

Exactly where to cut the frame

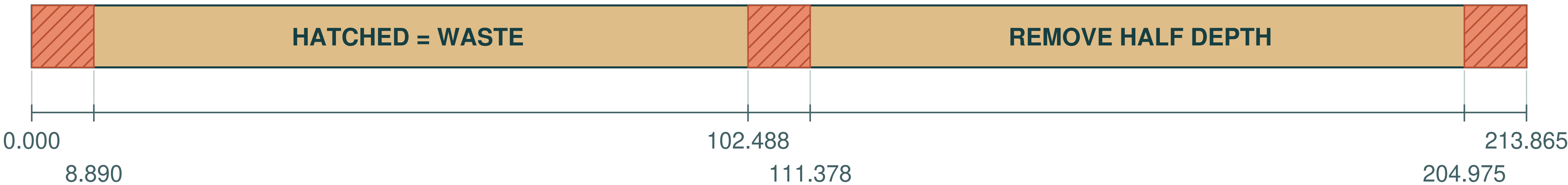
Half-lap joints: remove half the thickness from opposite faces, then overlap.

Keep sound existing joints. Replacement stock: nominal 2×4, actual 1-1/2 × 3-1/2 in.

F1 UPRIGHT ×4

CUT LENGTH 213.865 cm

OUTSIDE broad face facing you • bottom at left; top at right

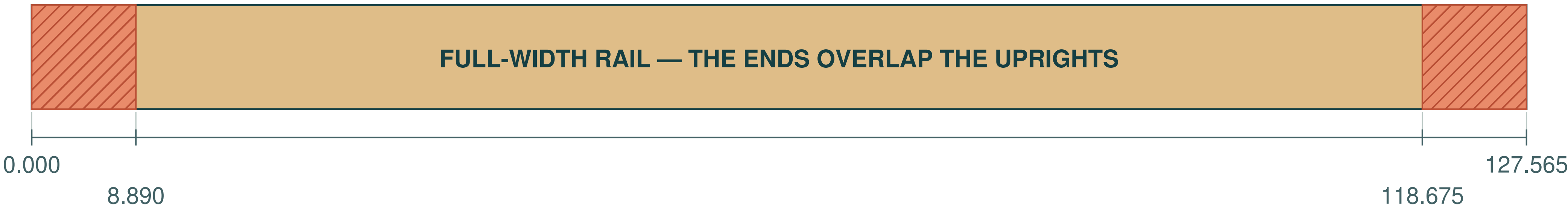


Notch depth = half the actual board thickness. For 1-1/2 in timber: cut 1.905 cm deep.

F2 CROSS RAIL ×6

CUT LENGTH 127.565 cm

INSIDE broad face facing you • a half-lap at each end



SECTION THROUGH THE LAP

Together, the two retained halves fill 1-1/2 in.



F2 retains OUTSIDE half

F1 retains INSIDE half

Each retained half = 3/4 in for this model.

EXACT LAYOUT MARKS

F1: 0–8.890 | 102.4875–111.3775 | 204.975–213.865

F2: 0–8.890 | 118.675–127.565

Measure from one squared end; mark with the actual mating board.

The F2 rail is 127.565 cm long, including both overlaps.

Do not use the clear opening between the uprights as cut length.

Cut maps are model dimensions, not site measurements. Verify timber, leaf size and squareness before cutting.

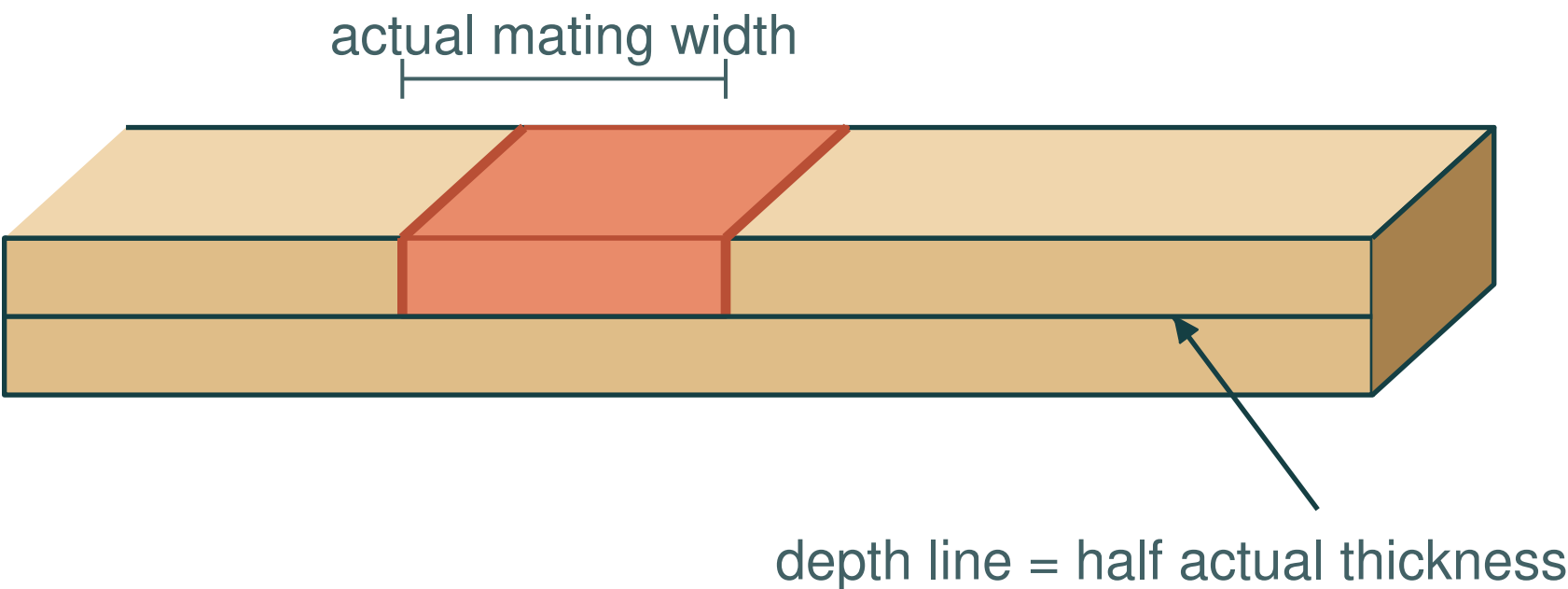
Cuts / layout marks: cm • Purchased stock: imperial • Rounded labels are not a cutting tolerance

Cut one test joint before cutting all pieces

Use two offcuts from your actual timber. Check face labels every time you turn a board.

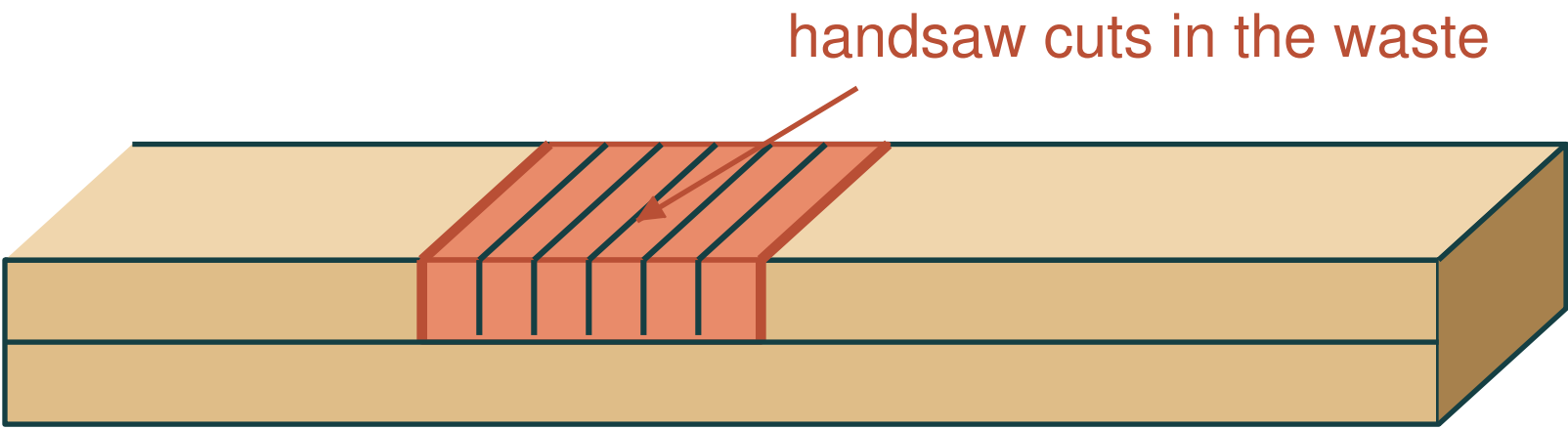
Clamp the board to a solid bench. Support the long length. Keep hands clear of the cutting path.

1 MARK THE SHOULDERS + HALF DEPTH



Square the blank to length; label OUTSIDE and INSIDE.
Use the mating board to mark the lap width. Knife the shoulders and mark half depth on both narrow edges.

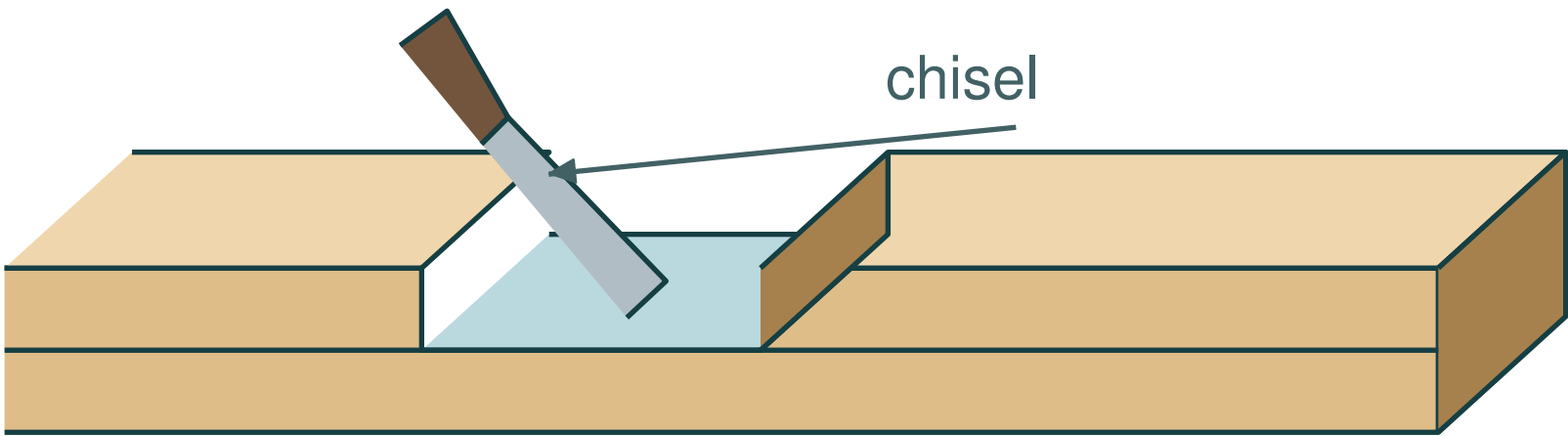
2 SAW THE SHOULDERS, THEN RELIEF CUTS



STOP short of the depth line; pare the last small amount.

Make a shallow starter on the waste side of the line.
Middle notch: two shoulders. End lap: one shoulder.
Add relief cuts; keep them above the depth line.

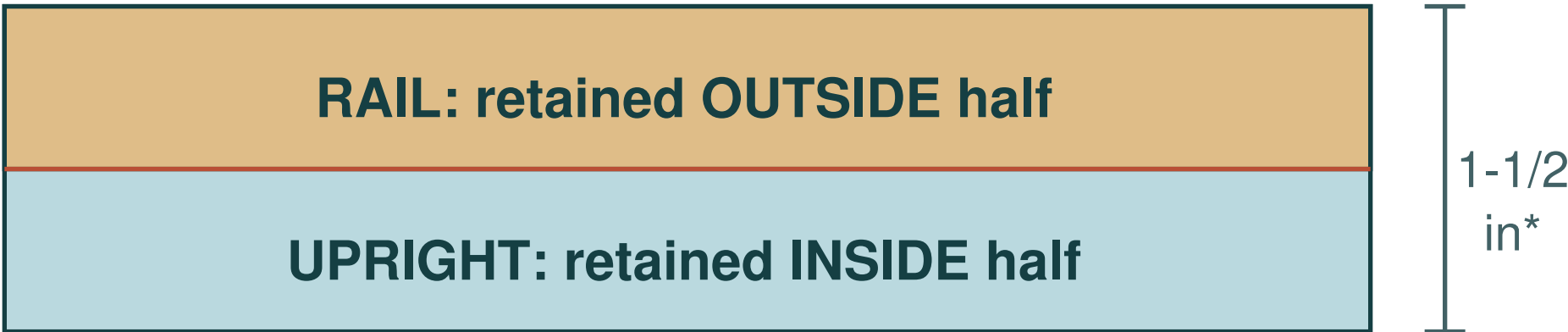
3 REMOVE WASTE; PARE THE FLOOR FLAT



Blue floor = the retained half. Finish exactly to the line.

Remove small chips between the relief cuts.
Work from each edge toward the middle; take thin cuts.
Keep both hands behind the sharp edge. Pare flat.

4 DRY-FIT THE OPPOSITE HALVES



Broad faces flush; shoulders touching; no rocking.
If tight, pare high spots; do not hammer the joint.
If loose or overcut, remake it; do not fill for fit.
Dry-fit the frame flat and check equal diagonals.

*For the nominal model. Match the real board thickness. Cutting diagrams do not specify structural joint fastening.

Method reference: Lee Valley Tools, “Mastering Handsaw Cuts” (Christopher Schwarz). Illustrations are original.

Cuts / marks: cm • Stock / equipment: imperial • Process diagrams are enlarged, not full-size templates