



STANDARDS AND GUIDELINES FOR DOORS AND WINDOWS

INTRODUCTION



Doors and windows comprise roughly 30% of the surface area of walls on historic structures. Traditionally they are spaced in orderly fashion with each room having at least one opening. The header of the openings typically align. Doors and windows are important components as they help to identify and define the architectural style and period of construction of a structure, while providing natural light and ventilation. This chapter will review the many styles and components of doors and windows; the following sections can be found:

WINDOW TYPES AND STYLES

COMPONENTS OF A WOOD WINDOW

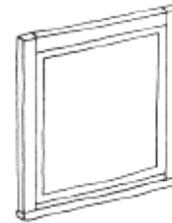
DOOR TYPES AND STYLES

SCREEN DOORS AND WINDOWS— See Sustainability Chapter

SHUTTERS— See Sustainability Chapter

STORM WINDOWS AND DOORS— See Sustainability Chapter

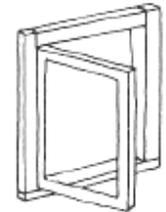
TYPES OF WINDOWS



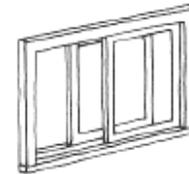
FIXED



DOUBLE- OR SINGLE-
HUNG (UPPER SASH
MAY BE FIXED IN EARLY
EXAMPLES)



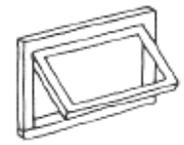
CASEMENT



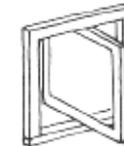
SLIDING



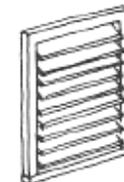
HOPPER



AWNING



PIVOT



LOUVER

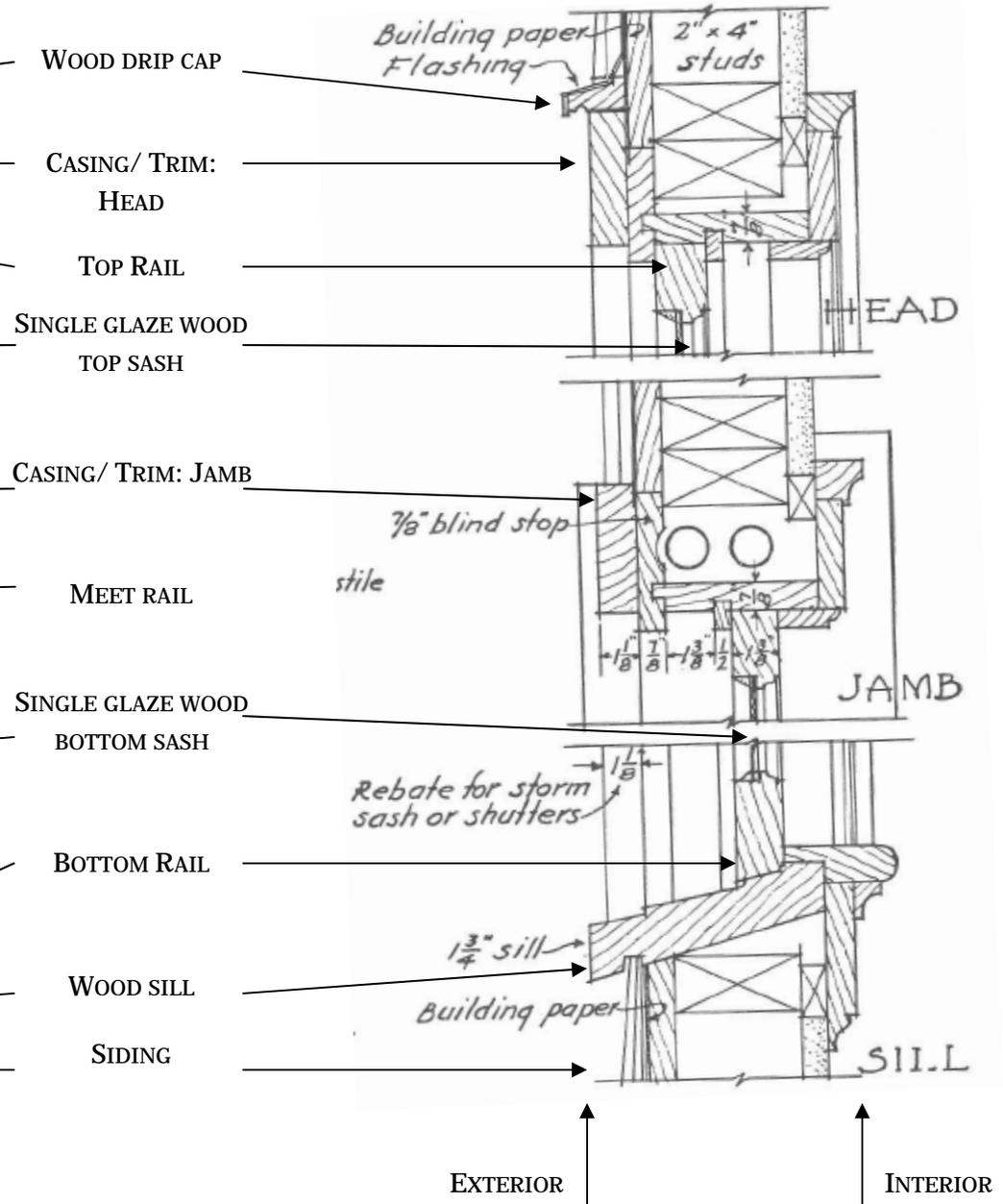
ABOVE: The types of windows images are from A Field Guide to American Houses by Virginia and Lee McAlester.

REMINDER: All exterior work requiring a building permit requires a Certificate of Appropriateness and must conform with all of City of Fort Worth ordinances. It is helpful when using these guidelines to be familiar with your architectural style.

COMPONENTS OF A WINDOW



ABOVE: Traditional 1/1 wood window found in the Fairmount Historic District.



ABOVE: The section is an excerpt from *Architectural Graphic Standards* published in 1932 by John Wiley and Sons, Inc.

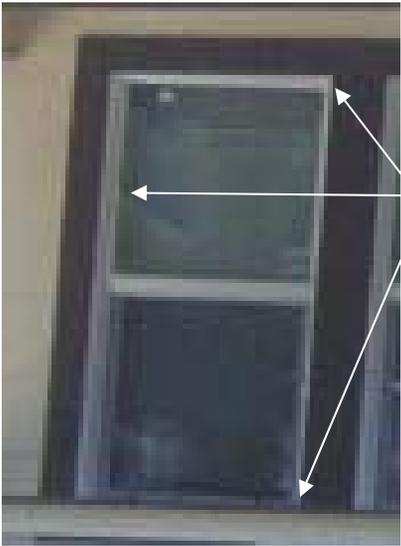
DO'S AND DON'T OF WINDOWS

Do

Uneven sashes are only appropriate if the bottom sash can slide up into the wall. This is known as a slip head condition or pocket window. This window has a wood sill set of a 15 degree angle, which will allow water to drip off the edge instead of seeping behind the window unit and damaging the wall.



*If a wood window is deemed non-repairable give special attention when choosing a replacement. Consider material, size, grid pattern and installations. Material changes **MUST** be approved by the HCLC but are generally not approved. Replacement windows should be recessed mounted, meaning they are not flush with the exterior of the wall and fit the original opening. Often the dimensions are difficult to replicate, ask Staff for assistance.*



Always double the width of trim between paired windows. Make sure to include a wood drip cap above the trim and a wood sill. Drip caps help to prevent water from seeping behind the window unit and prevent water damage to the wall.



DON'T

Don't have uneven sashes. Uneven sashes are only appropriate if the bottom sash can slide up into the wall. This window is also missing a sill which allows water to drip instead of seeping behind the weatherboards.



Don't change the size of the original opening, surface mount the window unit or mitered the corners. It is inappropriate to change the size of the original opening. Traditional wood windows are recessed within the wall to allow space for shutters and screens. Mitered corners allow for water to seep behind the weatherboards, causing water damage to the wall.



Don't install siding between paired windows. Paired windows should have abutting trim.



ENTRANCE COMPONENTS



BOTTOM RAIL OR KICKPLATE:
Traditionally equal height for the door and side light.

INAPPROPRIATE ALTERATIONS TO DOORS



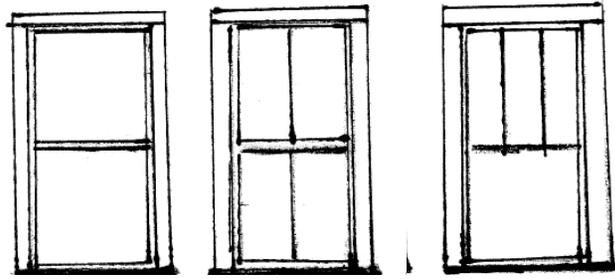
LEFT, RIGHT AND BELOW: The transoms and sidelights of these examples have all been significantly altered by either being covered or removed. In some cases the original door has been removed and the opening has been reduced in size and the trim has been altered.



INAPPROPRIATE STYLES FOR HISTORIC DISTRICTS



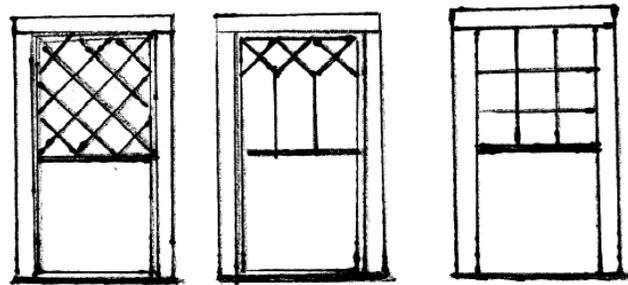
WINDOWS BY ARCHITECTURAL MOVEMENT



A. 1/1

B. 2/2

C. 3/1



D. DIAMOND/1

E. HALF DIAMOND/1

F. 6/1

During the 17th century window sashes were often glazed with many small panes of glass either in a square or diamond pattern. Often these windows were fixed. This was mostly due to glass-making techniques and cost. As it became easier to make glass and the cost fell, panes of glass became bigger. At the beginning of the 19th century windows were 6 panes over 6 panes (6/6). As Victorian architecture became prominent toward the later part of the century 4/4 windows began to replace the 6/6. By the turn of the century 1/1 were being used and by the 1910 that was the prominent window configuration. As the Arts and Crafts movement took over the nation small panes of glass often over a single pane of glass were used as a design feature rather than a technology necessity. As the Arts and Crafts movement transitioned to the Modern movement aluminum windows became fashionable.

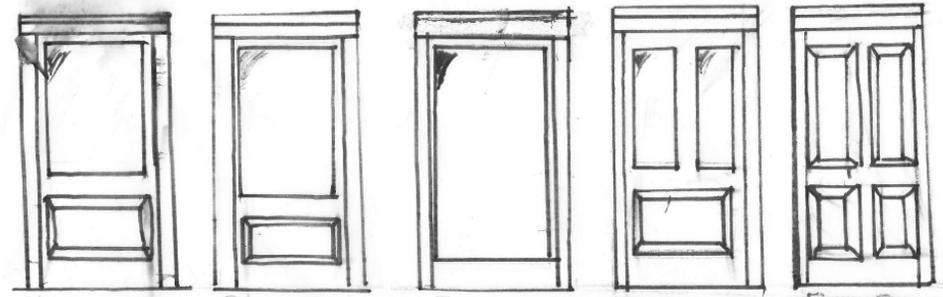
Victorian Windows: A, B, C, D, E, F

Arts and Crafts: A, C, D, E, F

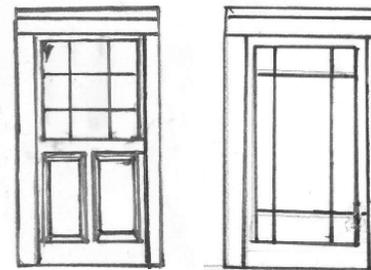
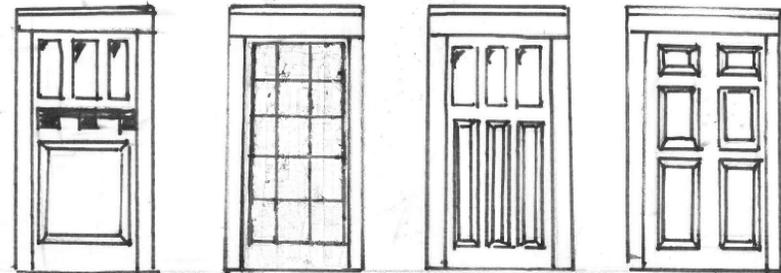
EUROPEAN REVIVALS: A, D, F and multipane casement windows

DOOR BY ARCHITECTURAL MOVEMENT

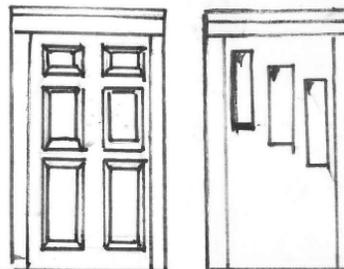
VICTORIAN



Arts and Crafts



Minimal Traditional





OPENING STANDARDS

1. Original windows, doors, transoms, side lights, and trim shall be repaired rather than replaced. (For maintenance tips on wood windows see the Sustainability Chapter.)
2. When necessary, replacement windows, doors, transoms, side lights, and trim shall match existing in size, shape, configuration, type, operation, muntin and mullion pattern, dimensions, profiles and detailing.
3. Replacement windows for wood windows shall have true divided lights.
4. Aluminum windows and doors are prohibited.
5. Fiberglass doors are prohibited.
6. Vinyl windows are prohibited on primary street elevations and shall not be installed when visible from the public right of way. When installed in a locations not visible from the public- right- of way vinyl windows should be 1/1 recess mounted with appropriate trim. (Visibility of public- right- of- way is determined by the HCLC or their staff).
7. When restoring, windows, doors, transoms, side lights, and trim, shall be typical of the size, location, profile, exposure, detail, relief and dimension of the style and period of the structure.
8. Security bars shall not be installed.
9. Original openings shall not be altered in size or location or removed. Window to door and door to window conversions shall maintain the header height and width of original opening.
10. New openings shall be typical of the size, location, material, profile, exposure, detail, relief and dimension of the style and period of the structure.

*For awnings see chapter on outdoor spaces.

** See chapter on Sustainability for standards pertaining to screens for door and windows , storm doors and windows, and shutters.

ADDITIONAL RESOURCES

- NPS Preservation Brief #9: The Repair of Historic Wooden Windows
- NPS Preservation Brief #33: The Preservation and Repair of Historic Stained and Leaded Glass
- A Field Guide to American Homes by Virginia and Lee McAlester