ATHLETIC FIELD LAYOUT AND MATERIALS LEGEND

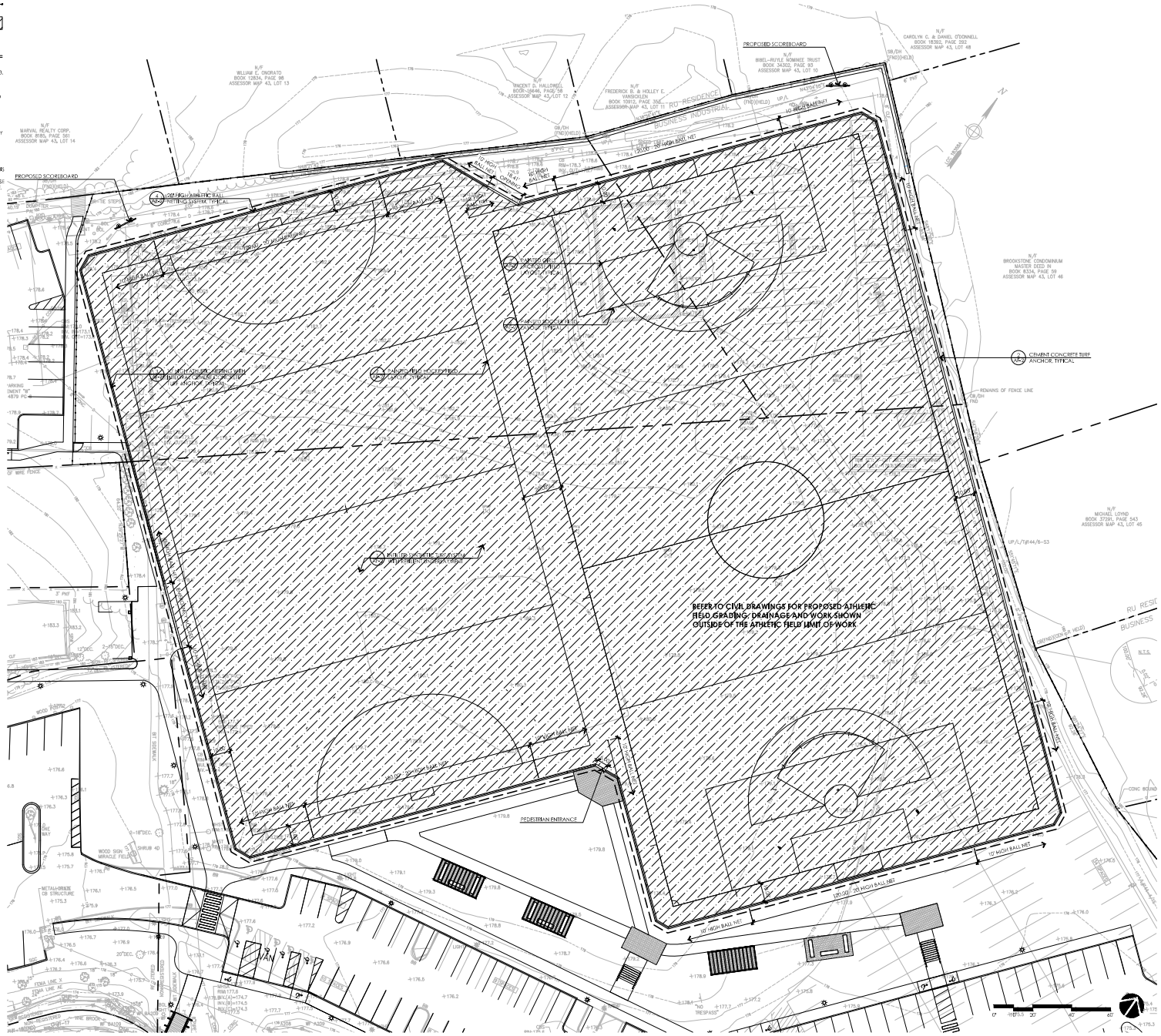
ATHLETIC FIELD LIMIT OF WORK

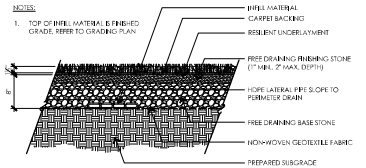
10'/20' ATHLETIC BALL NETTING SYSTEM

INFILLED SYNTHETIC TURF SYSTEM

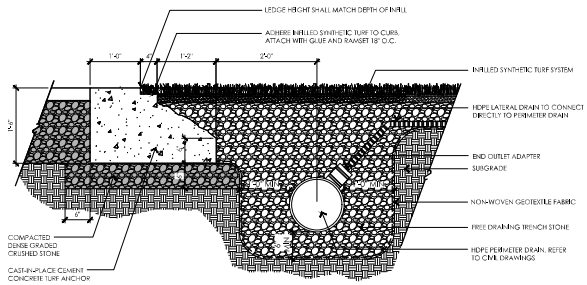
ATHLETIC FIELD LAYOUT AND MATERIALS NOTES

1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY CHA, LOCATED AT 114 LONGWATER DRIVE, SUITE 104, NORWELL, MA. AND DATED DECEMBER 1, 2023.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS, SPECIFICATIONS, AND ACTUAL CONDITIONS TO THE LANDSCAPE ARCHITECT AND CIVIL ENGINEER FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING AND PRIOR TO COMMENCING CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS.
4. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE BASED ON THE SURVEY REFERENCED. THE CONTRACTOR SHALL CONTACT DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
5. WHILE THE CONTRACTOR MAY USE THE ELECTRONIC DRAWINGS FOR LAYOUT PURPOSES, IT IS HIS RESPONSIBILITY TO CHECK ALL LAYOUT IN THE FIELD TO CONFIRM CONFORMITY WITH THE PROJECT DRAWINGS, SPECIFICATIONS, AND APPROVED SHOP DRAWINGS AND SUBMITTALS. USE OF ONLY THE ELECTRONIC DRAWINGS WITHOUT A SITE CHECK OF LAYOUT IS NOT ACCEPTABLE.

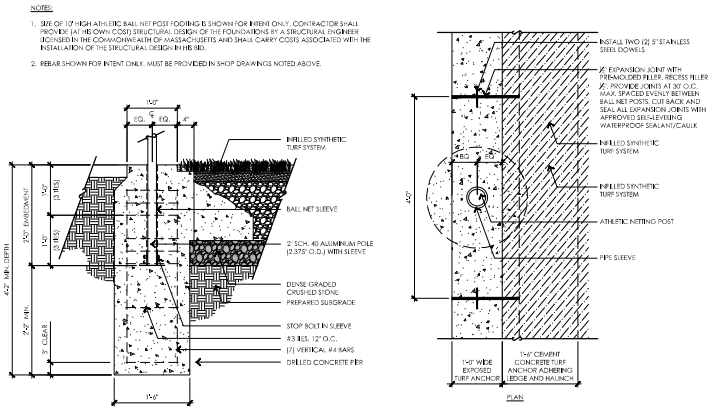

PROPOSED SCOREBOARD
20'/10' ATHLETIC BALL NETTING SYSTEM, TYPICAL
10' HIGH BACKSTOP
10' HIGH BALL NET
10' HIGH BALL NET
10' HIGH BALL NET



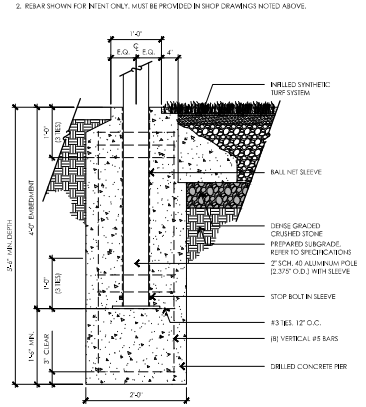
1 INFILLED SYNTHETIC TURF SYSTEM
NOT TO SCALE



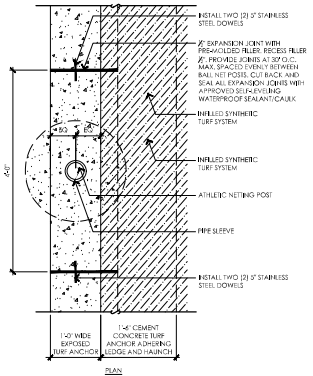
2 CEMENT CONCRETE TURF ANCHOR
NOT TO SCALE

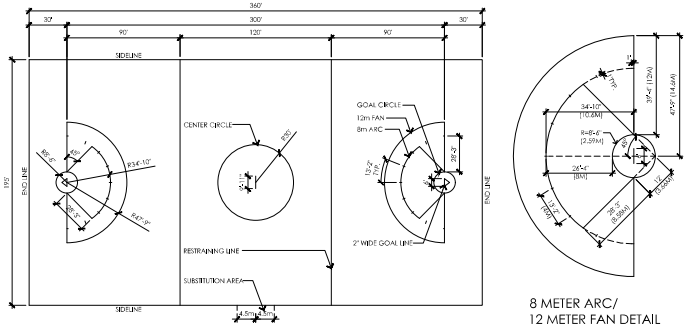


3 10' HIGH ATHLETIC NETTING WITH INTEGRAL CEMENT CONCRETE TURF ANCHOR
NOT TO SCALE

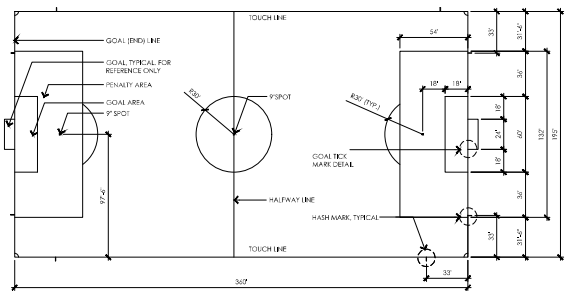


4 20' HIGH ATHLETIC BALL NETTING SYSTEM FOOTING
NOT TO SCALE

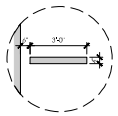




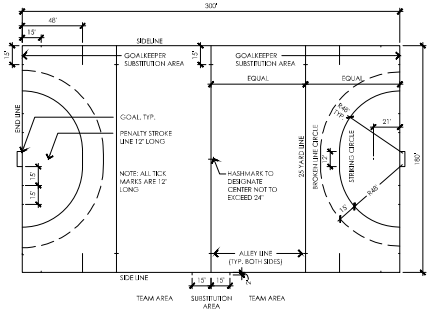
5 GIRLS' LACROSSE FIELD LAYOUT
NOT TO SCALE



6 SOCCER FIELD LAYOUT
NOT TO SCALE



HASH MARK DETAIL
SCALE: 3/8"=1'-0"



7 FIELD HOCKEY FIELD LAYOUT
NOT TO SCALE

ACTIVITAS
Landscape Architecture & Land Engineering

DRAWN BY:	MJO	SCALE:
CHECKED BY:	KL	PLOTTED: 7/31/2024

Robert Olson+Associates Architects
374 Congress Street
Boston, MA 02210
617-338-2790

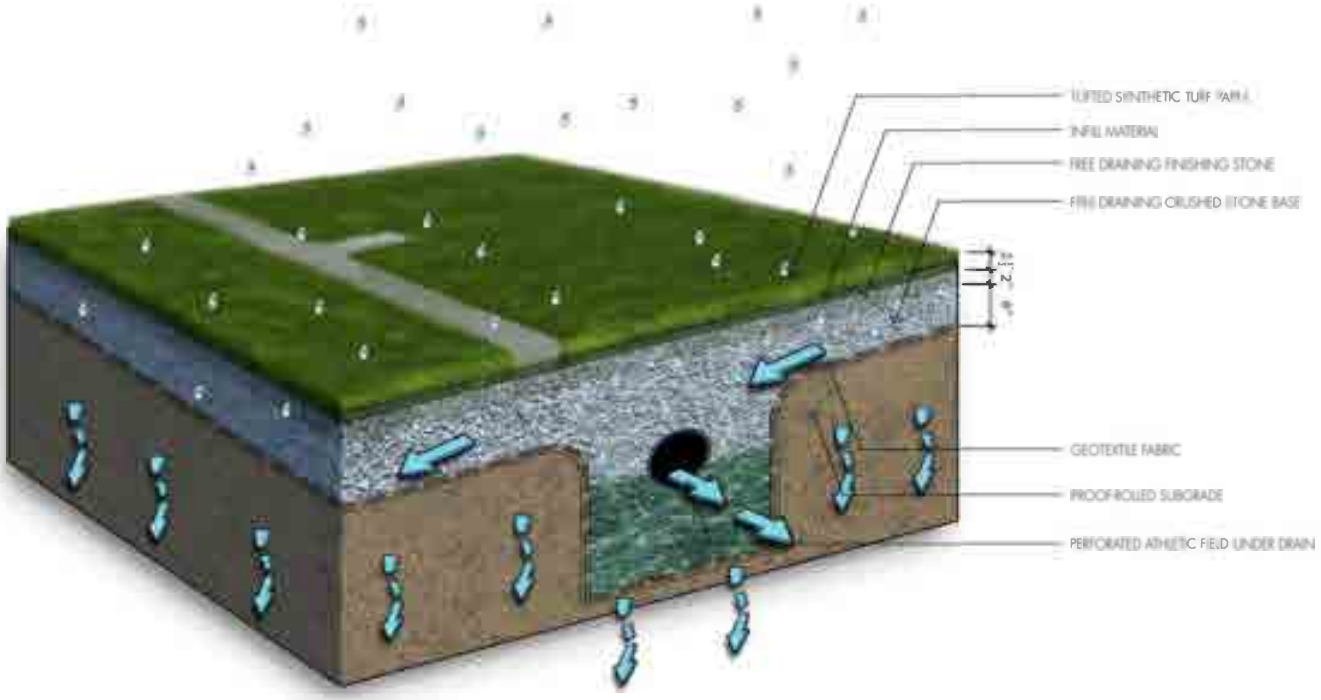
MONTROSE SCHOOL
MONTROSE SCHOOL CAMPUS PLAN
SITE IMPROVEMENTS
29 North Street
Medfield, Massachusetts 01420
© COPYRIGHT BY ACTIVITAS, INC.

ATHLETIC FIELD DETAIL SHEET I

DATE:	07/31/24
SCALE:	AS NOTED
PROJECT:	MSCI-2401

REV.#	DATE	BULLET #

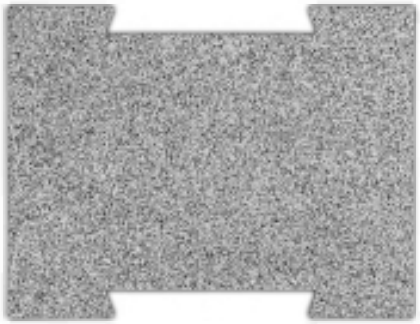
AF-2



TYPICAL SYNTHETIC TURF PROFILE



SYNTHETIC TURF CARPET



RESILIENT UNDERLAYMENT (PAD)



PROPOSED SYNTHETIC TURF SYSTEM





INFILL | SBR RUBBER AND SAND

ACTIVITAS
landscape architecture | civil engineering

DRAWN BY: JJD | DESIGNED BY: JC
CHECKED BY: JC | APPROVED BY: JC

Robert Olson+Associates Architects
219 Congress Street
Boston, MA 02210
617-236-2798

MONTROSE SCHOOL
MONTROSE SCHOOL CAMPUS PLAN
SITE IMPROVEMENTS
29 North Street
Medfield, Massachusetts 01420

ATHLETIC FIELD LAYOUT AND MATERIALS PLAN

DATE:	09/05/24
SCALE:	AS NOTED
PROJECT:	MSCP-2401

REV #	DATE	BULLET #

HUMAN HEALTH & SAFETY/ENVIRONMENTAL LOW LEVELS OF PFAs DETECTED IN SAMPLES OF DISCARDED TURF

News articles from both the Boston Globe and The Intercept from October 2019 reported analytical laboratory results of synthetic turf sampled for the presence of PFAS. This information however was of a preliminary nature as the results were not peer-reviewed nor had the concentrations been put into context (compared to ambient levels of reported for soils in unimpacted locations).

Suppliers of synthetic turf in the past utilized PFAS in the manufacturing of synthetic turf fibers, however, manufacturers have stopped using PFAS in the manufacturing process and Activitas requires documentation as part of their specifications to confirm this prior to approving the fabrication of the synthetic turf system for the project. After reviewing the information reported in the news articles, the following information was identified by our Senior Environmental Toxicologist:

- Cross contamination may provide a false positive if sampling occurs with materials that contain PFAS. The articles do not mention the precautions taken in the field and the results would be suspect is the Massachusetts DEP standard operating procedures were not followed.
- There is no certified method for analyzing PFAS concentrations in materials other than a US EPA method for analyzing PFAS in drinking water. Thus the comparison of PFAS in a bulk sample to a drinking water advisor is misleading.
- The articles noted that an additional eight samples were analyzed for total fluorine and assumed that the total fluorine is an indication that PFAS is present. Many consumer products contain fluorine such as toothpaste, mouthwash and household cleaners. The presence of fluorine does not necessarily indicate PFAS compounds are present.

Based on the above information, the discovery and reporting of ultratrace levels of PFAS in used synthetic turf appears to be overstated if not misleading.

Takeaway - our specifications will require that the synthetic turf system and its components do not use PFAS as defined by EPA Method 5537, California Proposition 65 and EPA Method 1312 as part of their manufacturing process.

HUMAN HEALTH, SAFETY/ENVIRONMENTAL COMMON QUESTIONS AND CONCERNS

Concerns Raised Regarding Turf

Heavy Metals and PAHs
PFAS
Heat

Peer Reviewed Scientific Studies regarding Heavy Metals & PAHs include:

- Pavilonis et. al. (2014)
- Peterson et al. (2018)
- USEPA (2019)
- Schneider et al. (2020)
- Pronnk et. al (2020)
- Tetra Tech (2021)

In summary, the presence of chemicals in synthetic turf materials have been well documented. However, numerous studies and reports have also demonstrated that the chemicals that are in the synthetic turf cannot come out of the materials at concentrations that would harm people or the environment. Consequently, synthetic turf systems, including turf blades and crumb rubber infill, are safe for contact by people and will not harm groundwater or surface water.

Peer Reviewed Scientific Studies regarding PFAS:

- Tetra Tech (2021)

The testing completed by Tetra Tech, demonstrated that none of the PFAS compounds regulated by the MassDEP were detected in any of the synthetic turf systems components, and that PFAS compounds would not leach from any of the synthetic turf system components at levels that would be a concern for groundwater or surface water.

Peer Reviewed Scientific Studies regarding heat:

- Jim et al. (2017)

Collectively, this information suggests that, while synthetic turf field surfaces get warmer than natural turf field surfaces, air temperatures above synthetic turf surfaces warm only marginally more than those above natural turf field surfaces, and that synthetic field surfaces do not retain heat once daytime heating is discontinued. These differences are substantially minimized on cloudy days and do not exist on overcast days. Moreover, the information suggests that replacing the existing asphalt parking lot with a synthetic turf field will improve environmental conditions by reducing paved surfaces that continue to emit heat after sunset.

Letter from Exec. Office of Health and Human Services, Dept. of Public Health, to Town of Medway BOH, dated March 23, 2015:
"In summary, the scientific literature continues to suggest that exposure opportunities to artificial turf fields are not generally expected to result in health effects."

ACTIVITAS

Robert Olson Associates Architects

MONTROSE SCHOOL
MONTROSE SCHOOL CAMPUS PLAN
SITE IMPROVEMENTS

ATHLETIC FIELD LAYOUT AND MATERIALS PLAN

DATE:	09/05/24
SCALE:	AS NOTED
PROJECT:	MSCP-2401

REV #	DATE	BULLET #