

# SECTION 3.1: WINDOWS AND DOORS

## WINDOWS AND DOORS

Windows and doors are one of the most important elements of historic buildings and can aid in defining the character, style, building type, and age of construction. Replacing windows with the incorrect style or configuration can significantly alter the visual appearance of a historic structure.

When replacing windows, the new windows should maintain the original location, size, character, and type. Typically, the style and age of the house should determine the types of windows that were used, ranging from casement, fixed, double or single hung windows, awning, jalousie, or sliders. In addition, windows may have had either a single pane of glass or multiple divided panes.

Doors should be maintained and repaired before considering replacement. If the replacement is inevitable, the new door should be compatible to the character of the building and should maintain the, original location, size, and type of the original.

### PRESERVATION TIPS

#### Regular maintenance and cleaning

- Replace broken or missing components such as trim and glazing.
- Maintain caulking, glazing putty, and weather stripping
- Regularly treat wood windows for insects or organic growth, applying putty at surface openings, and re-painting.

#### Repair

- It is possible to repair historic wood windows by replacing sections of windows that are deteriorated and utilizing epoxy consolidation.
- Small sections of deteriorated wood windows can also be repaired using the “Dutchman” method.
- Any replacement pieces used must match the original in design, shape, profile, size, material, and texture.

### WINDOW GUIDE

- Single-hung or double-hung types may substitute for each other.
- Aluminum casements may substitute for steel casement types.
- New windows must be **clear glass** or **Low-E** (minimum 79 VLT - Visual Light Transmittance) only, tinted or colored glass is **not** allowed.
- Slider windows may only be approved when they are appropriate to the style of the structure, typically constructed post 1950, to be determined by staff.
- Window openings that are visible from the right of way are considered an important architectural feature; enclosing these is not permitted.
- Changing the muntin pattern by removing or adding muntins is **not** permitted.
- New muntins must be applied raised profile with a contoured shape.

### DEFINITIONS

**Mullion:** A vertical member separating (and often supporting) window, doors, or panels set in series.

**Muntin:** 1. A secondary framing member to hold panes within a window, window wall, or glazed door. 2. An intermediate vertical member that divides the panels of a door.

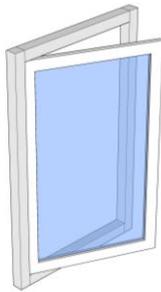
**Sash:** Any framework of a window that may be moveable or fixed, may slide in a vertical plane or pivoted.

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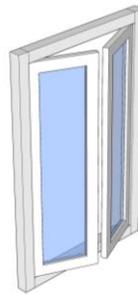
FIGURE 3.1 WINDOW TYPES/FUNCTIONS



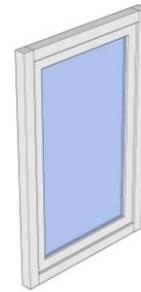
**SINGLE-HUNG/  
DOUBLE-HUNG**



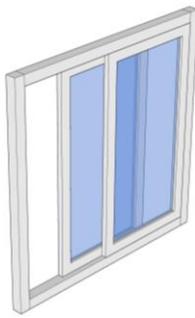
**CASEMENT**



**DOUBLE CASEMENT**



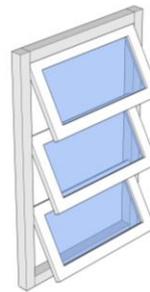
**FIXED**



**SLIDING**



**HOPPER**



**AWNING**

*The windows shown here are to display the various types of windows and function, raised applied muntins are required to replicate original window configurations.*

*Examples of various configurations are shown on the following page.*

### COMMON WINDOW TYPES

**Single-hung:** Fixed upper sash above a vertically rising lower sash

**Double-hung:** Two sashes that can both be raised and lowered vertically

**Casement:** Hinged on one side, swinging in or out

**Fixed:** Non-operable framed glazing

**Sliding:** Either a fixed panel with a horizontally sliding sash or overlapping horizontally sliding sash and is generally not appropriate for older structures, but may be appropriate for more modern styles.

**Hopper:** Hinged at the bottom and projecting in at an angle

**Awning (Single, Double and Triple):** Hinged at the top and projects out at an angle

**Jalousie:** A window comprised of angled glass, acrylic, or wooden louvers set in a frame horizontally

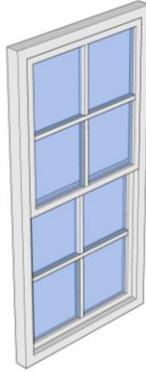
*Window type definitions are taken from the City of New Orleans HDLC – Guidelines for Windows and Doors*

# SECTION 3.1: WINDOWS AND DOORS

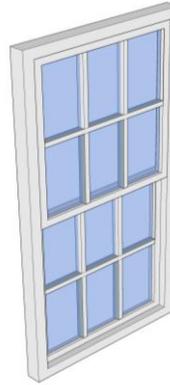
**FIGURE 3.2 WINDOW CONFIGURATIONS**



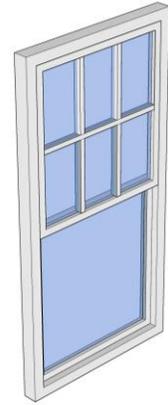
**1/1 SINGLE-HUNG**  
*Ranch, Colonial Revival, Neoclassical*



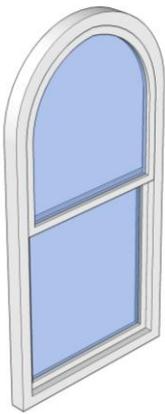
**4/4 SINGLE-HUNG**  
*Italianate, Colonial Bungalow*



**6/6 SINGLE-HUNG**  
*Colonial Revival, Greek Revival*



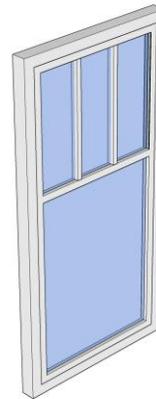
**6/1 SINGLE-HUNG**  
*Mediterranean, Craftsman*



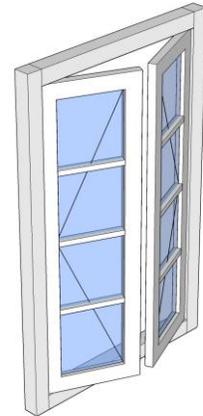
**1/1 ROUND-HEAD**  
*Italianate, Neoclassical*



**2/2 ARCHED HEAD**  
*Italianate*



**3/1 SINGLE-HUNG**  
*Mediterranean, Craftsman*



**DOUBLE CASEMENT**  
*Mediterranean, Modern*

*The examples of window configurations shown above are not exhaustive, configurations will be based on the historic tax card photo for each property.*

## WINDOW REPLACEMENT

When considering a replacement window, every effort should be made to match the size, configuration, shape and proportions of the existing window in addition to retaining or duplicating any historic decorative trim.

### IMPACT RESISTANT WINDOWS

Note: Impact resistant windows are preferred to meet the FLORIDA BUILDING CODE vs. rollup or accordion shutters. New impact resistant windows are required to be configured to match the historic style.

Removable panel hurricane shutters can be used with original windows.

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### HURRICANE SHUTTERS

Traditional shutters or new hurricane shutters with tracks and removable panels are recommended. The tracks should be painted the same color as the house. Hurricane shutters must be operable and must cover the entire surface of the window when closed. Permanent shutters must be compatible with the character of the building. All shutters must remain open during non-storm days.



Photos taken from the publication by 1000 Friends of Florida, *Disaster Mitigation for Historic Structures*, 2008

### OTHER PROTECTIVE OPTIONS

- Accordion or roll-down shutter types are not recommended but may be approved when not visible from the public right-of-way (as determined by staff) or by the HEPB.
- Functioning wooden shutters may be replicated for other windows, or new shutters that meet hurricane standards may be allowed if consistent with the style of the building.
- If the house still retains the original windows; removable shuttering with track systems may be permitted.
- An impact resistant window which resembles the historic type is sometimes the right choice for a property owner as an alternative to other kinds of hurricane protection.
- Metal “clamshell” awnings, commonly used in the 1950s, are characteristic on some building styles; however, they will not meet the FLORIDA BUILDING CODE.

For additional resources and information on preparing your property for a natural disaster, follow this link:

<http://www.1000friendsofflorida.org/building-better-communities/disaster-planning/>

### SECURITY BARS

Security bars may be installed on the inside of the window, they are NOT allowed on the exterior. Screening or roll down panels may be installed on the inside of the window. All security screening shall be a minimum 50% open visibility

*\*All building materials in Miami-Dade County must have a "Notice of Acceptance" and be approved by the County's Building Department. To search for approved products go to: [www.miamidade.gov/buildingcode/productcontrol.asp](http://www.miamidade.gov/buildingcode/productcontrol.asp)*

# SECTION 3.1: WINDOWS AND DOORS

## DOOR REPLACEMENT

If preserving the original historic door, replace all historic elements in-kind when possible or if using a replacement door, it should closely match the original in size, material, and profile of the original.

Typically solid paneled doors were the most common front door type for many of the residential styles found in the City's historic districts. Replacement of a solid panel door with an all glass door is not permitted. In more modern residences jalousie doors were typical, a clear or textured glass door replacement would be permitted.

**FIGURE 3.3 DOOR STYLE EXAMPLES**



*Solid panel door with 1/4 view and symmetric panels.  
Styles: Arts and Crafts, Bungalow, Mission, Mediterranean*



*Solid panel door with appropriate carving for architectural style and small view window.  
Styles: Mission, Mediterranean*



*Solid panel door with 1/4 view and symmetric panels.  
Styles: Arts and Crafts, Bungalow*



*Solid panel door with 3/4 view and symmetric panels.  
Styles: Arts and Crafts, Bungalow, Mediterranean*



*Solid panel door with symmetric panels.  
Styles: Mediterranean, Classical*



*Solid panel door with symmetric panels and lites  
Styles: Victorian, Italianate*



*Solid panel door with no decoration or carving and small view window  
Styles: Minimal Traditional, MiMo, Modern*



*Full view door with divided lites and clear glass or textured glass  
Styles: Minimal Traditional, MiMo, Modern (Post WWII)*

## SECTION 3.1: WINDOWS AND DOORS

There are several types of residential doors that are available on the market that are not appropriate for historic structures. A few examples are shown below.

**FIGURE 3.4 INAPPROPRIATE REPLACEMENT DOOR STYLE EXAMPLES**



*Plain modern panel doors*



*Panel doors with half-round windows*



*Panel doors with oval windows and modern leaded glass*



*Panel doors with oval windows and modern leaded glass*

### RESOURCES

#### **National Trust for Historic Preservation:**

*Weatherization of Windows*

*Window Tip Sheet*

#### **Preservation Briefs**

*The Repair of Historic Wooden Windows, Preservation Brief #9, by John H. Meyers.*

*The Repair and Thermal Upgrading of Historic Steel Windows, Preservation Brief #13, by Sharon C. Park, AIA.*

#### **National Park Service – Interpreting the Standards (click here and find the topics listed below)**

*Adding New Entrances to Historic Buildings, ITS #22, by Anne E. Grimmer.*

*New Openings on Secondary Elevations, ITS #21, by Anne E. Grimmer.*

*Inappropriate Replacement Doors, ITS #4, by Anne E. Grimmer.*

*Selecting New Windows to Replace Non-Historic Windows, ITS #23, by Claire Kelly.*

#### **Preservation Tech Notes (Click here and go to the section entitled “Windows” and or “Doors”**

*\*All definitions of window and door parts are taken from the reference book; Harris, Cyril M., Illustrated Dictionary of Historic Styles, Dover Publications, Inc., New York, NY. 1977.*

## SECTION 3.1: WINDOWS AND DOORS

### A CERTIFICATE OF APPROPRIATENESS IS REQUIRED WHEN...

- Replacement of windows
- Replacement of exterior doors
- Creation of new openings
- Closure of existing openings

### ADMINISTRATIVE APPROVAL IS POSSIBLE WHEN:

- Replacement with accepted windows and/or doors with the appropriate style and function
- Creation and closure of openings not visible to the right of way, as determined by staff

### HEP BOARD APPROVAL IS REQUIRED WHEN:

- Replacement with windows that do not match the original configuration or function, or that do not match the historic style
- Replacement of exterior doors that do not match the original configuration or function, or that do not match the historic style
- Creation of new openings visible to the right of way, as determined by staff
- Closure of existing openings that are visible to the right of way, as determined by staff

### APPLICATION CHECKLIST

*Below is a checklist to use when applying for a Certificate of Appropriateness for window and door applications:*

#### ARE THE WINDOWS ORIGINAL TO THE PROPERTY?

- YES  
 NO\*

*\*If no, contact staff prior to selecting replacement windows to find out the original style of windows that were used or is appropriate for your building.*

#### TYPE OF WORK:

- REPAIR ONLY  
 IN-KIND REPLACEMENT  
 REPLACEMENT WITH NEW MATERIAL TO MATCH ORIGINAL

#### EXISTING WINDOW/DOOR CONDITION:

- EXCELENT  
 GOOD  
 FAIR  
 POOR

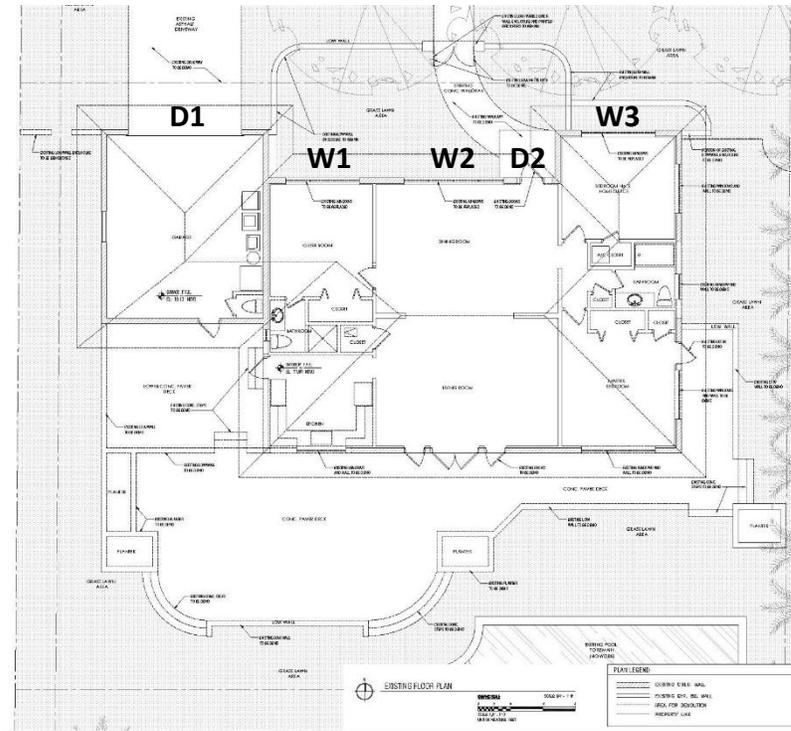
#### ATTACHMENTS REQUIRED:

- SURVEY OF THE PROPERTY  
 ONE SET OF PLANS (11X17) DRAWN TO SCALE (See following page for additional information to be included in plans)  
 MATERIAL SEPECIFICATION  
 PHOTOS OF THE MAIN FAÇADE, FRONT AND SIDES  
 MANUFACTURER'S CUT SHEET, SHOP DRAWING OR PHOTOGRAPHS OF THE PROPOSED WINDOW/DOOR REPLACEMENTS  
 HISTORIC PICTURE (IF AVAILABLE)

# SECTION 3.1: WINDOWS AND DOORS

## PREPARING A WINDOW AND DOOR REPLACEMENT APPLICATION

- SITE PLAN:** Number all the windows and doors to correspond with the window and door schedule.



- WINDOW AND DOOR SCHEDULE:** List all windows and doors to be replaced or modified, providing dimensions, function, glass type, frame color, etc.

Window/Door #	Existing Dimensions	Proposed Dimensions	Function	Glass Type	Frame Color	Muntins/Configuration
W1	36"x51"	36"x51"	Single Hung	Clear	White	Yes, 6 over 6
W2	36"x51"	36"x51"	Fixed	Clear	White	None
W3	36"x51"	36"x51"	Casement	Clear	White	Yes, 2 over 4

Window/Door #	Existing Dimensions	Proposed Dimensions	Function	Glass Type	Frame Color	Muntins/Configuration
D1	96"x120"	96"x120"	Garage	N/A	White	N/A
D2	36" x 80"	36" x 80"	Entry	N/A	Brown	N/A

*If an applicant requires assistance in fulfilling the requirements of a window application, please contact staff so that we can find the best solution for your property.*

# SECTION 3.1: WINDOWS AND DOORS

## PREPARING A WINDOW AND DOOR REPLACEMENT APPLICATION (Continued)

- PHOTOS OF ALL SIDE OF THE FAÇADE: Take photos of each side of the structure, key the photos to correspond with the window and door schedule.



Front View



Rear View



East View



West View

- EXISTING AND PROPOSED ELEVATIONS: Provide elevation drawings of ALL SIDES of the façade with the existing windows and doors.

