



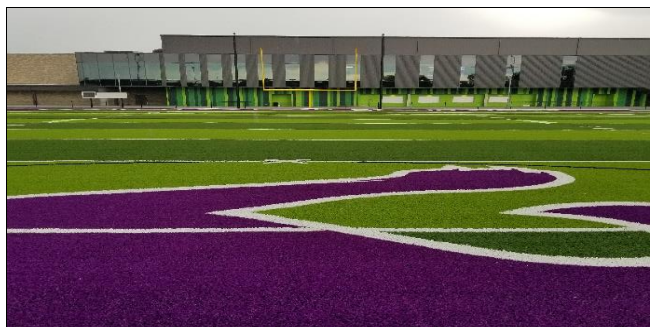
Test Report

Date: 05/22/2020 Report:0341

Location: Sample SW High School
Sample, USA Football/Soccer

PROJECT INFORMATION

Project Name	Sample Southwest High School		
Client Info	Sample Sports Construction 0000 SE Summit St. Sample, MO 64081	Site Info	Sample Southwest High School Sample Road Sample, USA
Report Date	05/25/2020	Test Date	05/22/2020
		Job no.	0341
Prepared By	Jeff Whitney Operations Director	<i>Jeff Whitney</i>	



Summary:

Midwest GMAX was commissioned to perform on-site g-max testing per ASTM F1936-19. A complete test was performed in accordance with the ASTM F1936-19 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)	120	99	to	132	200
*HIC	356	262	to	415	1000
Infill Depth (mm)	32	30	to	35	n/a

*Head Injury Criteria (HIC) is included as a reference to account for impact duration and is not a requirement of the ASTM 1936

Midwest GMAX

2396 Willow Creek Rd, Camdenton, MO 65020

jwhitney@midwestgmax.com

573.745.0888





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Turf Testing

Test Report

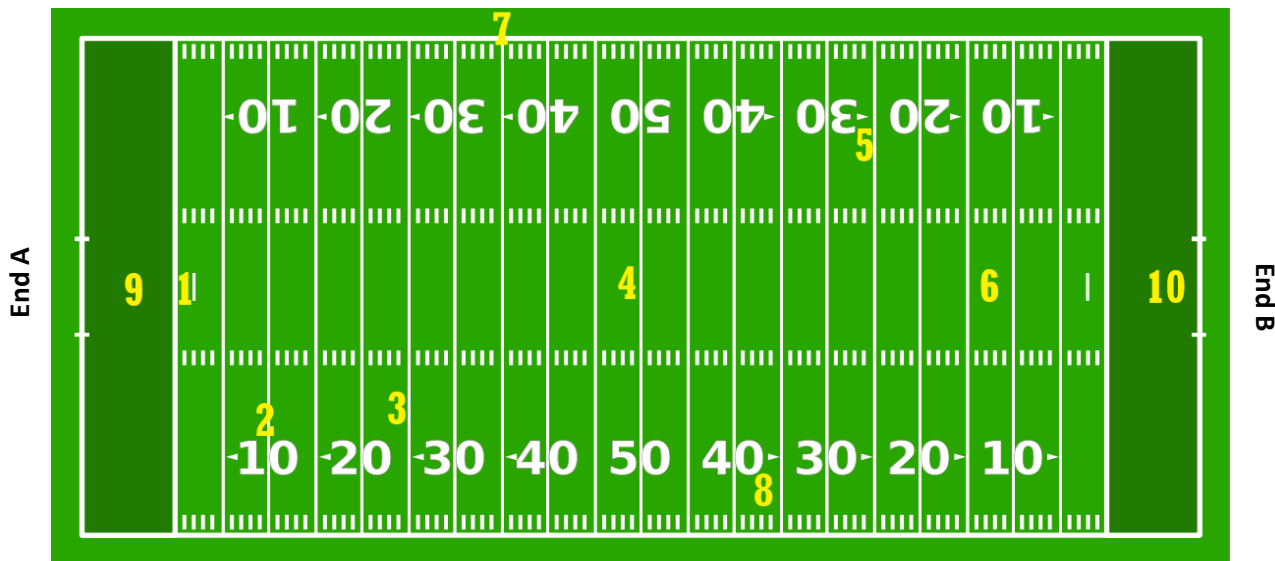
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General Information

Testing Device	ASTM F1936 Equipment Triax 2010 Data Acquisition	Test Method	ASTM F1936-19 ASTM F355 Procedure A
Install Date	05/2020	Test Date	05/22/2020
Field Orientation	End A = North	Primary Sport	Football
Product Info	Sample Turf 2.0	Infill System	Rubber/Sand
Underlayment	Aggregate	Air Temp (F)	77F
Humidity	77%	Field Temp (F)	85F
Technician	Jeff Whitney	Weather Cond.	Cloudy
		Misc. Field Notes	

Side D



Side C

TEST METHOD: Method A - ASTM F355, Test method for shock-absorbing properties of playing surface systems and materials. ASTM F 1936-19, Standard Impact Attenuation of Turf Playing Systems as Measured in the field (Gmax).

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Results Table

Pos. #	Field Location	Drop 1		Drop 2		Drop 3		Average (Drops 2 and 3)		Infill Depth (mm)	Field Temp (F)
		Gmax	HIC	Gmax	HIC	Gmax	HIC	Gmax	HIC		
1	North Goal Line, Center of Field	84	200	96	249	102	274	99	262	33	93
2	NW 10 Yd Line, 63' from Center	103	275	118	351	123	371	121	361	32	90
3	NW 25 Yd Line, 40' from Center	112	319	130	408	134	421	132	415	30	90
4	50 Yd Line, Center of Field	97	254	114	333	119	360	117	347	35	87
5	SE 25 Yd Line, 63' from Center	102	274	114	332	118	344	116	338	32	78
6	S 12 Yd Line, Center of Field	101	272	118	343	121	361	120	352	30	78
7	E Side Player Area, 35 Yd Line, 5' OB	97	255	112	325	115	339	114	332	35	89
8	SW 37 Yd Line, Between Hash & #s	108	300	126	388	129	400	128	394	30	78
9	N End, Center, 6' From Goal Line	113	322	127	390	132	416	130	403	32	93
10	South Endzone, Center, 6' From End Line	107	289	121	354	121	352	121	353	32	77
Overall Field Gmax Average		120									
Overall Field HIC Average		356									
Average Infill Depth @ Gmax Locations		32									

TEST RESULTS: The test results reported herein reflect the performance of the points tested, at the time of testing and at the temperature reported. This test has been prepared by Midwest GMAX with all reasonable skill, care and diligence within the terms of the contract with the client and within the limitations of the resources devoted to it. This report is confidential to the client. Midwest Gmax accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known.

REQUIREMENTS: When tested in accordance with ASTM F1936-19 and F355-A, the average Gmax at any single test point shall be <200 when tested at a freefall height of 24". If the average Gmax of one or more points is > or = to 200, the surface should be brought into compliance and re-tested prior to any subsequent use of the field.

TEST SCOPE: This specification provides a method for determining maximum impact attenuation shock absorbing properties for all types of synthetic turf playing systems and their corresponding locations for specific field layouts. Turf field systems are tested in accordance with ASTM F1936 and ASTM F355, Procedure A, in which the missile is released from a free-falling drop height of 24", and allowed to impact the surface, recording the impact attenuation in Gmax. Three drops are made at each test location (same spot) and the average of drop #2 and #3 is rounded up to the nearest whole number, and recorded as the Gmax for that location. The first drop is for conditioning purposes only. Measurement of surface temperature is also recorded at each location by inserting a temperature probe 1/2" below the surface at each location and recording the maximum temperature at each of the 10 locations.

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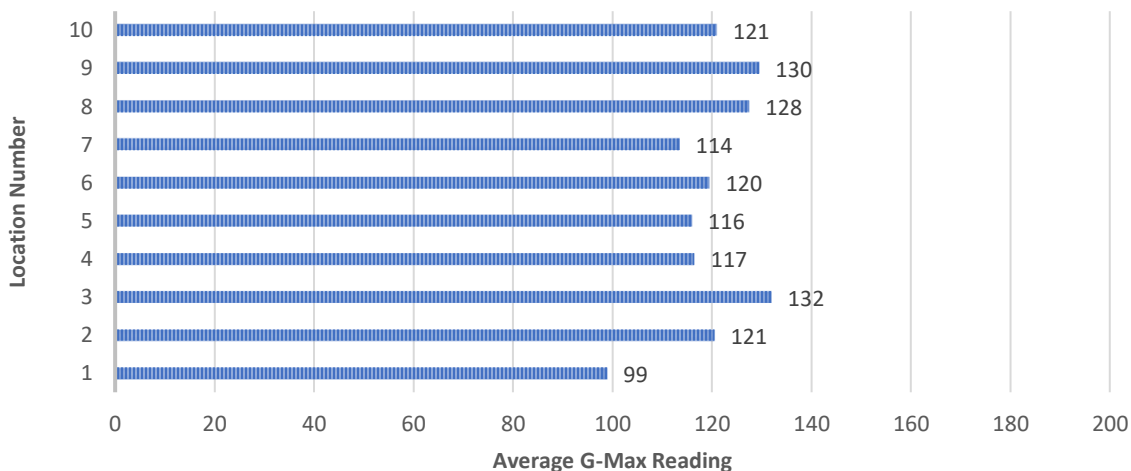
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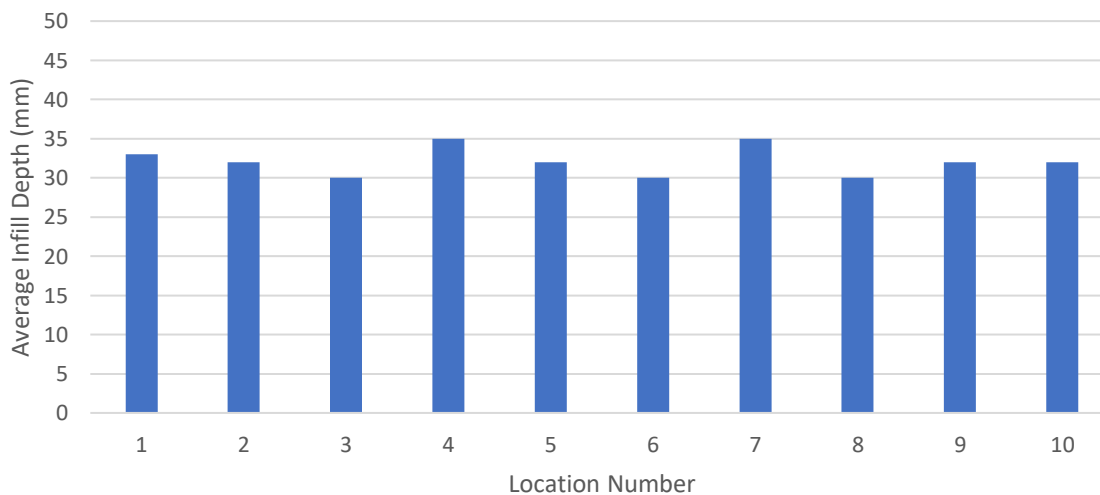
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AVERAGE G-MAX PER LOCATION



Average Infill Depth per Gmax Location



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Turf Testing

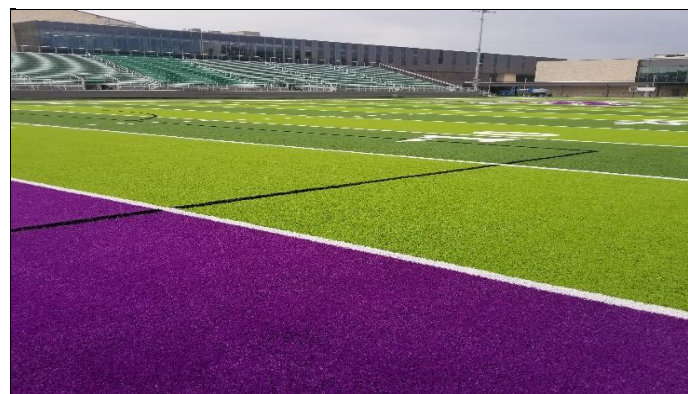
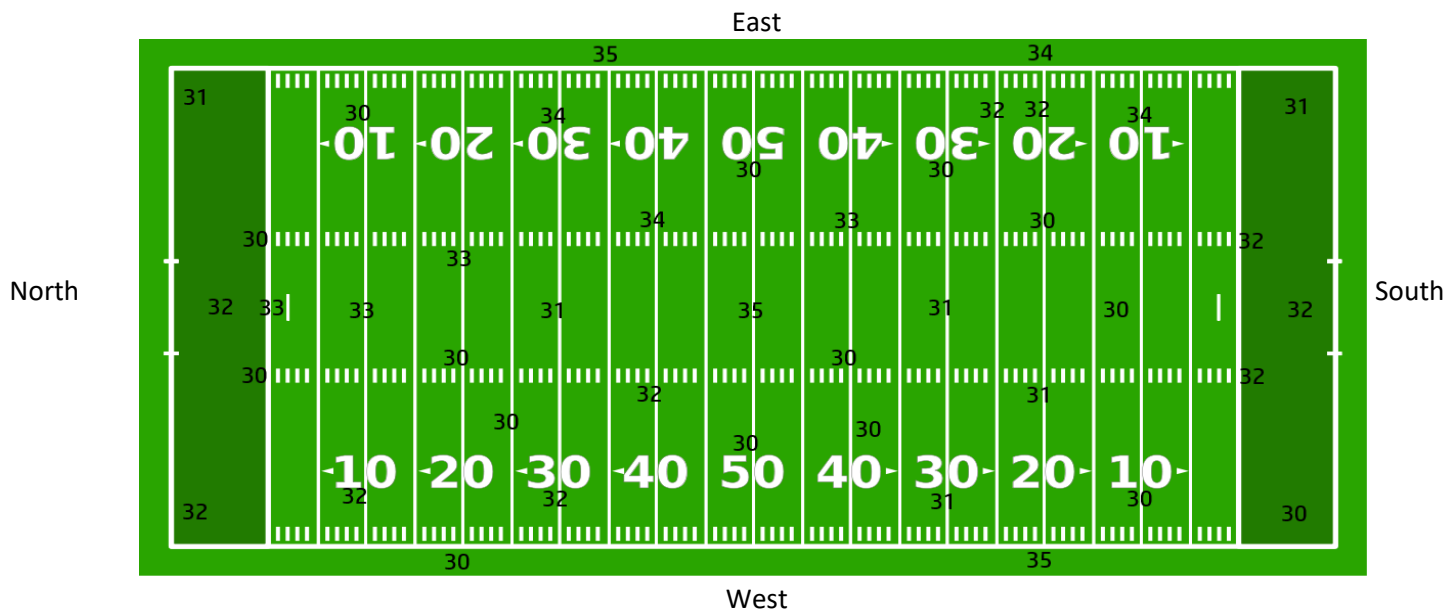
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Infill Map



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