seasonal allergies.	Production of the synthetic materials that makes up artificial turf generates greenhouse gas emissions.
No discoloration due to pet waste.	Granulated rubber infill can carry heavy metals that could leach into the water table.
No detrimental to track indoors.	Loss of organic matter can affect soil health by depleting healthy soil bacteria and organisms. Loss of soil dynamics can prevent soil from filtering and cleaning ground water.
No seasonal visual variation.	Seam breaks can result over time, which are hard to repair/patch without visual impact.
	Infill can be tracked indoors.
	Not easily interspersed or integrated with a range of other landscape materials such as live flowers, shrubbery, and trees.

Evolution of Artificial Turf

- The synthetic product has improved over the years.
- 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.
- Example of percolation:
Permeability of 30 inches per hour per square yard

Staff Recommendation for Permitting Process

- Staff is proposing to establish regulatory guidelines to set limitations on its usage to fit within the context of a sub-tropical environment, address installation standards, and assess the permitting process for the inorganic product.

Key Factors for Permitting

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 standards for landscaping;
- Citing standards for installing the product;
- Maintenance requirements;
- Determining the permitting process for artificial turf

Pervious or Impervious?

- Difference between living and non-living material?
- Is drainage required or optional with installation?

Design & Material Standards

Basic Considerations:

- Must be the color green
- Must be safe for children and pets
- Cannot be carpet material

Specific Considerations:

- Height and weight of turf
- Type of turf fiber and infill
- Type of backing

Installation Requirements

- Designated areas for artificial turf
- Material securely anchored at all edges and seams tightened
- Installation completed by a licensed professional, or must be installed according to the manufacturer's specifications
- Separate artificial turf from bodies of water and natural features

Preferences and Restrictions on Placement Arrangement

- Mitigation required from existing irrigation system?
- Allowed within dripline of trees?
- Prohibition from City right-of-way?
- Limited to certain zoning districts or for certain yard areas?

Upkeep Considerations

- Must be free of weeds, debris, odors, impressions, and flat or matted areas
- Cannot have holes, tears, discoloration, seam separations, or excessive wear
- Repair and replace as needed
- If unmaintained, City may have authority to remove the product

Permitting Process

- Recognized as pervious or impervious?
- Does it require a building permit?
- Inspection during the installation or after?
- Should an agreement be established and recorded with the property/property owners?
- Documentation may require:
 - Application form (with ISR calculations)
 - Property Survey
 - Contractor Registration
 - Landscape plan with placement and dimensions
 - Manufacturer and product specifications with warranty information
 - Drainage Plan

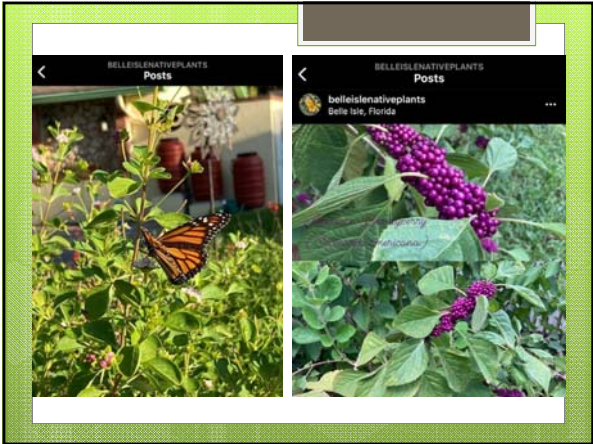
SWOT Analysis of Artificial Turf in The City of Belle Isle			
Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Caters to residential demand for the growing landscaping trend of artificial turf • Regulates and records use of artificial turf in the City, which ensures residents follow manufacturer imposed requirements and safety considerations to properly install the product • Could be an extra form of funding for the Planning Department and the City • Artificial turf may limit water consumption and lawn mowing services for private and public land (impacting use of government resources) • Code Enforcement Department oversees quality and maintenance of turf 	<ul style="list-style-type: none"> • City needs to create new permit application and permit procedure for artificial turf • City needs to develop standard specifications and code language for allowing artificial turf • Outsourcing Expertise: permitting process may require more than just a "Planning Review" to assess the material and installation of the product • Involving Universal Engineering Sciences will incur the homeowner money and time to review the permit application • How can code enforcement review the product to ensure it's well-maintained, especially if it is installed in the backyard of residential lots? 	<ul style="list-style-type: none"> • Turf upholds "natural" landscape appeal and aesthetics • Explores alternative landscaping options for residents • Could be less labor intensive to maintain • City can track and monitor effects of turf on the environment • A recorded agreement may need to be established • May require residents to install onsite drainage to prevent future flooding • May create jobs as residents hire artificial turf/landscaping companies for turf installment 	<ul style="list-style-type: none"> • Negative Environmental Impacts to the City <ul style="list-style-type: none"> • Artificial Turf may create a heat island effect, alter the micro-climate of individual lots, and increase CO2 levels by replacing organic material with inorganic material • May encourage more residents to use artificial turf, which takes away from the natural landscape of the overall City • May negatively affect local lawn mowing businesses • Does the City want to encourage natural landscaping or aesthetically-pleasing landscaping? • For the long term, is this an "enhancement" to the residential lots or detrimental to the overall quality of life for the citizens?

Alternative Landscaping Options for Residents

- Florida statute 373.185 references educational resources for local governments to utilize as they devise environmentally conscientious landscaping ordinances.
- 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.

Alternative Landscaping Options for Residents (cont.)

- Belle Isle residents off Colleen Drive are advocates of using Florida native plants as a landscaping option for their front yard.
- Instagram page @BelleIsleNativePlants shares an array of photos featuring their wildlife garden.



Staff Recommendations

- If the P&Z Board approves to allow for artificial turf, Staff recommends outlining standard specifications, and Code language.
- If the P&Z Board does not allow for artificial turf, Staff recommends the Code expressly prohibit the product on residential lots. Those that have artificial turf must maintain it well. However, replacing and expanding existing use could be prohibited.

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
Surfside, Florida	"A dense and continuous surface of synthetic fibers mounted on a permeable backing and of sufficient density and green color to replicate the appearance of healthy, natural grass"	Pervious	<p>-Min. eight-year "no fade" warranty</p> <p>-Type: cut pile infill with pile fibers of a min. height of 1.75 inches and max. height of 2.5 inches</p> <p>-Min. face weight of 75 oz per square yard</p> <p>-Manufactured from polyethylene monofilament, dual yard system, and made in the US</p> <p>-Have backing that is permeable</p> <p>-Be lead free and flame retardant</p>	<p>-Must be installed according to manufacturer's specifications</p> <p>-Must be anchored to ensure that turf will withstand the effects of wind</p> <p>-All seams must be nailed and glued, not sewn, and edges must be trimmed to fit against all regular and irregular edges to resemble a natural look</p> <p>-For seawalls, the artificial turf must be pinned or staked behind the seawall. None may be attached directly to or placed on a seawall or seawall cap</p> <p>-Proper drainage must be provided</p> <p>-Must be visually leveled with the grain pointing in one direction</p> <p>-A solid barrier device (e.g. concrete mow strip, bender board) is required to separate living and nonliving landscape</p> <p>-Precautions for installation around trees may be restricted to ensure tree roots are not damaged or the overall health of the tree is not compromised</p>	<p>-Be maintained in an attractive and clean condition with no holes, tears, stains, discoloration, seam separations, uplifted surfaces or edges, heat degradation or excessive wear</p> <p>-Be maintained in a green fadeless condition and free of weeds, debris, and impressions</p>	<p>-Cannot be in the public ROW or swales</p> <p>-Cannot be used as screening material</p>	<p>-Permitted on all properties</p> <p>-Separated from planter areas and tree wells by a concrete mow strip, bender board other barrier with a minimum four-inch thickness to prevent the intrusion of living plant material into the synthetic turf</p> <p>-Irrigation system shall be directed away from the synthetic turf</p>	<p>-Requires Building Permit</p> <p>(1) Application includes landscape plan;</p> <p>(2) Existing/proposed irrigation system;</p> <p>(3) Brand and type of turf with manufacturer specifications and warranties;</p> <p>(4) Scaled cross section and details of proposed materials and installation;</p> <p>(5) Survey of the property</p> <p>-Previously Installed Turf</p> <p>Property owners of artificial turf must submit proof satisfactory to the Town to show that the property is in compliance. The Town will review proof of compliance satisfactory to determine if turf may stay or if it in violation of the Code, which is subject to immediate removal</p>

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
Orlando, Florida	N/A	<p>Impervious</p> <p>Landscape Code sites "living" material as pervious areas</p>	<p>-Material must appear natural in appearance and color</p> <p>-Other generally accepted colors are reviewed by Appearance Review Officer</p>	<p>-Installed outside of the drip line of any tree</p>	<p>-Must be installed according to manufacturer's specifications</p> <p>-Must be anchored to ensure that turf will withstand the effects of wind</p> <p>-All seams must be nailed and glued, not sewn, and edges must be trimmed to fit against all regular and irregular edges to resemble a natural look</p> <p>-For seawalls, the artificial turf must be pinned or staked behind the seawall. None may be attached directly to or placed on a seawall or seawall cap</p> <p>-Proper drainage must be provided</p> <p>-Must be visually leveled with the grain pointing in one direction</p> <p>-A solid barrier device (e.g. concrete mow strip, bender board) is required to separate living and nonliving landscape</p> <p>-Precautions for installation around trees may be restricted to ensure tree roots are not damaged or the overall health of the tree is not compromised</p>	<p>-Cannot be installed within 50 ft of any artificial or natural body of water</p> <p>-Prohibited within drainage features</p> <p>-Prohibited within Historic Preservation Districts</p> <p>-Prohibited within public and private ROW</p> <p>-Use of indoor/outdoor plastic or nylon carpeting as artificial turf is prohibited</p>	<p>-Permitted on residential, private parks, schools, commercial sites and limited play areas of public parks and institutions</p>	<p>-Requires Engineering Permit</p> <p>-Owner/Builder Declaration form required (for doing work as the homeowner and not hiring a contractor)</p> <p>-Notice of Commencement must be provided for jobs more than \$2,500</p> <p>-All plans must include:</p> <p>(1) Site plan/survey/plot plan - must be signed and sealed by surveyor with property lines and easements included</p> <p>(2) Placement and dimension (L x W) of artificial turf</p> <p>(3) Distance between property line and where the artificial grass starts (L x W)</p> <p>(4) ISR calculations included on plans</p> <p>(5) Product specifications</p> <p>(6) Applicant must submit a statement regarding implementation of erosion sediment control measures in reference to The City of Orlando's Guidelines for Erosion Sediment Control</p>

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
Winter Park, Florida	"Artificial turf or synthetic grass means an artificial grass mat manufactured with man-made materials such as polypropylene, polyethylene, and/or other materials, which is used to replicate the appearance of natural grass"	-Impervious unless specifically designed and permitted with a proper porous permeable underlying material such as gravel. -Standard engineering coefficients of permeability shall be utilized for mixed surfaces.		Installation is distinguished between Impervious and Pervious materials -Impervious Installations requires: (1) permit (2) New total impervious area coverage (3) proof of permeability not required (4) first inch of stormwater runoff from the artificial turf must be retained onsite -Pervious Installations requires: (1) permit (2) Backing of a uniform (every square inch) woven material, which precludes the use of a solid backed material with periodic holes (3) Required min. rate of permeability is 30 inches per hour uniformly (every square inch) across the artificial turf (4) Underlying material (gravel, drainfield rock, sand setting, fabric, etc.) must be included in the design per the manufacturer's specifications to meet the min. rate of permeability	-Routine maintenance required to include cleaning, brushing, debris removal, repairing and replacing turf as needed -Code violation if turf is not maintained as designed and permitted	-Installations prohibited under tree canopies		-Property owner must enter into a recorded agreement with the City to maintain the turf in good standing and remain in compliance to Code. I. Property owner required to remove and/or replace the turf in the future if it ceases to function as designed and permitted II. The City's remedies in the event the property owner fails to comply with its maintenance, repair, and replacement obligations III. Property owner's indemnification and hold harmless of the City and its officials and employees with respect to the turf installation, maintenance, and repair, including any drainage problem that may arise therefrom

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
West Palm Beach, Florida	N/A	Impervious	<ul style="list-style-type: none"> -Must appear green, lifelike with individual blades of grass that emulate natural turf -Min. pile height of 1.5 inches -Min. tufted weight of 56 oz per square yard -Min. permeability of 30 inches per hour per square yard -Min. eight year manufacturer's warranty that protects against color fading and a decrease in pile height -Must be lead free -Must include test documentation declaring the turf yard and backing materials are disposable under normal conditions at any US landfill station (Total Content Leach Protocol (TCLP) test) 	<ul style="list-style-type: none"> -Must be installed according to manufacturer's specifications -Must be anchored to ensure that turf will withstand the effects of wind -All seams must be nailed and glued, not sewn, and edges must be trimmed to fit against all regular and irregular edges to resemble a natural look -For seawalls, the artificial turf must be pinned or staked behind the seawall. None may be attached directly to or placed on a seawall or seawall cap -Proper drainage must be provided -Must be visually leveled with the grain pointing in one direction -A solid barrier device (e.g. concrete mow strip, bender board) is required to separate living and nonliving landscape -Precautions for installation around trees may be restricted to ensure tree roots are not damaged or the overall health of the tree is not compromised 	<ul style="list-style-type: none"> -Town or other public entity or utility company may remove turf at any time and for any reason, including but not limited to, in order to provide underground access to utility work -The owner shall bear and pay any and all costs to replace and reinstall turf 	<ul style="list-style-type: none"> -Synthetic turf is prohibited in the public right-of-way and swales 	<p>Use and location limited to:</p> <ul style="list-style-type: none"> (1) Non-city-owned athletic fields and playgrounds associated with non-city-owned community center, park, school, or university (2) Part of a construction of any nonresidential development (3) On roof terraces 	<p>-Requires Building Permit</p> <ul style="list-style-type: none"> -Special use permit issued for non-city-owned athletic fields and playgrounds associated with non-city-owned community center, park, school, or university

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
Marco Island, Florida	N/A	N/A	<ul style="list-style-type: none"> -Must appear live turf, organic turf, grass, sod, or lawn -Type: cut pile infill with pile fibers -Min. height of 1.75 inches -Min. 75 oz per square yard -Must be manufactured from polyethylene monofilament, dual yard system -Be affixed to permeable backing -Min. 8-year "No Fade" warranty -Must be lead free -Must be flame retardant -Material other than polyethylene monofilament may be approved by CM/designatee if the product is certified to meet applicable environmental and health regulations regarding lead content -Recognized as a fill in material, rather than as a planned element of the landscape -Infill medium consists of clean silica sand or other approved mixture brushed into the fibers to ensure fibers are in an upright position and provide ballast to help hold the turf in place and provide a cushioning effect 	<ul style="list-style-type: none"> -Must be installed by a Florida-licensed general contractor or Florida-licensed landscape architect in a manner prescribed by the manufacturer -Must be installed over a subgrade prepared to provide positive drainage and an evenly graded mass of compacted, porous crushed rock aggregate material that is a minimum of three inches in depth -Cannot have seams visible between multiple panels -Must be anchored at all edges and seams -Panels of turf must have seams joined in a tight and secure manner -An infill medium consisting of clean silica sand or other mixture, pursuant to the manufacturer's specifications or as approved by the City Engineer, that shall (1) be brushed into the fibers to ensure that the fibers remain in an upright position, (2) provide ballast that will help hold the turf in place and (3) provide a cushioning effect 	<ul style="list-style-type: none"> -Must be fadeless and free of dirt, mud, stains, weeds, debris, tears, holes and impressions -The City, City employees or its contractors are not responsible to repair or replace any synthetic turf located within the public ROW, swales, or easements damaged as a result of an associated city project or work order. -Replacement of turf material removed or damaged to repair or maintain roadways or utilities in the public ROW, swales, or easements is the responsibility of the property owner and such repairs shall be made within 30 days or result in a code compliance violation 	<ul style="list-style-type: none"> -Cannot be installed on areas with a slope percentage greater than 5% -Use of indoor/outdoor plastic or nylon carpeting as artificial turf is prohibited -Synthetic turf is prohibited in the public right-of-way and swales within the City 	<ul style="list-style-type: none"> -Use of an irrigation system for non-active use turf shall be prohibited -An existing irrigation system that will not be utilized for the synthetic turf may remain, however, heads shall be removed and pipes shall be capped below ground -Separated from planter areas and tree wells by a concrete mow strip, bender board other barrier with a minimum 3/8" thickness to prevent the intrusion of living plant material into the synthetic turf areas -Areas of living plant material shall be installed or maintained in conjunction with the installation of synthetic turf when utilized in the front yard area. Living plant material shall include shrubs, vines, trees and groundcovers in separate planter areas and tree wells 	<ul style="list-style-type: none"> -Material specifications and plans must be provided to the City Manager or designee for review and approval prior to the installation of turf -Submittal shall include: <ol style="list-style-type: none"> I. A landscape plan showing turfed area, area of living plant material, and separation material between these areas II. Dimensioned cross section of proposed materials and installation details, including subgrade, drainage, base or leveling layer, and infill III. Edge material and detail for treatment of seams IV. Material description and specifications, including manufacturer, installer (with contact information), and warranty information

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
Lantana, Florida	N/A	N/A	<ul style="list-style-type: none"> -Must appear green, lifelike with individual blades of grass that emulate natural turf -Min. pile height of 1.5 inches -Min. tufted weight of 56 oz per square yard -Min. permeability of 30 inches per hour per square yard -Min. eight year manufacturer's warranty that protects against color fading and a decrease in pile height -Must be lead free - Must include test documentation declaring the turf yard and backing materials are disposable under normal conditions at any US landfill station (Total Content Leach Protocol (TCLP) test) 	<ul style="list-style-type: none"> -Must be installed according to manufacturer's specifications -Must be anchored to ensure that turf will withstand the effects of wind -All seams must be nailed and glued, not sewn, and edges must be trimmed to fit against all regular and irregular edges to resemble a natural look -For seawalls, the artificial turf must be pinned or staked behind the seawall. None may be attached directly to or placed on a seawall or seawall cap -Proper drainage must be provided -Must be visually leveled with the grain pointing in one direction -A solid barrier device (e.g. concrete mow strip, bender board) is required to separate living and nonliving landscape -Precautions for installation around trees may be restricted to ensure tree roots are not damaged or the overall health of the tree is not compromised 	<ul style="list-style-type: none"> -Must be maintained in a green, fadeless condition and free of dirt, mud, odors, stains, weeds, invasive roots, debris, tears, holes, impressions, and flat or matted areas -Repair depressions and ruts to maintain a visually-level surface -All edges must not be loose and must maintain appropriate edging and stakes -Must be replaced if the material falls into disrepair with fading, holes, or loose areas -Replacement and/or repairs must be done with like materials from the same manufacturer and done so in a manner that blends in with the existing turf -Town or other public entity or utility company may remove turf at any time and for any reason, including but not limited to, in order to provide underground access to utility work -The owner shall bear and pay any and all costs to replace and re-install turf 	<ul style="list-style-type: none"> -Use of indoor/outdoor plastic or nylon carpeting as artificial turf is prohibited 		<ul style="list-style-type: none"> -Requires Building Permit

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
Ocean Ridge, Florida	N/A	Considered 100% pervious area	<ul style="list-style-type: none"> -Must appear green, lifelike with individual blades of grass that emulate natural turf -Min. pile height of 1.5 inches -Min. tufted weight of 56 oz per square yard -Min. permeability of 30 inches per hour per square yard -Min. eight year manufacturer's warranty that protects against color fading and a decrease in pile height -Must be lead free -Must include test documentation declaring the turf yard and backing materials are disposable under normal conditions at any US landfill station (Total Content Leach Protocol (TCLP) test) 	<ul style="list-style-type: none"> -Must be installed according to manufacturer's specifications -Must be anchored to ensure that turf will withstand the effects of wind -All seams must be nailed and glued, not sewn, and edges must be trimmed to fit against all regular and irregular edges to resemble a natural look -For seawalls, the artificial turf must be pinned or staked behind the seawall. None may be attached directly to or placed on a seawall or seawall cap -Proper drainage must be provided -Must be visually leveled with the grain pointing in one direction -A solid barrier device (e.g. concrete mow strip, bender board) is required to separate living and nonliving landscape -Precautions for installation around trees may be restricted to ensure tree roots are not damaged or the overall health of the tree is not compromised 	<ul style="list-style-type: none"> -Must be maintained in a green, fadeless condition and free of dirt, mud, odors, stains, weeds, invasive roots, debris, tears, holes, impressions, and flat or matted areas -Repair depressions and ruts to maintain a visually-level surface -All edges must not be loose and must maintain appropriate edging and stakes -Must be replaced if the material falls into disrepair with fading, holes, or loose areas -Replacement and/or repairs must be done with like materials from the same manufacturer and done so in a manner that blends in with the existing turf -Town or other public entity or utility company may remove turf at any time and for any reason, including but not limited to, in order to provide underground access to utility work -The owner shall bear and pay any and all costs to replace and reinstall turf 	-Use of indoor/outdoor plastic or nylon carpeting as artificial turf is prohibited	<p>Locations allowed: -Allowed in rear and side yards, but cannot exceed 25% of the total lot area</p> <p>Locations not allowed: -In any front yard areas or in any area visible from the public ROW (regardless of whether it is in the rear or side yard), unless placed between paver blocks or similar items in a manner where the area for the turf does not exceed four inches in width, provided that the synthetic turf area does not exceed 50% of the total lot area using the paver blocks. -Screening, as approved by the building official, may be used in order to comply with the visibility requirement, further any turf placed in between paver blocks shall not count toward the 25% maximum amount allowed -No turf allowed in the ROW</p>	<p>-Requires Building Permit</p> <p>Existing Turf: -For properties where turf is currently installed that is not in compliance with the Code, when the existing turf is replaced or repaired, in an amount exceeding 50%, then compliance with Code is required -All existing turf, not in compliance, must be replaced within 10 years of the adoption of the turf ordinance</p>

Artificial Turf: Comparisons of Local Florida Ordinances

City/Town	Definition	Pervious or Impervious	Design/Material Standards	Installation Standards	Maintenance Standards	Prohibited Uses	Placement on Residential Property	Process to Permit
Lighthouse Point, Florida	"A dense and continuous surface of synthetic fibers mounted on a permeable backing and of sufficient density and green color to replicate the appearance of healthy, natural grass"	Pervious	<p>-Min. eight-year "no fade" warranty</p> <p>-Type: cut pile infill with pile fibers of a min. height of 1.75 inches and max. height of 2.5 inches</p> <p>-Min. face weight of 75 oz per square yard</p> <p>-Manufactured from polyethylene monofilament, dual yard system, and made in the US</p> <p>-Have backing that is permeable</p> <p>-Be lead free and flame retardant</p>	<p>-Must be installed by a licensed professional pursuant to manufacturer's requirements</p> <p>-Must be installed over a subgrade prepared to provide positive drainage and an evenly graded mass of compacted, porous crushed rock aggregate material</p> <p>-Must be anchored at all edges and seams</p> <p>-Drainage system must be installed underneath to prevent excessive runoff or pooling</p> <p>-Panels of turf must have seams joined in a tight and secure manner</p> <p>-An infill medium consisting of clean silica sand or other mixture, which should ensure that the fibers remain in an upright position, provide ballast that will help hold the turf in place and provide a cushioning effect</p>	<p>-Be maintained in an attractive and clean condition with no holes, tears, stains, discoloration, seam separations, uplifted surfaces or edge, heat degradation or excessive wear</p> <p>-Free of weeds, debris, and impressions</p>	<p>-Synthetic turf is prohibited in the public right-of-way and swales within the City</p> <p>-Cannot be treated as a filler for landscaping that is not part of a planned element of landscaping</p>	<p>-Permitted on residential and commercial properties</p> <p>-An existing irrigation system that will not be utilized for the synthetic turf may remain, however, heads shall be removed and pipes shall be capped below ground</p> <p>-Separated from planter areas and tree wells by a concrete mow strip, bender board other barrier with a minimum 3/8" thickness to prevent the intrusion of living plant material into the synthetic turf areas</p> <p>-Areas of living plant material shall be installed or maintained in conjunction with the installation of synthetic turf when utilized in the front yard area. Living plant material shall include shrubs, vines, trees and groundcovers in separate planter areas and tree wells</p>	<p>-Requires Building Permit</p> <p>-Submittal shall include: (1) A landscape plan showing turfed area, area of living plant material, and method of separation between these areas (2) Details regarding existing or proposed irrigation proximate to the turf (3) Brand and type of turf with manufacturer specifications and warranties; (4) Scaled cross section and details of proposed materials and installation, including but not limited to subgrade, drainage, base or leveling layer, and infill; (5) Survey of the property, signed and sealed by a licensed surveyor, depicting all existing easements located on the property (6) A form signed by any holder of an easement on the property consenting to the installation of the synthetic turf within the easement, with an accompanying acknowledgement by the property owner that in the event the easement holder performs work in the easement that it is the property owner's responsibility to repair and replace the synthetic turf disturbed as a result of the work in the easement</p>

Select Year: 2022 ▼

The 2022 Florida Statutes

[Title XXVIII](#)
NATURAL RESOURCES; CONSERVATION, RECLAMATION,
AND USE

[Chapter 373](#)
WATER
RESOURCES

[View Entire
Chapter](#)

373.185 Local Florida-friendly landscaping ordinances.—

(1) As used in this section, the term:

(a) “Local government” means any county or municipality of the state.

(b) “Florida-friendly landscaping” means quality landscapes 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, 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.

(2) Each water management district shall design and implement an incentive program to encourage all local governments within its district to adopt new ordinances or amend existing ordinances to require Florida-friendly landscaping for development permitted after the effective date of the new ordinance or amendment. Each district shall assist the local governments within its jurisdiction by providing a model Florida-friendly landscaping ordinance and other technical assistance. Each district may develop its own model or use a model contained in the “Florida-Friendly Landscape Guidance Models for Ordinances, Covenants, and Restrictions” manual developed by the department. To qualify for a district’s incentive program, a local government ordinance or amendment must include, at a minimum:

(a) Landscape design, installation, and maintenance standards that result in water conservation and water quality protection or restoration. Such standards must address the use of plant groupings, soil analysis including the promotion of the use of solid waste compost, efficient irrigation systems, and other water-conserving practices.

(b) Identification of prohibited invasive exotic plant species consistent with s. [581.091](#).

(c) Identification of controlled plant species, accompanied by the conditions under which such plants may be used.

(d) A provision specifying the maximum percentage of irrigated turf and impervious surfaces allowed in a Florida-friendly landscaped area and addressing the practical selection and installation of turf.

(e) Specific standards for land clearing and requirements for the preservation of existing native vegetation.

(f) A monitoring program for ordinance implementation and compliance.

(3) Each water management district shall also work with the department, local governments, county extension agents or offices, nursery and landscape industry groups, and other interested stakeholders to promote, through educational programs, publications, and other district activities authorized under this chapter, the use of Florida-friendly landscaping practices, including the use of solid waste compost, in residential and commercial development. In conducting these activities, each district shall use the materials

developed by the department, the Institute of Food and Agricultural Sciences at the University of Florida, and the Center for Landscape Conservation and Ecology Florida-Friendly Landscaping Program, including, but not limited to, the Florida Yards and Neighborhoods Program for homeowners, the Florida Yards and Neighborhoods Builder Developer Program for developers, and the Green Industries Best Management Practices Program for landscaping professionals. Each district may develop supplemental materials as appropriate to address the physical and natural characteristics of the district. The districts shall coordinate with the department and the Institute of Food and Agricultural Sciences at the University of Florida if revisions to the educational materials are needed.

(a) The Legislature finds that the use of Florida-friendly landscaping and other water use and pollution prevention measures to conserve or protect the state's water resources serves a compelling public interest and that the participation of homeowners' associations and local governments is essential to the state's efforts in water conservation and water quality protection and restoration.

(b) A deed restriction or covenant may not prohibit or be enforced so as to prohibit any property owner from implementing Florida-friendly landscaping on his or her land or create any requirement or limitation in conflict with any provision of part II of this chapter or a water shortage order, other order, consumptive use permit, or rule adopted or issued pursuant to part II of this chapter.

(c) A local government ordinance may not prohibit or be enforced so as to prohibit any property owner from implementing Florida-friendly landscaping on his or her land.

(4) This section does not limit the authority of the department or the water management districts to require Florida-friendly landscaping ordinances or practices as a condition of any permit issued under this chapter.

History.—s. 3, ch. 91-41; s. 3, ch. 91-68; s. 7, ch. 2001-252; s. 17, ch. 2009-243.

Sec. 60.224. - Artificial Turf.

a.

The use of artificial turf is permitted subject to obtaining a 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 minor Certificate of Appropriateness is required when applicable. 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.) Other generally accepted colors will be reviewed by the Appearance Review Officer. 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.

(Ord. No. 2013-74, § 1, 12-9-2013, Doc. #1312091207; Ord. No. 2021-49, § 1, 8-23-2021, Doc. #2108231204)

Artificial Turf

Required Permit

- [Engineering Permit Application](#)

Artificial grass requires an engineering permit as it is considered to be impervious surface. Each property is limited to the amount of impervious surface. Please allow 2 business days to process the permit application after you have submitted.

Check Your Eligibility

Ensure you meet the [requirements](#) and do not go over the amount of impervious surface in your property by calculating your ISR (impervious surface ration.) To do this you will need to calculate:

- Impervious Area in sq. ft. / Entire Lot Area in sq. ft. = ISR
- Example: 4,000 sq. ft. impervious / 10,000 sq. ft. lot = 0.4 or 40% ISR
 - Artificial turf, concrete, pavers, bricks, etc. are considered impervious.
 - If you have a pool, the city does not count the surface of the pool water toward the calculation.
- No more than 40% front yard ISR is allowed Municipal Code 61.302(b)
- No more than 55% entire lot ISR is allowed within the following zoning areas:
 - R-1AA R-1 R-1A R-1N R-2A
 - No more than 60% in R-2B and R-3A zoning
- For PD zoning, email cityplanning@orlando.gov
- Artificial turf is not allowed within 50 feet of a water body, such as a retention pond or natural lake.

Notice of Commencement/Owner Builder Declaration

If you are doing work as the homeowner and not hiring a contractor, the State of Florida requires you to submit an [Owner/Builder Declaration](#) form with the engineering permit application. You must sign this form must in person, at the Permitting Services office.

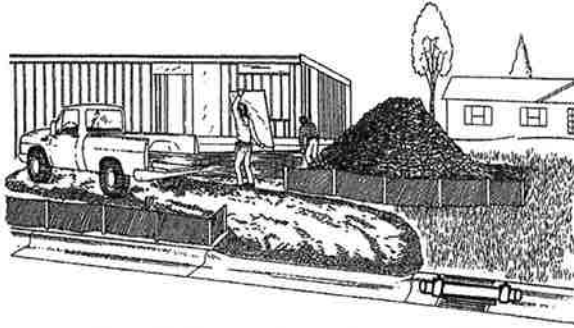
If the job is more than \$2,500, you must provide the city with a copy of the recorded Notice of Commencement. Click [here](#) to file a Notice of Commencement.

Required Plans & Documents

- Site plan/survey/plot plan: this is a drawing of your property which includes property lines, easements, signed and sealed by a surveyor which you should have received at time of sale for your property. If you are unable to locate your plan you can [submit a records request](#) to see if we have it. Please contact a surveyor if we do not have a copy on file or the plan is outdated.
- Show where the artificial grass is being placed by shading/highlighting the area and include dimensions (L x W)
- Distance between the property line and where the artificial grass starts (L x W)
- Include the ISR calculation on your plans
- Include the artificial turf product specifications
- The following statement must be included in your plans: The [City of Orlando's Guidelines for Erosion Sediment Control](#) will serve as a guide for the implementation of erosion sediment control measures. **This document must also be uploaded as part of the submittal package.**

After your application is processed, the digital applicant will receive an email with a link to access the digital plan review system, ProjectDox. Follow the upload requirements.

EROSION & SEDIMENTATION CONTROL FOR CONSTRUCTION SITES



By controlling erosion and sedimentation, Orlando builders keep our streets and waterways clean.

Controlling Erosion Can Be Easy

Erosion control is important and necessary for all development sites. The materials needed are easy to find and relatively inexpensive - silt fencing, synthetic bales, stakes, inlet protection, and grass seed. Putting these materials to use is a straightforward process. Maintenance to those Best Management Practices (BMP's) is key to staying in compliance.

This fact sheet includes shows step-by-step instructions that can be used by builders. Additional controls will be needed for sites that are adjacent to lakes, wetlands, and streams, have steep slopes, receive runoff from adjacent land, or are larger than one acre.

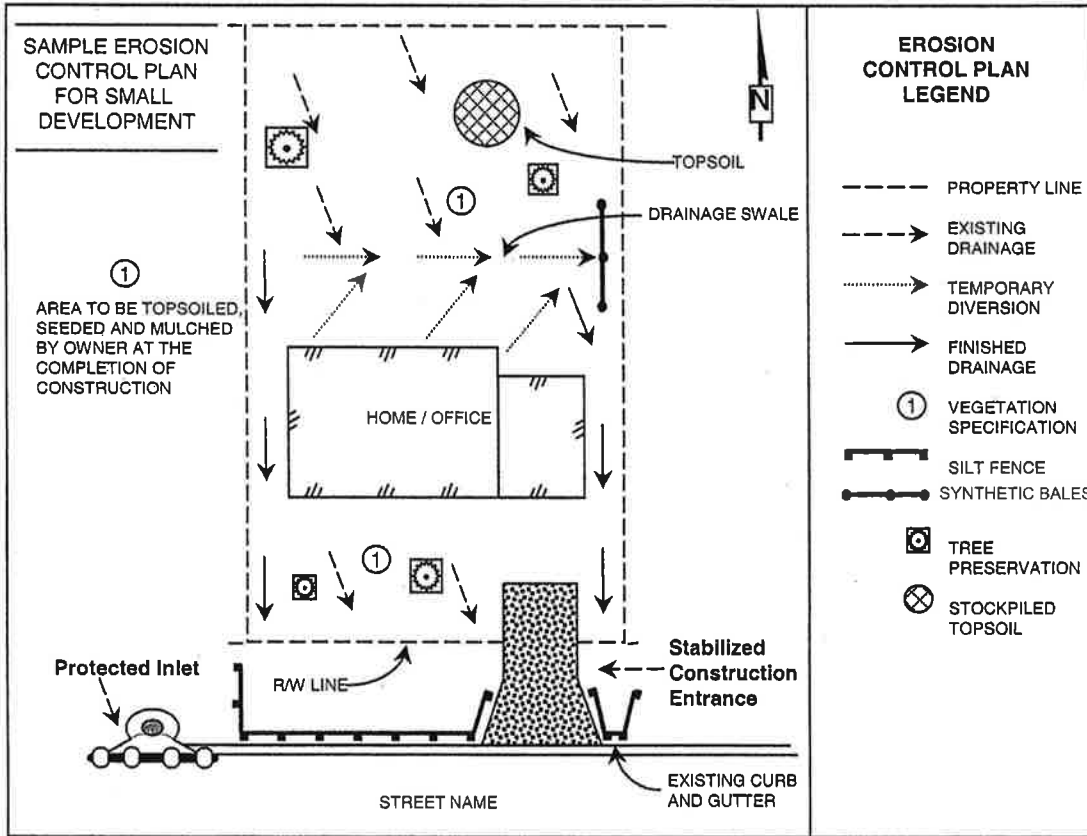
Erosion Is a Costly Problem

Eroding construction sites are a leading cause of water quality problems in Florida. For every acre under construction, about 1 ½ dump truck loads of soil wash into the stormwater system and into a nearby lake unless builders use proper erosion control measures.

When areas are stabilized and not endanger of eroding, the temporary erosion control measures can be removed. BMP's should not be left on finished sites.

For more information on erosion and sediment control issues and how you can help save our lakes, please contact the City of Orlando Streets and Stormwater Hotline at 407-246-2370.

Ways to help keep Orlando "The City Beautiful"



Under the Stormwater Utility Code, Section 31.19, the City prohibits the discharge of pollutants (including sediment and construction debris) into lakes, stormwater drains, or any part of the stormwater conveyance system (ex. streets, gutters, alleyways, ditches, canals, parking lots, and retention/detention ponds, etc.). For more information about erosion and sediment control, refer to the Florida Development Manual: A Guide to Sound Land and Water Management, and the FDEP Erosion, Sediment, and Stormwater Inspector Manual. Violators may be subject to civil penalties, citations, pollution abatement costs, and/or action by the City of Orlando Code Board.

(over)

COMMONLY USED EROSION CONTROL MEASURES

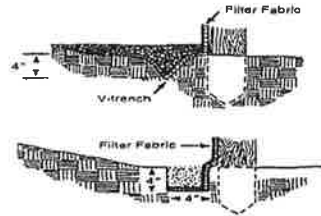
a.

PERIMETER CONTROLS

- Examples may include trenched-in silt fence, trenched-in synthetic bales, berms, sod buffers, waddles, turbidity barrier, etc.
- Install within 24 hours of land disturbance.
- Ensure that perimeter controls are installed properly (trenched-in, no gaps, appropriate BMP for conditions) and maintained until area is stabilized.
- Special attention to perimeter controls needs to be taken along sensitive and critical areas such as wetlands, waterbodies, stormwater systems, roads, adjacent parcels, etc.
- Inspect, repair, replace, and remove accumulated sediments weekly and after ½ inch rain event.

Silt Fences

Figure 3—Cross Sections of Trenches for Silt Fences



Source: North Carolina Erosion and Sediment Control Planning and Design Manual, 1988.

Figure 4—How to Install a Silt Fence

1. Excavate a 4" x 4" trench along the contour.



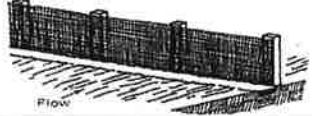
3. When joints are necessary, overlap ends for the distance between two stakes.



2. Stake the silt fence on downslope side of trench. Extend 8" of fabric into the trench.



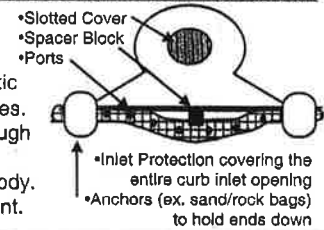
4. Backfill and compact the excavated soil.



STORMWATER SYSTEM PROTECTION

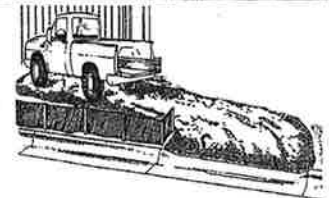
- Examples of stormwater systems may include stormwater inlets and grates, ditches, swales, retention/detention ponds, canals, lakes, etc.
- Method of protecting on-site and off-site stormwater systems include properly installed synthetic bales, silt fence fabric, filter fabric, sock-covered perforated pipe, or other inlet protection devices.
- In problem flood-prone areas (such as streets), ensure that floodwaters can be alleviated through ports and bypasses.
- Floating turbidity curtain may need to be installed for added protection to the receiving waterbody.
- Inspect, repair, replace, and remove accumulated sediments weekly and after ½ inch rain event.

Prevent Flooding when using Inlet Protection:



OFFSITE TRACKING

- Prevent offsite tracking of sediment onto streets by stabilizing the site entrance.
- Examples include at least 50 foot of gravel with geo-fabric underlay, tire wash area, etc.
- At the end of each workday, remove sediment by sweeping and scraping up soil tracked onto the street. Frequent sweeping of street and curb line will prevent sediment accumulation.
- Sediment in the streets and curbs can become major safety and environmental hazards for your site. Sediment can impede traffic, cause flooding, and degrade lakes.



SOIL STOCKPILES

- Locate away from any down-slope street, driveway, stream, lake, wetland, ditch, or drainageway.
- If stockpiles are located near a perimeter, cover stockpiles with plastic sheeting.
- Add perimeter controls at the toe of stockpile.
- Wet down exposed soil with a light spray or sprinkler to keep dust and erosion at a minimum.

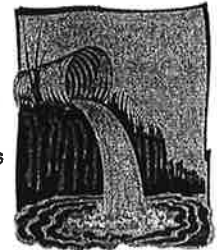


STABILIZE AREAS

- Wherever possible, preserve existing trees, shrubs, and other vegetation to minimize exposed areas.
- Stabilize exposed areas immediately. Do not wait till end of project.
- Stabilization can be achieved with sod, seeding, mulch, erosion control blankets, etc. Hard armor (ex. rip-rap, netting, concrete, rock, etc.) may be more appropriate in channels, flumes, steep slopes, swift moving water, etc.
- Revegetate exposed areas with seed, sod, or mulch as soon as possible.
- To prevent root damage to existing trees, do not grade, place soil stockpiles, or park near trees marked for preservation.
- Mulch may need to be anchored down by disking, crimping, or nets. Sod may need to be anchored down with staples – especially on side slopes.
- Seed and sod must be watered and maintained to establish effective cover per City Engineering Standards Manual specs.

DEWATERING OPERATIONS

- Dewatering a site to install underground utilities will require a permit through the Water Management District (St Johns River WMD 407-659-4800 or South Florida WMD 407-858-6100).
- Dewatering methods include well-points, sock filters, sump pumps, etc.
- Directing the water offsite will require the discharge to meet FDEP Surface Water Quality Classifications (62-302.530). The water will need to be tested for pollutants.
- Turbidity levels on the discharge water shall not exceed 29 N.T.U.'s above the receiving waterbody. This can be achieved through well-point and sock filter methods, velocity controls, armored spillways, sediment basins, use of chemical clarifiers, etc.
- Floating turbidity curtains should be installed in the receiving waterbody. Curtain must extend to bottom of waterbody and attached to sides of bank.



MAINTENANCE TO BMP'S

- Inspect BMP's at least daily and after ½ inch rain event.
- Remove sediment and repair spots of erosion immediately.
- If site is subject to NPDES permitting (1+ acres disturbed), keep a weekly log of erosion control efforts.

For more information on Erosion and Sediment Control Issues and how you can help save our lakes, please contact the City of Orlando Streets and Stormwater Hotline at 407-246-2370.

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF WINTER PARK, FLORIDA, AMENDING CHAPTER 58, CITY OF WINTER PARK CODE OF ORDINANCES, LAND DEVELOPMENT CODE; AMENDING SECTION 58-95 AND ADDING SECTION 58-170 GOVERNING ARTIFICIAL TURF REQUIREMENTS; PROVIDING FOR DEFINITIONS; PROVIDING REQUIREMENTS FOR INSTALLATION AND MAINTENANCE OF IMPERVIOUS AND PERVIOUS ARTIFICIAL TURF; PROVIDING FOR CODIFICATION, SEVERABILITY, CONFLICTS, AND AN EFFECTIVE DATE.

WHEREAS, the City Land Development Code currently limits the amount of impervious surface that may be utilized in residential and commercial development; and

WHEREAS, the City wishes to clarify that artificial turf, which is a grass mat manufactured with man-made materials used to replicate natural grass, can constitute an impervious surface subject to the relevant City regulations; and

WHEREAS, the City further wishes to clarify and enact regulations governing the installation of artificial turf; and

WHEREAS, the City finds that this Ordinance advances the interests of the public health, safety, and welfare.

NOW, THEREFORE, BE IT ENACTED BY THE CITY COMMISSION OF THE CITY OF WINTER PARK, FLORIDA:

SECTION 1. **Recitals.** The foregoing recitals are hereby ratified and confirmed as being true and correct and are hereby made a part of this Ordinance.

SECTION 2. **Amendment of City Code.** Section 58-95 of Chapter 58, Article III of the City Code of Ordinances is hereby amended, and a new Section 58-170 is hereby created in Chapter 58, Article V, Division 1 of the City Code of Ordinances, all as follows (words that are ~~stricken out~~ are deletions; words that are underlined are additions; stars * * * * * indicate breaks between sections, subsections, or paragraphs and do not indicate changes to the City Code; provisions not included are not being amended):

Sec. 58-95. - Definitions.

For the purposes of this article, certain terms or words used herein shall be interpreted as follows:

* * * *

Artificial Turf or synthetic grass means an artificial grass mat manufactured with man-made materials such as polypropylene, polyethylene, and/or other materials, which is used to replicate the appearance of natural grass.

* * * *

Impervious coverage means the percentage of the lot land area that is covered with impervious materials such as building, swimming pools (including pool water and pool decks), decks, patios, driveways, etc. Artificial turf shall also be considered an impervious coverage unless specifically designed and permitted with a proper porous permeable underlying material such as gravel. Standard engineering coefficients of permeability shall be utilized for mixed surfaces. Land located across a street and separated from the building site shall not be included in the available land area calculation.

* * * *

Sec. 58-170. – Artificial Turf Installation. The following requirements shall govern the installation of artificial turf.

a) Impervious installations

- 1) A permit shall be required to install.
- 2) New total impervious area coverage to include the artificial turf shall be submitted with the permit application.
- 3) Proof of permeability is not required.
- 4) The first one inch of stormwater runoff from the artificial turf must be retained on site in accordance with Sec. 58-163.
- 5) Installations are not allowed under tree canopies.

b) Pervious installations

- 1) A permit shall be required to install.
- 2) Artificial turf shall have a backing of a uniform (every square inch) woven material, which precludes the use of a solid backed material with periodic holes.
- 3) The required minimum rate of permeability shall be 30 inches per hour uniformly (every square inch) across the artificial turf.
- 4) Underlying material (gravel, drainfield rock, sand setting, fabric, etc.) shall be included in the design per the manufacturer’s specifications to meet the minimum rate of permeability.
- 5) Prior to installation of artificial turf, the property owner shall enter into an agreement, with and in a form acceptable to the City, providing for property

owner’s and its successors’ and assigns' scheduled maintenance activities and annual reports thereof to the City. Among other things, such agreement may provide for: (i) property owner’s requirement to remove and/or replace the artificial turf in the future if the artificial turf ceases to function as designed and permitted, is not properly maintained and/or if the expiration of the artificial turf’s life expectancy occurs; (ii) the City’s remedies in the event property owner fails to comply with its maintenance, repair and replacement obligations; and (iii) property owner’s indemnification and hold harmless of the City and its officials and employees with respect to the artificial turf installation, maintenance and repair, including any drainage problem that may arise therefrom.

c) *Maintenance of artificial turf.* The property owner shall routinely maintain artificial turf, including cleaning, brushing, debris removal, repairing and replacement. Such maintenance activities shall ensure that artificial turf continues to function as designed and permitted. The property owner’s failure to maintain, repair and/or replace artificial turf in compliance with this section or any agreement entered into with the City as required herein shall constitute a violation of this subsection.

SECTION 3. Codification. Section 2 of this Ordinance shall be codified into the Winter Park City Code. Any section, paragraph number, letter and/or any heading may be changed or modified as necessary to effectuate the foregoing. Grammatical, typographical and similar or like errors may be corrected, and additions, alterations, and omissions not affecting the construction or meaning of this Ordinance and the City Code may be freely made.

SECTION 4. Severability. If any section, subsection, sentence, clause, phrase, word or provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 5. Conflicts. In the event of a conflict or conflicts between this Ordinance and any other ordinance or provision of law, this Ordinance controls to the extent of the conflict, as allowable under the law.

SECTION 6. Effective Date. This Ordinance shall become effective immediately upon adoption by the City Commission of the City of Winter Park, Florida (the “Effective Date”), and shall apply to all applications for permits received on or after the Effective Date.

ADOPTED this ____ day of _____, 2021, by the City Commission of the City of Winter Park, Florida.

CITY COMMISSION
CITY OF WINTER PARK

Steve Leary, Mayor

ATTEST:

Rene Cranis, City Clerk

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Sec. 10.5-23. - In general.

a.

- (a) *Plant selection (plant palette) and placement.* The selection of plants to be included in the plant palette should be based on the plant's adaptability to the existing conditions present at the landscaped area (Lantana is in hardiness zone 10a) and, soil type and moisture conditions, light, mature plant size, desired effect, color and texture. Plant species that are drought and freeze tolerant are recommended. Plants shall be grouped in accordance with their respective water and maintenance needs. Plants with similar water and cultural (soil, climate, sun, and light) requirements shall be grouped together. The water use zones (hydrozones) shall be shown on the landscape and irrigation plans.

With the exception of areas used for permissible driveways or sidewalks leading to a structure on the property, all required setback areas shall be landscaped, planted and maintained with a combination of sod, flowerbeds, shrubs, hedges and ground cover not to exceed three (3) feet in height; and trees which shall be planted so as not to obscure vision of traffic. All swales shall be sodded; no trees or other plant material shall be allowed in swale areas except upon approval by the town. (See Art. II. of Chap. 17 for additional swale regulations). Furthermore, the town encourages the use of "Xeriscape" in the planning and planting of landscaping following seven fundamental practices. Xeriscape is meant to be accomplished by:

- (1) Planning and designing the landscaping for water conservation and beauty from the start;
 - (2) Creating practical turf areas of manageable sizes, shapes, and using appropriate grasses;
 - (3) Selecting low water requiring plants and grouping plants of similar water needs together; and then experimenting to determine how much and how often to water the plants;
 - (4) Using soil amendments if needed on the particular site and/or with the plant palette;
 - (5) Using mulches, such as woodchips, in order to reduce evaporation and to keep the soil cool;
 - (6) Irrigating efficiently with properly designed systems (including hose-end equipment) and applying the right amount of water at the right time; and
 - (7) Maintaining the landscape properly by mowing, weeding, pruning and fertilizing.
- (b) *Installation and phasing.* All landscaping shall be installed according to acceptable industry standards in a manner designed to encourage vigorous growth. Soil improvement measures may be required to ensure healthy plant growth. A plant or tree's growth characteristics shall be considered before planting to prevent conflicts with buildings, views, lighting, utility lines (overhead and underground) or signage. All plants (including turf) require watering during establishment. Temporary irrigation facilities may be installed to facilitate establishment. Required landscaping may be installed in phases as follows.
- (1) *Planned developments.* The number of trees required to be planted or preserved in a construction phase of a planned development, shall be a proportion of the total number of trees required to be planted in the overall planned development. This proportion shall be determined by comparing the area of the phase plan to the area of the entire planned development as shown on its current, controlling preliminary development plan. Areas of vegetation required to be preserved shall be excluded from the calculation of the area of a phase or subdivision plan of the planned development.
 - (2) *Other developments.* The entire perimeter landscaping shall be installed for residential and nonresidential developments, prior to the issuance of the first certificate of occupancy or completion or in accordance with a phasing plan approved by the development services director.
 - (3) *Preserved areas.* Areas of vegetations that are to be preserved must be protected during site construction

through the use of appropriate protection devices, such as tapes, fences, or other barriers.

a.

(c) *Maintenance.* Proper landscape and irrigation maintenance will preserve and enhance a quality landscape and help to ensure water-efficiency. The property owner is responsible for the following.

- (1) Regular maintenance of all landscaping in a way that presents a healthy, neat, and orderly appearance. All landscaping shall be maintained free from disease, pests, weeds and litter. This maintenance shall include weeding, watering, fertilizing, pruning, mowing, edging, mulching, pest control, or other maintenance, as needed and in accordance with acceptable horticultural practices. In no case shall turf and/or grass be permitted to grow to a height greater than twelve (12) inches.
- (2) The maintenance of required landscape structures (e.g., walls, fences) in a structurally sound condition.
- (3) The regular maintenance, repair, or replacement, where necessary, of landscape barriers required by this section.
- (4) Perpetual maintenance to prohibit the reestablishment of prohibited and non-native invasive species within landscaping and preservation areas.
- (5) Continuous maintenance of the site.
- (6) All trees shall be allowed to grow to their natural mature height and a full canopy. Maintenance shall be limited to periodic pruning to maintain healthy trees, removal of diseased limbs, or removal of limbs or foliage that present a hazard.
- (7) Landscape buffers shall be maintained and preserved along the entire length of the property.

Landscape areas which are required to be created or preserved by this section shall not be used for the storage/display of materials or sale of products or services.

(d) *Pruning.* Pruning shall be permitted to allow for healthy growth, and to promote safety considerations. Trees which cause a conflict with views, signage or lighting shall not be pruned more than the maximum allowed. The town manager, development services director or building official may suspend the provisions of this section in case of a natural disaster.

- (1) A maximum of one-fourth (¼) of tree canopy may be removed from a tree within a one-year period, provided that the removal conforms to the standards of crown reduction, crown cleaning, crown thinning, crown raising, vista pruning, and crown restoration pruning techniques. All pruning shall comply with the American National Standards Institute, ANSI 300 (Tree, Shrub and other Woody Plant Maintenance), as amended. The crown of a tree required by this code or condition of approval shall not be reduced below the minimum spread or height requirements of subsection 10.5-24(b) or specific town council conditions of approval. A tree which is pruned in excess of these requirements shall be replaced with a tree that meets the minimum requirements of subsection 10.5-24(b).
- (2) If other than the mature height and spread is desired for any required tree, the size and shape shall be indicated on an approved landscape plan. Shaping of a tree shall be permitted if the tree is to be used as an accent, focal point or as part of an overall landscape design. A maintenance commitment shall be clearly outlined on the approved landscape plan to explain the care and upkeep of a shaped tree.
- (3) Hatracking (tree topping), as defined in this chapter, is strictly prohibited by this subsection and also at subsection 10.5-3(b).
- (4) Exemptions. The following shall be exempt from the requirements of this section.
 - a. Trees affected by FAA and airport safety regulations.

- b. Trees which interfere with safe site triangles, utility lines, or utility structures.
- c. Trees having crown dieback or decay greater than one-third ($\frac{1}{3}$) the tree canopy.
- d. Trees having suffered damage due to natural or accidental causes.
- e. Trees having insect or disease damage greater than one-third ($\frac{1}{3}$) of the tree crown.
- f. Trees in botanical gardens, or botanical research centers.
- g. Trees pruned pursuant to the provisions of F.S. § 163.045.

(e) *Artificial turf.*

(1) *Minimum material standards.* All artificial turf shall comply with the following minimum standards:

- a. Artificial turf shall consist of green lifelike individual blades of grass that emulate natural turf in look and color and shall have a minimum pile height of one and one-half (1.5) inches and shall have a minimum tufted weight of fifty-six (56) ounces per square yard.
- b. Artificial turf installations shall have a minimum permeability of 30 inches per hour per square yard.
- c. All artificial turf shall have a minimum eight-year manufacturer's warranty that protects against color fading and a decrease in pile height.
- d. Artificial turf shall be lead free.
- e. All materials must include test documentation which declares that the artificial turf yarn and backing materials are disposable under normal conditions, at any US landfill station (Total Content Leach Protocol (TCLP) test).
- f. The use of indoor or outdoor plastic or nylon carpeting as a replacement for artificial turf or natural turf shall be prohibited.

(2) *Installation, maintenance and repair.*

- a. All artificial turf shall, at a minimum, be installed according to the manufacturer's specifications.
- b. All artificial turf installations shall be anchored to ensure that the turf will withstand the effects of wind.
- c. All seams shall be nailed and glued, not sewn, and edges shall be trimmed to fit against all regular and irregular edges to resemble a natural look.
- d. If artificial turf is planned to be installed immediately adjacent to a seawall, the artificial turf shall be pinned or staked behind the seawall. No artificial turf or installation mechanism shall be attached directly to or placed on a seawall or seawall cap.
- e. Proper drainage shall be provided for all artificial turf installations to prevent excess runoff or pooling of water.
- f. Artificial turf shall be visually level, with the grain pointing in a single direction.
- g. An appropriate solid barrier device (e.g., concrete mow strip, bender board) is required to separate artificial turf from soil and live vegetation.
- h. Precautions for installation around existing trees shall be monitored and may be restricted to ensure tree roots are not damaged with the installation of the base material and that the overall health of the tree will not be compromised.
- i. All artificial turf shall be maintained in a green fadeless condition and shall be maintained 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.

a.

- j. All artificial turf must be replaced if it falls into disrepair with fading or holes or loose areas. Replacement and/or repairs shall be done with like for 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.
- k. An owner or applicant shall obtain a duly-authorized building permit from the city's development services department prior to the installation of any artificial turf.
- l. The town or other public entity or utility company may remove artificial turf at any time and for any reason, including but not limited to, in order to provide underground access for utility work. The property owner shall bear and pay any and all costs to replace or reinstall the artificial turf.

(f) *Irrigation.*

- (1) Landscaped areas shall be irrigated as necessary to maintain required plant materials in good and healthy condition. Water can be conserved through the use of a properly designed and managed irrigation system. Irrigation scheduling information, with instructions for seasonal timer and sensor changes, shall be provided to the owner at the time of installation. Irrigation systems shall comply with the following standards.
 - a. All landscaped areas shall be provided with a readily available water supply with at least one (1) outlet within seventy-five (75) feet of the plants to be maintained.
 - b. Irrigation systems shall be continuously maintained in working order and shall be designed so as not to overlap water zones or to water impervious areas.
 - c. Irrigation systems shall not be installed or maintained abutting any public street which causes water from the system to spray onto the roadway or to strike passing pedestrian or vehicular traffic, where feasible.
 - d. Permanent irrigation systems are not permitted for areas set aside on approved site development plans for preservation of existing native vegetation.
 - e. Temporary irrigation systems installed pursuant to acceptable "Xeriscape" practices may be used to meet the standards of this section, upon approval of the PRC.
 - f. Whenever practical, irrigation systems shall be designed in districts to apply water onto shrub and tree areas on a less frequent schedule than those irrigating lawn areas. A rain-sensor switch shall be installed and maintained in operating condition on systems with automatic controllers.
- (2) The installation of tracer wire along main lines and laterals is strongly encouraged to permit easy location and prevent inadvertent cutting of pipes. If the water supply for the irrigation system is from a well, a constant pressure flow control device or pressure tank with adequate capacity shall be required to minimize pump "cycling." Check valves must be installed at irrigation heads as needed to prevent low head drainage and puddling. Nozzle precipitation rates for all heads within each valve circuit must be matched to within twenty (20) percent of one another. No water spray from irrigation systems shall be applied under roof overhangs. Irrigated areas shall not be less than four (4) feet wide, except when next to contiguous property or using micro or drip irrigation. A pressure-regulating valve shall be installed and maintained if static service pressure exceeds eighty (80) pounds per square inch. The pressure-regulating valve shall be located between the meter and the first point of water use, or first point of division in the pipe, and set at not more than fifty (50) pounds per square inch when measured at the most elevated fixture in the structure served. This requirement may be waived if satisfactory evidence is provided that high pressure is necessary in the design and that no water will be wasted as a result of high-pressure operation.

- (3) A regular irrigation maintenance schedule shall include but not be limited to checking, adjusting, and repairing equipment; and resetting the automatic controller according to the season. To maintain the original performance and design integrity of the irrigation system, repair of the equipment shall be done with the originally specified materials or their equivalents.
- (4) Restrictions.
- a. Irrigation of any residential, commercial, institutional, governmental or industrial landscape areas shall be restricted to the hours of 5:00 p.m. to 9:00 a.m.
 - b. Moisture sensing and/or rain shut-off switch equipment shall be required on automatic irrigation systems to avoid irrigation during periods of sufficient soil moisture. Said equipment shall consist of an automatic mechanical or electronic sensing device or switch that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.

(Ord. No. O-15-05, § 1, 9-26-05; Ord. No. O-10-06, § 2, 8-28-06; Ord. No. O-05-2016, § 1, 2-8-16; Ord. No. O-20-2019, § 5, 10-28-19; Ord. No. O-30-2019, § 6, 1-27-20)

ORDINANCE NO. 2019-15

AN ORDINANCE OF THE TOWN OF OCEAN RIDGE, FLORIDA, AMENDING ITS CODE OF ORDINANCES BY AMENDING CHAPTER 1 “GENERAL PROVISIONS”, SECTION 1-3 “DEFINITIONS”; AMENDING CHAPTER 66 “ENVIRONMENTAL REGULATIONS”, ARTICLE IV “LANDSCAPING”, DIVISION 2 “WATER EFFICIENT LANDSCAPE”, SECTION 66-141 “WATER EFFICIENT LANDSCAPE CODE”; ENACTING SECTION 66-142 “ARTIFICIAL TURF/SYNTHETIC GRASS” TO PROVIDE FOR REGULATIONS REGARDING ARTIFICIAL TURF/SYNTHETIC GRASS; PROVIDING FOR CODIFICATION, REPEAL OF CONFLICTING ORDINANCES, SEVERABILITY, AND AN EFFECTIVE DATE.

WHEREAS, the Town of Ocean Ridge, Florida (the “Town”) is a duly constituted municipality having such power and authority conferred upon it by the Florida Constitution and Chapter 166, Florida Statutes; and

WHEREAS, the Town Commission wishes to provide for regulations regarding artificial turf/synthetic grass; and

WHEREAS, the Town Commission has determined that the enactment of this ordinance is for a proper municipal purpose and in the best interests of the residents of the Town.

NOW THEREFORE, BE IT ORDAINED BY THE TOWN COMMISSION OF THE TOWN OF OCEAN RIDGE, FLORIDA, AS FOLLOWS:

SECTION 1 – Findings of Fact: The **WHEREAS** clauses set forth above are adopted herein as findings of fact.

SECTION 2 – Amendment: Chapter 1 “General Provisions”, Section 1-3 “Definitions”, is amended to read as follows:

Sec. 1-3. - Definitions.

Landscaping means all materials such as, but not limited to, grass, ground covers, shrubs, vines, hedges, trees or palms, and other material such as rocks, pebbles, artificial turf/synthetic grass, walls or fences, and decorative paving materials, all of which are approved by the administrative official.

SECTION 3 – Amendment: Chapter 66 “Environmental Regulations”, Article IV “Landscaping”, Division 2 “Water Efficient Landscape”, by amending Section 66-141 “Water efficient landscape code” to read as follows:

Sec. 66-141. - Water efficient landscape code.

- (a) *Intent and standards.* This water efficient landscape code establishes minimum standards for the development, irrigation, and maintenance of landscaped areas and requires specific water conservation measures, including the preservation of natural vegetation, where applicable.
- (b) *Applicability.* No site plan approval, construction permit or other development order shall be issued for new construction of a single-family or multifamily structure, or the "substantial improvement" of an existing single-family or multifamily structure, as defined in section 1-3 of the land development code, unless the water-efficiency actions included within the landscape plan comply with the provisions hereof, or unless exempted from these provisions. No certificate of completion, use, or use and occupancy shall be issued until the requirements of this division are met.
- (c) *Four-foot landscape minimum.* A minimum four-foot-wide area around the perimeter of the "footprint" of new construction shall receive landscape treatment, as provided herein.
- ~~(d) *Variances.* The town commission, for good cause shown, may grant variances, and conditional or partial exemptions from this land development code.~~
- (e) *Definitions.* Technical terms used herein shall be as defined in the model xeriscape code promulgated by the South Florida Water Management District.
- (f) *Water efficient landscape standards; established.*
 - (1) *Planning and design.* Site plans shall identify all vegetated areas, including those to be preserved. Installed trees and plant materials shall be grouped together into zones according to water use needs. Installed trees and vegetation shall be located to accommodate their mature size on the site. Unless the tree or other plant material is approved by the respective utility, no trees or other plant materials shall be located or planted in such a manner as to interfere with the use of recorded easements, power or other utility lines or facilities, or the use and maintenance of public rights of way. The water use zones shall correlate to the water use zone designations of plants listed in the Xeriscape Plant Guide II, published by the South Florida Water Management District. Impervious surfaces and materials within landscaped areas shall be limited to borders, sidewalks, step-stones, swimming pools, decks, spas, and other similar features. In no event shall all impervious materials on the lot exceed 40 percent of the total lot area, not including the "footprint" of the house.
 - (2) *Appropriate plant selection.* All landscaped areas shall include plant materials, which are noninvasive and native to the area, as listed in the Xeriscape Plant Guide II, previously cited. A minimum of 50 percent native plants shall be used within the landscaped area. Plants prohibited in section 66-151 of this land development code or which are prohibited elsewhere by this land development code, shall not be incorporated in a landscape plan for any reason, except educational purposes, at the request of a governmental agency.

- (3) *Turf areas.* Turf shall be treated as a major planned element of the landscape plan. The use of drought resistant grass types, including experimental varieties, is permitted. ~~Sod shall normally be required, but large turf areas, not subject to erosion, such as play fields, may be grassed with methods other than sod.~~
- (4) *Efficient irrigation.*
 - a. If required to support plant life, an irrigation system shall be designed to correlate with the organization of plants into zones. The water use zones shall be shown on the landscape plan. Irrigation shall be required as follows: High water use zone shall be provided with central automatic irrigation systems. Moderate water use zones shall be provided with a readily available water supply, such as a hose bib, within 25 feet. Low water use zones shall be provided with a readily available water supply, such as a hose bib, within 50 feet.
 - b. Reclaimed nonpotable water may be used for irrigation, if an acceptable source is approved by the town commission.
 - c. Moisture sensor and rain shutoff switch equipment shall be required on automatic irrigation systems. The equipment shall consist of an automatic mechanical or electronic sensing device or switch which will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.
- (5) *Certification.* For each major site plan, a Florida licensed landscape architect, shall conduct a final field observation, and shall provide the administrative official with a certificate of substantial completion, indicating specific compliance with the elements of this land development code.

SECTION 4 – Amendment: Chapter 66 “Environmental Regulations”, Article IV “Landscaping”, Division 2 “Water Efficient Landscape”, by enacting Section 66-142 “Artificial turf/synthetic grass” to read as follows:

Sec. 66-142. – Artificial turf/synthetic grass.

- (a) Minimum material standards. All artificial turf, also referred to as synthetic grass, shall comply with the following minimum standards:
 - (1) Artificial turf shall consist of green lifelike individual blades of grass that emulate natural turf in look and color, as approved by the Town Building Official, and shall have a minimum pile height of one and one-half (1.5) inches, unless otherwise approved by the Town Building Official, and shall have a minimum tufted weight of fifty-six (56) ounces per square yard.
 - (2) Artificial turf installations shall have a minimum permeability of 30 inches per hour per square yard.
 - (3) All artificial turf shall have a minimum eight-year manufacturer's warranty that protects against color fading and a decrease in pile height.
 - (4) Artificial turf shall be lead free.

- (5) All materials must include test documentation which declares that the artificial turf yarn and backing materials are disposable under normal conditions, at any US landfill station (Total Content Leach Protocol (TCLP) test).
- (6) The use of indoor or outdoor plastic or nylon carpeting as a replacement for artificial turf or natural turf shall be prohibited.

(b) Installation, maintenance and repair.

- (1) All artificial turf shall, at a minimum, be installed according to the manufacturer's specifications.
- (2) All artificial turf installations shall be anchored to ensure that the turf will withstand the effects of wind.
- (3) All seams shall be nailed and glued, not sewn, and edges shall be trimmed to fit against all regular and irregular edges to resemble a natural look.
- (4) If artificial turf is planned to be installed immediately adjacent to a seawall, the artificial turf shall be pinned or staked behind the seawall. No artificial turf or installation mechanism shall be attached directly to or placed on a seawall or seawall cap.
- (5) Proper drainage shall be provided for all artificial turf installations to prevent excess runoff or pooling of water.
- (6) Artificial turf shall be visually level, with the grain pointing in a single direction.
- (7) An appropriate barrier device (e.g., concrete mow strip, bender board, brick pavers, river rock, landscaping) is required to separate artificial turf from soil and live vegetation.
- (8) Precautions for installation around existing trees shall be monitored and may be restricted to ensure tree roots are not damaged with the installation of the base material and that the overall health of the tree will not be compromised.
- (9) All artificial turf shall be maintained in a green fadeless condition and shall be maintained 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.
- (10) All artificial turf must be replaced if it falls into disrepair with fading or holes or loose areas. Replacement and/or repairs shall be done with like for like materials from the same manufacturer, if possible, and done so in a manner that results in a repair that blends in with the existing artificial turf.
- (11) An owner or applicant shall obtain a duly-authorized building permit from the town's building department prior to the installation of any artificial turf.
- (12) The town or other public entity or utility company may remove artificial turf at any time and for any reason, including but not limited to, in order to provide

underground access for utility work. The property owner shall bear and pay any and all costs to replace or reinstall the artificial turf.

(c) Locations allowed. Artificial turf/synthetic grass shall be allowed in rear and side yards, but not to exceed 25% of the total lot area (this area is defined as the total parcel area defined as a side or rear yard minus the area of the primary structure) of the rear and side yards. Artificial turf/synthetic grass shall not be allowed in any front yard areas or in any area visible from the public right-of-way (regardless of whether it is in the rear or side yard), unless it is placed in between paver blocks or similar items in a manner where the area for the artificial turf does not exceed four (4) inches in width, provided that the synthetic turf area does not exceed 50% of the total area using the paver blocks. Screening, as approved by the building official, may be used in order to comply with the visibility requirement, further any turf/synthetic grass placed in between paver blocks shall not count toward the 25% maximum amount allowed. No artificial turf shall be installed in the public right-of-way.

(d) Existing artificial turf. For those properties where artificial turf is currently installed that is not in compliance with this section, when the existing artificial turf is replaced or repaired, in an amount exceeding 50%, then compliance with this section shall be required. Further, all existing artificial turf, not in compliance with this section, must be replaced within ten (10) years of the adoption of this ordinance.

(e) Pervious area. Artificial turf shall be considered as 100% pervious area.

SECTION 5 - Codification: The ordinance shall be codified in the Code of Ordinances of the Town of Ocean Ridge, Florida.

SECTION 6 - Repeal of Conflicting Ordinances: All Ordinances, Resolutions or parts of Ordinances and Resolutions in conflict herewith are hereby repealed.

SECTION 7 - Severability: If any word, clause, sentence, paragraph, section or part thereof contained in this Ordinance is declared to be unconstitutional, unenforceable, void or inoperative by a court of competent jurisdiction, such declaration shall not affect the validity of the remainder of this Ordinance.

SECTION 8 - Effective Date: This Ordinance shall become effective immediately upon adoption.

FIRST READING this 3rd day of February, 2020.

SECOND AND FINAL READING this 2nd day of March, 2020.

Commissioner _____ offered the foregoing Ordinance, and moved its adoption. The motion was seconded by Commissioner _____ and upon being put to a vote, the vote was as follows:

STEVE COZ, Mayor _____

DON MAGRUDER, Vice Mayor _____

PHILIP BESLER, Commissioner _____

KRISTINE DE HASETH, Commissioner _____

SUSAN HURLBURT, Commissioner _____

The Mayor thereupon declared this Ordinance approved and adopted by the Town Commission of the Town of Ocean Ridge, Florida, on second reading, this 2nd day of March, 2020.

TOWN OF OCEAN RIDGE, FLORIDA

BY: _____
Steve Coz, Mayor

ATTEST: _____
Karla Armstrong, Town Clerk

Town of Ocean Ridge, Florida
Town Commission Agenda Memorandum
Office of the Town Manager

Meeting Date: March 2, 2020
Subject: CD Rates & Transfer Funds Between Bank Accounts

Mayor & Commissioners:

At the February 3rd meeting, the Town Commission authorized me to transfer two million dollars from the general fund to the money market account at City National Bank in order to maximize our interest income, as the CD rates were too low at that time to invest.

We are currently earning interest in our money market account with a rate of 1.65%, and the current CD rates are as follows:

- 3 month = 1.60%
- 6 month = 1.65%
- 9 month = 1.70%
- 12 month = 1.75%

Since we are already earning 1.65% on our money market account, I am recommending that we wait to purchase another CD until the rates rise. I am requesting that the Town Commission give me the authority to transfer funds from the general fund to the money market account and vice-versa as needed throughout the year to continue to maximize the Town’s interest income, and to ensure we have adequate cash flow to meet our obligations.

Suggested Motion: I move to authorize Town Manager Stevens to transfer funds as needed from the general fund to the money market account and vice versa as needed to maximize the Town’s interest income and to ensure the Town has adequate cash flow to meet its obligations.

Respectfully,



Tracey L. Stevens, MMC
Town Manager & Finance Director



TO: City Council
FROM: Lance Lang, Principal Planner
DATE: February 19, 2019
SUBJECT: **ARTIFICIAL TURF**

I. RECOMMENDED ACTION

Discuss and determine whether the City should allow installation of artificial turf in the City of Minot.

If the Council wants to allow installation of artificial turf, proceed with one or more of the following options:

1. Direct City staff to draft an amendment to the Zoning Ordinance to allow installation of artificial turf in the City of Minot; and/or
2. Direct City staff to draft a limited exception to the Zoning Ordinance to allow artificial turf to be installed in the City of Minot, and outline any quality standards, restrictions, and/or processes the Council wants the exception to address; and/or
3. Direct City staff to draft an amendment to the Zoning Ordinance to allow the City to create an artificial turf pilot program to evaluate the pros and cons of artificial turf; and/or
4. The Council could provide opinions on this topic, but continue and incorporate the discussion into the comprehensive zoning code amendments the City hopes to address in 2019; and/or
5. The Council could elect to leave the ordinance as written, and prohibit installation of artificial turf in the City of Minot.

II. DEPARTMENT CONTACT PERSONS

Lance Lang (701) 857-4108

III. DESCRIPTION

A. Background

In the fall of 2018, Tim Vallely met with City staff to discuss the installation of artificial turf at the newly constructed Vallely Sports and Marine building located at 2125 Elk Drive, Minot. The property is presently zoned C2.

The Valley proposal recommends substituting artificial turf for 178 plantings/perennial plants that were a part of the submitted site plan and subsequently approved as the Landscape Plan of record by city staff during the permit review process. Mr. Valley claims that perennial plants would not survive the plans he has for the property, which includes parking boats on the plantings and performing snow removal on and around the plantings. He stated that the artificial product would look good year-round and be much easier to maintain.

Chapter 24 of the Zoning Supplement to the City of Minot’s Code of Ordinances (hereinafter, Zoning Ordinances) governs landscaping within the City, and sets forth the City’s intent for all properties to be landscaped and maintained with great care. Section 24-3 lists the general landscape requirements that shall apply in all multiple-family residential, business, mixed-use, public, and industrial districts. Subsection (f)(1) prohibits the use of artificial trees, shrubs, plants, or turf to fulfill the minimum requirements for landscaping.

Based upon the information received, City staff cannot identify an exception in the Zoning Ordinances that would allow Mr. Valley to use artificial turf in lieu of organic landscaping materials. It is our understanding that the Valley landscaping plan contemplates using artificial turf to fulfill the minimum requirements for landscaping, which eliminates any plausible exception to Section 24-3(f)(1). A variance requires an identification of physical conditions, unique to the site, that create an unreasonable hardship in the development of the site for permitted uses. City staff, based upon the information received to date, has not found a physical condition that warrants a variance in this instance.

B. Proposed Project

If artificial turf is something the City wants to explore, the Zoning Ordinances will need to be amended to allow the same to be installed in lieu of natural plant material. City staff has identified five options the City may consider moving forward, and each are discussed in more detail below:

- 1. Direct City staff to draft an amendment to the Zoning Ordinance to allow installation of artificial turf in the City of Minot.

Under this option, the Council would direct City staff to review the Zoning Ordinance and prepare an amendment for the Council’s consideration that removes any language prohibiting the installation of artificial turf. This option would allow property owners to install artificial turf with no regulation.

- 2. Direct City staff to draft a limited exception to the Zoning Ordinance to allow artificial turf to be installed in the City of Minot.

Under this option, the Council would direct City staff to review the Zoning Ordinance and prepare an amendment for the Council’s consideration that permits the installation of artificial turf subject to certain quality standards, restrictions, and/or a review process as recommended by the City staff.

If the Council has any specific direction regarding quality standards, restrictions, and/or a review process that it would like City staff to implement, City staff would welcome that direction at this time. Examples of specific regulations and processes other cities across the nation have adopted are cited in Attachments B and C of this memo.

- 3. Direct City staff to draft an amendment to the Zoning Ordinance to allow the City to implement an artificial turf pilot program to evaluate the pros and cons of artificial turf.

Under this option, the Council would direct City staff to review the Zoning Ordinance and prepare an amendment for the Council’s consideration that adopts a pilot program allowing the installation of artificial turf in the City of Minot.

Pilot programs are generally experimental programs that allow organizations to test out a solution to a problem on a small scale. Generally, they begin with a proposal listing the program objectives, procedures, protocols, the timeline in which the program will run, and the metrics that will assist in determining the program’s success or failure. Some communities use an agreement to launch the pilot, others adopt ordinances, and some use a combination of agreements and ordinances. Upon conclusion of the pilot program, communities can explore regulation through agreements, permits, or ordinances, if the program is to be implemented full-time. Regulations can then be updated at the conclusion of the pilot program.

If the Council elects this option, City staff would develop a proposal for the Council outlining the framework of the pilot program. The proposal would need to discuss the time frame in which the program would be conducted and establish a process by which to implement the program, including drafting a pilot program agreement, an ordinance allowing for the pilot program, the criteria to evaluate success, and the boundaries for the pilot program as well as any other considerations the Council may direct City staff to incorporate.

If at any time in the future the Council determines that they no longer want to allow artificial turf in the City, including as a pilot program, then the City can give notice to the program participants and any artificial turf approved for installation as part of a pilot program would need to be removed and replaced with organic plant materials by the owner of the property upon which the artificial turf was installed in accordance with the approved Landscape Plan of record.

- 4. The Council could provide opinions on this topic, but continue and incorporate the discussion into the comprehensive zoning code amendments the City hopes to address in 2019.

The Planning Department and Steering Committee have plans to prepare a comprehensive amendment to the Zoning Ordinance, and to that end is engaging in discussions with contractors to assist with the comprehensive code review and revision. The Council could elect to provide opinions on the topic, but ultimately direct City staff and the Steering Committee to incorporate this discussion into their comprehensive zoning code amendments.

- 5. The Council could elect to leave the ordinance as written, and prohibit installation of artificial turf in the City of Minot.

C. Consultant Selection

City staff has not retained a consultant to assist with this issue.

IV. IMPACT

a) Strategic Impact

Chapter 24 of the Zoning Supplement to the City of Minot’s Code of Ordinances (hereinafter, Zoning Ordinances) governs landscaping within the City, and sets forth the City’s intent for all properties to be landscaped and maintained with great care. The decision of whether or not to allow artificial turf in the City is a matter of personal preference when it comes down to installation, maintenance, and aesthetics. Whether or not the artificial turf could impact storm water runoff or cause other environmental concerns will largely depend upon the type of artificial turf or infill used, and City staff can research this issue more if the Council decides that it wants City staff to allow installation of artificial turf in the City of Minot.

b) Service/Delivery Impact

Attached to this memo as Attachment A is a document titled “Artificial Turf – The Pros and Cons.” City staff created this document to help chart the advantages and disadvantages to artificial turf installation. In addition to the points set forth in Attachment A, the Council should keep in mind that allowing artificial turf to replace some of the City’s present landscaping requirements has the potential to change the appearance of the City. As such, the City recommends giving City residents an opportunity to provide public comment on this issue.

c) Fiscal Impact

If no change to the Zoning Ordinance is requested, then there would be no fiscal impact to the City.

Additional staff study would be required in order to provide a comprehensive fiscal note on the effect allowing installation of artificial turf would have on the City. Initial fiscal impact would likely involve increased staff time to answer questions, review and discuss the changes, and monitor compliance with the ordinance. Property owners could initially achieve financial savings by installing artificial turf due to water conservation, time and money spent to mow the lawn, fertilize the lawn, etc., but it is difficult to determine if any cost savings would be offset by costs to maintain and replace artificial turf after their warranties expire.

Project Costs

N/A

Project Funding

N/A

V. ALTERNATIVES

If the Council does not want to proceed with one of City staff’s recommended options, the Council could propose an alternative option.

VI. TIME CONSTRAINTS

An ordinance requires two readings in order to be implemented/effective, and interested property owners would likely want to begin installation of artificial turf in early spring and continue through the summer. If the City wishes to implement ordinances to allow artificial turf, City staff recommends that the City strive to have the ordinance effective by April to allow property owners the opportunity to begin installation in May, weather permitting.

VII. LIST OF ATTACHMENTS:

- A. Natural v. Artificial Turf – “The Pros and Cons”**
- B. Survey of Other North Dakota Cities**
- C. Nationwide Examples**

Attachment A

Natural v. Artificial Turf – “The Pros and Cons”

There are advantages and disadvantages to both artificial turf and natural turf. Below is a compilation of opinions illustrating the pros and cons of each option.

City staff would note that the lists compiled below are merely a sampling of opinions that have been identifying by varying sources, including sales representatives and environmental groups. Many of the concerns expressed below may be addressed as the science behind natural and artificial turf products continues to evolve. The lists below should not be considered scientific or comprehensive, but simply a representative of the financial, environmental, and practical impacts staff discovered, along with representations from advocates and detractors on both sides.

NATURAL TURF

ADVANTAGES	DISADVANTAGES
Less expensive to install.	More expensive and laborious to maintain.
If maintained, never has to be replaced.	Must be mowed, trimmed, and watered regularly. Maintenance affected by droughts, flooding, and other irregular weather conditions.
Filters water – lowers run-off amount and recharges water tables.	Some fertilizers, pesticides, and herbicides can leach into run-off.
Can easily be repaired with patching and seeding/Easily interspersed and integrated with a range of planting materials.	Can become discolored due to disease and pet waste. Can become muddy without proper drainage.
Generally good for the environment – Cools the air on hot days; takes carbon out of the air and replenishes oxygen; provides habitat for insects (food for birds); microbial life enriches the soil, dead turf is compostable.	Mowers/trimmers can be noisy and throw pollen into the air which irritates many that suffer from seasonal allergies.

ARTIFICIAL TURF

ADVANTAGES	DISADVANTAGES
Less expensive and laborious to maintain.	More expensive to install.
Can withstand significantly more use (used in sports stadiums) and general wear and tear. Good for places with little natural light, or desert climates.	Must be replaced every 8-20 years depending upon quality and usage and typically is land-filled at the end of its useful life.
Conserves water.	<p>When artificial turf is installed the subgrade soil must be compacted, which affects water filtration and drainage. The impervious surface created by the compaction will increase runoff. Compacted soil underneath creates more run-off and “water pillows” can form without proper drainage.</p> <p>Can absorb sunlight and create “heat islands” than can be much hotter than natural turf – which can be temporarily reduced by the application of water prior to use.</p>
No mowing.	Needs occasional cleaning and/or antimicrobial treatments because pathogens are not broken down by natural processes in the same manner as in natural turf – some may also leech silver ions that are toxic to aquatic environments.
No pesticides or herbicides for pest or disease management required.	Reduces habitat for insects (food for birds) and microbial life that enriches the soil.
Recycled materials are often used as infill.	<p>Production of the synthetic materials that makes up artificial turf generates greenhouse gas emissions.</p> <p>Granulated rubber infill can carry heavy metals that could leach into the water table.</p>
No noise or emissions from mowers or trimmers, less allergens/pollen in the air to upset seasonal allergies.	Loss of organic matter can affect soil health by depleting healthy soil bacteria and organisms. Loss of soil dynamics can prevent soil from filtering and cleaning ground water.
No discoloration due to pet waste.	Seam breaks can result over time, which are hard to repair/patch without visual impact.
No dirt/mud to track indoors.	Infill can be tracked indoors.
No seasonal visual variation.	Not easily interspersed or integrated with a range of other landscape materials such as live flowers, shrubbery, and trees.

Attachment B

Survey of Other North Dakota Cities

The City Planning Department conducted a survey of other Cities in North Dakota to determine what ordinances, if any, they had regarding installation of artificial turf. The table below provides a brief summary of this survey:

Bismarck	Bismarck City Code 14-03-11(6)(b) prohibits the use of artificial plants or vegetation for landscaping.
Dickinson	Dickinson City Code Section 39.08.004 states that artificial trees, shrubs, plants, or turf shall not be used to fulfill the minimum requirements for landscaping.
Fargo	Fargo City Ordinance §20-0705(E) states that plants must meet the standards of the most recent edition of the American Standard for Nursery Stock; Must be nursery-grown and adapted to the local area.
Grand Forks	Grand Forks does not appear to have a specific prohibition against using artificial turf, but in speaking with their department they noted that they do have a number of ordinances regarding “impervious surface areas” (I.e., surfaces that do not absorb water. Their zoning districts set limits on how much of a lot can be an impervious surface.
West Fargo	City Ordinance 4-449-A(6)(A)(3) states that all plant materials shall be living plants. Artificial plants are prohibited.
Williston	Williston Zoning Ordinance Section 25R (Ordinance No. 1007) requires that plans meet the quality standards of the American Standards for Nursery Stock. Turf, vegetative ground cover, and xeriscape is allowed. Xeriscape is defined as landscaping in which the plants require minimal water.

Attachment C

Nationwide Examples

The City Planning Department conducted a survey of other Cities to gauge the feasibility of an artificial turf pilot program. The information below was gathered in January, 2019 as a sample of ordinances around the county regulating use of artificial turf:

<u>City</u>	<u>Restrictions</u>	<u>Ordinance Language</u>
Yuma, AZ	Artificial Turf allowed with little to no restrictions	<p>Yuma City Code § 154-20.03 (B)(3)(c) Landscape Design Standards:</p> <p><i>Groundcover.</i> Required groundcover may be of two types, vegetative or inert.</p> <p>(a) <i>Purpose.</i> Groundcover serves to reduce dust, stabilize soils, cut glare, and prevent evaporative water loss.</p> <p>(b) Vegetative groundcover consists of living plant materials generally characterized by primary horizontal growth, as well as secondary vertical growth generally not exceeding 18 inches in height and includes turf/turf. Vegetative groundcover is not required, but groundcover plants of a one-gallon container size may be used to substitute required shrubs at a rate of three groundcover plants per one required shrub. Refer to the Recommended Plants List for groundcover plant species approved for use in City of Yuma rights-of-way.</p> <p>(c) Inert groundcover consists of landscape rock such as gravel, decomposed granite, or crushed rock, with a minimum size of one-quarter inch screened. Unscreened road base material is not an acceptable material. <i>Other materials, such as artificial turf, are also approved.</i></p>
Long Beach, CA	Percentage Restrictions	<p>Long Beach Municipal Code § 21.42.030 (A)(2) states:</p> <p>Non-permeable paving and non-permeable artificial turf shall not cover more than thirty percent (30%) of on-site area that is not covered by structures, driveways, and approved parking pads. To help with on-site stormwater retention and filtration along with reducing the urban heat island effect, the use of permeable and high reflectance paving materials is encouraged.</p> <p>Note: An “urban heat island” is an urban area or</p>

		metropolitan area that is significantly warmer than its surrounding rural areas due to human activities
Austin, TX	General requirement that the inorganic materials do not predominate over plants.	<p>Austin Land Development Code § 25-2-1003</p> <p>(A) In this article, landscape yard means the area of a lot between the street right-of-way and a line that coincides with the front wall of the building and extends from the building corners to the side property lines.</p> <p>(B) At least 20 percent of the area of the landscape yard of a lot must be landscaped area.</p> <p>(C) Each square foot of permeable landscaped area under the canopy of a tree that has a trunk diameter of at least two inches, counts as one and one-fourth square feet of landscaped area for calculating compliance with Subsection (A). This credit applies only if:</p> <p>(1) at least 50 percent of the area under the canopy of the tree is permeable; and</p> <p>(2) the provisions of the Environmental Criteria Manual are met.</p> <p>(D) A required landscaped area may include planters, brick, stone, natural forms, water forms, aggregate, and other landscape features, <i>if inorganic materials do not predominate over the plants</i>. Smooth concrete or asphalt may not be included in a required landscaped area.</p> <p>(E) For a capital improvement project involving right-of-way, landscaping may not be installed until construction is finished.</p>
Hartford, CA	Material Restrictions; Percentage Restrictions	<p>Hartford Zoning Code § 6.3.3 governs the use of Artificial Turf:</p> <p>6.3.3 ARTIFICIAL TURF</p> <p>A. Definitions (1) Artificial Turf. Any man-made surface manufactured from synthetic materials which simulate the appearance of live turf, turf, sod, or lawn. (2) Synthetic Infill Material. Any man-made infill from recycled or virgin materials including but not limited to ambient and cryogenic crumb rubber, coated crumb rubber, ethylene propylene diene monomer granules, thermoplastic elastomer granules, and recycled footwear. (3) Organic Infill Material. Any material utilizing organic components such as cork, coconut husks, rice husks, silica sand, or acrylic coated sand.</p>

		<p>B. Regulations (1) The use of artificial turf containing synthetic infill materials shall be prohibited. (2) The use of artificial turf containing organic infill materials or containing no infill material shall be permitted, provided that: (a) Such use is in compliance with all applicable environmental laws and regulations; and (b) Any infill is composed completely of organic materials; and (c) The use of artificial turf does not exceed the impervious coverage requirements.</p>
Glendale, CA	<p>Percentage Restrictions;</p> <p>Location Restrictions;</p> <p>Material Restrictions;</p> <p>Installation Restrictions;</p> <p>Drainage Restrictions;</p> <p>Maintenance Restrictions;</p> <p>Appearance Restrictions.</p>	<p>Glendale Municipal Code Title 30 (Zoning) § 30.31 Landscaping:</p> <p>Artificial turf may be used in the single family zones (ROS, R1R, and R1) as follows:</p> <ol style="list-style-type: none">1. Artificial turf shall be calculated toward the total lot area requirement for landscaping, but shall not be calculated toward the live plant material requirement.2. Artificial turf shall not be permitted beneath the drip line of tree canopies. For purposes of this section, “drip line” is defined as the area beneath the extent of the tree canopy at mature growth plus two (2) feet.3. A minimum three (3) foot wide live plant material landscape border shall be required at the street front and street side property line.4. A minimum three (3) foot wide live plant material landscape border shall be required at the base of a building facing a street front or street side setback.5. Artificial turf shall only be permitted on sloped areas less than twenty-five (25) percent.6. Artificial turf shall imitate a natural turf-like appearance and require the following:<ol style="list-style-type: none">a. A minimum blend of three (3) colors, predominately green.b. A minimum blade length of one and one half (1-1/2) inches, with spines and uneven tops.c. Infill material shall be a natural material, such as coconut fiber, cork, and sand. No crumb rubber shall be permitted.7. Artificial turf shall be installed by a qualified state-licensed contractor with a valid landscaping contractors or synthetic products contractors

		<p>license.</p> <p>8. Artificial turf shall be directed to drain on-site to a permeable area.</p> <p>9. Artificial turf shall be maintained in a clean and orderly condition and shall not contain holes, tears, stains, discoloration, seam separations, uplifted surfaces, heat degradation, or excessive wear.</p> <p>Artificial turf shall not be permitted in any portion of a property located in a commercial, industrial, or special purpose zones (C1, C2, C3, CPD, CR, CH, CA, IND, MS, CEM, SR and CE). Artificial turf shall be permitted on property located in a mixed use zone (IMU, IMU-R, SFMU and DSP) only when not visible from the public street immediately adjacent to the property. Artificial turf shall be permitted in the multi-family zones (R-3050, R-2250, R-1650 and R-1250) as follows:</p> <ul style="list-style-type: none">a. Artificial turf shall be calculated toward the total lot area requirement for landscaping, but shall not be calculated toward the live plant material requirement.b. Artificial turf shall not be permitted beneath the drip line of tree canopies. For purposes of this section, “drip line” is defined as the area beneath the extent of the tree canopy at mature growth plus two (2) feet.c. A minimum three (3) foot wide live plant material landscape border shall be required at the street front and street side property line.d. A minimum three (3) foot wide live plant material landscape border shall be required at the base of a building facing a street front or street side setback.e. Artificial turf shall only be permitted on sloped areas less than twenty-five (25) percent.f. Artificial turf shall imitate a natural turf-like appearance and require the following:<ul style="list-style-type: none">i. A minimum blend of three (3) colors, predominately green.ii. A minimum blade length of one and one half (1-1/2) inches, with spines and uneven tops.
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		<p>iii. Infill material shall be a natural material, such as coconut fiber, cork, and sand. No crumb rubber shall be permitted.</p> <p>g. Artificial turf shall be installed by a qualified state-licensed contractor with a valid landscaping contractors or synthetic products contractors license.</p> <p>h. Artificial turf shall be directed to drain on-site to a permeable area.</p> <p>i. Artificial turf shall be maintained in a clean and orderly condition and shall not contain holes, tears, stains, discoloration, seam separations, uplifted surfaces, heat degradation, or excessive wear.</p> <p>Artificial turf shall not be permitted in any area where landscaping is required between adjacent residential zones.</p>
Anaheim, CA	<p>Setback Restrictions;</p> <p>Type Restrictions;</p> <p>Material Restrictions;</p> <p>Installation Restrictions;</p> <p>Appearance Restrictions;</p> <p>Maintenance Restrictions.</p>	<p>Anaheim Municipal Code § 18.46.055 sets forth the City’s Artificial Turf Standards and states:</p> <p>The use of artificial turf, as defined in Section 18.92.040, shall be permitted as follows:</p> <p>.010 Setback and percentage requirements. The design and installation of all new turf and artificial turf areas shall comply with the following requirements:</p> <p>.0101 Single-Family and Multiple-Family Zones. Artificial turf may be used in lieu of natural turf in front, side, and rear yards for up to 100% coverage or in combination with all other natural non-turf materials.</p> <p>.0102 Commercial, Industrial, and Public and Special Purpose Zones. Artificial turf may be used in lieu of natural turf in front, side, and rear yards for up to 100% coverage or in combination with all other natural non-turf materials.</p> <p>.020 Artificial Turf Design/ Quality Standards.</p> <p>.0201 Materials. Artificial turf shall be of a type known as cut pile infill and shall be manufactured from polypropylene, polyethelene, or a blend of polypropylene and polyethleyene fibers stitched onto a polypropylene or polyurethane meshed or hole-punched backing. Hole-punched backings shall have holes spaced in a uniform grid pattern with spacing</p>

		<p>not to exceed four inches by six inches on center.</p> <p>.0202 Installation. Artificial turf shall be installed over a compacted and porous road base material and shall be anchored at all edges and seams. Seams shall be glued and not sewn. An infill medium consisting of clean sand or other approved mixture shall be brushed into the fibers to insure that the fibers remain in an upright position and to provide ballast that will help hold the turf in place and provide a cushioning effect. Artificial turf must consist of pile fibers a minimum height of 1-3/4" and a proper drainage system shall be installed underneath the turf to prevent excessive run-off or pooling.</p> <p>.0203 Slope Restrictions. The installation of artificial turf on slopes greater than six point six percent (6.6%) shall require the approval of the City Engineer and shall meet requirements of the Public Works Department.</p> <p>.0204 General Appearance. Artificial turf shall be installed and maintained to effectively simulate the appearance of a well-maintained lawn. The Planning Department shall maintain and make available for public inspection a sample of various artificial turf products that meet this standard of appearance.</p> <p>.030 Prohibited uses. The use of indoor or outdoor plastic or nylon carpeting as a replacement for artificial turf or natural turf shall be prohibited. (Ord. 6101 § 42; April 22, 2008: Ord. 6112 § 1; September 30, 2008: Ord. 6317 § 17; March 3, 2015.)</p> <p>Section 18.92.040 defines “Artificial Turf” as Man-made synthetic material manufactured from polypropylene, polyethylene, or a blend of polypropylene and polyethleyene fibers which simulates the appearance of live turf, organic turf, turf, sod, or lawn.</p>
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**CITY OF LIGHTHOUSE POINT
FLORIDA**

a.

ORDINANCE 2017 – 0957

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF LIGHTHOUSE POINT, FLORIDA, RELATED TO PERVIOUS SURFACES AND THE INSTALLATION OF SYNTHETIC TURF; AMENDING CHAPTER 42, “LAND DEVELOPMENT CODE”, ARTICLE IV, “ZONING”, DIVISION 1, “GENERALLY”, SEC, 42-242 “DEFINITIONS” TO INCLUDE A DEFINITION FOR SYNTHETIC TURF; AMENDING CHAPTER 42, “LAND DEVELOPMENT CODE”, ARTICLE IV, “ZONING”, DIVISION 5, “SUPPLEMENTAL REGULATIONS AND REQUIREMENTS FOR SPECIFIC USES”, BY ENACTING A NEW SECTION 42-391 ENTITLED “SYNTHETIC TURF” TO PROVIDE FOR THE REQUIREMENTS AND STANDARDS FOR THE INSTALLATION OF SYNTHETIC TURF ON RESIDENTIAL AND COMMERCIAL PROPERTIES; AMENDING CHAPTER 42, “LAND DEVELOPMENT CODE”, ARTICLE II, “ADMINISTRATION AND ENFORCEMENT”, DIVISION 4, “SITE PLANS”, SUBDIVISION II, “STANDARDS AND REQUIREMENTS”, TO PROVIDE FOR THE INCLUSION OF SYNTHETIC TURF AS PERVIOUS AREA, AND SUBDIVISION I, “IN GENERAL”, SECTION 42-112, “APPLICATION FOR CONCEPTUAL OR PRELIMINARY SITE PLAN REVIEW”, TO PROVIDE FOR THE INCLUSION OF SYNTHETIC TURF IN THE CALCULATION OF PERVIOUS AREA; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; AND, PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Lighthouse Point City Commission finds that the use of certain types of synthetic turf in lieu of natural grass may be an acceptable form of ground cover where typical ground cover may not survive, as synthetic turf provides for sufficient drainage and green appearance similar to natural grass; and,

WHEREAS, to accommodate the use of synthetic turf within the City of Lighthouse Point, the City Commission finds it necessary and appropriate to require a formal permit application and review process prior to the installation of synthetic turf; and,

WHEREAS, the City Commission further finds that it serves the public health, safety, and welfare to adopt specific regulations governing the type of synthetic turf that can be utilized, as well as the appropriate methods of installation of synthetic turf; and,

**CITY OF LIGHTHOUSE POINT
FLORIDA**

ORDINANCE NO. 2017 - 0957

WHEREAS, the City Commission finds that the limitations hereinafter set forth are reasonably related to the health, safety and general welfare of the citizens, property owners and invitees of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF LIGHTHOUSE POINT, FLORIDA, THAT:

Section 1. The foregoing “Whereas” clauses are hereby ratified and confirmed as being true and correct and incorporated herein by reference.

Section 2. Chapter 42 of the City of Lighthouse Point Code of Ordinances entitled “Land Development Code”, Article IV, “Zoning”, Division 1, “Generally”, Section 42-242, “Definitions” is hereby amended as follows:

Subdivision means the platting of real property into two or more lots, parcels, tracts, tiers, blocks, sites, units, or any other division of land; and includes establishment of new streets and alleys, additions, and resubdivisions; and, when appropriate to the context, relates to the process of subdividing or to the lands or area subdivided.

Synthetic turf means a dense and continuous surface of synthetic fibers mounted on a permeable backing and of sufficient density and green color to replicate the appearance of healthy natural grass.

Section 3. Chapter 42 of the City of Lighthouse Point Code of Ordinances entitled “Land Development Code”, Article IV, “Zoning”, Division 5, “Supplemental Regulations and Requirements for Specific Uses”, is hereby amended by enacting a new Section 42-391, “Synthetic Turf” to read as follows:

- A. Synthetic turf may be permitted on all properties used for residential or commercial purposes, subject to the requirements and procedures set forth in this Section.
- B. Synthetic turf shall comply with all of the following design standards and shall:

CODING: Words in ~~strike through~~ type are deletions from existing law;
Words in underlined type are additions.

CITY OF LIGHTHOUSE POINT
FLORIDA

ORDINANCE NO. 2017 - 0957

- (1) Simulate the appearance of live turf, organic turf, grass, sod or lawn, as determined by the City, and shall have a minimum eight-year “no fade” warranty.
- (2) Be of a type known as cut pile infill with pile fibers of a minimum height of 1.75 inches and a maximum height of 2.5 inches.
- (3) Have a minimum face weight of 75 ounces per square yard.
- (4) Be manufactured from polyethylene monofilament, Dual Yarn System, and manufactured in the United States.
- (5) Have backing that is permeable.
- (6) Be lead free and flame retardant.

C. Synthetic turf shall comply with all of the following installation standards and shall:

- (1) Be installed by a Florida-licensed general contractor or Florida-licensed landscape architect in a manner prescribed by the manufacturer.
- (2) Be installed over a subgrade prepared to provide positive drainage and an evenly graded mass of compacted, porous crushed rock aggregate material that is a minimum of three (3) inches in depth.
- (3) Be anchored at all edges and seams.
- (4) Not have visible seams between multiple panels.
- (5) Have seams that are joined in a tight and secure manner.
- (6) Have an infill medium consisting of clean silica sand or other mixture, pursuant to the manufacturer’s specifications or as approved by the City Engineer, that shall:
 - a. Be brushed into the fibers to ensure that the fibers remain in an upright position; and
 - b. Provide ballast that will help hold the turf in place; and
 - c. Provide a cushioning effect.

D. Synthetic turf shall comply with all of the following additional standards:

- (1) Areas of living plant material shall be installed and/or maintained in conjunction with the installation of synthetic turf when utilized in the front yard area. Living plant material shall include a combination of two or more shrubs, vines, trees, or groundcovers in separate planter areas and tree wells.

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**CITY OF LIGHTHOUSE POINT
FLORIDA**

ORDINANCE NO. 2017 - 0957

- (2) Synthetic turf shall be separated from planter areas and tree wells by a concrete mow strip, bender board or other barrier with a minimum 3/8-inch thickness to prevent the intrusion of living plant material into the synthetic turf.
- (3) Irrigation systems proximate to the synthetic turf shall be capped, directed or otherwise treated so that no irrigation affects the synthetic turf.

E. Synthetic turf shall comply with all of the following maintenance standards and shall:

- (1) Be maintained in an attractive and clean condition, and shall not contain holes, tears, stains, discoloration, seam separations, uplifted surfaces or edges, heat degradation or excessive wear.
- (2) Be maintained in a green fadeless condition and free of weeds, debris, and impressions.

F. The following uses are prohibited:

- (1) Synthetic turf in the public rights-of-way or swales.
- (2) Synthetic turf treated as a filler for landscaping that is not part of a planned element of landscaping.

G. All uses of synthetic turf shall require a building permit. The building permit application shall include, at a minimum, all of the following information:

- (1) A complete landscape plan showing the area of synthetic turf, area of living plant material, and area and method of separation between these areas.
- (2) Details regarding existing or proposed irrigation proximate to the synthetic turf.
- (3) Brand and type of synthetic turf, including all manufacturer specifications and warranties.
- (4) A scaled cross section and details of the proposed materials and installation, including but not limited to subgrade, drainage, base or leveling layer, and infill.
- (5) A survey of the property, signed and sealed by a licensed surveyor, depicting all existing easements located on the property.
- (6) A form signed by any holder of an easement on the property consenting to the installation of the synthetic turf within the easement, with an accompanying acknowledgement by the property owner that in the event the easement holder performs work in the easement that it is the property owner's responsibility to

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**CITY OF LIGHTHOUSE POINT
FLORIDA**

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repair and replace the synthetic turf disturbed as a result of the work in the easement.

Section 4. Chapter 42 of the City of Lighthouse Point Code of Ordinances entitled “Land Development Code”, Article II, “Administration and Enforcement”, Division 4, “Site Plans”, Subdivision II, “Standards and Requirements”, Section 42-142, “Pervious area and greenspace”, is hereby amended by enacting a new section 42-142(c), to read as follows:

Sec. 42-142. – Pervious area and greenspace.

(c) Synthetic turf installation. Synthetic turf that is installed in conformance with the provisions contained in Section 42-391 of the City’s Code of Ordinances shall be considered a pervious surface for purposes of the calculations required in this Section.

Section 5. Chapter 42 of the City of Lighthouse Point Code of Ordinances entitled “Land Development Code”, Article II, “Administration and Enforcement”, Division 4, “Site Plans”, Subdivisions 1, “In General”, Section 42-112, “Application for conceptual or preliminary site plan review”, subsection (d)(16) is hereby amended to read as follows:

Sec. 42-112. Application for conceptual or preliminary site plan review.

(d)(16) Computation of pervious, with synthetic turf areas specifically identified, impervious, and paved surface, in square footage and percentage.

Section 6. Conflict. All Ordinances or parts of Ordinances, Resolutions or parts of Resolutions in conflict herewith be, and the same are hereby repealed to the extent of such conflict.

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**CITY OF LIGHTHOUSE POINT
FLORIDA**

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Section 7. Severability. If any phrase, clause, section or other part or application of the Ordinance shall be held by any court of competent jurisdiction to be unconstitutional or invalid, such unconstitutional or invalid part or application shall be considered as eliminated and so not affecting the validity of the remaining portions or applications remaining in full force and effect.

Section 8. Codification. It is the intention of the City Commission of the City of Light House Point that the provisions of this Ordinance shall become and be made part of the Code of Ordinances of the City of Lighthouse Point, Florida, that the Sections of this ordinance may be renumbered, re-lettered, and the word "Ordinance" maybe be changed to "Section", Article" or such other word or phrase in order to accomplish such intention.

Section 9. Effective Date. This Ordinance shall become effective immediately upon its passage and adoption.

PASSED AND ADOPTED BY THE CITY COMMISSION OF THE CITY OF LIGHTHOUSE POINT, FLORIDA, ON THE FIRST READING, THIS 12th DAY OF DECEMBER, 2017.

PASSED AND ADOPTED BY THE CITY COMMISSION OF THE CITY OF LIGHTHOUSE POINT, FLORIDA, ON THE SECOND AND FINAL READING, THIS 9th DAY OF January, 2018.

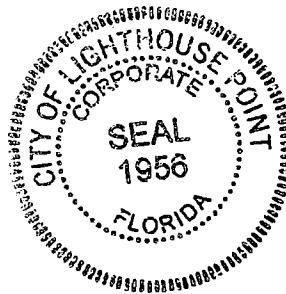
BY: *Sandy Johnson*
Sandy Johnson, Commission President

ATTEST:

Jennifer M. Oh
Jennifer M. Oh, City Clerk

APPROVED AS TO FORM:

[Signature]
Office of the City Attorney



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**CITY OF LIGHTHOUSE POINT
FLORIDA**

ORDINANCE NO. 2017 - 0957

	Yes	No	Absent
Commission President Sandy Johnson	<u>x</u>	_____	_____
Commissioner Vice President Jason D. Joffe	<u>x</u>	_____	_____
Commissioner Michael S. Long	_____	<u>x</u>	_____
Commissioner Earl Maucker	<u>x</u>	_____	_____
Commissioner Kyle Van Buskirk	<u>x</u>	_____	_____

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RESOLUTION 15-23

a.

A RESOLUTION OF THE CITY OF MARCO ISLAND, FLORIDA APPROVING AND ADOPTING ARTIFICIAL OR SYNTHETIC TURF STANDARDS AND SPECIFICATIONS FOR APPROVAL, INSTALLATION, AND MAINTENANCE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, on March 2, 2015, the City Council of the City of Marco Island, Florida adopted Ordinance No.15-04 which permits the use of artificial and/or synthetic turf when approved by the City Manager or his/her designee.

WHEREAS, City Council directed the City Manager to establish applicable standards and specifications for the approval, installation, and maintenance of artificial or synthetic turf consistent with Ordinance No.15-04.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MARCO ISLAND, FLORIDA:

SECTION 1. Recitals.

The foregoing "WHEREAS" clauses are hereby ratified and confirmed as being true, correct and reflective of the legislative intent underlying this Resolution and are hereby made a specific part of this Resolution.

SECTION 2. Adoption.

The Synthetic turf standards and specifications for the approval, installation and maintenance as contained in this Resolution are hereby created and adopted as follows:

Article 1. Synthetic Turf

1. Synthetic turf.

- a. The use of artificial plants and surfaces painted to appear as plant material are prohibited in a landscaped area except as provided by this section.
- b. The use of synthetic turf on areas with a slope percentage greater than 5% shall not be permitted.
- c. Synthetic turf that complies with the following standards may be permitted:
 - I. Simulate the appearance of live turf, organic turf, grass, sod or lawn.
 - II. Be of a type known as cut pile infill with pile fibers a minimum height of 1.75 inches.
 - III. Minimum 75 ounces per square yard.
 - IV. Be manufactured from polyethylene monofilament, Dual Yarn System.
 - V. Be affixed to a permeable backing.
 - VI. Have a minimum 8-year "No Fade" warranty.
 - VII. Product must be lead free.
 - VIII. Product must be flame retardant.

- 53 d. The use of indoor or outdoor plastic or nylon carpeting as a replacement for natural
- 54 or synthetic turf shall be prohibited.
- 55
- 56 e. A material other than polyethylene monofilament may be approved by the City
- 57 Manager or his / her designee if the product has been certified to meet applicable
- 58 environmental and health regulations regarding lead content.
- 59
- 60 f. Use of Synthetic turf in the public right of way or swale is prohibited.
- 61
- 62 g. Turf shall not be treated as a fill in material, but rather as a planned element of the
- 63 landscape.
- 64

65 **2. Installation.**

- 66 a. Synthetic turf shall:
- 67
- 68 I. Be installed by a licensed professional pursuant to manufacturer's
- 69 requirements.
- 70
- 71 II. Be installed over a subgrade prepared to provide positive drainage and an
- 72 evenly graded mass of compacted, porous crushed rock aggregate material.
- 73
- 74 III. Be anchored at all edges and seams.
- 75
- 76 b. A drainage system shall be installed underneath the turf to prevent excessive runoff
- 77 or pooling.
- 78
- 79 c. Where multiple panels are used, the change from one panel to the next shall not be
- 80 readily visible and seams shall be joined in a tight and secure manner.
- 81
- 82 d. An infill medium consisting of clean silica sand or other approved mixture shall be
- 83 brushed into the fibers to ensure that the fibers remain in an upright position and to
- 84 provide ballast that will help hold the turf in place and provide a cushioning effect.
- 85
- 86 e. Areas of living plant material shall be installed or maintained in conjunction with the
- 87 installation of synthetic turf when utilized in the front yard area. Living plant material
- 88 shall include shrubs, vines, trees and groundcovers in separate planter areas and
- 89 tree wells.
- 90
- 91 f. Synthetic turf shall be separated from planter areas and tree wells by a concrete
- 92 mow strip, bender board, or other barrier with a minimum 3/8" thickness to prevent
- 93 the intrusion of living plant material into the synthetic turf areas.
- 94
- 95 g. Use of an irrigation system for non-active use turf shall be prohibited.
- 96
- 97 h. An existing irrigation system that will not be utilized for the synthetic turf may
- 98 remain, however, heads shall be removed and pipes shall be capped below ground.

99 **3. Maintenance.**

- 100
- 101 a. Synthetic turf shall be maintained in a green fadeless condition and free of weeds,
- 102 debris, tears, holes, and impressions.
- 103
- 104
- 105

106 b. Synthetic turf is prohibited in the public right-of-way and swales within the City of
107 Marco Island. The City, City employees or its contractors or Subcontractors are not
108 responsible to repair or replace any Synthetic Turf located within the public right-of-
109 way, swales or easements damaged as a result of an associated city project or
110 work order. Replacement of any synthetic turf material removed or damaged to
111 repair or maintain roadways or utilities in the public right-of-way, swales or
112 easements is the responsibility of the property owner and such repairs shall be
113 made within 30 days or result in a code compliance violation.

114
115 **4. Material Specifications and Plans.**

116
117 a. Materials specifications and plans shall be provided to the City Manager or his / her
118 designee for review and approval prior to the installation of the synthetic turf.

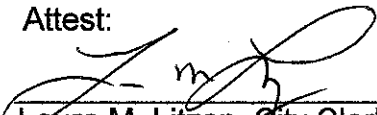
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120 b. The submittal shall include:

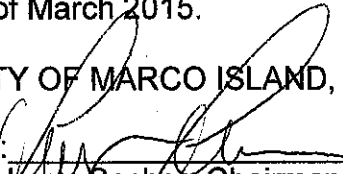
- 121 I. A landscape plan showing the area of synthetic turf, area of living plant
- 122 material, and separation material between these areas.
- 123 II. A dimensioned cross section of proposed materials and installation details,
- 124 including subgrade, drainage, base or leveling layer, and infill.
- 125 III. Edge material and detail for treatment of seams.
- 126 IV. Material description and specifications, including manufacturer, installer (with
- 127 contact information), and warranty information.
- 128
- 129

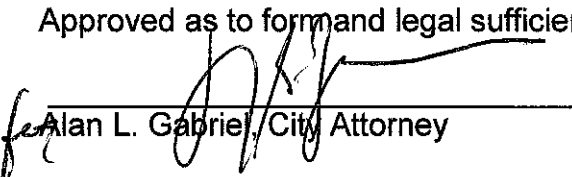
130 **SECTION 3. Effective Date.**

131
132 This Resolution shall be effective immediately upon adoption by the City Council.

133
134 The foregoing Resolution was adopted this 16th day of March 2015.

135 Attest:
136
137 
138 _____
139 Laura M. Litzan, City Clerk

CITY OF MARCO ISLAND, FLORIDA
BY: 
_____ Larry Sacher, Chairman

140
141 Approved as to form and legal sufficiency:
142
143 
144 _____
Alan L. Gabriel, City Attorney

a.

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ORDINANCE NO. 2020 - 1709

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AN ORDINANCE OF THE TOWN COMMISSION OF THE TOWN OF SURFSIDE, FLORIDA AMENDING THE TOWN OF SURFSIDE CODE OF ORDINANCES BY AMENDING SECTION 90-85.2 “DEFINITIONS” TO ESTABLISH A DEFINITION FOR SYNTHETIC TURF; AMENDING SECTION 90-87 “INSTALLATION OF LANDSCAPING AND IRRIGATION” TO PERMIT SYNTHETIC TURF ON ALL PROPERTIES WITHIN THE TOWN SUBJECT TO REQUIREMENTS, INSTALLATION AND MAINTENANCE STANDARDS AND PERMITTING; AND AMENDING SECTION 90-88 “MAINTENANCE OF LANDSCAPE AREAS” TO PERMIT SYNTHETIC TURF WITH EXCEPTIONS; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; PROVIDING FOR CONFLICTS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Article VIII, Section 2 of the Florida Constitution, and Chapter 166, Florida Statutes, provide municipalities the authority to exercise any power for municipal purposes, except where prohibited by law, and to adopt ordinances in furtherance of such authority; and

WHEREAS, the Town Commission of the Town of Surfside (“Town Commission”) finds it periodically necessary to amend its Code of Ordinances and Land Development Code (“Code”) in order to update regulations and procedures for maintain consistency with state law and to implement municipal goals and objectives; and

WHEREAS, at its regular Commission meeting on July 9, 2019, the Town Commission directed staff to evaluate and prepare an ordinance amending the Town’s Code to permit synthetic turf on all properties within the Town, subject to requirements, installation and maintenance standards and permitting; and

WHEREAS, the Town Commission wishes to amend Sections 85.2, 90-87 and 90-88 of the Town Code to permit synthetic turf on all properties located within the Town, provided that it shall not be counted towards the minimum required landscaped areas, buffers, foundation plantings or landscape islands; and

WHEREAS, the Planning and Zoning Board, as the local planning agency for the Town, held its hearing on the proposed amendment on December 12, 2019 with due public notice and input; and

35 **WHEREAS**, the Town Commission held its first public hearing on November 12, 2019, and
36 recommended approval of the proposed amendments to the Code of Ordinances having complied
37 with the notice requirements of the Florida Statutes; and

38 **WHEREAS**, the Town Commission has conducted a second duly noticed public hearing on
39 these regulations as required by law on January 14, 2020 and further finds the proposed changes
40 to the Code necessary and in the best interest of the community.

41
42 **NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COMMISSION OF**
43 **THE TOWN OF SURFSIDE, FLORIDA¹:**

44
45 **Section 1. Recitals.** The above Recitals are true and correct and are incorporated herein
46 by this reference:

47
48 **Section 2. Town Code Amended.** Section 90-85.2 “Definitions” of the Surfside Town
49 Code of Ordinances is hereby amended and shall read as follows¹:

50 **Sec. 90-85.2. - Definitions.**

51 * * *

52 *Open space:* All pervious ~~landscape planting~~ areas of the site.

53 *Pervious areas:* Any portion of the ground unobstructed by a non landscape planting surface or
54 synthetic turf which prevents or slows down the natural seepage of water into the ground.

55 *Synthetic Turf:* a dense and continuous surface of synthetic fibers mounted on a permeable
56 backing and of sufficient density and green color to replicate the appearance of healthy, natural
57 grass.

58 * * *

59 **Section 3. Town Code Amended.** Section 90-87. – “Installation of Landscaping and
60 Irrigation” of the Surfside Town Code of Ordinances is hereby amended and shall read as
61 follows¹:

62

63

64

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65 **Sec. 90-87. - Installation of Landscaping and Irrigation.**

66 All landscaping and irrigation shall be installed according to accepted horticultural planting
67 procedures with the quality of plant materials as hereinafter described, including:

68 * * *

69
70 (15) Synthetic turf.

71
72 a. Synthetic turf may be permitted on all properties subject to the requirements and
73 procedures set forth in this section.

74
75 b. Synthetic turf shall not be counted towards the minimum required landscaped areas,
76 buffers, foundation plantings or landscape islands.

77
78 c. Synthetic turf shall comply with all of the following design standards and shall:

79 i. Simulate the appearance of live turf, organic turf, grass, sod or lawn, and shall
80 have a minimum eight-year "no fade" warranty.

81 ii. Be of a type known as cut pile infill with pile fibers of a minimum height of
82 1.75 inches and a maximum height of 2.5 inches.

83
84 iii. Have a minimum face weight of 75 ounces per square yard.

85
86 iv. Be manufactured from polyethylene monofilament, dual yarn system, and
87 manufactured in the United States.

88
89 v. Have backing that is permeable.

90
91 vi. Be lead free and flame retardant.

92
93 d. Synthetic turf shall comply with all of the following installation standards and shall:

94 i. Be installed by a Florida-licensed general contractor in a manner prescribed by
95 the manufacturer.

96 ii. Be installed over a subgrade prepared to provide positive drainage and an
97 evenly graded, porous crushed rock aggregate material that is a minimum of three inches
98 in depth.

99 iii. Be anchored at all edges and seams consistent with the manufacturer's
100 specifications.

101 iv. Not have visible seams between multiple panels.

102 v. Have seams that are joined in a tight and secure manner.

103 vi. Have an infill medium consisting of clean silica sand or other mixture,
104 pursuant to the manufacturer's specifications that shall:

Coding: ~~Strikethrough~~ words are deletions to the existing words. Underlined words are additions to the existing words

- 105 a. Be brushed into the fibers to ensure that the fibers remain in an upright
- 106 position;
- 107 b. Provide ballast that will help hold the turf in place; and
- 108 c. Provide a cushioning effect.

109 (e) Synthetic turf shall comply with all of the following additional standards:

- 110 i. Areas of living plant material shall be installed and/or maintained in
- 111 conjunction with the installation of synthetic turf. Living plant material
- 112 shall be provided per the minimum code requirements.
- 113 ii. Synthetic turf shall be separated from planter areas and tree wells by a
- 114 concrete mow strip, bender board or other barrier with a minimum four-
- 115 inch thickness to prevent the intrusion of living plant material into the
- 116 synthetic turf.
- 117 iii. Irrigation systems proximate to the synthetic turf shall be directed so that
- 118 no irrigation affects the synthetic turf.

119 (f) Synthetic turf shall comply with all of the following maintenance standards and shall:

- 120 i. Be maintained in an attractive and clean condition, and shall not contain holes,
- 121 tears, stains, discoloration, seam separations, uplifted surfaces or edges, heat
- 122 degradation or excessive wear.
- 123 ii. Be maintained in a green fadeless condition and free of weeds, debris, and
- 124 impressions.

125 (g) The following uses are prohibited:

- 126 i. Synthetic turf in the public rights-of-way or swales.
- 127 ii. Synthetic turf shall not be used as a screening material where screening is
- 128 required by the code.
- 129

130 (h) All uses of synthetic turf shall require a building permit. The building permit

131 application shall include, at a minimum, all of the following information:

- 132 i. A complete landscape plan showing the area of synthetic turf, area of living
- 133 plant material, and area and method of separation between these areas.
- 134 Minimum landscape requirements shall be required.
- 135 ii. Details regarding existing or proposed irrigation proximate to the synthetic
- 136 turf.
- 137 iii. Brand and type of synthetic turf, including all manufacturer specifications and
- 138 warranties.
- 139 iv. A scaled cross section and details of the proposed materials and installation,
- 140 including but not limited to subgrade, drainage, base or leveling layer, and infill.
- 141 v. A survey of the property with a signed affidavit from the property owner that
- 142 no changes have occurred since the date of the survey.

Coding: ~~Strikethrough~~ words are deletions to the existing words. Underlined words are additions to the existing words

143 (i) Previously Installed Synthetic Turf. Within one year of the effective date of this
 144 Ordinance, all owners of property where synthetic turf has previously been installed
 145 shall submit proof satisfactory to the Town that the property is in compliance with this
 146 section. If the Town determines such proof of compliance satisfactory, the synthetic
 147 turf may continue to remain on the property. Failure to provide satisfactory proof of
 148 compliance with this section within one year of the effective date of this Ordinance
 149 shall constitute a violation of the Code and the property owner shall be required to
 150 immediately remove the synthetic turf.

151
 152 **Section 4. Town Code Amended.** Section 90-88. – “Maintenance of Landscaped Areas”
 153 of the Surfside Town Code of Ordinances is hereby amended and shall read as follows¹:

154 **Sec. 90-88. - Maintenance of Landscaped Areas.**

155 * * *

156
 157 (1) An owner of land subject to this Code shall be responsible for the maintenance of said land
 158 and landscaping so as to present a healthy, vigorous and neat appearance free from refuse
 159 and debris. All landscaped areas shall be sufficiently fertilized and irrigated to maintain the
 160 plant material in a healthy and viable condition.

161 *NOTE:* All fertilizer shall be safe and environmentally friendly. Also, the applications shall
 162 conform to the manufacturer's specifications.

163 (2) Three inches of clean, weed-free, arsenic free, organic mulch shall be maintained over all
 164 areas originally mulched at all times. Turfgrass shall be kept trimmed and/or mowed
 165 regularly to a height not exceeding eight inches above the ground. The use of mulch in swales
 166 or right-of-way is prohibited.

167 *NOTE:* If weeds, noxious grasses or underbrush are in excess of the eight inches; it too will need
 168 to be cut and the weeds, noxious grasses and underbrush removed and re-sodded if necessary.

169 (3) Irrigation systems shall be maintained to eliminate water loss due to damaged, missing or
 170 improperly operating sprinkler heads, emitters, pipes and all other portions of the irrigation
 171 system.

172 (4) Preserved and created native plant communities shall be maintained in a natural state without
 173 the use of mechanical equipment.

174 (5) An owner is responsible to ensure that landscaping that has been required to be planted
 175 pursuant to this Code, or installed in compliance with the landscape requirements previously
 176 in effect, be maintained in Florida Grade One condition, including but not limited to single-
 177 family residences, multifamily, or business sites. If landscaping is found to be in a state of
 178 decline, dead, damaged, or missing, it must be replaced with equivalent landscape material.
 179 If total replacement is required, species conforming to this Code shall be used. If any
 180 preserved vegetation dies which is being used to satisfy current landscape code requirements,
 181 such vegetation shall be replaced with the same landscape material selected from nursery-
 182 grown native stock only.

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- 183 (6) All trees shall be trimmed in accordance to Miami-Dade County tree preservation code. Any
184 type of tree abuse/hatracking is prohibited within the Town.
- 185 (7) Any trees and/or palms that are diseased (including dead palms with lethal yellowing) or trees
186 and/or palms causing a possible safety hazard as determined by the town are considered to
187 be a public nuisance. The town shall enforce the provisions of this section. Any property
188 owner of any lot or parcel of land in the town shall promptly remove any such tree and/or
189 palm after being notified by the town. The town is authorized and empowered to enter on
190 any lot or parcel of land in the town at any reasonable hour for the purpose of inspecting such
191 trees and/or palms.
- 192 (8) Shrubs and hedges shall be maintained that such plant materials do not obstruct clear sight
193 triangles and promote vehicular and pedestrian visibility. Also, hedges planted along
194 property lines shall be maintained and trimmed to prevent branches from extending over
195 and/or touching structures on adjacent properties.
- 196 (9) Any plastic or similar artificial landscape materials shall be prohibited with the exception of
197 seasonal holiday decorative displays of less than 60 days duration and synthetic turf as
198 provided for in this Article VII. of Chapter 90. Synthetic turf shall be permitted with the
199 exception that it shall not be counted towards the minimum landscaped area, buffers,
200 foundation planting or landscape islands.
- 201 (10) All property owners shall keep such property and the adjoining unpaved portions of the
202 public right-of-ways, swales and bulkheads clean and free from any accumulation of garbage,
203 trash, liter or debris.
- 204 (11) All property owners with in the town shall not permit unattended vegetation upon the
205 property, adjoining portions of the rights-of-ways, swales and canal banks.
- 206 (12) All non-compliance with section of the ordinance shall be enforced in accordance with the
207 Town's Code Enforcement Rules and Regulations.

208

209 * * *

210 **Section 5. Severability.** If any section, sentence, clause or phrase of this ordinance is
211 held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding
212 shall in no way affect the validity of the remaining portions of this ordinance.

213 **Section 6. Inclusion in the Code.** It is the intention of the Town Commission, and it is
214 hereby ordained that the provisions of this Ordinance shall become and made a part of the Town of
215 Surfside Code of Ordinances, that the sections of this Ordinance may be renumbered or re-lettered
216 to accomplish such intentions; and the word "Ordinance" may be changed to "Section" or other
217 appropriate word.

218

219 **Section 7. Conflicts.** Any and all Ordinances and Resolutions or parts of Ordinances or
220 Resolutions in conflict herewith are hereby repealed.

221

222 **Section 8. Effective Date.** This ordinance shall become effective upon adoption.

Coding: ~~Strikethrough words~~ are deletions to the existing words. Underlined words are additions to the existing words

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PASSED and **ADOPTED** on first reading this 12th day of November, 2019.

PASSED and **ADOPTED** on second reading this 14th day of January, 2020.

On Final Reading Moved by: Commissioner Karukin

On Final Reading Second by: Vice Mayor Gielchinsky

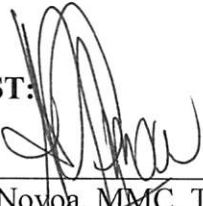
FINAL VOTE ON ADOPTION:

Commissioner Barry Cohen	<u>Yes</u>
Commissioner Michael Karukin	<u>Yes</u>
Commissioner Tina Paul	<u>Absent</u>
Vice Mayor Daniel Gielchinsky	<u>Yes</u>
Mayor Daniel Dietch	<u>Yes</u>




Daniel Dietch, Mayor

ATTEST:



Sandra Novoa, MMC, Town Clerk

APPROVED AS TO FORM AND LEGALITY FOR THE USE AND BENEFIT OF THE TOWN OF SURFSIDE ONLY:



Weiss Serota Helfman Cole and Bierman, P.L.
Town Attorney

Coding: ~~Strikethrough words~~ are deletions to the existing words. Underlined words are additions to the existing words

ORDINANCE NO. 4689-16

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WEST PALM BEACH, FLORIDA, AMENDING THE CODE OF ORDINANCES AT CHAPTER 94 (ZONING AND LAND DEVELOPMENT REGULATIONS), ARTICLE XIV (LANDSCAPING, LAND CLEARING, TREE PROTECTION, AND ARTIFICIAL TURF), TO MAKE VARIOUS AMENDMENTS TO SECTION 94-441 THROUGH SECTION 94-446, AND SECTIONS 94-448, 94-449, 94-451; TO CREATE SECTION 94-450 (LITTORAL PLANTING ZONES), SECTION 94-452 (ROADWAY BEAUTIFICATION), AND SECTION 94-453 (NONCONFORMING LANDSCAPE AREAS); AMENDING ARTICLE X (SUPPLEMENTAL DISTRICT REGULATIONS) TO CREATE SECTION 94-315 (OUTDOOR STORAGE FOR NONRESIDENTIAL AND MULTIFAMILY USES AND STORAGE AND DISPOSAL FACILITIES) AND TO RELOCATE AND AMEND THE PROVISIONS REGARDING VACANT LOT AND CONSTRUCTION SITE MAINTENANCE TO CREATE SECTION 94-316 (VACANT LOT AND CONSTRUCTION SITE MAINTENANCE); AMENDING ARTICLE XIX (DEFINITIONS); DECLARING THIS AMENDMENT TO BE CONSISTENT WITH THE COMPREHENSIVE PLAN OF THE CITY; PROVIDING A CONFLICTS CLAUSE, A CODIFICATION CLAUSE, AND A SEVERABILITY CLAUSE; PROVIDING FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

* * * * *

WHEREAS, the City’s landscape requirements have not been updated in many years and an evaluation and analyses was deemed necessary; and

WHEREAS, the City’s objectives of improving aspects of sustainability, aesthetics and value of properties within the city have progressed and the landscape requirements needed to be updated to reflect these objectives in the public interest; and

WHEREAS, Staff’s evaluation and analysis of the current landscape requirements found deficiencies and inconsistencies requiring updates and corrections; and

WHEREAS, this Ordinance introduces a text amendment modifying and establishing regulations, standards, and guidelines for the design, construction, and maintenance of landscaping within the City; and

WHEREAS, the Planning Board recommended approval (7-0) of this request to the City Commission after a Public Hearing on October 18, 2016, and

WHEREAS, the public hearings were advertised in the Palm Beach Post, and proof of publication is housed in the Development Services Department - Planning and Zoning Division records.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF WEST PALM BEACH, FLORIDA, that:

Language underlined added, and language ~~stricken~~ deleted.
Asterisks **** indicate language not amended which has been omitted to save space.

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SECTION 1: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-441 (Intent, application, exemptions and conflicts, Florida friendly landscape principles.) is hereby amended and shall read as follows:

Sec. 94-441. - Intent, application, exemptions and conflicts, Florida friendly landscape principles.

(a) *Intent.* The intent of the landscaping and tree protection requirements of this article is:

- (1) To establish standards to protect and to enhance community appearance by the installation of appropriate landscaping and screening materials within the city;
- (2) To promote the conservation of water by encouraging the preservation of native plant communities and ecosystems, the use of site specific plant materials, the utilization of Florida friendly landscape principles;
- (3) To maintain permeable land areas essential to surface water management and aquifer recharge;
- (4) To protect and expand the community wide tree canopy;
- (5) To maintain and increase the value of land by incorporating a minimum amount of landscaping into development;
- (6) To establish parameters for the use of artificial turf;
- (7) To eradicate or control certain exotic and invasive plant species which have become nuisances because of their tendency to damage public and private works, have a negative effect upon public health, or disrupt and destroy native ecosystems;
- (8) To encourage prudent and skilled workmanship for the installation and maintenance of all plant materials;
- (9) To establish procedures and standards for the administration and enforcement of this article.

(b) *Application.* The landscaping, tree protection, and screening requirements of this section shall apply to all development within the city, except those developments exempted in subsection (c) of this section regarding exemptions.

(c) *Exemptions.* The following development shall be exempt from the standards of this article:

- (1) Buildings or structures accessory to single-family or duplex development.
- (2) Renovations, repair, alteration or redevelopment which does not exceed 50 percent of the value of the structure.
- (3) Tee, fairway, putting green and other natural or manmade landscape features of a golf course development. The clubhouse, vehicular use areas and other nongreen areas however, shall conform to the requirements of this article.

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(4) Developments only when specifically noted by this chapter.

~~(5) City initiated housing projects.~~

(d) *Florida friendly landscaping.* Florida friendly landscaping is considered to be implementation of the following principles, which are described in more detail in the Florida Yards and Neighborhood Handbook, developed by the University of Florida, IFAS Extension Services and the Florida Department of Environmental Protection:

(1) The right plant in the right place by selecting plants that match the sites soil, light, water and climate conditions, with an aim for a diversity of trees, shrubs, groundcover and flowers, and plants that welcome wildlife.

(2) More efficient irrigation by grouping plants with similar watering needs together and zoning the irrigation system accordingly.

(3) Fertilize in compliance with the requirements of this code at chapter 34, article V, Florida friendly fertilizer use.

(4) Maintain landscape beds well mulched with at least two inches of space around tree trunks to prevent rot, using sustainably harvested mulch, such as melaleuca ~~malaleuca~~, pine straw or eucalyptus.

(5) Attract wildlife by selecting plants with seeds, fruit, foliage, flowers or berries that animals can eat; increasing vertical layering of vegetation; and reducing insecticide use.

(6) Utilize integrated pest management principles by selecting pest-resistant plants, spot treating pests with selective spectrum pesticide applied in accordance with label instructions.

(7) Compost and re-cycle yard waste and debris.

(8) Retain rainfall and irrigation with shallow rain gardens or swales; direct downspouts toward garden area and utilize permeable material for walkways, driveways and patios.

(9) Protect water bodies by not mowing or utilizing pesticides within ten feet of a water body.

(e) *Conflicts.* If the provisions of this article conflict with other ordinances, regulations or sections of this chapter, the more stringent limitation or requirement shall govern or prevail to the extent of the conflict.

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SECTION 2: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-442 (Open space landscape requirements) is hereby amended and shall read as follows:

Sec. 94-442. - Open space landscape requirements.

(a) *Intent.* The intent of this section is to provide standards for landscaping open space areas when required by this chapter. ~~Landscape plans, excluding those prepared for single family dwelling units, shall be prepared by persons as authorized by F.S. ch. 481, pt. II (landscape architecture).~~

(b) *Landscape plans.*

(1) Landscape plans, excluding those prepared for single-family dwelling units, shall be prepared by persons as authorized by F.S. ch. 481, pt. II (landscape architecture).

(2) Landscape plan requirements. When required, a landscape plan ~~or aerial photograph~~ shall contain the following:

- a. Date, north arrow, and graphic scale.
- b. The location of all existing or proposed structures, improvements, and uses.
- c. The location of property lines, existing or proposed setback.
- d. The location of existing or proposed underground or overhead utility services.
- e. Location of all proposed trees, shrubs, ground covers, and other landscape materials.
- f. The common and botanical name, size, and location of all trees and vegetation on the site. A table showing the size and quantity of all proposed landscape materials. A key which identifies all landscape materials shown on the plan.
- g. Tabulation clearly displaying the relevant statistical information necessary for the evaluation of compliance with the provisions of this article. This includes gross acreage or square footage, gross open space, square footage of preservation areas, square footage of paved and landscaped areas, and such other information as the city deems appropriate.
- h. Phasing of the site including any temporary landscaping.
- i. Location and width of any proposed dedication of property for public rights-of-way.
- j. Location and screening of all garbage receptacles.
- k. Location, dimensions and screening of all proposed satellite dishes and ground mounted mechanical and utility equipment.
- l. Delineation of the existing and proposed parking spaces, or other vehicular use areas, access aisles, driveways, terminal islands, interior islands, divider medians and similar features.

Language underlined added, and language ~~stricken~~ deleted.
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- m. Delineation of irrigation coverage, sensors location and high, medium and low zones of water usage if taking credit for these items in Florida friendly landscaping section; and details of the cross section of root ball and staking detail.
- n. Statement that all landscaped areas, excluding those areas with native noninvasive plants, will be provided with permanent, automatic irrigation.
- o. A tabulation clearly displaying each technique and method proposed to satisfy the Florida friendly landscape point system requirement and its accompanying point allocation.
- p. Nature of adjacent land uses.
- q. Existing landscaping on adjacent properties within 10 feet of the property line.
- r. Information on protection of existing trees, relocation and removal of existing trees, and mitigation proposed.

(c) *General standards.* All open space, as required by this chapter, shall be landscaped as provided in this section.

(1) *Landscaping generally.* All open space, excluding vehicular and pedestrian circulation features and surface parking, shall be covered with natural grass, ground cover, shrubbery, or other suitable plant material, or may have paved active recreation areas, patios, terraces, pedestrian circulation areas, swimming pools, water features, and similar site components incorporated in the open space designs. Artificial turf shall only be permitted and installed in accordance with the standards of section 94-451.

(2) *General landscaping standards for single-family dwelling units and all other developments.* General landscaping standards for single-family dwelling units and all other developments shall be as follows:

a. *Single-family dwelling units.* For single-family and duplex dwelling units, at least one shade ~~or flowering or fruit~~ tree shall be planted for each ~~4,200~~ 1,000 square feet of open space or portion thereof. ~~For single-family dwelling units, a~~ At least one shrub shall be planted for each 500 square feet of open space or portion thereof. Front yards shall be landscaped to meet the requirements of section 94-482(a).

b. *All other developments.* The general landscaping standards for all other developments shall be as follows:

1. *Trees.* At least one shade tree shall be planted for each ~~4,600~~ 1,500 square feet of required open space or portion thereof. At least one flowering tree shall be planted for each ~~6,400~~ 6,000 square feet of required open space or portion thereof. ~~Fruit trees may be planted in multifamily zoning districts.~~ Required trees may be planted at uniform intervals, at random, or in groupings. The calculation of trees for this provision may include those ~~used~~ required for buffering, screening, or to improve aesthetics within the site.

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2. ~~Shrubs.~~ At least one shrub shall be planted for each 500 square feet of required open space or portion thereof. ~~Shrubs shall be planted with three-foot intervals or clustered if the effectiveness of the buffer is improved. Required trees may be substituted for shrubs where applicable. In this case, at least one tree may be substituted for no more than five shrubs. Shrubs, however shall not be substituted for trees.~~

3. ~~Hedges.~~ ~~Hedges used for required buffering shall be planted in accordance with the most current edition of "Grades and Standards for Nursery Plants, Parts I and II" Florida #1 for each species of shrub.~~

(3) *Amount of plant material required.* The total open space area required shall determine the number of trees and shrubs to be planted. Required open space is established by each zoning district's regulations set forth in this code. The total amount of plant material required shall not be affected by that portion of the open space area devoted to active recreation purposes, patios, terraces, pedestrian circulation, and similar amenities.

~~(4) All landscaped areas and plant materials within or adjacent to vehicular use areas shall be protected from vehicular encroachment by wheel stops, curbs, or other similar devices. This requirement, however, shall not apply to any single family zoning districts.~~

(d) *Substitution of palm trees.* Palm trees may be substituted for not more than 35 percent of the shade or flowering trees required by this article, ~~except as specified in the comprehensive plan.~~ However, when palm trees are substituted for shade trees, ~~two~~ three palm trees shall be provided for each required shade tree. This ~~2:13:1~~ 2:43:1 substitution shall not be required for Royal Palm Trees (Roystonea spp.) and suckering palm trees such as the ~~Areca Palm, Paurotis Palm and the~~ , Senegal Date Palm (Phoenix reclinata), Medjool Date Palm (Phoenix dactylifera), Bismarck Palm (Bismarckia nobilis), and Silver Date Palm (Phoenix sylvestris).

(e) *Landscaping of ~~private land and public rights-of-way.~~* Private land and public rights-of-way between street or sidewalk surfaces or private areas that serve as an extension of public space and required buffer strips and landscaped open space areas shall be planted with groundcover approved by the city or natural grass per the requirements of section 94-445(4)(c). Grass areas shall be sodded. The planting of trees and shrubs within public rights-of-way is subject to the approval of the city.

~~(e) Site design flexibility.~~ ~~A site plan which provides at least 80 percent of the required trees or landscape area may be approved if it contains specific features which fulfill its exact intent through the use of creative and innovative techniques. All applications for site plan or other approval shall specify features intended to serve in lieu of specific requirements. This section does not apply to any city center commercial zoning districts as listed in article IV of this chapter. The developer shall provide a minimum of 80 percent of the required trees or landscape area and utilize the selection of design options indicated on the landscape plan to~~

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meet the landscape requirements. The adopted design options and the accompanying points shall be clearly tabulated on the landscape plan as required in subsection 94-448(d)(2)p. Such a landscape plan must satisfy a minimum total of 30 points from the following list of options:

Design options:		Points
(1)	Landscaped focal point to serve as vistas. The landscaped focal point must be visible from the entire street frontage of the site; the width of the landscaped focal point must be at least 35 feet; and the landscaped focal point may include signage, trees, shrubs and hedges.	10
(2)	Integration of sculpture, fountains, ponds and lakes in the design. Retention ponds must be visible from the street and landscaped to be accepted as a design option.	10
(3)	Coordination of signs, benches, trash receptacles, and lighting in the design by color, material, design, etc.	5
(4)	Provision of pedestrian plazas. Plazas are subject to the requirements of subsection <u>94-443(a)</u>.	10
(5)	Increased building setback of:	
	five feet	5
	ten feet or more	10
	The increased building setback shall not include vehicular use areas or parking lots.	
(6)	Utilization of berms to screen all parking areas from public thoroughfares and adjacent residential uses. Berms are subject to the requirements of subsection <u>94-445(4)</u>h.	10
(7)	Utilization of surface materials other than concrete and asphalt to differentiate vehicular and pedestrian traffic throughout the site. These may include tile, brick, paver blocks or other types of materials equal in durability and imperviousness and approved by the engineering and public works department.	10

(f) *Clear vision requirements.* Landscaping shall be installed in accordance with the clear vision requirements of subsection 94-305(e).

(g) *Florida-friendly landscape requirements.* All new developments except for those exempt pursuant to subsection 94-441(c) shall be required to apply certain Florida-friendly landscape techniques for landscaping prior to receiving a certificate of occupancy. The adopted design

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options and the accompanying points used to meet the Florida-friendly landscape requirements shall be clearly tabulated on the landscape plan ~~as required in subsection 94-448(d)(2)g.~~ Such a landscape plan must satisfy a minimum total of 15 points for a single-family dwelling unit and a minimum of ~~30-40~~ points for all other developments from the following list of options. Plants may only be counted once for credit toward drought tolerant or Florida native plant points.

Design options:		Points
(1)	Utilization of moisture sensing controller other than rainswitch, <u>alternate source of water such as a cistern, or highly efficient system that promotes water conservation.</u>	5
(2)	Plan submitted with low, moderate, and high water usage zones indicated.	5
(3)	<u>Groundcover or Grass:</u>	
a.	25—50 percent of the <u>groundcover or grass</u> areas are made up of natural drought tolerant grass -species from the list.*	5
b.	51 percent or more of the <u>groundcover or grass</u> areas are made up of natural drought tolerant grass species from the list.*	10
c.	<u>25—50 percent of the groundcover or grass areas are made up of Florida native plants.</u>	<u>5</u>
d.	<u>51 percent or more of the groundcover or grass areas are made up of Florida native plants.</u>	<u>10</u>
(4)	<u>Shrubs:</u>	
a.	25—50 percent of the required shrubs are made up of natural drought tolerant species from the list*.	5
b.	51 percent or more of the required shrubs are made up of natural drought tolerant species from the list*.	10
c.	<u>25—50 percent of the required shrubs are made up of Florida native plants.</u>	<u>5</u>
d.	<u>51 percent or more of the required shrubs are made up of Florida native plants.</u>	<u>10</u>
(5)	<u>Trees:</u>	
a.	25-50 percent of the required trees are made up of natural drought tolerant species	5

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		from the list:*	
	b.	51 percent or more of the required trees are made up of natural drought tolerant species from the list:*	10
	c.	<u>25-50 percent of the required trees are made up of Florida native plants.</u>	<u>5</u>
	d.	<u>51 percent or more of the required trees are made up of Florida native plants.</u>	<u>10</u>
(6)		<i>Extra shade trees in vehicular use areas:</i>	
	a.	25 percent more than the required shade trees planted in the vehicular use areas.	5
	b.	50 percent more than the required shade trees planted in the vehicular use areas.	10
(7)		Natural sod area less than 50 percent of <u>provided</u> landscape area.	10
(8)		Utilization of compacted mulched planting beds at least three inches in depth in all planted areas except ground covers.	10

* The list of drought tolerant natural grass, shrubs, and tree species is contained in Waterwise, the South Florida Water Management District plant and landscape practices guide, as may be amended. Additional low water use plant species may be accepted with verified documentation. These species should however, not include invasive species. A listing of these drought tolerant species may also be obtained from the planning department.

SECTION 3: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-443 (Nonresidential and multifamily screening and buffering requirements.) is hereby amended and shall read as follows:

Sec. 94-443. - Nonresidential and multifamily screening and buffering requirements.

(a) *Buffering of nonresidential uses adjacent to residential property.* The owner of property used for nonresidential purposes located adjacent to a residential zoning district shall install and maintain along the entire property line a protective screen wall and a landscaped buffer. For the purposes of this provision, nonresidential uses does not include park uses. Protective screen walls and buffers are required to meet or exceed the specifications of this section. The property owner of the nonresidential property may have the required protective screen wall waived by submittal of a waiver, signed by all

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abutting property owners, with signatures notarized, waiving objection to the existence of an unwalled nonresidential use.

(1) Protective screen walls.

- a. Walls shall be at least five feet in height, except, when erected within 20 feet of a residential front property line, shall be reduced to 30 inches in height. and Walls shall be constructed of brick, decorative concrete, other decorative masonry, or comparably durable and aesthetic wood or metal, excluding metal or wood slats in chainlink fences.
- b. Walls shall not contain any openings except those gates or similar means of access that may be approved in the course of site plan review.
- c. Walls shall extend the full length of the nonresidential property adjacent to a residential district. Walls in excess of 30 inches in height shall not be erected within 20 feet of a residential front property line. The five-foot wide landscape buffer shall be installed between the required wall and the property line when an alley separates the nonresidential property and the residential district.

(2) Landscape buffer.

- a. All landscape buffers~~The buffer~~ shall be a minimum of five feet in width at maturity.
- b. All portions of the landscape buffer shall be covered with natural grass, ground cover, shrubbery, mulch, or other suitable live plant material.
- c. At least one shade or flowering tree shall be planted in a required buffer for each 30 linear feet or portion thereof. Required shade or flowering trees may be planted at intervals or may be clustered if clustering improves the effectiveness of the buffer. Required trees to serve as a landscape buffer adjacent to a residential zoning district must be visible from the opposite side of the wall to enhance the buffering effect. Clustering of required trees shall be subject to city approval. If there is additional landscape area adjacent to the buffer strip, required trees may be placed adjacent to the buffer strip to allow a greater area for tree development.
- d. ~~Required h~~Hedges shall be planted in a required landscape buffer at with two-foot to three-foot intervals or clustered if the effectiveness of the buffer is improved. ~~Hedges shall be planted pursuant to the requirements of subsection 94-445(4)e.~~
- e. The amount of required plant material and of required buffer length shall be measured along the centerline of the buffer.
- f. Required trees, hedges and shrubs may not be clustered when planted next to buffer parking lots.

(b) Buffering of nonresidential uses adjacent to a public thoroughfare and nonresidential zoning district. The owner of property used for nonresidential purposes shall install and maintain a landscaped buffer strip along the entire edge of property adjacent to a public thoroughfare and other nonresidential zoning districts. The buffer strip shall be designed and landscaped as follows:

Language underlined added, and language ~~stricken~~ deleted.

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(1) For industrial uses and uses in industrial districts, the buffer strip shall be at least ten feet wide along the edge of property when adjacent to a public thoroughfare and at least five feet wide along the edge of property when adjacent to nonresidential zoning districts. For all other nonresidential uses, the buffer strip shall be at least five feet wide along the entire edge of property when adjacent to a public thoroughfare, and when adjacent to nonresidential zoning districts.

(2) The buffer strip may not be interrupted by more than 25 percent of its required length to provide for signs or vehicular ingress and egress. This provision may be waived by the planning and zoning administrator to accommodate normal vehicular ingress and egress for properties possessing less than 100 feet of frontage along a thoroughfare. However, not more than 50 percent of this requirement may be waived.

(3) Trees, shrubs, natural grass, ground cover, or other suitable live plant material shall be planted over the entire buffer strip area. However, paving may be used in areas of intensive pedestrian circulation.

(4) At least one shade or flowering tree shall be planted in a required buffer strip for each 30 linear feet or portion thereof. Paved areas used for pedestrian circulation and vehicular access shall be included when calculating the length of the buffer strip. Trees may be clustered or planted irregularly as deemed appropriate. Clustering of required trees shall be subject to city approval.

(5) To determine the amount of required plant material, the required buffer strip length shall be measured along the centerline of the buffer.

(c) *Screening and landscaping for vehicular use areas.* The owner of property that contains vehicular use areas shall install and maintain a landscape buffer when such uses are adjacent to or visible from a public thoroughfare. Vehicular use areas for multifamily residential uses shall provide an additional decorative wall when such uses are adjacent to a residential zoning district. Screening and landscaping shall be installed as required by the following:

(1) *A decorative wall:* Vehicular use areas shall be screened from residential uses and districts by a 36-inch high brick, decorative concrete, other decorative masonry, or comparably durable wood or metal wall around the periphery. The screen does not include metal or wood slats in chainlink fences. The wall may not be interrupted along more than 20 percent of required length to provide vehicular ingress and egress; however, this provision may be waived to accommodate normal vehicular ingress and egress for properties possessing minimal frontage.

(2) *A landscaped buffer:* Vehicular use areas shall be screened from thoroughfares and residential uses and districts by a landscape buffer of at least five feet in width. Hedges shall be planted within the landscape buffer and are subject to the requirements of subsection 94-445(4)e. Shade trees must be planted at 30-foot intervals. The requirements of this section shall not apply ~~when screening or buffering~~

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is provided pursuant to section 94-444, or when property lines are adjacent to an existing structure.

TABLE XIV-1

MINIMUM REQUIRED LANDSCAPE BUFFER FOR THE VARIOUS ZONING DISTRICTS*

Adjoining Proposed	Multifamily	Commercial	Industrial	Public Thoroughfare
Multifamily	5 feet	5 feet	5 feet	5 feet
Multifamily ≤ 4 units		<u>0</u>	<u>0</u>	<u>Setback</u> 5
Multifamily > 4 units	<u>5 feet</u>	<u>5 feet</u>	<u>5 feet</u>	<u>10 feet</u>
Commercial	5 feet plus 5-foot high wall	5 feet	5 feet	5 feet
Industrial	5 feet plus 5-foot high wall	5 feet	5 feet	<u>10</u> 5 -feet
Vehicular use areas	5 feet plus 3-foot high wall	5 feet	5 feet	5 feet

Note:

* ~~Trees shall be planted at 30-foot intervals and hedges shall be planted at two-foot intervals for each required landscape buffer. Clustering of required trees shall be subject to city approval.~~

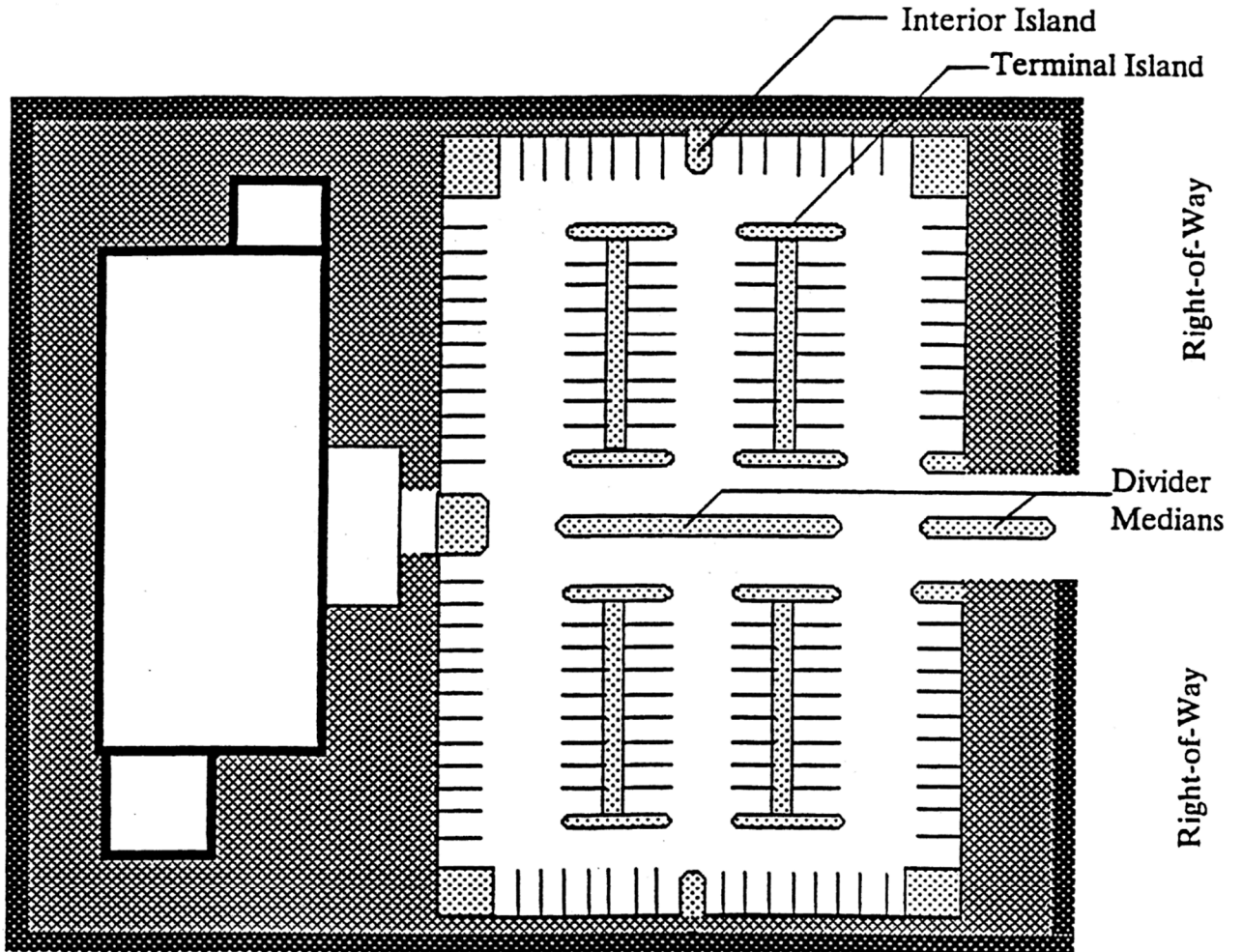
** ~~The five foot wall must be lowered to 30 inches when erected within 20 feet of a residential front property line. The five foot wide landscape buffer shall be installed between the required wall and the property line when an alley separates the nonresidential property and the residential district.~~





(3) *Off-street parking lots.* Off-street parking lots containing at least 12 interior parking spaces shall contain landscape areas. The total size of such landscaped areas shall be equal to ten square feet for each parking space and shall be provided within the interior of an off-street parking area. Landscaped areas shall contain at least one shade or flowering tree for each 100 square feet of required landscaped area. A minimum of 75 percent of all trees that are required to be planted within the interior of an off-street parking area shall be shade trees. The shade trees shall be located in such a manner to produce maximum overhead canopy for the vehicles. All parking lot landscaped areas shall be planted with natural grass, ground cover, shrubbery, or other suitable live plant material. Parking lot landscaped areas shall be designed, planted, and maintained to permit clear vision between the height of two feet and eight feet above grade; however, this requirement shall not apply where the lack of clear vision is not deemed to be a safety hazard. Terminal islands, interior islands and divider medians should be designed to retain maximum water in the turf areas and are subject to the following requirements. Figure XIV-1 is an example of the location and relationship between the parking lot landscape areas and the property.

Language underlined added, and language ~~stricken~~ deleted.

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FIGURE XIV-1
LANDSCAPE AREAS FOR PARKING LOTS



-  Exterior Landscape Provided
-  Landscape Buffer
-  Vehicular Use Area
-  Interior Landscaping for Vehicular Use Area

Language added, and language ~~stricken~~ deleted.
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- a. *Terminal islands.* Each row of parking spaces shall be terminated by landscaped islands of not less than five feet in width and not less than the length of the adjacent parking stall. ~~The Each~~ landscaped island shall have a minimum radius of 2½ feet at its end so as to allow car maneuvering. ~~The Each~~ landscaped island shall contain at least one shade or flowering tree per row of parking.
- b. *Interior islands.* One interior landscape island shall be required ~~provided~~ for every ten parking spaces in a row or fraction thereof. Interior landscape islands shall be at least five feet wide measured inside the curb and shall contain at least one shade or flowering tree per row of parking.
- c. *Divider medians.* Divider medians may be provided within the landscape area. If divider medians are used, they shall form a continuous landscaped strip between abutting rows of parking spaces. The minimum width of such a divider median shall be five feet. Shade or flowering trees within a divider median shall be planted at 30-foot intervals. The clustering of divider median trees may be approved by the planning and zoning administrator. The maximum spacing of trees however, shall not exceed 50 feet.

(2) For other paved areas utilized by motor vehicles, including aisles, loading areas, circulation areas and drive-in service areas, additional landscaping shall be provided as follows: four square feet of landscaped area shall be required for each 100 square feet, or fraction thereof.

(3) Landscape areas and plant materials must be protected from vehicular encroachment by curbs or wheel stops pursuant to subsection 94-442(b)(4). Parked vehicles shall not extend into a landscaped buffer area that is five or less feet wide unless two additional feet are added to the buffer. The two additional feet of landscaping shall contain no plant, irrigation device, or other object higher than six inches above the top of the curb of subsection (a) of this section. Landscape areas and sidewalks in the vehicular use area shall be designed in accordance with the minimum requirements set forth in Figure XIV-2. The usage of curbs is more preferable to wheel stops. However, wheel stops should be utilized when on-site drainage is a concern. Curbing and usage of wheel stops are subject to the following requirements:

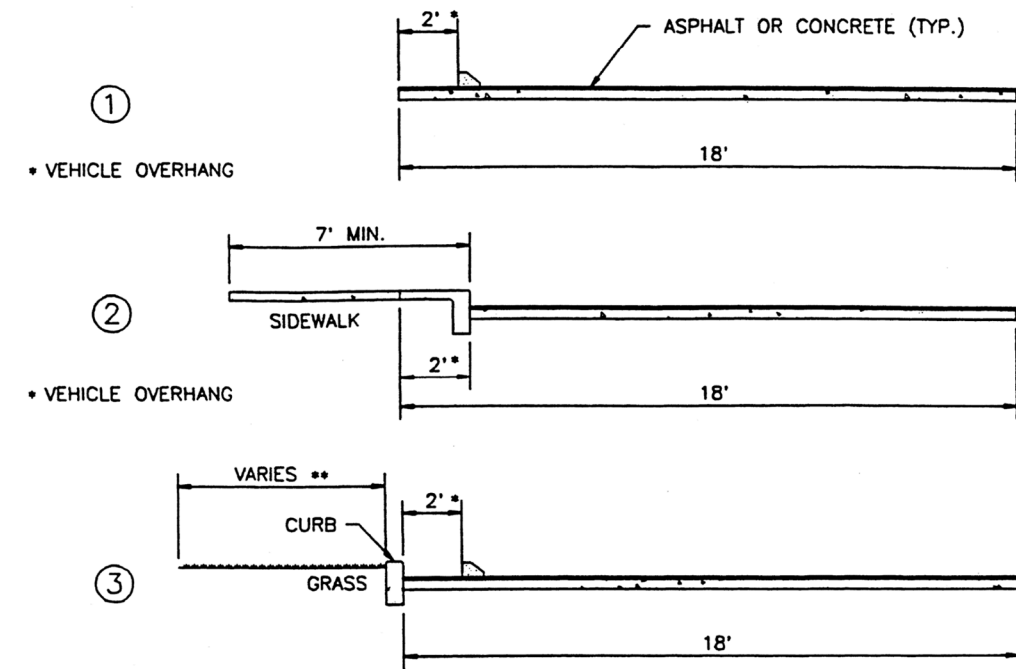
- a. *Curbs.* Landscape areas shall be separated from vehicular use areas by non-mountable, concrete curbing of the type characterized as "Type D" in the current edition of the "Roadway and Traffic Design Standards Manual" prepared by the state department of transportation, or curbing of comparable durability. Extruded concrete curb shall not be placed on top of asphalt. Cemeteries shall not be required to provide curbing along internal roadways where such roadways directly abut areas of interment. Public parks and public utility facilities shall not be required to provide curbing along internal roadways. Curbing and wheel stops shall be required for cemeteries, public parks and public utility facilities in parking areas.

Language underlined added, and language ~~stricken~~ deleted.
 Asterisks **** indicate language not amended which has been omitted to save space.

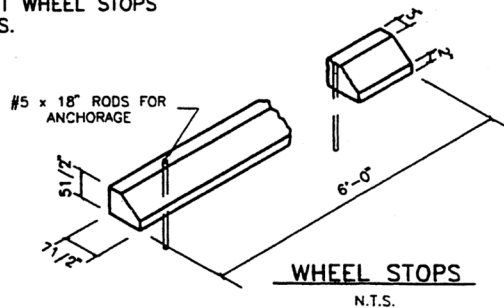
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- b. *Wheel stops.* Landscape areas adjacent to off-street parking areas shall be protected from encroachment or intrusion of vehicles through the use of wheel stops. Wheel stops shall have a minimum height of six inches above the finished grade of the parking area. Wheel stops shall be anchored as approved by the city engineer and shall be continuously maintained in good condition. Only one wheel stop may be used for one parking stall. One-half wheel stop placed in front of a single wheel stall shall not be accepted.

**FIGURE XIV-2
DIMENSIONAL REQUIREMENTS AND SPECIFICATIONS FOR
CURBS AND WHEEL STOPS**



** 8' MIN. WHEN PARKING BOTH SIDES WITHOUT WHEEL STOPS
7' MIN. WHEN PARKING ONE SIDE WITHOUT WHEEL STOPS
5' MIN WHEN PARKING WITH WHEEL STOPS.



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(d) *Additional landscaping requirements for multifamily residential uses.* The owner of property used for multifamily residential uses shall install and maintain the following landscaping:

(1) A landscape buffer shall be required for multifamily residential uses adjacent to a public thoroughfare. Such a landscape buffer shall be equal to the setback at least five feet in width for properties that contain four or less multifamily dwellings, and at least ten feet in width for properties that contain five or more multifamily dwellings. A landscape buffer of at least five feet in width is also required for properties that contain five or more multifamily dwellings along the multifamily residential use and the adjacent properties. The buffer strip shall be designed and landscaped as required by the following:

- a. The buffer strip shall not be interrupted at more than ~~20~~25 percent of its required length to provide vehicular ingress and egress; however, this provision may be waived to accommodate normal vehicular ingress and egress for properties possessing minimal frontage along a thoroughfare;
- b. All portions of the buffer strip shall be covered with natural grass, ground cover, shrubbery, mulch, or other suitable plant material;
- c. At least one tree shall be planted in a required buffer strip for each 30 linear feet or portion thereof. Required street trees may be clustered or planted irregularly as deemed appropriate. Clustering of all required trees shall be subject to city approval.

(2) Shade trees to be planted and landscaped on the exterior of all structures as required by the following:

- a. At least two shade or flowering trees for each dwelling unit for multifamily residential structures with two to five units per structure, and at least one shade or flowering tree for each dwelling unit for multifamily residential structures with six or more units per structure.
- b. At least 40 percent of the linear feet around the exterior of all structures shall be planted with trees, shrubs or hedges.
- c. All remaining, nonpaved areas shall be covered with natural grass, ground cover, mulch or contain beds of preserved native shrubs. Artificial turf shall only be permitted subject to the requirements of section 94-451.

(e) *Additional landscaping requirements for nonresidential uses.* The owner of property which is used for nonresidential uses shall install and maintain the following landscaping:

(1) At least 30 percent of the linear feet around the exterior of all commercial structures shall be planted with trees, shrubs or hedges;

(2) At least 20 percent of the linear feet around the exterior of all industrial structures shall be planted with trees, shrubs or hedges;

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(3) All remaining, nonpaved areas shall be covered with natural grass, ground cover, mulch or contain beds of preserved native shrubs. Artificial turf shall only be permitted subject to the requirements of section 94-451.

SECTION 4: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-444 (Miscellaneous open space standards) is hereby amended to deleted subsections (b), (c) and (d) and delete Figure XIV-3, and shall now read as follows:

Sec. 94-444. - Miscellaneous open space standards.

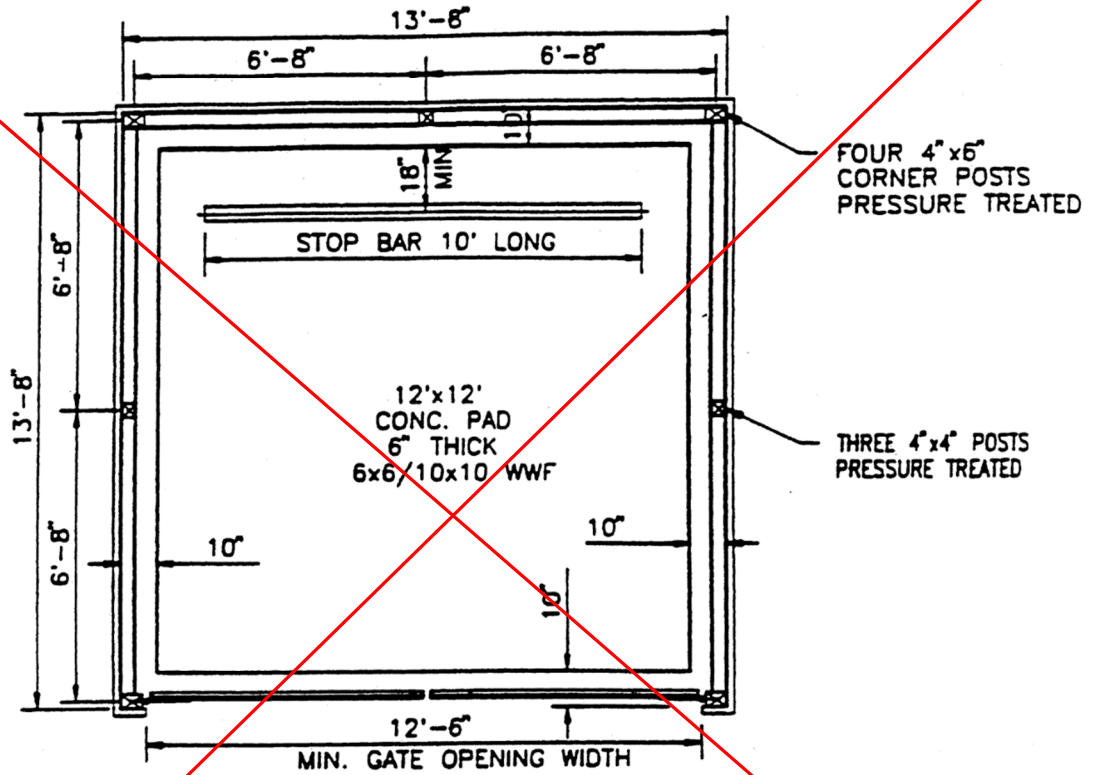
(a) *Plazas.* Plazas shall be developed and landscaped as provided in this section.

- (1) Plazas shall be paved, open, and landscaped areas which provide place for pedestrians to enjoy the out-of-doors.
- (2) Pedestrians shall have direct access to the plaza from at least one major thoroughfare and at least 50 percent of the plaza frontage.
- (3) Plazas shall be at least 900 square feet in area.
- (4) Curb cuts providing motor vehicle access onto a plaza are prohibited; however, plazas may be designed to provide access for emergency vehicles.
- (5) At least one tree shall be planted in required plaza for each 900 square feet or portion thereof. Shade trees shall be planted within the plaza area or along the periphery.
- (6) At least one linear foot of seating for every 30 square feet of plaza space. Seating surfaces shall have a depth of between 16 and 20 inches.
- (7) Ramps shall provide access for the handicapped to all pedestrian and seating areas and shall be in compliance with the Americans with Disabilities Act requirements.
- (8) Floors and other plaza surfaces, excluding planting areas, shall be made of concrete or other equally durable impervious surface.

~~(b) *Outdoor storage for nonresidential and multifamily uses; storage and disposal facilities.* Outdoor incinerators, garbage or trash receptacles, fuel oil or propane tanks, and storage racks shall not be permitted unless appropriate screening is provided. Screening shall be constructed of brick, decorative concrete, other decorative masonry, or comparably durable wood and steel. Walls shall be landscaped with shrubs and hedges planted at two-foot intervals. A four-sided enclosure with an obscuring gate may be required as a condition for site plan approval. Plans for the layout of trash receptacles shall be in accordance with the minimum requirements set forth in Figure XIV-3. The provisions of this section shall not apply to litter containers provided for the convenience of pedestrians. All areas for the storage and disposal of trash and garbage shall be paved with concrete surface as required by the city department of engineering and public works.~~

Language underlined added, and language ~~stricken~~ deleted.
Asterisks **** indicate language not amended which has been omitted to save space.

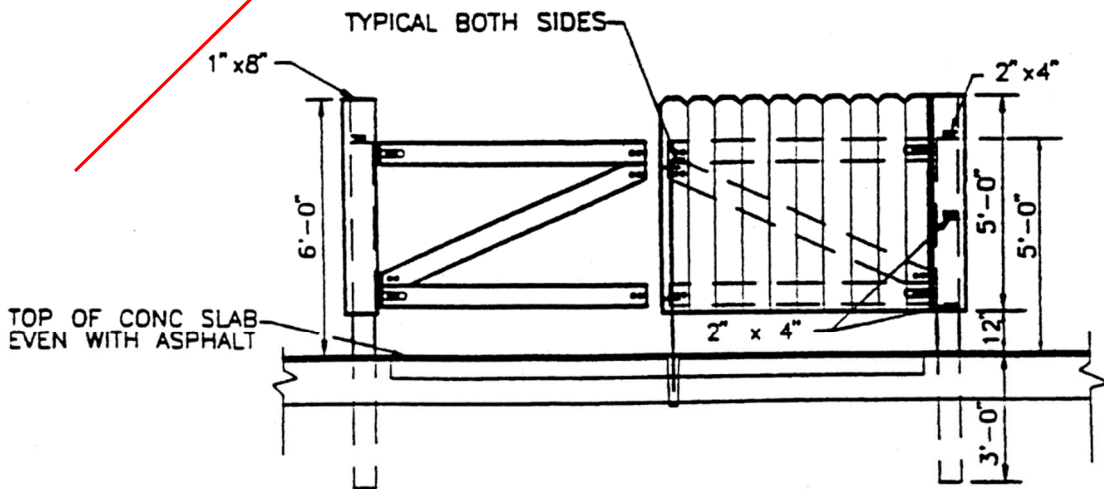
FIGURE XIV-3 DIMENSIONAL REQUIREMENTS AND SPECIFICATIONS FOR TRASH RECEPTACLES



* Walls must be landscaped with shrubs and hedges planted at two (2) feet intervals.

PLAN VIEW

N.T.S.



FRONT VIEW

N.T.S.

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Figure XIV-3 Dimensional Requirements and Specifications for Trash Receptacles

~~(c) Outdoor storage and disposal of goods, merchandise and materials.~~

~~(1) Screening. Outdoor storage of goods, merchandise and materials shall not be permitted unless enclosed on all sides by a wall of adequate height constructed of brick, decorative concrete, other decorative masonry, or comparably durable wood or steel. Wall openings shall have obscuring gates. All areas for the storage and disposal of goods, merchandise, and materials shall be covered with either asphalt or concrete paving, or crushed rock of such specification and design as required by the engineering department.~~

~~(2) Exemptions.~~

~~a. Temporary outdoor storage of bulk garden and farming supplies, such as wood chips, peat moss, flower flats, and similar items shall not be subject to the provisions of this section.~~

~~b. Automobiles and other motor vehicles may be stored subject to the requirements of section 94-273, rather than this section. Motor vehicle sales establishments shall be permitted to display no more than five motor vehicles within landscape buffer strips established pursuant to the provisions of this section.~~

SECTION 5: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial Turf), Section 94-445 (Plant material standards and specifications.) is hereby amended as shown, and to delete Figure XIV-4, and this section shall now read as follows:

Sec. 94-445. – Plant material standards and specifications.

All plant and nonplant material shall meet or exceed the standards and specifications of this section.

(1) *Maintenance free material.* To the extent practicable, all nonplant material shall be durable and maintenance-free.

(2) *Plant quality.* Plant materials used pursuant to the provisions of this ~~Section~~ article shall be equal to or better than Florida Department of Agriculture Number 1 Nursery Grade Standard.

(3) *Nonorganic plant materials prohibited.* Plastic or other nonorganic plant materials, with the exception of artificial turf, shall be prohibited from use and shall not be in compliance with the spirit or intent of this section. Artificial turf shall be subject to the requirements of section 94-451.

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(4) Required plant material specifications.

a. ~~Shade and flowering and fruit trees.~~ Shade and flowering ~~and fruit~~ trees planted pursuant to the provisions of this ~~section Article~~ shall be a minimum of ~~eight~~ twelve feet in height, and possess a minimum of five feet of clear trunk space. Up to ten percent of required trees may be reduced in size to a minimum of 10 feet in height based upon species and availability.

b. ~~Palm trees.~~ Palm species shall be a minimum of eight feet clear wood as defined in Florida grades and standards. ~~Planted shall be reasonably resistant to lethal yellowing disease. Whenever the clustering of palm trees is utilized, a minimum of three palm trees per cluster shall be required. Palm trees that are exempt from the substitution requirement pursuant to section subsection 94-442(c) are also exempt from the clustering requirement.~~

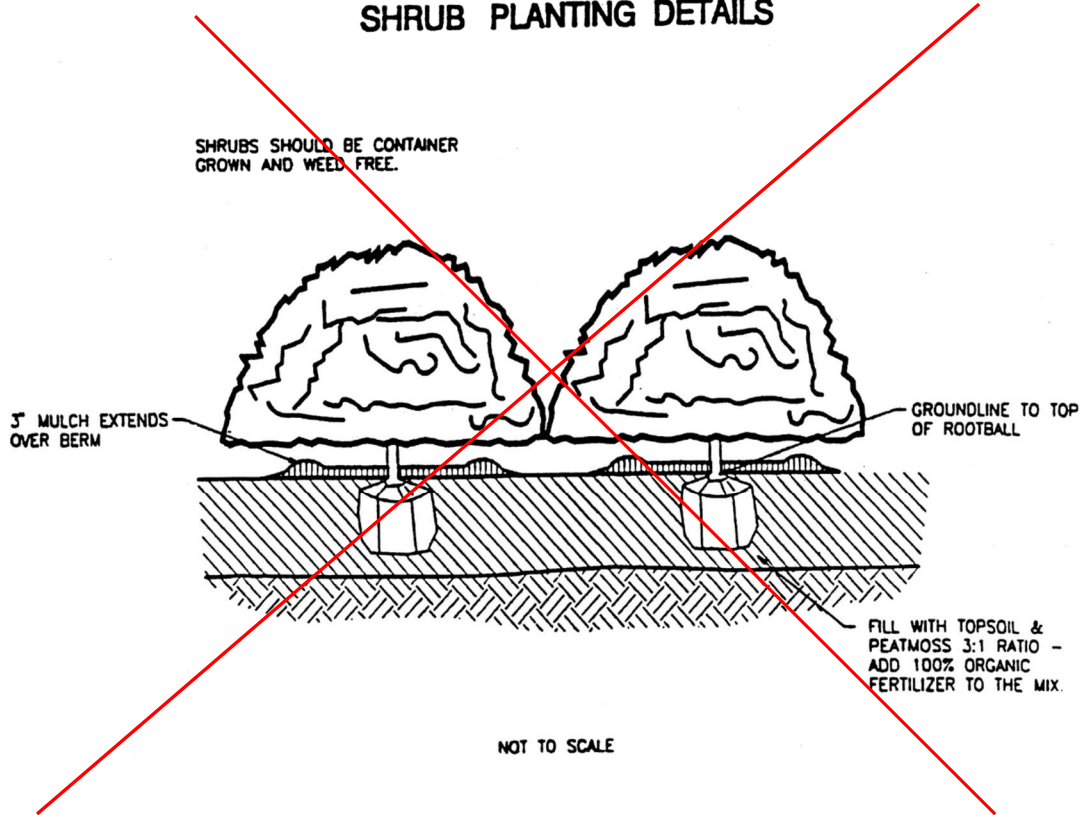
c. *Natural grass.* All natural lawn areas shall be planted with species suitable as permanent lawns in the city. Effective erosion control is mandatory in swales, rights-of-way, or other areas subject to erosion. The primary types of natural grasses used for residential, commercial, and industrial areas in South Florida are St. Augustine and Bahia cultivars. The selection of natural grass types shall be made while considering the long term economic and aesthetic effects of possible drought conditions upon the lawn areas. The following shall serve as a guide and is not meant to negate the use of other appropriate grass types for their specific site uses.

1. *St. Augustine grass.* St. Augustine grass should be used adjacent to areas that accommodate significant pedestrian traffic or where the aesthetics of the immediate area are considered an important factor.
2. *Bahia grass.* Bahia grass should be used in large, nonmanicured, turf areas such as open fields, recreation areas, road rights-of-way or other areas that are generally viewed from a distance or from a moving automobile.

d. *Shrubs.* Shrubs for general landscape purposes planted pursuant to the provisions of this section shall be a minimum plant container size of ~~two~~ three gallons. Container sizes for woody or herbaceous plant material, when utilized for ground cover, may vary. ~~The planting of shrubs shall be in accordance with the requirements set forth in Figure XIV-4.~~

Remove graphic

**FIGURE XIV-4
SHRUB PLANTING DETAILS**



e. *Hedges*. Hedges shall be planted ~~at least~~ at a minimum of 24 inches in height with and a maximum spacing of two ~~to three~~ foot intervals ~~at on~~ center. The hedge shall reach a maturity height of at least 4036 inches within two years of planting in the form of a solid continuous visual screen. Exceptions and substitutions from this provision may be approved by the planning and zoning administrator in order to promote the use of slow growing or native plant materials or specification of larger size plants at installation.

f. *Root systems*. Plant materials shall be selected to minimize potential root system damage or interference with public utilities.

g. *Irrigation systems*. Irrigation systems can be beneficial in efficiently adding water to cultivated landscape. The following guidelines shall be implemented for developing and maintaining irrigation systems.

1. *Irrigation of existing native noninvasive plant communities*. Existing native noninvasive plant communities and ecosystems maintained in a natural state may not require any additional irrigation water.

Language underlined added, and language ~~stricken~~ deleted.

Asterisks **** indicate language not amended which has been omitted to save space.

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- 2. *Reestablished native noninvasive plant area.* Native noninvasive plant areas that are supplements to an existing plant community or newly installed by the developer may initially require additional water to become established. Where newly planted native noninvasive areas have been installed in soils appropriate to the proposed native system, additional irrigation water after the period of establishment may not be necessary.
- 3. *Cultivated landscape areas.* Automatic irrigation systems shall be used for the cultivated landscape areas for all properties. Application of water through a properly maintained and regulated irrigation system can be the most efficient method of watering the landscape.
 - i. *Irrigation systems.* When irrigated, cultivated areas shall be irrigated by the use of an automatic irrigation system with controllers set to apply water as noted in this section. Irrigation controllers shall be switched to manual operation during periods of increased rainfall. Rainfall or moisture sensing devices are strongly encouraged to be used to avoid operation of the system during periods of increased rainfall.
 - ii. *Coverage requirements.* In all areas that are to be planted in a cultivated landscape, irrigation systems shall be designed to have 100~~200~~ percent coverage- and eliminate water overthrow onto nonpervious areas.
- 4. *Zoning of irrigation systems.* Wherever feasible, sprinkler heads irrigating lawns or other high water demand landscape areas shall be circuited so that they are on a separate zone or zones from those irrigating trees, shrubbery or other reduced water requirement areas.
 - h. *Berm specifications.* All berms shall be landscaped with trees, shrubs, ground cover, grass or hedges. Berms shall be installed subject to approval by the city engineer.
 - i. *Prohibited trees.* The following tree species are considered invasive and will overtake other plant habitats. The following tree species are therefore considered unacceptable for use as landscape trees and shall not be planted within the city and shall be removed as required for maintenance and development:
 - 1. Casuarina species (Australian pine tree)
 - 2. Schinus terebinthifolius (Brazilian pepper tree)
 - 3. Melaleuca quinquenervia (Melaleuca tree)
 - 4. Bischofia javanica (Bishopwood)
 - 5. ~~Rhodomyrtus tomentosa (Downy Rose Myrtle)~~
 - 5. Acacia auriculaeformis (Earleaf Acacia)

Language underlined added, and language ~~stricken~~ deleted.
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- 6. Schefflera actinophylla (Schefflera)
- 7. Albizia lebeck (Woman’s Tongue)
- 8. Cupianopsis anacardioides (Carrotwood)
- 9. Plants listed in Rule 5B-57.007 F.A.C, Noxious Weed List from the Florida Department of Agriculture and Consumer Services as revised from time to time.

j. *Limited use trees and plant materials.* ~~The following trees or p~~Plant materials characterized by large fleshy fruit, surface or buttress roots, poisonous properties, or possible interruption of visibility shall not be planted in any parkway area, in any landscaped strip, or buffer adjacent to a public right-of-way. Trees that may cause injurious harm or toxic reactions should also be of limited use.

- ~~1. Khaya ryasica (African Mahogany)~~
- ~~2. Pithecellobium dulce (Apes Earring Tree)~~
- ~~3. Thuja orientalis (Arbovitae Tree)~~
- ~~4. *Dypsis lutesens (Areca Palm)~~
- ~~5. Persea Americana (Avocado Tree)~~
- ~~6. Bambusa species (Bamboo)~~
- ~~7. Adansonia digitata (Baobab)~~
- ~~8. *Strelitzia nicolai (White Bird of Paradise)~~
- ~~9. Averrhoa carambola (Carambola)~~
- ~~10. *Agave and Furcraea species (Century Plant types)~~
- ~~11. Citrus species (Citrus Trees)~~
- ~~12. Enterolobium cyclocarpa (Ear Pod Tree)~~
- ~~13. Eucalyptus species (Eucalyptus Tree)~~
- ~~14. *Cycas circinalis (Fern Palm)~~
- ~~15. *Caryota mitis (Fishtail Palm)~~
- ~~16. Ceiba pentandra (Kapok Tree)~~
- ~~17. Mangifera indica (Mango Tree)~~
- ~~18. Calophyllum (Mast wood)~~
- ~~19. Morus species (Mulberry Tree)~~
- ~~20. Chorisia species (Floss Silk Tree)~~
- ~~21. Bombax malabaricum (Red Silk Cotton Tree)~~
- ~~22. Fiscus species (Rubber Tree)~~
- ~~23. Hura crepitans (Sandbox Tree)~~
- ~~24. Manilkara zapota (Sapodilla Tree)~~
- ~~25. Kigelia pinnata (Sausage Tree)~~
- ~~26. *Acoelorrhaphe wrightii (Paurotis Palm)~~
- ~~27. *Pandanus utilis (Screw Pine)~~
- ~~28. *Phoenix reclinata (Senegal Date Palm)~~
- ~~29. Yucca aloifolia (Spanish Bayonet)~~
- ~~30. Ravenala madagascariensis (Travelers Tree)~~

Language underlined added, and language ~~stricken~~ deleted.
 Asterisks **** indicate language not amended which has been omitted to save space.

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~~31. Casimiroa edulis (White Sapote Tree)~~

~~32. Terminalia species (Wild Tropical Almond)~~

~~* Plant material permitted on private property adjacent to public property or rights-of-way.~~

k. *Use of Ficus species.* Ficus species may be planted as individual trees provided that they are no closer than 15 feet of any structure or utility. Ficus species planted within 15 feet of any structure or utility shall be permitted only if they are contained in a planter or maintained as a hedge which is constantly cultivated and does not exceed the height limitations as provided in section 94-302.

SECTION 6: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-446 (Plant material installation and maintenance.) is hereby amended and shall read as follows:

Sec. 94-446. – Plant material installation and maintenance.

Plant material shall be installed and maintained as provided in this section.

(1) *Installation.*

a. Landscaping shall be installed showing skilled workmanship and according to accepted planting procedures.

b. Plant materials shall be located and installed to provide proper growing conditions and good drainage of root systems.

c. Soil in landscaped areas shall be free of debris, including paving base or fill material, and calcareous materials such as shell, lime rock, concrete, plaster, and stucco. Soil in landscaped areas shall consist of sand, peat, muck, and similar materials to produce a plastic and friable state. Such soils shall be at a minimum depth of six inches below the root ball and at least ten inches on all sides of the root ball. Planting areas are to be totally excavated whenever plant materials are installed 24 or less inches apart. Planting areas containing excessive calcareous materials shall be excavated to a minimum depth of two feet.

d. A minimum of three inches of compacted, sustainably harvested, non-cypress organic mulch shall be placed around all newly installed trees, shrubs and ground cover planting areas. The use of melaleuca mulch is encouraged. Mulch consisting of any exotic invasive species must be certified seed-free by the producer.

e. The planting of shade, flowering or fruit trees shall be installed in a sound workmanship like manner according to accepted and proper planting procedures. All trees shall be properly guyed and staked at the time of planting. Trees shall be re-staked in the event of blow-overs or other failure of the staking and guying. All

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guy wire and staking material should be removed as soon as the tree will stand on its own but no more than one year after planting.

f. Verification required. Written verification of proper landscaping installation by the landscape architect of record shall be provided to the city and shall include the following:

- (1) Species, including quality, type, quantity, and any other original plant specifications;
- (2) Design or location;
- (3) Irrigation; and
- (4) All other landscape structures and material used or installed in accordance with the site plan.

g. Review. The city will inspect and review the project for compliance after the verification has been received from the landscape architect.

h. Deviation. Any deviation from the approved landscape plan will be relayed to the planning and zoning administrator for further review prior to the issuance of the certificate of occupancy.

(2) Maintenance. All landscape areas shall be maintained on a regular basis, to include weeding, watering, fertilizing, pruning, mowing, edging, mulching, replacement of dead or missing landscaping, removal of prohibited plants, and other horticultural practices that are needed to keep landscaping in good condition, free from disease, insect pests, weeds, refuse, and debris. Landscape maintenance shall be carried out in a manner that will not disrupt, inconvenience or endanger any member of the public, or pedestrian, or motor vehicles. Landscaping shall be maintained in good condition, shall present a healthy, neat, and orderly appearance, and shall be free from refuse and debris. All unhealthy or dead material shall be replaced within ~~six~~ three months. All landscaped areas, excluding reestablished native noninvasive plant areas and areas of artificial turf installed in accordance with the provisions of section 94-451, shall be provided with a permanent automatic irrigation system.

a. Mulching. In order to preserve soil moisture, at least three inches of compacted, clean, weed free, sustainably harvested, non-cypress mulch shall be maintained over all appropriate planting areas at all times.

b. Tree trimming. Standards for trimming shall be performed in accordance with the latest Ppruning Sstandards for Sshade Ttrees published recommended by the National Arborist Association or other professional arborist association, a copy of which is on file in the planning, zoning and building department. Trees in the swales and parkways shall be trimmed by the adjacent property owner to prevent impedance ~~of~~ or interference with traffic or travel on sidewalk, street, or creates a danger to traffic by impeding or obstructing the view of intersections. Trees shall only be trimmed in the following manner:

- 1. All cuts shall be clean, flush with the branch collar and made at junctions, laterals or crotches. For overhead utility lines, the drop crotch trimming method shall be followed.
- 2. Removal of dead wood, overlapping branches, weak or insignificant branches and suckers shall be done simultaneously with any crown reduction.

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3. Tree topping or hatracking is prohibited. The severe cutting back of limbs to stub larger than three inches in diameter within the tree's crown to such an extent so as to remove the canopy and disfigure the tree shall not be done on any tree. Trees severely damaged by natural causes or under utility wires or other obstructions where other pruning practices are not possible may be exempted from this ordinance at the determination of the planning and zoning administrator or designee.

c. *Tree abuse.* Tree abuse shall not be permitted. The following shall be considered tree abuse:

1. Damage inflicted upon any part of a tree including the root system by machinery, storage materials, excavation and chemical application.
2. Damage inflicted by cutting a tree which permits infection or pest infestation.
3. Improper cutting ~~of~~ a tree, permanently reducing the function of the tree, or causing it to go into shock; cutting which destroys the natural shape; hatracking; tears and splitting of limb ends or peeling, stripping of the bark.
4. Girdling a tree with use of wires, weed eaters or mower damage.
5. Removal of the bark more than one-tenth of the tree.
6. Improper staking techniques resulting in damage to the tree or the use of nails directly into the trunk.

d. *Mowing.* Natural grass shall be mowed as required in order to encourage deep root growth and therefore the preservation of irrigation water.

e. *Edging.* All roadways, curbs and sidewalks shall be edged when necessary in order to prevent encroachment from the adjacent grassed areas. The use of weed-eaters to trim lawn grasses around a tree will be done so as not to remove bark causing the deterioration and eventual death of the tree.

f. *Watering.* Watering of planted areas should be managed so as to maintain healthy flora, make plant material more drought tolerant, avoid excessive turf growth, minimize fungus growth, stimulate deep root growth, minimize leaching of fertilizer, and minimize cold damage.

1. All landscaped areas, excluding reestablished native noninvasive plant areas and areas of artificial turf installed in accordance with the provisions of section 94-451, shall be provided with a permanent automatic irrigation system.
2. *Watering of plants and trees.* Watering of plants and trees should always be in a sufficient amount to thoroughly soak the root ball of the plant and the surrounding area, there by promoting deep root growth and drought tolerance.
3. *Operation of automatic irrigation systems.* Operation of automatic irrigation systems should be in accordance with section 90-93.
4. *Maintenance of irrigation systems.* Irrigation systems shall be constantly maintained to eliminate waste of water due to loss of heads, broken pipes, misadjusted nozzles or other causes.

g. *Removal of debris.* Fruit and debris, other than leaves from installed plant materials, shall not constitute a nuisance within public rights-of-way.

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SECTION 7: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-448 (Protection of trees and other vegetation.) is hereby amended and shall read as follows:

Sec. 94-448. – Protection of trees and other vegetation.

(a) *Intent.* The intent of this section is to protect trees and vegetative cover within the limits of the city.

(b) *Removal of trees from median, parkway, park or city owned property.* No person other than the city shall remove any tree from the median, parkway, park or city owned property without first obtaining a permit from the ~~planning and zoning administrator~~ city.

(c) *Application.* The terms and provisions of this section shall apply to real property as follows:

(1) All real property upon which any designated specimen or historic tree is located. A tree may be designated a specimen or historic tree by the following criteria:

a. *Historic tree.* A tree may be determined to be of notable historic interest to the city due to its age, type, size, or historic association with the community; and designated as such by the city commission. A registry of historic trees shall be maintained by the planning division.

b. *Specimen tree.* A tree may be determined, in the judgment of a professional forester, landscape architect, arborist, horticulturist, or similar expert, to be of high value of the community, because of its type, size, age, or other professional criteria; and designated as such by the city commission. Specimen trees may be protected by conditions of approval of development orders.

(2) All vacant and undeveloped property, and property containing no permanent buildings.

(3) All property containing permanent structures, ~~excluding property which contains four or fewer dwelling units and~~ upon which no designated specimen or historic tree is located.

(4) All redeveloped property.

(d) *Permits required.*

(1) *Tree alteration permit.* Historic trees, specimen trees, and any other trees or vegetation located on property subject to the provisions of this section shall not be removed, relocated, or replaced unless a tree alteration permit is obtained. Tree

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alteration permit applications shall be provided by the planning and zoning administrator. The application shall include a written statement that specifies the location of the property, expected use of the property, and reasons for removal, relocation, or replacement. The planning and zoning administrator may require submission of a landscape plan or aerial photograph when a permit is requested.

~~(2) Landscape plan requirements. When required, a landscape plan or aerial photograph shall contain the following:~~

- ~~a. Date, north arrow, and graphic scale.~~
- ~~b. The location of all existing or proposed structures, improvements, and uses.~~
- ~~c. The location of property lines, existing or proposed setback, and yard requirements.~~
- ~~d. The location of existing or proposed underground or overhead utility services.~~
- ~~e. Location of all proposed trees, shrubs, ground covers, and other landscape materials.~~
- ~~f. The common and botanical name, size, and location of all trees and vegetation on the site. A table showing the size and quantity of all proposed landscape materials. A key which identifies all landscape materials shown on the plan. Groups of trees or vegetation in close proximity may be designated as "clumps," with an identification of the predominate species, estimated number, average diameter, and approximate size.~~
- ~~g. Tabulation clearly displaying the relevant statistical information necessary for the evaluation of compliance with the provisions of this article. This includes gross acreage or square footage, gross open space, square footage of preservation areas, square footage of paved and landscaped areas, and such other information as the city deems appropriate.~~
- ~~h. Phasing of the site including any temporary landscaping.~~
- ~~i. Location and width of any proposed dedication of property for public rights-of-way.~~
- ~~j. Location and screening of all garbage receptacles.~~
- ~~k. Location, dimensions and screening of all proposed satellite dishes.~~
- ~~l. Delineation of the existing and proposed parking spaces, or other vehicular use areas, access aisles, driveways, terminal islands, interior islands, divider medians and similar features.~~
- ~~m. Delineation of irrigation coverage, sensors location and high, medium and low zones of water usage; and details of the cross section of root ball and staking detail.~~
- ~~n. Statement that all landscaped areas, excluding those areas with native noninvasive plants, will be provided with permanent, automatic irrigation.~~
- ~~o. A tabulation clearly displaying each technique and method proposed to satisfy the Florida friendly landscape point system requirement and its accompanying point allocation.~~
- ~~p. If applicable, include a tabulation clearly displaying each design option proposed to satisfy the flexible design option point system and its accompanying point allocation.~~
- ~~q. Nature of adjacent land uses.~~

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~~r. Landscape plans, excluding those prepared for single family dwelling units, must be signed and sealed by persons as authorized by F.S. ch. 481, pt. II (landscape architecture).~~

~~(3)(2)~~ *Removal of trees and shrubs.* A permit to remove trees and vegetation shall not be issued unless one or more of the following conditions exists:

- a. The tree is not a designated historic or specimen tree per Section 94-448(c)(1)b.
- b. The tree cannot be relocated on or off the site because of its age, type, or size.
- c. The trees or shrubs constitute an unreasonable impediment to development of a permitted use of the property by virtue of their location in a buildable area or yard area where structures or improvements are to be placed.
- d. The trees or shrubs are diseased, injured, in danger of falling, too close to existing or proposed structures, interfere with existing or proposed utility services, create unsafe visual conditions affecting vehicular traffic, conflict with requirements of other ordinances of this chapter, or are a threat to the public health, safety, and welfare.
- e. The trees that are prohibited trees as specified in subsection 94-445(4)i.
- f. The planning and zoning administrator's decision for removal will be in the public interest.

~~(4)(3)~~ *Tree relocation and replacement.* The applicant for a tree removal permit shall be required to relocate or replace trees to be removed or provide payment in lieu thereof into the landscape trust account for trees that cannot be relocated, replaced or installed due to preexisting site development constraints as determined by the planning and zoning administrator. Relocated trees shall be installed in a sound and skilled manner according to accepted planting practices and shall be in accordance with the following:

- a. If the tree is transplanted, it shall be moved by the property owner in accordance with the National Arborist Association Standards to another location within the city and maintained by the new property owner.
- b. If a tree on public property is willfully destroyed by anyone except the city forester/arborist, the tree must be substituted with an equivalent replacement that is approved by the forester/arborist or designer on the site from which the destroyed tree was removed.
- c. No permit shall be required for the removal of trees that are dead, severely diseased, or destroyed by natural causes. This includes trees that are planted in a certified nursery or botanical garden.

(e) *Tree replacement.*

(1) *Characteristics.* Replacement trees shall have shade and screening potential equal to or superior to that of the trees they replace at the time of the initial installation, except as provided as follows:

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a. Trees that are ~~35~~20 feet or more in canopy size shall be mitigated based upon the size of the existing tree canopy, not the number of trees (i.e., if 100 square feet of existing canopy is removed, 100 square feet of canopy shall be planted).

b. Palms trees shall be mitigated on a one for one basis. When palm trees are substituted for shade trees, the equivalent canopy shall be replaced according to the category of the replacement species. ~~two palm trees shall be provided for each required shade tree. In accordance with subsection 94-442(4)(c), this 2:1 substitution shall not be required for Royal Palm Trees and suckering palm trees such as the Areca Palm, Paurotis Palm and the Senegal Date Palm.~~

(2) *Payment in lieu.* If it is determined by the planning and zoning administrator that the application for tree removal meets the permit requirements of subsections (d)(1) and (d)(3) above, but replacement, relocation or installation of trees and shrubs is not feasible due to site constraints, the following shall apply:

a. The applicant/owner shall make payment to the city's landscape trust account in lieu of actual tree or shrub replacement or installation. Funds collected pursuant to this section shall be expended for the purchase of trees for placement on public properties within the city.

b. The payment due shall be calculated based upon the costs for the number and type of tree(s) and/or shrubs required to be replaced or installed based upon the current edition of the Plant Finder catalog, plus installation costs ~~as established by resolution of the city commission.~~ equal to one times the cost. ~~based upon the current edition of the Plant Finder catalog.~~

(3) *Minimum standards.* All replacement trees shall be equal to or better than Florida Department of Agriculture Number 1 Nursery Grade Standard. All trees replaced or relocated pursuant to this section must be in a healthy, living condition one year from the date of planting. Replacements that are not established, have failed to a degree that survival is not probable, or have died must be replaced with healthy specimens. Such replacements must continue until a tree is established at the approved location.

(4) *Waivers of replacement standards.* Minimum standards may be waived if the applicant can demonstrate that current market conditions result in a shortage of appropriate replacement trees.

(f) *Tree protection.*

(1) *Land clearing and construction.* During land altering and construction, protective barriers specified by the planning and zoning administrator shall be erected and maintained around all trees or groups of trees to be protected. The movement of equipment or the storage of equipment, materials, and placement of debris or fill within protective barriers is prohibited.

(2) *Toxic substances.* During land alteration and construction, the cleaning of equipment or materials and the disposal of waste material such as paint, oil, solvents, asphalt, concrete, or mortar within the dripline of any tree or groups of trees is prohibited. Contaminated earth must be replaced.

(3) *Attachments and wires.* Attachments or wires, except those of a protective nature, shall not be attached to any tree.

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(4) *Alternate means of protection.* Trees located within portions of a development site where land clearing and construction activities will not occur or where heavy machinery will not operate shall not require protective barriers. Such areas shall be staked and roped, ribboned, or otherwise designated.

(5) *Removal of dangerous trees.* A tree alteration permit for the removal of a tree determined by competent authority to be in a hazardous or dangerous condition so as to endanger the public health, welfare, or safety, and require immediate removal without delay, may be issued after such tree has been removed.

(6) *Suspension.* Following an emergency such as a hurricane, tropical storm, tornado, or flood, and other natural causes such as drought conditions and freeze damage, the requirements of this section may be suspended by the planning and zoning administrator for a period of 30 days. Such a suspension shall apply only to trees which have been damaged beyond saving or are a hazard, provided that the planning and zoning administrator is notified of the intended removal at least 24 hours prior to removal.

(7) *Exemptions.* All licensed plant or tree nurseries and tree farms shall be exempt from the provisions of this section. However, this exemption shall apply only to those trees planted and growing on the premises of the licensee and intended for sale to the general public in the ordinary course of business.

(8) *Exempt trees.* The following trees and species listed in section 94-445(h)i. shall be exempt from the provisions of this section:.

- a. ~~Schinus terebinthifolius (Brazilian Pepper Tree)~~
- b. ~~Melaleuca leucadendron (Melaleuca)~~
- c. ~~Casuarina species (Australian Pine)~~
- d. ~~Bischofia javanica (Bishopwood)~~
- e. ~~Redomyrtus tomentosa (Downy Rose Myrtle)~~
- f. ~~Acacia auriculaeformis (Earleaf Acacia)~~

(9) *Removal and disposal of diseased trees.* Trees which are determined by the planning and zoning administrator to be diseased and to be a potential source for contaminating other trees, or for spreading tree infection or disease, shall be removed and disposed of without undue delay on an emergency basis, as the circumstances may require. The lethal yellowing disease of coconut trees shall be considered an emergency tree infection or disease.

(10) *Trees on city property.* Trees on city property shall not be removed by any firm, corporation, or individual unless prior approval is granted by the city. ~~manager~~

(11) *Removal and disposal of prohibited trees.* Trees which are included as prohibited trees pursuant to subsection 94-445(4)i shall be removed and disposed of from the entire site before a certificate of occupancy can be obtained.

(g) *Penalty for violation of protected trees.* In addition to penalties provided in section 94-9, the city shall have the option of pursuing civil actions in a court of competent jurisdiction for violation of any provision of this section or any special condition which may be imposed in a permit or other development order. The court or special magistrate may order a combination of tree replacement and fines for violations of this section. Funds

Language underlined added, and language ~~stricken~~ deleted.
Asterisks **** indicate language not amended which has been omitted to save space.

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~~collected as fines for violation of this section shall be expended for the purchase of trees for replacement on public property within the city. Replacement of illegally removed trees may be required as restitution in lieu of fines. Any person who removes trees in violation of this section shall pay to the city a civil penalty equal to the total value of trees illegally removed or damaged. Value shall be determined by utilizing the current International Society of Arboriculture shade tree value formula. This sum may be recovered in civil action brought by the city.~~

SECTION 8: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-449 (Land clearing permit) is hereby amended and shall read as follows:

Sec. 94-449. – Land clearing permit.

(a) *Permit required.* Land clearing, land removing, or land filling activities shall not occur unless a land clearing permit has been issued.

(b) *Permit application procedures.* Application for a permit required by this section shall be obtained from the planning and zoning administrator. The application shall include a written statement specifying the location of the property and the reasons necessitating the land alteration.

(c) *Requirement for ~~the~~ tree alteration permits.* Tree alteration permits shall be approved for the removal or relocation of trees only as provided in 94-448.

(d) *Permit requirements.* A land clearing permit shall not be issued unless one of the following conditions exist:

- (1) The proposed land clearing, including removal of vegetation and trees, grading, removal and disposal of all prohibited trees, filling, contouring, and similar actions, is necessary to allow the permitted use of property.
- (2) A tree removal permit, if necessary, has been issued.
- (3) Appropriate measures, pursuant to this section, have been completed to protect existing native noninvasive trees and vegetation.

SECTION 9: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf) Section 94-450 (Vacant lot and construction site maintenance.) shall be relocated to Section 94-316 of the Code and amended, as set forth in Section 15 of this Ordinance.

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SECTION 10: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV Landscaping, Land clearing, Tree protection, and Artificial turf) Section 94-450 (Vacant lot and construction site maintenance.) is hereby deleted in its entirety and replaced with Section 94-450 (Littoral planting zones) which shall read as follows:

94-450- Littoral planting zones.

(a) Required. Littoral planting is required on lakes whose water surface is larger than one half acre in size. The littoral planting zone is, at a minimum, an area that extends ten feet into a lake from the shoreline and extends a maximum of five feet upland from the shoreline.

- (1) Minimum planting area. At least 50 percent of the shoreline shall be planted with wetland trees and/or aquatic plants at ten square feet of littoral zone for every one linear foot of shoreline.
- (2) Minimum planting standards. There shall be a minimum of one tree for every 80 square linear feet, and plants shall be on a minimum of three-foot centers.
- (3) Slope. Shelf slope and size shall be noted on the landscape plan in the form of a cross section drawing and respective specifications based on actual plant and tree requirements.

Sec. 94-450. – Vacant lot and construction site maintenance.

~~(a) Intent.~~ The intent of this section is to minimize the detrimental health, safety, general welfare and impacts of vacant lots and construction activities on the residents of the City of West Palm Beach; to ensure that each vacant lot and construction site is maintained, and each construction activity is conducted in such a manner so as to avoid unnecessary inconvenience and annoyance to the general public and the occupants of the neighboring properties; and to require maintenance practices that will reduce the amount of sediment and other pollutants leaving construction sites during land development or land disturbing construction activities.

~~(b) Applicability.~~

- ~~(1) The regulations contained in this section apply to all vacant lots and land disturbing construction and land development activities on properties within the boundaries and jurisdiction of the City of West Palm Beach.~~
- ~~(2) This section applies to all properties within the jurisdiction of the City of West Palm Beach with an active, printed or expired building permit or demolition permit for any land disturbing construction and/or land development activities as defined in this section.~~
- ~~(3) All Florida Department of Transportation (FDOT) funded construction is exempt from this section. All FDOT funded or conducted construction activities shall meet the requirements as required by Florida Department of Environmental Protection regulation.~~
- ~~(4) All other land disturbing construction and land development activities exempt from local permitting authority are exempt from this section. Land disturbing construction and land development activities performed by the city within city right-of-way or on city property are exempt from this section.~~

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~~(5) The demolition of existing buildings within the Downtown Master Plan Area shall follow the regulations established in subsection 94-102(1) of this Code.~~

~~(6) Where this section and another ordinance conflict or overlap, whichever imposes the more stringent restrictions shall prevail.~~

~~(c) *Definitions.* The following words, terms and phrases when used in this section, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:~~

~~*Erosion.* The detachment and movement of soil, sediment or rock fragments by water, wind, ice, or gravity.~~

~~*Erosion control measure.* A practice or combination of practices to control erosion and attendant pollution.~~

~~*Irrigation.* The methods of supply and application of water other than natural rainfall to foster plant growth. Methods shall include an automated irrigation system or hand watering.~~

~~*Land development activities.* The construction of buildings, roads, parking lots, paved storage areas, demolition of structures, installation of utilities, or other similar facilities.~~

~~*Land disturbing construction activities.* Any man-made change of the land surface, including removing vegetative cover, excavating, filling and grading landscaping modifications, and demolition.~~

~~*Land stabilization.* The restoration of a construction site to grade, tilling, planting of sod with provision for irrigation. Land stabilization does not include the removal of structures except temporary construction fences.~~

~~*Landowner.* Any person, firm, corporation or other legal entity who, individually or jointly or severally with others, holds the legal or beneficial title to any building, facilities, equipment or premises subject to the provisions of this chapter. The term shall include the landowner's duly authorized agent, a purchaser, devisee, fiduciary, property holder as any other person, firm, corporation or legal entity having a vested or contingent interest or, in the case of a leased premises, the legal holder of the lease or his legal representative. It is intended that this term shall be construed as applicable to the person, firm, corporation or legal entity responsible for the construction, maintenance and operation of the building, facilities or premises involved.~~

~~*Seeding.* The planting of vegetative cover, such as grasses or legumes, over disturbed areas.~~

~~*Site.* The entire area included in the legal description of the land on which the land disturbing construction or land development activities are proposed in the permit application.~~

~~*Sodding.* The placement of permanent vegetative cover over disturbed areas as a method of permanent stabilization.~~

~~*Stormwater Pollution Prevention Plan (SWPPP).* A plan prepared in accordance with good engineering practices with a written description of the number, location and sizes of control measures designed to reduce pollutants in stormwater discharge associated with construction activity.~~

~~*Vacant lot.* Any parcel of land not containing a structure excluding a fence.~~

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~~Vertical construction commencement.~~ Approved inspections of tie-beams, columns, or similar vertical construction, as applicable.

~~(d) Administration.~~

~~(1) A stormwater pollution prevention plan (SWPPP) pursuant to the city's stormwater management program shall be submitted along with the application for a building permit or demolition permit for any land disturbing construction or land development activities. It shall be unlawful to perform, or for the landowner of any construction site to allow to be performed, any construction activity prior to: (i) the issuance of a building permit, a demolition permit or a public right of way permit; and (ii) the city's approval of the SWPPP.~~

~~(2) The SWPPP shall be subject to the review and approval of the engineering services director or designee. Such review shall be conducted to ensure that the land disturbing construction or land development activities will be conducted in compliance with the Environmental Protection Agency (EPA) Federal Guidelines. The engineering services director or designee will respond and notify if any changes are required to the SWPPP. The SWPPP shall be monitored relating to the field conditions and if the measures are not effective, the SWPPP shall be revised.~~

~~(3) A SWPPP may be modified or amended upon the written approval of the engineering services director or designee.~~

~~(4) Unless otherwise provide in this section, the construction services director may, after two prior written warnings, revoke any demolition or building permit granted in accordance with this section for violation(s) of this section or any construction site maintenance regulations.~~

~~(e) Maintenance.~~

~~(1) Job site. Contractors, subcontractors and persons holding permits to perform land disturbing construction or land development activities, and the landowners of construction sites shall cause the construction site to be maintained in a neat and orderly condition that is free from any debris, garbage, junk, used or discarded construction materials, trash or any other foreign substance produced as a result of the land disturbing construction or land development activities, other than debris, garbage, junk, trash or other foreign substance deposited into and contained within a trash receptacle or trash dumpster.~~

~~a. In all instances where a building permit has not been issued within three months of the completion or abandonment of land disturbing construction activities, the job site shall, within 30 days after the expiration of such three month period, be brought to grade, tilled, planted and maintained with ground cover to include sodding or seeding which shall have irrigation. Any temporary construction fence shall also be removed. The construction services director or designee, with input from the planning director or designee, may grant, in writing, an extension to the time frame for the issuance of a building permit, under this paragraph, when the landowner has demonstrated a good faith effort in pursuing the building permit but that circumstances beyond the control of the contractor and/or permittee have occurred.~~

~~b. All construction waste and debris from new construction or major alteration or repair shall be kept in an enclosed container to minimize debris from littering adjacent properties and public rights of way. The permittee, contractor or~~

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~~landowner shall cause such waste or debris to be removed weekly in accordance with section 74-2 of this Code.~~

~~c. All mud or debris shall be continually removed from the public sidewalks and streets.~~

~~d. All weeds and grass shall be maintained in accordance with subsection 74-2(c) and section 94-446 of this Code.~~

~~e. Contractors, subcontractors, persons holding permits to perform land disturbing construction and land development activities and the landowners of construction sites shall, at the direction of the engineering services director or designee, either repair, or reimburse the city for its costs incurred to repair, any damage to any public right of way that is caused by any construction vehicle involved in the land disturbing construction or land development activities.~~

~~f. In the event that the demolition permit or building permit expires, all materials and equipment related to the land disturbing construction or land development activities shall be removed from the job site within ten days of the permit expiration date. The job site shall, within 30 days thereafter, be brought to grade, be tilled and planted with ground cover to include sodding or seeding which shall have irrigation. Said ground cover shall be maintained in accordance with subsections 74-2(c) and section 94-446 of this Code.~~

~~(2) *Temporary construction fences.* No temporary construction fence may be erected until a site plan depicting the materials, location and access gates has been approved as part of the fence permit issuance.~~

~~a. Temporary construction fences may not be erected until a demolition permit or building permit for the land disturbing construction or land development activities has been issued, and no more than ten days prior to the commencement of land disturbing construction or land development activities. If land disturbing construction or land development activities do not commence within ten days of fence installation, then, within 15 days of the ten-day period, the fence shall be removed and the site shall be tilled and planted with ground cover to include sodding or seeding which shall have irrigation and shall be maintained in accordance with sections 74-2 and 94-446 of this Code.~~

~~b. In the event that the demolition permit or building permit expires, all temporary construction fences shall be removed within ten days of the permit expiration date, and within 15 days of removal of the fences, the site shall be brought to grade, tilled and planted with ground cover to include sodding or seeding which shall have irrigation and shall be maintained in accordance with section 74-2 and 94-446 of this Code.~~

~~c. Temporary construction fences shall comply with the following requirements:~~

- ~~1. Temporary construction fences shall be installed in accordance with the Florida Building Code and Occupational Safety and Health Administration (OSHA) standards. Temporary construction fences installed pursuant to this section shall be subject to the visibility at intersections requirements of subsection 94-305(e) of this Code.~~

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~~2. All temporary construction fencing shall be maintained in a satisfactory manner by the permittee or landowner, during the entire period of the land disturbing construction and land development activities, to ensure adequate performance, to prevent nuisance conditions and to maintain the public health, safety and welfare.~~

~~3. Gates shall be chained and locked with a lock substantial enough to ensure closure and security when workers are not on the job site.~~

~~4. No temporary construction fence may encroach beyond the subject property line. No fence may encroach upon the public right-of-way without obtaining the appropriate public right-of-way permit(s).~~

~~5. Screening details shall be submitted with the temporary construction fence permit application. Wind screening shall be substantial enough to avoid rips or tears due to wind or sun, and shall have no less than 85 percent opacity. Screening shall be maintained in good condition at all times. Screening graphics shall be approved with a permit pursuant to the provisions of Chapter 94, Article 13, sign regulations, of the zoning and land development regulations of this Code.~~

~~6. All wind screening materials shall be removed upon the issuance of a hurricane warning for an area including the city. Screening materials shall be reinstalled not more than ten days after the hurricane threat has ended.~~

~~7. The construction services director or designee may grant the use of a temporary movable construction fence as part of a phased construction or phased demolition permit. Within ten days of the completion of the phase of construction or demolition, the temporary movable fence shall be removed, and may be replaced by another temporary construction fence meeting the provisions of this section.~~

~~d. The construction services director or designee may grant, in writing, a restriction or extension to the time frames for the erection or removal of temporary construction fences when necessary to maintain the public health, safety and welfare.~~

~~(3) *Erosion control measures.*~~

~~a. Applicability. Erosion control measures are required for the following sites of land disturbing construction or land development activities:~~

~~1. Sites requiring a filing of plat, involving the construction of or additions to houses, duplexes, condominiums, townhouses, apartments or construction of or additions to commercial, industrial, or institutional buildings.~~

~~2. Sites on existing lots of record involving the construction of or additions to houses, duplexes, condominiums, townhouses, apartments or the construction of or additions to commercial, industrial, or institutional buildings.~~

~~3. Sites involving grading, removing of protective ground cover or vegetation, excavating, land filling or other land disturbing activities affecting a surface area of 4,500 square feet or more.~~

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~~4. Sites involving excavating or land-filling or a combination of excavating and filling affecting 400 cubic yards or more of dirt, sand or other excavation or fill material.~~

~~5. Sites involving street, highway, road or bridge construction, enlargement, relocation or reconstruction excluding FDOT construction exempted by subsection 94-450(b)(3).~~

~~6. Those sites involving the laying, repairing, replacing or enlarging of an underground pipe, utility main or similar facility for a distance of 300 feet or more.~~

~~b. All sites for which erosion control measures are required, described in subsection (a) immediately above, shall comply with the city's stormwater management program and shall submit a stormwater pollution prevention plan (SWPPP) for approval by city.~~

~~c. The approved stormwater pollution prevention plan (SWPPP) shall be maintained by the permittee or landowner during the entire period of the land disturbing construction or land development activities on the site in a manner satisfactory to ensure adequate performance in accordance with the SWPPP and to prevent nuisance conditions. All erosion control measures installed in accordance with the SWPPP shall be removed by the permittee or landowner upon completion of all land development or land disturbing construction activities.~~

~~d. In the event that a building permit or demolition permit expires, within 30 days of the permit expiration date, the site shall be brought to grade, tilled and planted with ground cover to include sodding or seeding which shall have irrigation and shall be maintained in accordance with subsections 74-2(c) and subsection 94-446 of this Code, and upon completion, all measures installed as part of the SWPPP shall be immediately removed.~~

~~(4) Waiver of erosion control requirements.~~

~~a. The engineering services director or designee shall have the authority, on a case by case basis, to grant a written waiver of any requirements of the stormwater management program or requirement for an SWPPP for small sites, for land disturbing construction or land development activities covering less than one acre, or individual single family home sites in a previously platted subdivision or land division.~~

~~b. Any waiver of the stormwater management program requirements or for an SWPPP does not invalidate any other requirements set forth in this section.~~

~~(f) Erosion control and land stabilization bonds or deposits.~~

~~(1) Erosion control – Contractors, subcontractors and persons applying for a demolition and/or building permit to perform land disturbing construction or land development activities shall post an erosion control bond or deposit for the erosion control measures approved by the stormwater pollution prevention plan (SWPPP), in an amount established by resolution and satisfactory to the city to fully cover the costs associated with compliance with the SWPPP and other necessary erosion control of the site, should the permit expire. An erosion control bond shall not be required for the construction of~~

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~~single family dwellings, duplexes, accessory apartments, or additions or renovations to an existing single family dwelling, existing duplex, or existing accessory apartment.~~

~~(2) Land stabilization — Contractors, subcontractors and persons applying for a demolition and/or building permit to perform land disturbing construction or land development activities shall, in addition to the erosion control bond, post a land stabilization bond or deposit, in an amount established by resolution and satisfactory to the city, to cover the costs associated with land stabilization of the site, should the permit expire. A land stabilization bond shall not be required for the construction of single family dwellings, duplexes, accessory apartments, or additions or renovations to an existing single family dwelling, existing duplex, or existing accessory apartment.~~

~~(3) The erosion control and land stabilization bonds or deposits may be combined and posted together, combined with any performance bonds posted in favor of the city, or posted separately. The erosion control or land stabilization bonds or deposits shall be posted for the entire permitted site or project.~~

~~(4) Only the following types of bonds or deposits will be accepted: (i) bond issued by a surety company authorized to do business in Florida, (ii) deposit of a cashier check or bank draft of any national bank or state bank, (iii) deposit of a certified check drawn on a financial institution acceptable to the city, as determined by the finance department, (iv) letter of credit drawn on a financial institution acceptable to the city, as determined by the finance department, or (v) deposit of a U.S. postal money order.~~

~~(5) Upon vertical construction commencement, payment in full of all applicable fees, and compliance with all terms and conditions of any posted bond, the contractor, subcontractor or permit applicant who posted the bond or bonds or deposit may request release of same. The city shall provide the permittee with an approval to release bonds/deposits and the city shall issue a check in the amount of any unused deposit or a release of any bond and release of any other security given for the erosion control and/or land stabilization requirements.~~

~~(6) This section shall not apply to any federal government entity and shall not apply to any state, regional, county, local or municipal government entity of this state; or any public school, community college or state university.~~

~~(g) Enforcement; appeals.~~

~~(1)The construction services director, or designee, or engineering services director, or designee, are authorized to inspect construction sites for compliance with the requirements of this section.~~

~~(2) Stop work orders. The construction services director may post a stop work order for a building permit if any land disturbing construction activities or land development activities regulated under this section are being undertaken in violation of this section. The engineering services director may post a stop work order if any land disturbing construction activities or land development activities regulated under this section are being undertaken for violations of this section occurring in the right of way or related to the SWPPP and erosion control measures.~~

~~(3) Stop work order retraction. The construction services director or engineering services director who issued a stop work order may retract that stop work order once the violation of this section is cured.~~

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~~(4) Notice of intent. Not less than ten days after the posting a stop-work order as provided above, the engineering services director may issue a written notice to the permittee or landowner of the city's intent to perform work necessary to cure existing violations and comply with this section. Said notice shall be sent certified and regular mail. If, after 14 days from issuance of the notice of intent, the site is not in compliance with the requirements of this section, the city may enter the site and commence all work necessary to comply with this section. The city's costs for the work performed by the city shall be subtracted from the deposit or bond posted with the city and any additional costs shall be billed to the permittee or the landowner. In the event a permittee or landowner fails to pay the amount due to fully reimburse the city, the city shall file a lien against the property for all unreimbursed costs, plus interest and administrative expenses, and may take all available actions to collect the sums due.~~

~~(5) Compliance with the provisions of this section may also be enforced in accordance with F.S. Ch. 162, or by injunction, uniform citation procedure, code enforcement procedure, fine, lien forfeiture or any other appropriate and available remedy.~~

~~(6) Decisions of the construction services director may be appealed to the construction board of adjustment and appeals. Decisions of the engineering services director regarding erosion control measures or SWPPP may be appealed to the stormwater utility board.~~

SECTION 11: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-451 (Artificial Turf.) is hereby amended and shall read as follows:

Sec. 94-451. – Artificial turf

(a) The use and location of artificial turf shall be limited to the following:

- (1) The construction of non-city-owned athletic fields and playgrounds associated with a non-city-owned community center, park, school, or university;
- (2) As part of the construction of any nonresidential development; or
- (3) On roof top terraces.

(b) Artificial turf proposed under the provision of subsection (a)(1) above shall only be installed upon approval of a class A special use permit, pursuant to the procedures and standards set forth in this chapter.

(c) In all areas of installation, artificial turf shall be treated as impervious surface area. The quantity of artificial turf to be incorporated into a project shall be limited by the maximum percentage of impervious surface for the subject property within the applicable zoning district.

(d) With the exception of those circumstances in which artificial turf is installed pursuant to subsection (a)(1) above, artificial turf shall not be:

- (1) A part of any landscape buffers required by this article;

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- (2) Visible from the public thoroughfare;
- (3) Installed within permanent drainage features (e.g., ponds, swales);
- (4) Installed in any residential zoning district.

(e) *Minimum material standards.* All artificial turf shall comply with the following minimum standards:

- (1) Artificial turf shall consist of green lifelike individual blades of grass that emulate natural turf in look and color and shall have a minimum pile height of 1.5 inches and shall have a minimum tufted weight of 56 ounces per square yard.
- (2) Where artificial turf is utilized for institutional recreational uses (e.g., playgrounds, athletic fields), the artificial turf product installed shall be designed for the intended use and meet the appropriate additional standards.
- (3) Artificial turf installations shall have a minimum permeability of 30 inches per hour per square yard.
- (4) All artificial turf shall have a minimum eight year manufacturer's warranty that protects against color fading and a decrease in pile height.
- (5) Artificial turf shall be lead free.
- (6) All materials must include test documentation which declares that the artificial turf yarn and backing materials are disposable under normal conditions, at any US landfill station (Total Content Leach Protocol (TCLP) test).
- (7) The use of indoor or outdoor plastic or nylon carpeting as a replacement for artificial turf or natural turf shall be prohibited.

(f) *Installation, maintenance and repair.*

- (1) All artificial turf shall, at a minimum, be installed according to the manufacturer's specifications.
- (2) All artificial turf installations shall be anchored to ensure that the turf will withstand the effects of wind.
- (3) All seams shall be nailed and glued, not sewn, and edges shall be trimmed to fit against all regular and irregular edges to resemble a natural look.
- (4) If artificial turf is planned to be installed immediately adjacent to a seawall, the artificial turf shall be pinned or staked behind the seawall. No artificial turf or installation mechanism shall be attached directly to or placed on a seawall or seawall cap.
- (5) Proper drainage shall be provided for all artificial turf installations to prevent excess runoff or pooling of water.
- (6) Artificial turf shall be visually level, with the grain pointing in a single direction.
- (7) An appropriate solid barrier device (e.g., concrete mow strip, bender board) is required to separate artificial turf from soil and live vegetation.
- (8) Precautions for installation around existing trees shall be monitored and may be restricted to ensure tree roots are not damaged with the installation of the base material and that the overall health of the tree will not be compromised

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(9) All artificial turf shall be maintained in a green fadeless condition and shall be maintained 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~~-invasive roots; and all edges of the artificial turf shall not be loose and must be maintained with appropriate edging or stakes.

(10) All artificial turf must be replaced if it falls into disrepair with fading or holes or loose areas. Replacement and/or repairs shall be done with like for 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.

(g) An owner or applicant shall obtain a duly-authorized building permit from the city's development services department prior to the installation of any artificial turf.

SECTION 12: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), Section 94-452 (Roadway beautification.) is hereby created and shall read as follows:

Sec. 94-452. – Roadway beautification

(a) Intent. The intent of this section is to beautify public roads and keep the public roads aesthetically pleasing with landscaping and other enhancements.

(b) Applicability.

(1) The standards contained in this section shall apply to all public rights-of-way which are adjacent, contiguous or internal to existing and proposed residential and nonresidential developments. Landscaping and irrigation are required within roadway medians and road shoulders. All approved planned developments that are subject to major amendments, shall be required to landscape, irrigate and maintain improvements within adjacent and/or contiguous public rights-of-way. If a development order requires road improvements not adjacent and/or contiguous to the development, the petitioner of the development shall landscape and irrigate said road. Unless otherwise approved through a development order or other agreement, developers and their successors or assigns shall be responsible for the installation and maintenance of roadway landscaping, including irrigation. Where roads have been landscaped and enhanced, but become nonconforming due to safety standards implemented by this section, nonconformities may be rectified during future road improvements by the person or entity making the improvements.

(2) As new developments are approved, property owners on both sides of the road shall be required to share the cost of landscape and irrigation maintenance for medians and/or road shoulders based on the linear frontage of each development or by the square footage of the area to be maintained.

Language underlined added, and language ~~stricken~~ deleted.
Asterisks **** indicate language not amended which has been omitted to save space.

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(b) Landscape plans. Landscape plans for rights-of-way shall be submitted by the applicant and approved with each development approval.

(c) Installation.

(1) Landscaping installation shall be in accordance with applicable state and/or county engineering standards and this code. All landscaping and irrigation within the right-of-way shall be installed and completed within six months from the issuance of the clearing permit for said project or as otherwise approved by the city commission. The preparation of the soil within the road right-of-way shall include excavation of material detrimental to plant growth. Best management practices shall be used for proper soil preparation and drainage of the site. The water source for the roadway landscaping shall originate from the developer's project.

(2) The developer shall be responsible for obtaining all permits through the appropriate agencies.

(d) Maintenance. The developer and its successors, or assigns shall be responsible for the maintenance of the roadway landscaping. Landscaping maintenance shall be performed in accordance with applicable state and/or county engineering standards and city code requirements. The roadway shall be maintained to the same standard as the adjacent development landscaping. As new developments or major amendments to approved developments occur adjacent to existing roadway beautification projects, the cost to maintain the common median shall be equally shared between the property owners on both sides of the roadway, and each owner shall be jointly and severally liable for such maintenance, unless otherwise specified in the conditions of development approval or separate agreements. The city shall disclose to all parties any maintenance agreements between developments upon request, but it shall be the property owner's responsibility to coordinate the maintenance and the shared cost thereof.

(e) Enforcement. Failure to install and maintain roadway landscaping, including plant replacement, shall be a violation of this section as well as development order conditions, if applicable.

SECTION 13: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIV (Landscaping, Land clearing, Tree protection, and Artificial turf), is hereby amended to create Section 94-453 (Nonconforming landscape areas) which shall read as follows:

Sec. 94-453 Nonconforming landscape areas.

(a) Legal nonconformities established. With the exception of sites that have been modified without city approval, any parcel of land which is the subject of a current valid development order or upon which a structure has been erected prior to April 1, 2017, and does not meet all or part of the minimum landscape requirements in this division shall be considered a legal nonconformity.

(1) Requirements for existing sites.

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a. The city shall use approved landscape plans or development orders as the minimum landscape installation standard and requirement for a developed site.

b. If an approved landscape plan is not on file with the city, the existing landscaping becomes a living plan of record and as such has the same standards and protection as allowed under provisions set forth in this article, similar to a landscape filed with and approved by the city.

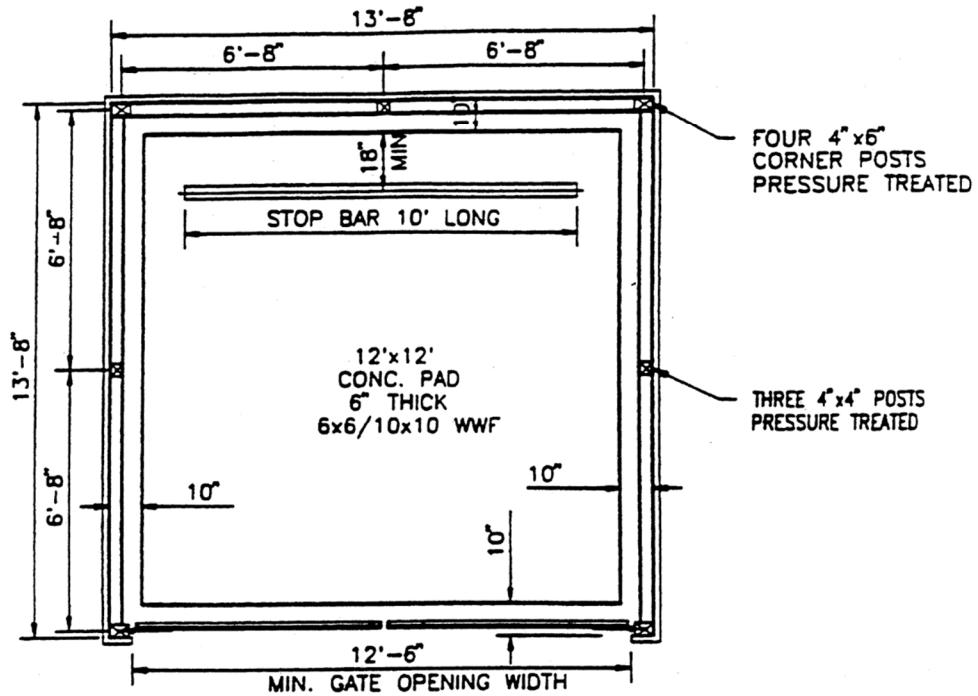
(b) Maintenance. Nonconforming areas are not exempt from minimum maintenance standards.

SECTION 14: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article X (Supplemental District Regulations) Section 94-315 (Outdoor storage for nonresidential and multifamily uses; storage and disposal facilities.) is hereby created and shall read as follows:

Sec. 94-315. – Outdoor storage for nonresidential and multifamily uses; storage and disposal facilities.

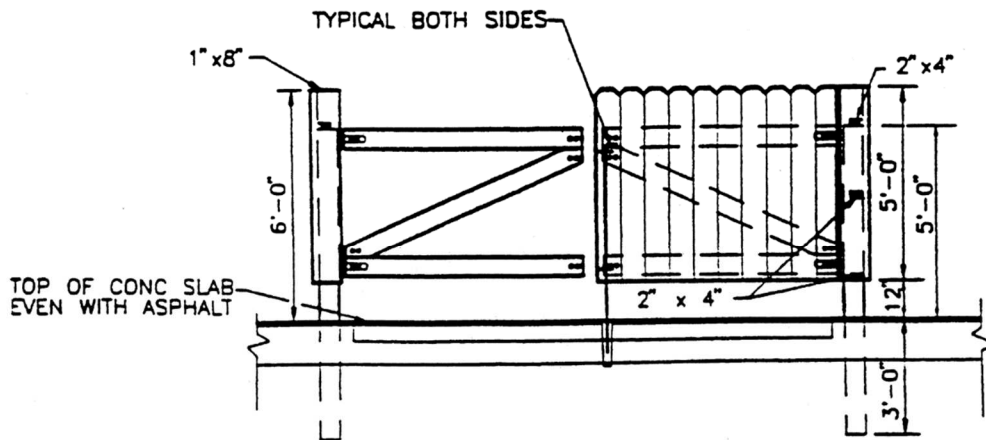
(a) Outdoor incinerators, garbage or trash receptacles, fuel oil or propane tanks, and storage racks shall not be permitted unless appropriate screening is provided. Screening shall be constructed of brick, decorative concrete, other decorative masonry, or comparably durable wood and steel. Walls shall be landscaped with shrubs and hedges planted at two-foot intervals. A four-sided enclosure with an obscuring gate may be required as a condition for site plan approval. Plans for the layout of trash receptacles shall be in accordance with the minimum requirements set forth in Figure XIV-3. The provisions of this section shall not apply to litter containers provided for the convenience of pedestrians. All areas for the storage and disposal of trash and garbage shall be paved with concrete surface as required by city engineering department.

FIGURE XIV-3 DIMENSIONAL REQUIREMENTS AND SPECIFICATIONS FOR TRASH RECEPTACLES



* Walls must be landscaped with shrubs and hedges planted at two (2) feet intervals.

PLAN VIEW N.T.S.



FRONT VIEW N.T.S.

Figure X-6 Dimensional Requirements and Specifications for Trash Receptacles

Language underlined added, and language ~~stricken~~ deleted.
Asterisks **** indicate language not amended which has been omitted to save space.

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(b) Outdoor storage and disposal of goods, merchandise and materials.

(1) Screening. Outdoor storage of goods, merchandise and materials shall not be permitted unless enclosed on all sides by a wall of adequate height constructed of brick, decorative concrete, other decorative masonry, or comparably durable wood or steel. Wall openings shall have obscuring gates. All areas for the storage and disposal of goods, merchandise, and materials shall be covered with either asphalt or concrete paving, or crushed rock of such specification and design as required by the city engineering department.

(2) Exemptions.

a. Temporary outdoor storage of bulk garden and farming supplies, such as wood chips, peat moss, flower flats, and similar items shall not be subject to the provisions of this section.

b. Automobiles and other motor vehicles may be stored subject to the requirements of section 94-273, rather than this section.

SECTION 15: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article X (Supplemental District Regulations), Section 94-316 (Vacant lot and construction site maintenance.) is hereby created to amend and restate these regulations in this section, which shall read as follows:

Sec. 94-316. – Vacant lot and construction site maintenance.

(a) Intent. The intent of this section is to minimize the detrimental impacts to health, safety, and the general welfare resulting from vacant lots and construction activities; to ensure that each vacant lot and construction site is maintained, and each construction activity is conducted in such a manner so as to avoid unnecessary inconvenience and annoyance to the general public and the occupants of the neighboring properties; and to require maintenance practices that will reduce the amount of sediment and other pollutants leaving construction sites during land development or land disturbing construction activities.

(b) Applicability.

(1) The regulations contained in this section apply to all vacant lots and land disturbing construction and land development activities on properties within the boundaries and jurisdiction of the city.

(2) This section applies to all properties with an active, printed or expired building permit or demolition permit for any land disturbing construction and/or land development activities.

(3) All Florida Department of Transportation (FDOT) funded construction is exempt from this section. All FDOT funded or conducted construction activities shall meet the requirements as required by Florida Department of Environmental Protection regulation.

Language underlined added, and language ~~stricken~~ deleted.
Asterisks **** indicate language not amended which has been omitted to save space.

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- (4) All other land disturbing construction and land development activities exempt from local permitting authority are exempt from this section. Land disturbing construction and land development activities performed by the city within city right-of-way or on city property are exempt from this section.
- (5) The demolition of existing buildings within the Downtown Master Plan Area shall follow the regulations established in subsection 94-102(1) of this code.
- (6) Where this section and another ordinance conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(c) Administration.

- (1) A stormwater pollution prevention plan (SWPPP) pursuant to the city's stormwater management program shall be submitted along with the application for a building permit or demolition permit for any land disturbing construction activities or land development activities. It shall be unlawful to perform, or for the property owner of any construction site to allow to be performed, any construction activity prior to: (i) the issuance of a building permit, a demolition permit or a public right-of-way permit; and (ii) the city's approval of the SWPPP.
- (2) The SWPPP shall be subject to the review and approval of the engineering services director. Such review shall be conducted to ensure that the land disturbing construction or land development activities will be conducted in compliance with the Environmental Protection Agency (EPA) federal guidelines. The engineering services director will respond and notify if any changes are required to the SWPPP. The SWPPP shall be monitored relating to the field conditions and if the measures are not effective, the SWPPP shall be revised.
- (3) A SWPPP may be modified or amended upon the written approval of the engineering services director.
- (4) Unless otherwise provide in this section, the development services director may, after two prior written warnings, revoke any demolition or building permit granted in accordance with this section for violation(s) of this section or any construction site maintenance regulations.

(d) Maintenance.

- (1) Job site. Contractors, subcontractors and persons holding permits to perform land disturbing construction or land development activities, and the landowners of construction sites shall cause the construction site to be maintained in a neat and orderly condition that is free from any debris, garbage, junk, used or discarded construction materials, trash or any other foreign substance produced as a result of the land disturbing construction or land development activities, other than debris, garbage, junk, trash or other foreign substance deposited into and contained within a trash receptacle or trash dumpster.
 - a. In all instances where a building permit has not been issued within three months of the completion or abandonment of land disturbing construction activities, the job site shall, within 30 days after the expiration of such three-month period, be brought to grade, tilled, planted and maintained with ground

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cover to include sodding or seeding which shall have irrigation. Any temporary construction fence shall also be removed. The development services director may grant, in writing, an extension to the time frame for the issuance of a building permit, under this paragraph, when the property owner has demonstrated a good faith effort in pursuing the building permit but that circumstances beyond the control of the contractor and/or permittee have occurred.

b. All construction waste and debris from new construction or major alteration or repair shall be kept in an enclosed container to minimize debris from littering adjacent properties and public rights-of-way. The permittee, contractor or property owner shall cause such waste or debris to be removed weekly in accordance with section 74-2 of this code.

c. All mud or debris shall be continually removed from the public sidewalks and streets.

d. All weeds and grass shall be maintained in accordance with subsection 74-2(c) and section 94-446 of this code.

e. Contractors, subcontractors, persons holding permits to perform land disturbing construction and land development activities and the landowners of construction sites shall, at the direction of the engineering services director, either repair, or reimburse the city for its costs incurred to repair, any damage to any public right-of-way that is caused by any construction vehicle involved in the land disturbing construction activities or land development activities.

f. In the event that the demolition permit or building permit expires, all materials and equipment related to the land disturbing construction or land development activities shall be removed from the job site within ten days of the permit expiration date. The job site shall, within 30 days thereafter, be brought to grade, be tilled and planted with ground cover to include sodding or seeding which shall have irrigation. Said ground cover shall be maintained in accordance with subsections 74-2(c) and section 94-446 of this code.

(2) Temporary construction fences. No temporary construction fence may be erected until a site plan depicting the materials, location and access gates has been approved as part of the fence permit issuance.

a. Temporary construction fences may not be erected until a demolition permit or building permit for the land disturbing construction or land development activities has been issued, and no more than ten days prior to the commencement of land disturbing construction or land development activities. If land disturbing construction or land development activities do not commence within ten days of fence installation, then, within 15 days of the ten-day period, the fence shall be removed and the site shall be tilled and planted with ground cover to include sodding or seeding which shall have irrigation and shall be maintained in accordance with sections 74-2 and 94-446 of this code.

b. In the event that the demolition permit or building permit expires, all temporary construction fences shall be removed within ten days of the permit expiration date, and within 15 days of removal of the fences, the site shall be brought to grade, tilled and planted with ground cover to include sodding or

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seeding which shall have irrigation and shall be maintained in accordance with section 74-2 and 94-446 of this code.

c. Temporary construction fences shall comply with the following requirements:

1. Temporary construction fences shall be installed in accordance with the Florida Building Code and Occupational Safety and Health Administration (OSHA) standards. Temporary construction fences installed pursuant to this section shall be subject to the visibility at intersections requirements of subsection 94-305(e) of this Code.

2. All temporary construction fencing shall be maintained in a satisfactory manner by the permittee or landowner, during the entire period of the land disturbing construction and land development activities, to ensure adequate performance, to prevent nuisance conditions and to maintain the public health, safety and welfare.

3. Gates shall be chained and locked with a lock substantial enough to ensure closure and security when workers are not on the job site.

4. No temporary construction fence may encroach beyond the subject property line. No fence may encroach upon the public right-of-way without obtaining the appropriate public right-of-way permit(s).

5. Screening details shall be submitted with the temporary construction fence permit application. Wind screening shall be substantial enough to avoid rips or tears due to wind or sun, and shall have no less than 85 percent opacity. Screening shall be maintained in good condition at all times. Screening graphics shall be approved with a permit pursuant to the provisions of chapter 94, article 13, sign regulations, of the zoning and land development regulations of this code.

6. All wind screening materials shall be removed upon the issuance of a hurricane warning for an area including the city. Screening materials shall be reinstalled not more than ten days after the hurricane threat has ended.

7. The development services director may grant the use of a temporary movable construction fence as part of a phased construction or phased demolition permit. Within ten days of the completion of the phase of construction or demolition, the temporary movable fence shall be removed, and may be replaced by another temporary construction fence meeting the provisions of this section.

d. The development services director may grant, in writing, a restriction or extension to the time frames for the erection or removal of temporary construction fences when necessary to maintain the public health, safety and welfare.

(3) Erosion control measures.

a. Applicability. Erosion control measures are required for the following sites of land disturbing construction or land development activities:

1. Sites requiring a filing of plat, involving the construction of or additions to houses, duplexes, condominiums, townhouses, apartments or construction of or additions to commercial, industrial, or institutional buildings.

Language underlined added, and language ~~stricken~~ deleted.

Asterisks **** indicate language not amended which has been omitted to save space.

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2. Sites on existing lots of record involving the construction of or additions to houses, duplexes, condominiums, townhouses, apartments or the construction of or additions to commercial, industrial, or institutional buildings.

3. Sites involving grading, removing of protective ground cover or vegetation, excavating, land-filling or other land disturbing activities affecting a surface area of 4,500 square feet or more.

4. Sites involving excavating or land-filling or a combination of excavating and filling affecting 400 cubic yards or more of dirt, sand or other excavation or fill material.

5. Sites involving street, highway, road or bridge construction, enlargement, relocation or reconstruction excluding FDOT construction exempted by subsection 94-316(b)(3).

6. Those sites involving the laying, repairing, replacing or enlarging of an underground pipe, utility main or similar facility for a distance of 300 feet or more.

b. All sites for which erosion control measures are required, described in subsection (a) immediately above, shall comply with the city's stormwater management program and shall submit a stormwater pollution prevention plan (SWPPP) for approval by city.

c. The approved stormwater pollution prevention plan (SWPPP) shall be maintained by the permittee or landowner during the entire period of the land disturbing construction or land development activities on the site in a manner satisfactory to ensure adequate performance in accordance with the SWPPP and to prevent nuisance conditions. All erosion control measures installed in accordance with the SWPPP shall be removed by the permittee or landowner upon completion of all land development or land disturbing construction activities.

d. In the event that a building permit or demolition permit expires, within 30 days of the permit expiration date, the site shall be brought to grade, tilled and planted with ground cover to include sodding or seeding which shall have irrigation and shall be maintained in accordance with subsections 74-2(c) and subsection 94-446 of this code, and upon completion, all measures installed as part of the SWPPP shall be immediately removed.

(4) Waiver of erosion control requirements.

a. The engineering services director shall have the authority, on a case-by-case basis, to grant a written waiver of any requirements of the stormwater management program or requirement for an SWPPP for small sites, for land disturbing construction or land development activities covering less than one acre, or individual single-family home sites in a previously platted subdivision or land division.

b. Any waiver of the stormwater management program requirements or for an SWPPP does not invalidate any other requirements set forth in this section.

(e) Erosion control and land stabilization bonds or deposits.

Language underlined added, and language ~~stricken~~ deleted.

Asterisks **** indicate language not amended which has been omitted to save space.

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(1) Erosion control - Contractors, subcontractors and persons applying for a demolition and/or building permit to perform land disturbing construction or land development activities shall post an erosion control bond or deposit for the erosion control measures approved by the stormwater pollution prevention plan (SWPPP), in an amount established by resolution and satisfactory to the city to fully cover the costs associated with compliance with the SWPPP and other necessary erosion control of the site, should the permit expire. An erosion control bond shall not be required for the construction of single-family dwellings, duplexes, accessory apartments, or additions or renovations to an existing single-family dwelling, existing duplex, or existing accessory apartment.

(2) Land stabilization - Contractors, subcontractors and persons applying for a demolition and/or building permit to perform land disturbing construction or land development activities shall, in addition to the erosion control bond, post a land stabilization bond or deposit, in an amount established by resolution and satisfactory to the city, to cover the costs associated with land stabilization of the site, should the permit expire. A land stabilization bond shall not be required for the construction of single-family dwellings, duplexes, accessory apartments, or additions or renovations to an existing single-family dwelling, existing duplex, or existing accessory apartment.

(3) The erosion control and land stabilization bonds or deposits may be combined and posted together, combined with other performance bonds posted in favor of the city (other than the public construction bond posted by city contractors for city projects), or posted separately. The erosion control or land stabilization bonds or deposits shall be posted for the entire permitted site or project.

(4) Only the following types of bonds or deposits will be accepted: (i) bond issued by a surety company authorized to do business in Florida, (ii) deposit of a cashier check or bank draft of any national bank or state bank, (iii) deposit of a certified check drawn on a financial institution acceptable to the city, as determined by the finance department, (iv) letter of credit drawn on a financial institution acceptable to the city, as determined by the finance department, or (v) deposit of a U.S. postal money order.

(5) Upon commencement of construction, payment in full of all applicable fees, and compliance with all terms and conditions of any posted bond, the contractor, subcontractor or permit applicant who posted the bond or bonds or deposit may request release of same. The city shall provide the permittee with an approval to release bonds/deposits and the city shall issue a check in the amount of any unused deposit or a release of any bond and release of any other security given for the erosion control and/or land stabilization requirements.

(6) This section shall not apply to any federal government entity and shall not apply to any state, regional, county, local or municipal government entity of this state; or any public school, community college or state university.

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(f) Enforcement; appeals.

(1) The development services director and engineering services director are authorized to inspect construction sites for compliance with the requirements of this section.

(2) Stop-work orders. The development services director may post a stop-work order for a building permit if any land disturbing construction activities or land development activities regulated under this section are being undertaken in violation of this section. The engineering services director may post a stop-work order if any land disturbing construction activities or land development activities regulated under this section are being undertaken for violations of this section occurring in the right-of-way or related to the SWPPP and erosion control measures.

(3) Stop-work order retraction. The development services director or engineering services director who issued a stop-work order may retract that stop-work order once the violation of this section is cured.

(4) Notice of intent. Not less than ten days after the posting a stop-work order as provided above, the engineering services director may issue a written notice to the permittee or property owner of the city's intent to perform work necessary to cure existing violations and comply with this section. Said notice shall be sent certified and regular mail. If, after 14 days from issuance of the notice of intent, the site is not in compliance with the requirements of this section, the city may enter the site and commence all work necessary to comply with this section. The city's costs for the work performed by the city shall be subtracted from the deposit or bond posted with the city and any additional costs shall be billed to the permittee or the landowner. In the event a permittee or property owner fails to pay the amount due to fully reimburse the city, the city shall file a lien against the property for all unreimbursed costs, plus interest and administrative expenses, and may take all available actions to collect the sums due.

(5) Compliance with the provisions of this section may also be enforced in accordance with F.S. Ch. 162, or by injunction, uniform citation procedure, code enforcement procedure, fine, lien forfeiture or any other appropriate and available remedy.

(6) Decisions of the development services director may be appealed to the construction board of adjustment and appeals. Decisions of the engineering services director regarding erosion control measures or SWPPP may be appealed to the stormwater utility board.

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SECTION 16: The Code of Ordinances of the City of West Palm Beach at Chapter 94 (Zoning and Land Development Regulations); Article XIX (Definitions), Section 94-611 (Definitions) is hereby amended to add or amend the following definitions which shall read as follows. All other definitions in this section shall remain unchanged.

Commencement of construction or start of construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (PL 97-348)), includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction or a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, vertical construction, construction of columns, tie-beams, or any work beyond the stage of excavation or of the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include the excavation for a basement, footings, piers or foundations or the erection of temporary forms; or the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

Erosion means the detachment and movement of soil, sediment or rock fragments by water, wind, ice, or gravity.

Erosion control measure means a practice or combination of practices to control erosion and attendant pollution.

Florida native plant means a species occurring within the state boundaries prior to European contact, according to the best available scientific and historical documentation. Florida native plants include those species understood as indigenous, occurring in natural associations in habitats that existed prior to significant human impacts and alterations of the landscape.

Flowering tree means a tree reaching a minimum mature size of at least 15 feet tall and 15 feet in canopy spread at maturity that has ornamental value because of its production of flowers at some time during the year.

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Irrigation means the methods of supply and application of water other than natural rainfall to foster plant growth. Methods shall include an automated irrigation system or hand watering.

Land development activities means the construction of buildings, roads, parking lots, paved storage areas, demolition of structures, installation of utilities, or other similar facilities.

Land disturbing construction activities means any man-made change of the land surface, including removing vegetative cover, excavating, filling and grading landscaping modifications, and demolition.

Land stabilization Means the restoration of a construction site to grade, tilling, planting of sod with provision for irrigation. Land stabilization does not include the removal of structures except temporary construction fences.

Seeding- means the planting of vegetative cover, such as grasses or legumes, over disturbed areas.

Site means the entire area included in the legal description of the land on which the land disturbing construction or land development activities are proposed in the permit application or are occurring.

Sodding. The placement of permanent vegetative cover over disturbed areas as a method of permanent stabilization.

Start of construction. See, commencement of construction.

Stormwater Pollution Prevention Plan (SWPPP). A plan prepared in accordance with good engineering practices with a written description of the number, location and sizes of control measures designed to reduce pollutants in stormwater discharge associated with construction activity.

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Vacant lot. Any parcel of land not containing a structure excluding a fence.

Vertical construction approved inspections of tie-beams, columns, or similar vertical construction, as applicable.

SECTION 17: The City Commission of the City of West Palm Beach hereby finds and determines that the amendment described in this Ordinance are consistent with the standards set forth in Section 94-32 of the Zoning and Land Development Regulations, as follows:

- A. *Changed Conditions.* The revisions to the landscape code are necessary to bring the Code into conformance with current environmental and economic conditions.
- B. *Code Compliance.* The text amendments conform with all portions of the Zoning and Land Development Regulations.
- C. *Compatibility.* The text amendments do not create any incompatibilities.
- D. *Public Utilities.* The text amendments encourage water conservation, reducing demand to the water supply and has positive effects on drainage. There will not be any negative affects to capacities for other public facilities.
- E. *Natural Environment.* The text amendments encourage water conservation and preservation and expansion of the tree canopy, resulting in positive impacts on the natural environment.
- G. *Property Values.* The text amendments encourage the addition of landscaping and trees, and the maintenance of same, to add value to properties.
- H. *Orderly and Logical Development.* The text amendments will not affect the development pattern in a negative way, and will provide a positive result when applied to new and existing development.

SECTION 18: All ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed.

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SECTION 19: Should any section or provision of this Ordinance or any portion, paragraph, sentence or word thereof be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remainder of this Ordinance.

SECTION 20: Authority is hereby granted to codify the amendments set forth in this Ordinance.

SECTION 21: This Ordinance shall take effect in accordance with law.

FIRST READING THIS 30TH DAY OF JANUARY, 2017.

SECOND READING AND PASSAGE THIS 11TH DAY OF APRIL, 2017.



ATTEST:

X
CITY CLERK

**CITY OF WEST PALM BEACH BY
ITS CITY COMMISSION:**

X
PRESIDING OFFICER

**APPROVED AS TO FORM AND
LEGALITY:**

X
CITY ATTORNEY

Artificial Turf Environmental Data

Each listing shows the reference first then the key information gleaned from that reference.

https://www.researchgate.net/profile/Nils-Nilsson-3/publication/242241995_Mapping_emissions_and_environmental_and_health_assessment_of_chemical_substances_in_artificial_turf/links/54114c5f0cf2df04e75d763e/Mapping-emissions-and-environmental-and-health-assessment-of-chemical-substances-in-artificial-turf.pdf

No significant damage to humans due to leaching in 2008. Drinking water levels are 20-800 times higher than threshold amounts. Some chemicals not studied.

<https://journals.ametsoc.org/view/journals/apme/49/3/2009jamc2198.1.xml>

Modeling the Thermal Effects of Artificial Turf on the Urban Environment

Southern CA (dry climate <12" annual rainfall)

Causes small increase in air temp but water savings reduce energy used for water production. From an energy standpoint this is a wash.

<https://www.mdpi.com/1660-4601/14/9/1050>

Artificial Turf: Contested Terrains for Precautionary Public Health with Particular Reference to Europe? 2017

little risk to sports people and children but some risk to installation workers. crumb rubber

<https://rucore.libraries.rutgers.edu/rutgers-lib/41407/PDF/1/>

Synthetic Turf Disposal and Health Concerns, 2010

Artificial turf, which is made of recycled rubber, has a lifespan typically between ten and twelve years. When that lifespan is up it can either be recycled or disposed of in landfills. Sometimes, the turf is recycled and reused, but when there is no need for it, there is no other option but to dispose of it into a landfill.

The chemicals can potentially be hazardous if they come into contact with a person's skin, are inhaled through the air, or are ingested through the water supply.

<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.562.9393&rep=rep1&type=pdf>

Estimating the Required Global Warming Offsets to Achieve a Carbon Neutral Synthetic Field Turf System Installation

Based on comparison of a 9,000-m² field, 4046.86 m²/Acre=2.224 acres in grass and Artificial Turf.

“The tree planting offset requirements to achieve a 10-year carbon neutral synthetic turf installation is estimated to be 1861 trees (±23%).”

That is 836.8 medium growth coniferous trees per acre. or one tree per 52 sf. (7.2’x7.2’) which is not large enough to plant such a tree.

http://pstorage-acs-6854636.s3.amazonaws.com/3959830/es4044193_si_001.pdf

Environmental and Health Impacts of Artificial Turf: A Review, Stanford University

Only trace amounts of contaminants from ground rubber tires are detected in the environment, well below acceptable levels.

<https://www.mistrasportandoutdoors.se/globalassets/konferens--och-projektsajter/mistra/rapporter/final-report.pdf>

The development of artificial turf in Swedish football fields

It is estimated that 42,400 tons of microplastics are unintentionally released to the environment each year in the EU alone, and of this 38% comes from AT infill (Hann 2018).

the EU appears to be applying the precautionary principle, as is looking to ban or restrict the use of microplastic infill,

the artificial turf’s impact came from the manufacture of the materials used, and its disposal at its end of life, corresponding to 65% of total emissions

the pressure for finding circular end-of-life solutions increases.

<https://artificialgrassrecyclers.com/artificial-turf-maintenance/#:~:text=Even%20with%20rigorous%20maintenance%2C%20it,warm%20spring%20and%20summer%20months.>

4. Look out for Fungi and Molds

Even with rigorous maintenance, it is possible to have fungus or mold spring up in your artificial turf – it’s living outside, after all.

Mold, mildew, and fungus are powdery growths common in the outdoors, especially in the warm spring and summer months. They are found in every type of climate and location, as long as they have enough moisture to grow. If any pet waste has escaped your notice, especially, you might run the risk of having unwanted spores pop up.

In the event that this happens, you can clean the area with hydrogen peroxide. The hydrogen peroxide will remove any mold, kill the remaining invisible spores, and take care of any musty odors.

<https://www.lazylawn.co.uk/blog/pros-cons-of-artificial-grass/>

Artificial grass can get hot in extreme heat, however it should not cause any burns. Applying sand infill will help keep the turf cool.

<https://moldoff.com/combat-mold-on-artificial-turf/>

Artificial turf can be a magnet for mold! The blades of artificial turf are held upright by a silicon sand base. The base traps moisture and the grass provides shade, which are two main ingredients necessary for mold growth. Once mold gets a foothold in the sand, it begins to climb the grass blades. The roots penetrate into the blades and the mold feeds on the plastics. If you don’t take care of the problem immediately, the mold problem will only continue to grow and be harder to control.

<https://www.youtube.com/watch?v=IHuGszcGshg>

Video showing professional artificial turf maintenance and its necessity.