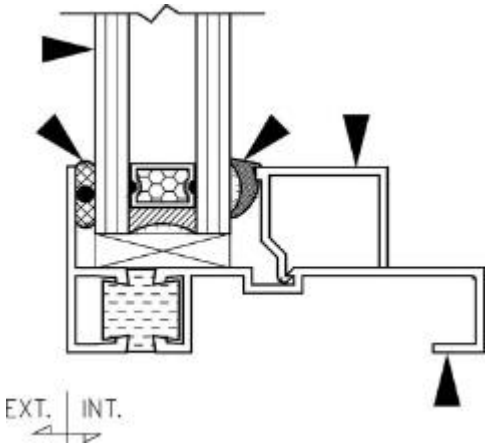
TERMINOLOGY

Many of the technical terms used in this report are defined below. Several of the terms have meanings specific to this report and may not represent the generally accepted definitions used within the construction industry.

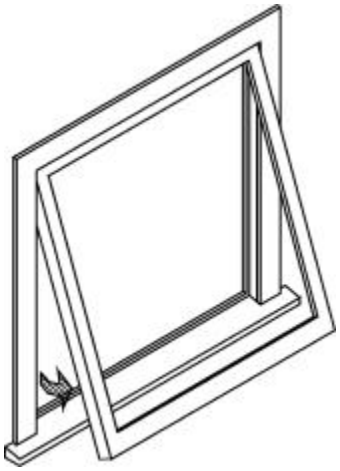
Air Barrier refers to materials and components that together control the flow of air through an assembly and thus limit the potential for water penetration, heat loss and interstitial condensation due to air movement.

Anchor refers to any device used to secure a building part or component (window) to adjoining construction or to a supporting member.

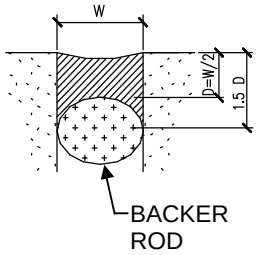
Assembly refers to an arrangement of more than one material and/or component to serve specific overall purposes. Together, the collective materials and components comprise the complete cross section of the wall, window or roof.



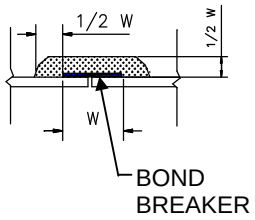
Awning Window is an operable window with a top mounted hinged sash that swings out at the bottom.



Backer Rod refers to a round compressible material, either open or closed cell foam, placed into voids between materials to provide a backing for the application of sealant.



Bond Breaker refers to a release type of material used to prevent adhesion of the sealant to the substrate material.

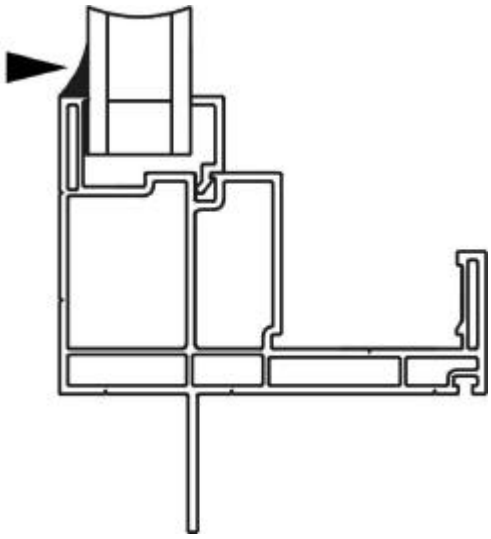


Building Envelope, generally refers to those parts of the building that separate inside conditioned space from unconditioned or outside space, such as windows, doors, walls, roofs, and foundations. Some building envelope elements can be exposed to exterior environmental loads but not separate dissimilar environments (balcony guard walls).

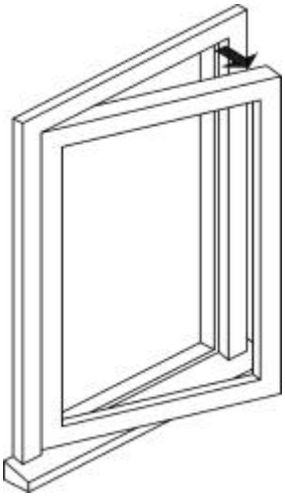
Building Paper refers to asphalt impregnated organic sheet material (breather type sheathing membrane) that creates a water shedding surface behind the cladding.

Butt Joint refers to a meeting of two members squarely.

Cap Bead is an additional bead of sealant applied over the top of the glazing tape or gasket, either outside or inside to improve weather tightness and to provide a bevel or watershed surface.

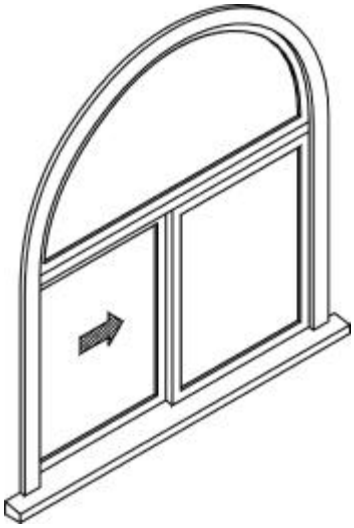


Casement Window is an operable window with a vertically hinged sash to open in, or more usually out.



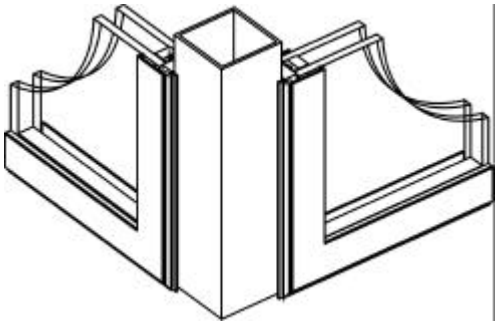
Cladding refers to a material or component of the wall assembly that forms the outer surface and is exposed to the exterior environment.

Composite Windows consists of two or more lites in one or more frames.

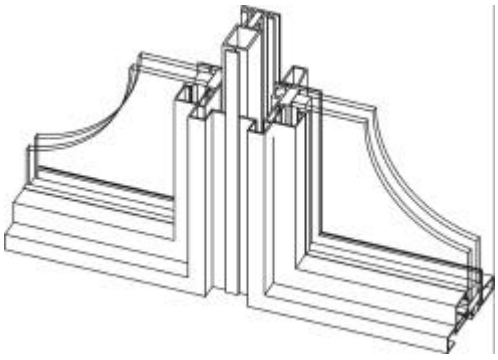


Concealed Barrier refers to a strategy for rain penetration control where the water shedding surface is at different location than the exterior moisture barrier. Discontinuities in the water shedding surface, a poor air barrier, the lack of a air space between the water shedding surface and the exterior moisture barrier, poor pressure equalization characteristics or a combination of these variables results in a more significant amount of water contacting and remaining in contact with the exterior moisture barrier than occurs within a rainscreen assembly.

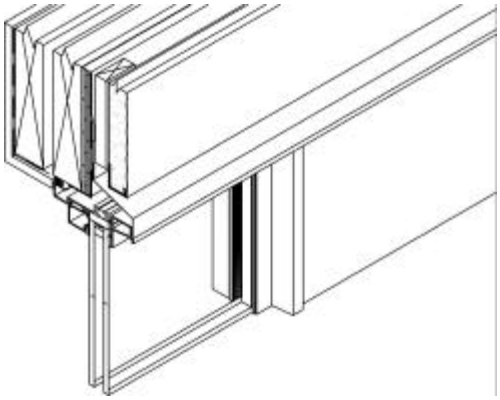
Corner Post refers to a mullion, which connects two windows at an angle forming a corner.



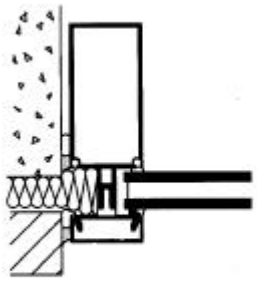
Coupling Bars or Adapters are a special extrusion, tube or specific shape to assemble two individual window frames together, either vertically or horizontally, creating a composite window.



Cross Cavity Flashing intercepts and directs any water flowing down the cavity of a wall assembly to the exterior, and prevents exterior moisture from entering the wall assembly below the flashing. Can sometimes be located at the window head level and also function as the window head flashing.



Curtain Wall is a high performance aluminum framed wall system typically containing both vision glass and opaque metal or glass spandrel panels. These systems are supported by brackets, attached to the floor slabs and typically run entirely outside the structure, past the slab edge.



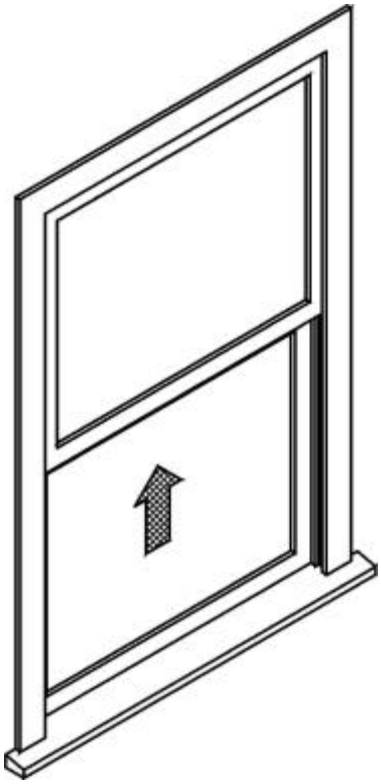
Damage refers to symptoms of deterioration that have occurred as a result of a particular problem.

Defect refers to the inability of a material or component to meet its normally accepted standard for quality. A defect does not necessarily result in a failure or a problem.

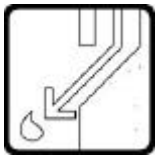
Deflection refers to a water management strategy that utilizes features of the building and assembly geometry to limit the exposure of the assemblies to rain.

Detail refers to a location within a building envelope assembly where the typical construction is interrupted because it meets a penetration of the assembly or an adjacent assembly. Examples include balcony guardrail connections, dryer and other vent grilles, control joints within a wall assembly.

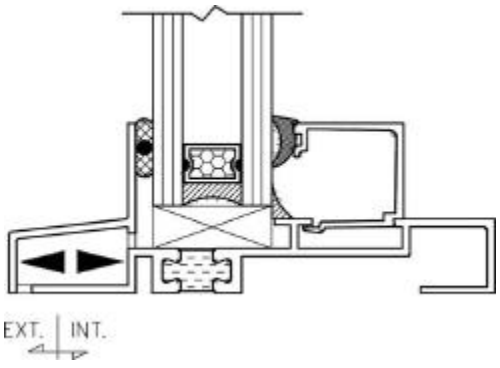
Double or Single Hung Windows refers to an operable window with two sashes that has one or both operating vertically.



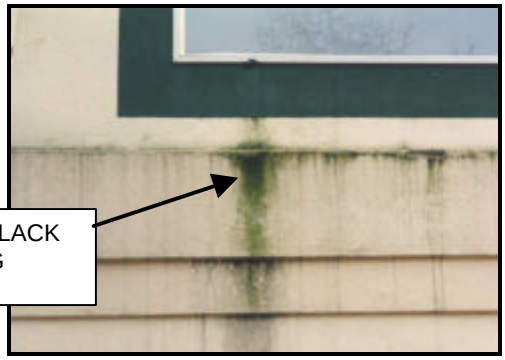
Drainage refers to a water management strategy that utilizes surfaces of the assemblies to drain water away from the assembly.



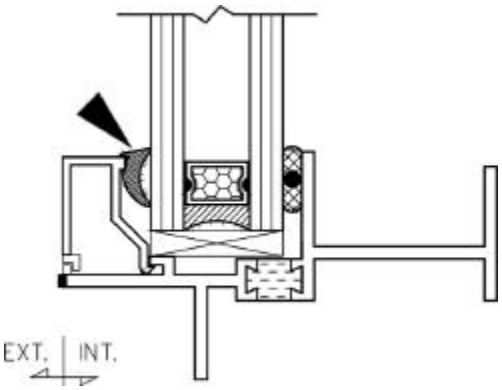
Drained Cavity refers to space behind the water shedding surface (cladding in a wall assembly, or metal and glass in a window) that provides a path for free drainage (provides a capillary break) of bulk water within the assembly.



Drip Flashing directs water flowing down the face of vertical elements, such as walls or windows, away from the surface so that it does not continue run down the surface below the element.



Dry Seal refers to gasket materials that do not adhere to surfaces when applied to the interior or exterior or both, between the glass and the frame or sash. The seal is provided by imposed mechanical pressure causing the gasket to compress.



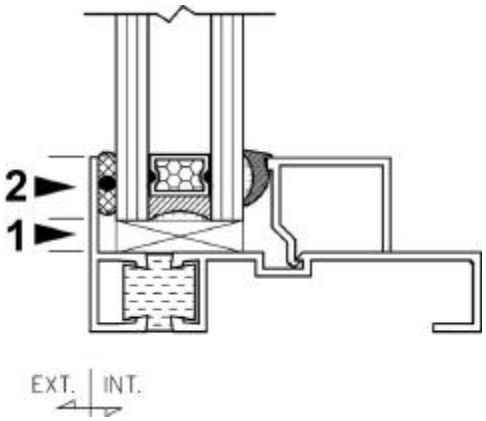
Drying refers to a water management strategy that incorporates features and materials to facilitate diffusion and evaporation of moisture out of an assembly (from materials that get wet within an assembly).

Durability refers to the ability of a material, components, assembly or building to perform its required functions in its service environment over a period of time without maintenance, repair or renewal.

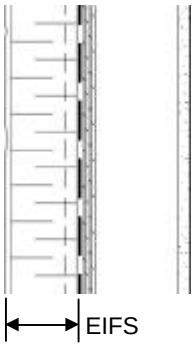
Edge Blocks are short lengths of elastomeric materials located at one or both sides of a glass lite to limit lateral movement ("walking") caused by horizontal expansion/contraction, minimal building sway or other factors.

Edge Clearance (1) refers to the dimension between the edge of the glass or panel and its surrounding frame, which is measured in the plane of the glass or panel.

Edge Cover (2) refers to the dimension by which the inner edge of the frame or stop overlaps the edge of the glass or panel.

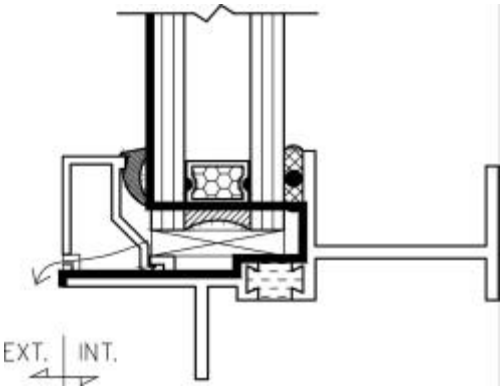


EIFS is an acronym for Exterior Insulation and Finish System and refers to the cladding portion of an assembly that utilizes insulation that is adhered or mechanically fastened to a substrate and is then finished with a thin reinforced base coat followed by a finish coating to provide final texture and colour.



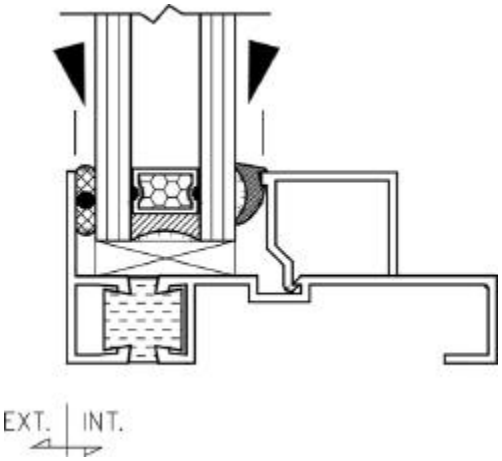
Exterior Glazed is a method in which glass is inserted into the frame and secured from the exterior of the frame.

Exterior Moisture Barrier (also referred to as a water resistive barrier) refers to the surface farthest into an assembly from the exterior that can accommodate some exterior moisture in the form of bulk water without incurring damage to the materials with the assembly or to adjacent materials.



Extrusion is the metal or PVC fabricating process by which a material is brought to a plastic state and forced to flow through a hole in a die of a desired shape.

Face Clearance is the dimension measured between the face plane of a lite of glass or panel and the nearest face of its retaining frame or stop.



Face Seal refers to a strategy for rain penetration control that relies on the elimination of holes through the cladding or outer surface materials to limit water ingress.

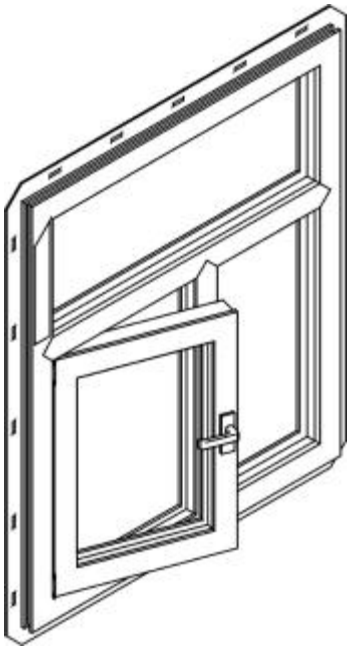
Failure refers to the inability of a material, component, assembly, interface or detail to perform its intended function(s).

Fenestration is the arrangement and proportion of window and door openings in a building.

Fixed Window is a window in which the glazed unit is fixed in place and does not open.

Flashing refers to materials used to deflect water at interfaces and details within and between assemblies to the exterior.

Frame refers to the associated head, jamb, sill and where applicable, mullion and muntin that, when assembled, house the sash or fixed glazing.



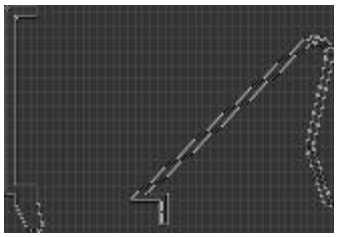
Glass Bite is the amount of overlap between the stops and the edge of the glass.

Glazing refers to the act of furnishing or installing glass.

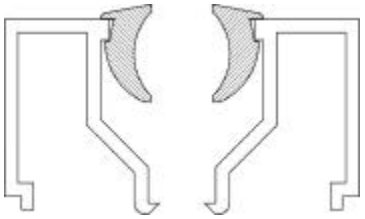
Glazing Bead is a light removable member applied to a frame or door stile or rail to hold glass or infill panel in a fixed position.

Glazing Pocket is the recessed channel in aluminum framing systems designed to receive glazing infills. Also known as a Glazing Reglet.

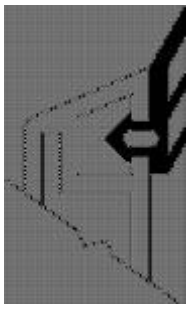
Glazing Stop (Removable) Without Gasket refers to a removable member of metal, plastic or wood used to a hold glazing unit against a fixed portion of the frame or an opposite glazing stop.



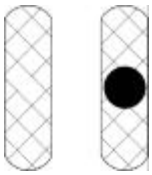
Glazing Stop (Removable) With Gasket refers to a removable member of metal, plastic or wood used to hold a glazing unit in place that utilizes a removable and replaceable gasket to apply pressure on the glazing unit.



Glazing Stop (Fixed) With Gasket refers to a fixed portion of the frame with a removable and replaceable gasket to support the glazing.



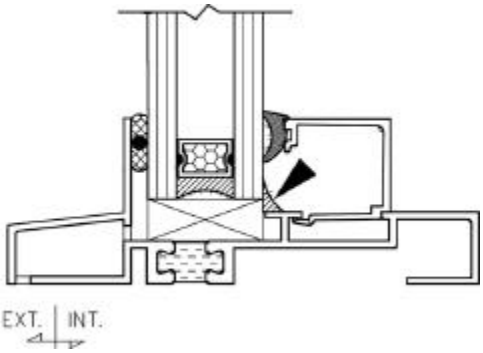
Glazing Tape (unshimmed and shimmed) is butyl used as a wet seal between glazing and the fixed portion of the window frame.



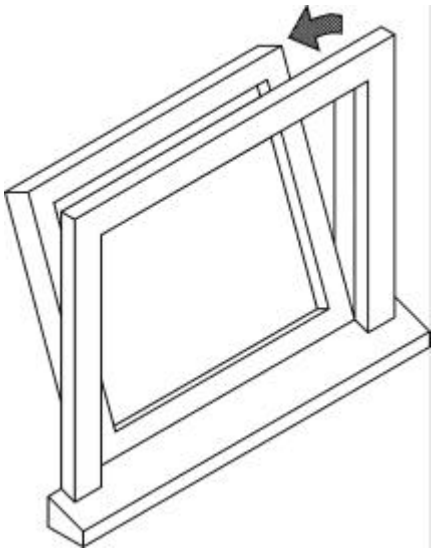
Head refers to the horizontal member forming the top of the frame.

Header is the horizontal frame member that encloses and secures the top of the frame.

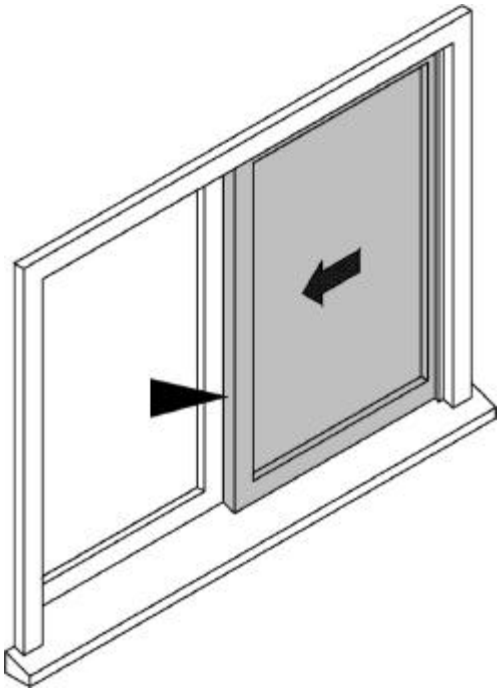
Heel Bead is a sealant or gasket placed between the window frame and the inside face of the glazing unit to create an air and watertight seal.



Hopper Window - is an operable window with a bottom mounted hinged sash that swings in or out at the top. (similar to an awning window, except hinged at bottom).

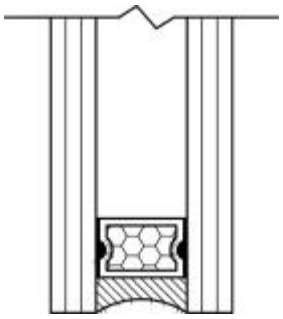


Horizontal Slider Window is an operable window that contains one or more operating sashes that open and close by sliding sideways in the frame.



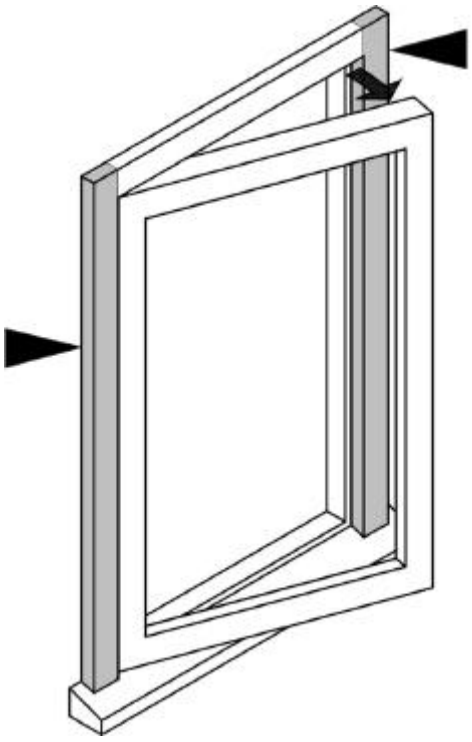
Housewrap refers to a sheet plastic material that is used as a breather type sheathing membrane, generally between the wall sheathing material and the exterior cladding. Although at one time used as a proprietary term, housewrap is now used to represent a generic group of materials. One common type of housewrap consists of Spun-Bonded Polyolefin (SBPO); another is made of perforated polyethylene.

Insulating Glazing Unit refers to a hermetically sealed assembly consisting of two or more lites of glass separated by a spacer bar and sealed/joined with sealant.



Interface refers to a location within the building envelope where two different components or assemblies meet. This could be two different wall assemblies or a wall and a window assembly.

Jamb refers to the upright or vertical members forming the side of the frame.



Laminated Glass is a sandwich of two or more sheets of glass bonded together with resilient plastic interlayer(s).

Low-E Glass Low emissivity glass; a type of reflective glass used to reduce radiation heat transfer and improve the “U” value of the glazing.

Maintenance refers to a regular process of inspection, minor repairs and replacement of components of the building envelope to maintain a desired level of performance for the intended service life without unforeseen renewal activities. Maintenance activities are typically for items with life cycles of less than one year.

Mitre is a joint made up of two members, each of which is cut one-half the total angle of the joint.

Movement Joint refers to a joint on a wall that provides capability for differential movement of building elements without damage or deformation of the adjacent elements.

Mullion refers to a vertical or horizontal frame member that separates two or more sashes, two or more fixed lites, or a combination for sashes and fixed lites.

Muntin refers to a vertical or horizontal sash member that separates two or more lites within a sash. Also use to describe formation of a grid within a sealed unit.

Operable Windows or opening windows are those windows that contain an opening sash, which holds the glazed unit.

Operation of the building or the envelope refers to normal functions and use of the building for its intended occupancy.

Penetration refers to an intentional opening through an assembly for ducts, electrical wires, pipes, scuppers, fasteners, etc. to pass through.

Pressure Equalized Rainscreen refers to a rainscreen assembly in which additional measures have been taken to reduce pressure differentials across the cladding and therefore further limit water penetration. These measures could include compartmentalization of the exterior drained cavity and optimization of venting arrangement, cavity size, and stiffness of the cladding and air barrier.

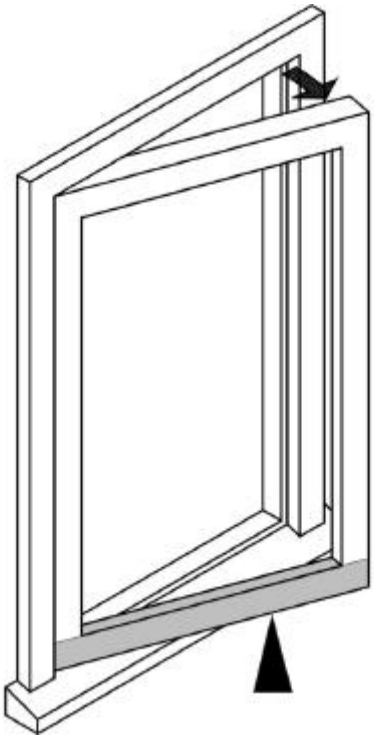
Premature Failure refers to the inability of an assembly, interface or detail to perform it's intended function(s) for its expected service life.

Pressure Plate is the second member of a composite vertical or horizontal mullion section consisting of two or more extrusions. The pressure plate is attached by anchors to the back member for securing the glass tightly between the two members, which are separated from direct contact with the glass by preformed gaskets. Pressure plates are usually concealed with a snap-on face cover.

Primary Structure refers to structural system that carries the gravity (self weight and live) loads as well as the lateral loads imposed to the foundation.

Punched Window is a single window frame installed in a wall opening.

Rail refers to the horizontal piece of sash or screen frame.



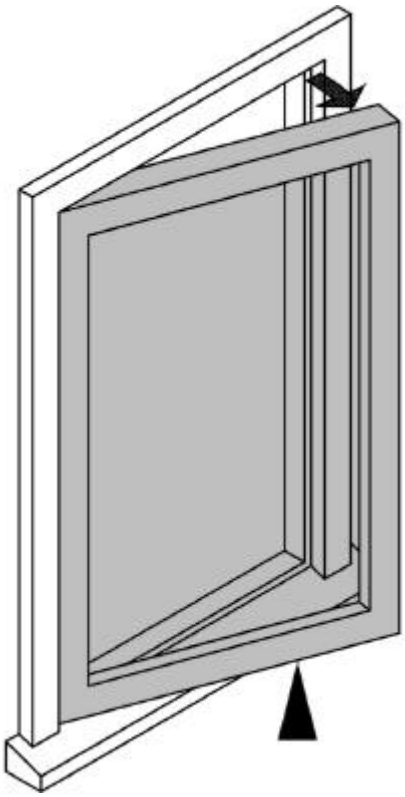
Rainscreen refers to a strategy for rain penetration control where the water shedding surface is at a different location than the exterior moisture barrier and air barrier. The exterior moisture barrier is located to the interior of the water shedding surface and there is an air space between the water shedding surface and the exterior moisture barrier that creates a capillary break. The flow of exterior moisture (rain) through the water shedding surface is effectively minimized and the capillary break facilitates drainage of the minimal water that may be present within the cavities of the assembly. The exterior moisture barrier and air barrier may or may not be at the same location in a rainscreen assembly.

Rehabilitate refers to a program of comprehensive overall improvements to the building envelope assemblies and details so that it can fulfill its originally intended functions.

Renewals refers to activities associated with the expected replacement of worn out components or materials of a building envelope and are typically for items with life cycles in excess of one year.

Repair refers to replacement or reconstruction of envelope assemblies, components or materials at specific localized areas of the building envelope so that it can fulfill its originally intended functions.

Sash refers to a unit assembly of stiles and rails for holding glass with or without dividing bars and muntins.



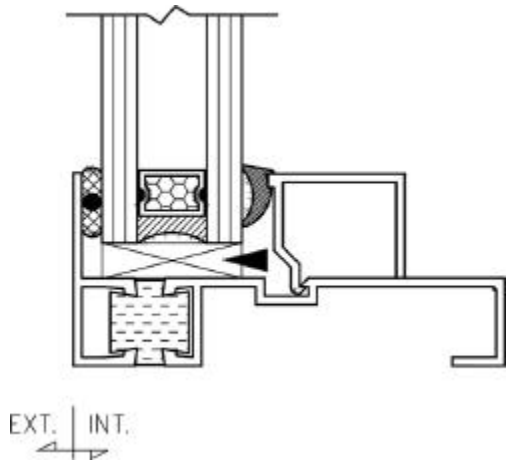
Screw Spline Joinery is a type of joinery used in extruded panelized framing systems, which eliminates the need for clips and exposed fasteners. The screw splines are designed as an integral part of the extrusions.

Sealant is an elastomeric material with adhesive qualities used to seal joints or openings against the passage of air and water.

Secondary Structure: refers to the structural support system (framing, clips and fasteners) required to transfer the imposed gravity and lateral loads acting on or through the building envelope to the primary structure. These components typically include the wood or steel studs, exterior sheathing and cladding attachment clips along with associated fasteners.

Service Life refers to the actual period of time during which building envelope materials, components, and assemblies perform without unforeseen maintenance and renewals costs.

Setting Block refers to synthetic rubber blocks (typically neoprene) that transfer glazing unit dead loads to the frame or sash (typically set at ¼ points at the base of the frame, and sometimes at corners in casement windows to help resist racking).



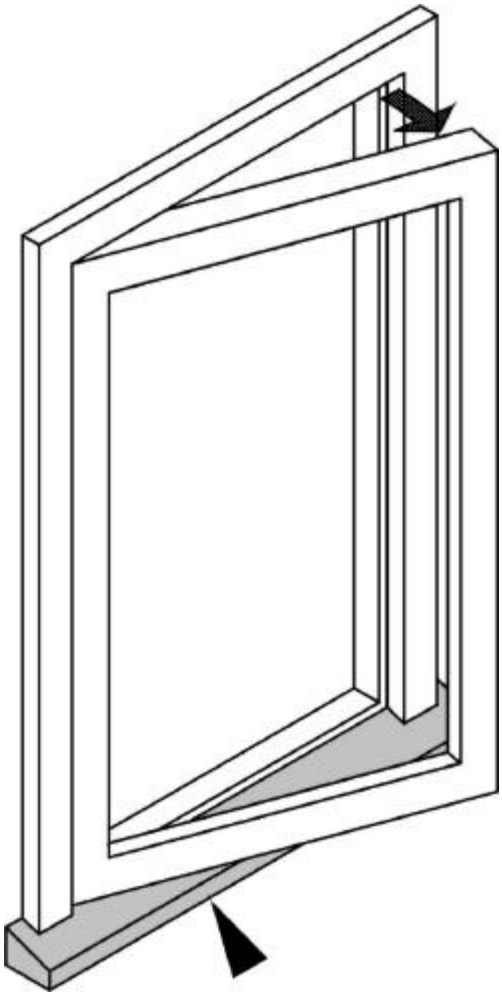
Shear Block is a type of joinery that uses an extruded or cold-formed shape (the shear block) that is attached to a vertical mullion to reinforce a corner of a sash or frame. The horizontal member fits over the shear block and is secured by screws driven into the shear block.

Sheathing refers to materials (generally gypsum based sheathing or concrete board products for non-combustible construction, plywood or Oriented Strand Board (OSB) for combustible construction) used to provide structural stiffness to the wall framing and to provide structural backing for the cladding and sheathing membranes.

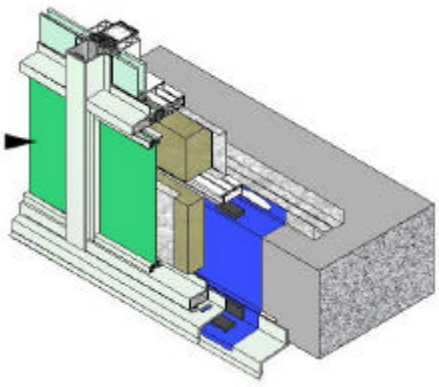
Sheathing Membrane refers to a material within an exterior wall assembly whose purpose is usually to function as part of the exterior moisture barrier. This material limits penetration of water further into the structure once past the cladding. Waterproof type sheathing membranes can also perform the function of the air barrier and the vapour barrier. Materials include both breather type (vapour permeable) sheathing membranes such as sheathing paper and housewraps, and waterproof (non-vapour permeable) sheathing membranes such as self-adhering modified bituminous membranes.

Shim is a spacer of uniform thickness and varying sizes used to plumb, space and level frames.

Sill is the main cross or horizontal member forming the bottom of the frame.



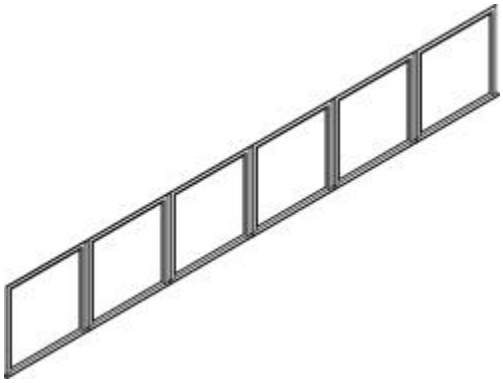
Spandrel refers to opaque glazing material most often used to conceal building elements (typically at floors, ceilings, plenums, or at columns).



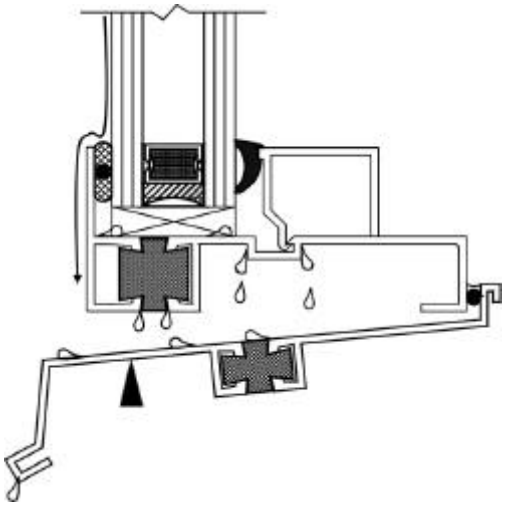
Splice is a longitudinal or latitudinal connection between the parts of a continuous member.

Storm Window refers to an exterior-mounted window used in conjunction with a separate interior window assembly and is typically intended to perform the function of the water shedding surface.

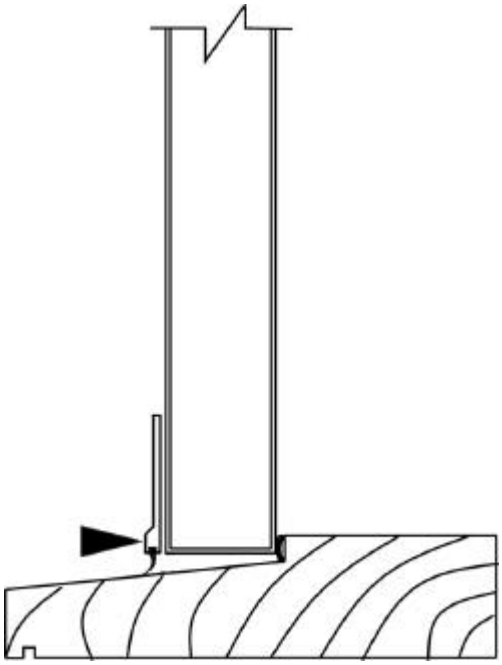
Strip Windows consist of a horizontal assembly of several windows, normally assembled with pre-designed coupling bars or frame adapters.



Sub-sill Drainage collects incidental water leakage that occurs through the window frame on a water impermeable membrane or flashing applied continuously to the rough opening so that water is directed to the exterior of the moisture barrier within the wall.



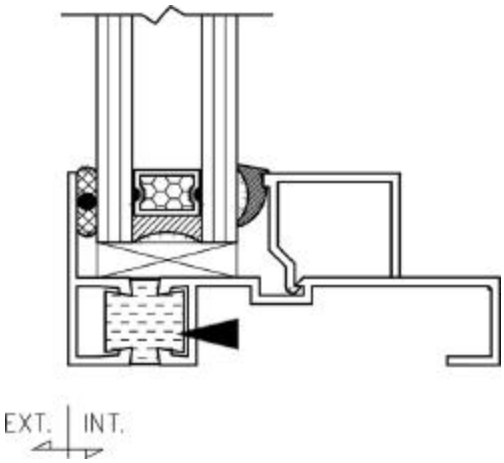
Sweep Strip or Door Sweep is a weatherstrip mounted at the top or bottom edge of a swing door.



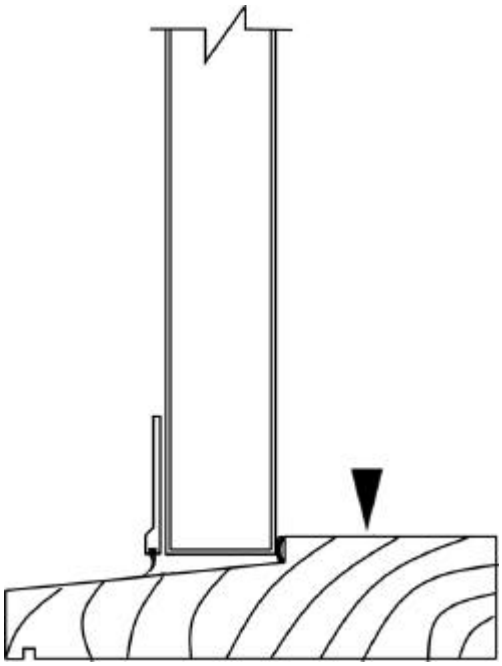
System describes a combination of materials and components that perform a particular function such as an air barrier system, or exterior moisture barrier system.

Tempered Glass is a modified glass, created in a secondary process via controlled heating and air-cooling of the heated glass. Tempered glass is four times stronger than annealed glass and when shattered breaks into small pieces. It is resistant to thermal stress and often used as safety glass.

Thermal Break refers to a low heat-conducting layer between the interior and exterior portions of a metal frame to reduce heat flow and decrease condensation potential.

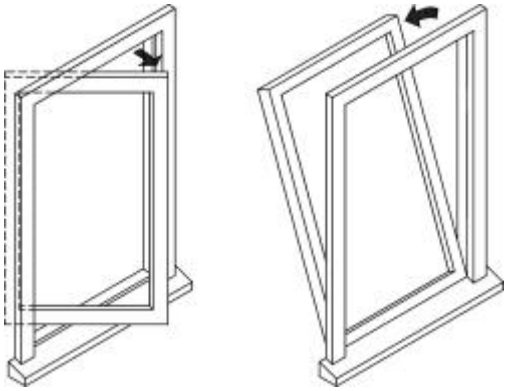


Threshold is the lower horizontal member of a doorframe extending from jamb to jamb that lies directly under a door and is set on the floor.



Through-wall Flashing refers to a waterproof membrane or metal flashing placed under segmented precast concrete, stone masonry or brick units known as copings that close the tops of masonry walls to prevent water from entering the wall at joints in the coping. Through wall flashing is also used to prevent capillary transfer of moisture through porous materials such as concrete or masonry if they extend from high moisture locations such as below grade.

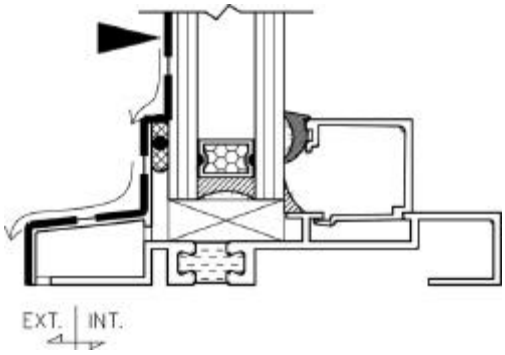
Tilt and Turn Windows act both as an opening casement window and like a bottom hinged hopper window.



Transom is the frame area immediately above a door opening, which contains fixed glass or an operating sash.

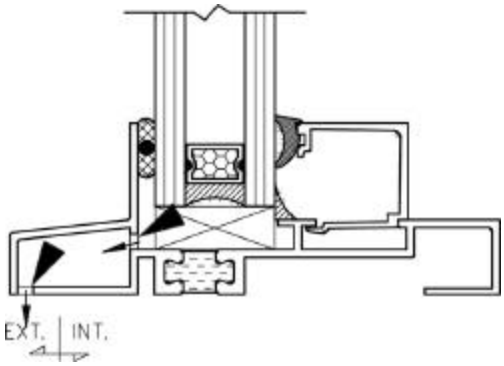
Vapour Barrier refers to material(s) with low vapour permeability that are located within the assembly to control the flow of vapour through the wall assembly and limit the potential for condensation due to diffusion.

Water Shedding Surface refers to the surface of assemblies, interfaces and details that deflect and/or drain the majority of exterior moisture impacting on the façade in the form of liquid water.

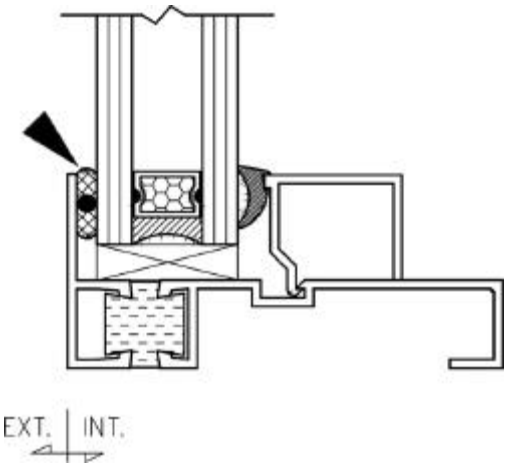


Weatherstripping refers to material around operable lites used to reduce air leakage or water penetration, or both.

Weep Hole is a small opening in the sill or intermediate horizontal members that allow infiltrated water to drain to the building exterior.



Wet Seal refers to glazing compounds, eg. Glazing tapes, caulking, and adhesives that are applied to the interior or exterior or both, between the glass and the frame or sash.



Window-Wall refers to the use of traditional residential windows adapted for floor to ceiling use. They are typically supported directly on the slab rather than outside the slab edge.