

P R O J E C T
SAFE WINDOWS

Documenting Injury and Loss Prevention
in Hurricane Charley



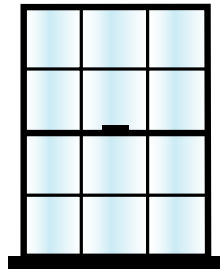
Interim Report

August 30, 2004

Protecting People First Foundation

Launches

“Project Safe Windows”



P R  J E C T
SAFE WINDOWS

Initiative to Document Injury and Property Loss Prevention In Hurricane Charley

Homeowners, Building Managements Asked For Help
In Identifying Injury, Property Loss Reductions

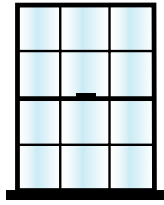
PORT CHARLOTTE, FL, AUG. 24 - The Protecting People First Foundation today launched an on-site study to document the contribution of impact resistant glass, safety film, hurricane shutters and other protective glazing technologies in preventing injury and property loss as a result of Hurricane Charley.

Staff assigned to Project Safe Windows will arrive in Florida tonight (Wednesday) and tomorrow to begin work on the study.

The Foundation has partnered with ABS Consulting, a global risk management firm, to analyze the performance of various forms of safety glass in the areas hardest hit by Hurricane Charley.

A team led by Dr. James R. (Bob) Bailey, who has served as a risk consultant, researcher, and technical manager for over 20 years, will perform the engineering analysis. He is experienced in areas related to wind engineering, construction materials, solid mechanics, dynamics, numerical analysis, structural analysis and design, and materials testing. Bailey holds a doctorate from Texas Tech and has performed sophisticated wind modeling work as well as window risk studies for NASA at the Kennedy and Johnson Space Centers.

Protecting People First and ABS are inviting the public and property managers to participate in this study by sharing data and experience on the performance of windows in homes, offices or public facilities performed during the hurricane. Individuals can participate by logging onto the Foundation's website at www.protectingpeople.org or by contacting Foundation officials at (401) 294-4444.



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“We have already received a good deal of anecdotal evidence of impact resistant glazing and safety window film making a big difference in preventing injury and dramatically reducing property damage in Hurricane Charley,” said Eric Cote, manager of the Protecting People First Foundation.

Cote cited studies of property damage by Hurricane Andrew in 1992 that showed some 65% of property damage claims were the result of interior water damage caused when flying debris or high winds destroyed windows, opening structures to the damaging impact of wind driven rain.

“Our objective with Project Safe Windows is to conduct a detailed analysis to validate these initial reports and document findings from an engineering standpoint,” Cote said.

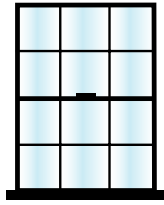
“If the experience with Hurricane Andrew and Charley tell us anything, it is that investment in safe windows ought to be at the top of any hurricane preparedness list,” he said.

Following its analysis of window performance in residences, businesses and public facilities, the Foundation will issue a report of its findings to government officials, the insurance industry, building code officials, the architectural and construction industry and the general public.

The Protecting People First Foundation was established in 1998 is to raise awareness of the hazards associated with natural and manmade disasters, and to promote the technologies available to mitigate these hazards.

The Foundation was created by Aren Almon-Kok, mother of one-year-old Oklahoma City bombing victim Baylee Almon, one of 19 children killed in the Oklahoma City bombing. Almon-Kok created the Foundation to honor the memory of her daughter and other bombing victims by promoting the lessons learned in the Oklahoma City bombing through a national education campaign.

The Foundation has focused much of its work in recent years on the promotion of safety glass technology to mitigate the impact of hurricanes, tornadoes and manmade disasters such as bombings.



PROJECT SAFE WINDOWS

Bon Secours Saint Joseph Hospital

Port Charlotte, Florida

Product: Laminated glass and security window film

Manufacturer: Old Castle Glass (PVB mfg. and window film mfg. unknown at this time)

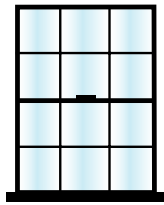
Project Highlights: This hospital stayed open during the entire hurricane and sustained major damage, mostly in the form of broken windows, roof damage and extensive water intrusion. The hospital was originally built in the 1960's and has undergone several major expansions since then. Its most recent expansion was a new emergency department that has laminated glass. This glass performed very well, with only one pane of laminated glass broken after the storm. In the older sections of the hospital, we saw evidence of shattered windows held intact by security window film. We also saw many tempered insulating glass units in which the outer lite of glass was shattered. Fortunately in these cases, the inner lite remained intact. In other cases, double paned windows on aluminum frames were blown open when metal latches holding them in place were sheered by the force of the wind driven windows. In these cases, massive water intrusion took place and patients had to be immediately evacuated to the hallways.



Some of the medical staff from the Bon Secours Saint Joseph Hospital are shown outside the new Emergency Department which withstood the hurricane force winds thanks to its laminated glass. The hospital remained open during the entire hurricane.



Taken from the roof of Bon Secours Saint Joseph Hospital, this image shows the massive damage done to this area of Port Charlotte, Florida.



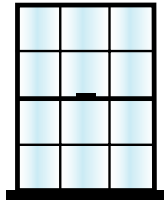
**PROJECT
SAFE WINDOWS**



This photo illustrates the power of the winds generated by Hurricane Charley. The window locking mechanism on this upper story window was sheered off by the force of the wind, forcing the window open and driving wind swept rain into the hospital. Patients had to be evacuated as this unfolded.



These overhead windows shattered in the storm but security window film kept shattered glass intact, preventing any falling glass in the hospital's main entrance.



PROJECT SAFE WINDOWS

Home of Liz Hutchinson

311 Taylor Street
Punta Gorda, Florida

Product: Security Window Film

Manufacturer: To Be Determined

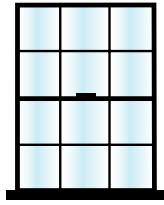


This image, taken on Friday afternoon before Hurricane Charley struck land, shows a quiet scene at the home of Liz Hutchinson. The photo below was taken Saturday morning after the hurricane passed over her town.



major water damage that destroyed many works of arts and a significant amount of framing equipment. This neighbor and her family, which included six adults and a dog, rode out this storm in an interior

Project Highlights: This is a very compelling story. Liz Hutchinson owns a modest sized bungalow built in 1929 near the town center. Her home is surrounded on both sides by nearly identical homes, neither of which had security window film. Liz's home had window film on all windows except a small attic window. All but two of her windows were shattered and it appeared that the damage occurred due to smaller wind-borne debris, mainly roof gravel. Her windows looked as if someone had shot them with a shotgun. The window film held all of the broken glass intact, and there was no water intrusion from any of these windows. Unfortunately, the small attic window with no window film installed on it did give way, which led to some minor water damage and a fair amount of roof damage. Liz is an accomplished artist and has many of her original paintings hanging on her wall. She was extremely grateful that her artwork was saved by the film. I happened to be on hand when Liz's insurance adjuster inspected her house. When asked for his reaction to how the film performed, the adjuster said, "This is unbelievable. I've never seen anything like this." He asked that his name not be used in conjunction with his comment. While Liz was very fortunate, both of her neighbors, one who is also an artist, were not so lucky. Shattered annealed windows in the front of the neighbor's house west of Liz's house allowed



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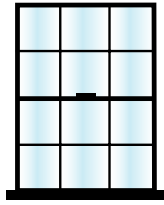
bathroom. The walls shook violently, and after the front windows blew out, the woman's husband had to struggle to hold the bathroom door from being sucked open. Her other neighbor suffered significant window damage from the same type of smaller wind-borne debris that struck Liz's bungalow. All three of these structures were built at the same time (1920s) by the same builder using the same construction materials. The window glass and frames were the same. Only Liz's had security film, and the resulting benefits were evident.



This image shows the shattered but intact window in the front of Liz Hutchinson's home.



This image dramatically demonstrates the difference in window performance between Liz Hutchinson's home at 311 Taylor Street and her neighbor's home less than 5 feet to the north that did not have security window film.



**PROJECT
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Home of Mr. Jessy Granado and Mrs. Teddie Jones

Punta Gorda, Florida

Product: Security Window Film

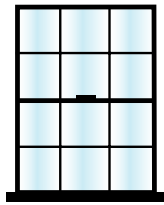
Manufacturer: Madico



Project Highlights: This was the older couple who had large sliders and had installed film on every window. They lost a small bathroom window to a piece of flying aluminum, which caused some water intrusion into the bathroom. They also had one window in an adjoining bedroom shatter, although the window film held the broken window intact and no water entered the house from this window. By comparison, the two homes on either side of the Granado and Jones home suffered major window failure. As a result, both homes suffered extensive water damage.

Mr. Jessy Granado and Mrs. Teddie Jones are shown in front of a large bank of sliders at their Punta Gorda home. The couple is pictured below in their bedroom where flying debris shattered a window. Security window film prevented any water intrusion into the bedroom.





PROJECT SAFE WINDOWS

Medicine Store (Pharmacy)

3124 Highway 41
Port Charlotte, Florida

Product: Security Window Film

Manufacturer: CPFilms

Project Highlight: This was an interesting combination success story. The pharmacy is located in a small strip mall that is anchored on one end by a two story doctor's office. All of the windows in this strip mall remained unbroken, despite massive numbers of broken store front windows in all directions from the pharmacy. In addition to protecting the pharmacy from the ravages of Hurricane Charley, the window film also deterred a looter from breaking into the store and stealing pharmaceuticals. This attempted break in occurred three days after the hurricane passed through. The thief was deterred from entering the pharmacy due to the presence of the window film. NOTE: While the security window film performed well during the storm, the roof of this strip mall did not survive the storm. As a result, the pharmacy sustained major water damage.



Nina Wallace, bookkeeper for a retail pharmacy in Port Charlotte, points to the impact point where a looter tried to break into the pharmacy to steal prescription drugs three days after the hurricane. Security window film deterred the robber. Nina is shown above, illustrating her store front windows, that were unaffected by the storm. In stark contrast, another image (right) was taken of a building less than one mile from the pharmacy that had no protective glazing.