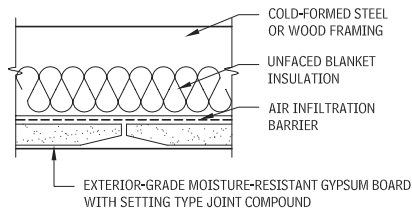
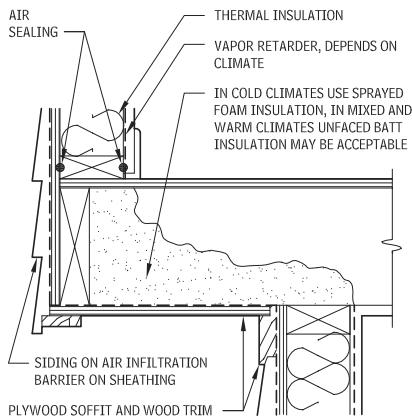


184 ELEMENT B: SHELL EXTERIOR ENCLOSURE

GYPSUM BOARD SOFFIT 2.460



PLYWOOD SOFFIT 2.461



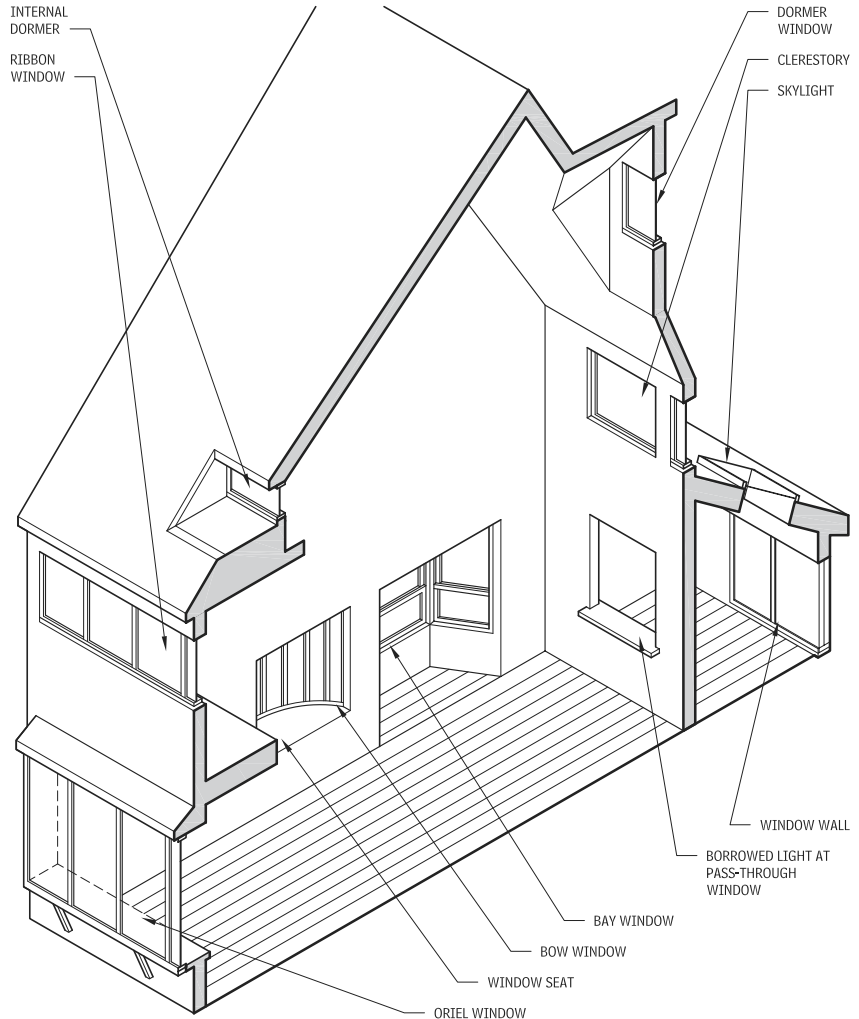
EXTERIOR WINDOWS

Although architects choose fenestration products based on many unique priorities and circumstances, a number of common considerations apply to most situations. Here are the factors that affect window choice:

- **Appearance:** Size and shape, operating type and style, frame materials, glass color and clarity
- **Function:** Visible light transmittance (provision of daylight), glare control, reduction in fading from ultraviolet radiation, thermal comfort, resistance to condensation, ventilation, sound control, maintenance, and durability
- **Energy performance:** U-value, solar heat gain coefficient (SHGC) (which is replacing the shading coefficient), air leakage, annual heating and cooling season performance, and peak load impacts
- **Cost:** Initial cost of window units and installation, maintenance and replacement costs, effect on heating and cooling plant costs, and cost of annual heating and cooling energy

Many designers and homeowners find it difficult to assess the value of choosing a more energy-efficient window. Although some basic thermal and optical properties (e.g., U-factor, solar heat gain coefficient, and air leakage rate) can be identified if a window is properly labeled, this information does not tell how these properties influence annual energy use for heating and cooling. This must be determined by using an annual energy rating system or by computer simulation.

WINDOW CONFIGURATIONS 2.462



WINDOW BASICS

Any discussion on exterior windows must begin by defining these key terms:

- **Borrowed light:** An interior wall opening or window that allows light to be transferred into another space.
- **Clerestory:** The portion of a wall above an adjacent roof level; also, a fixed or operable window located in this part of a wall.
- **Dormer:** A vertical window set above the line of a sloped roof in a small projecting space with triangular side walls.
- **Internal dormer:** A vertical window set below the line of a sloped roof.
- **Oriel window:** A bay window supported by brackets, corbeling, or cantilevers.

- **Window wall:** A continuous series of fixed or operable sashes, separated by mullions that form an entire nonload-bearing wall surface.
- **Ribbon window:** A horizontal band of fixed or operable windows extending across a significant portion of the façade.
- **Mullion:** A slender vertical member separating lights, sashes, windows, or doors.
- **Muntin:** Nonstructural members separating panes within a sash; also called a *glazing bar* or *sash bar*.
- **Sash:** The basic unit of a window, consisting of frame, glazing, and gasketing; may be stationary or operable.

NOTES

- 2.460 a. Do not use this system in cold climates. Coordinate with appropriate wall types to allow continuity of insulation and air barrier.
- b. Place control joints every 15 ft.