DMA Sports Group
an ISA Sport International Partner

Field Safety and Performance Evaluation

Home Depot Center
AstroTurf Synthetic Field
Carson, CA

February 10, 2012

Prepared for:

Home Depot Center
18400 South Avalon Blvd
Carson, CA 90746

Prepared through:

AstroTurf, LLC
2680 Abutment Rd SE
Dalton, GA 30721

Prepared by:

ISA USA / DMA Sports Group
Pembroke, NH *Seattle, WA*Lubbock, TX
Phone: (603) 731-6248
Contact: Mr. Jeffrey Gentile

Athletic Facility Testing & Consulting

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AstroTurf, LLC
2680 Abutment Rd SE
Dalton, GA 30721

Attn: Mitchell Truban

RE: Field Safety and Performance Test Evaluation

Mr. Truban,

On January 24, 2012, DMA Sports Group personnel conducted on-site STC Performance Testing at the Home Depot Center's AstroTurf Stadium Field in Carson, CA. The purpose of the testing was to evaluate performance characteristics of the synthetic turf field using the test methods outlined in the Synthetic Turf Council's Performance Testing Guidelines. For reference, these guidelines are the same as those prescribed by FIFA.

Field observations

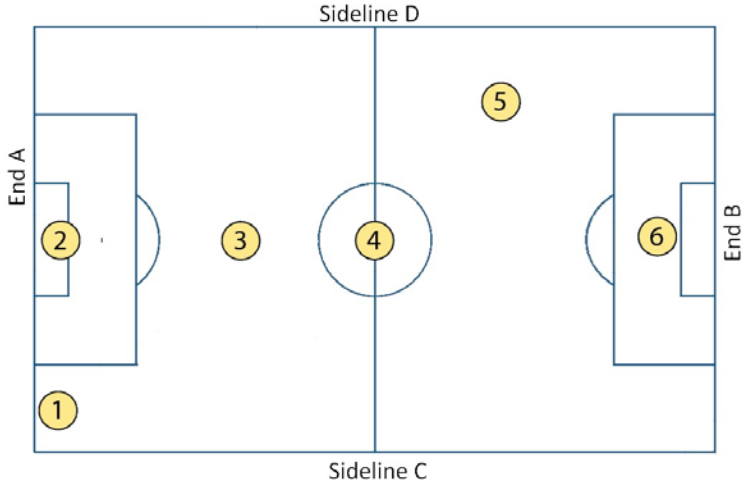
The Home Depot Center field consists of an AstroTurf GameDay Grass carpet with a Sand/Rubber infill system. The field is all green with no inlaid markings. The field is roughly 2-months old and is in great shape for the age. Infill depths showed to be sufficient to meet the performance a recommendation within this test.

Conditions

Field Testing Date: **1/23/2012**
Surface Temp: **90° F**
Humidity: **20%**

Air Temperature: **68 ° F**
Turf Backing Temp: **81° F**
Wind Average Speed: **CALM**

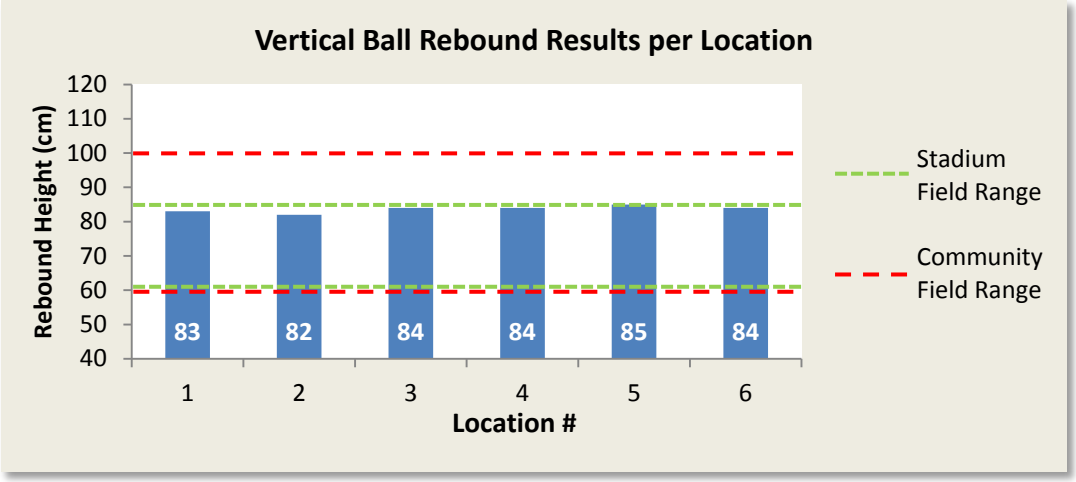
Location Map



End B = North

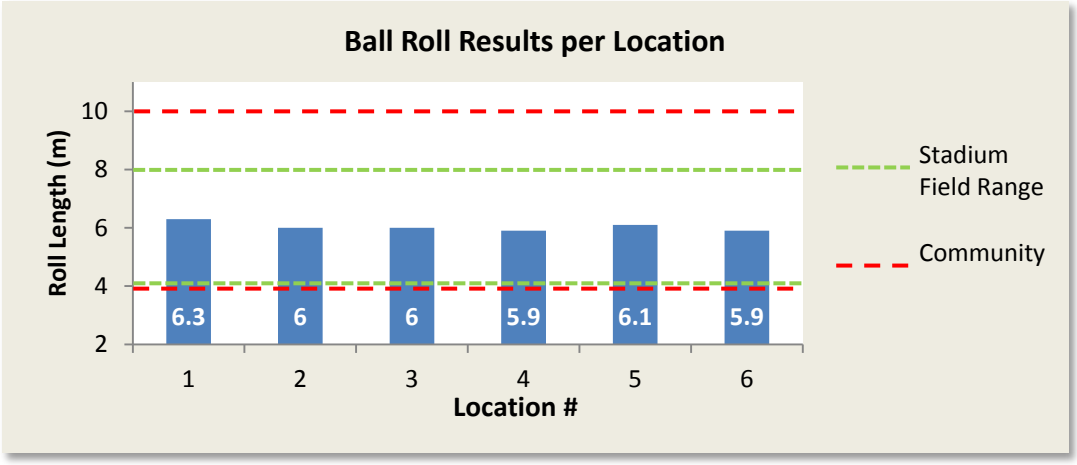
Vertical Ball Rebound Test

Measures how high the ball bounces when falling vertically onto a synthetic turf field. A Ball is released from 2m and the height of its rebound from the surface is calculated. The ball is first calibrated on a level concrete surface to 1.35m. The results are compared to the STC performance guidelines of 0.6 m to 1.0m for a Community Field and 0.65m to 0.85m for a Stadium Field.



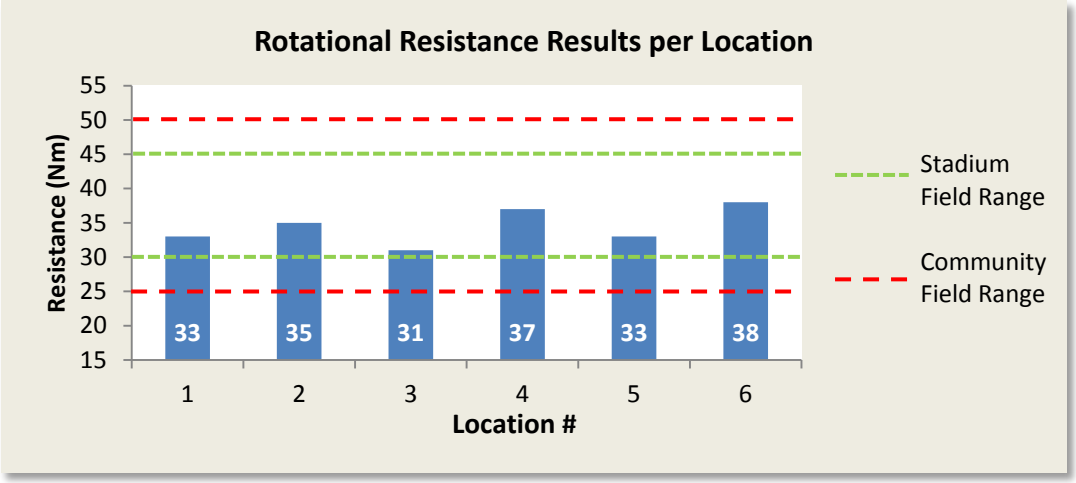
Ball Roll Test

This test measures how far the ball rolls onto synthetic grass compared to natural grass. The results are compared to the STC performance guidelines of 4m to10m for a Community Field and 4m to 8m for a Stadium Star.

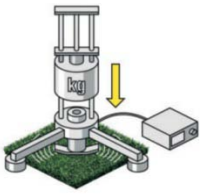


Rotational Resistance Test

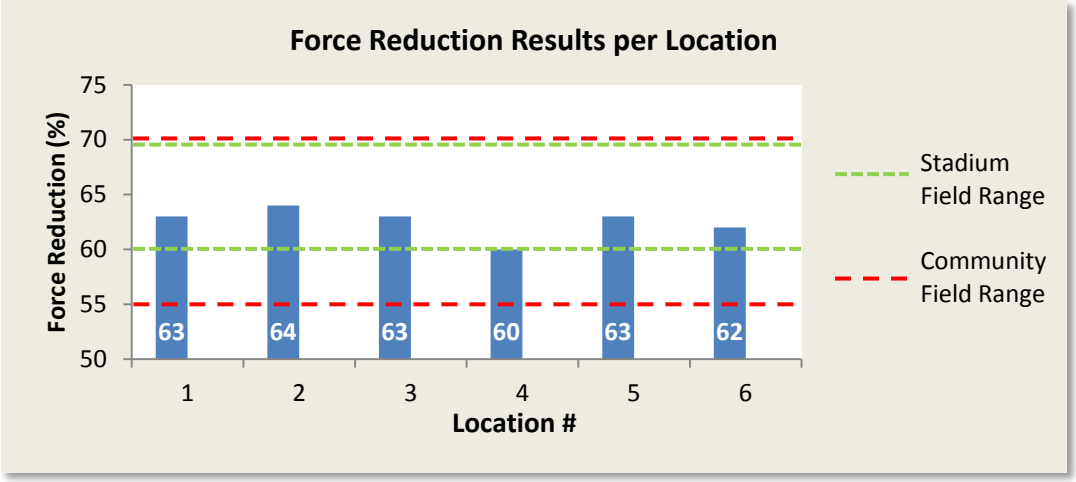
This test measures the interaction between the shoe sole and the surface of artificial grass relating to the ability of a player to change direction. The results are compared to the STC performance guidelines of 25Nm to 50Nm for a Community Field and 30Nm to 45Nm for Stadium Field.



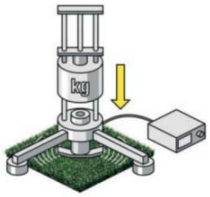
Force Reduction



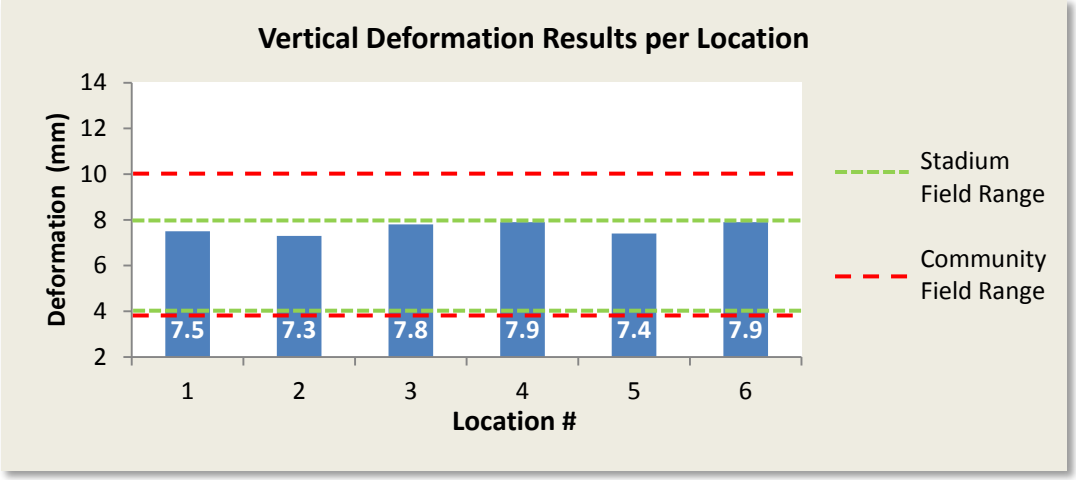
Measures the impact absorption provided by synthetic turf to a player running or falling on as well as the foot stability of the surface as a player runs across it. The results are compared to the STC performance guidelines of 55% to 70% for a Community Field and 60% to 70% for Stadium Field.



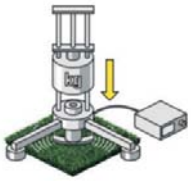
Vertical Deformation



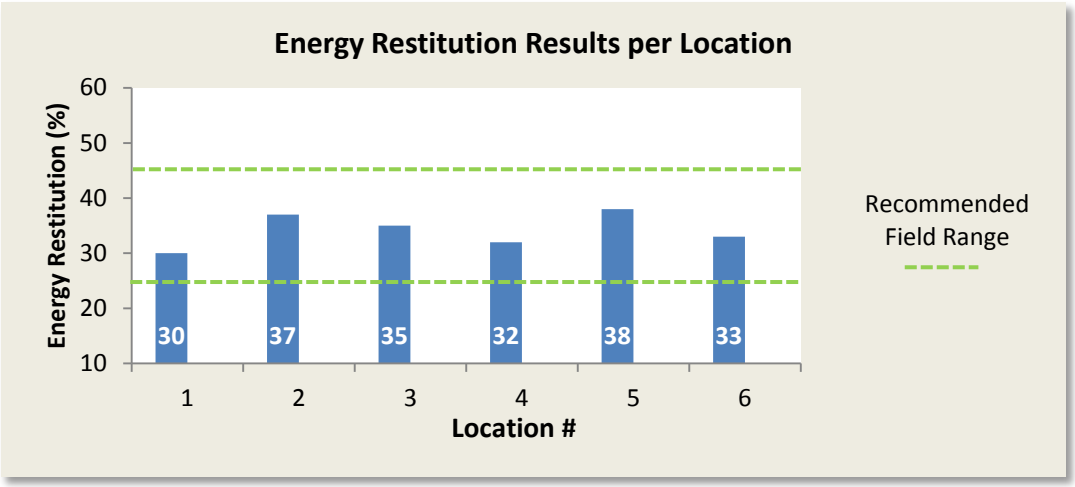
Measure amount a surface compresses as an athlete runs across it. This relates to speed of play as well as joint and ligament fatigue. The results are compared to the STC performance guidelines of 4 mm to 10 mm for a Community Field and 4mm to 8mm for Stadium Field.



Energy Restitution



Energy Restitution is defined as the energy returned as a percentage of the energy of compression. This can be thought of as the springiness of the surface. Although this measurement is not a part of the official standard, it is a useful measure. The recommended range is 25% to 45%.



Conclusion and Results Summary

The result for all of these tests performed met the requirements for a STC Stadium Field. The requirements for a STC Stadium field are the same as those specified in the FIFA 2-Star Standard.

Test Type	Community Field Passing Range	Stadium Field Passing Range	Test Position						Pass / Fail
			1	2	3	4	5	6	
Vertical Ball Rebound (cm)	*60 – 100*	*60 – 85*	83	82	84	84	85	84	**Pass**
Ball Roll (m)	*4.0 -10.0*	*4.0 -8.0*	6.3	6.0	6.0	5.9	6.1	5.9	**Pass**
Rotational Resistance (Nm)	*25 – 50*	*30 – 45*	33	35	31	37	33	38	**Pass**
Force Reduction (%)	*55 - 70*	*60 - 70*	63	64	63	60	63	62	**Pass**
Vertical Deformation (mm)	*4.0 - 9.0*	*4.0 - 8.0*	7.5	7.3	7.8	7.9	7.4	7.9	**Pass**
Energy Restitution (%)*	**25 - 45**	**25 - 45**	30	37	35	32	38	33	**N/A**
Infill Depth (mm)*	*N/A*	*N/A*	34	33	33	32	35	31	**N/A**

*These values are shown for reference only, and are not included in the STC standard.

ISA-Sport USA is here to assist you from evaluation of products through testing in the field to assure a proper installation and performance of your synthetic grass field.

Yours truly,

Jeffrey T Gentile
Field Testing Coordinator

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