On-Site Testing
GMAX Impact Evaluation

New England Turf Management

Project Information

Project Name:	Fairfield Ludlowe High School		
Client Info:	Fairfield Public Schools	**Site Info:**	Football Field
Report Date:	7/15/2025	**Test Date:**	7/11/2025
Report Status:	Complete	**Job #:**	25503917
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Checked by:	Roger Clough		

Notes:
1. This report has been prepared by New England Turf Management with all reasonable skills, care and diligence within the terms of the contract with the Client and within the limitations of the resources devoted to it.
2. This report is confidential to the Client and New England Turf Management accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.
3. This report shall not be used for engineering or contractual purposes unless signed by the Author and the Checker and unless the report status is "Final".

Summary

New England Turf Management was commissioned to perform on-site Gmax impact testing per ASTM F1936. A complete test was performed in accordance with the ASTM F1936 Standard. The results have been summarized in the quick reference table below. Complete results and background can be found in the subsequent sections of this report.

Quick Reference Results Summary

	Average	(min)	Range	(max)	Max per ASTM
Gmax (g's)	158	138	to	189	200
Infill Depth (mm)	29.5	27	to	34	n/a

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General Information

Testing Device	ASTM F1936 Apparatus TRIAX 2010 Data Acquisition	**Test Method**	GMAX
Install Date	2015	**Test Date**	7/11/2025
Field Orientation	Drop 9 = north	**Primary Sport**	Football
Product Info	FTOMP	**Infill System**	rubber
Underlayment	shockpad	**Air Temp (°F)**	72
Turf Cover %	100	**Soil Moisture %**	
Humidity %	87	**Weather Conditions**	Sun
Misc. Field Notes		**Technician**	Roger Clough

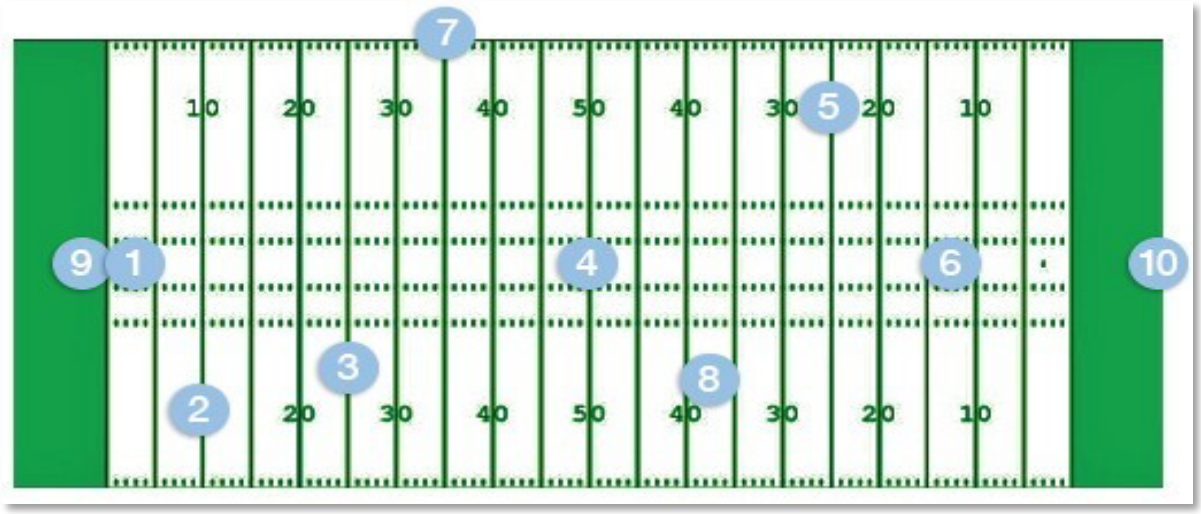
Method

Method Background ASTM F355 Procedure A and ASTM F1936 are test methods used to measure the impact attenuation properties of synthetic turf playing systems. ASTM F355 Procedure A covers the overall test method and ASTM 1936 specifies the method for measurement in the field on an installed synthetic turf playing surface.

The test procedure involves dropping a 20 lb impacting missile three times at each location from a consistent height of 24 inches. The test is typically performed at 10 locations. The locations are based on the primary sport and the discretion of the tester. The first drop conditions / compacts the loose infill. This value is recorded but not included in the location average. The second and third drops are recorded and averaged for the location average. The location averages are used to determine the field average.

The impacting missile contains an accelerometer sensor that measures the magnitude of deceleration (measured in units of gravity or g's) for the duration of impact. The deceleration measured during impact creates a curve. The peak of that curve is referred to as the "Gmax". This is the primary value measured with this test. The maximum allowable Gmax as specified in the current ASTM F1936 test specification is 200 g's.

Location Map



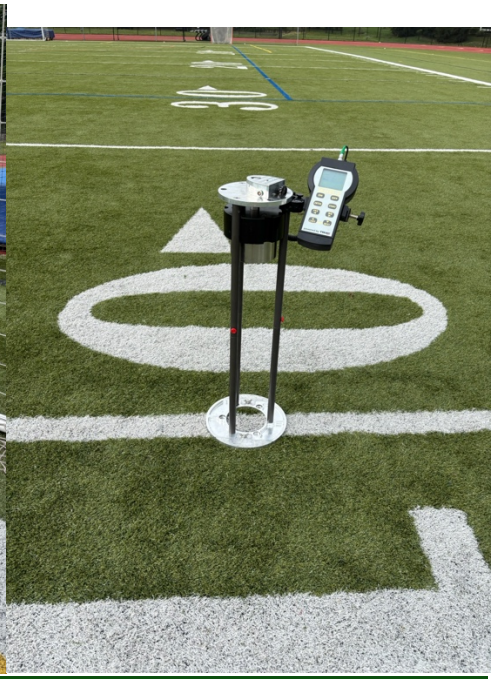
Results Table

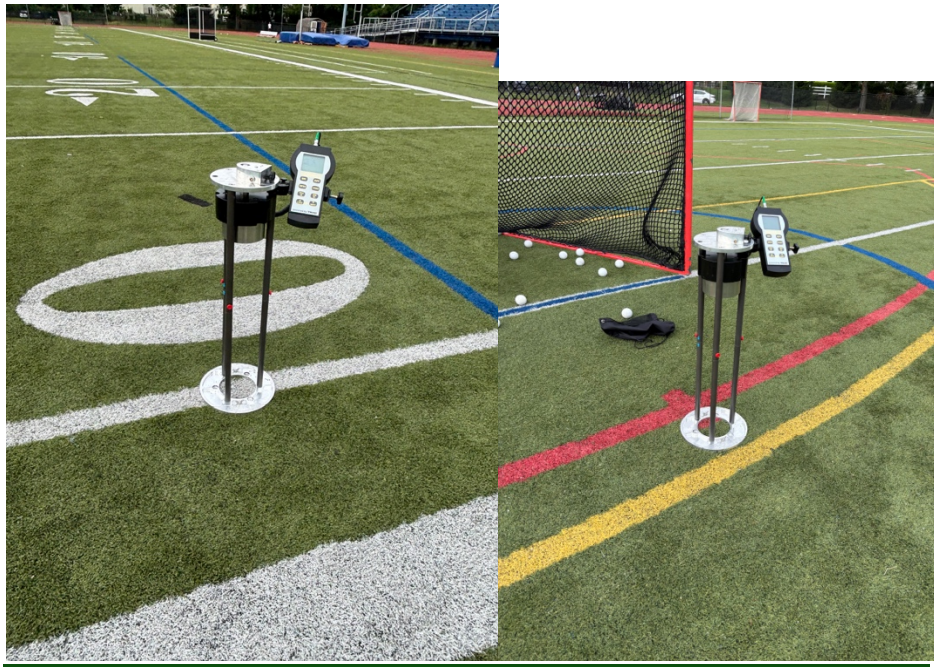
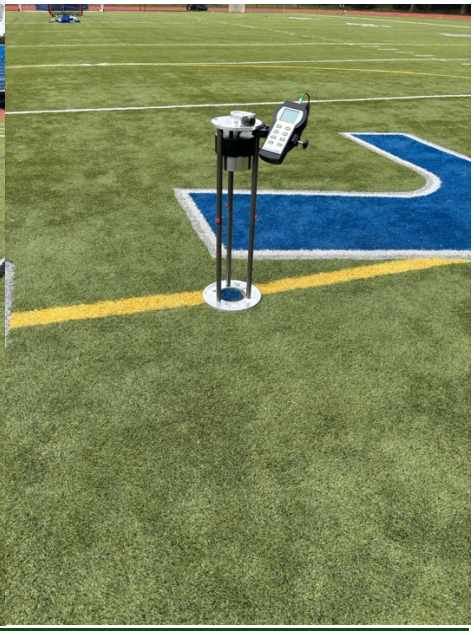
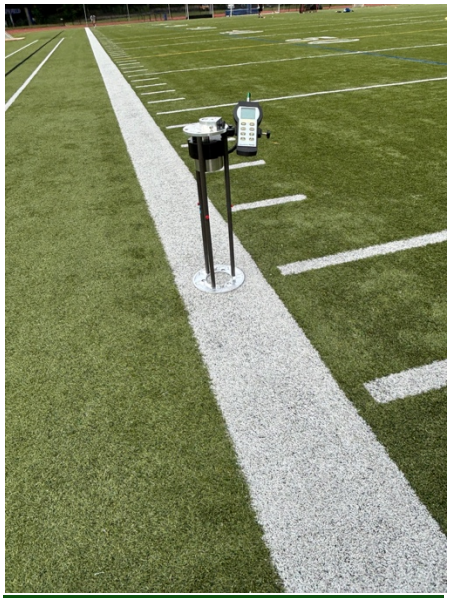
Loc#	Drop #	Gmax (g's)	Location Description	Gmax Avg (g's)	Infill Depth (mm)	Surface Temp (°F)
1	2	153			29	88
1	3	157		155	29	88
2	2	158			27	88
2	3	159		159	27	88
3	2	162			28	91
3	3	166		164	28	91
4	2	158			24	78
4	3	161		159	24	78
5	2	154			34	95
5	3	156		155	34	95
6	2	164			27	95
6	3	164		164	27	95
7	2	147			30	77

Loc#	Drop #	Gmax (g's)	Location Description	Gmax Avg (g's)	Infill Depth (mm)	Surface Temp (°F)
7	3	148		148	30	77
8	2	149			27	91
8	3	147		148	27	91
9	2	138			32	82
9	3	142		140	32	82
10	2	186			37	84
10	3	189		188	37	84

The above table outlines your Gmax score for the second and third drop at each location on the field and an average Gmax score for both drops. The location numbers correspond to the above field map. It also includes an infill depth reading. Per ASTM standards your Gmax score should be under 200.

Location Photos

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