CL-001 Lift-out clear-film interior window panel

Make a removable room-side air-barrier frame for one fixed, non-egress window with a measured 30 x 40 in clear reveal.

US customary dimensions control. Metric equivalents use 1 in = 25.4 mm. Original bounded design, not a prototype-tested or load-certified plan. Read limits and checks before cutting.

Application and limits

Original household fixture, not a load-rated structure or occupied shelter.

No building energy rating, cooling capacity or prototype test is claimed.

Keep combustion appliances, flues, ventilation requirements and emergency exits unobstructed.

Fixed, non-egress window only; no safety-glazing, security, storm-impact or guaranteed R-value claim.

Materials and finished cuts

Part / quantity	Finished size	Stock and orientation
P01 Vertical stiles | 2	39 3/4 x 1 1/2 x 3/4 in 1009.65 x 38.1 x 19.05 mm	1 × 2 in board. sound untreated cedar or other durable untreated wood; no unknown salvage
P02 Horizontal rails | 2	26 3/4 x 1 1/2 x 3/4 in 679.45 x 38.1 x 19.05 mm	1 × 2 in board. sound untreated cedar or other durable untreated wood; no unknown salvage
P03 Window film cut blank | 1	31 3/4 x 41 3/4 x 0.005 in 806.45 x 1060.45 x 0.127 mm	clear interior window film. window-attachment film approved by its supplier for the intended use; 0.005 in diagram thickness, measure actual product

Fasteners, purchased components and consumables

8 #6 x 2-1/2 in wood screws for four frame butt joints

4 flat corner mending plates with 16 matched #6 x 1/2 in screws

12 ft self-adhesive closed-cell window gasket, uncompressed 1/8 in thick, selected for removable insert contact

Film supplier-approved fixing tape; two fabric pull tabs 8 in long

Four removable commercial window-insert retainers; compatible fixings for sound wood reveal

Tools and cutting allowance

Tape measure and steel rule; Pencil, square and clamps; Saw suited to the stated stock; eye and hearing protection; Drill/driver, countersink and bits matched to fasteners; Sandpaper and edge file; gloves when handling cut mesh

Keep saw kerf outside every finished cut. Allow 1/8 in per saw pass in the stock purchase; measured blade kerf controls. Ordinary cut target is +/-1/16 in. Product-specific mounting holes are trial-fitted before drilling.

Step-by-step assembly

01 Inspect sound stock and a stable work surface. In the drawings x runs left to right, y front to rear and z upward.

02 Measure actual stock before cutting; nominal board names are not finished cross sections. Match each part to its label and material in the cut schedule.

03 Mark each finished cut separately, leaving saw kerf outside the line. Label parts, target +/-1/16 in and ease all hand-contact edges.

04 Measure the reveal at top, middle and bottom and at both sides. This example uses the smallest width 30 in and height 40 in. Reject the example if the frame would cover emergency escape, a required vent, sash hardware or decayed wood. The finished wood frame is 29-3/4 x 39-3/4 in; the film blank is trimmed only after fixing.

05 Lay the two 39-3/4 in stiles flat with their 3/4 in thickness pointing toward the room. Place 26-3/4 in rails BETWEEN them at top and bottom, making a 29-3/4 x 39-3/4 in frame. Compare diagonals; each is about 49.65 in and their difference must be no more than 1/8 in.

06 At each butt joint mark two pilots through the 1-1/2 in-wide stile into the rail end, centered in the 3/4 in thickness and 3/8 in from the rail edges. Use the eight 2-1/2 in screws; their 1 in embedment is into the rail. Do not substitute 1-1/4 in screws that stop inside the stile.

07 Fit one flat mending plate across each rear corner using four 1/2 in screws per plate. Pick a plate whose holes miss the butt-joint screws. All heads must remain below the later film attachment surface or be placed on the opposite face.

08 Lay the 31-3/4 x 41-3/4 in film blank over the room-side frame face. The 1 in allowance beyond each edge is a handling margin. Attach with the film supplier-approved tape, keeping corners flat. Tension or heat-shrink only if that product specifically requires it; trim surplus flush after attachment.

09 Run gasket continuously around the wood outer edge, not across the glazing face. The 1/8 in uncompressed seal occupies the 1/8 in nominal gap on each side. Make tight butt joins; do not stretch the foam. Fix two folded pull tabs under the upper rear corner plates with their free loops room-side.

10 Dry-fit from inside with a helper. Install four removable retainers in sound reveal wood, two per vertical side about 6 in from the ends, using their specified pilot and screws. Retainers locate the insert; friction alone must not let the panel fall. Check rapid hand removal without tools.

11 Inspect the space between film and original glass after the first cold night and daily during early use. Remove the panel if moisture collects, dry the reveal and correct air leakage before reinstalling. Never block exterior drainage or paint the sash shut. Store the removed frame flat and protected in warm weather.

12 Complete the listed acceptance checks before use. Record changes to stock or fittings; retain this sheet with the finished assembly.

Acceptance checks

Wood frame 29-3/4 x 39-3/4 in (755.7 x 1009.65 mm); film handling blank not the installed outside envelope.

Pull tabs accessible; four retainers secure; original window drainage open.

No condensation or damp wood accepted for continued use.

Use and maintenance

Check film tears and gasket continuity monthly; remove to dry any moisture; replace stretched tape and damaged film.

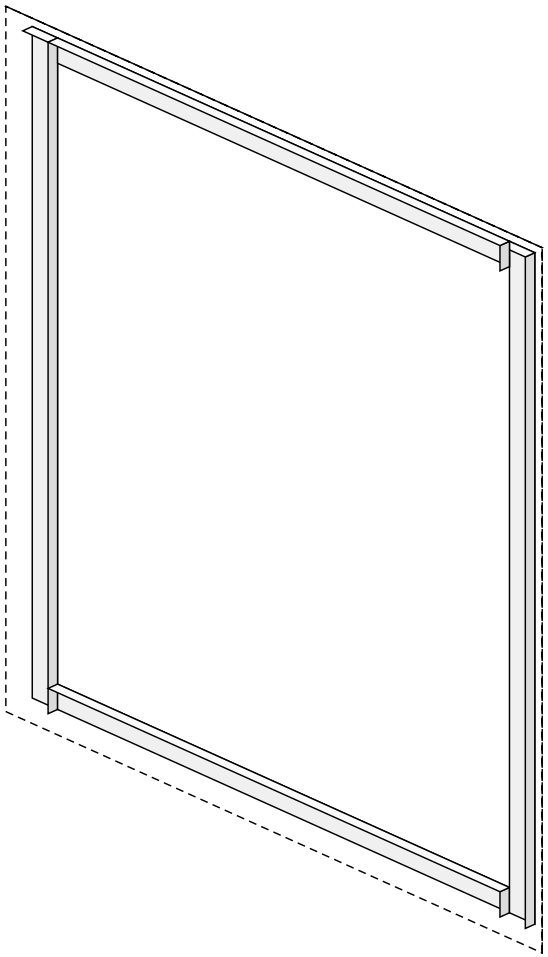
Primary context

Pacific Northwest National Laboratory, Building America Solution Center: Install Interior Storm Windows

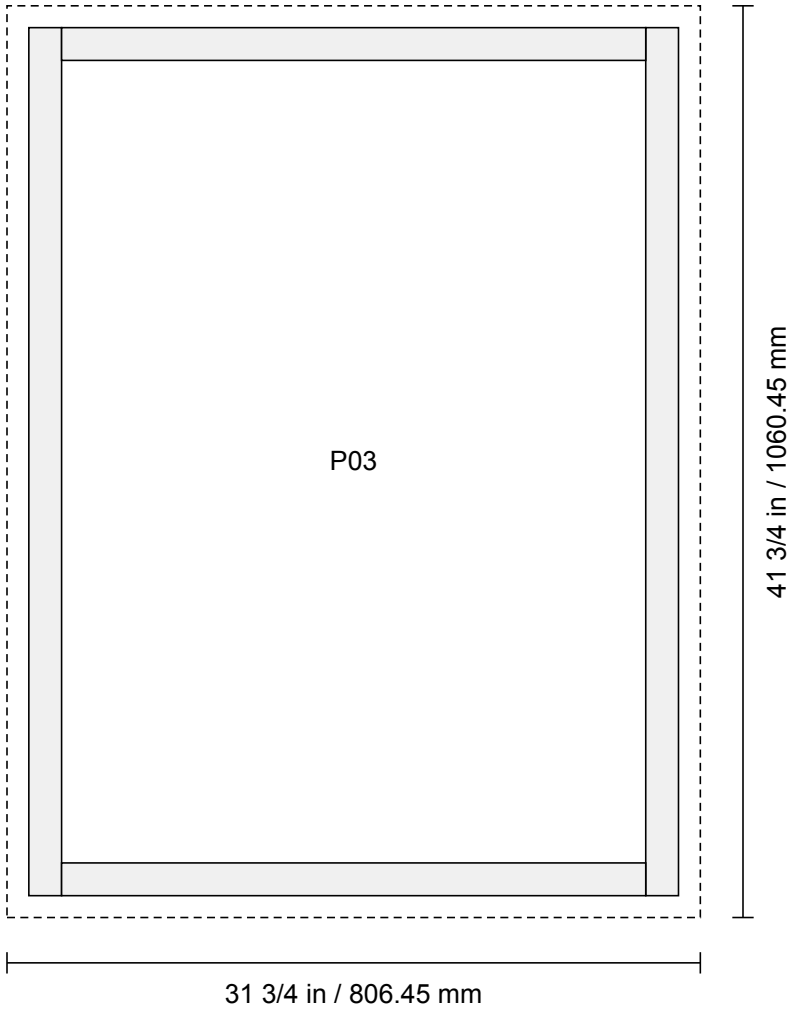
Natural Resources Canada: Keeping The Heat In, Section 8

CL-001 | Assembly and dimension reference

ISOMETRIC: assembly orientation



FRONT: projected part positions



Wood frame 29-3/4 x 39-3/4 in (755.7 x 1009.65 mm); film handling blank not the installed outside envelope. Pull tabs accessible; four retainers secure; original window drainage open.

Dashed film/mesh outlines include cut-blank margins; trim after fixing. No dimensions are taken from scale.