

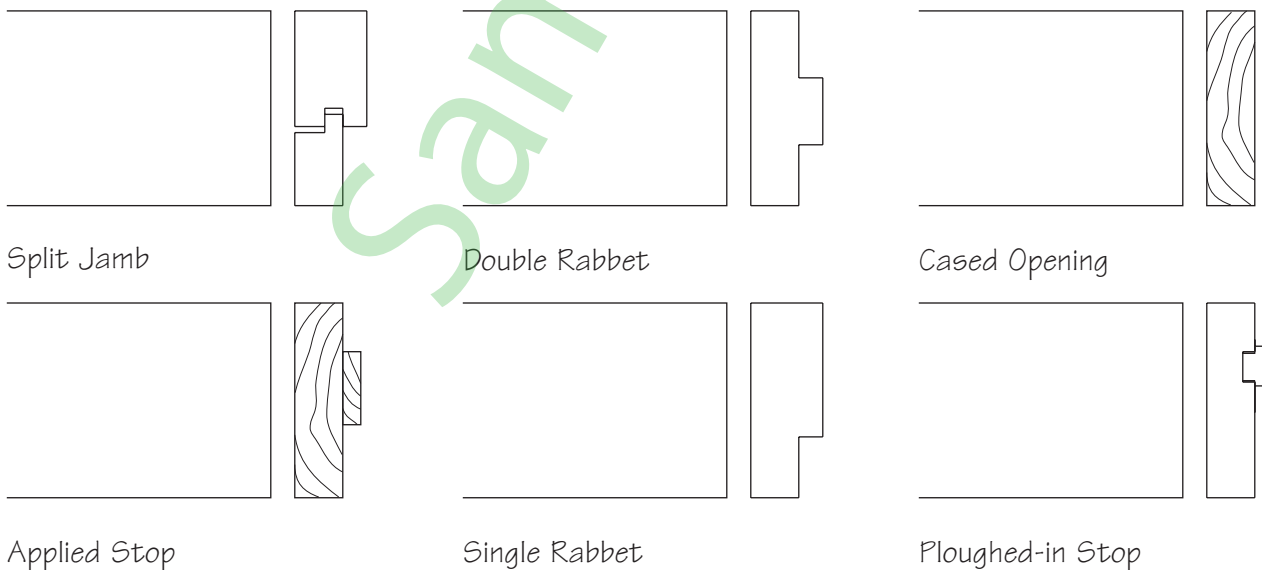
900-T-4

Workmanship

In the absence of specifications, the following standards will apply. Where more than one method or material is listed for a Grade, woodworkers will supply their choice from the alternatives.

Workmanship	Premium		Custom		Economy	
	Transparent	Opaque	Transparent	Opaque	Transparent	Opaque
Finish Condition	Transparent	Opaque	Transparent	Opaque	Transparent	Opaque
Cut of lumber	Plain sawn	Plain sawn	Plain sawn	Plain sawn	Plain sawn	Plain sawn
Finger-jointed lengths	Not permitted		Not permitted		Permitted	
Cut of veneer	Plain sliced	Mill option	Plain sliced	Mill option	Plain sliced	Mill option
Kerfed or backed out back	Mill option		Mill option		Mill option	
<b>Minimum Thickness Related to Frame Type</b>						
Split jamb	19 mm [3/4"] thin member		19 mm [3/4"] thin member		17 mm [11/16"] thin member	
Rabbeted frame	38 mm [1-1/2"] total thickness		33 mm [1-5/16"] total thickness		27 mm [1-1/16"] total thickness	
Cased opening	27 mm [1-1/16"]		19 mm [3/4"]		17 mm [11/16"]	
Applied stop (generally used only on interior frames )	Not applicable in this Grade, but may be specified if desired		32 mm [1-1/4"] total thickness of assembly (19 mm [3/4"] jamb + 13 mm [1/2"] applied stop)		27 mm [1-1/16"] total thickness of assembly (17 mm [11/16"] jamb + 9 mm [3/8"] applied stop)	
Ploughed-in stop	40 mm [1-9/16"] total thickness of assembly (27 mm [1-1/16"] jamb + 19 mm [3/4"] stop let into 6 mm [1/4"] groove)		32 mm [1-1/4"] total thickness of assembly (19 mm [3/4"] jamb + 19 mm [3/4"] stop let into 6 mm [1/4"] groove)		32 mm [1-1/4"] total thickness of assembly (19 mm [3/4"] jamb + 19 mm [3/4"] stop let into 6 mm [1/4"] groove)	
<b>Preservative Treatment (Exterior Frames Only)</b>						
All finish conditions and frame types	Exposed and concealed exterior members shall be treated as defined in Section 100					
<b>Fasteners and Adhesives (Exterior Frames Only)</b>						
All finish conditions and frame types	Nails and screws used for assembly in Redwood, Cedar and Cypress species shall be galvanized steel or aluminum					
	Moisture-resistant Type I assembly shall be used for exterior frames					

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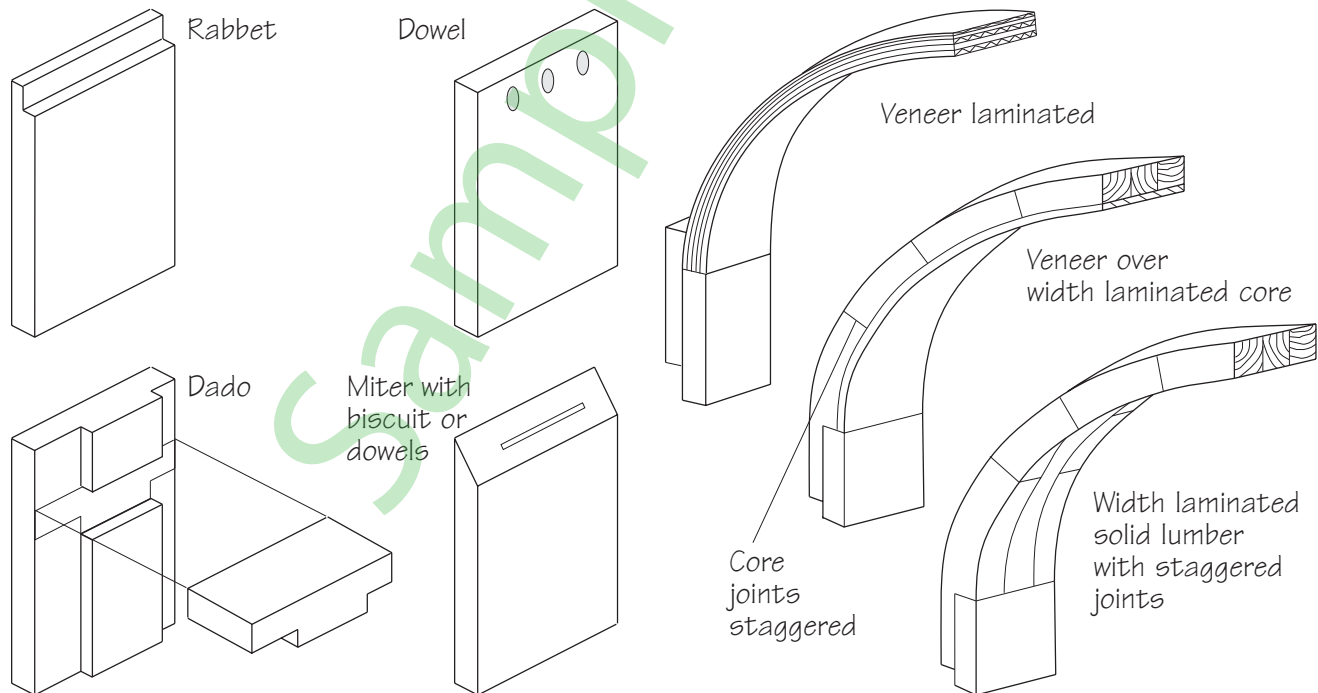
Frame and Jamb Profiles - Figure 900-03

900-T-5

**Machining and Joinery**

In the absence of specifications, the following standards will apply. Where more than one method or material is listed for a Grade, woodworkers will supply their choice from the alternatives.

Machining	Premium	Custom	Economy
<b>Plant Machining Considerations</b>			
Sizing	Plant sized except where field adjustments required	Plant sized except where field adjustments required	Shipped oversize for cutting and fitting in the field
<b>Joinery and Assembly Considerations</b>			
Dadoed, doweled, mitered with biscuit, or rabbeted joints	Plant prepared and assembled in sections as large as practical for safe transportation and installation	Plant prepared and bundled in sets appropriately labeled for the jobsite	Shipped loose without preparation
Curved jambs or heads	Veneer-laminated or veneer-laminated over bandsawn width-laminated low density lumber	Bandsawn from solid stock and width-laminated with end joints of laminations staggered	Not applicable
<b>Glass and Glazing</b>			
All Frames and Lites	Trim glazed openings with wood mouldings of the profile indicated in the contract documents, removable one side. In the absence of specifications, profile shall be mill option. Removable stop to be placed on the exterior face of the fixed glazed frame when mounted in exterior openings.		
Wood Moulding Glass Stop	Plant prepared, one side installed, other side tacked in place	Plant prepared and bundled in sets appropriately labeled for the jobsite	Shipped loose without preparation



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Joinery - Figure 900-04

900-T-6

Smoothness of Exposed Surfaces (Minimum Requirements)

Smoothness Table	Premium		Custom		Economy	
	Transparent	Opaque	Transparent	Opaque	Transparent	Opaque
Sharp edges (Arris)	Eased with fine abrasive		Eased with fine abrasive		Mill option	
Top flat surfaces	150 grit		120 grit		100 grit or 15 KCPI	
Moulded surfaces	120 grit		minimum 20 KCPI			
Shaped surfaces	120 grit		minimum 20 KCPI			
Turned surfaces	120 grit		100 grit			
Sanding cross scratches	None allowed	Not to exceed 6.4 mm [.25"]	None allowed	Not to exceed 6.4 mm [.25"]		

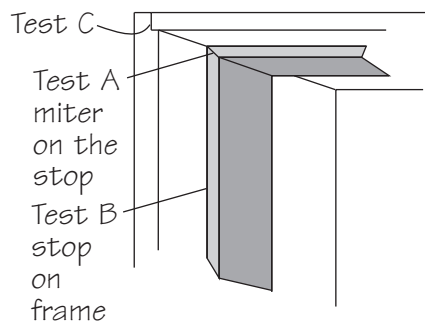
NOTE: No tearouts, knife nicks, or hit-or-miss finish allowed. No knife marks allowed where sanding is required. Surface variations as a result of multiple tool passes treated as turned surfaces above. Glue and filler, if used, must be inconspicuous and sanded as smoothly as the surrounding surface. Sanding before final stain and/or finish should be a consistent grit and scratch pattern, as it influences blend of color and sheen between components. Top Flat Surfaces are those which which can be sanded with a drum or wide belt sander. Turnings are customarily sanded on the lathe, and will exhibit cross scratches. Before finishing, all exposed portions of architectural woodwork shall have handling marks or effects of exposure to humidity or moisture removed by a thorough uniform final sanding. The sanded surface shall then be cleaned and dust free, prior to proceeding with the first step in the finishing process. Veneer sand-through, with veneer sanded to the point where cross banding or core is visible, and/or core telegraphing (variation from a true plane in excess of 0.25 mm [0.010"] in any 76 mm [3"] span) is not allowed in any Grade.

900-T-7

Tightness of Plant Assembled Joints

NOTE: Maximum gap between exposed components shall be tested at points designed to join; where members contact or touch.

900 Tightness of Plant Assembled Joints	Premium		Custom		Economy	
	Interior	Exterior	Interior	Exterior	Interior	Exterior
Maximum gap: Test A	0.4 mm [.015"] wide by 20% of joint length	0.6 mm [.025"] wide by 30% of joint length	No plant assembly		No plant assembly	
Maximum gap: Test B	.4 mm [.015"] x 76 mm [3"], and no gap may occur within 1829 mm [72"] of a similar gap	.6 mm [.025"] x 152 mm [6"], and no gap may occur within 762 mm [30"] of a similar gap				
Maximum gap: Test C	0.4 mm [.015"]	0.6 mm [.025"]				
Flushness variation	0.03 mm [.001"]	0.4 mm [.015"]				



Test Locations - Figure 900-05

## 900-T-8

### Selection for Grain and Color

For Transparent finish, adjacent members shall ...

- Premium Grade: ... be well matched for grain and color.
- Custom Grade: ... be compatible for color.
- Economy Grade: ... not be selected.

Visible finger joints not permitted in Premium and Custom Grades. No selection for grain or color is required for opaque finish in any Grade.

### Field Assemblies

Selection of adjacent members for compatibility is the responsibility of the installation contractor.

## 900-T-9

### Labeled (Fire-Rated) Jamb Assemblies

AWI Wood Type 20-minute-rated frames can only be manufactured and labeled under license from Underwriters Laboratories (UL) or Intertek Testing Services (ITS). Engineering details for 3'-0" x 8'-0" and 4'-0" x 8'-0" frames at neutral pressure have been tested by AWI and are available as a member service. Other designs and details may require testing or specific authorization from UL or ITS.

In Canada, labeled 20-minute fire rated wood doors, wood door frames, and sidelight assemblies are available in standard profiles from a very limited number of architectural woodwork manufacturers. Also, only limited species are available. The design authority should check with the supplier before specifying.



### Compliance Criteria

## 900-C-1

### Tests for Smoothness of Exposed Surfaces

KCPI (Knife Cuts Per Inch) can be determined by holding the surfaced board at an angle to a strong light source and counting the visible ridges per inch, usually perpendicular to the profile.

SANDING can best be checked by sanding a sample piece of the same species with the required grit of abrasive. Observation with a hand lens of the prepared sample and the material in question will offer a comparison of the scratch marks of the abrasive grit. Reasonable assessment of the performance of the finished product will be weighed against absolute compliance with the standard.

## 900-C-2

### Tightness and Flushness of Plant Assembled Joints

Joint tightness and/or flushness will meet the standard when tested with a feeler gauge at the points indicated in the il-

lustration. Joint length will be measured with a ruler with a minimum division of 1 mm [ $1/16$ " ] and calculations made accordingly. Reasonable assessment of the performance of the finished product will be weighed against absolute compliance with the Standard.



### Design Ideas

## 900-D

### Freedom of Expression

This section shows a few frame design ideas. It makes no pretense of being complete. It's here for the reader to use as a starting place. The exercise of personal creativity is the essence of fine architectural woodwork.

Custom-designed woodwork gives you complete freedom of expression.

• **Design flexibility:** The use of custom-designed woodwork in a building allows the design professional freedom of expression while meeting the functional needs of the client. A custom-designed building is enhanced by the use of custom-designed woodwork.

• **Cost effective:** Custom woodwork does compete favorably with mass-produced millwork, and offers practically limitless variations of design and material. Most woodwork lasts the life of the building - quality counts.

• **Complete adaptability:** By using custom woodwork, the architect or designer can readily conceal plumbing, electrical and other mechanical equipment without compromising the design criteria.

• **No restrictions:** Custom architectural woodwork permits complete freedom of selection of any of the numerous hardwoods and softwoods available for transparent or opaque finish. Other unique materials available from woodwork manufacturers require no further finishing at all, such as plastic laminates and decorative overlays. These materials can be fashioned into a wide variety of profiles, sizes, and configurations. The owner and design professional have the best of both worlds - high quality and freedom of choice.

• **Dimensional flexibility:** Since custom woodwork is normally produced by a specialty architectural woodwork firm, dimensions can easily be changed prior to actual fabrication, if required by job conditions. Special situations such as designing for the handicapped can readily be accommodated by the custom architectural woodwork manufacturer.

• **Quality assurance:** Adherence to the QSI and specifications will provide the design professional a quality product at a competitive price. Use of a qualified AWI/AWMAC member firm will help ensure the woodworker's understanding of the quality level required.

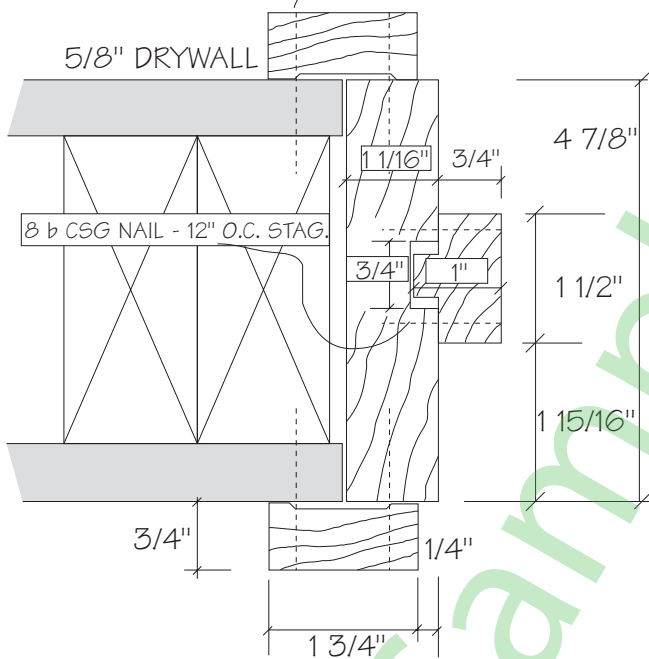
**900-D-1**

**20-Minute Wood Frames**

Some woodwork manufacturers are licensed to fabricate and label 20-minute-rated wood frames for use in combination with 20-minute wood doors. A variety of species are available. New designs and fire ratings on wood frames are being developed by individual manufacturers. Neither AWI nor AWMAC sets standards for these frames. Consult with your woodwork manufacturer on availability.

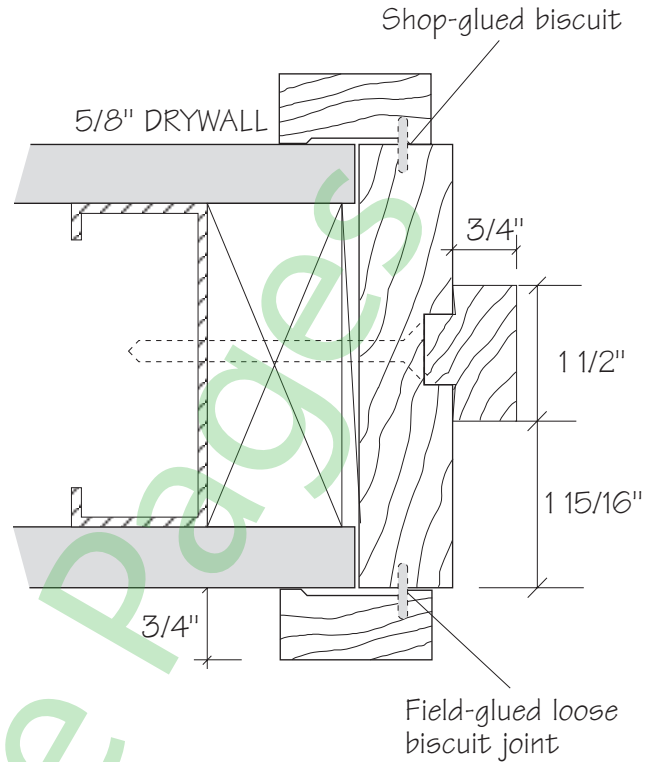
**IMPORTANT:** Only firms licensed by Underwriters Lab (UL) or Warnock-Hersey (WHI) under their respective labeling programs are authorized to attach the 20-minute label. If this label will be required by the local code officials, it is the obligation of the design professional to so specify, and the obligation of the purchaser to assure supply by a properly licensed firm. Certificates of occupancy may be withheld or withdrawn for failure to follow these guidelines.

8-10 b CSG NAIL - 12" O.C. STAG.



**900-D-2**

**No Visible Fastening**



**900**