(2) STRUCTURAL GLUED-LAMINATED TIMBER. Structural glued-laminated timber is an engineered, stress-rated product of a timber laminating plant comprising assemblies of specially selected and prepared wood laminations securely bonded together with adhesives. The grain of all laminations is approximately parallel longitudinally. The following standards are adopted as part of this building code for the design and production of structural glued-laminated timber, except that the modification of design stresses for duration of load shall be as specified in Ind 53.61 (1) (a) 1. c.

(a) AITC 117 [Ind 51.27 (3)], "Standard Specifications for Structural Glued-Laminated Timber of Douglas Fir, Western Larch, Southern Pine and California Redwood."

(b) AITC 119 [Ind 51.27 (3)], "Standard Specifications for Hardwood Glued-Laminated Timber."

(c) AITC 120 [Ind 51.27 (3)], "Standard Specifications for Structural Glued-Laminated Timber Using 'E' Rated and Visually Graded Lumber of Douglas Fir, Southern Pine, Hem Fir and Lodgepole Pine."

(3) ROUND POLES. Allowable unit stresses for nongraded round poles used as structural members other than piling shall be 80 percent of the allowable unit stresses for select structural grade beams and stringers (19 percent moisture content) of the appropriate species as listed in Table 1, supplement to the National Design Specification for Stress Grade Lumber and Its Fastenings [Ind 51.27 (8)]. No obviously unsound load-bearing poles are to be used. Higher allowable stresses will be permitted for round poles graded in accordance with a recognized standard.

Note: ASTM designation D 3200-73 "Standard Specification and Methods for Establishing Recommended Design Stresses for Round Timber Construction Poles" is acceptable for graded round poles. ANSI Standard 05.1—1972 may be used for poles subject to transverse loads only.

(4) PILING. See section Ind 53.24.

(5) PLYWOOD. (a) *General.* The quality and design of all plywood used in construction of all buildings and structures shall conform to the minimum standards under this section. All plywood when used structurally, including among others, use for siding, roof and wall sheathing, subflooring, diaphragms, and built-up members, shall conform to the performance standards for its type in U.S. Product Standard PS 1 [Ind 51.27 (11)] for softwood plywood/construction and industrial. Each panel or member shall be identified for grade and glue type by the trademarks of an approved testing and grading agency. In addition, all plywood when permanently exposed in outdoor applications shall be of exterior type.

Note: It will be the policy of the department to approve designs in conformance with the following: (1) "Plywood Design Specification," including Supplement No. 1, "Design of Plywood Curved Panels"; Supplement No. 2, "Design of Plywood Beams"; Supplement No. 3, "Design of Flat Plywood Stressed-Skin Panels"; and Supplement No. 4, "Design of Flat Plywood Sandwich Panels"; (2) "Plywood Diaphragm Construction"; (3) Laboratory Report 121, "Plywood Folded Plate Design and Details"; (4) Laboratory Report 93, "Load-Bearing Plywood Sandwich Panels"; and (5) "Fabrication Specifications Plywood-Lumber Components: CP-8, BB-8, SS-8, SP-61, FF-62, PW-61" (above publications available from the American Plywood Association, 1119 A Street, Tacoma, Washington 98401); (6) Design Guide HP-SG-71, "Structural Design Guide for Hardwood Plywood" (available from the Hardwood Plywood Manufacturers Association, 2310 South Walter Reed Drive, Arlington, Virginia 22206).

(b) No part of any of the above referenced standards shall supersede the general live load requirements of section Ind 53.11.

(6) RECONSTITUTED WOOD BASE-FIBER AND PARTICLE PANEL MATERIALS. Materials of this type, when used structurally, shall be approved by the department in accordance with the requirements of section Ind 50.12. Evaluation will be based on ASTM D 1037 [Ind 51.25 (44)].

(7) SOLID WOOD FLOOR AND ROOF SHEATHING. Minimum thickness of nonstress rated lumber used for floor and roof sheathing shall be in accordance with Table 53-XVI.

TABLE 53-XVI
MINIMUM NET THICKNESS OF LUMBER PLACED (INCHES)

Use	Span (Inches)	Perpendicular to Support		Diagonal to Support	
		Surfaced Dry‡	Surfaced Unseasoned	Surfaced Dry‡	Surfaced Unseasoned
Floors	24	3/4	25/32	3/4	25/32
	16	5/8	11/16	5/8	11/16
Roofs	24	5/8	11/16	3/4	25/32

‡Maximum 19% moisture content.

(a) The above dimensions shall be the minimum dimensions for lumber with grades as specified in Table 53-XVII.

TABLE 53-XVII
MINIMUM BOARD GRADES‡

Grading Agency	Solid Floor or Roof Sheathing	Spaced Roof Sheathing
West Coast Lumber Inspection Bureau	Utility	Standard
Western Wood Products Association	4 Common or Utility	3 Common or Standard
Southern Pine Inspection Bureau	No. 3	No. 2
Redwood Inspection Service	Merchantable	Construction, common
National Lumber Grades Authority	4 Common or Utility	3 Common or Standard
Northern Hardwood and Pine Manufacturers Association	4 Common	3 Common
Northeastern Lumber Manufacturers Association	4 Common	3 Common

‡The above grades are taken from grading rules approved by the American Lumber Standards Committee.

(8) TIMBER FASTENERS. The design and use of timber fasteners shall be in accordance with the requirements of National Design Specifications for Stress-Grade Lumber and Its Fastenings [Ind 51.27 (8)].

(a) *Fastener identification.* Light gauge perforated metal plate connectors shall be permanently identifiable with regard to their gauge and manufacturer.

History: Cr. Register, July, 1974, No. 223, eff. 1-1-75; am. (2), Register, December, 1974, No. 228, eff. 1-1-75; r. and recr. (2), Register, April, 1975, No. 232, eff. 5-1-75.

Ind 53.62 Special systems. (1) WOOD TRUSSES. Wood trusses shall be constructed in accordance with the following recommended standard and the listed exceptions:

(a) "Design Specifications for Light Metal Plate Connected Trusses" [Ind 51.27 (10)].

1. Exceptions and additions:

a. Section 301.2. Moment coefficients used in design of top or bottom chord members shall be based on the assumption of no fixity at member ends or joints due to plate connectors.

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