

**Project Information**

<b>Project Name:</b>	Stellos Stadium				
<b>Client Info:</b>	Town of Nashua	<b>Site Info:</b>			
<b>Report Date:</b>	6/19/2023	<b>Test Date:</b>	6/15/2023		
<b>Report Status:</b>	Complete	<b>Job #:</b>			
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<b>Checked by:</b>	James Leszuk				

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
<b>Gmax (g's)</b>	165	139	to	199	200
<b>Infill Depth (mm)</b>	32.4	19	to	36	n/a

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**General Information**

<b>Testing Device</b>	ASTM F1936 Apparatus TRIAX 2010 Data Acquisition	<b>Test Method</b>	GMAX
<b>Install Date</b>	2012	<b>Test Date</b>	6/15/2023
<b>Field Orientation</b>	Drop 9 = south	<b>Primary Sport</b>	football
<b>Product Info</b>	FTOMP	<b>Infill System</b>	rubber
<b>Underlayment</b>	gravel	<b>Air Temp (°F)</b>	72
<b>Turf Cover %</b>	100	<b>Soil Moisture %</b>	
<b>Humidity %</b>	57	<b>Weather Conditions</b>	Sun
<b>Misc. Field Notes</b>		<b>Technician</b>	Roger Clough

**Method**

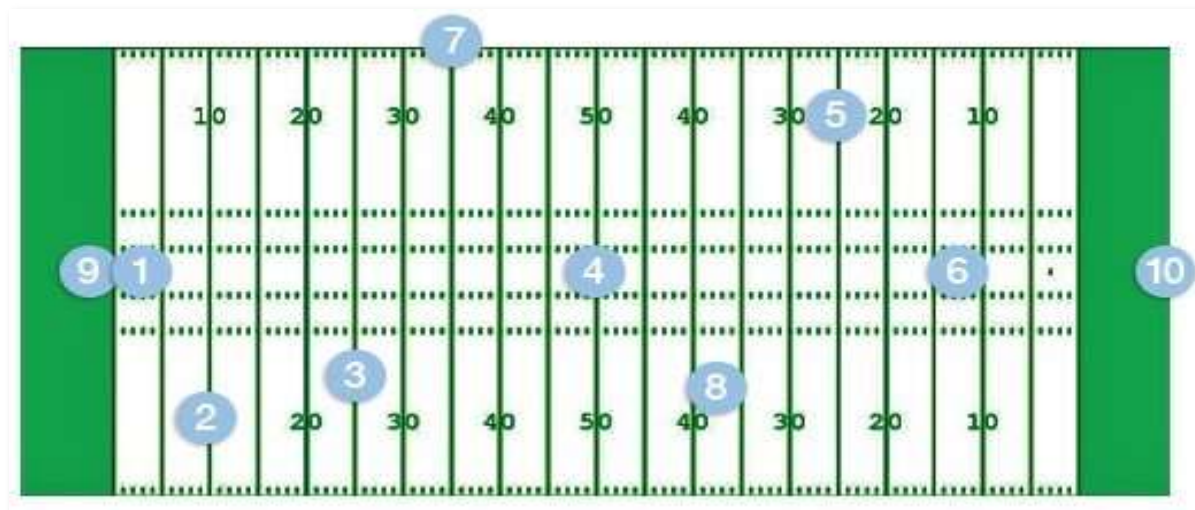
Method Background ASTM F355 Procedure A and ASTM F1936 are test methods used to measure the impact attenuation properties of synthetic turf playing systems. ASTM F355 Procedure A covers the overall test method and ASTM 1936 specifies the method for measurement in the field on an installed synthetic turf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

# On-Site Testing GMAX Impact Evaluation

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	171			35	60
1	3	167		169	35	60
2	2	139			35	60
2	3	142		140	35	60
3	2	144			36	60
3	3	143		143	36	60
4	2	197			19	60
4	3	199		198	19	60
5	2	158			34	60
5	3	160		159	34	60
6	2	183			31	60
6	3	187		185	31	60
7	2	169			32	60

# On-Site Testing GMAX Impact Evaluation

Loc#	Drop #	Gmax (g's)	Location Description	Gmax Avg (g's)	Infill Depth (mm)	Surface Temp (°F)
7	3	170		170	32	60
8	2	152			34	60
8	3	155		153	34	60
9	2	163			34	60
9	3	167		165	34	60
10	2	180			34	60
10	3	176		178	34	60

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



**Location #9**

On-Site Testing  
GMAX Impact Evaluation



**Location #1**



**Location #2**



**Location #3**

On-Site Testing  
GMAX Impact Evaluation



**Location #7**



**Location #4**

On-Site Testing  
GMAX Impact Evaluation



**Location #8**



**Location #6**