



CITY OF PORTSMOUTH

Historic District Commission

Guidelines for Windows & Doors



WINDOWS & DOORS

Windows and doors typically comprise at least one quarter of the surface area of the exterior walls of most historic buildings. In terms of operation, windows and doors provide access to natural light and ventilation for a building. In terms of appearance, they are an important design feature that helps to define the style and period of a building. Whether elaborate or simple, windows and doors demonstrate both the history of the building and the history of the methods of manufacturing when they were created. These histories help to tell the story of Portsmouth's rich manufacturing tradition at multiple scales.

Windows and doors, including their shutters, trim and associated features, are important elements of historic buildings because they can:

- Act as a welcoming transition from the building's exterior to the interior
- Act as the "eyes" of a building
- Provide natural light and ventilation
- Help define architectural style and building type
- Help date the age of construction
- Define the character of each individual building and provide a visual connection to the streetscape
- Contribute to the visual cohesiveness and architectural vocabulary of the surrounding area

These *Guidelines* were developed in conjunction with the City of Portsmouth's Historic District Commission (HDC) and the Planning Department. Please review this information during the early stages of planning a project. Familiarity with this material can assist in moving a project quickly through the approval process, saving applicants both time and money.

In its review, the HDC considers a property's classification, recommending the greatest historic authenticity at focal buildings, with more flexibility at contributing structures, and the most at non-contributing properties. The HDC Staff in the Planning Department is available to provide informal informational meetings with potential applicants who are considering improvements to their properties.

Additional *Guidelines* addressing other historic building topics are available at City Hall and on the Commission's website at www.planportsmouth.com/historicdistrictcommission. For more information, to clarify whether a proposed project requires HDC review, or to obtain permit applications, please call the Planning Department at (603) 610-7216.

DEFINITIONS

Glazing: Glass

Light: A pane of glass

Mullion: The vertical framing element separating two window or door frames

Multi-light: Having many glass panes, as a window or door

Muntin: The narrow molding separating individual panes of glass in a multi-paned window sash

Sash: The part of the window frame that holds the glazing, especially when movable

Simulated Divided Light (SDL): A window or door in which muntins are applied to a larger piece of glass at the exterior, interior and/or between layers of insulated glass

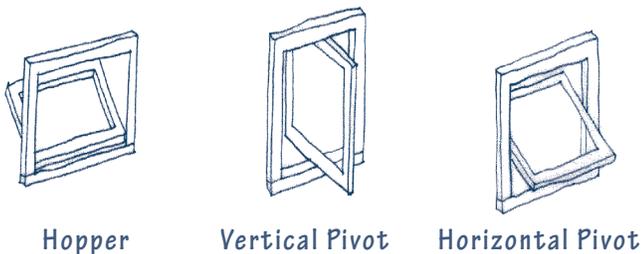
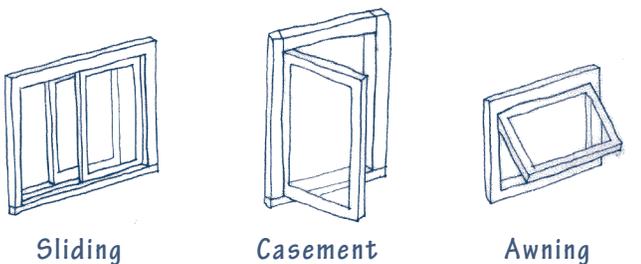
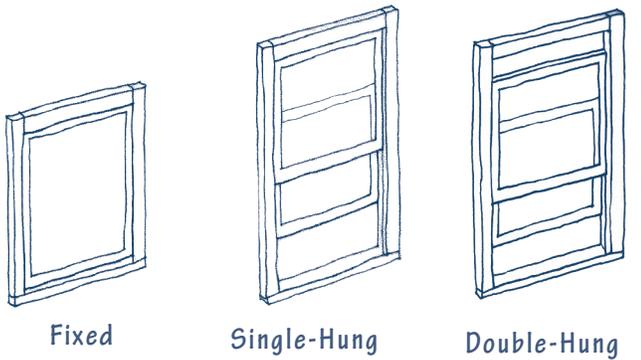
Single-light: Having one glass pane, as a window or door

True Divided Light: A window or door in which a glass area is divided into several small panes

COMMON WINDOW TYPES

All of the identified window types can have different muntin patterns or configurations. Muntin patterns are defined in terms of the number of panes or lights. (Refer to *Window Configurations* at right for additional information.)

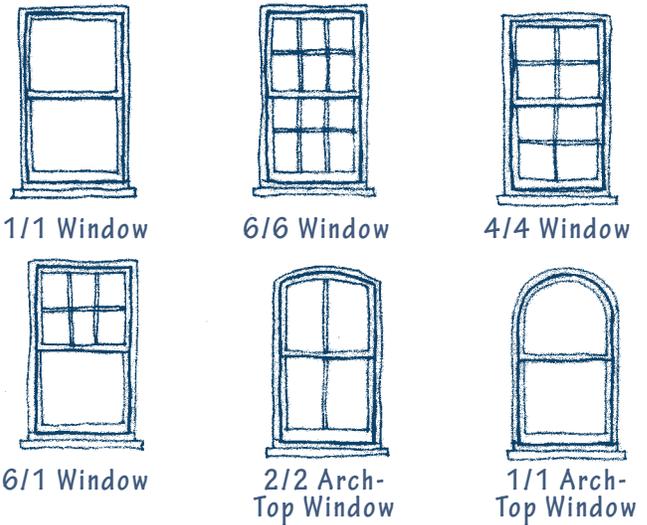
- **Fixed:** Non-operable framed glazing
- **Single-hung:** Fixed upper sash above a vertically rising lower sash
- **Double-hung:** Two sashes that can be raised and lowered vertically
- **Sliding:** Either a fixed panel with a horizontally sliding sash or overlapping horizontally sliding sash
- **Casement:** Hinged on one side, swinging in or out
- **Awning:** Hinged at the top and projecting out at an angle
- **Hopper:** Hinged at the bottom and projecting in at an angle
- **Vertical Pivot:** Pivots vertically along its central axis
- **Horizontal Pivot:** Pivots horizontally along its central axis



Other Window Types:

Dormer Windows: Refer to *Dormers*, *Guidelines for Roofing*, page 04-5.

Storefront Windows and Doors: Refer to *Guidelines for Commercial Development & Storefronts*, page 12-11.



WINDOW CONFIGURATIONS

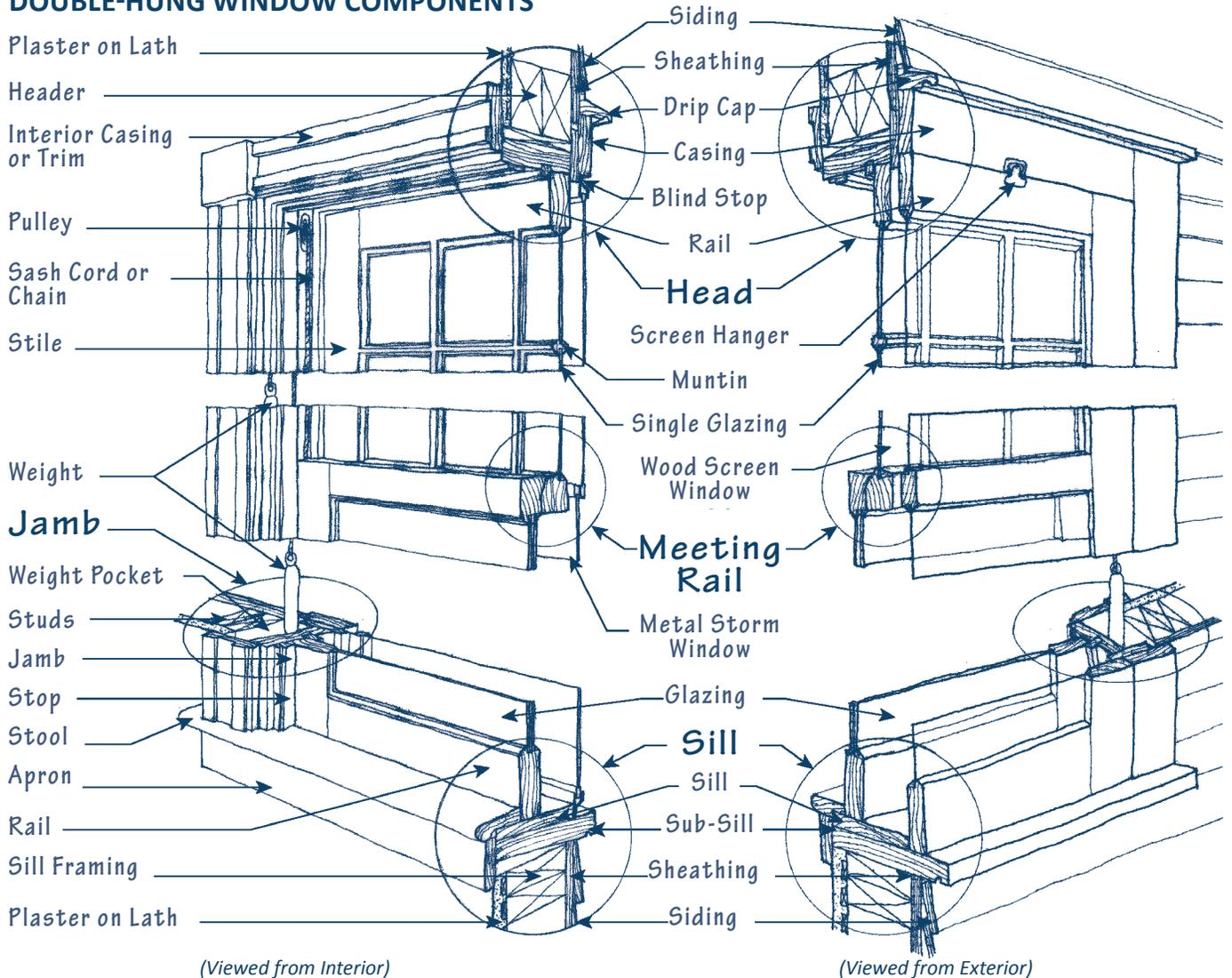
Window patterns and configurations are intrinsically linked to a building's period of construction and architectural style. Older buildings, such as those built in the Colonial and Federal periods, typically have double-hung or casement windows with smaller panes of glass and more simplified detailing reflective of the materials and hand manufacturing processes readily available at that time. Late-19th century buildings, such as those from the Victorian period, often had windows of varying shapes with elaborate frames, casings, applied ornament and trim, and larger glass lights. Finally, Colonial Revival buildings of the early-20th century often reproduce aspects of the Colonial and Federal styles, but might include larger lights.

Because all of the components and details of a window are essential to defining the construction period and style, the pattern and configuration of a proposed replacement window should be historically appropriate for each building. If considering a replacement window, it is important to keep in mind that altering the window type, style, shape, material, size, component dimension, muntin pattern or location can dramatically alter the appearance of the building. (For guidance on window and building styles and periods of construction, refer to the *Guidelines for Architectural Styles*.



This projecting bay window features three double-hung windows with a decorative muntin pattern at the upper sash.

DOUBLE-HUNG WINDOW COMPONENTS



(Viewed from Interior)

(Viewed from Exterior)

HISTORIC WINDOW PROBLEM SOLVING

Property owners may not pay attention to their windows until a problem occurs. Typical concerns include operability, air infiltration, maintenance and appearance. Generally, the appearance of a window that has not been properly maintained can seem significantly worse than its actual condition. Replacement of an entire wood window because of a deteriorated component, typically the sill or bottom rail, is rarely necessary. In many instances, selective repair or replacement of damaged parts and the implementation of a regular maintenance program is all that is required. It is generally possible to repair windows in fair or good condition relatively economically.

Maintenance

- Regularly review condition, repair and repaint windows

To improve operation

- Verify that sash cords, chains and weights are functional — Install metal sliders or sash tape, balances or operators at jambs if repair is not practical
- Repair or replace deteriorated components such as parting beads that separate window sash

- Remove built-up paint, particularly at jambs

To reduce air infiltration

- Replace broken glass (glazing)
- Install weather-stripping snugly between moving parts — Quality metal weather-stripping can last 20 years (Refer to *Weather Stripping & Caulk*, page 08-10)
- Re-caulk perimeter joints
- Remove and replace missing or cracked glazing putty
- Add sash locks to tighten windows
- Add interior or exterior storm window — A storm window can achieve similar R-values to a new thermal window
- Insulate weight pockets if no longer in use

To reduce solar heat gain or heat loss

- Install and utilize operable exterior shutters where historically appropriate
- Install interior blinds, curtains or UV window shades
- Plant deciduous trees at south and west elevations to block summer sun and allow in winter sun, and plant conifer trees at north to reduce effect of winter winds
- Install clear, transparent low-e film or glass



One of the advantages of historic wood windows over a modern prefabricated unit is repairability. This photograph demonstrates a Dutchman repair at the corner of the historic wood window sash. Also note the application of new glazing putty as part of the repair.

WINDOW MATERIALS: PAST & PRESENT

Wood windows were historically manufactured from durable, close-, straight-grained hardwood of a quality uncommon in today's market. The quality of the historic materials and relative ease of repairs allows many well-maintained old windows to survive from the early 20th century or earlier.

Replacement windows and their components tend to have significantly shorter life spans than historic wood windows.

Selecting replacement windows is further complicated by manufacturers who tend to offer various grades of windows, with different types and qualities of materials and warranties. Today, lower cost wood windows are typically made from new growth timber, which is much softer and more susceptible to deterioration than the hardwoods of the past. Vinyl and PVC materials, now common for replacement windows, break down in ultraviolet light, and generally have a life expectancy of less than 20 years. Fiberglass and composite windows, typically made from a combination of wood material and plastic resins, have only been available since the 1990's, so their longevity has not been fully evaluated. Because of the great variety of finishes for aluminum windows, they continue to be tested to determine projected life spans.

Other areas of concern with replacement windows, beyond the construction materials used in the frame and sash, include the type and quality of the glazing, seals, fabrication and installation. Double glazing or insulated glass, used in most new window systems, is made up of an inner and outer pane of glass sandwiching a sealed air space. The air space is typically filled with argon gas sealed around the perimeter. This perimeter seal can fail in as few as 10 years, resulting in condensation between the glass layers, necessitating replacement to allow for clear visibility. Many of the gaskets and seals that hold the glass in place also have a limited life span and deteriorate in ultraviolet light.

Significant problems with replacement windows also result from poor manufacturing or installation. Twisted or crooked frames can make windows difficult to operate. Open joints allow air and water infiltration into the wall cavity or building interior. When selecting replacement windows, it is important to consider life span and life-cycle costs.

WOOD WINDOW REPAIR

Given the significance windows play in defining the architectural character of a building, **the HDC strongly encourages the maintenance and repair of existing windows.** If portions of a window are deteriorated, it is often possible to replace only the deteriorated portion or component of the window. Replacement of the entire component or unit might not be necessary. (Refer to *Detecting Wood Rot* and *Wood Repair Options, Guidelines for Exterior Woodwork*, page 05-5.)

A property owner wishing to pursue historic window replacement is required to demonstrate that the existing windows are beyond repair and replacements are warranted.

When evaluating window repair versus replacement, the following guidelines can be helpful:

1. Perform routine maintenance: Replace broken or missing components such as trim, glazing or sash cords. Verify that caulking, glazing putty, parting beads and weather-stripping are applied securely and repaint the window.

2. Treat or repair deteriorated components: At the earlier stages of wood deterioration, it is possible to complete in-place treatments that do not necessitate component replacement. These include treating wood for insects or fungus, consolidating with epoxy and applying putty at holes and cracks and painting. Refer to *Wood Repair Options, Guidelines for Exterior Woodwork*, page 05-5.

3. Replace Deteriorated Components: Replace either the deteriorated portion of wood with a "Dutchman" or the entire component if the majority is deteriorated. (A Dutchman is a repair with a piece of the same material in a sharp-edged recessed cut. Refer to photograph above.) The replacement piece should match the original in design, shape, profile, size, material and texture. New wood sills are usually easily installed, while complete sash replacement might solve problems of broken muntins and deteriorated rails.

4. Replace Window: If the majority of the window components are deteriorated, damaged or missing and in need of replacement, installation of a new window that matches the original window might be warranted with appropriate documentation.



This window, and more specifically its surround, is highly ornate and an important feature of this home. Maintenance of the entire window assembly is encouraged for its long-term preservation.

WINDOW REPAIR VERSUS REPLACEMENT

When considering repair and retention of existing windows versus installation of replacement windows, applicants are encouraged to retain existing historic windows except in the case of extensive deterioration. In such a case, documentary evidence must be provided with an application. It can often be less costly to repair an existing historic wood window than to install a replacement window. (Refer to *Historic Window Problem Solving*, page 08-03.)

It is important to remember that just because a portion of the window or door is deteriorated, replacement of the entire component or unit might not be necessary, particularly for wood windows. A simple means of testing wood window deterioration is to probe the element with an awl or ice pick. Pierce the element perpendicular to the grain at an angle where the wood appears darker in color and measure the penetration depth and damp wood and assess the type of splintering. (Refer to *Detecting Wood Rot, Guidelines for Exterior Woodwork*, page 05-5.)

HDC WINDOW REVIEW

The HDC strongly encourages window repair or replacement of only those components of windows that are deteriorated beyond repair. If a property owner wishes to pursue window replacement, it will be necessary to demonstrate that the existing windows are beyond repair and replacements are warranted by providing detailed photographs for review.

FIBERGLASS & COMPOSITE WINDOWS

Fiberglass windows are made from sand, while composite windows are made from sand combined with wood pulp. When compared to vinyl windows, fiberglass and composite windows:

- Are stronger, harder and more rigid than vinyl - Thus requiring smaller frame and sash dimensions and allowing greater glass sizes and admission of sunlight
- Have similar expansion and contraction rates as wood and glass, minimizing seasonal opening of seams and joints
- Can be fabricated with profiled exterior frames and exterior muntins to approximate the appearance of wood windows
- Can have a paintable, exterior finish

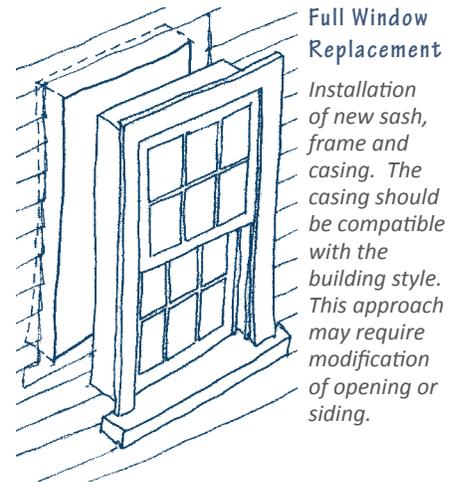
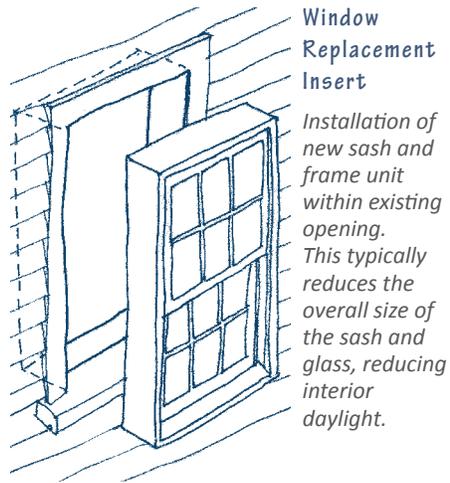
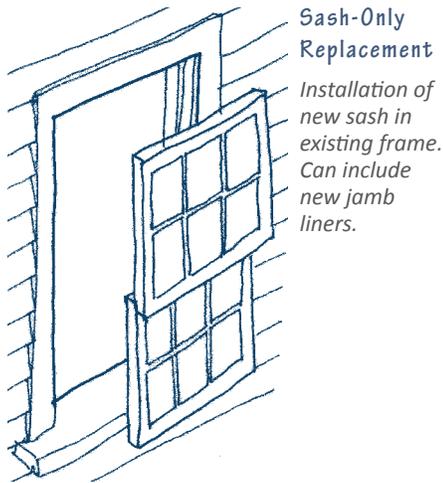
Both fiberglass and composite windows tend to be more affordable than wood windows. However, there is great variety in the types of detailing, with some manufacturers doing a better job of approximating the appearance of wood windows. Care should be taken in reviewing the appearance with regard to all dimensions, such as frames, sash, and muntin thicknesses, as well as overall configuration.

ALUMINUM WINDOWS

When the majority of windows in commercial and large-scale residential buildings are deteriorated, property owners often seek a quality replacement window that will not require a high level of maintenance. One option that is often considered is aluminum replacement windows. Because aluminum replacement windows are typically custom made to fit within existing masonry openings, they are frequently used in larger commercial applications rather than as replacement windows for single or two-family homes.

Some of the advantages of aluminum replacement windows is that they can usually be made to replicate historic wood windows while including insulated glass for better thermal performance. This replication can include the sash operation and exterior profiled muntins matching the historic configuration. In addition, because they have a factory-applied, baked on paint finish, which can be selected to match historic paint colors, they do not require the regular repainting associated with wood windows.

Because of the strength of aluminum and its ability to fasten the parts of the window together with strong connections, aluminum replacement windows can easily outlast the lifespan of vinyl alternatives by two to three times depending on the quality of each product. Although the initial costs associated with aluminum replacement windows is typically greater than vinyl, the life-cycle costs associated with more frequent replacement of lower-quality windows might provide overall costs savings in the long run. In addition, the overall thermal performance of an aluminum replacement window tends to be higher than most vinyl windows, allowing for energy costs savings for the building occupants.



WINDOW OPTIONS

Repair or replacement of existing components: Deteriorated sills, sash and muntins are repairable by craftsmen with wood consolidant or replacement parts, retaining original fabric and function. (Refer to *Wood Repair Options, Guidelines for Exterior Woodwork*, pages 05-5.) In-kind replacement sash components and sills can be custom-made to replace deteriorated elements if necessary. Property owners are strongly encouraged to explore repair and selective replacement parts options prior to considering whole sash or frame replacement, particularly at historically significant buildings.

Repair and selective component replacement benefits:

- Original building fabric and historic character remain
- Historic profiles, dimensions and proportions can be retained and matched
- Repairs can be completed by skilled local carpenters
- Timber used in historic windows can last substantially longer than replacement units

Sash replacement package: If the sash is beyond repair, some manufacturers offer replacement jamb liners and new sash for installation within existing window casings. (Jamb liners are the vertical internal facing between the window sash and structural frame.) Because of the loss of the historic sash, this option is discouraged by the HDC.

Sash replacement package disadvantages:

- Stock replacement sash are often inappropriate to the size, profiles and proportions of existing openings and detailing
- Replacement sash have a limited warranty, likely needing another partial or full replacement in 10 to 25 years as seals and joints open
- Modification of the jambs is necessary
- Liner often made from vinyl or other inappropriate material
- The jamb liners do not always work well in existing window openings and might need more frequent replacement
- Out-of-square (wacked) openings can be hard to fit, making window sash hard to operate, and seals might not be tight
- Historic sash are removed and become landfill debris

Frame and sash replacement unit: If the frame is beyond repair, a frame and sash replacement unit is a complete frame with a pre-installed sash of various muntin patterns for installation within an existing window frame opening. Due to the total loss of the sash and modification of the frame, this is not recommended by the HDC for historic buildings. It might be an option in new construction, based upon the specific circumstances of a project.

Frame and sash replacement unit disadvantages:

- Stock replacement sash are often inappropriate to the size, profiles and proportions of existing openings and detailing
- As the surrounding frame typically must be modified, alteration of built-in surrounds might be required and two frames and sills are typically visible at the exterior
- The size of the window sash and glass openings are reduced due to the new frame within the old frame
- In-fill might be required for non-standard sizes
- Modification of existing casing and sills may be required
- Historic sash are removed and become landfill debris

INSTALLING REPLACEMENT WINDOWS

When installing windows, it is important to keep in mind that the overall appropriateness of any installation is largely based upon its details. It is generally best to review buildings of similar style, materials and construction period for the appropriate details for a project.

- **Wall Plane** — An easy way to identify new windows is by how far back a window is set into a wall plane from the outside wall face. A historic window tends to have greater depth than a new window, with the window casing, frame and sash receding back from the wall plane, providing shadow lines between components
- **Casing & Sill** — Many replacement windows do not come with a factory-installed casing or sill, requiring them to be field-applied by a contractor during installation. To ensure that the replacement windows look like they “fit” a building, the stylistically appropriate casing and sill should be installed related to the building’s style and construction type, either masonry or wood-framed.

Vinyl windows with applied muntins lack the profiles and details of traditional wood windows and are not appropriate at historic buildings. They are also mounted flush to the outside wall without trim or casings.



MAINTAINING REPLACEMENT WINDOWS

One of the selling points of replacement windows is that they do not require maintenance. With the relatively short life expectancy of many of the materials and components, this is a very optimistic viewpoint.

As joints or seals in replacement windows deteriorate, openings can be formed that allow air and water to enter into the window frame, wall cavity and/or building interior, causing additional damage. Repair of these openings typically requires replacement of the deteriorated parts. This can present a problem if the manufacturer has modified their designs or is no longer in business, necessitating custom fabrication of deteriorated elements or replacement of the window.

As previously described, the double-glazing has similar problems over time due to deterioration of the perimeter seal. In addition, if the glazing unit is cracked or broken, it will require full replacement. This is further complicated when the double-glazing includes an internal muntin grid. By contrast, a good carpenter can generally repair a historic wood window with single-pane glazing and install an interior or exterior storm window to improve thermal performance.

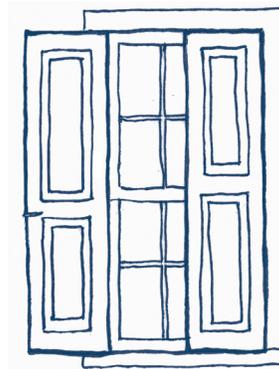
REPLACEMENT WINDOW QUALITY

Reputable mill shops, lumber yards and window specialists typically provide a better selection and higher quality replacement window options than companies that advertise with bulk mailings or flyers. Local companies are often familiar with the unique attributes of window detailing for building types and periods in Portsmouth and are a better option for matching historic detailing.

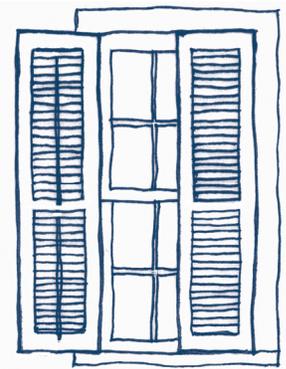
REPLACEMENT WINDOW COSTS

The costs that should be anticipated when considering the installation of replacement windows include:

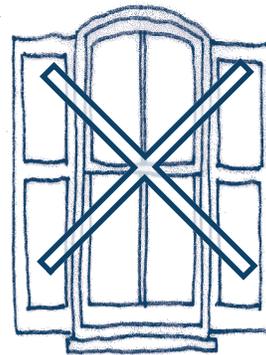
- Labor to remove old windows and a disposal fee
- Purchase price and delivery of new windows
- Labor and materials to modify existing framing for new windows
- Labor to install new windows
- Life-cycle cost of more frequent replacement of deteriorated components, sash and window units



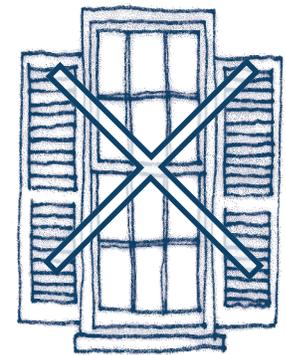
Paneled Shutter
Six-over-six double-hung window with paneled shutters



Louvered Shutter
Six-over-six double-hung window with louvered shutters



Not Recommended
The shutters do not fit the arched opening of the window



Not Recommended
The shutters are too short and narrow for the window

SHUTTERS

Historically, exterior shutters were used as shielding devices to modulate light and protect against inclement weather. Paneled shutters were installed to provide a solid barrier when closed and louvered shutters were used to regulate light and air. Shutters were not used on all historic buildings or in all locations. Some building styles did not typically include shutters. It is often possible to determine if shutters previously existed by looking for hardware such as hinges or tie-backs or evidence of their attachment, such as former screw holes in the window casing.



Shutters should be wood, operable and sized to fit window openings when closed. Shutter hardware should be compatible with the building style and typically includes hinges and "shutter dogs" or hold-backs.

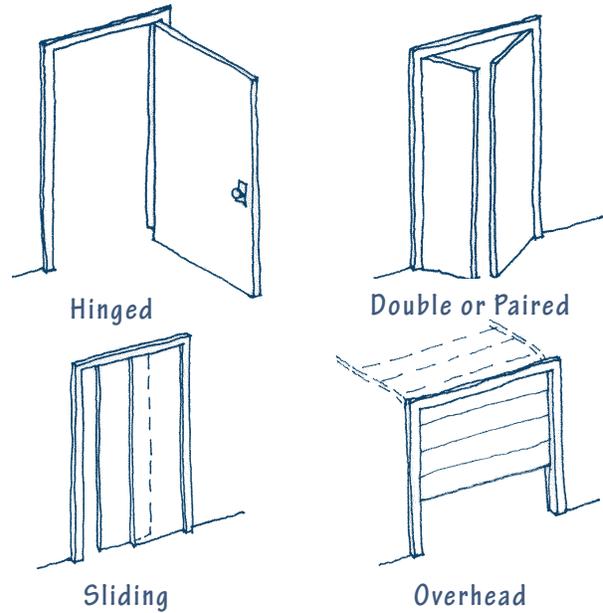


Most of the doors found at historic homes in Portsmouth are paneled wood. This example includes a multi-light transom window and pedimented door surround.

DOORS

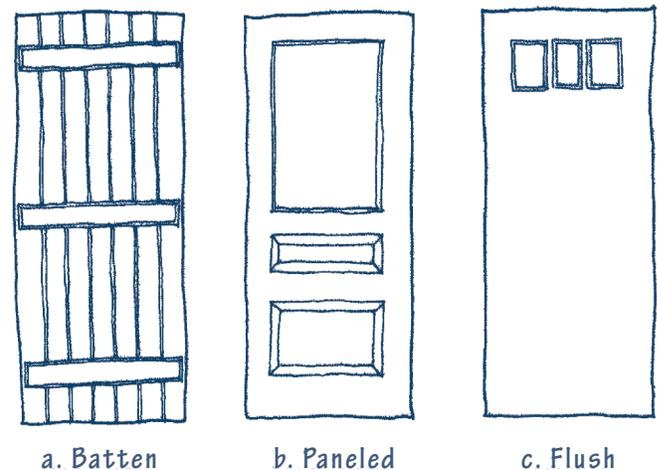
Entrance doors serve an important role in regulating the passage of people, light and air into a building, as well as providing a threshold separating the exterior and interior. Historically, most doors were wood and varied stylistically based upon the architectural style of the building, with some more “high-style” and others simpler interpretations. Similarly, a building can have a grand front door, and a simpler side or rear door. As a result, doors are considered an important feature and the retention, maintenance and repair of historic doors is recommended. Traditionally, a door’s hardware and trim complemented the overall building style. When selecting hardware for a door it is important to complement its historic style.

Doors are typically constructed of numerous parts. By the middle of the 18th century, elaborate paneled doors became more common, and now represent the most common door type in American residences. Paneled doors can be constructed in a variety of configurations that can reflect the style of the building. Later 19th century doors often included glazed panels. In the 20th century, new door types, including flush doors and metal doors, had periods of popularity.



COMMON DOOR TYPES

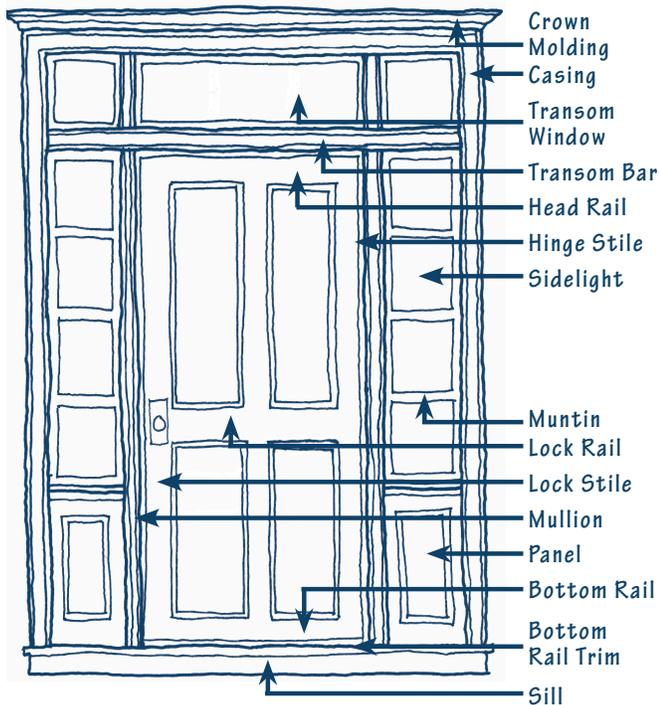
- **Hinged:** Swings to close at opposite jamb – almost always mounted at interior thickness of wall swinging inward
- **Double or Paired:** A pair of swinging doors that close an opening by meeting in the middle – includes French doors
- **Sliding:** Either a fixed panel with a horizontally sliding door or overlapping horizontally sliding doors – includes patio doors
- **Overhead:** Horizontal sections that open upward by sliding on tracks – most often found at garages



COMMON WOOD DOOR STYLES

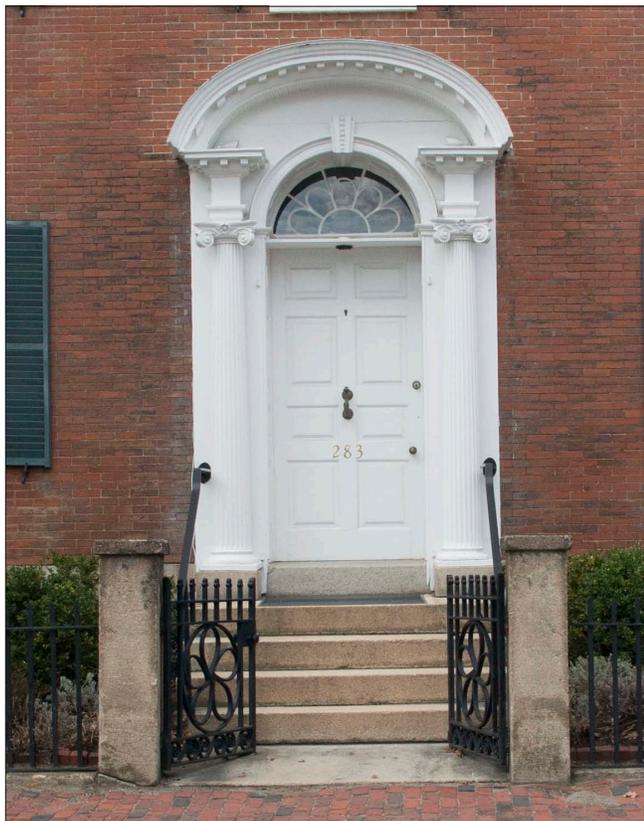
All door styles can have glazing installed in different configurations.

- **Batten:** Full height boards attached edge to edge with horizontal boards nailed to the verticals
- **Paneled:** A frame of solid wood parts with either glass or wood panels
- **Flush:** A single plain surface on its face, typically wood veneer



PANELED WOOD DOOR COMPONENTS

In Portsmouth, paneled wood doors are the most common at historic residences. The diagram above identifies typical wood paneled door components. Door configurations vary with a building's architectural style.



Grand homes often have ornate entrance doors to impress visitors. This Georgian example includes a half-round transom window with a segmental arch door hood, flanked by semi-engaged Ionic columns.



Wood checking and peeling paint is visible. Minor repair and maintenance can prolong the serviceable life of this door.

HISTORIC DOOR PROBLEM SOLVING

Since doors tend to be one of the most operated elements on the exterior of a building, they are more likely to deteriorate from wear or damage and require regular maintenance, such as painting. If deterioration occurs, selective repair or replacement of damaged parts and the implementation of a regular maintenance program is often all that is required to retain a historic door.

To improve operation:

- Verify that doors fit properly in their frames and joints are tight
- Verify that hardware is operational, particularly that hinges are tight and hinge pins not worn
- Remove built-up paint at door and jambs
- Repair or replace deteriorated components such as trim and stops (molding inside a door frame that stops a door from swinging)

To reduce air infiltration:

- Install weather-stripping snugly between door and frame (quality metal weather-stripping can last 20 years)
- Replace broken glass (glazing) and missing or cracked glazing putty
- Caulk perimeter joints around casing and frame
- Install a storm door

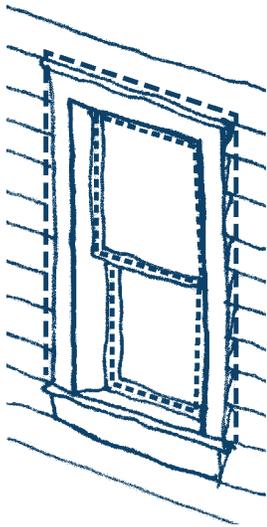
To reduce solar heat gain or heat loss:

- Install and utilize operable exterior shutters
- Install clear, transparent low-e film or glass

Door maintenance:

- Regularly inspect, repair and repaint doors

If door replacement is warranted, the door should be appropriate to the architectural style and character of the building. Similar to windows, replacement doors should match the original materials, type, size, shape, configuration, panel pattern, glazed window type and pattern, proportions, profiles and details as historic doors. Salvaged doors may be more appropriate than new doors. However, salvaged doors must match the size, shape, type, configuration, proportions and profiles of the original doors to be appropriate. (Refer to *Doors*, page 08-8, the *Guidelines for Architectural Styles* and HDC Staff for additional information.)



Recommended weather-stripping locations:

- Behind window sash track
- Between window meeting rails
- At perimeter of doors/windows

Recommended caulk locations:

- Between door/window frame and adjacent wall
- Between abutting materials such as corner boards and siding, porch and wall surface
- Between dissimilar materials such as masonry and wood, flashing and wall surface

WEATHER STRIPPING & CAULK

Proper application of weather stripping and caulk around windows and doors can greatly reduce air infiltration and drafts. When selecting weather stripping or caulk, choose materials appropriate for each location and follow the manufacturer’s installation recommendations for best results. Because weather stripping is used between the moving parts of windows and doors, it can easily become damaged, loose, bent or torn. Inspect weather stripping regularly, preferably every fall, and replace it as needed. For heavy-use installations such as entrance doors, it may be beneficial to install more durable weather stripping, such as spring metal or nailed felt.

The installation of caulk or other sealants should occur throughout the exterior of the building to minimize interior drafts and to protect the building’s wall system from wind-driven rain. Locations where caulk is recommended include where two dissimilar materials meet; where expansion and contraction occur; or where materials are joined together. Select caulks and sealants that can be sanded and/or painted to minimize their visual appearance. In addition, care should be taken to prevent caulk or sealant from being smeared onto the face of adjacent materials since the residue might affect paint adherence. It is also important to select the appropriate type for each location and exercise care when removing old caulk that might contain lead. (Refer to *Safety Precautions, Guidelines Introduction*, page 01-16.)

DEFINITIONS:

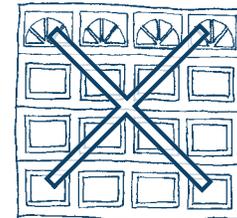
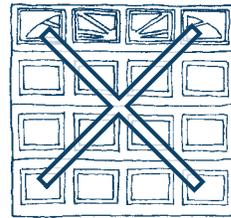
Weather Stripping: A narrow compressible band used between the edge of a window or door and the jambs, sill, head and meeting rail to seal against air and water infiltration; made of various materials including spring metal, felt, plastic foam and wood with rubber edging.

Caulk: Flexible sealant material used to close joints between materials; made of various materials including tar, oakum, lead, putty and modern elastomerics such as silicone and polyurethane.

SCREEN / STORM WINDOWS & DOORS

Screens and storms should conceal as little of the historic window or door as possible and should be selected to complement each window or door type. This generally means selecting a half-screen for double hung windows and a wood storm window that has rails that coincide with the frames, rails, stiles and glazing pattern and overall configuration of the associated window.

The most recommended option for a screen or storm door is a simple wood framed opening with a large screen and minimal ornament. If more elaborate detailing is desired, the style and level of detailing should complement the building style; for example, a screen or storm door with Victorian gingerbread would not be appropriate for a Colonial or Federal style house.



Garage doors with arched or round window openings are generally not appropriate at historic buildings.

GARAGE & NON-TRADITIONAL DOOR TYPES

Occasionally, modern functions require openings not found in historic architecture. These may include: garage doors, loading dock doors, doors that must swing outward to meet safety or code requirements, or other special conditions. The goal of the HDC is to integrate these types of openings in a sensitive manner to maintain the historic character of the building and the surrounding neighborhood.

If an opening can be made which copies another opening type which could have reasonably existed on a particular building, then it may be desirable to do so. In some cases it may be impossible to make certain desired changes, such as adding a garage door opening, simply because the style or type of building does not lend itself to such modification. Where existing additions or modifications do not fit the pattern of historic development in Portsmouth, every effort should be made to minimize its impact rather than making the intrusion more prominent by potentially locating them at secondary elevations and in a manner that minimizes removal of character-defining features.

MODIFYING OR ADDING OPENINGS

The arrangement, size and proportions of window and door openings are key components of a building’s style and character. As a result, the modification or addition of window or door openings, particularly on more prominent building façades, is strongly discouraged. This includes the infill of all or part of an opening to make it smaller or to visually remove it. It also includes increasing the size of a door opening to provide a larger opening for a display window, garage, loading dock or other use.

HDC CRITERIA FOR WINDOW & DOOR REVIEW

When evaluating a proposed repair or replacement of a window or a door, the HDC's goal is to preserve the integrity of the remaining historic fabric in Portsmouth's Historic District to ensure continued access to this shared heritage. One of the major factors in the review process is the property's historical and/or architectural value as determined by the historic designation. The more significant the property, the more critical is its authenticity.

- **Focal Properties** — Maintain the highest historic integrity with restoration of historic windows or wood replacement windows throughout
- **Contributing Properties** — Restoration of historic windows encouraged — Wood windows should be installed at street-facing façades with more flexibility possible at elevations with limited visibility from the street
- **Non-Contributing Properties** — Restoration of historic windows encouraged, with greatest possibility for flexibility for alternate materials that include a profiled exterior frame and/or muntin system, preferably with a painted exterior finish

When is HDC Review Not Required?

A Certificate of Approval is not required for:

- A replacement exterior door, window or storm window, provided that it matches the historic design and materials — or if the materials used restore the original architectural features, including but not limited to the number and arrangement of window lights, use true and non-removable divided lights, and ensure that the size of window openings does not change
- Window-mounted air conditioner units that are temporary and seasonal
- Installation of window flower boxes
- Installation of unobtrusive, electronic security devices

The HDC does not require a Certificate of Approval in order to replace shutters provided they are:

- Constructed of wood
- Sized at one-half the width of the sash they are to cover
- Installed with hinges and dogs as appropriate to the building style
- Louvered, paneled or constructed of boards as appropriate to the building's architectural style

The HDC does not require a Certificate of Approval for a storm or screen window and door installation or replacement provided:

- They are constructed with wood frames, with any metal or vinyl tracks concealed by the wood frames
- Replacements are the same design and materials as the elements they are replacing or restore the original architectural features

Windows

When evaluating a proposed replacement window material, the HDC utilizes the Criteria for Review and will consider the following replacement window materials, with all options to include profiled, exterior muntins, appropriate to the building style and period of construction:

1. Wood — Wood windows can either be true or simulated divided lights with insulated glass and exterior muntins
2. Aluminum (At commercial buildings and new construction only) — Details and profiles should generally match wood construction, with the exception of storefront windows
3. Fiberglass / Composite — Preferably with a painted exterior finish
4. Aluminum clad — Details typically vary and it is difficult to modify color
5. Vinyl clad — Generally lacks sharp details of wood, has a glossy finish, and is difficult to modify color
6. Vinyl — Lacks exterior profiles and details of wood, glossy finish, difficult to modify color, tends to require more frequent replacement — Not appropriate

The HDC encourages:

- Retaining and maintaining serviceable historic windows
- Using storm windows rather than replacement windows as the best means to achieve energy efficiency
- Installing weather stripping, caulk, glazing putty and sash locks to reduce air infiltration
- Reducing solar heat gain or loss through such activities as: utilizing shutters, blinds or curtains, strategically locating trees and installing UV protection
- Installing clear glass at all openings unless replacing cracked historic colored, beveled or frosted glass in-kind

If replacement windows are warranted, the HDC encourages:

- Reviewing grades of windows offered by manufacturers
- Utilizing quality materials in the installation process
- Understanding the limits of the warranties for all components and associated labor for replacement
- Selecting reputable manufacturers and installers who are likely to remain in business and honor warranties
- Installing quality true divided-light or simulated divided-light replacement windows to match the original material, size, shape, configuration, operation, dimensions, profiles and detailing of historically appropriate windows to the greatest extent possible, including the use of egress windows.
- Selecting wood- or aluminum-clad wood replacement windows for street elevations
- Installing replacement windows in less visible areas
- Maintaining serviceable trim, hardware and components or utilizing hardware appropriate for the historic period

The HDC discourages:

- Interior or internal muntin grids for multi-paned appearance



Center-hall homes generally have a single window centered over the door flanked by a pair of windows at each level. In this example, the windows all have 6/6 double-hung sash with wood louvered shutters.

HDC CRITERIA FOR WINDOW & DOOR REVIEW (CONTINUED)

Shutter Review

The HDC encourages:

- Maintaining historic shutters
- Installing new shutters where they existed historically
- Operable shutters made of wood or other materials with a paintable finish
- Shutters of the appropriate style for the building and location, with a painted finish
- Appropriately sized and shaped shutters for the window opening, fitted to cover the window when closed
- Period-appropriate hardware
- Refurbished historic shutter hardware appropriate to the building style

The HDC discourages:

- Shutters where they did not exist historically
- Shutters screwed or nailed into the building wall
- Vinyl or aluminum shutters

Door Review

The HDC encourages:

- Retaining historic doors and surrounding trim
- If the originals do not survive, matching replacement doors as closely as possible to the original doors or using salvaged doors appropriate to the period and style of the building
- Installing historically and stylistically appropriate wood replacement doors when level of deterioration requires replacement

The HDC discourages:

- Removing or encapsulating surrounding trim
- Replacing original doors, unless seriously deteriorated

Screen/Storm Windows & Door Review

The HDC encourages:

- Simple storm/screen windows and doors with large screened openings that reveal as much of the historic window or door as possible and fit historic openings
- Removable storm/screen windows to facilitate maintenance of historic windows
- Storms/screens (half screens) that minimize the change to the exterior appearance
- Painting the wood storm/screen window or door frame to match the adjacent window or door trim

The HDC discourages:

- Vinyl, aluminum, metal or other synthetic materials for storm/screen frames – Wood frames can be custom made to fit any size or shape opening
- Visually opaque screen material
- Plexiglas, or similar material, fastened to window or door frames, screens or shutters
- Storms/screens adhered or fastened directly to window or door trim, shutters or blinds
- Storm/screen windows that are too small or a different shape than the opening and require in-fill trim or panels
- Full window screens covering the entire window opening – Half screens are appropriate for single- and double-hung windows

Garage & Non-Traditional Door Review

The HDC encourages:

- Retaining historic doors
- Stylistically appropriate replacement doors
- New paneled doors with a paintable exterior finish
- Single-bay garage openings that do not require removal of decorative features or modification of opening

The HDC discourages:

- Non-traditional door types that are visually prominent from the street