Formal Committee Poll-C1 for ANSI/APA PRR 410 (Revision to ANSI/APA PRR 410 2021)

Notations: ~~Deletion~~ and Addition

Item#01:
Rationale for the changes: Editorial
Ballot: Page ii
American National Standards Institute, Inc.
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New York, NY 10036

Item #02:
Rationale for the changes: Editorial - Routine standards update
Ballot: Section 2.1

D198-~~15~~22a Standard Test Methods of Static Tests of Lumber in Structural Sizes
D2915-~~17~~25 Standard Practice for Sampling and Data-Analysis for Structural Wood and Wood-Based Products
D3501-~~05a (2018)~~24 Standard Test Methods for Wood-Based Structural Panels in Compression
D4761-~~19~~25 Standard Test Methods for Mechanical Properties of Lumber and Wood-Based Structural Material
D5456-~~19e1~~24 Standard Specification for Evaluation of Structural Composite Lumber Products
D7033-~~14~~22 Standard Practice for Establishing Design Capacities for Oriented Strand Board (OSB) Wood-Based Structural-Use Panels
D7672-~~19~~24 Standard Specification for Evaluating Structural Capacities of Rim Board Products and Assemblies
F1667-~~20~~M-21a Standard Specification for Driven Fasteners: Nails, Spikes, and Staples

Section 2.2
ANSI/AWC NDS-20~~18~~24 National Design Specification for Wood Construction
ANSI 117-202~~0~~5 Standard Specification for Structural Glued Laminated Timber of Softwood Species
ANSI A190.1-20~~17~~22 Standard for Wood Products Structural Glued Laminated Timber
CSA O86:~~19~~24 Engineering Design in Wood
CSA O121:17 (R2022) Douglas Fir Plywood
CSA O122:25Structural Glued-Laminated Timber
CSA O151:17 (R2022) Canadian Softwood Plywood
CAN/CSA O325:~~16~~21 Construction Sheathing
US Product Standard PS 1-~~19~~22 Structural Plywood

Item #03:

Rationale for the changes: Correction. The reduced total loads for those revised configurations resulted from the difference between the LSD specified edgewise compression perp of 6.3 MPa (published in PRR 410 based on glulam rim boards, which is equivalent to the ASD allowable compression perp of 500 psi) and 6.9 MPa (previously used based on the ASD allowable compression perp of 550 psi). The reduction in the edgewise compression perp increases the minimum number of 2x studs needed for the end bearing in some cases, which in turn increases the on-center span and reduces the permissible total load. Table on the right is a screenshot of APA publication W345CA.

Ballot: Table B1A

TABLE B1A

MAXIMUM LIMIT STATES FACTORED LOADS FOR PRR 410 RIM BOARDS MANUFACTURED FROM MAT-FORMED AND COMPOSITE PANELS, AND PLYWOOD QUALIFIED IN ACCORDANCE WITH PS 2 OR CSA O325 WHEN USED TO SPAN AN OPENING (STANDARD-TERM LOAD DURATION K_D = 1.0)

Load Condition	Size	Span (L)					Size	Span (L)				
		L ≤ 610 mm	610 mm < L ≤ 762 mm	762 mm < L ≤ 914 mm	914 mm < L ≤ 1067 mm	1067 mm < L ≤ 1220 mm		L ≤ 610 mm	610 mm < L ≤ 762 mm	762 mm < L ≤ 914 mm	914 mm < L ≤ 1067 mm	1067 mm < L ≤ 1220 mm
Total Load (kN/m)	25 x 241 mm	19.0	15.6	13.2	10.4	8.1	29 x 241 mm	21.4	17.5	14.8	11.7	9.1
Min. End Bearing (mm)		76	76	76	76	76		76	76	76	76	76
Total Load (kN/m)	2 plies 25 x 241 mm	38.0	31.1	26.3	20.7	16.1	2 plies 29 x 241 mm	42.8	35.0	29.6	23.3	18.1
Min. End Bearing (mm)		76	76	76	76	76		76	76	76	76	76
Total Load (kN/m)	25 x 302 mm	23.8	19.4	16.4	14.2	12.6	29 x 302 mm	26.8	21.9	18.5	16.0	14.1
Min. End Bearing (mm)		76	76	76	76	76		76	76	76	76	76
Total Load (kN/m)	2 plies 25 x 302 mm	47.6	38.9	32.9	28.5	25.1	2 plies 29 x 302 mm	53.5	43.8	37.0	32.1	28.3
Min. End Bearing (mm)		76	76	76	76	76		76	76	76	76	76
Total Load (kN/m)	2 plies 25 x 356 mm	53.1	43.8	37.3	32.5	28.8	2 plies 29 x 356 mm	59.7	49.3	42.0	36.6	32.4
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 406 mm	60.7	50.1	42.7	37.1	32.9	2 plies 29 x 406 mm	68.3	56.4	48.0	41.8	37.0
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 457 mm	68.3	56.4	48.0	41.8	37.0	2 plies 29 x 457 mm	76.8	63.4	54.0	47.0	
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 508 mm	75.9	62.6	53.3	46.4	41.1	2 plies 29 x 508 mm	85.4	70.5	60.0	52.2	46.2
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 559 mm	80.4	68.9	58.7	51.1	45.2	2 plies 29 x 559 mm	93.9	77.5	66.0	57.5	50.9
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 610 mm	80.4	72.0	61.7	54.0	47.9	2 plies 29 x 610 mm	97.3	81.0	69.4	60.7	53.9
Min. End Bearing (mm)		114	152	152	152	152		152	152	152	152	152

For English Units: 1 kN/m = 68.5 lbf/ft, 1 mm = 0.0394 in.

a. This table is for preliminary design use only. Final design shall include a complete analysis.

b. For dry service conditions where the average equilibrium moisture content of solid-sawn lumber over a year is 15 percent or less, and does not exceed 19 percent.

c. The table is developed based on design properties tabulated in Table A2A with a maximum depth-to-width ratio of 12 and an assumed uniform load. The shear load includes the load within a distance from supports equal to the Rim Board depth.

d. Simply supported beam subjected to uniform loads only. Span is distance measured between inside faces of opening. Connect the 2-ply Rim Boards with a minimum of 3 rows of 8d box nails (0.113 inch x 2-1/2 inches) at 152 mm (6 inches) on center for 302 mm (11-7/8 inches) or less in depth, 4 rows of 8d box nails at 152 mm (6 inches) on center for 406 mm (16 inches) and 457 mm (18 inches) in depth, 5 rows of 8d box nails at 152 mm (6 inches) on center for 508 mm (20 inches) and 559 mm (22 inches) in depth, and 6 rows of 8d box nails at 152 mm (6 inches) on center for 610 mm (24 inches) in depth. Clinch the nails whenever possible.

e. Tabulated values represent total loads permitted in addition to the dead weight of the rim board (assumed 0.72 g/cm³ or 45 pcf).

f. Joints in rim board shall not be located within opening.

g. For openings greater than 1.2 m (4 feet) in length, use glulam, SCL, or other engineered wood products.

TABLE 5A

MAXIMUM LIMIT STATES FACTORED LOADS FOR [redacted] TO SPAN AN OPENING[a,b,c,d,e,f,g] (STANDARD-TERM LOAD DURATION K_D = 1.0)

Load Condition	Size	Span (L)					Size	Span (L)				
		L ≤ 610 mm	610 mm < L ≤ 762 mm	762 mm < L ≤ 914 mm	914 mm < L ≤ 1067 mm	1067 mm < L ≤ 1220 mm		L ≤ 610 mm	610 mm < L ≤ 762 mm	762 mm < L ≤ 914 mm	914 mm < L ≤ 1067 mm	1067 mm < L ≤ 1220 mm
Total Load (kN/m)	25 x 241 mm	19.0	15.6	13.2	10.4	8.1	29 x 241 mm	21.4	17.5	14.8	11.7	9.1
Min. End Bearing (mm)		76	76	76	76	76		76	76	76	76	76
Total Load (kN/m)	2 plies 25 x 241 mm	38.0	31.1	26.3	20.7	16.1	2 plies 29 x 241 mm	42.8	35.0	29.6	23.3	18.1
Min. End Bearing (mm)		76	76	76	76	76		76	76	76	76	76
Total Load (kN/m)	25 x 302 mm	22.5	18.6	15.8	13.8	11.9	29 x 302 mm	25.3	20.9	17.8	15.5	13.4
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 302 mm	45.0	37.2	31.7	27.6	23.8	2 plies 29 x 302 mm	50.7	41.8	35.6	31.0	26.8
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 356 mm	53.1	43.8	37.3	32.5	28.8	2 plies 29 x 356 mm	59.7	49.3	42.0	36.6	32.4
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 406 mm	60.7	50.1	42.7	37.1	32.9	2 plies 29 x 406 mm	68.3	56.4	48.0	41.8	37.0
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 457 mm	68.3	56.4	48.0	41.8	37.0	2 plies 29 x 457 mm	76.8	63.4	54.0	47.0	41.6
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 508 mm	75.9	62.6	53.3	46.4	41.1	2 plies 29 x 508 mm	85.4	70.5	60.0	52.2	46.2
Min. End Bearing (mm)		114	114	114	114	114		114	114	114	114	114
Total Load (kN/m)	2 plies 25 x 559 mm	79.3	66.0	56.6	49.5	44.0	2 plies 29 x 559 mm	89.2	74.3	63.6	55.7	49.4
Min. End Bearing (mm)		152	152	152	152	152		152	152	152	152	152
Total Load (kN/m)	2 plies 25 x 610 mm	69.8	69.8	61.7	54.0	47.9	2 plies 29 x 610 mm	97.3	81.0	69.4	60.7	53.9
Min. End Bearing (mm)		114	152	152	152	152		152	152	152	152	152

For English Units: 1 kN/m = 68.5 lbf/ft, 1 mm = 0.0394 in.

a. This table is for preliminary design use only. Final design shall include a complete analysis.

b. For dry service conditions where the average equilibrium moisture content of solid-sawn lumber over a year is 15 percent or less, and does not exceed 19 percent.

c. The table is developed based on design properties tabulated in Table 4 subject to the maximum factored uniform vertical load capacity (qV) of Table 3, a maximum depth-to-width ratio of 12, and an assumed uniform load. The shear load includes the load within a distance from supports equal to the Rim Board depth.

d. Simply supported beam subjected to uniform loads only. Span is distance measured between inside faces of opening. Connect the 2-ply Rim Boards with a minimum of 3 rows of 8d box nails (0.113 inch x 2-1/2 inches) at 152 mm (6 inches) on center for 302 mm (11-7/8 inches) or less in depth, 4 rows of 8d box nails at 152 mm (6 inches) on center for 406 mm (16 inches) and 457 mm (18 inches) in depth, 5 rows of 8d box nails at 152 mm (6 inches) on center for 508 mm (20 inches) and 559 mm (22 inches) in depth, and 6 rows of 8d box nails at 152 mm (6 inches) on center for 610 mm (24 inches) in depth. Clinch the nails whenever possible.

e. Tabulated values represent total loads permitted in addition to the dead weight of the Rim Board (assumed 0.72 g/cm³ or 45 pcf).

f. Joints in Rim Board shall not be located within opening.

g. For openings greater than 1.2 m (4 feet) in length, use glulam, SCL or other engineered wood products.

Item #04:
Rationale for the changes: To maintain consistency with the latest ANSI/APA standards, the qualified certification agency and qualified inspection agency should be North America-based. This requirement is consistent with the European product certification systems.
Ballot: Section 3.2

Qualified Certification Agency (Canada)—~~an~~U.S. or Canada-based agency meeting the following requirements

Qualified Inspection Agency (U.S.)— ~~an~~U.S. or Canada-based agency meeting the following requirements

Item #05:
Rationale for the changes: editorially update the terminology so that each terminology does not start with an article (a, an, or the). This is consistent with ANSI/APA PRG 320-2025, ASTM, and ISO standards' style and format

Ballot: Section 3.2
Throughout 3.2, editorially update the terminology so that each terminology does not start with an article (a, an, or the).

***ASD Reference Design Value*—~~a~~**design value used in the U.S. based on normal duration of load, dry service conditions, and sustained temperatures up to 100ºF (38ºC) for Allowable Stress Design (ASD)

***Approved Agency (Canada)*—~~an~~**established and recognized agency regularly engaged in conducting certification services, when such agency has been approved by regulatory bodies (see Qualified Certification Agency)

***Approved Agency (U.S.)*—~~an~~**established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by regulatory bodies (see Qualified Inspection Agency and Qualified Testing Agency)

***Composite Panel*—~~any~~**panel containing a combination of veneer and other wood-based materials meeting the requirements of PS 2 or CSA O325

***Edgewise Bending Properties*—~~the~~**mechanical properties of rim boards, including design edgewise bending stress ($F_{be,\ ASD}$ or $f_{be,\ LSD}$), modulus of elasticity (E_e), shear stress ($F_{ve,\ ASD}$ or $f_{ve,\ LSD}$), and compressive stress perpendicular to grain ($F_{c\perp e,\ ASD}$ or $f_{c\perp e,\ LSD}$) when subjected to loading on the edge of the rim boards

***Horizontal (Shear) Load Transfer Capacity*—~~the~~**mechanical capacity of rim boards to transfer applied lateral loads, such as wind or seismic, through shear load transfer provided by the connections between rim board and floor sheathing, and rim board and sill plate

Mat-Formed Panel—~~*any*~~ wood-based panel which does not contain veneer, consistent with the definition of wood structural panels

Mill Specification—~~*a*~~manufacturing specification based on product evaluation to be used for quality assurance purposes by the manufacturer and the qualified agency

Qualified Certification Agency (Canada)—~~*an*~~ agency meeting the following requirements:

Qualified Inspection Agency (U.S.)—~~*an*~~agency meeting the following requirements:

Qualified Testing Agency—~~*an*~~agency meeting the following requirements:

Recognized Accreditation Body—~~*an*~~organization complying with ISO/IEC 17011 and recognized by the regulatory body having jurisdiction as qualified to evaluate and accredit certification agencies, inspection agencies and/or testing agencies

Rim Board—~~*a*~~ continuously supported, full-depth structural element developed for use within a wood floor or roof assembly and performing a similar role as a starter or end joist when installed in a load bearing wall or non-load bearing wall perpendicular or parallel to the joist framing to transfer horizontal (shear) and vertical (compression) loads, provide attachment for diaphragm sheathing, siding and/or exterior deck ledgers, and provide lateral support to floor or roof joists or rafters

Structural Composite Lumber (SCL)—~~*an*~~engineered wood product that is intended for structural use and bonded with an exterior adhesive, and meets the definition and requirements of ASTM D5456

Structural Glued Laminated Timber (glulam)—~~*an*~~ engineered, stress rated product of a timber laminating plant that is comprised of assemblies of specially selected and prepared wood laminations securely bonded together with adhesives, and meets the definition and requirements of ANSI A190.1 or CSA O122

Vertical (Compression) Load Capacity—~~*the*~~ mechanical capacity of rim boards to transfer applied gravity loads, such as wall loads, through compressive load transfer to the sill plate of the supporting wall

Wood Structural Panel—~~*a*~~panel product composed primarily of wood that, in its commodity end use, is essentially dependent upon certain mechanical and/or physical properties for successful end-use performance and meets the definition and requirements of PS 1, PS 2, CSA O325, CSA O121, or CSA O151

Item #06:

Rationale for the changes: Intent is to clarify that uniform and concentrated vertical load determined from section 6.3.4 and 6.5.3 is applicable to thicker rim of the same depth, species and grade combination.
Additionally, further language are added to ensure that rimboard uniform vertical load capacity determined by testing is not increased based on the 360 psi bearing limit without also testing the thicker section for buckling capacity.

Ballot: Section 6.3.5

The uniform vertical load capacity determined from Section 6.3.4 is applicable to a shallower rim board of the same grade, thickness and species combination, or a thicker rim board of the same depth and species combination, provided that the thickness of the tested member is used to determine the uniform vertical load capacity.

Section 6.5.4

The concentrated vertical load capacity determined from Section 6.5.3 is applicable to a shallower rim board of the same grade, thickness and species combination, or a thicker rim board of the same depth and species combination.

Item #07:

Rationale for the changes: update reference US model codes

Ballot: Table 5 footnote a

Rim board products qualified with the nailing schedule in this standard are recognized in Section 2303.1.13 of the 2024, 2021, 2018 and 2015 International Building Code® (IBC), and Sections R502.1.7 and R602.1.7 of the 2024, 2021, 2018 and 2015 International Residential Code® (IRC).