

December 1, 2011

Mr. Thomas Johnston  
International Hurricane Protection Association  
2501 Floral Road  
Lantana, Florida 33462

RE: Test results for wind loading of wood structural panels as referenced in Section 1609.1.2 of the 2007 Florida Building Code, Building.

Dear Mr. Johnston,

This letter is being provided to summarize the results of the structural wind load testing which was recently performed by Architectural Testing, Inc. on OSB and CDX plywood sheathing at the Architectural Testing, Inc. test facility in Tampa, Florida. Included with this letter is Appendix A which includes a table containing details of each test specimen and the results they achieved.

For ARCHITECTURAL TESTING, INC.

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Shawn G. Collins, P.E.  
Manager – Regional Operations

SGC:

Attachments (2): Appendix A – Test Data  
Appendix B – Photographs

## Appendix A

### Test Data

Specimen No.	Panel Type	Fastener Type	Fastener Spacing	Maximum Pressure Achieved (psf)	Maximum Deflection at Midspan (Inches)	Failure Mode
1	15/32" CDX	1/4" diameter by 4" long hanger bolt with 5/8" washer and wing nut	1" from edge with 16" on center spacing and 2" embedment	35.0 psf	4.13"	While attempting 40.0 psf, the plywood pulled away from the fasteners on the right side of the unit at 33.2 psf.
2	7/16" OSB	1/4" diameter by 4" long hanger bolt with 5/8" washer and wing nut	1" from edge with 16" on center spacing and 2" embedment	25.0 psf	3.97"	While attempting 30.0 psf, the OSB pulled away from the two middle fasteners on the left side of the unit 10 seconds after load.
3	7/16" OSB	1/4" diameter by 4" long hanger bolt with 5/8" washer and wing nut	1" from edge with 8" on center spacing and 2" embedment	50.0 psf	5.41"	While attempting 55.0 psf, the OSB pulled away from all the fasteners on the right side of the unit at 52.6 psf.

- All specimens consisted of 4' x 8' panel sizes.
- All fasteners were installed on the 4' side of the panels; panels were orientated in a horizontal position
- All loads were in the negative direction only and were held for 30 seconds.
- Loading sequence began at 5.0 psf and was increased in 5.0 psf increments upon successful completion of each load level



**Architectural Testing**

Appendix B

Photographs



**Photo No. 1**  
**Specimen # 1**  
**1/2" CDX plywood with 16" on center spacing;**  
**test specimen after structural loading**



**Photo No. 2**  
**Specimen # 1**  
**Failure on right side at 33.2psf**



**Photo No. 3  
Specimen # 1  
Failure on right side at 33.2psf**



**Photo No. 4  
Specimen # 2  
7/16" OSB with 16" on center spacing**



**Photo No. 5  
Specimen # 2  
Failure on left side at 30.0psf**



**Photo No. 6  
Specimen # 2  
The two middle fasteners pulled through the plywood transferring point loads to the two end fasteners causing them to pull away from the 2x4 substrate and split the host wood bucking**



**Photo No. 7**  
**Specimen # 3**  
**7/16" OSB with 8" on center spacing**



**Photo No. 8**  
**Specimen # 3**  
**Failure on right side at 52.6psf**

