

Artificial vs Natural Turf

Learning Outcomes

Understand cost considerations when deciding between artificial and natural turf

Understand the differences in maintenance practices between artificial and natural turf

Learn about potential pitfalls associated with a decision to install artificial turf

On it's surface (see what I did there?), artificial turf is an appealing option when building new or renovating existing fields. Less maintenance, fewer rainouts, more tournament revenue!

But what is it like in real life?



Greenview Shores Park

Joint use facility developed for Wellington High School and the Village of Wellington.

Consists of super field, stadium field, basketball courts, tennis courts.

High School has priority weekdays until 6pm.

Wellington has priority after 6pm weekdays and all weekend.

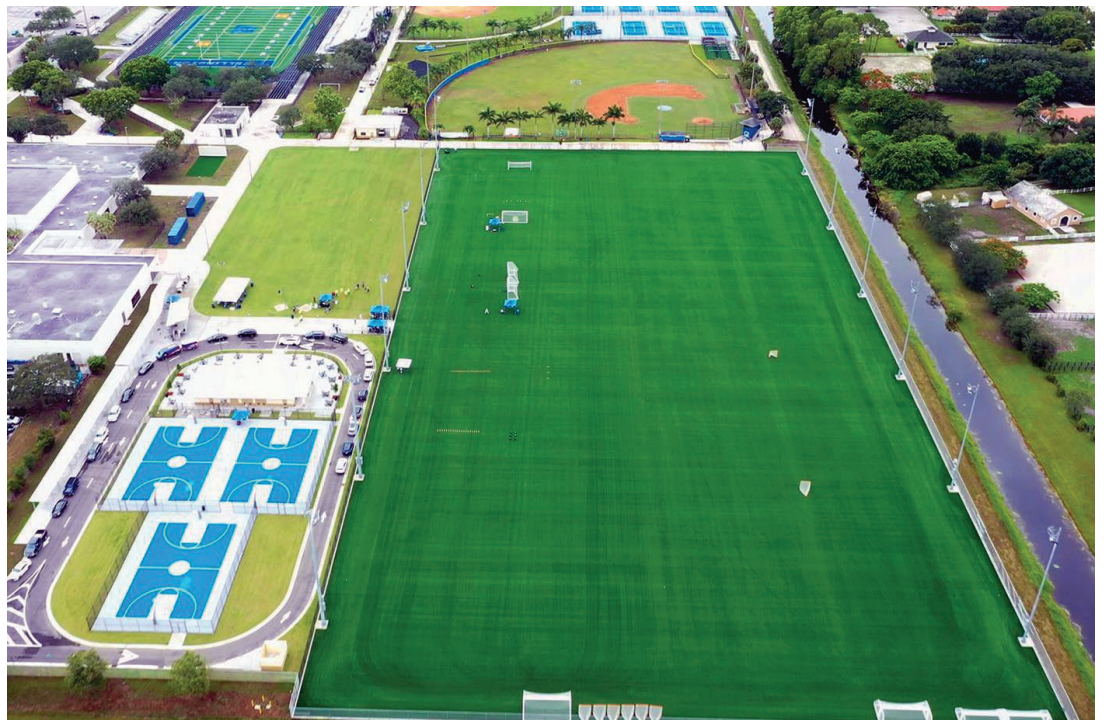
Largest continuous FIFA certified artificial turf field in the country

Greenview Shores Park

Super field is programmed only – no open play

Basketball and tennis are open to the public during non-school hours

Wellington has use of stadium field



Greenview Shores Park Stadium Field

The Stadium Field is host to Wellington High School team sports. The Village of Wellington has use of the stadium on weekends and other specified times. It has been used for tournaments – Wellington and outside entities – as well as various championship games or opening day events.



Basketball courts are open to public during non-school hours.

Also used for Recreation Programming

Building includes bathrooms, meeting room, 2 concession stand facilities



Tennis courts are open to the public during non-school hours.

Tennis facility summer camps.

High School team use.



Cost Considerations

Initial Installation

Artificial Turf at the time of construction of Greenview Shores Park was estimated at approximately \$20/sf.

Lifespan of turf is reportedly 7-10 years with a replacement cost of approximately \$750,000 per "soccer" field

Subsurface will last an estimated 20 years



Initial Installation

Natural turf at the time Village Park Field 6/7 were installed was approximately \$9.44/sf.

Life expectancy before complete rebuild is 10 years with a replacement cost of approximately \$800,000.

Surface replacement is done every 3-5 years depending on the use of that field at a cost of approximately \$80,000.

Spot sod replacement costs per field ranges between \$2,000 and \$6,000. Doesn't include regular maintenance.



Maintenance Contract - \$12,500

10 – Field Sweeping Sessions which includes:

- Pre-service field inspection
- Light de-compacting
- Power field sweeping with surface brush
- Infill replenishment to high traffic areas

2 – Deep Grooming Sessions which includes:

- Pre-service field inspection and de-compaction
- Brushing and infill cleaning with vacuum and rotary brush
- Infill replenishment to high traffic areas
- Infill measurement at 10 locations
- Up to 10 minor inlay repairs

Gmax Testing

A GMAX test, for synthetic turf fields, measures impact attenuation – the ability of the playing surface to absorb the shock or kinetic energy from a collision, such as a player falling to the surface.

Approximate cost - \$10,000



Equipment

Pull behind field groomer
(included)

Magnetic float used to pick up
metal items deposited on the
field.

Cart with turf tires

Goals must be designed for
synthetic turf fields – soccer
sled, portable rugby, lacrosse w/
wheels

Various tools, mats, etc.





General Maintenance Synthetic

Inspecting fields and adding infill when needed

Brush/sweep

Magnetic drag

Spot spray non-selective herbicide

Semi-annual deep grooming

Annual Gmax testing

Maintenance Practices Natural

Inspect fields and fill holes

Weed/insect spraying

Mowing

Irrigation repair

Fertilize

Aerate/verticut



Rules



Lessons Learned



Field Lining

Plan

Change lines each quarter based on programming. Remove paint with solution and repaint.



Field Lining

Reality

Cannot dump the chemical in the sanitary sewer so we paint to cover as many sports as possible.



Design

Things to consider:

- Safety – pay attention to positioning of immovable objects
- Entry/exit points for equipment
- Emergency vehicles
- Storage for goals/equipment
- Nearby landscape (will end up on turf)



More Lessons Learned

- People tend to believe the turf is indestructible
- Gum is bad
- No tent stakes
- Chairs need flat feet
- Can't drive large equipment
- Popcorn is bad
- Weeds grow in synthetic turf
- No sharp turns
- No skinny wheels
- No metal cleats
- It's hot, even with cool technology
- You still have to kill weeds
- Synthetic fields still require maintenance

Benefits

Fewer rainouts

No concerns with rest during growing season

Durability - all day use

Water savings (if cool technology infill is used)

Striping lasts longer

Sports tourism

User Feedback