

Fire-Rated Assemblies Georgia-Pacific Wood Products LLC

PR-S202 Revised June 25, 2024

Products: FiberStrong®, GP, and APA Rimboards

Georgia-Pacific North Woods LP, 327022 Highway 11 North, Englehart, Ontario, Canada P0J

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(705) 544-2395 www.buildgp.com

1. Basis of the product report:

- 2024 International Building Code (IBC): Sections 104.2.3 Alternative material, 703 Fire-Resistance Ratings and Fire Tests, 721 Prescriptive Fire Resistance, and 722.6 Wood assemblies
- 2021, 2018, and 2015 IBC: Sections 104.11 Alternative materials, 703 Fire-Resistance Ratings and Fire Tests, 721 Prescriptive Fire Resistance, and 722.6 Wood assemblies
- 2024 International Residential Code (IRC): Sections R104.2.2 Alternative materials and R302.13 Fire protection of floors
- 2021, 2018, and 2015 IRC: Sections R104.11 Alternative materials and R302.13 Fire protection of floors
- 2020 National Building Code of Canada (NBCC): Clause 1.2.1.1 of Division A, Clauses 3.1.7, 4.1, 4.3.1.1, 9.10.3.1, 9.11, and 9.23.4.2 of Division B, Table 9.10.3.1.-B, and Appendix D
- American Wood Council Design for Code Acceptance DCA 3, Fire-Rated Wood-Frame Wall and Floor/Ceiling Assemblies
- APA System Report SR-405
- ASTM E119 and CAN/ULC S101 full-scale fire test reports, and engineering analyses

Product description:

FiberStrong[®], GP, and APA rimboards covered in this report are made with OSB in accordance with ANSI/APA PRR 410 and the in-plant manufacturing standard approved by APA.

Design properties:

Design properties for FiberStrong, GP, and APA rimboards are provided in ANSI/APA PRR 410 in the U.S. and CCMC 13237-L in Canada.

4. Product installation:

FiberStrong, GP, and APA rimboards covered in this report shall be installed in accordance with the recommendations provided by the manufacturer (www.buildgp.com/engineered-lumber). The Rim Board protection provided by the gypsum board contained in this report shall be permitted to be continuous or discontinuous. When the Rim Board protection is discontinuous due to the interruption of the floor framing, the floor framing must abut to the continuous Rim Board, and the required gypsum protection must abut to the floor framing with gaps of no greater than 1/16 inch. When used with I-joist framing, the gypsum protection must be notched to fit at all corners of the I-joist or the space between the I-joist web and the gypsum protection must be filled with a web filler with a gap of no greater than 1/16 inch between the gypsum protection and the web filler and between the web filler and the I-joist web and flanges.

5. Fire-rated assemblies:

FiberStrong, GP, and APA rimboard assemblies have been shown through testing and engineering analysis to achieve the fire resistance ratings described in this report. Firerated assemblies for FiberStrong, GP, and APA rimboards shall be constructed in accordance with the prescriptive requirements provided in this report or recommended by the manufacturer (see link above).

6. Limitations:

- a) FiberStrong, GP, and APA rimboards covered in this report shall be designed in accordance with the code using the design properties specified in ANSI/APA PRR 410 in the U.S. and CCMC 13237-L in Canada.
- b) FiberStrong, GP, and APA rimboards covered in this report are limited to dry service conditions where the average equilibrium moisture content of sawn lumber is less than 16% in the U.S. and the average equilibrium moisture content of solid-sawn lumber over a year is 15% or less and does not exceed 19% in Canada.
- c) FiberStrong, GP, and APA rimboards covered in this report are produced at the Georgia-Pacific Wood Products LLC facilities under a quality assurance program audited by APA.
- d) This report is subject to re-examination in one year.

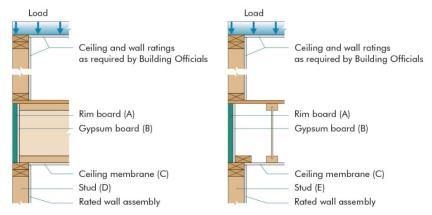
Identification:

FiberStrong, GP, and APA rimboards described in this report are identified by a label bearing the manufacturer's name (Georgia-Pacific Wood Products LLC) and/or trademark, the APA assigned plant number (530), the product grade, the APA logo, and a means of identifying the date of manufacture.



Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



End Wall Configuration Base Assembly

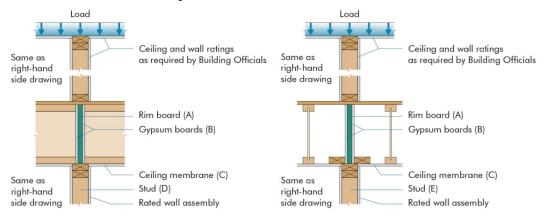
Rim Board	Rim Board	Ceiling Membrane Req.	Ceiling Membrane Req.	Stud	Stud
Thickness, in.	Protection	for 1-hr. Rim Assembly	for 2-hr. Rim Assembly	Size	Size
Α	В	С	С	D	Е
	Unprotected	1-hour Fire-rated Assembly	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
1	(1) 5/8" Type X	5/8" Regular	90-min Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	5/8" Type X	2x6	2x4
	Unprotected	1-hour Fire-rated Assembly	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
1-1/8	(1) 5/8" Type X	5/8" Regular	90-min Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	5/8" Type X	2x6	2x4
	Unprotected	1-hour Fire-rated Assembly	2-hour Fire-rated Assembly	2x4	2x4
1-1/4	(1) 1/2" Type X	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	1/2" Type X	90-min Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	5/8" Type X	2x6	2x4

- Rim assembly for fire from inside of structure.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- When 2-layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.



Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Single Wall Configuration Base Assembly

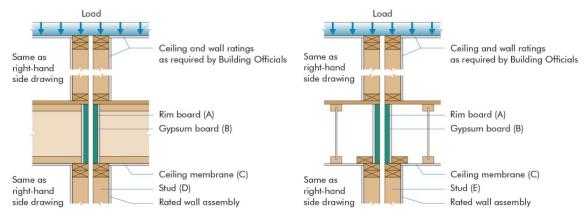
Rim Board	Rim Board	Ceiling Membrane Req.	Ceiling Membrane Req.	Stud	Stud
Thickness, in.	Protection	for 1-hr. Rim Assembly	for 2-hr. Rim Assembly	Size	Size
Α	В	С	С	D	Е
	Unprotected	45-min Fire-rated Assembly	2-hour Fire-rated Assembly	2x6	2x4
	(1) 1/2" Type X	1/2" Type X	90-min Fire-rated Assembly	2x6	2x6
1	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x8	2x6
	(2) 1/2" Type X	No Ceiling Required	5/8" Type X	2x8	2x6
	(2) 5/8" Type X	No Ceiling Required	1/2" Type X	2x8	2x6
	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x6	2x4
	(1) 1/2" Type X	1/2" Type X	90-min Fire-rated Assembly	2x8	2x6
1-1/8	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x8	2x6
	(2) 1/2" Type X	No Ceiling Required	5/8" Regular	2x8	2x6
	(2) 5/8" Type X	No Ceiling Required	1/2" Type X	2x8	2x6
1-1/4	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x6	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x8	2x6
	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x8	2x6
	(2) 1/2" Type X	No Ceiling Required	1/2" Type X	2x8	2x6
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x8	2x6

- Rim assembly for fire from either side of wall.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2-layer (or more) gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.



Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with Load Transfer Base Assembly

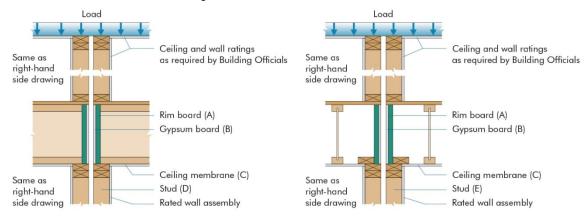
Rim Board	Rim Board	Ceiling Membrane Req.	Ceiling Membrane Req.	Stud	Stud
Thickness, in.	Protection	for 1-hr. Rim Assembly	for 2-hr. Rim Assembly	Size	Size
Α	В	С	С	D	Е
	Unprotected	1/2" Type X	90-min Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
1	(1) 5/8" Type X	No Ceiling Required	45-min Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4
	Unprotected	1/2" Type X	90 min Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
1-1/8	(1) 5/8" Type X	No Ceiling Required	5/8" Type X	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4
	Unprotected	1/2" Regular	90 min Fire-rated Assembly	2x4	2x4
1-1/4	(1) 1/2" Type X	No Ceiling Required	45-min Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	No Ceiling Required	5/8" Regular	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4

- 1) Rim assembly for fire from either side of wall. "With load transfer" assumes load transfers to the adjacent rim board if the fire exposed rim board fails.
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2-layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.



Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with Load Transfer Base Assembly

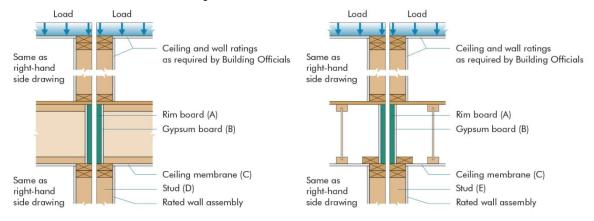
Rim Board	Rim Board	Ceiling Membrane Req.	Ceiling Membrane Req.	Stud	Stud
Thickness, in.	Protection	for 1-hr. Rim Assembly	for 2-hr. Rim Assembly	Size	Size
Α	В	С	С	D	Е
	Unprotected	1/2" Type X	90-min Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
1	(1) 5/8" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	1/2" Type X	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x6	2x4
	Unprotected	1/2" Type X	90 min Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
1-1/8	(1) 5/8" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	1/2" Regular	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4
	Unprotected	1/2" Regular	90 min Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x4	2x4
1-1/4	(1) 5/8" Type X	No Ceiling Required	45-min Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	1/2" Regular	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	No Ceiling Required	2x6	2x4

- 1) Rim assembly for fire from either side of wall. "With load transfer" assumes load transfers to the adjacent rim board if the fire exposed rim board fails
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2-layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.



Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with No Load Transfer Base Assembly

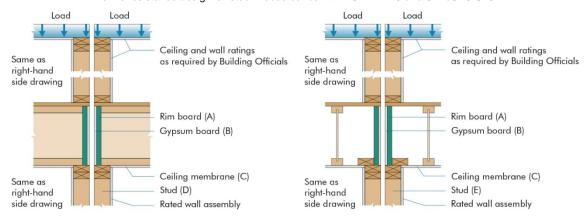
Rim Board	Rim Board	Ceiling Membrane Req.	Ceiling Membrane Req.	Stud	Stud
Thickness, in.	Protection	for 1-hr. Rim Assembly	for 2-hr. Rim Assembly	Size	Size
Α	В	С	С	D	Е
	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	1/2" Type X	90-min Fire-rated Assembly	2x4	2x4
1	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	5/8" Type X	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Type X	2x6	2x4
	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
1-1/8	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	5/8" Type X	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Type X	2x6	2x4
	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
1-1/4	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	5/8" Regular	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x6	2x4

- 1) Rim assembly for fire from either side of wall. "With no load transfer" assumes no load transfers to the adjacent rim board if the fire exposed rim board fails
- 2) Gypsum wallboard shown on the ceiling is to protect the Rim Board only. It does not necessarily cause the floor assembly to be rated.
- 3) Attach 1-layer Type X (1/2 or 5/8-inch) gypsum wallboard to Rim Board with 1-1/2-inch Type W drywall screws spaced 12 inches o.c.
- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
- 6) Use only fire rated gypsum wallboard. Type C may be substituted for Type X.
- 7) Rim Board and gypsum wallboard thickness are shown as minimums. Thicker Rim Board and gypsum wallboard may be substituted.
- 8) Toe nailing from the I-joist flange to the rim is permitted. When 2 layer gypsum wallboards are used, I-joist end nails shall be 16d box (0.135 inch x 3-1/2 inches) nails.
- 9) Rim board needs to be sized for vertical and lateral loads.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.



Fire Resistance Rated Rim Board Assembly

This fire resistance design is listed in accordance with ASTM E119 and CAN/ULC S101



Double Wall Configuration with No Load Transfer Base Assembly

Rim Board	Rim Board	Ceiling Membrane Req.	Ceiling Membrane Req.	Stud	Stud
Thickness, in.	Protection	for 1-hr. Rim Assembly	for 2-hr. Rim Assembly	Size	Size
Α	В	С	С	D	Е
	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
1	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	5/8" Regular	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x6	2x4
	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
1-1/8	(1) 5/8" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
	(2) 1/2" Type X	No Ceiling Required	1/2" Type X	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x6	2x4
	Unprotected	5/8" Type X	2-hour Fire-rated Assembly	2x4	2x4
	(1) 1/2" Type X	1/2" Regular	90-min Fire-rated Assembly	2x4	2x4
1-1/4	(1) 5/8" Type X	No Ceiling Required	1-hour Fire-rated Assembly	2x6	2x4
	(2) 1/2" Type X	No Ceiling Required	1/2" Type X	2x6	2x4
	(2) 5/8" Type X	No Ceiling Required	1/2" Regular	2x6	2x4

- 1) Rim assembly for fire from either side of wall. "With no load transfer" assumes no load transfers to the adjacent rim board if the fire exposed rim board fails.
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- 4) Attach 2-layer Type X (1/2 or 5/8-inch) gypsum wallboards to Rim Board with 2-inch Type W drywall screws spaced 12 inches o.c.
- 5) Provide min. 1-3/4-inch bearing for I-joist.
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- 9) Rim board needs to be sized for vertical and lateral load.
- 10) Stud size may be reduced if the gypsum protection is discontinuous, provided that other requirements in the code are satisfied.

APA – The Engineered Wood Association is an approved national standards developer accredited by American National Standards Institute (ANSI). APA publishes ANSI standards and Voluntary Product Standards for wood structural panels and engineered wood products. APA is an accredited certification body under ISO/IEC 17065 by Standards Council of Canada (SCC), an accredited inspection agency under ISO/IEC 17020 by ANSI National Accreditation Board (ANAB), and an accredited testing organization under ISO/IEC 17025 by ANAB. APA is also an approved Product Certification Agency, Testing Laboratory, Quality Assurance Entity, Validation Entity, and Product Evaluation Entity by the State of Florida, and an approved testing laboratory by City of Los Angeles.

APA - THE ENGINEERED WOOD ASSOCIATION

HEADQUARTERS

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(253) 620-7400 • E-mail Address: help@apawood.org

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