



April 20, 2020

To: Casey Anderson, Chair, Montgomery County Planning Board
Cc: Natali Fani-Gonzalez, Vice Chair, Montgomery County Planning Board
Gerald R. Clichy, Commissioner, Montgomery County Planning Board
Tina Patterson, Commissioner, Montgomery County Planning Board
Partap Verma, Commissioner, Montgomery County Planning Board

Marc Elrich, County Executive, Montgomery County

Sidney Katz, President, Montgomery County Council
Tom Hucker, Vice President, Montgomery County Council
Gabe Albornoz, Councilmember, Montgomery County Council
Andrew Friedson, Councilmember, Montgomery County Council
Evan Glass, Councilmember, Montgomery County Council
Will Jawando, Councilmember, Montgomery County Council
Nancy Navarro, Councilmember, Montgomery County Council
Craig Rice, Councilmember, Montgomery County Council
Hans Riemer, Councilmember, Montgomery County Council

Reference: Project Plan No. 91998005C and Site Plan No. 81999002M
Foulger Pratt proposal to install plastic carpet on Ellsworth Drive, Downtown Silver Spring, Montgomery County Planning Board hearing, possibly in May

Dear Chair Anderson:

“DO NO HARM”

We are writing on behalf of the Friends of Sligo Creek (FOSC) to state our opposition to the proposal by the developer Foulger Pratt to install plastic carpet on a portion of Ellsworth Drive in Downtown Silver Spring, part of the DTSS project now pending before the Planning Board. The proposal may be before you soon, possibly at a May meeting.

FOSC is the nonprofit organization dedicated to protecting and improving the health, safety and environmental quality of the Sligo Creek Watershed, in partnership with Montgomery and Prince George’s County governments and agencies, Montgomery Parks and the people in our communities.

Your decision will affect our water quality.

FOSC urges the Planning Board to reject the proposal to put plastic carpet on Ellsworth Drive. The proposal raises troubling issues concerning its likely effects on the quality of our water, public safety, and watershed health. Simply put, we expect that Sligo Creek and our watershed would be degraded by installation of the plastic carpet.

Details of our specific concerns are below.

However, we would be remiss if we did not draw your attention to a set of issues that are likely to be front and center on the public policy agenda in the near future. The developer's proposal raises issues that may not be easily addressed under current regulations but are nonetheless critical to the protection of human health and watershed health. Scientists are starting to raise health concerns over the use of the PFAS family of chemicals in synthetic turf, including the "blades" of plastic grass and possibly the turf backing.¹ We have not seen studies of manufacturer SYNLawn's SYNTipede243 product and do not know if any exist, but, ***to protect the public, it is important that the Planning Board and County Executive obtain technical information from the firm about its use of any PFAS in its product.***

We are also very troubled about how limited publicly available information on the product proposed and product testing is, based on project filings on the Planning Board's website and information on the manufacturer's website (SYNLawn.com). Synthetic carpets are known to contain uniquely harmful constituents such as heavy metals in pigments, color stabilizers, UV inhibitors, plasticizers, non-stick chemicals, and flame retardant.

We all need to know what's in this product. To further clarify the risks to Sligo Creek and the watershed, we have requested technical information from the carpet's manufacturer (SYNLawn) and the manufacturer of the storm water management facility now in place under Ellsworth to protect Sligo Creek from Downtown Silver Spring runoff (Contech's StormFilter). We understand that SYNLawn will have proprietary concerns, but to understand public risks, we need better information.

Due diligence to protect Sligo Creek is also a responsibility of government. ***We strongly urge that the Planning Board and County Executive will step up their due diligence with the applicant, carpet manufacturer and DTSS storm water management facility manufacturer so that any decision can be based on sound science and risk assessment.***

¹According to recent studies, the artificial grass "blades" in synthetic turf may contain PFAS chemicals, known as "forever chemicals" (ie, they don't break down). PFAS chemicals are thought to be used to keep the plastic "blades" from sticking to the extrusion machinery. Some industry members have noted that they have no other cost effective process. PFAS chemicals also have been identified in certain products' backing. Researchers have called for firms to identify any PFAS used in the manufacturing of their turf product. For details on the science, see the February 2020 Fact Sheet on Per-and Poly-fluoroalkyl Substances (PFAS) in Artificial Turf Carpet by the well-respected TURI (Toxics Use Reduction Institute) at UMass Lowell; and recent work by PEER (Public Employees for Environmental Responsibility) and The Ecology Center. https://www.turi.org/TURI_Publications/TURI_Chemical_Fact_Sheets/PFAS_in_Artificial_Turf_Carpet; <https://www.peer.org/industry-in-a-dither-about-pfas-in-synthetic-turf/> SYNLawn products have not been tested in publicly available research, as far as we can tell, but until SYNLawn reassures the Planning Board and County, the PFAS question remains open. We should not give SYNLawn the benefit of the doubt.

In conclusion, we urge Foulger Pratt and the Planning Board to do no harm to our water or watershed. There are healthier and safer solutions for Ellsworth that can be adopted – without the risks involved. Why not choose healthier and safer solutions that protect Sligo Creek – and pose no potential risks and liability for the County?

Healthier and Safer Solutions to Protect Sligo Creek

- *The best solution to protect Sligo Creek would be to remove the asphalt and replace it with undergrading and permeable pavement (stone or concrete, no synthetics) on Ellsworth - not plastic turf.*

This solution would:

- (1) Protect the current Ellsworth storm water maintenance facility in place because it would not be burdened by the new plastics pollution load (it is probably not up to protecting Sligo Creek from the new plastics pollutants);
- (2) Lower the temperature of runoff into Sligo Creek (runoff from plastic is hotter; higher water temperatures kill aquatic life); and
- (3) Slow down storm water run-off (run off is faster on plastic surfaces; rapid runoff rates are degrading our stream and riparian buffers).

Permeable pavement would be an improvement over the current asphalt.

- *Another option would be to use a “green streets” concept to channel storm water runoff and then cover the remaining asphalt with durable wood planking. Asphalt could be removed in strategically placed areas on the sides and where utilities are not underneath, which could then serve as multiple mini-water retention and or infiltration sites. The remaining asphalt could be covered with durable wood planking or other stone or concrete paver material strategically designed to help to slow and route storm water run-off to mini-garden areas.*
- *A distant next best option might well be to leave the asphalt in place.*

Our concerns are set out in detail below.

Our Concerns.

We object to the installation of plastic carpet (and the particular plastic carpet proposed) on Ellsworth Drive on public safety, health, and environmental grounds:

1. **The plastic grass product proposed is substantially petroleum-based.** It is not “environmentally friendly”, contrary to representations by the manufacturer that some input materials are plant-based and the product is “Bio-based Synthetic

Turf'.² (See Appendix 1 for product details provided by the manufacturer.) Rather, the substantial petroleum content makes the product flammable, as the County's Departments of Permitting Services and Transportation have recognized.³ **Montgomery County should not allow people to use and vehicles to drive on a flammable surface.**

2. Plastic carpets are known to many in the scientific community to contain hazardous chemicals related to higher cancer rates and disruption of human growth regulators, to name just a few very serious concerns. **Runoff containing these toxicants should not be allowed into Sligo Creek.**
3. **According to the manufacturer, the product proposed is not designed or certified for heavy foot traffic or the vehicular use that will occur on Ellsworth, a very busy and complex stretch of Downtown Silver Spring.**

The manufacturer recommends the product only for landscape, pets, play, rooftop, and golf. (See Appendix 2) Foulger Pratt proposes closing off Ellsworth to normal vehicle traffic so that only minimal access is allowed, but emergency vehicles, delivery trucks and weekly Farmers' Market trucks would still be able to drive on it, according to its filings with the Planning Board. Any other option would be better: **plastic carpets are not up to or certified for the type of use proposed.**

4. **Bearing more weight and friction than the carpet was designed for, the plastic blades of grass and their synthetic backing can be expected to degrade even more rapidly than "normal".⁴ By permitting this carpet to be installed, the Planning Board and County make it very likely that the degraded carpet will show up in Sligo Creek, in either particulate or dissolved chemical form.**
5. Storm water management filtration under Ellsworth is the main line of defense protecting Sligo Creek from pollutants coming down from DTSS. Keeping a filter cleared of sediment is critical, so how and how rapidly the carpet will degrade in

² The environmentally friendly features of the product SYNLawn's SYNTipede 243 appear to be exaggerated. According to technical specifications on the product website, the synthetic grass blades are made of polyethylene and the turf backing is made out of polypropylene. Both are petroleum-based. SYNLawn's proprietary coating of the carpet backing (Enviroloc) is described as containing "biobased resources including soybean oil", but a closer look at the manufacturer's description indicates that it, too, is heavily petroleum-based. See Appendix 1.

³ The County's Department of Permitting Services has recognized the flammability hazard in its review of the proposal. See DAIC Document 81999002M-DPS-RPP.pdf. The Department of Transportation also opposes the use of synthetic turf on Ellsworth because it is flammable. See DAIC Document 91998005C. On its website, the manufacturer represents its products as having a Class A Fire Rating, but it is not at all clear how this rating was determined.

⁴ A widely accepted rule of thumb is that 5-10% of a plastic synturf carpet typically disintegrates off the carpet each year. On this basis, have the Planning Board and County Executive estimated the amount of plastic debris to be expected for the quantity of SYNTipede 243 plastic carpeting proposed? Keep in mind, this figure would need to be adjusted to reflect the fact that the product will likely deteriorate faster than "normal" because the product is not designed for the specific usage proposed. Also, because installation is unusual and does not appear to be recommended by the manufacturer (it is proposed to go on top of the asphalt), even more friction is likely to be generated, resulting in faster plastic deterioration.

combination with the design of Contech's StormFilter storm water management facility under Ellsworth are significant.

Because it was not designed for SYNLawn and has been in place since around 2005, we would not expect Contech's system to be up to the job.⁵ We are also concerned that the normal pre-plastic pollution operation of the system itself will likely be degraded by the additional pollution burden. Normal maintenance will not be enough.⁶

Furthermore, we do not know if the storm water runoff flow rate would change and how that would affect current the storm water facility. Typically, the flow rate for synthetic turf would be higher.

An additional critical question: how will Sligo Creek be protected from hotter storm water runoff? Outdoor plastic carpets typically heat up more than most other surfaces despite chemical treatment. Hotter storm water temperatures will kill life in Sligo Creek. Winter issues concerning anti-ice treatment are also important. Have the Planning Board and County determined that this storm water system can handle the new pollutant load in all weather?

We urge the Planning Department, the Department of Permitting Services, the Department of Environmental Protection and Montgomery Parks to investigate our concerns by requesting additional technical details and research from the applicant, SYNLawn and the designers of the current SWM system under Ellsworth.

Key information includes the particulate and chemical filtration capability of the SWM system now in place; the chemical and particulate size properties of how the plastic carpet/synthetic turf typically deteriorates; and the expected temperature of the carpet (average and peak) and how the storm water facility will handle this.

- 6. *Prior to a Planning Board decision on this proposal, we request that a thorough review of the storm water management situation be undertaken by the County in light of the concerns we have raised.*** While we understand that the applicant has represented the particular project would disturb less than 5,000

⁵ We are also trying to find out from DEP whether any special storm water protection was put in place for the several years that artificial turf was installed on what is now the ice rink area on Veterans' Plaza. It is important to note that the product used at the time was not the same product that is now proposed by the applicant and that the usage proposed did not involve any vehicular or similarly heavy foot traffic, for which the product was not designed. From what we can tell so far, there is no evidence that the StormFilter storm water maintenance facility was designed to handle the artificial turf that was installed at the time.

⁶ To evaluate whether the existing storm water facilities can handle the new pollution load, we have asked SYNLawn for information on how its product deteriorates, whether it degrades in chemical or particulate form and, if in particulate form, what size particles? We have also reached out to the manufacturer of the Ellsworth storm water facilities (Contech's StormFilter), designed to protect Sligo Creek from DTSS runoff, to find out what particulate size and chemicals its facilities are designed to handle. Preliminary guidance from Contech suggests that the product now in place is not what they now suggest to handle storm water runoff from artificial turf. While more frequent maintenance of the facility by DEP would help protect our Creek, it probably would not be enough.

square feet of surface area and therefore is exempt from storm water management requirements, we have not been able to confirm its calculations. ***We request confirmation from the County and Planning Board staff on the dimensions of the proposed carpet area.***

7. **The coronavirus situation raises additional public health questions about our ability to keep this product clean and whether our storm water management system in place under Ellsworth can handle relevant cleaning agents or anti-microbial technology.**⁷ Will the County have to close down part of Ellsworth because it is a health hazard, if we have a situation in the future similar to what we face now? It is important that SYNLawN will provide technical details about sanitization of its product and possible effects on water that can be evaluated by the County.

Conclusion. Plastic carpets used in outdoor public spaces pose major threats to our water and environmental quality. These threats are often unrecognized or unacknowledged, in part because technical product information may be proprietary and may not be available. As is often the case, the only way the public can know enough about the product in order to evaluate it is to buy a sample and have it tested.

Nonetheless, in this case, there is enough information on the product to raise large red flags about the public risks.

What is at stake? Sligo Creek is the focus of many of our communities. As the current quarantine situation clearly illustrates, people cherish Sligo Creek. People rely upon it and are active in improving - not harming – its water quality. Our wildlife depends on it. What goes into Sligo Creek ultimately ends up in the Chesapeake Bay and our drinking water. Our water is not protected from this type of plastic pollution.

We urge the Planning Board, County Executive, County Council and Foulger Pratt to “Do No Harm”. The Planning Board should deny this proposal to install synthetic turf carpeting on Ellsworth.

Please require installation of permeable pavement rather than plastic carpeting/synthetic turf to protect public health and safety, Sligo Creek and the watershed.

Thank you for your consideration.

Additional details documenting our concerns taken directly from the product manufacturer’s website are below.

⁷ According to a recent study published in correspondence to The New England Journal of Medicine, the current COVID19 virus can stay on plastic up to three days.

https://www.nejm.org/doi/full/10.1056/NEJMc2004973?query=featured_home

Sincerely,

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APPENDIX 1

The plastic carpet proposed (SYNLawn's SYNTipede 243) is substantially petroleum-based, even though the manufacturer highlights materials described as plant-based and markets the product as "Bio-based Synthetic Turf". Because of the large petroleum content, it is flammable, as the County's Department of Permitting Services and Department of Transportation have recognized.

We have been able to document the petroleum-based content, in the manufacturer's own words.

Screenshots 1 – 3 below are pages from the manufacturer's website that list technical specifications for the plastic carpet proposed for Ellsworth Drive. Screenshots 1 and 2 document in the manufacturer's own words that the product's grass blades (called "yarns") and its primary backing are made of petroleum-based plastics:

- The artificial blades of grass are made of polyethylene (a thermoplastic polymer)
- The primary turf backing is polypropylene-based.

SYNLawn's claim that its plastic carpet is environmentally friendly and bio-based rests solely on the contents of its proprietary Enviroloc turf coating. (See Screenshots 1 and 3.) The company describes Enviroloc as replacing a "large portion of petroleum-based polymers (up to 60%) with bio-based polymers created from sustainable resources including soybean oil."

Taking the converse of SYNLawn's petroleum claim, at least 40% of polymers for the turf backing are petroleum-based. Without additional information, the actual percentage of petroleum-based polymers for coating of the backing is impossible to determine.

Similarly, there is not sufficient information to assess the description of soybean oil and other sustainable resource content. Scientifically, biopolymers are not necessarily benign. Many of these polymers have been designed to be environmentally persistent. Micro or nano particles from a persistent biopolymer may be just as hazardous as those from a synthetic polymer.





We urge the Planning Board and County Executive to request that SYNLawn provide additional technical information in support of its descriptions.


SCREENSHOT 1

Product Specifications for Syntipede 243 From Manufacturer Synlawn's Website:


- The backing and grass blades (referred to as “yarn”) are petroleum-based plastics. See also Screenshot 2.
- The manufacturer claims that the proprietary coating of its backing (Enviroloc) is “plant-based”.
- But more details provided by the manufacturer are not consistent with its plant-based claim. See Screenshot 3 below.

Grass Zone Yarn/Color	PE / Field Green / Apple
Grass Zone Denier	10,000 / 6
Thatch Zone Yarn/Color	PE / Field Green / Beige
Thatch Zone Denier	5,040 / 12
Grass Zone Yarn Shape	Omega
Finished Pile Height	1"
Finished Pile Weight	60 oz.
Backing	15 / 18 PP 2-Part / 20oz. EnviroLoc™
Tuft Gauge	3/8"
Total Weight	86 oz.
Tuft Blnd	> 8 lbs.
Permeability	> 300 inches per / SY
Features	Sanitized*, EnviroLoc™, StatBlock™ Anti-Static, DualChill™ IR Reflective, Deluster, UV Stabilizers
Test Data	ASTM F1292, F1951, IPEMA Certified

-  Unmatched Lifetime Warranty
-  EnviroLoc™ Plant-Based Backing
-  Deluster and UV Protection
-  Class A Fire Rating



Foot Traffic




Softness

SUPER YARN™ TECHNOLOGY

Sanitized*
Antimicrobial

DualChill™
IR Reflective

StatBlock™
Anti-Static








Artificial Grass Fiber
Compacted Aggregate Base
Geotextile Weed Barrier

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Not to scale. For illustration only.

RECOMMENDED USES

 LANDSCAPE
 PETS
 PLAY
 ROOFTOP
 GOLF

Source: <https://www.synlawn.com/wp-content/uploads/2019/12/SYNLawn-SYNTipede-243-ST243.pdf>, consulted April 7, 2020.

Screenshot 2: Additional SYNTipede 243 Petroleum-based Specifications from SYNLawn's Website

SYNLAWN [®] a sportgroup company		SYNTipede 243	
Primary Yarn Polymer	Polyethylene	Primary Backing	15/18 PP 2-Part
Yarn Cross Section	Omega	Coating Type	20 oz. EnviroLoc™
Standard Color	Field Green / Apple	PE Yarn Denier / Ends	10,000 / 6
Fabric Construction	Tufted	Texturized Thatch Denier / Ends	5,040 / 12
Second Yarn Polymer Thatch	Polyethylene	Warranty Period	Limited Lifetime
Secondary Yarn Color	Field Green / Beige		

Source: <https://www.synlawn.com/wp-content/uploads/2019/12/SYNLawn-SYNTipede-243-ST243.pdf>, consulted April 7, 2020.

Screenshot 3: How “Truly Green” is SYNTipede 243 ? SYNLawn's Website Describes its Proprietary Enviroloc Turf Coating

- The manufacturer claims that the proprietary coating of its backing (Enviroloc) is “plant-based”.
- The company describes Enviroloc as replacing a “large portion of petroleum-based polymers (up to 60%) with bio-based polymers created from sustainable resources including soybean oil.”
- Taking the converse of SYNLawn's petroleum claim, at least 40% of polymers for the turf backing are petroleum-based. Without additional information, the actual content is impossible to evaluate.

Truly 'green' technology.

SYNLawn's exclusive EnviroLoc™ Backing System is an environmentally-friendly, multi-layer component system that “locks” in durable turf fibers, thereby, extending the product's life cycle. Made in the USA, the EnviroLoc™ Backing System replaces a large portion of *petroleum*-based polymers (up to 60%) with *biobased* polymers created from sustainable resources including soybean oil.

The EnviroLoc™ Backing System uses a durable 2-part woven Polypropylene backing fabric constructed to lock in tufted grass fibers. After tufting, the backing fabric and stitched grass fibers receive a thick layer of SYNLawn's proprietary biobased EnviroLoc™ coating. Together, these components provide a sturdy anchor for fibers creating less “shedding” as well as create an environmentally responsible approach to synthetic grass.

Source: <https://www.synlawn.com/enviroloc-backing-system/>, consulted April 7, 2020.

APPENDIX 2

Plastic carpet/synthetic turf is the wrong thing to install on Ellsworth Drive. SYNlawn's products are not designed for the type of usage that will occur if the proposal goes through.

As Screenshot 4 (below) from the website documents, the manufacturer recommends the product only for landscape, pets, play, rooftop, and golf. It is not designed for the very heavy foot traffic or vehicular use that will occur on Ellsworth Drive.

Foulger Pratt proposes closing off Ellsworth to normal vehicle traffic, but emergency vehicles, delivery trucks and weekly Farmers' Market trucks would still be able to drive on it.

No substitute would be any better: plastic carpets are not up to or certified for the type of use proposed.

Note also that the listed certifications are not relevant for the use proposed.

Screenshot 4: Recommended uses of SYNlawn's SYNTipede 243 are for "landscape, pets, play, rooftop and golf", according to the manufacturer

Grass Zone Yarn/Color	PE / Field Green / Apple
Grass Zone Denier	10,000 / 6
Thatch Zone Yarn/Color	PE / Field Green / Beige
Thatch Zone Denier	5,040 / 12
Grass Zone Yarn Shape	Omega
Finished Pile Height	1"
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Artificial Grass Fiber

Compacted Aggregate Base

Geotextile Weed Barrier

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Not to scale. For illustration only.

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