

Port Orange Tornado

STORM DAMAGE ASSESSMENT

July 24, 2009

A study of the installation of manufactured/mobile homes
and the effects of storm damage.



prepared by the



Bureau of Mobile Home and RV Construction
Division of Motor Vehicles
Department of Highway Safety and Motor Vehicles

MOBILE\MANUFACTURED HOME DAMAGE ASSESSMENTS FROM PORT ORANGE TORNADO

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MOBILE/MANUFACTURED HOME DAMAGE ASSESSMENTS FROM THE PORT ORANGE TORNADO

The Purpose for Mobile/Manufactured Home Assessments

In 1996, the Bureau of Mobile Home and RV Construction implemented the Mobile Home Licensed Installer's program in accordance with Section 320.8249, Florida Statute. This program includes the testing, licensing and sanctioning of individuals who install mobile homes. A major function of this program is training county and city building officials on how to inspect the set-up of a mobile home to ensure it meets the department rules. In addition to this training responsibility, staff also investigates complaints relating to improper installation of homes.

The Bureau also serves as an inspection agency for the U.S. Department of Housing and Urban Development (HUD) and monitors the construction of mobile/manufactured homes built in Florida. In July 1994 HUD amended its regulations governing mobile home construction to ensure that they were more resistant to wind damage.

The assessment of mobile home damage from different storms gives the Bureau insight as to the effectiveness of its Installation Program and HUD's Manufactured Home Construction and Safety Standards. The effectiveness of installation components, building department training and installer training is also measured.

Limitations of the Report

The purpose of this report is strictly for the use of the Florida Department of Highway Safety and Motor Vehicles to determine the effectiveness of current department administrative rules governing the installation of mobile/manufactured homes.

All statistics reported here are from two mobile home parks inspected. In addition, due to debris, entry into some mobile/ manufactured homes was not possible to make more specific determinations. Consequently, the statistics reported here are estimates. There may be differences between what is reported here and determinations by local building departments, insurance companies or other government agencies.

When reporting the number of homes "destroyed or non-repairable" the totals represent homes with severe roof damage to the point of the roof being blown from the home or the roofs being severely damaged allowing the intrusion of rain water.

**DEPARTMENT OF HIGHWAY SAFETY AND MOTOR VEHICLES
DIVISION OF MOTOR VEHICLES
BUREAU OF MOBILE HOME AND RV CONSTRUCTION**

**PORT ORANGE TORNADO
ASSESSMENT**

The National Weather Service confirmed an EF-0 tornado touched down in the city of Port Orange late Friday afternoon, July 24, 2009. An EF-0 tornado has winds ranging from 65 – 85 miles per hour. The residents reported seeing funnel clouds and one tornado on the ground around 6:25 pm. Only one minor injury from flying glass was reported.

Jim Roberts, Region 5 Coordinator with the State Emergency Response Team, stated that 154 homes received minor to major damage. The National Weather Service reported 7 homes destroyed, 8 heavily damaged, 26 moderately damaged and 122 lightly damaged. Their source was the Port Orange Fire and Rescue.

Two mobile home parks received damage from the tornado.

Lighthouse Pointe Mobile Home Park:

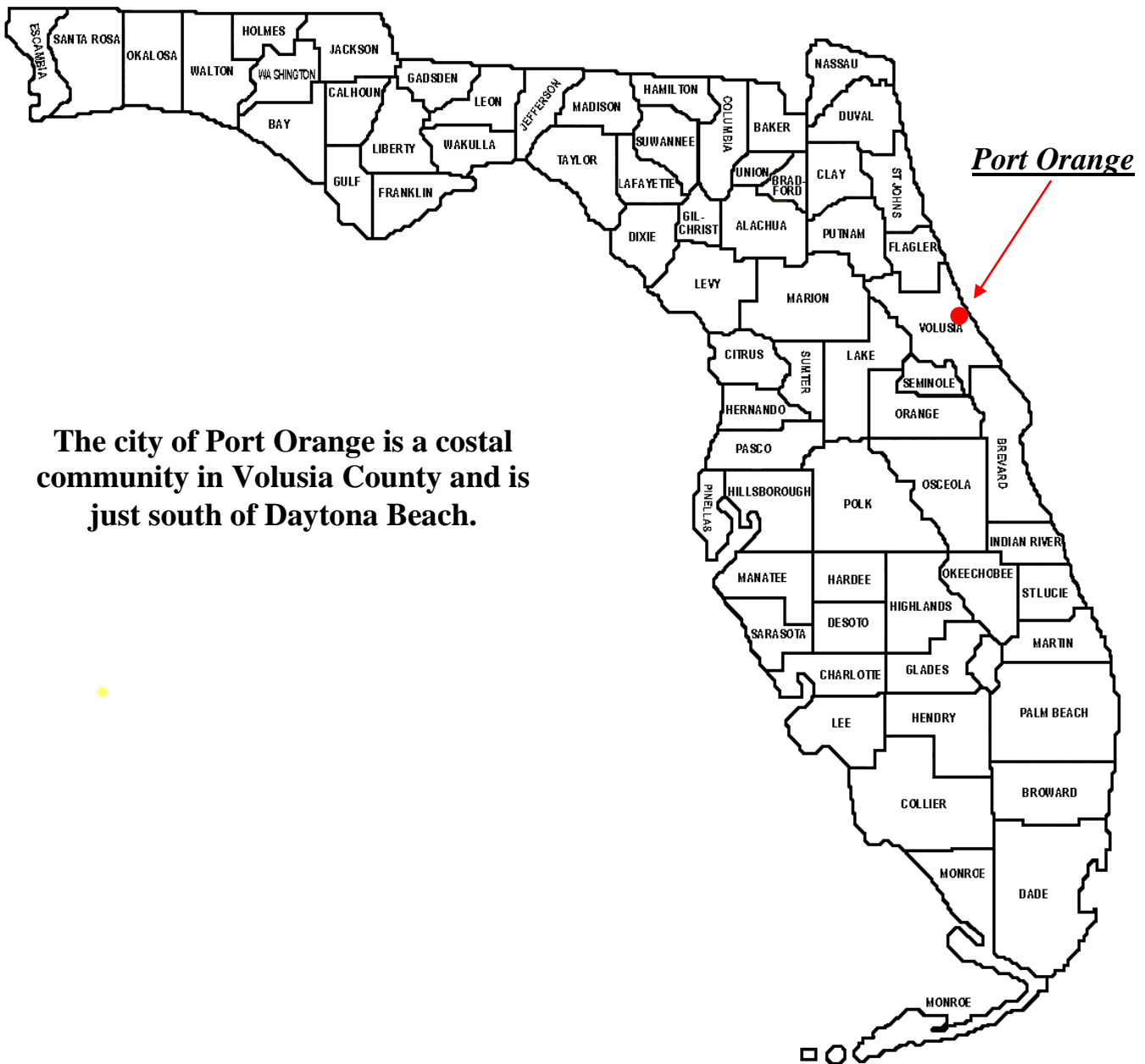
Approximately 40 homes received damage, but none of the homes moved on their foundations (piers). Most of the homes were pre and early HUD units. Most damage was to carports, aluminum attachments and roofs. Two homes appeared to be beyond repair with others from moderate to minor damage. After inspections from the insurance companies other homes could be declared a total loss due to the cost of repairs exceeding the cost of the home.

Laurelwood Estates:

Approximately 120 homes received damage, but none of the homes moved on their foundations (piers). Most of the homes were early HUD and 1980s units. Five homes appeared to be beyond repair. Approximately 115 homes received minor to moderate damage. Most damage was to carports, aluminum attachments and roofs. This park had its anchoring systems enhanced with the State's retrofitting program.

Bureau staff's assessment noted the homes destroyed were the result of carports being blown from the homes. The carports were attached to the roof membrane and as a result large portions of the roof were pulled from the home's trusses leaving the home exposed to rain water intrusion. More homes may be declared a total loss by insurance companies.

AREA OF COVERAGE



A satellite view showing the area of damage to the Lighthouse Point and Laurelwood mobile home communities.

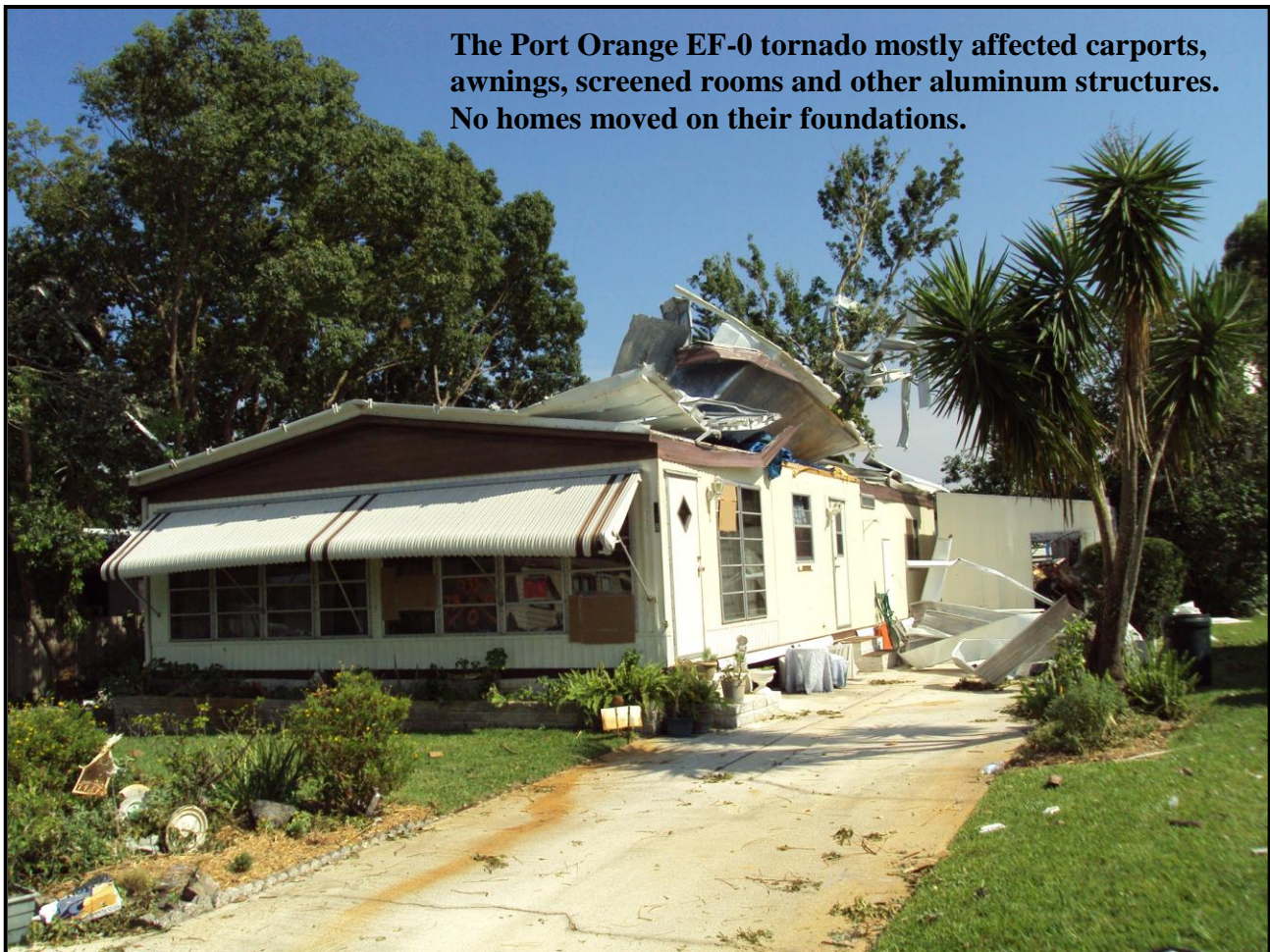


TABLE 1
PORT ORANGE TORNADO
A Study of Mobile/Manufactured Home installation in
Volusia County's Port Orange

Date of Inspection and Mobile Home Park Identification					Estimations						
Date	Mobile Home Park	Address	City	County	Age of park by decade	Homes in park	Homes destroyed or non repairable	pre 94 homes damaged	post 94 homes damaged	Homes flooded underneath	Homes flooded inside
7/25,27/09	Lighthouse Pointe	155 Spring Dr.	Port Orange	Volusia	70s	436	2	38	0	0	0
7/25,27/09	Laurelwood Estates	500 Lantern Blvd.	Port Orange	Volusia	70s - 80s	325	5	115	0	0	0
TOTALS						761	7	153	0	0	0

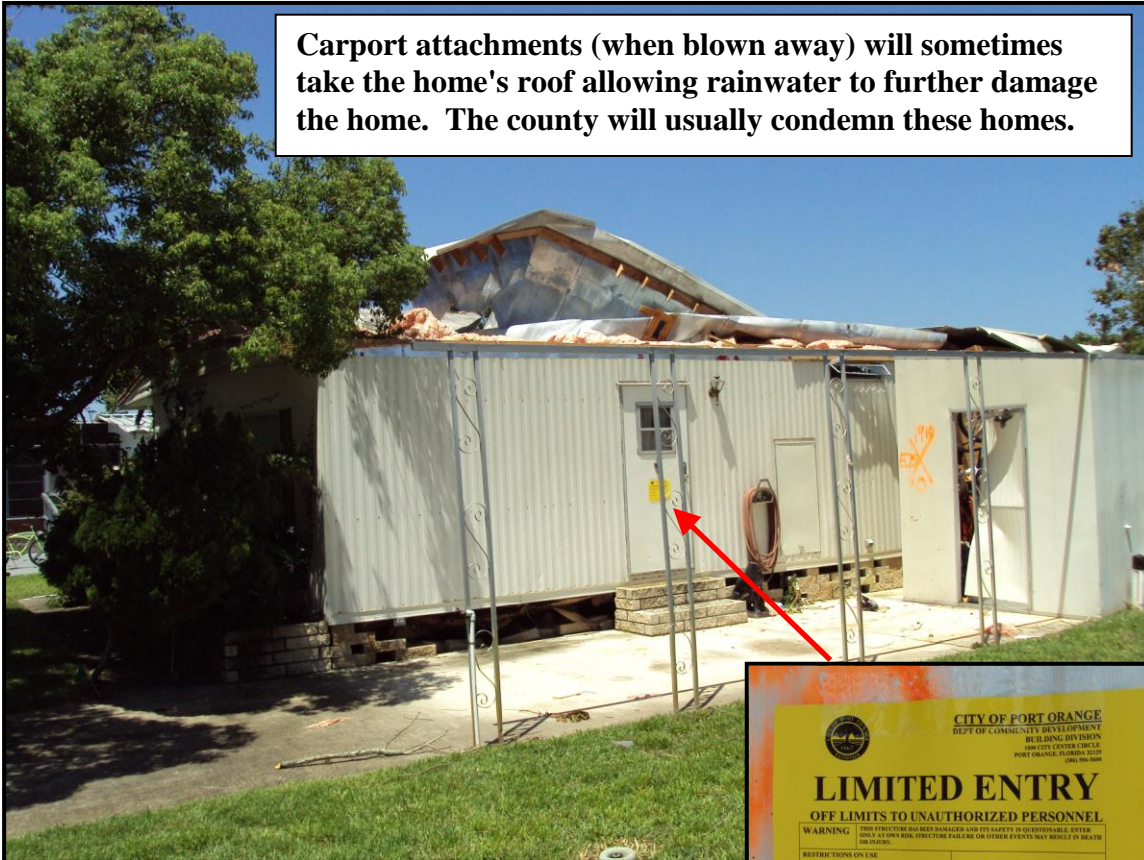


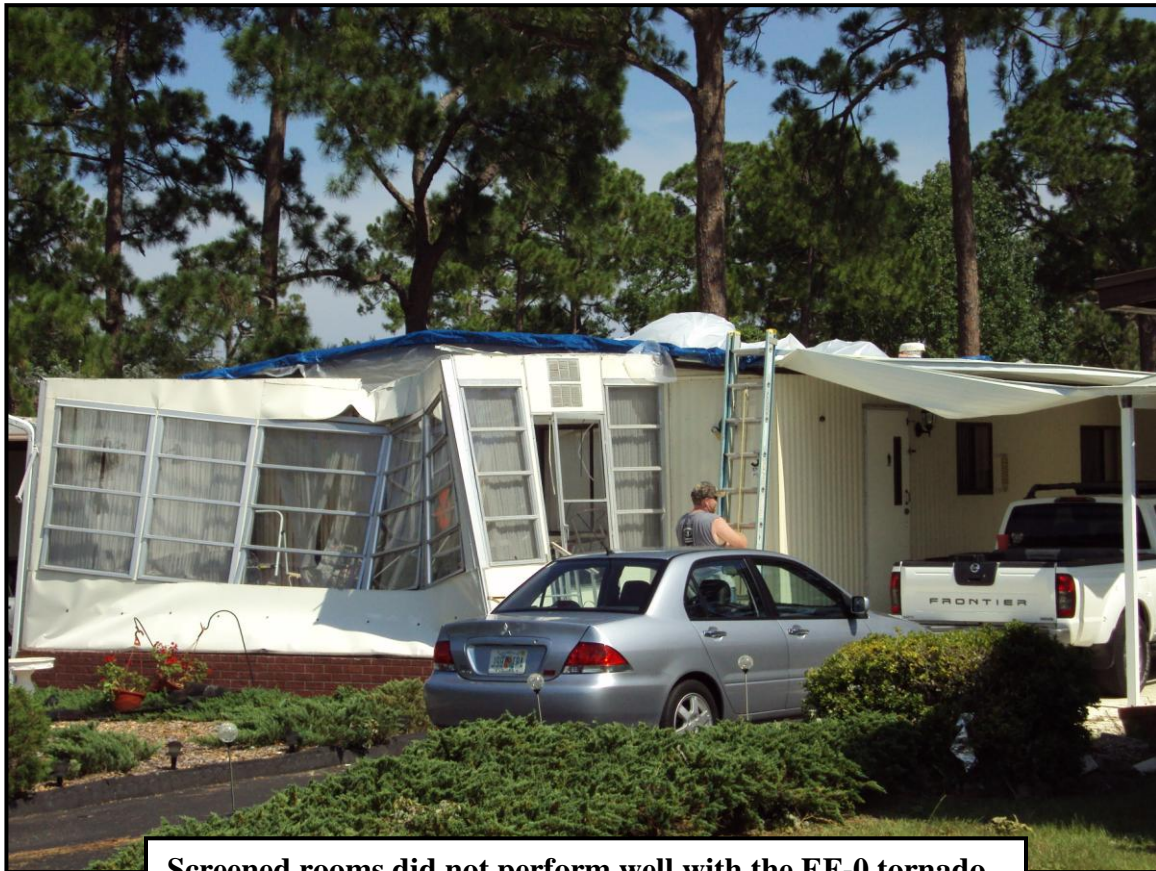
The two mobile home communities affected by the tornado in the city of Port Orange.



The Port Orange EF-0 tornado mostly affected carports, awnings, screened rooms and other aluminum structures. No homes moved on their foundations.

Carport attachments (when blown away) will sometimes take the home's roof allowing rainwater to further damage the home. The county will usually condemn these homes.





Screened rooms did not perform well with the EF-0 tornado.

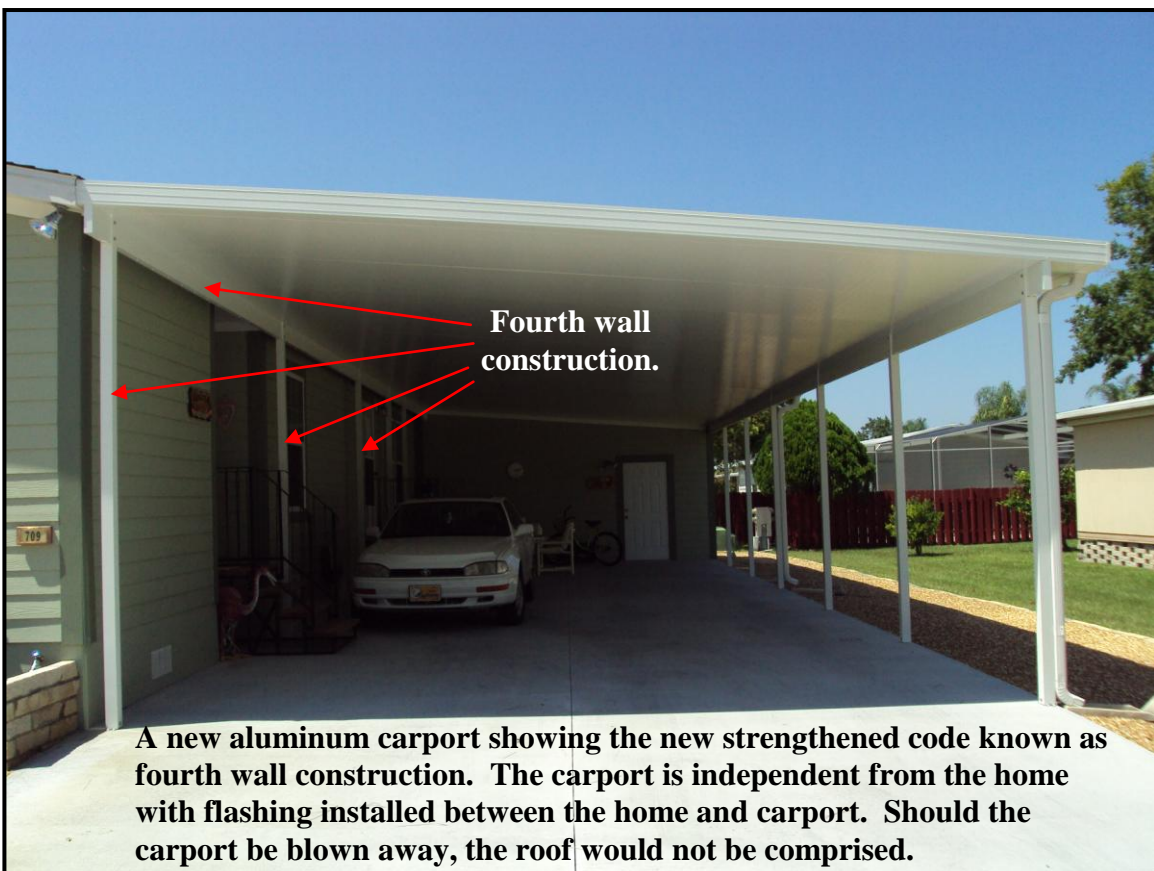




Other screen rooms and/or Florida rooms not performing well.

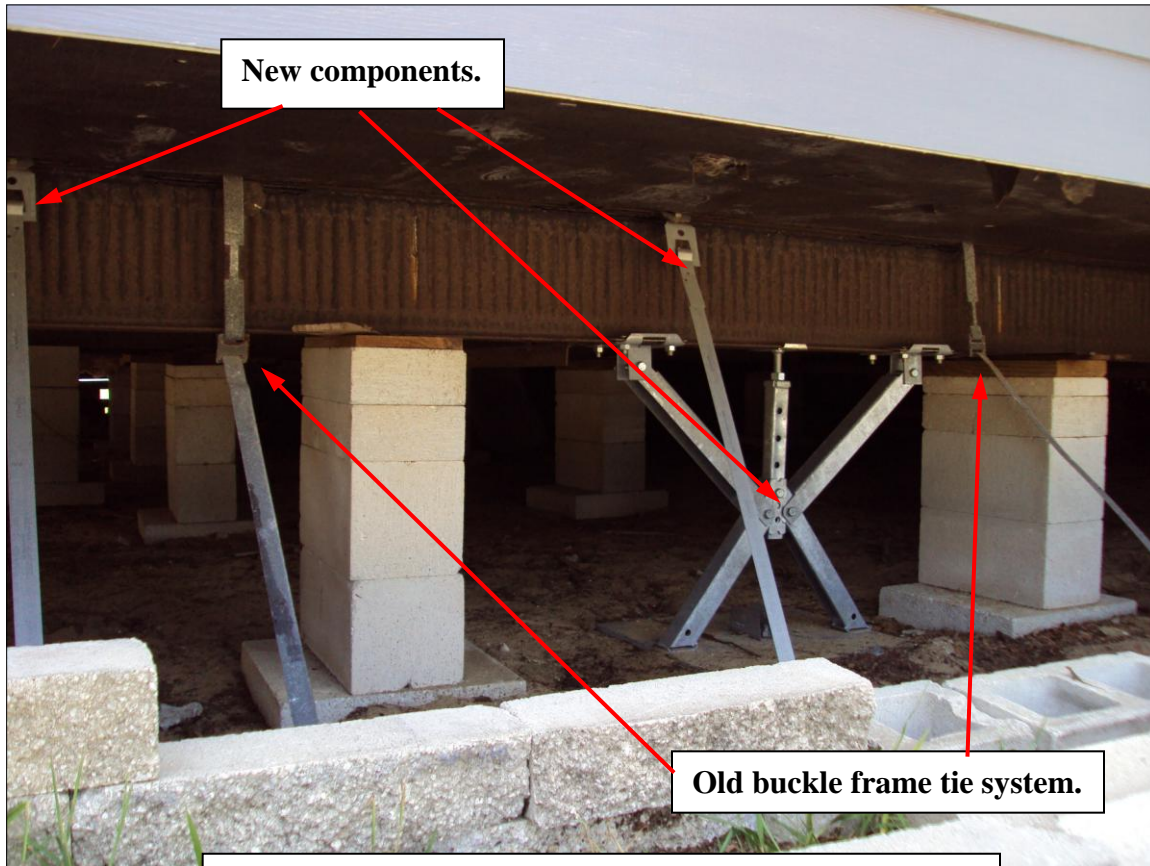


The Florida Building Code has strengthened its aluminum attachment requirements and evidence can easily be seen in this photograph. The carport on the right was built to the new strengthened code.



Fourth wall construction.

A new aluminum carport showing the new strengthened code known as fourth wall construction. The carport is independent from the home with flashing installed between the home and carport. Should the carport be blown away, the roof would not be comprised.



Laurelwood Estates was retrofitted with new products.





Governor Crist visited both Lighthouse Pointe and Laurelwood Estates mobile home communities.

