



Section 2:

QUESTIONS TO ASK WHEN CONSIDERING WHAT MITIGATION OPTION MAY BE APPROPRIATE

QUESTIONS TO ASK WHEN CONSIDERING WHAT MITIGATION OPTION MAY BE APPROPRIATE FOR A HISTORIC BUILDING

1. Is the building designated as an historic resource?

Contact your local historic review board, planning department or historical society/organization, to determine if the building is designated under a local preservation ordinance. These entities may also have information about any tribal or federal designations.

Contact the Florida Department of State, Division of Historic Resources at fmsfile@dos.state.fl.us to determine if the building is listed in the National Register of Historic Places. You can also go to National Park Service's website (www.cr.nps.gov/nr/) to check on possible National Register listing.

If your building is not designated, go to question 2.

If your building is designated, go to question 3.

2. Is the building 50 years or older? (Or has it been determined to possess exceptional significance if less than 50 years old?)

Buildings that are 50 years old or older may be eligible for listing or designation as an historic resource. Buildings less than 50 years old may be eligible for designation or National Register listing if determined to possess exceptional significance by a local preservation program or the National Park Service.

If yes, please continue with question 3.

If no, but you have an older home, you are encouraged to follow the recommendations in this document to maintain the architectural and historic integrity of the building.

3. Does the local government have any existing standards or requirements for review of historic properties?

Check with the local planning department, building department, historic preservation organization. Many local governments have ordinances which specify a required review process for changes to designated historic properties and have specific design requirements. These can affect the type of mitigation option that can be considered.

4. Is the planned mitigation part of a larger rehabilitation/renovation project or a stand alone project?

Be aware that the range of mitigation options will vary depending on the scope of the overall project. For example, if you are replacing roofing, installation of framing straps and screwing down sheathing should be accomplished. If you are not replacing roofing a bead of adhesive placed on the joint between sheathing and framing will still improve the strength of the roof system. Additionally, a larger budget may allow for the development

of a custom solution, as opposed to being limited to looking at existing products.

5. Where is the funding coming from and are there associated design standards that must be met?

Use of state or federal funds (including grant monies), and some permitting processes require a formal review of the proposed changes by the Florida Department of State, Division of Historical Resources, the State Historic Preservation Officer and FEMA. This is in addition to any local approvals that may be needed. These reviews need to be completed prior to the initiation of construction. Contact the Compliance Review Section in the Bureau of Historic Preservation, Florida Department of State, to determine if this review applies to you. Contact information: 850.245.6333 or 1.800.847.7278.

6. Are there resources in your community where you can get professional help with the project?

Check with local historic preservation organizations and local planning staff. Often there are local architects with experience in historic preservation and extensive local knowledge who may be hired to design your hazard mitigation improvements. Additionally some local architects may be willing to provide pro bono services for projects sponsored by local historic preservation organizations or other non-profits. In all cases, however, you need someone who has demonstrated architectural experience with historic buildings so make sure that references are provided.

7. Is the building historic, or does it have historic components?

Mitigation options vary depending on the age and significance of the building feature(s) targeted for protection.

Obviously, changes occur to buildings over time. For example, windows or doors are replaced, roofing materials are altered and porches are added or modified. Early alterations can possess significance equivalent to original features. Consult with the local preservation officer or the state Division of Historic Resources staff for assistance in determining if a specific feature is of historic significance to your property. Materials of construction or manufacture can provide a clue – for example if the building was built in the 1800's of wood and the windows are metal, they are not likely to be original or of historic significance.

If yes, the mitigation option chosen should preserve the historic integrity of the feature.

If no, the mitigation option should preserve surviving significant or character-defining features (for example, surviving original wood window trim) and should be compatible with the historic character of the property.

8. Will the building owner or occupants “activate” the damage protection measures when they are needed?

It is very important to choose products that match your capability to install or use them. Something that requires a lot of manpower or expertise to close or temporarily install is not a good option if that manpower or expertise does not exist. Be realistic in your projections of the people and resources you will actually have as a storm approaches, and use that as one of the criteria for evaluating different options.

To continue with the analysis, please go to the appropriate section for the feature involved:

- For Windows, go to Section A
- For Roofs, go to Section D
- For Doors, go to Section B
- For Walls, go to Section E
- For Porches, go to Section C
- For Foundations, go to Section F

A. WINDOWS:

1. Is the window or its frame historic?

It is very important to be aware of construction and design details of the window to be protected as these will influence the choices available. Proper installation of the window protection system is key to ensuring that a product functions properly and provides the level of protection for which it is designed. Products which rely on perimeter pressure for installation, such as a combination of plywood and metal wedges, can be installed on windows that are recessed but are not appropriate for windows that are flush with the outer face of the wall. Windows that have sash weights will have pockets on each side of the window and this construction may not provide sufficient support for the screws or bolts needed to secure storm panels.

Design details, such as shape of decorative surrounds, will need to be maintained and not modified or obscured by the mitigation option. Don't be afraid to talk directly to the manufacturer or vendor of a particular product – custom details may not be included in the catalog but special needs may be accommodated with a little creativity.

2. Is there evidence of historic shutters around the window?

Look for physical evidence of historic shutters on the building. This can be in the form of actual shutters on the premises, remnants of historic shutter hardware, existing screw holes or hinge rabbets still visible around the window or cut-outs in the window framing or trim to allow shutter movement. Historic photographs are excellent resources to document the existence of historic shutters.

If yes, operable hurricane shutters are a viable option; you want to look for an approved product that replicates the appearance of the historic shutter and utilizes hardware that is appropriate for the building.

If no, shutters are generally not an acceptable option.

3. Is there evidence of screens on the windows?

As with shutters, look for physical evidence that the windows historically had screens on them.

If yes, consider woven wire hurricane screens (not perforated metal panels). Make sure the product does not obscure the historic details of the window and that the associated hurricane screen framing replicates the appearance of the traditional wood screen frame.

If no, woven wire is generally not an acceptable option.

If there is no evidence of any historic use of storm protection, consider other options, which may include the use of temporary storm panels, a flexible wind abatement system, or impact resistant glass storm panels.

4. Is there a porch or breezeway in front of the windows?

If the answer is yes, there may be an opportunity to install a flexible wind abatement system or storm panel system on the porch. Then the windows would be protected in addition to the porch. Flexible wind abatement systems can be hidden on the inside of the porch front and rolled down when required. The design of the porch will determine if this is an option. Some strengthening of the porch may be required. (See section C below.)

B. DOORS:

1. Is there evidence of historic shutters around the doors?

Look for physical evidence of shutters on the door. This can be in the form of actual shutters on the premises, existing screw holes or hinge rabbets still visible around the door or cut-outs in the door framing or trim to allow shutter movement. Historic photographs are an excellent resource to document the existence of shutters on the building.

If yes, operable hurricane shutters are a viable option. You want to look for one that replicates the appearance of the historic shutter and use hardware that is appropriate for the building.

If no, shutters are generally not an acceptable option.

2. Is there evidence of a historic screen door?

As with shutters, look for physical evidence that the entries historically had screen doors on them.

If yes, look at storm doors with woven wire hurricane screens (but not perforated metal panels). Make sure the product does not obscure the historic details of the door and that the associated framing replicates the appearance of a traditional screen door.

If no, woven wire is generally not an acceptable option.

If there is no evidence of historic use of storm protection, consider other options, which may include the use of temporary storm panels, or a flexible wind abatement system.

- 3. Are the garage doors historic?** If yes, historic garage doors should be reinforced on the interior side of the door, so that nothing can be seen from the exterior of the building. However, if the garage doesn't have another exit, this may not be a viable option since there would be no way to get out of the garage after the reinforcing is installed. In that case, the temporary use of a flexible wind abatement system or other similar option should be considered.

C. PORCHES**1. Are the porches securely attached to the building?**

The key consideration in protecting a porch is making sure that it is securely attached to the building and that its elements (roof decking, framing, posts, deck framing and foundation) are all connected creating a continuous load path to resist the forces of high wind. Having an architect, engineer or building professional help analyze the existing connections may be appropriate.

If not secure, consider using lag bolts, hurricane straps or other similar options to strengthen the existing connections. Make sure that this reinforcement is concealed if possible or otherwise installed to minimize its visibility.

D. ROOFS**1. Is the roofing being replaced?**

Options obviously increase if the roofing is going to be replaced. For example, attachment of the roof deck to roof framing can easily be improved, and a self-adhering moisture resistant membrane can be added, providing protection from wind and moisture should a storm blow off the primary roof covering. Wind resistant shingles or other roofing products can be used if appropriate to the historic building.

If yes, look at storm resistant roofing materials (if they match the historic roofing material), hurricane straps or clips, improved sheathing attachment, and a self-adhering roofing membrane. Consider using a combination of options.

If no, look for options that will strengthen the connection between the roof decking and framing (hurricane straps, clips, sheathing adhesives, etc) which can be installed in the attic without affecting the existing roofing.

E. WALLS**1. Are the connections between the walls, foundation and roof framing secure?**

The important consideration here is to establish a continuous load path by use of a system of metal connectors and fasteners that connect the structural frame of the building from the roof through the walls to the foundation. Look in the attic or under the building to see if there are hurricane straps or other connecting devices already installed.

If no, consider installing straps, clips or other options to strengthen the connections between the walls and other structural components. This is another area where an architect, engineer or building professional can help.

F. FOUNDATIONS**1. Are the connections between the foundation and the walls secure?**

The connections between the foundation and the walls must be strong enough to support the building as well as keeping it from blowing away in high winds. Consider the options identified in Section E above, as well as reviewing the general condition of the foundation and making needed repairs.

CHECKLIST: QUESTIONS TO ASK WHEN CONSIDERING WHAT MITIGATION OPTION MAY BE APPROPRIATE FOR A HISTORIC BUILDING

GENERAL		Is the building designated as an historic resource?	
YES		NO	
<p>The selection procedures herein should be followed to ensure protection of historic building integrity. To determine if your building is designated as a significant historic resource you can contact your local historic review board, local planning department, or local historical society/ organization. To determine if your building is listed or eligible for listing in the National Register of Historic Places contact the Florida Division of Historic Resources or go to National Park Service's website.</p>		<p>For older buildings, you are encouraged to follow the recommendations in this document to maintain the architectural and historic integrity of the building.</p>	
GENERAL		Is the building 50 years or older? (Or has it been determined to possess exceptional significance?)	
YES		NO	
<p>Buildings that are 50 years old or older may be <u>eligible for listing</u> in the National Register of Historic Places and under state and federal law are treated equally as those properties which are already listed.</p>		<p>For older buildings, you are encouraged to follow the recommendations in this document to maintain the architectural and historic integrity of the building.</p>	
GENERAL		Does the local government have any existing standards or requirements for review of historic properties?	
YES		NO	
<p>Many local governments have ordinances which specify a required review process for changes to historic properties and have specific design requirements. These can affect the type of mitigation option that may be considered.</p>		<p>For older buildings, you are encouraged to follow the recommendations in this document to maintain the architectural and historic integrity of the building.</p>	
GENERAL		Is the mitigation part of a larger rehabilitation/renovation project?	
YES		NO	
<p>The range of mitigation options will vary depending on the scope of the overall project. A larger budget may allow for the development of custom solutions, as opposed to being limited to looking at existing products.</p>		<p>You are encouraged to follow the recommendations in this document to maintain the architectural and historic integrity of the building.</p>	
GENERAL		Where is the funding coming from and are there associated design standards that must be met?	
YES		NO	
<p>Use of state or federal funds, including grant monies and some permitting processes, require a formal review of the proposed changes by the Florida Department of State, Division of Historical Resources, the State Historic Preservation Officer and/or FEMA. This is in <u>addition to</u> any local approvals that may be needed. These reviews need to be completed prior to the initiation of construction.</p>		<p>You are encouraged to follow the recommendations in this document to maintain the architectural and historic integrity of the building.</p>	

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GENERAL		Are there resources in your community where you can get professional help with the project?	
YES		NO	
Check with local historic preservation organizations and local planning staff. Often there are local architects with an interest in historic preservation and extensive local knowledge who may be hired to design your hazard mitigation improvements. You need someone who has demonstrated architectural experience with historic buildings so make sure that references are provided.		Contact Division of Historical Resources for technical assistance 1-800-847-7278.	
GENERAL		Is the building feature historic, or does it have historic components?	
YES		NO	
The mitigation option chosen should preserve the historic integrity of the feature. Mitigation options vary depending on characteristics/design details of the building feature targeted for protection.		The mitigation option should preserve surviving character defining features (for example original wood window trim) and should be compatible with the historic character of the property.	
GENERAL		Will your manpower be an issue in "activating" the damage protection measure when they are needed?	
YES		NO	
It is very important to choose products that match your capability to install and use. Something that requires a lot of manpower to close or temporarily install is not a good option if that manpower does not exist. Be realistic in your projections of the people and resources you will actually have as a storm approaches, and use that as one of the criteria for evaluating different options.		If public works staff or a contractor will be responsible for installing protective measures before a storm or predicted disaster event, ensure that all on-site resources are readily available consistent with the emergency response plan for the site and that contract arrangements are in place in advance.	
WINDOWS		Is the window or its frame historic?	
YES		NO	
Proper installation of the window protection system is key to ensuring that a product functions properly and provides the level of protection for which it is designed. It is very important to be aware of construction and design details of the window to be protected as these will influence the choices available. Design details, such as moldings and other decorative features, will need to be maintained and not obscured by the mitigation option.		You are encouraged to follow the recommendations in this document to maintain the architectural and historic integrity of the building. If new windows are to be installed, they should be compatible with the historic character of the property.	
WINDOWS		Is there evidence of historic shutters around the windows?	
YES		NO	
Permanent operable hurricane shutters are a viable option; you want to look for an approved product that replicates the historic shutter and utilizes hardware that is appropriate for the building.		Permanent operable shutters are generally not an acceptable option. Other options can include the use of temporary storm panels, or a flexible wind abatement system, fabric panels, or permanent impact resistant storm windows.	

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WINDOWS		Is there evidence of screens on the windows?	
YES		NO	
Consider woven wire hurricane screens (not perforated metal panels) but make sure that the product does not obscure the historic details of the window and that the associated framing replicates the appearance of a traditional wood screen frame.		Woven wire hurricane screening is generally not an acceptable option. Other options can include the use of temporary storm panels, a flexible wind abatement system, or the use of permanent impact resistant storm windows.	
WINDOWS		Is there a porch or breezeway in front of the windows?	
YES		NO	
Consider installing hurricane protection at the perimeter of the porch. Consider storm panels or wind abatement systems that can protect the porch and the windows under it. Some strengthening of the porch may be required.		Direct protection of windows will be required. See above.	
DOORS		Is there evidence of historic shutters around the doors?	
YES		NO	
Permanent hurricane shutters are a viable option; you want to look for a product that replicates the historic shutter and use hardware that is appropriate for the building.		Shutters are generally not an acceptable option. Other options may include the use of temporary storm panels, or a flexible wind abatement system.	
DOORS		Is there evidence of a historic screen door?	
YES		NO	
Consider woven wire storm doors (but not perforated metal panels), but make sure the product does not obscure the historic details of the door and its surround, and that the associated framing replicates the appearance of a traditional screen door.		Woven wire is generally not an acceptable option. Other options may include the use of temporary storm panels, a flexible wind abatement system or an impact resistant glass storm door.	
DOORS		Are the garage doors historic?	
YES		NO	
Historic garage doors should be reinforced on the interior side of the door, so that nothing can be seen from the exterior of the building. However, if the garage doesn't have another exit, this may not be a viable option since there would be no way to get out of the garage after the reinforcing is installed. In that case, the temporary use of a flexible wind abatement system or other similar option should be considered.		If not compliant with current codes, non-historic garage doors should also be reinforced on the interior side of the door. If replacing the non-historic garage doors, be sure that the new code-compliant doors are compatible with the historic character of the building.	

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PORCHES		Are the porches securely attached to the building?	
YES		NO	
<i>Make sure that they are properly maintained. See window and door protection at porches (previous pages).</i>		<i>Consider using lag bolts, hurricane straps or other similar options to strengthen the existing connections. Make sure that this reinforcement is concealed if possible, or installed so as to minimize visual impacts. Professional assistance is recommended in planning and executing these improvements (architect, engineer, building professional).</i>	
ROOF		Is the roofing being replaced?	
YES		NO	
<i>Look at storm resistant roofing materials (if they match the historic roofing material), hurricane straps or clips, improved sheathing attachment, and a self adhesive roofing membrane. Consider using a combination of options.</i>		<i>Look for options that will strengthen the connection between the roof decking and framing (hurricane straps, clips, sheathing adhesives, etc) which can be installed in the attic without affecting the existing roofing.</i>	
WALLS		Are the connections between the walls and structural elements above and below secure?	
YES		NO	
<i>No hazard mitigation improvements needed.</i>		<i>Consider installing straps, clips or other options to strengthen the connection between the wall and the rest of the building. This is another area where professional assistance is recommended in planning and executing these improvements (architect, engineer, building professional).</i>	
FOUNDATIONS		Are the connections between the foundation and the building secure?	
YES		NO	
<i>No hazard mitigation improvements needed. Make sure that foundation features such as brick piers are maintained. Ensure that storm water does not collect against or around building foundations. Make drainage improvements as needed.</i>		<i>Consider installing straps, clips or other options to strengthen the connection between the foundation and wall. This is another area where professional assistance is recommended in planning and executing these improvements (architect, engineer, building professional).</i>	