

# Hurricane Protection Products

- **Your Main Choices**
- **Pros, Cons & Average Costs**
- **List of Local Vendors**
- **Further Reading**

*by Viviane Silverman*

# Hurricane Protection Products

## Letter from the Author:

*Within this document, I have done my best to lay out the most helpful information I have gleaned after four weeks of research and meeting with hurricane protection product representatives; and I have learned a lot! It is divided into sections, beginning with the least expensive product, and then moving upwards. Each section opens with product pictures, followed by its major pros and cons; at the end of each section, I have listed that product's average price per square foot.*

*Near the document's end you will find a page listing the major local vendors that I feel offer a good product for a fair price, along with their contact information, showroom locations and any Group discounts offered. The final page has online addresses for articles that I found especially helpful, with additional tips on how you can avoid damage to your home during a hurricane.*

*I hope that all of this information will prove helpful to you in knowing more about your options, and being able to better evaluate what hurricane protection products may be the right choice for you and your home. This is a very individual decision, and will depend on many differing factors, such as your home's location, the number of openings, if you are full time here, etc.*

*As for myself and my single family home in VillageWalk, these are my own priorities in considering new storm protection:*

- \_\_\_ Strong and reliable protection for all of my home's openings;*
- \_\_\_ Being able to close and open my shutters by myself quickly and easily, multiple times a season as needed (I live here full time);*
- \_\_\_ When my shutters are fully closed, I want a measure of natural light in my home;*
- \_\_\_ The best quality for my budget.*

*Once you feel you might know which hurricane protection is right for you, you will need to work directly with company reps to get accurate quotes and schedule installation. Happily, almost all of the vendors on my list have agreed to offer our group members a discount, so do mention our Group name to them – **“Viviane Silverman's Hurricane Group.”** If, later, you find out other product information that you feel conflicts with what you have read here, you must evaluate for yourself what resonates best for you; I hold no legal, financial or other responsibilities as to products or companies included in this document.*

*I am sure that whatever decision you make will be the right one for you and your home. Please remember that personal safety for you and yours always comes first, and to carry adequate replacement-value insurance for your home and its contents.*

*With All My Best Wishes, your VillageWalk neighbor **Viviane Silverman***

P.S. Unfortunately, I was unable to include a section on backup power generators here, mainly because this would have taken me 3–4 weeks more to research, and I felt it very important to get all of you this information on storm shutters and garage doors NOW. I was alerted that the price of aluminum is going up substantially on

November 1<sup>st</sup>, and may rise again later this winter, due to the enormous customer demand for hurricane products after Irma. So I encourage each of you to begin your shopping ASAP, if you want your home protected for our 2018 hurricane season. **Ken Rosemann will be posting on this topic on NEXTDOOR of Palmer Ranch; and when I do research generators, I will email my information to all of you then.**

# Hurricane Protection Products

## **The GOOD NEWS about most of the homes built within Palmer Ranch communities:**

- They are located well inland of the Gulf of Mexico, and are in Evacuation Zones D or E\* (*only Zones A & B, plus mobile home residents, were forced to evacuate during Irma*);
- They are around 20' or more above sea level, and so are safe from most storm surges;\*
- Most of our homes are very solidly built, with walls of poured concrete or concrete block\*, and roof supports tied down with stainless steel straps.\*

*\*You will need to check on your own home's specific construction via your HOA, through Sarasota County or via a home inspection.*

# Hurricane Protection Products

## **The LESS-GOOD NEWS about most of the homes built within Palmer Ranch communities:**

- Many of them still have the original builder-grade single pane sliding doors and windows, and non storm-ready garage doors, all of which will need serious hurricane protection;
- Many have only the builder-supplied metal hurricane panels, which are cumbersome to install and to take down, especially for older owners; and will make your home dark and depressing;
- As experienced during Hurricane Irma's sudden direction change towards Sarasota, many homeowners, whether in town or away, could not find needed help in installing their storm panels, and then in taking them down. This created tremendous anxiety and a feeling of helplessness, which many of us wish to avoid in the future.

# Hurricane Protection Products

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*More Tips on Protecting Your Home from Storm Damage*



# 1. Security Film

This is essentially a tough, clear, multi-layered polyester (PET) film that is bonded to your window and door glass with a very strong clear adhesive. The film's tints range from clear to grey; it can reduce the heat coming into your home by 60%, as well as lower the fading from UV rays by 99.9%. **Film cannot prevent the outside glass pane from being broken by extreme weather or by someone trying to break in; but it will hold the glass pieces together inside the metal frame, and continue to provide a strong barrier to keep your home safer from harm.**

This film used to be called “Hurricane Film”, until the impact glass window and door industry lobbied to have the product renamed “Security Film”, and to have it removed from coverage by the home insurance companies. The Security Film industry is now lobbying to reverse those measures. From what has been said by long-time film installers, the higher-rated and thicker security film is extremely tough, and did an excellent job protecting homes during Hurricane Charley; if the film was installed on the inside, the outside glass may still have broken from flying debris, but the film held itself in place inside its frame, and so continued to protect the home from major wind and rain infiltration. A small hole could not expand into a big hole, and could be covered up quickly by the homeowner during the storm with strong plastic and tape. Then once the storm had passed, they would replace the glass pane and the film. **In these cases, security film and glass replacement was a lot less expensive than buying high cost new impact-resistant windows and doors, which can also break during storms and will also need to be fully replaced.**

It is best not to try to install film yourself, but is essential to hire a professional and experienced security film company and installer; they can guide you on which film will be best for the features you are most interested in, and they will make sure to remove any old film and install the new film very carefully, removing any unsightly bubbles. Also make sure that the proper caulk is applied to seal the film's outside edges to the window or door's metal frame, in order to create a much tougher unit. Otherwise, with enough outside pressure, the whole glass pane with its film layer may separate from its metal frame, and fall inwards, opening up a huge hole into your home!

**You might wish to consider a combination of installing security film** *(to cut down on your energy costs, UV light, and improve your home security all year)* **and then add additional hurricane protection over each opening by storm panels, shutters or shades** *(see following product sections).*

# 1. Security Film

- **PROS:** One of the less expensive options.
- Creates extremely strong layer against impact from storm debris or attempted break-in; will keep glass from flying around inside the home, and keep any hole created small.
- Final result is clear, so will not cut down on natural light or distort your outside view.
- Always in place; does not take up additional storage room.
- You should not need your HOA's approval on adding film, unless it is noticeably tinted (***check with your HOA on this***).
- **CONS:** They cannot prevent the glass pane they are adhered to from breaking; but they will keep its pieces mostly attached to the film, with any broken glass falling outside of the home. ***TIP: To keep storm debris away from the glass, you may wish to consider also adding clear lexan storm panels over your windows, and aluminum shutters over your doors and sliders (see later product sections)***.
- You should not consider installing these films as a DIY project; they are tricky to install, and any bubbles left under the film and adhesive are extremely distracting. You should hire a security film professional to install this (***see Vendor page at end of this document***). Also, make sure that all the film's edges are properly caulked and adhered to the window or door's metal frame, to end up with a much stronger final unit.
- **AVERAGE COST:** \$7– \$12 per square foot.\*
- **Average storm preparation time:** None.

\* per Consumer Reports

## 2. Metal Corrugated Panels



**TIP:** You can bring more light into the house by adding in some clear Lexan panels, which are shaped the same as the metal ones and install the same way **(left)**.

**These heavy and sharp-edged metal panels are corrugated, and install overlapping each other, and so are very resistant to strong winds and debris.**

Some things that you might consider are:

- 1) Will you need to hire someone to install and take them down?
- 2) How will you feel inside a dark house?
- 3) How much storage space will they take up in your garage? **(right)**





## 2. Metal Corrugated Panels

- **PROS:** Made of aluminum or galvanized steel; very strong and secure, once installed correctly.
- This is your least expensive option. **TIP:** *If you wish to replace these with new shutters, they could be sold (at about \$1.00 per linear foot, including hardware), or donated to Habitat for Humanity for a tax deduction.*
- **CONS:** They tend to be heavy, awkward and sharp-edged, and many older homeowners need to hire someone to install them; the installation fees can add up over time, and installers may be overwhelmed and prove hard to hire during an imminent hurricane.
- They make the interior of your home a completely dark box for a storm's days or weeks, which many find depressing. (**TIP:** *Add some clear polycarbonate storm panels to bring in light.*)
- Your HOA may require you to remove these shutters a short time after each hurricane, meaning they may have to be put up multiple times during one storm season. (*Check your HOA's rules on this; for instance, VillageWalk allows them to be left up for 1 –2 months if the HOA is notified in advance in writing, a convenience for seasonal residents.*)
- They take up garage storage space the rest of the year; and if they are not labeled and keyed properly to each opening, then stored in the correct order, they will be harder to install next time.
- **AVERAGE COST:** \$7– \$8 per square foot.\*
- **Average storm preparation time:** 15 minutes per window depending on the size.\*  
**NOTE:** *Tall panels over sliding doors are more difficult and time consuming to install.*

\*Excerpted from the SunSentinel article: "Hurricane shutter guide: Compare types" –  
Copy & paste into your browser: <http://www.sun-sentinel.com/news/weather/hurricane/sfl-hc-shutterguide-htmlstory.html>

### 3. Clear Polycarbonate Panels



*These clear polycarbonate panels – whether flat\* (left) or corrugated (below) are very strong and let in a lot of light; you may be able to use the same tracks and hardware as you have used for your metal shutters. Be aware that they are wide and can be floppy, so the tall ones will be a two-person job; and they are not recommended for over sliding doors as they restrict access.*

*\*The flat panels shown to the left are available from [Hurricane Safe Products](#); see vendors, p. 22.*



**NOTE:** *These panels are plastic, so will scratch, and will also yellow with long-term sun exposure (of 5 years or more); corrugated panels will somewhat distort your outside views (left). They also need a good amount of dedicated garage storage space the rest of the year (a few panels are shown stored at right).*

### 3. Clear Polycarbonate (Lexan) Panels

- **PROS:** Just as strong and secure as the metal panels, once installed correctly.
- They allow a lot of natural light to enter your home. If properly sealed, the flat panels can also act as storm windows, cutting down on your summer energy costs. **TIP:** *Try to find panels that have been “rolled” rather than “pulled or extruded” during production – this produces smoother surfaces and less visual distortion; they should also be crystal clear, although all will scratch easily, and will yellow over time. “Clear Tek” is one recommended brand name, among others.*
- The corrugated panels can be installed using the same tracks and hardware from your metal shutters. **NOTE:** *Tall corrugated Lexan window and door panels will bend outwards with high winds, and so may slip out from under U-shaped top channels; so they should be secured at both top and bottom with bolts and wing nuts. NOTE: The flat panels use a different style of attachment (see picture on previous page) which also absorbs the shock of debris impact, so your old metal panel tracks will need to be removed and those holes patched and retouched with paint before the new panels can be installed.*
- Many HOAs allow you to install clear panels and leave them up for the entire storm season, saving you time, work and money (*check with your own HOA about this.*)
- **CONS:** The flat panels look different, so you will be responsible to obtain your HOA's approval first.
- As tall panels are wide and floppy, installing them over tall windows or doors will be a two-person job.
- The outside view through corrugated panels can be visually distorted, or scratches on flat panels may become hard to ignore; the panels will restrict access when installed over your sliders or other doors.
- These panels take up a lot of storage space in your garage during the winter season; each panel will need protection to avoid more scratches during handling; if they are not arranged and labeled correctly, they will be harder to organize and install next time.
- **AVERAGE COST: \$14 per square foot.** \
- **Average storm preparation time:** 15 minutes per window, depending on the style and size.\*

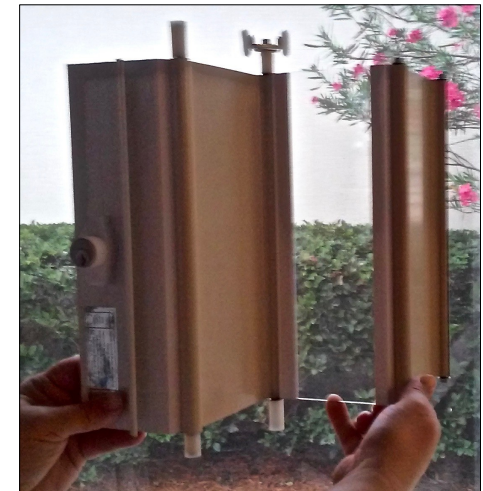
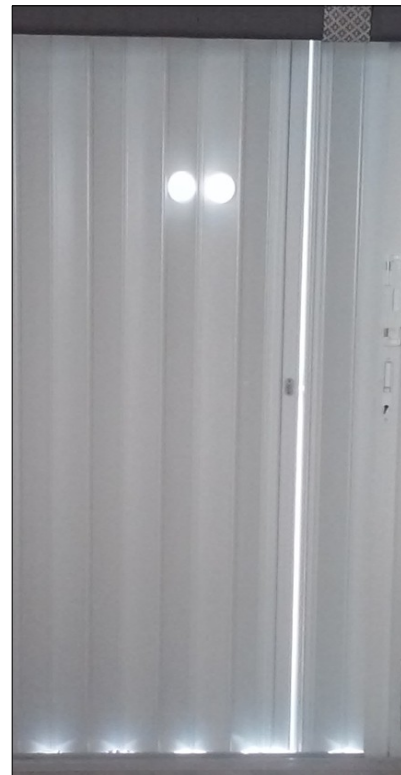
## 4. Aluminum Folding Hinged Shutters



These manual shutters are very strong, always available to close quickly for storms (**left**), easy to operate by one person (**far left**), and require very little maintenance. **At a medium price level, they are a good value.**

To bring in some natural light during a storm, for a small upcharge some companies will insert clear polycarbonate "porthole windows" (**below & below left**); or clear slats\* (**below bottom**).

*\*Slats only available at [Shade and Sheild](#).*



## 4. Aluminum Folding Hinged Shutters:

- **PROS:** The least expensive of the aluminum shutters, a good value for the price. Very strong, although they can be dented by flying projectiles; keep in mind that individual dented panels can be replaced later reasonably.
- They do not require extra storage space, as they are permanently installed on the outside of your doors and windows. They are always ready for individual homeowners to easily and quickly close and open them without help. With added keyed locks, they offer a good theft deterrent.↓
- They come in four long-lasting, powder-coated finishes to be more compatible with your home's look.
- When closed, their zig-zag design allows a little opening space and natural light at the top and bottom. Additionally, some companies will install small clear round polycarbonate “porthole windows” within individual panels for about \$20.00 each; one offers clear polycarbonate panels at about \$25.00 each\* (**see previous page**).
- They are low maintenance, which can be done by you or a company. Before storm season, the tracks will need to be hosed out to remove mud-dauber nests, dirt and dead insects, so the panels will glide smoothly when closing; the top wheels will need a spray of silicone; and the velcro strip that secures the opened and folded panels does dry out over time and will need replacing every few years (*velcro strips or rolls can be found at Lowes, etc.*)
- **CONS:** You will be responsible to obtain your HOA's approval before having them installed.
- Without any clear porthole windows or clear panels installed, the inside of your home will be very dark.
- The narrow panels are somewhat visible when stored folded up at a 90 degree angle to your house wall (**see previous page**), and you may feel this changes the look of your home.
- **AVERAGE COST: \$16-\$20 per square foot.↓\*** **TIP:** *If you wish to save some money, consider installing less expensive clear polycarbonate panels over windows you don't look out of often, and using accordion shutters only over your entryway, sliders, and the windows where an undistorted/unscratched view are more important.*
- **Average storm preparation time:** 15-30 minutes for an entire house.\*\*

\*The clear polycarbonate shutters are available only at the local company *Shade and Shield*.

\*\*Excerpted from the SunSentinel article: “Hurricane shutter guide: Compare types” –  
Copy & paste into your browser: <http://www.sun-sentinel.com/news/weather/hurricane/sfl-hc-shutterguide-htmlstory.html>

## 5. Aluminum Roll-Down Shades



These permanently-installed and very strong aluminum shades remain enclosed inside their box above the window or door when not in use. When needed, they are lowered within two side tracks (**above**), either manually by a hand crank, or automatically by a motor and push-button remote. The shade's lower edge inserts into a bottom track for additional protection from storm wind and rain. **Because of all of these quality features, roll-down shades are on the higher cost end of storm protection products; with motors included, they come out to almost double the price for accordion shutters.**

During a storm, you can bring some natural light into your home by either adding some polycarbonate “viewing slats”\* (**upper right**) – about \$40.00 for three; or by temporarily opening (**but never during wind and rain**) a little space between the slats (**lower right**).



*\*NOTE: Make sure a company's viewing slats are proven to be hurricane tested and rated before installation, or your shades may fail County inspection.*

## 5. Aluminum Roll-Down Shades

- **PROS:** Are very strong, can be single or double walled; and any slats dented by projectiles can be replaced later reasonably.
- Because the horizontal slats overlap and the shade's outside edges stay within metal tracks, they are excellent at keeping wind and rain away from the front surface of your windows and doors. **NOTE:** *If wind-driven water collects and rises high enough at the base of your sliders, this standing water will probably find its way into your home. Two suggestions I have seen for that problem are to either sandbag outside, or to look up how to create an internal dam at the inside bottom of each door with strong plastic sheeting and water-resistant tape (among many other useful tips found in the online article "Hurricane Retrofit Guide;" find its web address on p. 23 of this document).*
- House openings can easily and quickly be made storm-ready by one person.
- Offer some of the best protection, and make an excellent theft deterrent.
- You can bring some natural light into your home by adding clear "viewing slats", around \$40.00 for three slats.
- **CONS:** Most expensive of the popular shutter systems, especially if motorized with a remote control.
- Push-button-operated roll-down shutters require a battery backup system, and/or a manual backup crank, so the shutters can be lowered and raised during power outages.
- It is advised to test motorized shades often, especially before storm season, to make sure that the motors and back-ups are working properly. **NOTE:** *Power surges can burn out motors (cost = \$300--\$500 ea.); have motors replaced by pros.*
- They should have a maintenance cleaning of all the tracks and the crank before storm season, to remove any mud-dauber nests, dirt and dead insects.
- **AVERAGE COST: \$30 – \$55 per square foot.\*** The cost of automated aluminum shades runs close to double that of manual accordion shutters.
- **Average storm preparation time:** Minimum; one of the easiest shades to operate.

\*Excerpted from the SunSentinel article: "Hurricane shutter guide: Compare types" –  
Copy & paste into your browser: <http://www.sun-sentinel.com/news/weather/hurricane/sfl-hc-shutterguide-htmlstory.html>

## 6. Roll-Down Hurricane Cloth Screens:



Some advantages of roll-down cloth screens are that they are easy to lower and raise (***top two pics***), they let in filtered light and you can see through them to the outside view (***lower left***). **But there are also some serious negatives to consider (see CONS on next page).**

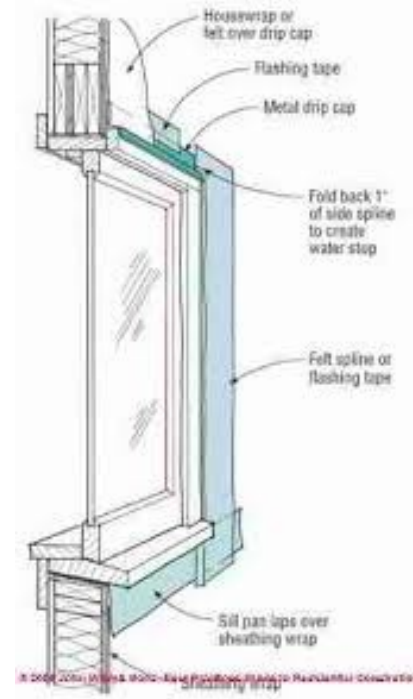
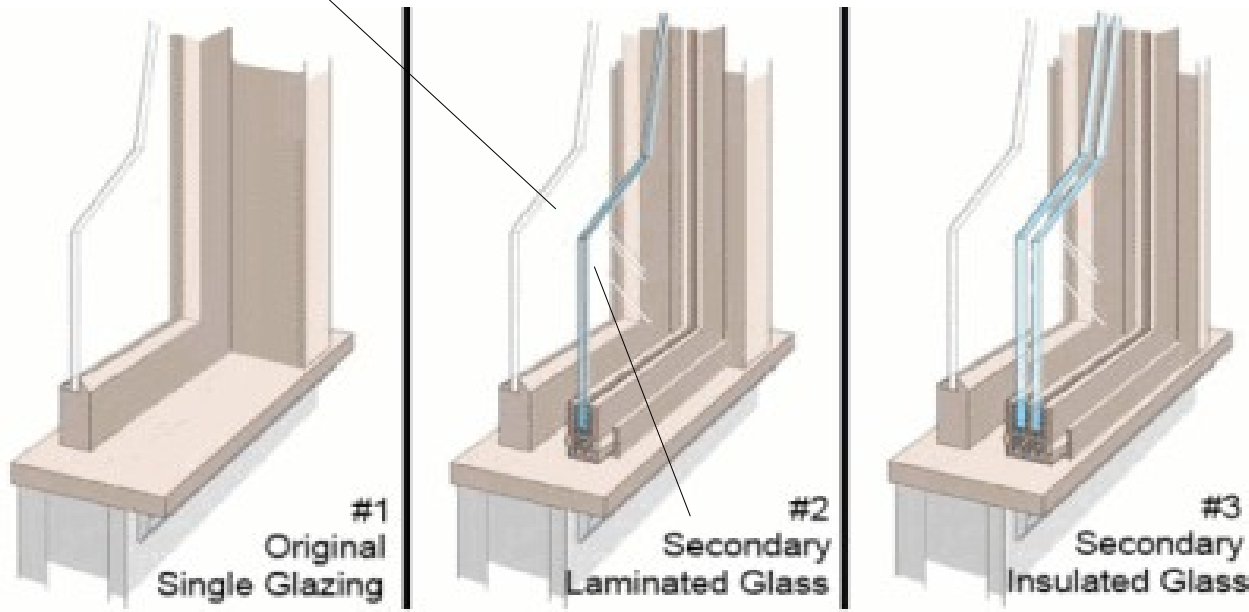


## 6. Roll-Down Hurricane Cloth Screens

- **PROS:** Are very good at keeping out wind and rain (except for some water seeping in under the bottom).
- Are permanently affixed above the openings, and so do not take up any garage storage space. The colors can blend in fairly unobtrusively with your home's style and trim color.
- Home can easily be made storm-ready by one person; a number of screens can be operated by the same remote control at the same time.
- Let in quite a lot of filtered light, and you can see through them to outside views.
- **CONS:** Motorized shades are in the most expensive tier of the popular shutter systems.
- They will require a manual backup crank, so the shades can be lowered and raised during power outages. It is advised to test them often, especially before storm season, to make sure that the motors and back-ups are working properly. **NOTE:** *Power surges can burn out motors (cost = \$300--\$500 ea.); have them replaced by professionals.*
- They should have a maintenance cleaning of all the tracks and the crank before storm season, to remove any mud-dauber nests, dirt and dead insects.
- The cloth is quite flexible: if hit with a projectile, the pressure can break any glass that is touched behind it. So it should never be installed closer than 4—6" in front of a narrow window, and no closer than 3 ½ feet in front of a wider window or sliding glass door. Also, as the cloth can be easily cut with a knife or razor, these screens are not good for home security.
- It has been reported that many of these cloths will seriously disintegrate into a powder after a 10 year exposure to heat, humidity and sun; also, there has been tearing found where the cloth rubs against its side tracks. **TIP:** *The brand "Omega Tex" by Twitchell has been recommended as one of the best on the market; its company offers a full 10 year warranty.*
- **AVERAGE COST: \$30 – \$55 per square foot.\***
- **Average storm preparation time:** Minimum; probably the easiest shutter to operate.\*

# 7. Impact-Resistant Windows and Doors

The single “sacrificial glass pane” should always be found on the outside of the window.



To prevent later leaks and damage, a careful professional installation, including the parts inside your wall (**left**), is as important as the quality of the product itself

Impact-resistant windows and doors have been shown to lower your home's energy costs and greatly reduce its UV exposure. However, some sellers' claims that by themselves they will withstand all of a hurricane's intense rain, wind and flying debris, may be false promises. There are recent reports that new impact windows and sliders have suffered breaking, along with serious wind-driven water infiltration and frame damage during hurricanes Charley and Irma, with resulting damage to interior walls and flooring. Be aware that they may need the additional protection of storm shutters or shades over them to be truly effective. **As this product is a very expensive option, do thorough research on all their Pros and Cons before deciding to buy them primarily for storm protection.**



Florida tests hurricane products by changing wind tunnel pressures on them repeatedly, and by shooting large pieces of wood out of a cannon at high speeds (**left**). **The resulting product test score is the FL# (State Product Approval Number);** for us, products should be rated at 150 – 180 mph windspeed. Keep in mind that these test conditions are not nearly as powerful as the wind, rain and debris damage <sup>18</sup> done during a hurricane.

## 7. Impact-Resistant Windows and Doors

- **PROS:** By its frame solidity and added insulation between separate panes of sealed tempered and safety glass, this product has been shown to lower your energy costs and outside noise, and reduce UV light entering your openings by 99%. It also offers very good security protection, as safety glass is extremely difficult for burglars to break, plus the slider locks have been improved to hook in at both the top and bottom, inhibiting lifting and moving the door from the outside.
- **NOTE:** There should be a single pane of tempered glass on the outside of the window; called the “sacrificial glass”, it is the first pane to break upon impact, with its pieces falling safely outside the home. The second pane of sandwiched “safety glass” is similar to a car's windshield, with a durable and clear plastic-like layer bonded with heat between two pieces of tempered glass. Upon strong impact, these “safety layers” do flex a little, but they can also break if hit hard enough. The strong plastic center should prevent a large hole from forming; also, the broken glass shards are supposed to cling to the plastic layer, rather than flying around the room\*, with resulting serious cuts to people and damages to your property.
- **CONS:** It is the most expensive option, and must be installed correctly by a pro window and door contractor. All parts must be of equal strength: the safety glass, the heavy frame, the tracks, surrounding wood framing, screws and caulking. Any shortcuts to the installation will result in water leaks, wall damage, and failure during a hurricane.
- After recent hurricanes, it has been reported by industry contractors that even impact windows and doors do leak quite a bit of wind-driven water into the home, with resulting serious water damage to walls and flooring. \*Large flying debris has been known to completely break all the layers of the safety glass, resulting in sending glass shards flying through the inside of the home. Also, very strong winds can twist the frames as well, so that the entire expensive unit has to be replaced, not just the glass. After Irma, some Sarasota area buildings with recently-installed impact doors and windows are now having to also have hurricane shutters installed over each of these openings, in order to keep the horizontal wind-driven rain and flying projectiles from directly hitting the exposed glass.

**After hearing about these very real problems, my own feeling is that the sales pitch “With 'hurricane-proof' doors and windows, you won't need any other hurricane protection.” is either misinformed or, worse, misleading. You may spend \$35,000 – \$45,000+ on impact-resistant doors and windows, only to find your home badly damaged anyway during a hurricane; then you will have to spend more money repairing the damaged products, plus you will also need to install hurricane shutters or shades to further protect each impact opening. So please do serious research before purchasing these impact products primarily as hurricane protection. You might save a lot of money and get better hurricane protection by keeping your current doors and windows, and covering them with good quality hurricane panels, shutters or shades.**

- **AVERAGE COST:** \$35 – \$50 a square-foot,\* including new frames, tracks and layered hurricane glass.
- **Average storm preparation time:** None\*.

## 8. Storm-Ready Garage Doors



**About 80% of residential hurricane wind damage starts with wind entry through the garage door. Along with protecting your windows and doors, it is vital that you also make sure your garage doors up to current hurricane Fla. Building Standards and County Code, and thus strong enough to stand up against hurricane force wind, rain and projectiles. *NOTE: Most of our older garage doors do not measure up (see how to check their storm rating on the following page). As your home's biggest opening, if it is blown inward or pulled out, which is very common, not only will your car and all the garage contents be ruined (above); the resulting increase in internal pressure can blow the roof off right off your house (left). This can also create other tears and fissures in the home's walls that allow rain and water to invade it and then damage your drywall, flooring and furniture.***

# 8. Storm-Ready Garage Doors

In a hurricane, failure of the garage door – the biggest hole in our homes -- leaves a breach in the house envelope that can be as big as 300 square feet. The resulting increase in inside pressure can blow the roof off a house or create other tears and fissures in the home that allow rain and water to invade and then damage or ruin drywall.



*(Left) Backing your car against the garage door provides little additional bracing. It may help brace the panel the car bumper pushes against from positive (inward acting) pressure; but, it will do nothing to help with negative (outward acting) pressure. It just puts your car closer to possible debris impact damage .*

*If your garage door is relatively new, but not rated as “storm ready,” rather than replace it you could use a garage door reinforcement kit (right); or you could add storm shutters or roll-downs over the entire outside of the garage.*



## Garage Doors Hurricane Reinforcement Kits

**PROS:** Will upgrade your door to be strong and secure; the metal rods can be stored nearby in garage. **New kits run \$500 or over, plus the cost of installation.**

**CONS:** It will take between 40 and 60 minutes to install each time; its mounting hardware needs to be in place beforehand, with holes being drilled into your garage floor. It will need to be removed each time you need to use the car, and takes up storage room.

## New Storm-Ready Garage Doors, Tracks and Hardware

**PROS:** Strong and secure, made of galvanized steel and polycarbonate windows, with reinforced braces, struts, spring and mounting hardware; always in place and ready for hurricane protection; no prep time and no need for storage space.

**CONS:** It is the more expensive option, will require a site visit, and must be installed by professionals; the heavy door, spring, chain and motor must all be paired and balanced correctly during installation, in order for the garage door to be reliable and safe to operate. Hire a company with garage door expertise that you can trust. **Costs, including materials, installation, the County Permit and Inspection, range between \$733.00 for a single car garage, to \$1,085.00 for a two-car garage.\***

*\*Estimate from D&D Doors for a white storm-ready steel garage door, motor not included. But your current working motor should be able to power a new storm-ready garage door.*

GARAGE DOOR WIND LOAD GUIDE – VALUES IN PSF									
Based on ASCE7-05 Standard & 2009 – 2009 International Building Code, Exposure B, 85 – 150 MPH Basic Design Wind Speed, MPH									
Mean Roof Height	Door Size	85 MPH	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
Less Than 30 Feet	Nominal Wind Speed →	85	90	100	110	120	130	140	150
	Single 9' x 7'	11.4	12.8	15.8	18.1	22.8	26.7	31.0	35.6
	Double 16' x 7'	-12.8	-14.5	-17.9	-21.6	-25.8	-30.2	-36.1	-40.2
	Double 16' x 7'	10.9	12.3	15.2	18.3	21.8	25.6	29.7	34.1
		-12.2	-13.7	-16.9	-20.4	-24.3	-28.5	-33.1	-38.0
Based on ASCE7-05 Standard & 2009 – 2009 International Building Code, Exposure C, 85 – 150 MPH Basic Design Wind Speed, MPH									
15 Feet Single Story	Nominal Wind Speed →	85	90	100	110	120	130	140	150
	Single 9' x 7'	13.9	15.6	19.2	23.2	27.7	32.5	37.7	43.2
	Double 16' x 7'	-15.7	-17.6	-21.7	-26.3	-31.3	-36.7	-42.6	-48.9
	Double 16' x 7'	13.3	14.9	18.4	22.3	26.5	31.1	36.1	41.4
		-14.8	-16.6	-20.5	-24.8	-29.5	-34.7	-40.2	-46.2
25 Feet Double Story	Nominal Wind Speed →	85	90	100	110	120	130	140	150
	Single 9' x 7'	15.4	17.2	21.2	25.7	30.6	35.9	41.6	47.8
	Double 16' x 7'	-17.4	-19.5	-24.0	-29.1	-34.6	-40.6	-47.1	-54.0
	Double 16' x 7'	14.7	16.5	20.3	24.6	29.3	34.4	39.9	45.8
		-18.4	-18.4	-22.7	-27.4	-32.7	-38.3	-44.5	-51.0

The design pressures listed are the minimum required. Recommended "VINUCCO" levels meet or exceed the required design pressures. MPH = miles per hour. PSF = pounds per square foot.

WindCode® "W" RATING GUIDE									
EXPOSURE B									
Structural Type	85 MPH	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH	
One Story	W1	W1	W2/W3	W3	W4	W5	W6	W7	
Two Story	W1	W1	W2/W3	W3	W4	W5	W6	W7	
EXPOSURE C									
Structural Type	85 MPH	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH	
One Story	W3/W4	W3/W4	W3/W4	W4	W5	W6	W7	W8	
Two Story	W4	W4	W4	W5	W6	W7	W7	W8/W9	

MPH = miles per hour

*Look for official Wind Load Ratings Stickers adhered to the inside of your door, like the one above. Make sure that your door will protect you against wind and impacts of 150—180 mph. Or instead your sticker may indicate that your door needs to use a metal hurricane reinforcement kit during a storm, which you will need to always have on hand.*

## 9. List of Recommended Local Hurricane Product Companies:

Following is my list of local vendors for Hurricane Protection Products, assembled from recommendations by neighbors and friends. I feel they are all good companies that offer quality products at fair prices – although your final three or more quotes will differ, depending on your home's number and size of openings, the price level of the product/s that you choose, etc. Vendors are arranged alphabetically under their product category; but you will see that they differ in some of the features offered, and in the amount of the discount extended to our group.

**When working with a company representative, remember to identify yourself as a member of “Viviane Silverman’s Hurricane Group.” and ask for that company’s promised VSHG Group Discount, listed below each one in RED.**

**NOTE ON BACKUP GENERATORS:** Researching backup generators, including natural gas, propane and solar, would take me another 2–3 weeks, and I thought it best to get this report on Hurricane Protection out to every one NOW, so all of you can proceed with your shopping and purchases ASAP. Also, Ken Rosemann has been leading a group researching these on NEXTDOOR of Palmer Ranch, and has told me that he plans to share his own Report and information on that site: <<https://nextdoor.com/neighborhood/palmerranch--sarasota--fl/>> Once you are on the site, type “Ken Rosemann” into the “SEARCH” bar there to find his post/s and then type into the “REPLY” box to send him your message or question.

### I. SECURITY FILM:

**Total Shield Protection** President: Richard Tinaro 941-894-7138  
& Brent Wilson Partner 941-356-7691  
\_\_\_ Professional film suppliers & installers, excellent reputation, honest & reliable.  
\_\_\_ **VSHG GROUP DISCOUNT FOR BOTH: 20%**

### II. PANELS, SHUTTERS, SHADES & SCREENS:

Vendors listed alphabetically. **NOTE:** Some below also sell impact windows & doors.

**Darren Wilson** Independent Installer 941-809-9281  
\_\_\_ Highly experienced and honest; works with three of the major shutter companies listed on this page (ask him which ones). Will purchase and install all of the storm products, as well as arrange for the County Permit and Inspection.  
\_\_\_ **BEST VSHG GROUP DISCOUNT: 22% –24.5%, depending on the product**

**Hurricane Safe Products** 941-351-6700  
\_\_\_ YOU MUST SEE THE INNOVATIVE PRODUCTS IN THEIR SHOWROOM:  
\_\_\_ 3801 North Washington Blvd. (US 301), Sarasota, FL 34234  
\_\_\_ Manufacture their own patented products; also sell and install.  
\_\_\_ **NOTE:** They carry the ClearTek flat (uncorrugated) window panels (p.10)  
\_\_\_ **VSHG GROUP DISCOUNT: 15%**

**Mr. Window** 941-722-8424 President: Tom Morlock  
\_\_\_ Offers all of the protection products, not just impact windows and doors.  
\_\_\_ Very honest and uses only good installers  
\_\_\_ Showroom: 308 7th St W, Palmetto, FL 34221  
\_\_\_ **VSHG GROUP DISCOUNT: 5% –15%, depending on the product**

**Shade and Shield –** 941-921-0844; REP: Courtney  
\_\_\_ Website: <http://www.shadeandshield.com/>  
\_\_\_ Showroom: 1537 Northgate Blvd, Sarasota  
\_\_\_ **NOTE:** They offer the Clear Accordion Shutter Slats (p. 12)  
\_\_\_ **VSHG GROUP DISCOUNT: 15%**

**Southern Cross Shutter Systems** President: Brant Smith 941-235-2620  
\_\_\_ Showroom: 1109 Tamiami Trl, Port Charlotte, FL 33953  
\_\_\_ **BEST VSHG GROUP DISCOUNT: 22% –24.5%, depending on the product**

**StormSmart** REP: Bruce Parker, his cell: 941-916-5004  
\_\_\_ Website: <http://www.stormsmart.com> Toll Free: 888.962.7283  
\_\_\_ Showroom: 11040 Plantation Rd., Fort Myers, FL 33966  
\_\_\_ **VSHG GROUP DISCOUNT: 15%**

**Windshutters** 941-921-5555 REP: Ken Sheckler,  
\_\_\_ Website: <http://www.windshutters.com> E-mail: [ken@windshutters.com](mailto:ken@windshutters.com)  
\_\_\_ Showroom: 1847 61st St, Sarasota, FL 34243  
\_\_\_ **NO VSHG GROUP DISCOUNT OFFERED**

### III. IMPACT DOORS AND WINDOWS ONLY:

**Absolute Window and Door** 941-485-7774  
\_\_\_ REPS: Dan Ferrelli + Gordon Yoder; Cell: 941-400-4550  
\_\_\_ Showrooms: 400 Seaboard Ave, & 1240 Ogden Rd, Venice, FL 34285  
\_\_\_ **VSHG GROUP DISCOUNT: 5%**

**Clear View Glass** 941-441-7791; President: Tom Helm 941-918-0440  
\_\_\_ Website: [www.clearviewglassandmore.com](http://www.clearviewglassandmore.com)  
\_\_\_ Showroom: 3676 Destination Drive, Suite 104, Osprey 34229  
\_\_\_ **VSHG GROUP DISCOUNT: 7% for 6 contracts, 10% for more**

**Mulleys Aluminum Doors + Windows** 941-371-3502  
\_\_\_ Showroom: 6345 McIntosh Road, Sarasota, FL 34238  
\_\_\_ Website: <http://www.mulleysaluminum.com/>  
\_\_\_ **VSHG GROUP DISCOUNT: 5%**

**NewSouth Window Solutions** (941) 925-4000  
\_\_\_ Showroom: 5249 S Tamiami Trail, Sarasota, FL 34231  
\_\_\_ Manufacture and service their own impact products locally.  
\_\_\_ **VSHG GROUP DISCOUNT: 45%**

### IV. STORM-READY GARAGE DOORS::

**D & D Garage Doors** 941-371-7242 Sales Rep: Michelle LoCastro  
\_\_\_ Website: [www.DandDGarageDoors.com](http://www.DandDGarageDoors.com)  
\_\_\_ Showroom: 1177 Cattlemen Road, Sarasota 34232  
\_\_\_ **VSHG GROUP DISCOUNT: 5% off total, excluding the Permit Fee**

## 10. Suggested Articles to Learn More About Protecting Your Home

I encourage each of you to read some or all of the following online articles, so that you will better understand hurricanes, along with practical tips on how to help keep your risk of damage lower. The longer ones can be quite technical, so you may wish to skim until you find the items that most interest you. **To read each article, first copy and paste each web address given below its title into your browser.**

**TIP:** You can find many other helpful articles by typing in "Hurricane safety" in a browser such as Google.

**Hurricane Retrofit Guide** from the Division of Emergency Management, **Bureau of Mitigation**, Tallahassee, Florida

**Tutorial:** <https://www.floridadisaster.org/mitigation/rcmp/strengthen/Ttorial/>

**Complete Guide:** <http://www.floridadisaster.org/hrg/>

This very thorough Guide is intended to help you learn how to protect your home against hurricane winds and rains and to help you decide what protection measures to take first. Although you can't completely "hurricane proof" your house, you may well be able to make it more "hurricane resistant" and help give it a chance to survive.

**Hurricane Irma: What to do during the storm** from the Palm Beach Post

<http://www.palmbeachpost.com/news/hurricane-irma-what-during-the-storm/CsZnyrkQhhqmcwIMPoswJM/>

**Against The Wind: Protecting Your Home From Hurricane Wind Damage** from FEMA

<http://www.floridadisaster.org/EMTOOLS/Severe/documents/agstwnd-fema.pdf>

**8 Ways to Protect Your Home Against Tornadoes and Hurricanes** from Popular Mechanics

<http://www.popularmechanics.com/home/interior-projects/how-to/g605/8-ways-to-protect-your-home-against-tornadoes-and-hurricanes/>

**Hurricanes: Science and Society** – Details how hurricanes form, and what its different forces can do to your home

<http://www.hurricanescience.org/society/impacts/homeownerperspective/>

**Top 10 Hurricane Myths Debunked** from Today's Homewoner.com

<https://www.todayshomeowner.com/top-10-hurricane-myths-debunked/11/>

**7 stupid things we do during a hurricane that can get us killed** from the Miami Herald

<http://www.miamiherald.com/news/weather/hurricane/article171813657.html>