

M E M O R A N D U M

April 19, 2017

TO: Education Committee

FROM: Craig Howard, Senior Legislative Analyst *CH*

SUBJECT: **Worksession – Amendment to the FY17-22 Capital Improvements Program and Supplemental Appropriation to the FY17 Capital Budget, Montgomery County Public Schools, \$4,900,000 for the Building Modifications and Program Improvements Program, for Artificial Turf at Julius West MS, Einstein HS, and Whitman HS**

Today the Committee will hold a worksession on an amendment to the FY17-22 Capital Improvements Program (CIP) and supplemental appropriation to the FY17 Capital Budget, Montgomery County Public Schools (MCPS), \$4,900,000 for the Building Modifications and Program Improvements Program. The source of funds is contributions. MCPS staff will be available to participate in today's discussion.

The Board of Education (BOE) requested this appropriation on February 14 (©3-8). A draft appropriation resolution is attached on ©3-5. The County Executive recommends approval (©1-2). The Council introduced this appropriation on March 21, held a public hearing on April 4, and is scheduled to take action on May 2.

Background

This appropriation will fund artificial turf installation at Julius West Middle School, Albert Einstein High School, and Walt Whitman High School per a 2016 settlement agreement between the Board and Montgomery Soccer, Inc. (MSI) stemming from a 2014 artificial turf field partnership award protest. Under the terms of the agreement, MSI will provide:

- \$1.2 million to design and install an artificial turf stadium field at Whitman HS. The Whitman HS All-Sports Booster Club has committed to contributing an additional \$300,000 to the project, and the BOE approved the Booster Club's request to initiate fundraising for this purpose in March 2016.
- \$1.8 million to fund the installation of 1.5 artificial turf soccer fields as well as the actual cost (up to \$400,000) to install lighting for the fields at Julius West MS.
- \$1.2 million for the installation of an artificial turf stadium field at Einstein HS. The installation of the Einstein HS field is contingent upon obtaining all the necessary permit approvals from the City of Rockville to install the artificial turf fields and lighting at Julius West MS.

No taxpayer dollars will be used for the design and installation of these artificial turf fields. In exchange, MSI will receive access to each of these fields for approximately 1,000 hours per year for a 10-year period when the fields are not being used by the schools. Staff from the MCPS Department of Facilities Management hosted community meetings at each school location in January and February to

provide project information and obtain community feedback for consideration in the design and construction of the fields.

Public Hearing. There were eight speakers at the Council’s public hearing on the proposed supplemental appropriation; four testified in favor and four testified against. Written copies of testimony provided by speakers is attached at ©9-21. Issues raised by supporters of the project include the poor quality of existing grass fields and associated safety issues for players, inability to use fields in inclement weather, and financial savings from the partnership agreement. Issues raised by those against the project include concerns about long-term health impacts, maintenance and future replacement costs, and excessive heat on artificial turf fields.

Project Discussion Issues

This section provides information on artificial turf materials, maintenance, policies, and practices pertaining to both these new fields under consideration and MCPS’ other artificial turf fields.¹

Infill. In accordance with Council Resolution 18-58, MCPS reports that each field will use plant-derived infill material. Specifically, these fields will be installed with a base layer of sand overlaid with cork as was done with the artificial turf field installed at Somerset Elementary School. MCPS reports that the sand does not contain silica. MCPS also notes that, in conjunction with the Department of Parks, they will continue to evaluate this infill approach as well as new plant-derived infill mix materials as they become available.

Maintenance and Inspections. On March 30, the Board of Education approved a contract for centralized artificial turf maintenance to ensure that all artificial turf field are properly maintained for the safety of the users and the longevity of the fields (©22-23). Previously, the maintenance of artificial turf was largely managed at each individual school through partnerships with the school booster clubs and Parent Teacher Associations (PTAs). The annual maintenance contract is for an amount not to exceed \$10,000 per field and was awarded to FieldTurf USA. MCPS states that:

“Staff in the Athletics Unit and the Department of Facilities Management worked with the artificial turf field manufacturer to develop a comprehensive maintenance program and negotiated the costs for an annual contract. This centralized maintenance program will provide consistent and more comprehensive maintenance to all artificial turf fields, including more frequent inspections and testing for safety and field condition.”

The artificial turf at each of the three new proposed locations will still include a 10-year manufacturer’s warranty for defects. Under the centralized approach, each artificial turf field will receive the following services:

- Conduct G-Max testing;
- General sweeping and cleaning, including magnet sweeping, to remove foreign objects such as dirt, leaves, bird droppings, gum and other debris that may collect on the field surface;
- Deep power grooming, sweep and rejuvenation to de-compact infill to maintain appropriate G-Max levels;
- Add additional infill as needed in high traffic areas; and
- Inspection of infill depth and consistency, infill migration, field edging attachments, sewn and glued seams, line verification, and field inlays.

¹ Further details on agency practices and policies related to artificial turf and natural grass playing fields are attached beginning at ©28 via March 9 letters from Councilmember Elrich to MCPS and the Department of Parks requesting information on these topics and the response from each agency.

G-Max Tests. A G-Max test measures the level of shock absorbency on an artificial turf field. MCPS conducts G-Max testing on all its artificial turf fields, and as noted above this testing process will become part of the new maintenance contract. Following industry standards, MCPS complies with a G-Max limit of 200 established by American Society for Testing and Materials (ASTM). To ensure compliancy with ASTM guidelines, an independent testing agency conducts the G-Max tests.

MCPS has begun to publish the results of G-Max testing online,² and an example of the G-Max test results for the Gaithersburg HS field from August 2016 are attached at ©24-27. MCPS currently has most recent G-Max test results for each field on its website, with plans to publish all test results going forward.

Replacement. MCPS anticipates an 8-10 year life cycle for artificial turf fields and estimates replacements costs of approximately \$500,000 to \$600,000. The Department of Parks reports a higher cost of \$725,000 for the current replacement of the artificial turf field at Montgomery Blair High School.

MCPS maintains an Enterprise Fund for use toward future artificial turf replacement. The fund receives revenue from: partnership funds from sports organizations and booster clubs; revenue generated from community use; and funds contributed by MCPS due to cost avoidance realized from lower utilities and maintenance. MCPS reports a current balance of \$2.2 million in this fund, with a projected fund balance of approximately \$4.0 million by FY21. Depending on the actual replacements costs, \$4 million could fund between 5-8 field replacements.

The Department of Parks reports that the old artificial turf field at Blair HS was disposed of via a recycling facility which reuses or recycles the infill material and the turf components at a cost of approximately \$13,000. While MCPS has yet to replace any of its artificial turf fields, MCPS plans to pursue a similar approach and recycle its artificial turf fields when disposal is required in the future.

Heat Guidelines. To address concerns with potential high heat on artificial turf surfaces, MCPS has developed the following heat guidelines that apply to all artificial turf fields and has a heat warning sign posted at all artificial turf fields to inform community user groups:

- Anytime the outdoor temperature exceeds 80 degrees, coaches exercise caution in conducting activities on artificial turf fields.
- When outdoor temperatures exceed 90 degrees, coaches may hold one regular morning or evening practice (before 12 noon or after 5:00 pm).
- When the heat index is between 91-104 degrees between the hours of 12:00 noon and 5:00 p.m., school athletic activities are restricted on artificial turf fields to one hour, with water breaks every 20 minutes.

Staff Recommendation

Council staff recommends approval of the requested appropriation to install artificial turf at Julius West MS, Einstein HS, and Whitman HS.

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² <http://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=496174>



OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

MEMORANDUM

Isiah Leggett
County Executive

March 9, 2017

TO: Roger Berliner, President, Montgomery County Council

FROM: Isiah Leggett, County Executive

SUBJECT: Amendment to the FY17-22 Capital Improvements Program and Supplemental Appropriation #18-S17-CMCPS-3 to the FY17 Capital Budget Montgomery County Public Schools Building Modifications and Program Improvements (No. P076506), \$4,900,000

I am recommending a Supplemental Appropriation to the FY17 Capital Budget and Amendment to the FY17-22 Capital Improvements Program in the amount of \$4,900,000 for the Building Modifications and Program Improvements (No. P076506) project. Appropriation for this project will fund Artificial Turf Installation at the Julius West Middle School, Albert Einstein High School, and the Walt Whitman High School facilities in the City of Rockville, Kensington-Wheaton (Area 2), and Potomac (Area 1) respective Planning Areas.

This increase is needed due to an approved Board of Education settlement agreement that provides for Montgomery Soccer, Inc. to fund the design and installation of artificial turf fields at Julius West Middle School and Albert Einstein and Walt Whitman High Schools in exchange for preferred use hours of approximately 1,000 hours per year for a 10-year period, when the fields are not being used by the schools. The recommended amendment is consistent with the criteria for amending the CIP because this action leverages significant non-County sources of funds and offers the opportunity to achieve significant savings and cost avoidance.

I recommend that the County Council approve this supplemental appropriation and amendment to the FY17-22 Capital Improvements Program in the amount of \$4,900,000 and specify the source of funds as Contributions.

I appreciate your prompt consideration of this action.

Roger Berliner
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March 9, 2017

IL: bh

Attachment: Amendment to the FY17-22 Capital Improvements Program and Supplemental
Appropriation #18-S17-CMCPS-3

cc: Dr. Jack Smith, Superintendent of Schools, MCPS
Adrienne Karamihas, Budget and Operations Manager, MCPS
James Song, Director, Department of Facilities Management, MCPS
Jennifer Hughes, Director, Office of Management and Budget

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Resolution: _____
Introduced: _____
Adopted: _____

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: Council President at the Request of the County Executive

SUBJECT: Amendment to the FY17-22 Capital Improvements Program and Supplemental Appropriation #18-S17-CMCPS-3 to the FY17 Capital Budget Montgomery County Public Schools Building Modifications and Program Improvements (No. P076506), \$4,900,000

Background

1. Section 307 of the Montgomery County Charter provides that any supplemental appropriation shall be recommended by the County Executive who shall specify the source of funds to finance it. The Council shall hold a public hearing on each proposed supplemental appropriation after at least one week's notice. A supplemental appropriation that would comply with, avail the County of, or put into effect a grant or a Federal, State or County law or regulation, or one that is approved after January 1 of any fiscal year, requires an affirmative vote of five Councilmembers. A supplemental appropriation for any other purpose that is approved before January 1 of any fiscal year requires an affirmative vote of six Councilmembers. The Council may, in a single action, approve more than one supplemental appropriation. The Executive may disapprove or reduce a supplemental appropriation, and the Council may reapprove the appropriation, as if it were an item in the annual budget.
2. Section 302 of the Montgomery County Charter provides that the Council may amend an approved capital improvements program at any time by an affirmative vote of no fewer than six members of the Council.
3. The County Executive recommends the following capital project appropriation increases:

Project Name	Project Number	Cost Element	Amount	Source of Funds
Building Modifications and Program Improvements	P076506	Construction	\$4,900,000	Contributions

TOTAL **\$4,900,000**

Amendment to the FY77-22 Capital Improvements Program and Supplemental Appropriation
#18-S17-CMCPS-3

Page Two

4. This increase is needed due to an approved Board of Education settlement agreement that provides for Montgomery Soccer, Inc. to fund the design and installation of artificial turf fields at Julius West Middle School and Albert Einstein and Walt Whitman High Schools in exchange for preferred use hours of approximately 1,000 hours per year for a 10-year period, when the fields are not being used by the schools. The recommended amendment is consistent with the criteria for amending the CIP because this action leverages significant non-County sources of funds and offers the opportunity to achieve significant savings and cost avoidance.
5. The County Executive recommends an amendment to the FY17-22 Capital Improvements Program and a supplemental appropriation in the amount of \$4,900,000 for the Building Modifications and Program Improvements (No. P076506) project, and specifies that the source of funds will be Contributions.
6. Notice of public hearing was given and a public hearing was held.

Action

The County Council for Montgomery County, Maryland, approves the following action:

The FY17-22 Capital Improvements Program of the Montgomery County Government is amended as reflected on the attached project description form and a supplemental appropriation is approved as follows:

Project Name	Project Number	Cost Element	Amount	Source of Funds
Building Modifications and Program Improvements	P076506	Construction	\$4,900,000	Contributions
TOTAL			\$4,900,000	

This is a correct copy of Council action.

Linda M. Lauer, Clerk of the Council

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Building Modifications and Program Improvements (P076506)

Category	Montgomery County Public Schools	Date Last Modified	11/11/16
Sub Category	Countywide	Required Adequate Public Facility	No
Administering Agency	Public Schools (AAGE18)	Relocation Impact	None
Planning Area	Countywide	Status	Ongoing

	Total	Thru FY16	Rem FY16	Total 6 Years	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	Beyond 6 Yrs
EXPENDITURE SCHEDULE (\$000s)											
Planning, Design and Supervision	5,897	3,852	765	1,280	640	640	0	0	0	0	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	0	0	0	0	0	0	0	0	0	0	0
Construction	28,782	21,482	2,580	4,720	2,360	2,360	0	0	0	0	0
Other	1,260	850	200	400	200	200	0	0	0	0	0
Total	35,939	25,994	3,545	6,400	3,200	3,200	0	0	0	0	0
FUNDING SCHEDULE (\$000s)											
Contributions	2,550	2,510	45	0	0	0	0	0	0	0	0
G.O. Bonds	33,384	23,484	3,500	6,400	3,200	3,200	0	0	0	0	0
Total	35,939	25,994	3,545	6,400	3,200	3,200	0	0	0	0	0

APPROPRIATION AND EXPENDITURE DATA (000s)

Appropriation Request	FY 18	3,200
Supplemental Appropriation Request		4,980
Transfer		0
Cumulative Appropriation		33,228
Expenditure / Encumbrances		25,994
Unencumbered Balance		7,234

Date First Appropriation	FY 07
First Cost Estimate	
Current Scope	FY07
Last FY's Cost Estimate	0

Description

This project will provide facility modifications to support program offerings at schools that are not scheduled for capital improvements in the six-year CIP. These limited modifications to instruction and support spaces are needed to provide adequate space for new or expanded programs and administrative support space for schools that are not included in the revitalization/expansion program. An FY 2012 appropriation was approved to continue to provide facility modifications at various schools throughout the system. Facility modifications in FY 2013 and beyond will be determined based on the need for space modifications/upgrades to support new or modified program offerings. Due to fiscal constraints, expenditures requested in the Board of Education's FY 2011-2016 CIP for FYs 2013-2016 were removed by the County Council in the adopted FY 2011-2016 CIP. An FY 2013 appropriation was approved to renovate science laboratories at one high school and provide special education facility modifications for two elementary schools and two high schools. An FY 2014 appropriation was approved to continue to provide facility modifications and program improvements to various schools throughout the county. An FY 2015 appropriation was approved for modifications to schools due to special education program changes; science laboratory upgrades at secondary schools; space modifications for program requirements; as well as two specific one-time projects—the construction of an auxiliary gymnasium at Thomas Pyle Middle School and classroom modifications at the Whittier Woods Center to be used by Walt Whitman High School. An FY 2015 appropriation was approved for \$1.3 million for the installation of artificial turf at Winston Churchill High School. An FY 2016 appropriation was approved for modifications to schools due to special education program changes, space modifications for program requirements, and computer lab conversions at various schools throughout the county. An FY 2016 supplemental appropriation for \$45,410 was approved to begin the design of the artificial turf installation at Somerset Elementary School. An FY 2017 appropriation was approved, however, it was \$2.0 million less than the Board of Education's request and will fund program changes to address space deficits through building modifications. An FY 2018 appropriation is requested to continue this project.

Coordination

Mandatory Referral - M-NCPPC, Department of Environmental Protection, Building Permits, Code Review, Fire Marshall, Department of Transportation, Inspections, Sediment Control, Stormwater Management, WSSC Permits

Office of the Superintendent of Schools
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

February 16, 2017

MEMORANDUM

To: The Honorable Isiah Leggett, County Executive
The Honorable Roger Berliner, President, Montgomery County Council

From: Jack R. Smith, Superintendent of Schools

Subject: Transmittal of Board of Education Agenda Item #11.13

Fiscal Year 2017 Supplemental Appropriation and Amendment to the Fiscal Year 2017-2022
Capital Improvements Program for Artificial Turf Installation at Julius West Middle
School and Albert Einstein and Walt Whitman High Schools

BOE Meeting Date: February 14, 2017

Type of Action: FY 2017 Supplemental Appropriation

JRS:AMZ:JS:ak

Attachment

Copy to:
Dr. Zuckerman
Ms. Karamihas
Mr. Song
Montgomery County Office of Management and Budget

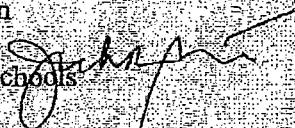
ACTION
11.13

Office of the Superintendent of Schools
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

February 14, 2017

MEMORANDUM

To: Members of the Board of Education

From: Jack R. Smith, Superintendent of Schools 

Subject: Request for a Fiscal Year 2017 Supplemental Appropriation and Amendment to the Fiscal Year 2017-2022 Capital Improvements Program for Artificial Turf Installation at Julius West Middle School and Albert Einstein and Walt Whitman High Schools

Background

On June 27, 2016, the Board of Education approved a settlement agreement with Montgomery Soccer, Inc. (MSI) stemming from a 2014 artificial turf field partnership award protest. Similar to other field use agreements, MSI will contribute funds for the design and installation of new artificial turf fields at Julius West Middle School and Albert Einstein and Walt Whitman high schools in exchange for preferred use hours and access to the artificial turf fields when not in use by the schools.

Under the terms of the settlement agreement, MSI will provide \$1.2 million to design and install an artificial turf stadium field at Walt Whitman High School. At Julius West Middle School, MCPS has determined that the site will permit the construction of artificial turf for 1.5 soccer fields, based on existing site constraints including forest conservation and stormwater management easements. Under the terms of the settlement, MSI is required to contribute \$1.8 million to fund this installation of 1.5 fields, as well as the actual cost for lighting the fields, not to exceed \$400,000. At Albert Einstein High School, the settlement agreement requires MSI to provide \$1.2 million for the installation of an artificial turf stadium field, provided that the necessary approvals are obtained for lighting for the artificial turf fields at Julius West Middle School. In exchange, MSI will have access to use each of these fields for approximately 1,000 hours per year for a 10-year period when the fields are not being used by schools.

The Walt Whitman High School All-Sports Booster Club has committed to contribute up to \$300,000 toward the cost of the field project, and on March 21, 2016, the Board of Education approved the Booster Club's request to initiate fund raising for this purpose.

WHEREAS, On June 27, 2016, the Board of Education approved the settlement agreement that provides for Montgomery Soccer, Inc. to fund the design and installation of artificial turf fields at Julius West Middle School and Albert Einstein and Walt Whitman high schools in exchange for preferred use hours when the fields are not being used by schools; and

WHEREAS, Montgomery Soccer, Inc. will fund \$1.2 million for the design and installation of artificial turf at the Walt Whitman High School stadium field, to include architectural and engineering services; and

WHEREAS, The Walt Whitman High School All-Sports Booster Club has committed and received Board of Education approval to raise up to \$300,000 to contribute toward the cost of installing the artificial turf field; and

WHEREAS, Montgomery Soccer, Inc. will fund \$1.8 million for the design and installation of artificial turf fields at Julius West Middle School to include architectural and engineering services; and

WHEREAS, Montgomery Soccer, Inc. will fund the actual cost for the field lighting system at Julius West Middle School, not to exceed \$400,000; and

WHEREAS, Montgomery Soccer, Inc. will fund \$1.2 million for the design and installation of artificial turf at the Albert Einstein High School stadium field, to include architectural and engineering services, provided that the necessary approvals are obtained for lighting for the artificial turf fields at Julius West Middle School; and

WHEREAS, Staff in the Department of Facilities Management has hosted community meetings at each school location to provide project information and obtain community feedback for consideration in the design and construction of the artificial turf fields; and

WHEREAS, The scope of the projects will include the use of an organic infill material in the installation of each artificial turf field; now therefore be it

Resolved, That the Board of Education request a Fiscal Year 2017 Supplemental Appropriation and Amendment to the Fiscal Year 2017-2022 Capital Improvements Program in the amount of \$4.9 million to fund the design and installation of artificial turf fields at Julius West Middle School and Albert Einstein and Walt Whitman high schools in accordance with the settlement agreement with Montgomery Soccer, Inc., and be it further

Resolved, That this resolution be forwarded to the county executive and the Montgomery County Council for consideration and action.

IRS:AMZ:JS:mas

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Testimony of David S. Weaver in Support of \$4.9 MCPS Supplemental Appropriation for
Turf Fields at Einstein, Whitman and Julius West

Montgomery County Council

Tuesday, April 4, 2017

My name is David Weaver and I live in the Capitol View Park section of Silver Spring – part of the Einstein High School cluster. Thank you for the opportunity to testify today.

I am here to respectfully ask for your support of the \$4.9 million MCPS supplemental appropriation for new turf fields at Einstein, Whitman and Julius West. Approval of this supplemental would allow implementation of a plan that is a win-win-win for the County. It's a win for the student athletes at these schools who will have quality playing fields. It's a win for the community members who will have access to these fields. And it's a win for the taxpayers of the County, since Montgomery Soccer, Inc. is paying for the installation of the fields.

As the parent of an Einstein Junior and a rising Freshman, I can tell you that the current condition of the stadium field at Einstein is a safety hazard for student-athletes who compete there. For most of the year, there is more dirt than grass, there are ruts and holes and four drainage grates present a hazardous for athletes every time they take the field.

The supplemental before you would privately finance a new turf field, which thanks to this Council's action, would utilize organic in-fill materials. This would not only be an improvement for the student athletes at Einstein, but it would also be a significant community improvement.

In addition to being an Einstein parent, I have also been a volunteer MSI coach for many years, and I applaud their commitment to providing a wide range of affordable soccer programming. As this Council knows all too well, the lack of available field space in the County creates a significant strain on those fields that have been developed. This supplemental would address this issue and alleviate some of that strain by putting new all-weather fields into the mix, allowing countless more games and practices to proceed regardless of what Mother Nature might throw our way.

Again, I respectfully ask for your support of this supplemental and I thank you for the opportunity to testify.

**Testimony of Albert Einstein High School Booster Club
Supplemental appropriation to MCPS FY17 Capital Budget, \$4,900,000 for Artificial Turf Installation at
Julius West MS and Albert Einstein and Walt Whitman High Schools
April 4, 2017**

Thank you for the opportunity to testify today regarding the supplemental appropriation that would provide for a new turf stadium field at Albert Einstein High School in Kensington, Maryland. The Albert Einstein High School Booster Club has serious concerns about the state of the current field at Einstein, and asks for your support of this appropriation, which is a win-win-win for the County, our student-athletes and the thousands of community members who participate in programs run by Montgomery Soccer, Inc. (MSI).

The current condition of the athletic field at Einstein creates a safety hazard for student-athletes who compete there. Years of use by JV and Varsity Football, boys and girls JV and Varsity Soccer, JV and Varsity Field Hockey, and boys and girls JV and Varsity Lacrosse has damaged the ability of the field to drain properly. The result is numerous holes and gouges in the surface and seemingly permanent loss of grass in the middle of the field. Meanwhile, the edges of the field drop sharply to support four drainage grates that are hazardous for athletes running full speed toward those areas.

We recognize that there is currently no County funding budgeted to upgrade the Einstein field. Montgomery County Public Schools athletic department has looked at ways to improve the field, but those efforts have not come to fruition. For example, we understand Einstein was slated to have its track replaced and, at the same time, the athletic field was to be re-graded and seeded with Bermuda grass. However, this upgrade stalled for reasons that were unclear. In addition, the County at one time was planning to set aside \$11 million to install artificial turf at high schools throughout the county, but the plan was not approved, precluding Einstein from competing for a portion of these funds as well.

The supplemental appropriation before you would provide private funding for a new, state-of-the-art, turf field, which would utilize organic in-fill materials while dramatically improving both safety and playability for our student-athletes and members of the community. Einstein would get a new field; MSI would have access to it when not being used by the school; and taxpayers would not bear the projects' development costs. We urge you to approve this arrangement, which will result in our student-athletes having a safe, playable surface.

The status quo is simply unacceptable. Einstein's student-athletes are put at risk each time they step out onto the field. Games are canceled because of the poor drainage and some kids choose not to participate because of the sub-par facilities Einstein offers. We respectfully ask for your support of this supplemental appropriation.

Thank you for your consideration.

Kristina Gryboski, PhD testimony

I have written to the Principal and PTSA President of Einstein High School, board of education, Senator Van Hollen, and the Montgomery County Councilmembers to express my opposition to installation of artificial fields. Parents have not been given adequate information for balanced, risk-benefit analysis and decision making including risk of contamination and the high maintenance costs and removal costs associated with Artificial Turf that will have to be funded by taxpayer dollars.

A Forbes article from 2014 titled "How taxpayers get fooled on the cost of an Artificial Turf field" refers to the chart from Montgomery County as an example of misleading and biased presentation of information by companies that falsely portrays artificial turf as less expensive than natural grass. This chart was the same as the one presented to parents who attended the public forum at Einstein several months ago. <https://www.forbes.com/sites/mikeozanian/2014/09/28/how-taxpayers-get-fooled-on-the-cost-of-an-artificial-turf-field/#375ba98f5db2> This investigative article shows how the marketing of the artificial field was biased in favor of artificial turf companies who are driven by profit not the public interest. The increased use of the field by MSI in exchange for the installation would benefit MSI, but taxpayers will bear a burden in terms of the burden of maintenance, and removal costs after the functional life of the turf ends, and will have a trade off in terms of increased MSI use of the field that will put pressure on any system installed. Parents have not been given information on the risk of long term harm to children and the environment due to contaminants in materials. The health risks have been clearly communicated by the Mount Sinai School of Medicine Children's Environmental Health Center <http://cahn.mssm.edu/about/departments/environmental-public-health/cehc> which conducts groundbreaking research to identify the environmental causes of childhood diseases and translates their findings into solutions using research to educate families and advocate for public policy that protect children's health. The link to their report below contains evidence on the many health risks, and the lack of sufficient data to prove safety of all types of Artificial turf, including any infill currently on the market. http://media.wix.com/ugd/ffd0a19_f5aa0824698341499b4228ebabf90cb5.pdf

I urge you to read this 2016 scientific report in full. The Center advises in this report advising testing: "Prior to the installation of artificial turf fields of any type, studies conducted by independent, academic, or federal research institutions must prove the safety of these products. To be informative, comprehensive studies should consider, at a minimum:

- Exposure assessment under realistic playing conditions.
- All possible routes of exposure: Inhalation, Ingestion and dermal absorption (through skin)
- Potential health effects not only of individual chemicals, but also of mixtures of chemicals to determine their additive and synergistic effects.

In addition to the above scientific requirements, it is the responsibility of municipalities and installers to assess the opinions and address all concerns of the communities that will be utilizing the fields" (end quote)

While I appreciate that the Councilmembers have required all infill to be plant derived, the Mount Sinai report cautions "Beware of greenwashing: the use of terms like "organic", "green", and "Eco" do not guarantee safety. In fact, those terms are not regulated for turf products, so their meaning in this context is at best ambiguous..... (there is) insufficient data on chemical exposures due to limited studies that assess composition, off-gassing, leaching, and associated potential health effects of the natural cork and/or ground fibers from the outside shell of the coconut (sometimes referred to as "corkonut," or rice husks)"

The Mount Sinai report credibly provides evidence about the health and environmental risks, and of the lack of available evidence to prove the safety for all current artificial turf substances, not only infill: "Although much of the focus is on infill, all components of a turf field contain potential chemicals of concern....Additives and coatings are used on the blades and infill such as colorants, sealants, antimicrobials, and flame retardants. Many of these may be chemicals of concern and can leach from the product. These products (fiber blades, antimicrobials, fungicides, infill) not only increase the likelihood of chemical exposures, they may increase maintenance costs. It's important that manufacturers are upfront about all maintenance requirements. In addition, antimicrobials and fungicides may pose health risks for children chronically exposed to them. "

Parents have not been given adequate, unbiased information about the option of improved Natural Grass fields, through rehabilitating and re-sodding high wear areas, and investing in irrigation and drainage. This is a feasible and possible option for playability and safety, and more sustainable financially and environmentally in the longer term. The Natural Grass Advisory group is one example of how the County can find options for advancing techniques for durable and cost-effective Natural Turf

<https://www.naturalgrass.org/> Our schools are teaching our children to be stewards of the environment in science and biology class, yet the decision to install artificial turf has been made without due consideration of biohazard risks to children, wildlife, and the ecological damage that may last for generations. To quote Rachel Carson, the renowned environmentalist from Maryland who our children learn about in history class, "Underlying all of these problems of introducing contamination into our world is the question of moral responsibility – responsibility not only to our own generation but to those of the future."

We must learn from recent history on the lessons from Flint, Michigan government representatives who put cost-cutting ahead of due diligence to protect public health, leading to disastrous outcomes for children due to contaminants. Will your legacy be the same?

My name is Jeannette Roegge and I am a member of Walt Whitman High School's All-Sports Boosters Club's Turf Committee. I represent the overwhelming majority of parents, the administration, students, and coaches in expressing our strong support for approving turf at Whitman. We are pleased to hear that, after nearly three long years of active conversation and two years of various proposals from the Whitman community and MCPS, we are at the final stage of approval.

I'd like to emphasize that our intense passion around pursuing turf is centered squarely on the safety of our students. With such limited green space for fields at Whitman, our students have been left with little choice but to drive off school property to practice, scrimmage, and play games. Our stadium field is closed for the vast majority of available hours. For example, after football season in the fall, the field is covered and closed until March. Due to the rainy spring season, only games in good weather can be played on the stadium field and the lacrosse team leaves campus daily to play on muddy fields elsewhere. For years, the need to preserve the health of the grass field at all times has made this only viable field area off limits more than not. We need to keep our kids off the highways and convert that limited-use field to turf for all team practices and games.

The issue of turf surface safety has been discussed for decades and we are pleased that Montgomery County has addressed the two hypothetical concerns often expressed; 1) crumb rubber in-fill by using an alternative; and 2) Gmax testing to assure even less risk of concussions on the new field. The much bigger and more practical safety issue involves keeping our students at Whitman. We hope the County Council agrees with the conclusion that neighboring counties, states, and the Whitman community have come to understand; that turf areas are needed, especially in our population-dense area.

MSI Soccer is a very well-known, professional, and high-impact provider of youth development to Montgomery County. We are pleased that such a strong organization would be partnered with Whitman High School. We thank MSI for funding and you for working together with them to make this a reality during these budget-constrained times. We are encouraged that this turf initiative will also provide extra economic benefit to Montgomery County as well.

In summary, I speak for a large group people in this strong, final appeal to the County Council to approve turf for the good of our students and the broader Whitman Community. Thank you for your time today.

Peter S. Hamm
7811 Exeter Road
Bethesda, MD 20814

Testimony Before the Montgomery County Council
April 4, 2017

Greetings, Council Members, and thanks for your public service and for the opportunity to testify today. I am a homeowner and resident of Battery Park, and the proud father of a freshman who has played both soccer and softball for the Walt Whitman High School Vikings this year.

For more than two years, parents and administrators at Whitman have been working to install a turf field for our students. The community has showed overwhelming support for the Montgomery County Public Schools turf effort with attendance at hearings and more than a hundred letters or other official notifications of support. That support was again confirmed at a school board-hosted community meeting in February.

You have been asked to vote on a supplemental appropriation to finalize a court settlement approval which includes this turf field at Whitman. The settlement resolves litigation brought by MSI Soccer Inc. almost three years ago. Under the terms of the agreement, MSI will provide funds for artificial turf fields at Whitman and Julius West Middle School and Einstein High School. In exchange, MSI will have access to use these fields for a set number of scheduled hours per year for the next ten years, when they are not reserved for school use. The Whitman All Sports Boosters has also contributed substantial funds from parent contributions to pay for the artificial turf field.

This is a textbook example of a successful broad-based government-community partnership. Approval agreement has already been given by the MCPS Board and County Executive Leggett. I urge you to approve these efforts so we can finally move forward after this long process. Again, thank you very much for the chance to testify.

TESTIMONY of Diana Conway
Before the Montgomery County Council
Opposing the Nearly \$5 Million Supplemental Appropriation for MCPS Synthetic Turf Fields
4-4-17

Dear Chairman Rice, Council President Berliner, and Member of the Montgomery County Council,

Thank you for holding this hearing. My testimony opposes the use of these funds for this purpose, and requests redirection to grass fields in general, with a possible first step of thorough and scientifically defensible studies and pilots of grass versus synturf.

I am opposing this supplemental appropriation for several reasons:

- Misdirection of funds: While everyone agrees MCPS fields –especially high school fields—take an enormous amount of use and are often in mediocre or poor condition, this use of funding for synthetic turf (synturf) is throwing good money after mediocre to poor.
- Injury to field users from surface hardness, cleat-grab and heat: There is a reason professional players vociferously condemn synturf and endorse grass: their careers depend on staying injury-free even as their careers demand they play on whatever surface is required of them. The same complaints are voiced for *all* field users: Painful joints, torque injuries, skin-shaving and heat. Synturf is indisputably and significantly and *dangerously* hot on warm sunny days. And unplayably hard or hot fields derail the income stream that is critical to replacement funds ---leading right into...
- Cost: This issue is critical for a school system facing daunting growth in population and rising student needs for support. And of course a legendary and growing maintenance/construction backlog. There has been no effort by MCPS to test grass fields versus synturf. No grass companies have been asked to bid on these fields. There is no study even proposed for equivalently-funded, equivalently used & maintained grass fields --circumstances like drainage and new maintenance protocols like aeration, careful sod selection, regular soil analysis and new mowing protocols. Obviously the synturf *installation* and replacement costs *must* be part of that analysis. The fact that members of both the Council and at MCPS *did not know* that until after our coalition members stated it further proves that *these expensive decisions are being made in a fact-vacuum*. Absent such an analysis MCPS and public playgrounds/parks/fields are choosing one product over another in a *fact-vacuum* that gives off a strong odor of poor due diligence and discharge of fiduciary duty. There is no known and secure source of replacement funds. Finally, the alternative synturf infills being pursued are largely untested, not in use in any pro fields, and already predicted to cost substantially more than tire infill, and still face unproven supply sources.
- Toxicity: The volume of factual and irrefutable data on synturf’s toxicity would take pages and hours to review. Suffice it to say that (1) the synturf industry continues to *mischaracterize* an absence of proof of direct causation of harm as a sufficient, dispositive proof of safety. That is *bogus logic*. If our middle and high-school students used that logic I would expect prompt refutation by peers and teachers. They also cite –on industry *and* company websites, federal agency statements that were retracted years ago. Very nice. (2) Shifting from tire infill to plant-derived infill, while commendable, provides illusory safety assurance: plastic grass, heavy particulate. And confirms liability exposure (see next bullet) given that the presence of lead in the plastic grass has been shown for over a decade. Plus the flame retardants, biocides and fungicides for MRSA, vomit, blood, sweat, dog feces etc. (3) The particulate –of any kind-- is a known source of harm especially to young people. Synturf breaks down with age, weather and use. Each field use resuspends that particulate for inhalation, ingestion and dermal uptake. The presence of heavy toxicity in the particulate is alarming but not discussed.
- Liability: Every new synturf installation and every decision not to remove existing synturf is another ~~drop~~, no another ~~cup~~, no another generous addition to possible County and MCPS liability for knowingly providing an unsafe product, to children, with poorly spent public dollars, for years.
- Lousy product: Synturf has for years claimed tire infill is “proven” to be safe, and will last significantly longer than warranted (1-3 additional years is 15+ to 30+ percent of the 8-year warranty). FieldTurf is facing *dozens* of

fraud suits across the country, with more still being filed. And regardless of the cause, a prematurely failing field like Blair HS leaves an intentionally large group of users, many with financial claims on field time, without a *promised* benefit. Suing a manufacturer doesn't spontaneously get you a playable field. Injury and heat and toxicity and cost also add to the robust objections to synturf.

Given these extraordinary and well documented issues, and given the daunting rise in student population and service-demand, it is incumbent on the Council to require MCPS to wisely spend its resources to benefit all its students. Even when field installation is paid for—generously—by a non-MCPS, non-taxpayer-funded source, the field and its financial needs always reverts to the public fisc. And a growing inventory of synturf means a growing cost for each replacement cycle.

Rather than throwing millions more into a dubious product (now facing major fraud lawsuits across the US) to support only field-athletes, we urgently ask that MCPS, the County and the Parks Department collaborate on well-managed, objective pilot fields to test whether grass fields can be successful, plus verifying relative costs such as the dramatic 2:1 ratio reached elsewhere, plus the remaining issues on grass versus synturf discussed above.

The core goal of MCPS is to provide the best possible education for all students. That means addressing the annual CIP beg-a-thon issues: classrooms with working science equipment, buildings with functional HVAC, media centers with current technology, mold-free portables with mud-free access routes. Given how far short we are falling today in the face of over 2,000 new students every year plus the rising needs for student support, I implore the Council and MCPS to look seriously at the financial upsides of grass--- on top of the vast reduction in toxicity-load, the reduction in heat exposure and in injury risk. One aspect MCPS and the County seem to have overlooked is the liability issue cropping up around legal journal and various jurisdictions from MA to CT to MO to CA to WA... to MD, in particular for tire-infill fields. Even as the County shifts away from tire infill, their removal may become a higher financial priority than new field installation if plaintiffs firms and the National Association of Insurance Commissioners are correct that carbon nanotubes from tires behave like and will generate lawsuits like asbestos

Thank you for considering my views on this matter

Kind regards, Diana E. Conway

More on what's wrong with synturf:

- The pros hate it, fear it. For years the NFL's player-surveys show that by over nine-to-one the 1,600+ active NFL players expect synturf to end their careers sooner than grass. A study several years ago specifically on field surface was even more stark. Soccer stars from David Beckham to Abby Wambach and Hope Solo have spoken passionately against synturf for its heat, injuries and toxicity. Elite college golfers complain of joint pain caused by synturf at driving ranges.
- Safety, injuries. This unqualified 'thumbs down' is from athletes whose careers rise or fall on staying injury-free. And they play on only the best fields. In addition there are hundreds of interviews with elite or professional athletes confirming how unforgiving synturf is: from joints to concussions to turf-toe to ACL to turf-burn+MRSA (which thrives on waste-tire synturf—and even more so on the plant-derived infill). Unlike the strict hardness/Gmax safety standards used for professionals (NFL games do not proceed when hardness Gmax hits 100), MCPS appears satisfied to slip under the "noncompliance" Gmax of 200... even though years ago the synturf trade group (STC) lowered its "recommended" maximum from 175 to 165. MCPS became attentive only after Bethesda Magazine and Forbes Magazine raised the issue. Forbes' Mike Ozanian ("traffic cop at the intersection of sports and money") has written NINE TIMES about synturf since 2014---every article has been critical and several have cited MCPS fields, unflatteringly.
- Heat. Melted shoes, blistered hands and feet, lawsuits against daycare centers with synturf playgrounds— reports abound. County synturfs measure over 150 on warm sunny days, and the highest temps are closest to

the surface--- putting the youngest children at greatest risk. Baltimore schools without AC are allowed to close when temps are predicted to reach 105-110. US jurisdictions issue heat warnings when the heat index will be 105 to 110. Fields in Hong Kong and Europe and the US Midwest have measured close to 200. Extensive sports surface studies show that synturf, no matter what combination of plastic grass and infills, cannot reduce heat by more than 15 degrees. As the studies note, a 15-degree reduction from 150+ degrees is not 'relevant' or 'adequate'. [It is good for growing MRSA however.]

- Cost is a controversial point on grass versus synturf. MCPS' existing data is not even relevant: as Mr. Song confirmed to the BOE recently, grass maintenance budgets for HS fields are all over the map. But synturf warranties require consistent, specific care. Even so Blair HS has failed early, RMHS and WJHS have reached near-limit Gmax hardness. One field passed only after aggressive 'remediation' while the Gmax tester cooled his heels before taking his measurements. One quote indicated that even a parking lot could pass a Gmax test ... with enough pre-grooming. And of course the public-private partnerships on which replacement budgets rely are dead in the water if a private partner fails to meet its commitment. Loss of that partner artificially extends the field's apparent life by dramatically reducing use.
- To date there is no specified source for the \$400k to \$600k that will be needed every 5-9 years for every synturf. Taxpayers may not be aware of that looming obligation... much less the legal liability for predictable harm, physical or toxicological.
- Lead is a neurotoxin. Just one year ago FieldTurf confirmed "Yes there is lead in our product" in public testimony to the Maryland State Legislature. For years now, both the CDC and the American Academy of Pediatrics have stated there is no safe level of lead exposure, especially for *children*.
- I feel certain the industry would have found time in the past 13 months to correct that statement if there were any way to do so. In addition to the lead in waste tires, lead has repeatedly been found in the plastic grass, where it is used for the same reasons as it was used in paint: it's a terrific color fixative. And it has the same effect: irreversible brain and organ damage. This is not an acceptable tradeoff for more hours of field time or rental income. Field paint has lead in very high levels: industry reps have told federal regulators that their paint contains up to 3,000 ppm of lead chromate. MCPS testimony to the Council in 2009 stated that FieldTurf's fields were lead-free.... Even as FieldTurf was being sued in CA for lead levels from the plastic grass up to ONE HUNDRED TIMES the then-legal limit.
- Additional toxic load--unmonitored. Required chemical applications include: flame retardants (plastic grass and tires are flammable petroleum products; plant-derived infill is flammable); biocides for the vomit, sweat, spit, dog feces, candy, etc., herbicides for the weeds that cannot be pulled without harming the mesh, fabric softeners for static, fungicides to remove mold—a particular problem for plant-derived infill since... plants mold. It is reasonable to expect maintenance crews to apply these products generously and prophylactically, especially if MRSA is detected... meaning an even higher exposure level for field users.
- Toxic stew. This combination of neurotoxins, known human carcinogens, endocrine disruptors and general toxins is not a playing field. It is a toxic waste dump exacerbated by high heat and frequent exposure.
- Particulate. The components of synturf—plastic grass, tire or other infill, chemical applications-- break down into dust and particulate with use, age and weather. That particulate undergoes constant resuspension whenever a field is being used. Athlete uptake of particulate has been shown along all three vectors: inhalation, ingestion and dermal uptake. As with PigPen in the *Peanuts* comics each footfall, each bounce of a ball throws up a cloud of dust that is constantly ground into finer and finer particulate.
- Guinea pigs? **These fields create an expensive, legally fraught, toxic short-term 'solution' to muddy fields. There are options that have succeeded elsewhere. Synturf creates an unstudied, unmeasured experiment in the synergies of uncertain chemical combinations: What is the effect of chronic, close frequent contact with an unknown blend of known human toxins, in high heat, over time, without testing, disclosure, waiver or consent, ... on children?**

Best, Diana

Diana E. Conway
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240-997-0404

dconway@erols.com

www.safehealthyplayingfields.org **

** The STC trade group has acquired our website address ending in .com which takes you to *their* site.

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Sunday, Apr 2 at 11:31 PM

From: jaybarker@verizon.net
To: county.council@montgomerycountymd.gov
Subject: Artificial turf proposal

To the Council: I am the father of a student at Walt Whitman High School, and am concerned about the possible adverse health effects of artificial turf. I understand that the proposal to install artificial turf fields at Whitman, Albert Einstein High School and Julius West Middle School is being paid for for a private company, MSI, not public money. I appreciate and applaud the Council's decision not to allow use of rubber crumb infill. Some serious health issues remain, however: (1) no lead should be permitted in the purchased turf; (2) use of the artificial fields should be forbidden on sunny, warm days when the plastic turf will generate abnormally high temperatures for users of the surface, and (3) possible inhalation of matter from organic infill. An environmental question, whether the fields will be recycled after their useful life has ended, is also an issue and recycling should be required to avoid further degrading the planet.

1. Lead exposure: The Council should insist that any provider of artificial turf represent and warrant that the product does not contain any lead. The federal Centers for Disease Control reports that lead is in the fibers of some artificial turf. According to the CDC, though "[t]he risk for harmful lead exposure is low from new fields with elevated lead levels in their turf fibers because the turf fibers are still intact and the lead is unlikely to be available for harmful exposures to occur," "[a]s the turf ages and weathers, lead is released in dust that could then be ingested or inhaled, and the risk for harmful exposure increases. If exposures do occur, CDC currently does not know how much lead the body will absorb; however, if enough lead is absorbed, it can cause neurological development symptoms (e.g., deficits in IQ). Additional tests are being performed by NJDHSS [New Jersey Department of Health and Human Services] to help us better understand the absorption of lead from these products." See https://www.cdc.gov/nceh/lead/tips/artificialturf.htm. I understand that no level of lead exposure is safe. No one can reasonably support acquisition of any artificial turf that contains lead. Please require that the artificial turf purchase will not include any lead.

2. Excessive heat: Use of the fields should be prohibited on sunny, clear, warm days. Plastic and synthetic surfaces cause the air immediately above them to get much hotter than the air above grass fields would be. Young athletes, in particular, must be vulnerable to harm from that hot air. This problem apparently exists for many types of fibers and infill, not just crumb rubber infill. A slide presentation for a video from the Penn State University Center for Sports Surface Research, reports that synthetic turf is generally 35 to 55 degrees Farenheit hotter than the surface temperature of natural grass. (Natural grass is cooler than the air temperature.) The Penn State presentation shows that sharply elevated temperatures are caused for all combinations of fiber and infill tested, including "eco" infill and TPE. See http://plantscience.psu.edu/research/centers/ssrc/sportsturf-scoop. Use of the synthetic fields on warm, clear, sunny days can be hazardous and should be moved to cooler times of day, according to Penn State. The County should require that the turf not be used on clear, sunny, warm days to avoid harm to students and other users.

3. Possible inhalation of particulates from organic infill: Whether plant-based infill is safe is unclear, and a study of its effects should be made. I am not sure that the public knows the makeup of plant-based infill or whether it produces particulate matter that kids may breathe in and suffer from. Any silica in any infill would be a health concern, since inhaling silica dust, I understand, can cause silicosis, a serious lung disease. Will the contractor be required to

indemnify the County and students against the possible adverse health effects of the organic infill? What is known about the health effects of the infill?

4. Ensuring that the turf does not end up in the ocean: As you probably know, the Pacific Ocean is now polluted by enormous fields of plastic, which scientists believe cover an aggregate area larger than the state of Texas. The County should require that the contractor commit to pay for recycling of the turf when it has reached the end of its useful life, with money put into escrow to assure that the promise will be upheld. We must think ahead and ensure the proper disposal of the turf after it has been used.

I appreciate the Council's attention to this very important matter. Thank you very much.

Sincerely,

James A. Barker
7700 Winterberry Place
Bethesda, Maryland 20817
jaybarker@verizon.net
301-717-0539 (cell)

To: boe@mcpsmd.org, Jack_Smith@mcpsmd.org, County.Council@montgomerycountymd.gov ; Ike Leggett--OCE <ocemail@montgomerycountymd.gov>

Please consider this testimony in your further discussions of synthetic turf on MCPS and other County property. We apologize for the late submission.

Testimony of Kathleen Michels and Jerry Kickenson

RE: MCPS discussion of Synthetic Turf fields – Whitman and Einstein HS
- Correcting “Alternative Facts” and misleading information presented by MCPS
- Proposal for discussion of safer, healthier natural turf fields

At the presentations by MCPS (Seth Adams) in January at both Whitman and Einstein High Schools there were a number of inaccuracies and simply incorrect statements. **If the case for synthetic turf fields in partnership with private organizations at schools is so strong the truth should be sufficient.** As parents of two K-12 MCPS athletes/graduates from Down County Consortium schools including Blair HS (and veterans of that field) we would like to set some facts straight and make a proposal.

Some of the "alternative facts" Seth Adams presented at both meetings which should be PUBLICALLY corrected were:

1) That shoes and plastic somehow met the definition of the "plant based infill" the county and MCPS now require (of course only the cork, coconut based options currently available do fulfill that definition). Mr. Adams presented ground up athletic shoes and plastic pellets as "plant based infills" being considered. If that is true, we look forward to touring their shoe and plastic tree farms from which these plant based infills will come.

2) Skewed and misleading cost comparisons for synthetic vs grass turf fields making grass fields look more expensive when they are not.

- **life-cycle costs were not considered for synturf. Only supposed maintenance cost differences were considered.** Even the 2011 county council review and report admitted grass fields were much less expensive when both initial and life cycle costs for both were calculated, even over 20 years. (2011ATMoCo) Their analysis showed the difference in maintenance costs alone did not even come close to making up for the much more expensive initial and replacement costs for Synturf fields¹. In fact, to try and make synthetic turf look financially competitive that report had to factor in a "fudge factor" of hoped for, **not actual**, hugely higher rental fee revenue for each synturf field to make up for the synturf cost.
- No mention was made that **Replacement Costs are high and can be early.** The early replacement of the Blair HS Synturf is prematurely draining **\$750,000** from other needs. WJHS and RMHS are looking at similar costs.

3) Misleading Maintenance and Safety testing statements

- With synthetic turf Fields like Blair not even lasting the length of their 8-year warranty and the others (WJHS and RMHS) threatening student safety and health as they become too hard and degrade, there is real-life evidence and consensus that to keep the synthetic turf fields at least minimally safe for students **MORE maintenance needs to be done not less.**

¹ <http://www.montgomerycountymd.gov/COUNCIL/Resources/Files/atworkgroup/atreportfinal.pdf>

- **HOWEVER, Mr. Adams** repeatedly indicated to save money **more synturf maintenance could be cut – even though needed for athlete safety**. MCPS needs to state publically and DEMONSTRATE its commitment to increasing maintenance and hardness testing for student athlete safety, NOT to make such safety related testing and maintenance optional.
 - What he also left out is that MCPS COULD provide another option but has so far chosen not to: safe healthy **STATE OF THE ART grass fields** to replace poorly constructed poorly maintained grass which would be much more cost effective than synturf especially if implemented throughout the system of school and public sports fields.
- 3) **Giving schools false and limited options and downplaying the impact of replacement costs**: the assertion that the only choice parents have is old muddy rocky fields or new synturf because there is no money for fields is bogus. The BOE actually proposed many millions of dollars as partial payment for SNTHETIC TURF HS fields. BUT only for synturf! They could have proposed a fraction of the cost for state of the art durable grass instead. The synturf funding from the CUPF fund as proposed was nixed because of its high cost in the face of other priorities combined with the explosive and ever expanding impact of synturf on the MCPS capital budget.
 - 4) That "alternative fact" is further highlighted by Mr. Adams's repeated insistence that there is a slush fund of some kind (the Community Use of Public Funds) that **will pay for the synturf rug and infill replacements** for all synturf fields every 8 years. If that money is available, it could be made available for high performing **grass fields too** without blowing the budget on repeated and ballooning synturf replacements. In addition, since MSI is paying for the installation of the fields in this case with guaranteed use over 10 years, no revenue would go into the fund to offset the later replacement costs of those same fields. So where would the money come from to replenish those funds and what needs would synturf replacement funding take priority over?
 - 5) GRASS vs Plastic SYNTURF comparisons are misleading at best: Mr. Adams / MCPS's visual comparisons were for old poorly installed abused grass fields vs new synturf fields. The correct comparison is well constructed and maintained state of the art grass vs synturf And looks are misleading at best- synturf field plastic is always green no matter how hard the field gets. Grass fields indicate when maintenance is needed.

There are many examples of all the latest construction and maintenance techniques to ensure make grass fields are more playable and durable under adverse conditions.

For example From the 2014 Montgomery Parks Soccerplex report:

... "On Columbus Day weekend we host our Discovery Cup tournament and for several days prior to the weekend it rained buckets. By Friday morning we had received 6" of rainfall. We put our sand drained and sand based fields to the test. Every other tournament in the Mid-Atlantic region either cancelled their tournament or only ran their event on synthetic turf fields. **We were the only tournament/facility playing games on natural grass. The decision to add or convert to sand was a success.** In 2014 we will begin to increase capacity on these fields by offering weekday training time. With new maintenance practices we believe we can increase the number of hours to 1,000+/year."...

We would like to propose the county step back from paving sports fields with plastic given all the advances in constructing and maintaining durable grass fields, at a fraction of the cost of

synthetic turf fields especially when the lifecycle costs are considered. For the price of one synthetic field, 2-3 state of the art grass fields could be installed AT EXISTING FIELD SITES and this could be done across the sports field systems (Rec, MCPS and Parks) so that pressure isn't just put on a very few fields while the others have potential for so much more use for many more players. We just are not doing it.

We propose the county council pull together a forum and present the issues and solutions for fields across the county run by the Recreation Dept, the Schools and the Parks. **The goal should be that everyone can play on safe healthy fields and not have to make the sad choice between playing on abused poorly constructed, poorly maintained grass or hot, unsanitary toxin-laden plastic and tire crumb. Or not playing at all.**

You see: the one preferred option of state of the art grass fields - although much more cost effective- is not even on the table. Although the Parks dept is taking some steps in that direction with centralized expertise and funding support. Solutions that prioritize state of the art higher performance grass fields as the healthiest and safest option for all, must at least have a "seat at the table" when decisions are being made.

At the end of the day even the highest performing grass field with all the bells and whistles is MUCH cheaper to install, durable and, especially when maintenance is centralized, cost effective to maintain than synturf. But the parents are not being offered that option by MCPS (or MSI) It's synturf or no turf.

Until MCPS, the BOE, the County Council and the Executive all together step up and stick up for what is right and healthy for their kids, hot, unsanitary and short lived unsustainable plastic will continue to pave our children's fields and blow up our county and education budget.

Let's keep the conversation going and fight for what's right for our children and communities

Kathy Michels, PhD
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Jerry Kickenson
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Silver Spring , MD 20902
301-649-5684
Jerry.kickenson@gmail.com

For more information See
www.safehealthyplayingfields.org and www.synturf.org
Www.ehhi.org/turf/

ACTION

Office of the Superintendent of Schools
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

March 30, 2017

MEMORANDUM

To: Members of the Board of Education
From: Jack R. Smith, Superintendent of Schools
Subject: Award of Contract—Artificial Turf Field Maintenance Program

Until recently, the maintenance of artificial turf fields largely was managed at each individual school through partnerships with the school booster clubs and Parent Teacher Associations (PTAs). Montgomery County Public Schools is implementing a centralized approach to artificial turf field maintenance to ensure that all artificial turf fields are properly maintained for the safety of the users and the longevity of the fields. Staff in the Athletics Unit and the Department of Facilities Management worked with the artificial turf field manufacturer to develop a comprehensive maintenance program and negotiated the costs for an annual contract. This centralized maintenance program will provide consistent and more comprehensive maintenance to all artificial turf fields, including more frequent inspections and testing for safety and field condition. The partnerships with the school booster clubs, PTAs, and school administrators will continue.

WHEREAS, A comprehensive maintenance program for artificial turf fields is necessary to ensure safe playing conditions, the longevity of the fields, and compliance with the product warranty conditions; and

WHEREAS, Staff in the Athletics Unit and the Department of Facilities Management, in collaboration with the manufacturer of the artificial turf fields, developed a comprehensive maintenance program and negotiated the cost for an annual contract; and

WHEREAS, The annual contract will ensure that a comprehensive maintenance program is performed consistently at all artificial turf fields; and

WHEREAS, The partnerships with the school booster clubs, Parent Teacher Associations, and school administrators will continue so that all artificial turf fields are properly maintained; now therefore be it

Resolved. That an annual maintenance contract for an amount not to exceed \$10,000 per artificial turf field be awarded to FieldTurf USA, Inc., located in Montreal, Quebec, Canada, for all existing artificial turf fields; and be it further

Resolved. That the Board of Education authorize the superintendent of schools to negotiate and execute the necessary maintenance program for all future artificial turf fields.

JRS:AMZ:JS

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Athletic Field Consultants, Inc.

G-MAX Test and Field Inspection Report

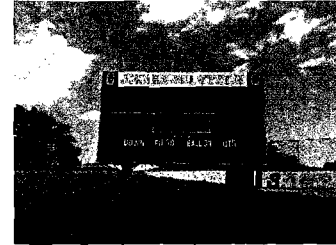
Test Performed By: Jeff Clise
on behalf of Athletic Field Consultants, Inc.

Report No.: 16-033-1

General Project Information

Date of Test: 8/23/2016 (warm, sunny)

Project Name: Gaithersburg High School Football Field
Project Address: 314 S Frederick Avenue, Gaithersburg, MD 20877
Contact Name: Jason Woodward, Athletic Director
Contact Phone: 301-840-4747
Contact Email: Jason_D_Woodward@mcpsmd.org



Field Conditions and Description of Field on Date of Test

Field Play Configuration: Football, Soccer, M&W Lacrosse, Field Hockey

Field Orientation: NE, SW (End to End)

Field Surface Type: FTRV 1F

Manufacturer: FieldTurf

Installation Date: 8/2012

Field Planarity: no deviations noted

Test Point	Infill Depth (mm)	Temperature (F.) Air	Temperature (F.) Field	Drop No. 1	Drop No. 2	Drop No. 3	Average Drop (2 and 3)
1	43	85	137	114.14	124.37	127.81	126.09
2	42	85	140	107.80	118.01	118.84	118.43
3	44	85	137	108.03	117.10	119.26	118.18
4	44	85	138	110.80	121.19	123.84	122.52
5	40	85	141	123.17	138.84	141.60	140.22
6	43	85	141	113.26	123.02	125.78	124.40
7	42	85	136	121.19	128.30	132.22	130.26
8	44	85	138	113.02	122.34	122.68	122.51
9	41	85	139	121.45	130.20	131.64	130.92
10	41	85	138	105.78	114.76	118.05	116.41
Average GMAX Value for Entire Field							124.99
Values in Bold/Red Exceed the ASTM Maximum Allowed G-MAX of 200							
ASTM Specified Drop Height: 2' Producing an Impact Velocity 11.35 FPS ± 0.56							
Test Method: ASTM F 355, Test Method for Shock-Absorbing Properties of Playing Surface Systems and Materials.							
ASTM F1936-10, Standard Specification for Impact Attenuation of Turf Playing Systems as measured in the Field (G-MAX)							
Test equipment calibrated February 2016.							

Report Summary

Introduction:

An independent analysis of the FieldTurf synthetic playing surface, relative to gmax and general field conditions, was requested by the client. G-MAX Testing and Field Inspections were performed on the Gaithersburg High School Football Field on August 23, 2016.

Ten separate locations were tested for G-MAX values. Each test location had three G-MAX tests performed in order to obtain the average G-MAX. The tests were performed using ASTM certified and calibrated equipment, and were performed at locations on the field as determined by the ASTM F 1936-10 Specifications. The test results reported herein reflect the performance of the points tested at the time of testing and at the temperatures reported.

Findings/Recommendations:

No site abnormalities were found and there were no deviations from standard test procedures. All test points met the requirement of less than 200 average G-MAX when tested except for those indicated by Bold Red and shown in the Test Result G-Max Table.

Athletic Field Consultants, Inc.

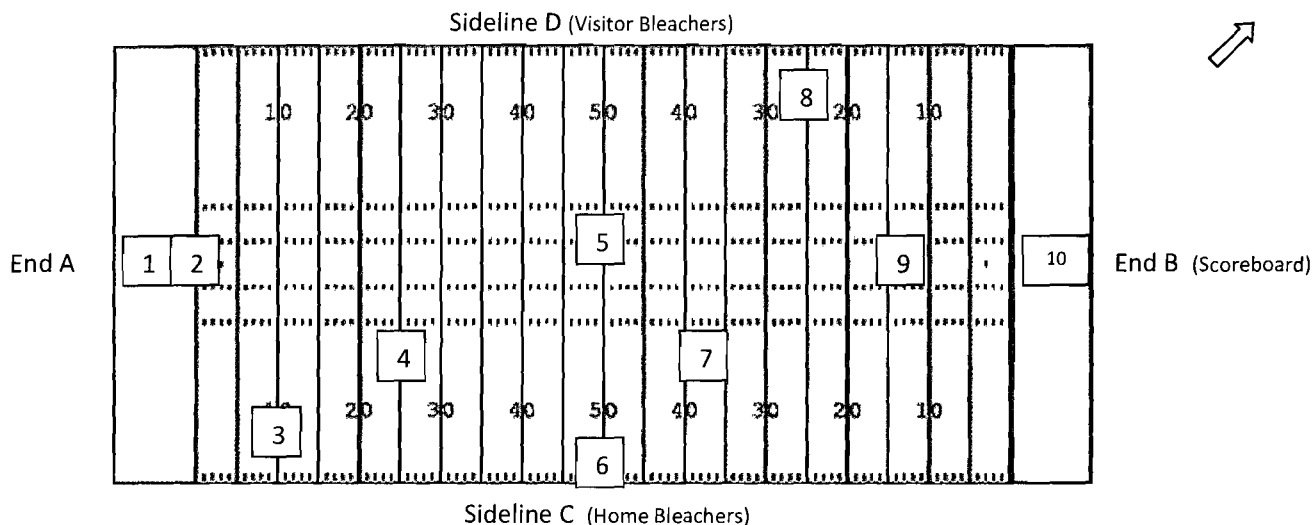
G-MAX Test and Field Inspection Report

Project Name: Gaithersburg High School Football Field

Report No.: 16-033-1

Date of Test: 8/23/2016

Test Point Location Diagram (Football Field)



Test No.	Test Point Location Description
1	End Zone A 6' From Goal Line Along Center Line of Field
2	End Zone A Goal Line at Center of Field
3	End A 10 Yard Line at Numbers Along Sideline C
4	End A 25 Yard Line at the Hash Marks Along Sideline C
5	50 Yard Line at Center of Field
6	50 Yard Line at Side Line C
7	End B 35 Yard Line at the Hash Marks Along Sideline C
8	End B 25 Yard Line at the Numbers Along Sideline D
9	End B 12 Yard Line Center of Field
10	End Zone B 6' From Back of End Zone Along Center Line of Field

*All test point locations are in accordance with ASTM specifications, but performed in sequence determined by tester.

Contact Discussions

Field Use: Football, Soccer, M&W Lacrosse, Field Hockey

Maintenance Schedule: Unknown

Frequency of Use: Heavy, Daily

Maintenance Equipment: Unknown

Turf Condition (Standing, Starting to Lay Over, Laying Over, Excess Fiber Wear, Inlays)

Goal Area: Standing

Creases/Penalty Kick: Standing

Center Field: Standing

Logo/Colored Areas: Standing

Sidelines: Standing

Inlays: Standing

Access Points to Field: Standing

General

Field Accessibility: Multiple

Field Security: 6' Fence

Sporting Event Accessories and Maintenance Equipment Storage: Off Field

Observations/Recommendations: Continue established maintenance schedule, field appears to be in good shape. Regularly monitor infill depths of high wear areas (goals, creases, penalty kicks, center of field) and add rubber infill as needed. Continue annual GMAX testing to ensure proper performance of field

Athletic Field Consultants, Inc.

G-MAX Test and Field Inspection Report

Impact Test Data
(Acceleration Time Curve)

Project Name: Gaithersburg HS Football
Report No.: 16-033-1

Date of Test: 8/23/2016
Test Performed By: Jeff Clise

Test Point No. 1 Drop Point No. 1		Test Point No. 1 Drop Point No. 2		Test Point No. 1 Drop Point No. 3	
Test Point No. 2 Drop Point No. 1		Test Point No. 2 Drop Point No. 2		Test Point No. 2 Drop Point No. 3	
Test Point No. 3 Drop Point No. 1		Test Point No. 3 Drop Point No. 2		Test Point No. 3 Drop Point No. 3	
Test Point No. 4 Drop Point No. 1		Test Point No. 4 Drop Point No. 2		Test Point No. 4 Drop Point No. 3	
Test Point No. 5 Drop Point No. 1		Test Point No. 5 Drop Point No. 2		Test Point No. 5 Drop Point No. 3	
Test Point No. 6 Drop Point No. 1		Test Point No. 6 Drop Point No. 2		Test Point No. 6 Drop Point No. 3	
Test Point No. 7 Drop Point No. 1		Test Point No. 7 Drop Point No. 2		Test Point No. 7 Drop Point No. 3	
Test Point No. 8 Drop Point No. 1		Test Point No. 8 Drop Point No. 2		Test Point No. 8 Drop Point No. 3	
Test Point No. 9 Drop Point No. 1		Test Point No. 9 Drop Point No. 2		Test Point No. 9 Drop Point No. 3	
Test Point No. 10 Drop Point No. 1		Test Point No. 10 Drop Point No. 2		Test Point No. 10 Drop Point No. 3	

Athletic Field Consultants, Inc.

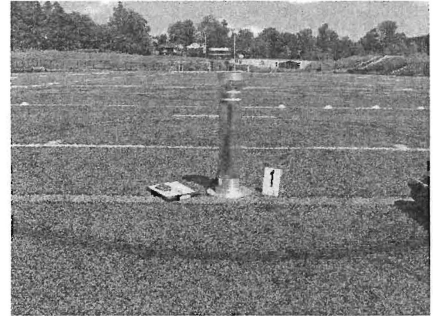
G-MAX Test and Field Inspection Report

Test Point Location Photographs

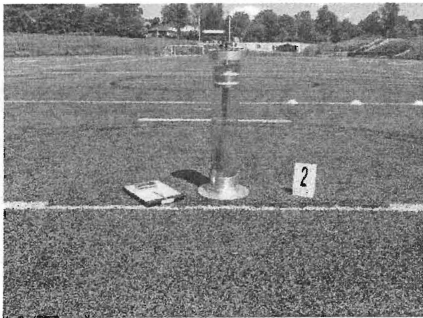
Project Name: Gaithersburg High School Football Field

Date of Test: 8/23/2016

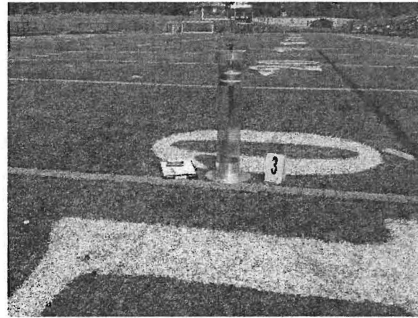
Report No.: 16-033-1



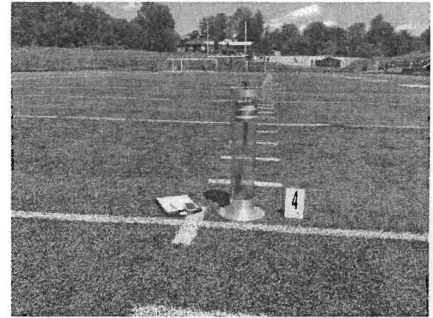
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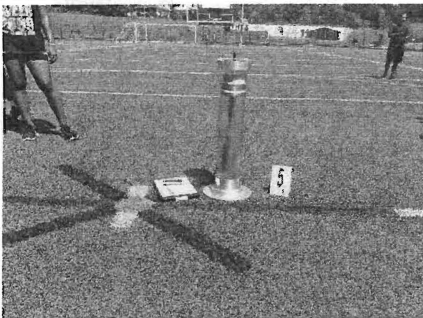
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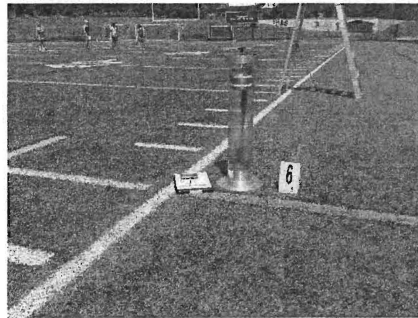
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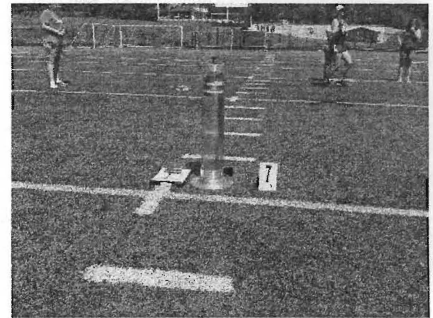
Test No. 4



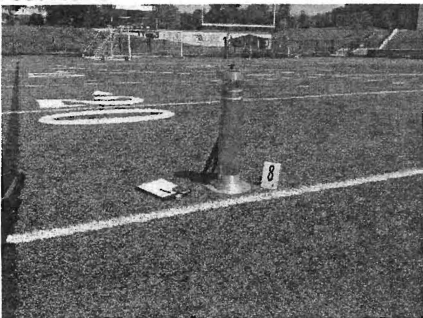
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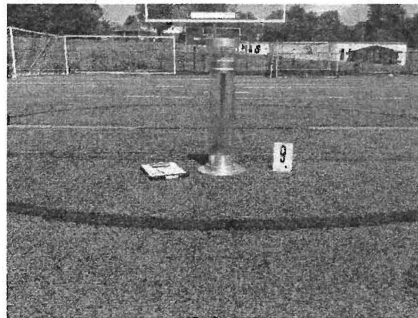
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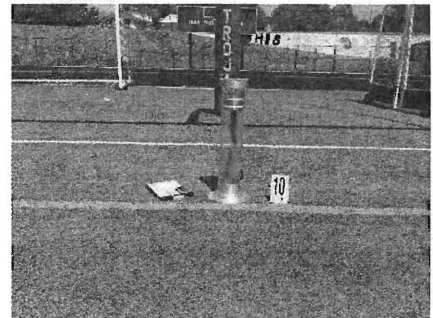
Test No. 7



Test No. 8



Test No. 9



Test No. 10



MONTGOMERY COUNTY COUNCIL
ROCKVILLE, MARYLAND

MARC ELRICH
COUNCILMEMBER AT-LARGE

Dr. Andrew Zuckerman, Chief Operating Officer
Montgomery County Public Schools
Carver Educational Services Center
850 Hungerford Drive, Room 149
Rockville, MD 20850

March 9, 2017

Dear Dr. Zuckerman:

I have been contacted by residents from across the County who have raised serious concerns about issues regarding artificial turf fields. I share their concerns, and for years I have tried to ask questions of MCPS staff during multiple Education Committee and Council sessions. My staff has also raised questions, and in the past, we have felt a wall of resistance that I do not understand nor find acceptable.

Let me begin with the request that MCPS discard the bias toward artificial turf fields – of any type - and its belief that natural grass athletic fields are not a viable option. It is my understanding that:

1. Properly installed and properly maintained grass fields can withstand much more use than in the past -- and can be as rainproof as synthetic turf.

2. MCPS does not have the interest or the expertise to install or restore natural grass athletic fields to the appropriate standard, which then leads to the false conclusion that synthetic turf fields are the only viable solution. Families at Einstein High School – site of the most recent initiative to install a synthetic turf field – report that the grass field is in terrible shape and have told my staff that given the options of the current terrible grass field and a synthetic turf field that has an identified source of funding (from a contract with MSI), they choose (somewhat reluctantly) synthetic turf. They are told that since the infill will be “plant-based infill,” the health concerns associated with ground tire infill are not an issue. While that statement is technically correct, it ignores multiple other critical issues with any kind of synthetic turf, including:
 - Surface hardness (usually measured with a GMAX score)
 - Extraordinarily high heat
 - Abrasions and other injuries

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- Maintenance, including a process to remove gum, cigarette butts and other droppings;
- Inhalation concerns from direct off-gassing of the field, from increasing particulate as field materials deteriorate, and from the aerosolizing chemical whose applications may be required to meet warranty requirements
- Fiber degradation and warranty coverage
- Replacement costs
- Disposal costs, which will likely increase as waste-recipients become aware of the potential toxicity-load of used fields

Although all of the above issues merit further discussion, for the purposes of this communication, my questions and requests below focus on surface hardness and fiber degradation, replacement costs and contents of the plant-based infill.

1. Please provide the GMAX results for each of the fields over the past 5 years. It is my understanding that the fields are tested every year for GMAX.
2. Please explain what is being done to address the issue of fiber degradation at the Richard Montgomery HS field and potentially at other schools. Below is a link to the Bethesda magazine article, which explains some of the concerns. <http://www.bethesdamagazine.com/Bethesda-Beat/Web-2016/Civic-Group-Concerned-That-Richard-Montgomery-High-Schools-Artificial-Turf-Field-Failed-Safety-Test/>
3. Please explain the plan, timing and (approximate) cost for replacement of each of the synthetic turf fields. In the past, Mr. James Song, Facilities' Director at MCPS, has talked about enterprise funds that are used for this purpose; however, I do not understand the source of the enterprise funds. The organizations that have partnered with MCPS to pay for building these fields are guaranteed a certain number of hours of use, generally over 8-10 years. Do they also pay hourly rental fees each time their teams use the fields? If not, then are community use rentals the source of the enterprise funds? Could you please send a breakdown of the payment and funding streams for each of the synthetic turf fields?
4. Do the plant-based infills now being used include silica sand? Please send the contents of the plant-based infill.
5. Has MCPS evaluated the various plant-based infills for cost (installation as well as field life-cycle) and for performance?

It is my understanding that the funding for and maintenance of the high schools' athletic fields vary by each individual high school. Please send me the maintenance protocols and procedures and funding amount and source for each natural grass stadium field at the high schools that do not have a synthetic turf field, and for each of the high schools with a synthetic turf field.

And please provide answers for the following questions:

1. What are the maintenance practices of and funding for the remaining athletic fields at high schools, middle schools and even elementary schools?
2. Does the amount of time and money spent on installing, restoring and maintaining these fields vary from school to school?
3. Is each school given money specifically for field maintenance?
4. Who maintains the fields? Does MCPS have central staff that service the schools' fields? And/or does MCPS contract with companies to maintain grass fields? If so, how is that process handled and funded?

I realize there are quite a few questions, but they are almost all variations of questions my staff and I – and multiple residents - have been asking for years (except for the new questions on the plant-based infill), so I'm hopeful that the answers are readily available.

I appreciate your attention to this request and look forward to your response.

Sincerely,



Marc Elrich

Cc: Members of the Board of Education, Council President Roger Berliner, Councilmember Craig Rice, Planning Board Chairman Casey Anderson, Director of Parks Mike Riley, MCPS Director Department of Facilities Management James Song, Craig Howard and Keith Levchenko, Council staff

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MONTGOMERY COUNTY PUBLIC SCHOOLS

www.montgomeryschoolsmd.org

MARYLAND

March 22, 2017



The Honorable Marc Elrich
Montgomery County Council
Stella B. Werner Council Office Building
100 Maryland Avenue
Rockville, Maryland 20850

Dear Councilmember Elrich:

I am writing in response to your March 9, 2017, letter requesting additional information about artificial turf playing fields, natural grass playing fields, and the maintenance practices for athletic playing fields. Montgomery County Public Schools (MCPS) is committed to improving the maintenance and condition of all of our athletic fields and play spaces. We agree that as technology continues to evolve, the natural grass fields may withstand more use than in the past. We are working through several efforts, including a partnership with the Montgomery County Department of Parks, to improve our practices in maintaining outdoor athletic fields and playing areas.

At the same time, it is also our view that artificial turf fields play an important role in providing safe and available playing surfaces for our high school stadium fields and other high use outdoor areas. We will continue to monitor the evolving technology around both natural grass and artificial turf fields to use the safest and best performing alternative materials available.

Responses to your specific questions are enclosed. I look forward to continuing to work with the County Council to increase the availability of safe, quality playing fields for our students and Montgomery County residents.

Sincerely,

Andrew M. Zuckerman, Ed.D.
Chief Operating Officer

AMZ:em

Enclosure

Copy to:

Members of the Board of Education
Dr. Smith
Dr. Navarro

Dr. Statham
Mr. Civin
Dr. Johnson

Dr. Beattie
Mr. Song
Mr. Ikheloa

Office of the Chief Operating Officer

850 Hungerford Drive, Room 149 ♦ Rockville, Maryland 20850 ♦ 301-279-3626

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Responses to Questions from Councilmember Elrich, March 9, 2017

1. GMAX testing

- In the initial years of installing artificial turf fields at high schools, maintenance of the fields was conducted primarily through the individual school athletic directors, booster clubs, and Parent Teacher Associations. As a result, we do not have detailed, consistent testing practices or records going back as far as you request.
- As outlined later in this response, Montgomery County Public Schools (MCPS) is moving to a centralized maintenance approach that will include more regular and frequent GMAX testing at all artificial turf fields going forward.
- The available data regarding GMAX tests can be viewed at the following link: <http://www.montgomeryschoolsmd.org/departments/facilities/maintenance/default.aspx?id=496174>.

2. Fiber condition at Richard Montgomery High School

- The fiber of an artificial turf field will degrade over time based on usage, and the artificial turf field at Richard Montgomery High School is beginning to show fiber degradation. The manufacturer inspected the field and determined that the field is in safe playing condition. In addition, the manufacturer commissioned a second assessment of the fiber condition of the field, conducted by a separate entity, which also determined that the field is safe for play. We are closely monitoring the field conditions with more frequent inspections and plan to resurface the field when the condition warrants.

3. Replacement Fund

- We anticipate approximately an 8–10 year life cycle for the artificial turf fields. The replacement cost is estimated to be approximately \$500,000–\$600,000.
- MCPS maintains an Enterprise Fund for use toward future artificial turf replacement. The revenue sources include: partnership funds from sports organizations and booster clubs; revenue generations from the community uses; and funds contributed as a result of the cost avoidance realized from lower utilities and maintenance. At this time, these revenues have resulted in a current fund balance of approximately \$2.2 million. Based on the current approach, we anticipate to increase the fund balance to approximately \$4.0 million by Fiscal Year (FY) 2021.
- The contribution of the partnering organizations towards the cost of the fields provides them with a specific number of hours of use per week. If their use extends beyond these agreed upon hours, the organizations pay for additional use through the Community Use of Public Facilities and its rate structure.

4&5. Infill Materials

- As the technology of infill mix continues to change, we are monitoring the new products that become available. In 2014, the City of Gaithersburg installed an artificial turf field at

Lakelands Park utilizing the cork/coconut husk infill mix. We, and other agency partners, have learned a great deal from this experience.

- The cork/coconut husk materials present some implementation challenges. One is that the materials generate dust from the breakdown of organic materials. The field needs to be watered to minimize the dust being airborne and inhaled. Because plant-derived infill mix absorbs moisture, it has a tendency to harden and even freeze during cold temperature days.
- The Department of Parks (Parks) has evaluated various infill mix materials and shared the findings. Based on these reviews, MCPS piloted an approach for the artificial turf field at Somerset Elementary School that involves a base layer of natural sand overlaid with cork. The sand does not contain silica.
- Working with Parks, we will continue to evaluate this approach as well as new infill mix materials as they become available.

Maintenance Questions

The remainder of your letter includes questions about maintenance practices for athletic fields at all school levels and for both artificial and natural surface fields. This response will address athletic playing fields in three categories: high school artificial turf fields; high school natural grass fields; and all other school fields.

- **High School Artificial Turf Fields**

As noted above, since the beginning of the artificial turf program at MCPS, individual school athletic directors and organizations have been responsible for the maintenance program of the artificial turf fields at schools. At this time, however, we believe that a comprehensive maintenance program for artificial turf fields is necessary to ensure safe playing conditions, the longevity of the fields, and compliance with the product warranty conditions. We are moving forward to implement a centralized maintenance contract that will provide an increased level and frequency of maintenance activities, inspections, and testing.

The Board of Education will take action on the award of contract for this artificial turf maintenance effort on March 30, 2017. The negotiated cost of this contract is \$10,000 per artificial turf field. This effort will be an important step to ensuring consistency in conditions, funding, and approach across all artificial turf fields.

- **High School Natural Grass Fields**

Individual high schools are primarily responsible for maintaining their own athletic fields. Most schools contract with field maintenance contractors preapproved by MCPS. The cost of the services depends on the level of maintenance desired by the school. For instance, some schools do a portion of the maintenance work themselves, and therefore do not include activities such as mowing, fertilizing, lining fields for games, in the contracted scope of work.

High schools are given a lump sum of money to assist in the funding of the total athletics program. This lump sum is combined with money that the school collects from gate receipts, booster clubs, fundraising, a state athletic association subsidy, and miscellaneous other sources. From these funds, schools pay for their own field maintenance needs, equipment, officials (referees), custodial overtime, security, uniforms, awards, reconditioning, etc.

For FY 2017, the average field maintenance/field preparation cost for schools with natural grass fields was \$36,310 per school. While this figure includes all outside fields, not just the stadium field, the stadium field is by far the most expensive facility to maintain. The cost of field maintenance depends on many factors, including the number and nature of athletic fields.

- **Other School Fields**

For many years, Parks has received funding to maintain a certain number of MCPS natural grass ballfields. The number has varied over time, but currently Parks maintains fields at approximately 76 MCPS schools. Parks uses a contractor to provide the regular maintenance for these fields. Parks also uses its own department staff to maintain fields in parks adjacent to schools, which function as both fields for school use and as park fields. Most other MCPS elementary and middle school fields are maintained by MCPS staff. Both Parks staff and the Parks contract carry out a higher level of maintenance activities than MCPS routinely conducts.

As you know, we are continuing to partner with Parks around improving athletic playing fields, including both renovation and maintenance practices. The briefing provided by Parks to the Education and the Planning, Housing, and Economic Development committees on December 5, 2016, provides the best summary of the current state of ballfield maintenance funding and activities in each category of field. We look forward to our continued work with Parks on this important initiative, and will continue to report jointly to the Board of Education and the County Council as the work progresses.



MONTGOMERY COUNTY COUNCIL
ROCKVILLE, MARYLAND

MARC ELRICH
COUNCILMEMBER AT-LARGE

Michael F. Riley, Director
Montgomery County Department of Parks
9500 Brunett Ave.
Silver Spring, MD 20901

March 9, 2017

Dear Mike:

I want to thank you and your staff for your proactive efforts to address the issues of the deteriorating carpet on the Blair synthetic turf field. I saw the announcement that stated,

“The carpet on the artificial turf field at Blair High School has deteriorated and is heavily worn. It needs to be replaced. In order to assure the safety of athletes and minimize disruption to play, the field’s playing surface will be replaced over the winter months while demand is relatively low. The new surface will feature all organic infill and a shock absorption pad underneath the carpet,” said Mike Riley, Director of Montgomery Parks.

I have the following questions about the process:

1. Is the field still under warranty? If yes, will the manufacturer pay for the replacement?
2. How much will the replacement cost?
3. Do most synthetic turf fields have shock absorption pads underneath? How often do those pads require replacement?
4. What is the maintenance plan and procedures for the new field? Who performs the maintenance?
5. How and where was the old field, including the ground up tire infill, disposed of? What was the cost associated with the disposal?

And in a related question, could you give me an update on the status of your various efforts to develop natural grass fields that are better designed and maintained? That includes both the organic fields pilot as well as the conventional grass fields. Are any of these fields being designed to be essentially rainproof as the SoccerPlex field has shown is possible?

Thank you.

Sincerely,



Marc Elrich

Cc: Planning Board Chairman Casey Anderson, Council President Roger Berliner, Councilmember Nancy Floreen, Councilmember Tom Hucker, Council staff Marlene Michaelson and Craig Howard



MONTGOMERY COUNTY DEPARTMENT OF PARKS
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

April 5, 2017

Councilmember Marc Elrich
Council Office Building
100 Maryland Avenue, 6th Floor
Rockville, MD 20850

Dear Councilmember Elrich,

Thank you for your letter of March 9, 2017 regarding the replacement of the carpet on the artificial turf field at Montgomery Blair High School. I am writing to provide answers to the questions you raised in the letter.

- *Is the field still under warranty?*

The artificial turf has a FieldTurf Manufacturers Limited Warranty. Please see a copy attached.

- *If yes, will the manufacturer pay for the replacement?*

The Commission's Office of General Counsel is currently reviewing the Commission's options.

- *How much will the field replacement cost?*

Field replacement will cost approximately \$725,000. The total project will include removal and recycling of the old carpet and infill, grading and preparation of the field base, and a new carpet with game inlays, organic infill, and shock pad.

- *Do most synthetic turf fields have shock absorption pads underneath?*

Most synthetic turf fields utilizing organic infill require shock pads underneath to assure adequate shock attenuation.

- *How often do those pads require replacement?*

The pads are warranted for 25 years.

- *What is the maintenance plan and procedures for the new field?*

Daily Maintenance – Inspect the field daily for tears to seams and inlays or other damage, and for foreign objects or liquids on the playing surface. Completed repairs as needed.

Semiweekly Maintenance – Measure the moisture content of the infill and irrigate as required to meet the required moisture levels specified by the turf manufacturer.

Weekly Maintenance – Utilize a sweeper with a magnet attached across the surface to remove any foreign objects. May be needed more frequently if excessive foreign objects are noted on the daily inspections.

Monthly Maintenance - Measure the depth of infill and replenish the infill to the required depth as needed.

Yearly maintenance – Performed deep grooming and infill replenishment once per year by the manufacturer. Impact testing (commonly referred to as g-max testing) will be performed, which measures the shock-attenuation performance of the field.

Grooming – This will be performed at a minimum of once per month or more frequently as the number of hours dictate. The manufacturer requires that this field be groomed at a maximum interval of 100 hours of use.

- *Who performs the maintenance?*

A combination of park staff and contractors will perform the maintenance.

- *How and where was the old field, including the ground up tire infill, disposed of?*

The playing surface materials, including the sand, rubber infill and carpet, were cut into rolls and transported to Reclaimed Rubber & Plastics, Inc.'s (RRP) recycling facility. RRP has a processing plant to extract the infill material from the carpet fibers, and then reuse or recycle as much as possible of the turf components. The sand and rubber infill can be re-used for new crumb rubber fields or sold to paving companies for installation in roadway systems. The carpet can be re-used for facilities like batting cages, etc.

- *What was the cost associated with the disposal?*

The disposal cost approximately \$13,000.

- *Could you give me an update on the status of your various efforts to develop natural grass fields that are better designed and maintained? That includes both the organic field pilot as well as conventional grass fields.*

The provision of improved turf grass athletic fields at park and public school sites remains one of the Department of Parks' top priorities. Our approach to this goal is comprehensive and multifaceted and includes the following efforts.

- **Equipment** - We have purchased larger, more efficient aerifiers and seeders that use the latest industry technology. These larger seeders can cover 2-3 times more acreage than the seeders we were using in the same amount of time. This newly acquired equipment improves efficiency by over 50%, providing the opportunity to increase seeding

frequency while reducing labor costs. Additional seeding efficiency improves the density of the turf grass on our fields creating a safer playing surface. With the use of more efficient aerification equipment, we can become more effective in our continued goal of soil decompaction which increases turf grass root development assisting in healthier plants while reducing weather related closures by increasing infiltration rates. These efforts will result in decreased weather related field closure events.

- Use of growth covers – Growth covers are being used in numerous ways such as late season renovations that typically wouldn't be successful due to our cold winter temperatures and increased plant protection and development during non-permitted play seasons. We have also found that as an unexpected benefit, growth covers are a good method for controlling damage by discouraging play on the fields during our winter closure period.
- Turfgrass Varieties - New varieties and cultivars are being utilized to improve wear tolerance, disease resistance, drought tolerance, heat and cold tolerance, and sustainable growth with a reduction in nutrient requirements. These selections will improve the athletic surface quality, reduce erosion and nutrient run-off, and improve water quality in our communities. The University of Maryland conducts research on seed selection and provides recommendations to the National Turfgrass Evaluation Program. Our seed is chosen from this published information.
- Dormant sprigging – This is an experimental method for establishing Bermuda Grass on fields where there isn't an adequate water source for irrigation during the establishment phase when the fields must remain fully saturated for several weeks before reducing in the later phases of grow in. This method can be used with little to no water for establishment allowing conversion of a field from a cool season turf to warm season turf where water isn't available and provides a cost savings from reduced or eliminated water usage. We have currently used this method successfully in the Cabin John Recreational Park, and an additional field is planned for 2017. This process reduces the length of time for field closure for turf renovation, and provides a hardier stand of turf that can regenerate from heavily used fields more successfully than tall fescue.
- Training – We are continuing to expand athletic field and turf maintenance training for all our staff who perform work on our athletic fields. Our internal training curriculum includes detailed information on improved maintenance and management methods for our fields and equipment that are up to industry standards. A training calendar has been created to promote external training from multiple state agencies and non-profit organizations.

- Developing better nutrient programs – We are developing better nutrient programs for our fields. We are investigating and utilizing different types of fertilizers both organic and synthetic. A point of emphasis is on improving soil health to increase nutrient availability to the plant and promote turf grass drought tolerance, disease tolerance, and wear tolerance. One of the products that has shown promise is enhanced efficiency fertilizers. We have used this technology at several locations and have found it provides an efficient way to provide nutrients for our turf in one application for long periods of time that would typically require multiple applications. This saves labor hours as well as feeds the turf consistently which is better for plant health.
- Tiered resource allocation - Developing tiers of maintenance efforts based on hours and type of usage. We are developing staggered levels of maintenance based on the number of hours and type of sport played on our fields. This will allow us to concentrate our efforts and resources where they will provide the greatest benefit.
- Independent University Research - Collaboration with University of Maryland on trials controlling weeds and annual grasses comparing synthetic and organic products. We have initiated a trial at Timberlawn Local Park comparing different organic pest control products. The trial is being directed by Dr. Tom Turner from the University of Maryland and will continue for several more years.
- Increased frequency of detailed soil testing – While expensive this is needed to not only meet the Maryland Department of Agriculture requirements for nutrient applications it will also help us gain knowledge on what soil structures are best suited for the type of play our athletic fields receive. This information will also be used to create our nutrient management program for our fields to maximize plant health by selectively adding the necessary nutrients deficient in the soil.
- Use of amended soil root zones – We have constructed three rectangular fields with amended soil root zones with a 60-70% sand composition. We will be evaluating how these fields perform (turf health, compaction resistance, readiness for play after rain event) to determine whether future fields should utilize this technique.
- Organic field pilot - we are working to develop the parameters for a five-field study starting this fall using an organic field management approach. The fields we have chosen represent a broad cross section of the types of fields we have in our inventory.
 - Elite level, irrigated, cool season grass field
 - Elite level, irrigated, warm season grass field
 - A non-irrigated, cool season grass, local park field

- A non-irrigated, warm season grass, local park field
- An irrigated, cool season grass local park field.

We have been in contact with an industry leader in organic turf maintenance to develop a maintenance protocol for managing our athletic fields. The knowledge gained from this study will assist us in developing our plan for maintaining pesticide free athletic fields in our parks.

- *Are any of these fields being designed to be essentially rainproof as the SoccerPlex field has shown is possible?*

The concept of a “rainproof” turf grass field has been a goal within the athletic field industry for decades. As research and technology continues to evolve, drainage rates are increasing allowing for a safe return to the playing surface quicker. A sand based profile with a vacuum enhanced drainage system is the best profile moisture regulation system in the industry utilized by professional stadiums but cannot prevent all weather-related closures. Montgomery Parks are constantly striving to improve our athletic field playability in relation to weather related events through engineered soils, increased sub-surface drainage, and innovative aerification technology.

Thank you for the opportunity to answer these questions. Please let me know if you would like any other information about the Department of Parks athletic field program or initiatives.

Sincerely,



Michael F. Riley, Director
Montgomery Parks



Manufacturer's Limited Warranty

FieldTurf warrants that if FieldTurf FTOM 1F for football/soccer/lacrosse/field hockey synthetic turf proves to be defective in material or workmanship, resulting in premature wear, during normal and ordinary use of the Product for the sporting activities set out below or for any other uses for which FieldTurf gives its written authorization, within 8 years from the date of completion of installation, FieldTurf will, at FieldTurf's option, either repair or replace the affected area without charge, to the extent required to meet the warranty period (but no cash refunds will be made). This warranty does not come into effect unless the Certificate of Completion is sent for validation to the head office of FieldTurf indicated below within 30 days of installation or customer use, whichever occurs first. This warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this warranty, and all other remedies or recourses which might otherwise be available are hereby waived by the Buyer. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the product including but without limitation, damages for personal injury or economic losses.

Other Exclusions

This limited warranty does not cover:

1. Damage resulting from accident, force majeure, misuse, intentional and unintentional abuse, infill displacement, and neglect or from other than normal and ordinary use of the Product. Normal and ordinary use is considered as usage up to 3,000 hours per year of regular play and utilization for the sporting activities set out in the warranty. Normal play and ordinary use includes a reasonable number of users or participants and does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, in particular to, but not limited to white or yellow lines, goal areas, and sideline areas, or the area around the bases, home plate and the pitcher's mound.
2. Damage resulting from failure to maintain the Product in accordance with the maintenance and use instructions provided to the buyer. Buyer shall produce maintenance logs.
3. Damage resulting from repair, attempted repair or maintenance by anyone other than FieldTurf or an authorized distributor or authorized third party serviceman.
4. Damage due to causes which include but are not limited to the application of chemicals or cleaning agents, adhesive backing, dirt, traffic, normal matting, negligence, vandalism, fire, flood, windstorm, animals and improper care.
5. Failure or improper design of the base. Depression of the soil or matter upon which the base or Product rests.
6. Use of improper footwear such as long spiked track shoes and regular use of steel cleats. Standard soccer or football cleats are recommended. Flat soled shoes such as work boots should be avoided.

We disclaim liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product is used for purposes other than the specific sporting activities set out herein or any other uses for which FieldTurf gives its written authorization, it being understood that FieldTurf has tested the Product for use in connection with these sporting activities and may not have tested it for other uses, FieldTurf shall not be responsible for any and all damages incurred and this limited warranty as well as all legal warranties shall become null and void. Any product repairs or replacements performed under the terms of this guarantee shall not lead to any extension whatsoever of the guarantee.

Name of purchaser: **Montgomery County Department of Parks, 9500 Brunett Ave., Silver Spring, MD 20901**

Date of completion: **August 10th, 2009**

Sporting Activities: **Multi Sport use**

Location: **Montgomery Blair High School**

Installed by **FieldTurf USA**

Address: **51 University Boulevard**

City: **Silver Spring**

State: **Maryland**

Zip: **20901**

Tel: **(301) 649-2451**

Fax

Signature: 

(Please Print Name) **Michael MacNeil**

Date: **August 14th, 2009**

Reference: **061749**

This warranty is insured by a third party. For more information please contact Customer Service at FieldTurf at the number listed below. FieldTurf 8088 Montview Road, Montreal, Quebec, Canada, H4P 2L7 Toll Free: 1-800-724-2969

FieldTurf Tarkett
UNITED IN SPORT

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