

WINDOWS

DESIGN GUIDELINES

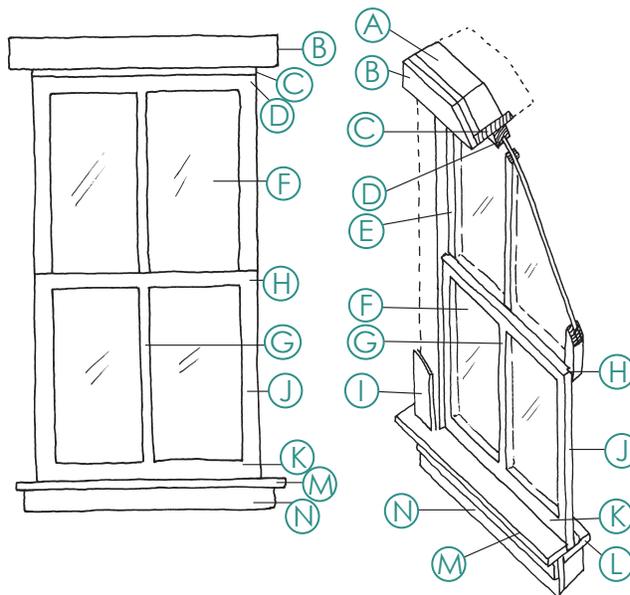


The type, size, framing, and dividing lights of windows, as well as their location and rhythm, help establish the historic character of a building. Although windows are inherently functional by nature, they possess a vast range of decorative potential and are valuable tools in architectural design. Original window components should be retained to the extent possible. The character-defining features of a window should be preserved. Historic windows can be repaired through reglazing, patching, and splicing wood elements such as muntins, frame sill, and casing. Repair and weatherization is generally more energy-efficient and less expensive than replacement. Windows should be in character with the historic building.



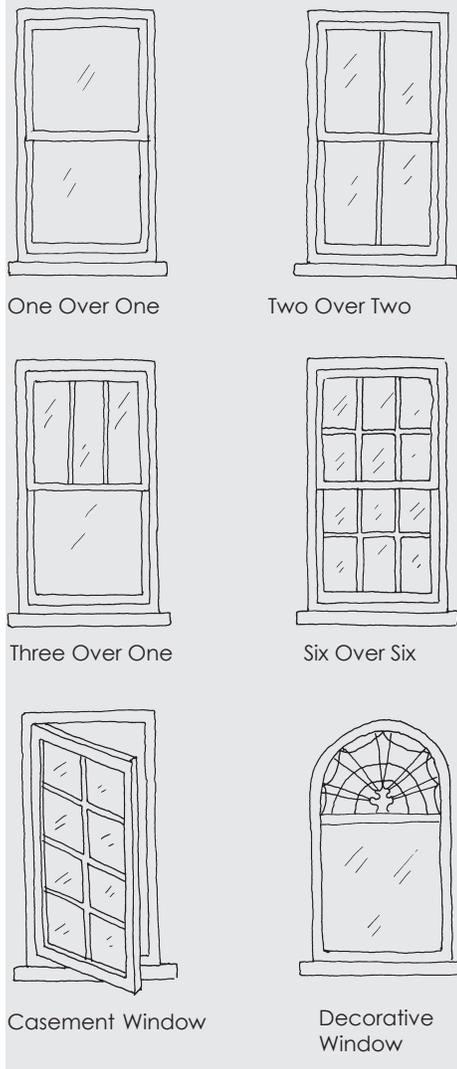
Window Elements (Interior Views)

- A. Wall Frame
- B. Head Trim
- C. Frame Head
- D. Top Rails
- E. Parting Bead
- F. Glazing
- G. Muntin/Mullion
- H. Meeting Rails
- I. Jamb Trim
- J. Side Rails
- K. Bottom Rails
- L. Sill
- M. Stool
- N. Trim



Preserve the functional and decorative features of a historic window, as well as the original window material.

Window Types



W.1 Preserve the functional and decorative features of a historic window, as well as the original window material.

- » Where a historic window is intact and in repairable condition, retain and repair it to match the existing as per location, light configuration, detail, and material.
- » Preserve a historic window feature including a frame, sash, muntin, mullion, glazing, sill, head, jamb, or molding.
- » Preserve an original transom. A transom can be opened to let cool air in and warm air out of the structure.
- » Preserve the original material of a window. If this is not possible, alternative materials may be considered if they convey the character, detail, and finish of the original material.
- » Maintain the functionality of an original double-hung window in a historic structure. A double-hung window functions like a transom, and allows cool air in and warm air out, facilitating air circulation.
- » Repair, rather than replace, a frame and sash.
- » Consider weather-stripping to reduce air flow in and out of a structure, creating a more energy-efficient building.

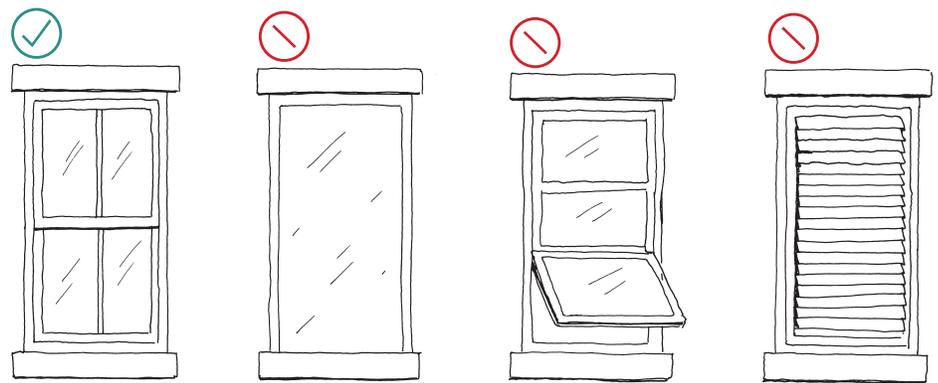
W.2 Avoid alterations to a historic window that would negatively affect the historic appearance of the window and structure.

- » Do not apply reflective or insulating film to window glass.
- » Do not use smoked, tinted, low-E, or reflective glass on building facades that can be seen from a public way.
- » Do not block in or back-paint a transom or sidelight.
- » Do not alter the number, size, location, or shape of an original window if seen from a public way by making new window openings or permanently blocking existing openings.
- » Do not remove or obscure historic window trim with metal or siding materials.
- » Do not install new floors or dropped ceilings that block the glazed area of historic windows. A design should incorporate a setback that allows the full height of the historic window to be seen unobstructed if a dropped ceiling is necessary.



Window forms such as a fleur-de-lis (top) and Palladian (bottom) enliven the facades of many of Louisville's historic buildings.

Sash Configuration Defines Historic Window Character



Preserve a historic window feature including a frame, sash, muntin, mullion, glazing, sill, head, jamb, or molding.

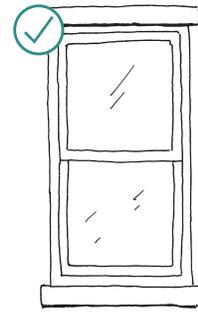
W.3 Reconstruct a missing window element.

- » Use a surviving prototype to reconstruct a missing window element such as architraves, hoodmolds, sash, sills, and interior or exterior shutters or blinds.
- » Use a material for which there is a historic precedent or a compatible substitute material if necessary.

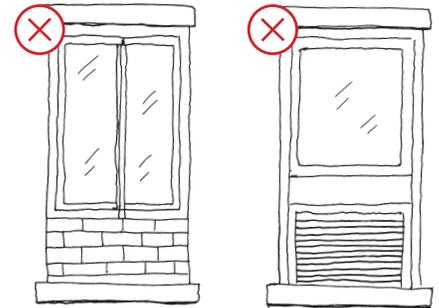
W.4 Match a replacement window design to the original.

- » Replace a severely deteriorated historic window with a new window that conveys the same visual appearance. For more information on what classifies a window as “severely deteriorated” and, therefore eligible to be completely replaced, see the final page of this chapter.
- » Use historical, pictorial, and physical documentation to select a new window that is compatible with the historic character of the building and the district.
- » Select a window that matches the historic sash dimension, muntin configuration, reveal depths, glass-to-frame ratios, glazing patterns, frame dimensions, trim profiles, and decorative features when the repair of original windows is impossible.
- » Evaluate the option of using appropriate salvage materials when replacing windows that are deteriorated beyond repair.
- » Install a replacement window that operates in the same way as the original window - double-hung windows are replaced with double-hung, and casement windows are replaced with casements.

Get the Proper Fit



Original Window



Inappropriate Alterations

If replacement is necessary, select a window that matches the historic sash dimension, muntin configuration, reveal depths, glass-to-frame ratios, glazing patterns, frame dimensions, trim profiles, and decorative features when the repair of original windows is impossible.



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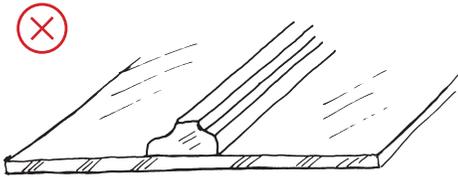
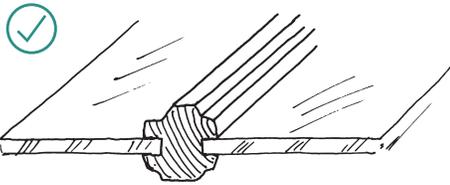
Trim Helps Windows Stake Their Claim



Do not remove or obscure historic window trim with metal or siding materials. Trim helps visually affix a window within the facade so that it stands out from the wall plane rather than receding into it.

- » Use a large sheet of clear glass when replacing a storefront display window.
- » Do not install a replacement sash that does not fit historic window openings. Original openings should never be blocked-in to accommodate a stock window.
- » Do not install a synthetic replacement window on a primary facade that does not appear similar in finish, texture, and depth to the historic window materials.
- » Do not replace a multi-pane window that has true divided lights with thermal glazing windows that have false “snap-in” or applied muntins on a primary facade elevation.
- » Do not install contemporary picture, glass block, or jalousie window in an exterior window openings.

Muntins Give Definition



Reconstruct a missing window element. True muntins hold individual panes of glass and help define a window's character. False muntins are applied over a large sheet of glass and are imitative, not functional. In some cases, false muntins may be considered; however, the use of true muntins is preferred.

Historic Shutters

Shutters are integral, functional components of many historic buildings. They provide protection from heat and some protection from storms. Historically, louvered or slatted shutters were placed on most window and door openings. The louvers were usually operable. Historic shutters should be preserved.

W.5 Preserve and repair an existing wood shutter.

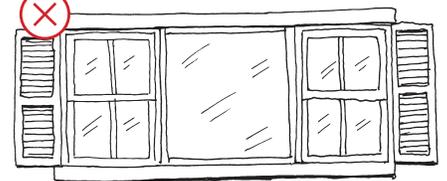
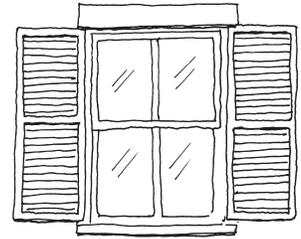
- » Keep original shutters in tact. The shutters serve as accents and provide security.
- » Use existing shutters to help cool a structure. Shutters help block solar heat gain in the summer while allowing breeze to pass through (if they are louvered), helping with cooling costs during summer months.

W.6 Repair an existing shutter with in-kind materials.

W.7 Replace shutters where they previously existed when possible.

- » If damage is too extensive to repair, using replacement shutters may be considered.
- » Choose a replacement shutter that appears similar in style, color, size, and material to the historic materials. The replacement shutter should cover one-half of the window, were it to be closed.
- » Install shutters only where there is historic evidence for them.
- » A replacement shutter should be or appear to be operable, measure the full height and width of the windows, and be constructed of a historically-appropriate material.
- » Use solid shutters for the ground floor and solid or louvered shutters for the upper floors.
- » Mount replacement shutters so they partially cover the vertical trim of the window frame.
- » Do not mount a shutter to the masonry or cladding on either side of the window.
- » Do not install aluminum or vinyl shutters.

Historic Shutters Are Functional, Not Merely Ornamental



If replacement of historic shutters is necessary, choose a replacement shutter that appears similar in style, color, size, and material to the historic materials. The replacement shutter should cover one-half of the window were it to be closed.



Preserve and repair existing wood shutters.

Awnings

On some buildings, awnings represent a key character-defining feature. Historic awnings should be preserved. New awnings may be added in a manner that retains the character of a historic building.

W.8 Preserve an original awning.

W.9 Maintain a historic awning in operable condition.

W.10 Repair an altered awning to its original design.

W.11 Replace a non-repairable historic awning to be consistent with the historic context.

- » Design an awning to complement existing architectural features. It should not overwhelm the facade.
- » Design an awning to be of a matte-finish, weather-proofed fabric of traditional form, and of a color that complements the building. Typically, an awning of a solid color and narrow or wide stripes running perpendicular to the building is the preferred pattern.
- » Consider the use of an operable awning where appropriate. Operable awnings can provide shade in the summer and allow solar access in the winter, increasing the energy-efficiency of a structure.
- » Use a material that is durable and weather resistant.
- » Attach an awning between the window display area and the sign-board or second-floor window sill. An awning should be attached below the transom line where historic prism glass is present.
- » Do not damage the historic structure when installing an awning. Hardware should be limited to that which is required for structural stability and should be driven into mortar joints, not masonry.
- » Do not use fiberglass, metal, plastic, or back lit awnings that have contemporary shapes.
- » Do not install an awning where there is no historic evidence.

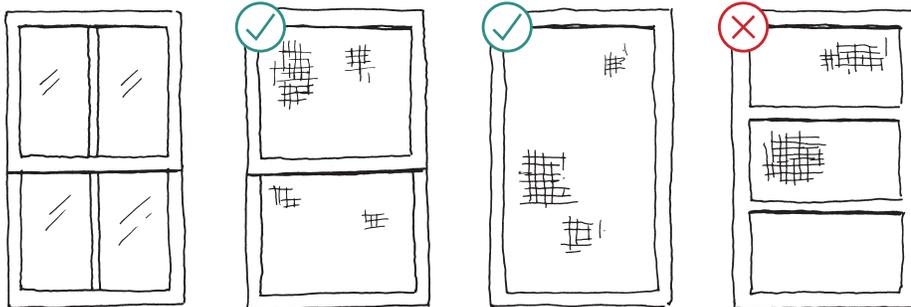
Window Appurtenances

In some cases, it may be necessary to install safety features and modern conveniences onto windows, such as storm windows, security bars, and window air conditioning units. Often, it will be most appropriate to install temporary features, such as removable storm screens, rather than relying on strategies that may require repeated and damaging installation.

W.12 Minimize the visual impact of a modern appurtenance on a historic building.

- » Install a window fixture, such as air conditioning unit, in a window on a secondary elevation.
- » Install a storm window that duplicates the shape and color of the original window. A storm window can help reduce air movement into and out of an existing window, and provide a more affordable way to create a more energy efficient home.
- » Use a storm window that has wood or narrow, metal frame.
- » Mount a storm window on the blind stop within the window frame.
- » Install security bars in a way that does not obscure the historic window.
- » Use retractable commercial security bars for a storefront.
- » Upon installation of a modern fixture, do not damage any part of the historic window or frame or obscure the architectural character of the original window.

Storm Windows and Screens Should Align With Sash



Historic Window

Install a storm window that duplicates the shape and color of the original window. A storm window can help reduce air movement into and out of an existing window and provide a more affordable way to create a more energy efficient home.

Historic Window Condition Determination

The Architectural Review Committees (ARC) and Landmarks Commission (LC) classify windows into four classes to determine their condition and what treatment is recommended. These condition determinations provide guidance for ARC and LC decision-making regarding Certificate of Appropriateness (COA) applications for projects involving historic windows. Metro Staff, the ARC, and the LC recommend that project applicants and property owners review the classification definitions prior to submitting a COA application.

Classification Definitions

- » **Class One:** "Routine Maintenance" - with small repairs including paint removal, reglazing and weather stripping, caulking, and repainting.
- » **Class Two:** "Stabilization" - shows a small degree of physical deterioration, but can be repaired in place by patching, water proofing, consolidating, and regluing the existing material.
- » **Class Three:** "Partial Replacement" - has localized deterioration in specific areas. These members are totally removed and new ones are spliced into the existing fabric.
- » **Class Four:** "Total Replacement" - if the entire fabric of the window has deteriorated, then the only feasible alternative is total replacement.

The four categories described above present potential scenarios that a property owner may encounter with the condition of their historic windows. Windows that meet the class four standards are the only candidates that shall be considered for window replacement.