ANSI/APA PRG 320-2017 (Recirculation Ballot 2017-1-R1 General)

**Ballot issue date: 05/23/2017 Ballot closing date: 06/06/2017**

**Ballot Instructions:**

1. This is a **recirculation ballot** to **Ballot 2017-1**, which was issued on 03/23/17 and closed on 04/24/17.
2. Ballot 2017-1 contained 3 ballot items. Items 1 and 2 received no negative votes, while Item 3 received 4 negative votes. Two of the 4 negative votes on Item 3 have been changed to affirmative with comments by the voters. Resolutions to the standing negative votes and affirmative with comments are attached to this ballot, as proposed by the ExSub, and are reflected in this recirculation ballot.
3. You are requested to review the attached changes in response to the negative votes and affirmative with comment votes and, in light of this information, vote to reaffirm or revise your vote on Ballot 2017-1. See the attached recorded votes for your vote on Ballot 2017-1.
4. If the changes in this recirculation ballot do not affect your vote on Ballot 2017-1, you can either confirm your vote by returning this ballot or do nothing (your vote on Ballot 2017-1 will be considered as your final vote). However, it is encouraged that you return this ballot to avoid any ambiguity.
5. If the changes in this recirculation ballot do affect your vote on Ballot 2017-1, you must cast your new vote by returning this ballot. Ballot items marked Negative or Affirmative-with-Comment shall be accompanied by a written explanation and proposed resolution that would address the negative or affirmative with comment using the comment form on page 2.
6. Please return your ballot by e-mail to [borjen.yeh@apawood.org](mailto:borjen.yeh@apawood.org).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Committee Member Name | | Signature (not required with e-mail) | | Date |

**Ballot** (Aff = affirmative; Aw/C = affirmative with comment; Neg = negative; Abst = abstention)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Description | Aff | Aw/C | Neg | Abst |
| 2017-1-01-R1 | Revise the referenced dry service conditions based on CSA O86 |  |  |  |  |
| 2017-1-02-R1 | Update the referenced standards |  |  |  |  |
| 2017-1-03-R1 | Editorially revise terminologies as marked |  |  |  |  |

**Ballot Comment Form for ANSI/APA PRG 320-2017**

**(Recirculation Ballot 2017-1-R1 General)**

Required only for Negative or Affirmative-with-Comment

**Please attach this page to the e-mail ballot return**

|  |  |
| --- | --- |
| Item | Comments |
| 2017-1-01-R1 |  |
| 2017-1-02-R1 |  |
| 2017-1-03-R1 |  |

General Editorial Revisions

Recirculation Ballot 2017-1-R1 (3 items)

Notations: Inserted Text New Text

Deleted Text ~~Old Text~~

Changes from Ballot 2017-1 Text

**Ballot Item 2017-1-01: Revise the referenced dry service conditions based on CSA O86.**

**Rationale:**  To align the referenced dry service conditions in the Canadian code.

**Ballot:**

1. Scope

CLT panels shall be used in dry service conditions, such as in most covered structures, where the ~~mean~~ average equilibrium moisture content of ~~solid-sawn lumber~~ solid wood is less than 16 percent in the U.S., and is 15 percent or less over a year and does not exceed 19 percent in Canada.

**Ballot Item 2017-1-02: Update the referenced standards as follows.**

**Rationale:**  Update. The added references are necessary due to other revisions (see other ballots/items).

**Ballot:**

2.1 U.S. Standards

*AITC Test T107-2007* Shear Test

*~~AITC~~ ANSI 405-~~2008~~2013* Standard for Adhesives for Use in Structural Glued Laminated Timber

*ANSI~~/AITC~~ A190.1-~~2007~~2017* Structural Glued Laminated Timber

*ANSI/AWC NDS-~~2012~~2015* National Design Specification for Wood Construction

*ASTM D9-~~09ae1~~12* Standard Terminology Relating to Wood and Wood-Based Products

*ASTM D198-~~09~~15* Standard Test Methods of Static Tests of Lumber in Structural Sizes

*ASTM D905-08 (2013)* Standard Test Method for Strength Properties of Adhesive Bonds in Shear by Compression Loading

*ASTM D907-~~11a~~15* Standard Terminology of Adhesives

*ASTM D1037-~~06a~~12* Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials

*ASTM D2395-~~07ae1~~14e1* Standard Test Methods for Specific Gravity of Wood and Wood-Base Materials

*ASTM D2559-~~10a~~12ae1* Standard Specification for Adhesives for Bonded Structural Wood Products for Use Under Exterior Exposure Conditions

*ASTM D2915-10* Standard Practice for Sampling and Data-Analysis for Structural Wood and Wood-Based Products

*ASTM D3737-~~09~~12* Standard Practice for Establishing Stresses for Structural Glued Laminated Timber (Glulam)

*ASTM D4761-~~11~~13* Standard Test Methods for Mechanical Properties of Lumber and Wood-Based Structural Material

*ASTM D5055-~~11a~~16* Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists

*ASTM D5456-~~11a~~14b* Standard Specification for Evaluation of Structural Composite Lumber Products

*ASTM D6815-09 (2015)* Standard Specification for Evaluation of Duration of Load and Creep Effects of Wood and Wood-Based Products

*ASTM D7247-~~07~~16* Standard Test Method for Evaluating the Shear Strength of Adhesive Bonds in Laminated Wood Products at Elevated Temperatures

*ASTM D7374-08 (2015)* Standard Practice for Evaluating Elevated Temperature Performance of Adhesives Used in End-Jointed Lumber

*ASTM E119-16a* Standard Test Methods for Fire Tests of Building Construction and Materials

*US Product Standard PS 1-09* Structural Plywood

*US Product Standard PS 20-~~10~~15* American Softwood Lumber Standard

2.2 Canadian Standards

*CAN/CSA O86-~~09~~14 (Reprint 2016)* Engineering Design in Wood

*CAN/ULC S101-14* Standard Methods of Fire Endurance Tests of Building Construction and Materials

*CSA O112.10-08 (R2013)* Evaluation of Adhesives for Structural Wood Products (Limited Moisture Exposure)

*CSA O122-~~06~~16* Structural Glued-Laminated Timber

*CSA O141-05 (R~~2009~~2014)* Softwood Lumber

*CSA O177-06 (R2015)* Qualification Code for the Manufacturers of Structural Glued-Laminated Timber

*NLGA* Standard Grading Rules for Canadian Lumber (~~2007~~2014)

*NLGA SPS 1-~~2011~~2017* Special Products Standard for Fingerjoined Structural Lumber

*NLGA SPS 2-~~2010~~2017* Special Products Standard for Machine Graded Lumber

*NLGA SPS 4-~~2011~~2014* Special Products Standard for Fingerjoined Machine Graded Lumber

*NLGA SPS 6-~~2010~~2015* Special Products Standard for Structural Face-Glued Lumber

2.3 International Standards

*~~ISO Guide 65-1996~~* ~~General Requirements for Bodies Operating Product Certification Systems~~

*ISO/IEC 17011-2004* Conformity Assessment – General Requirements for Accreditation Bodies Accrediting

Conformity Assessment Bodies

*ISO/IEC 17020-~~1998~~2012* ~~General Criteria for the Operation of Various Types of Bodies Performing Inspection~~ Conformity Assessment – Requirements for Operation of Various Types of Bodies Performing Inspection

*ISO/IEC 17025-2005* General Requirements for the Competence of Testing and Calibration Laboratories

*ISO/IEC 17065-2012* Conformity Assessment – Requirements for Bodies Certifying Products, Processes, and Services

3.2 Terms Specific to This Standard

Qualified Certification Agency (Canada)

(e) is accredited by a recognized accreditation body under ~~ISO Guide 65~~ ISO/IEC 17065

**Ballot Item 2017-1-03: Editorially revise some terminologies based on the proposal agreed by the committee at the last meeting as follows.**

**Rationale:**  Editorial.

**Ballot:**

3.2 Terms Specific to This Standard

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

Cross-Laminated Timber (CLT) – a prefabricated ~~solid~~ engineered wood ~~panel~~ product made of at least three orthogonal~~ly bonded~~ layers of ~~solid-~~ graded sawn lumber or structural composite lumber (SCL) that are laminated by gluing ~~of longitudinal and transverse layers~~ with structural adhesives ~~to form a solid rectangular-shaped, straight, and plane timber intended for roof, floor, or wall applications~~

~~CLT Grade – a unique designation of a class of CLT panels having the same layup of different panel thicknesses~~

~~Note 1. The standard CLT grades in this standard are listed in Table 1. Custom CLT grades may be established in accordance with Section 7.2.1.~~

# Edge Joint ~~Joints~~ – a joint ~~joints~~ ~~made by gluing~~ of the ~~edges~~ narrow faces of adjacent laminations within a CLT layer with or without gluing

End Joint ~~joints~~ – a joint ~~joints~~ made by gluing of ~~the finger~~ two pieces of ~~joints of the same~~ laminations within a CLT layer by the ends ~~prior to laminating adjacent layers~~

Layer~~s~~ – ~~all laminations on one side of a face bondline for panel face or all laminations between two adjacent bondlines for others~~ an arrangement of laminations of the same thickness, grade, and species combination laid out essentially parallel to each other in one plane

* ~~Parallel~~ Longitudinal – a layer with the laminations oriented parallel to the major strength direction
* ~~Perpendicular~~ Transverse – a layer with the laminations oriented perpendicular to the major strength direction*, ~~a~~*~~nd~~ also referred to as cross layer

Layup – an arrangement of layers in a CLT panel determined by the grade, number, orientation, and thickness~~, and grade~~ of laminations

Note 1. ~~The~~ ~~standard~~ Typical CLT ~~grades~~ layups in this standard are listed in Table 1. Other (Custom) CLT ~~grades~~ layups may be established in accordance with Section 7.2.1.

LSD Design Value – design value used in the Canada based on standard-term duration of load, dry service conditions, and temperatures up to 122ºF (50ºC) except for occasional exposures to 150ºF (65ºC) for the Limit States Design (LSD)

Major Strength Direction – general direction of the grain of the laminations in the outer ~~parallel~~ layers of the CLT panel ~~and also referred to as the parallel direction~~

Minor Strength Direction – perpendicular to the major strength direction of the CLT panel ~~and also referred to as the perpendicular direction~~

Remanufactured Lumber – lumber that meets the requirements of Section ~~4.3.4~~ 5.4 of ANSI~~/AITC~~ A190.1 in the U.S. or NLGA SPS 1, 2, 4, or 6 in Canada

Structural Composite Lumber (SCL) – an engineered wood product that is intended for structural use and bonded with adhesives, and meeting the definition and requirements of ASTM D5456

Note x: CLT combinations utilizing laminated strand lumber (LSL), laminated veneer lumber (LVL), and oriented strand lumber (OSL) laminations are included in Tables A2 and A4.  CLT combinations utilizing laminations of Parallel Strand Lumber (PSL) are permitted, but have not been specifically evaluated for inclusion in Tables A2 and A4.

Wood Failure ~~(percent)~~ – the rupturing of wood fibers from the specified block shear test on bonded specimens, measured as the area of wood fiber remaining at the bondline ~~following the rupture of wood fibers from the specified shear test,~~ and expressed as a percentage of total area involved in such failure