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ICC-ES Evaluation Report ESR-4069

Reissued November 2022

Revised December 2022

This report is subject to renewal November 2024.

DIVISION: 06 00 00 —WOOD, PLASTICS AND

COMPOSITES

Section: 06 17 21—Dowel-Laminated Timber

REPORT HOLDER:

STRUCTURECRAFT BUILDERS INC.

EVALUATION SUBJECT:

DOWEL-LAMINATED TIMBER (DLT)

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 International Building Code[®] (IBC)
- 2018, 2015, 2012 and 2009 International Residential Code® (IRC)

For evaluation for compliance with codes adopted by the Los Angeles Department of Building Safety (LADBS) see ESR-4069 LABC and LARC Supplement.

Properties evaluated:

- Structural
- Fire Resistance

2.0 USES

StructureCraft DowelLam™ Dowel-Laminated Timber (DLT) is a mechanically laminated timber panel, pegged together by hardwood dowels, for use as floor and roof deck panels in Types III, IV (Heavy Timber) and V Construction, and in Types I and II Construction where permitted by IBC Section 603 and elsewhere in the code. StructureCraft DowelLam™ Dowel-Laminated Timber may also be used in structures regulated under the IRC when an engineered design is submitted in accordance with IRC Section R301.1.3.

3.0 DESCRIPTION

3.1 General:

StructureCraft Dowel-Laminated Timber panels described in this evaluation report consist of planed and finger-jointed sawn lumber laminations, set on edge and mechanically fastened together by inserting 3 /₄-inch diameter profiled hardwood dowels running perpendicular to the wide faces of the laminations. The dowels are inserted into predrilled holes 1 /₃₂ inch less than the 3 /₄-inch dowel diameter to secure a tight fit. The moisture content of the lumber at the time of manufacture does not exceed 19 percent, and the dowels are dried to 5 to 8 percent moisture content prior to insertion. Once inserted, the dowels swell as they come into equilibrium with the higher moisture content of the surrounding lumber, providing additional friction for a tight fit of the dowel in the laminations.

The StructureCraft Dowel-Laminated Timber panels are available in thicknesses of 4 inches nominal (89 mm) to 12 inches nominal (286 mm), widths of 12 inches (305 mm) to 14 feet (4.3 m) and lengths up to 60.7 feet (18.5 m).

3.2 Material:

3.2.1 Wood Laminations: Wood laminations used in manufacturing StructureCraft Dowel-Laminated Timber are produced from either visually graded or mechanically stress rated lumber as required in the approved StructureCraft quality documentation. The moisture content of the laminations is 19 percent or less, prior to insertion of the wood dowels. Finger joints in the laminations, where used, meet the requirements for Certified End Joints according to the West Coast Lumber Inspection Bureau (WCLIB). The adhesive used for the finger joints is a non-formaldehydebased, one-component polyurethane, also conforming to the approved StructureCraft quality documentation.

3.2.2 Dowels: The ³/₄-inch diameter wood dowels used in StructureCraft DLT are hardwood dowels manufactured in accordance with the standards contained in the approved StructureCraft quality documentation. A profile of the dowel is shown in Figure 1. Dowel patterns for the different DLT panel thicknesses, including dowel spacing and positioning within the panel, are shown in Figure 2.

4.0 DESIGN AND INSTALLATION

4.1 General:

Design and installation of StructureCraft Dowel-Laminated Timber panels described in this evaluation report must be in accordance with this evaluation report, the applicable code provisions, and the StructureCraft published design and/or



installation instructions. Sections 2304, 2305, 2306, and 2307 of the IBC are applicable to StructureCraft Dowel-Laminated Timber.

4.2 Reference Design Values:

Reference design values for Allowable Stress Design (ASD) of StructureCraft Dowel-Laminated Timber panels resisting out-of-plane loading are shown in Table 1. These values are for loads applied parallel to the wide face of the panel laminations (normal to the wide faces of the panels) where the panels are continuously supported at bearing lines which cross the laminations at panel ends or intermediate locations.

Use of StructureCraft DLT panels spanning to bearing lines which are exactly parallel with the laminations is outside the scope of this report.

4.3 Adjustment Factors:

The reference design values of Table 1 must be adjusted by the load duration factor C_D and temperature factor C_t (or C_t, K_F , ϕ , and λ for Load and Resistance Factor Design) in accordance with Section 4.3 of the National Design Specification® for Wood Construction (NDS) and Tables 4A and 4C of the NDS Supplement - Design Values for Wood Construction (Supplement). The size factor CF is already considered, where applicable, in the design values of Table 1 and may not be additionally applied. The beam stability factor, C₁, of Section 3.3.3 of the NDS shall be taken to be the StructureCraft DLT **Panels** 1.0 for Table 1. The bending design values in Table 1 include the repetitive member factor, $C_r = 1.15$, and must not be further increased for repetitive use.

4.4 Fire Resistance:

Where fire performance is required, the fire resistance rating (FRR) of exposed StructureCraft Dowel-Laminated Timber may be determined in accordance with Chapter 16 of the NDS. Additionally, the Heavy Timber construction provisions of Section 602.4 of the IBC for lumber decking are applicable to the StructureCraft Dowel-Laminated Timber described in this evaluation report.

4.5 Use of Dowel Laminated Timber in Diaphragm Construction:

For the purposes of diaphragm construction, StructureCraft DLT panels are considered laminated decking and must be sheathed with wood structural panel sheathing in accordance with the requirements of Section 4.2 of the Special Design Provisions for Wind and Seismic (SDPWS) and subject to the additional requirements SDPWS Section 4.2.7.1.

5.0 CONDITIONS OF USE

The StructureCraft Dowel-Laminated Timber described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Use of StructureCraft DowelLam™ DLT panels must be limited to dry service conditions where the moisture content in lumber in service is less than 19 percent, as in most covered structures.

- 5.2 The StructureCraft Dowel Laminated Timber panels recognized in this evaluation report used in floor and roof deck construction are intended to span the direction of the laminations and be supported along lines crossing the laminations at panel ends and/or intermediate locations.
- 5.3 The use of StructureCraft Dowel-Laminated Timber in diaphragm construction must be in accordance with SPDWS Section 4.2, subject to the additional requirements of SPDWS Section 4.2.7.1 for laminated deckina.
- 5.4 Loading and support conditions, other than those described in Section 4.2, are outside the scope of this evaluation report.
- 5.5 Dowel-laminated decking panels must be anchored to supports in accordance with the applicable code.
- Notching and drilling StructureCraft Dowel-Laminated Timber panels have not been evaluated and are outside the scope of this evaluation report. The reference design values recognized in Table 1 of this report are for flat-faced rectangular-section panels.
- **5.7** StructureCraft Dowel-Laminated manufactured in Abbotsford, Canada under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- **6.1** Quality Documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation, AC10, dated June 2014.
- 6.2 Results of structural testing of StructureCraft Dowel-Laminated Timber panels.
- 6.3 Structural calculations, drawings, and details.
- 6.4 Results of fire testing conducted in accordance with ASTM E119.

7.0 IDENTIFICATION

- 7.1 Every StructureCraft Dowel-Laminated Timber panel is identified with a stamp containing the following information: manufacturer's name (StructureCraft Builders Inc.) or logo, manufacturing address (1929 Foy Street, Abbotsford V2T 6B1, BC, Canada), manufacturing date and shift, product name, panel species and grade/model designation, and the evaluation report number (ESR-4069).
- **7.2** The report holder's contact information is the following:

STRUCTURECRAFT BUILDERS INC. 1929 FOY STREET ABBOTSFORD, BRITISH COLUMBIA V2T 6B1 **CANADA** (604) 940 8889

www.structurecraft.com mail@structurecraft.com

TABLE 1-REFERENCE DESIGN VALUES (ASD) FOR STRUCURECRAFT DOWEL-LAMINATED TIMBER DECKING 4,5,6

		SPRUCE-PIN	E-FIR DLT		
Grade	Nominal Size ¹ (Panel Thickness) (in.)	F _b (S _{eff})C _r or ^{2,7} F _b (S _{eff})C _F C _r (lbf-ft/ft)	EI (x10 ⁶ lbf-in. ² /ft)	V ³ (lbf/ft)	R ⁸ (lbf/ft-in.)
2100f-1.8E	2x4 (3.5)	4,880	77	2,970	5,100
	2x6 (5.5)	12,145	299	5,130	5,100
1950f-1.7E	2x8 (7.25)	18,315	648	7,020	5,100
	2x4 (3.5)	4,360	64	2,970	5,100
Select	2x6 (5.5)	9,400	250	5,130	5,100
Structural	2x8 (7.25)	14,085	572	7,020	5,100
•	2x10 (9.25)	20,450	1,187	9,180	5,100
	2x12 (11.25)	27,965	2,136	11,340	5,100
	2x4 (3.5)	3,050	60	2,970	5,100
	2x6 (5.5)	6,580	233	5,130	5,100
No.1/No.2	2x8 (7.25)	9,860	534	7,020	5,100
	2x10 (9.25)	14,315	1,108	9,180	5,100
	2x12 (11.25)	19,575	1,993	11,340	5,100
	2x4 (3.5)	1,745	51	2,970	5,100
	2x6 (5.5)	3,760	200	5,130	5,100
No.3	2x8 (7.25)	5,635	457	7,020	5,100
	2x10 (9.25)	8,180	950	9,180	5,100
	2x12 (11.25)	11,185	1,709	11,340	5,100
Grade	Nominal Size ¹ (Panel Thickness)	F _b (S _{eff})C _r or ^{2,7} Fb(S _{eff})C _F C _r (lbf-ft/ft)	EI (x10 ⁶ lbf-in. ² /ft)	V ³ (lbf/ft)	R ⁸ (lbf/ft-in.)
	(in.) 2x4 (3.5)	5,580	86	3,960	7,500
2400f-2.0E	2x6 (5.5)	13,880	333	6,840	7,500
	2x4 (3.5)	4,710	81	3,960	7,500
ŀ	2x6 (5.5)	10,150	316	6,840	7,500
Select	2x8 (7.25)	15,215	724	9,360	7,500
Structural	2x10 (9.25)	22,085	1,504	12,240	7,500
•	2x12 (11.25)	30,205	2,705	15,120	7,500
	2x4 (3.5)	4,010	77	3,960	7,500
No.1 & btr.	2x6 (5.5)	8,645	299	6,840	7,500
	2x8 (7.25)	12,960	686	9,360	7,500
	2x10 (9.25)	18,810	1,425	12,240	7,500
	2x12 (11.25)	25,730	2,563	15,120	7,500
No.1/No.2	2x4 (3.5)	2,965	69	3,960	7,500
	2x6 (5.5)	6,390	266	6,840	7,500
	2x8 (7.25)	9,580	610	9,360	7,500
	2x10 (9.25)	13,905	1,266	12,240	7,500
	2x12 (11.25)	19,015	2,278	15,120	7,500
	2x4 (3.5)	1,655	60	3,960	7,500
			233	6,840	7,500
	2x6 (5.5)	3,570	200	-,-	
No.3	2x6 (5.5) 2x8 (7.25)	5,355	534	9,360	7,500
No.3					

See page 5 for footnotes.

TABLE 1—REFERENCE DESIGN VALUES (ASD) FOR STRUCURECRAFT DOWEL-LAMINATED TIMBER DECKING 4,5,6 (Continued)

		(Continu	uea)				
COAST SITKA SPRUCE DLT							
Grade	Nominal Size ¹ (Panel Thickness) (in.)	F _b (S _{eff})C _F C _r ^{2,7} (lbf-ft/ft)	EI (x10 ⁶ lbf-in. ² /ft)	V ³ (lbf/ft)	R ⁸ (lbf/ft-in.)		
	2x4 (3.5)	4,535	73	2,750	5,460		
0.1.4	2x6 (5.5)	9,775	283	4,750	5,460		
Select	2x8 (7.25)	14,650	648	6,500	5,460		
Structural	2x10 (9.25)	21,265	1,345	8,500	5,460		
	2x12 (11.25)	29,085	2,421	10,500	5,460		
	2x4 (3.5)	3,225	64	2,750	5,460		
	2x6 (5.5)	6,955	250	4,750	5,460		
No.1/No.2	2x8 (7.25)	10,425	572	6,500	5,460		
	2x10 (9.25)	15,130	1,187	8,500	5,460		
	2x12 (11.25)	20,695	2,136	10,500	5,460		
	2x4 (3.5)	1,830	60	2,750	5,460		
	2x6 (5.5)	3,945	233	4,750	5,460		
No.3	2x8 (7.25)	5,915	534	6,500	5,460		
	2x10 (9.25)	8,590	1,108	8,500	5,460		
	2x12 (11.25)	11,745	1,993	10,500	5,460		
Grade	Nominal Size ¹ (Panel	F _b (S _{eff})C _F C _r ^{2,7}	EI	V ³	R 8		
Crade	Thickness) (in.)	(lbf-ft/ft)	(x10 ⁶ lbf-in. ² /ft)	(lbf/ft)	(lbf/ft-in.		
	2x4 (3.5)	4,535	73	3,190	4,860		
Select	2x6 (5.5)	9,775	283	5,510	4,860		
Structural	2x8 (7.25)	14,650	648	7,540	4,860		
Cirdotarai	2x10 (9.25)	21,265	1,345	9,860	4,860		
	2x12 (11.25)	29,085	2,421	12,180	4,860		
	2x4 (3.5)	4,185	73	3,190	4,860		
No.1 & btr.	2x6 (5.5)	9,020	283	5,510	4,860		
	2x8 (7.25)	13,525	648	7,540	4,860		
	2x10 (9.25)	19,630	1,345	9,860	4,860		
	2x12 (11.25)	26,845	2,421	12,180	4,860		
No.1/No.2	2x4 (3.5)	3,485	69	3,190	4,860		
	2x6 (5.5)	7,520	266	5,510	4,860		
	2x8 (7.25)	11,270	610	7,540	4,860		
	2x10 (9.25)	16,360	1,266	9,860	4,860		
	2x12 (11.25)	22,375	2,278	12,180	4,860		
	2x4 (3.5)	2,005	60	3,190	4,860		
NI- C	2x6 (5.5)	4,325	233	5,510	4,860		
No.3	2x8 (7.25)	6,480	534	7,540	4,860		
	2x10 (9.25) 2x12 (11.25)	9,405 12,865	1,108 1,993	9,860 12,180	4,860 4,860		
			1 002				

See page 5 for footnotes.

TABLE 1—REFERENCE DESIGN VALUES (ASD) FOR STRUCURECRAFT DOWEL-LAMINATED TIMBER DECKING 4,5,6 (Continued)

Grade Nominal Size¹ (Panel Thickness) (in.) F _b (Seff)C _F C ₇ ^{2,7} (Ibf-ft/ft) EI (x10 ⁶ lbf-in.²/ft) V³ (lbf/ft) Select Structural 2x4 (3.5) 4.185 69 3.850 2x8 (7.25) 9,020 266 6,650 2x10 (9.25) 19,630 1,266 11,900 2x12 (11.25) 26,845 2,278 14,700 2x4 (3.5) 2,790 60 3,850 2x6 (5.5) 6,015 233 6,650 2x4 (3.5) 2,790 60 3,850 2x6 (5.5) 9,015 534 9,100 2x10 (9.25) 13,085 1,108 11,900 2x12 (11.25) 17,900 1,993 14,700 2x4 (3.5) 1,655 51 3,850 2x4 (3.5) 1,655 51 3,850 No.3 2x8 (7.25) 5,355 457 9,100 2x8 (7.25) 5,355 457 9,100 2x10 (9.25) 10,625 1,709 14,700 10 (bf-ft/ft)			lea)	(Continu				
Grade Size¹ (Panel Thickness) (in.) Fb(Seit)CFCr ².7 (Ibf-ft/ft) El V³ (Ibf/ft) Select Structural 2x4 (3.5) 4,185 69 3,850 Select Structural 2x6 (5.5) 9,020 266 6,650 2x8 (7.25) 13,525 610 9,100 2x12 (11.25) 26,845 2,278 14,700 2x4 (3.5) 2,790 60 3,850 2x6 (5.5) 6,015 233 6,650 2x8 (7.25) 9,015 534 9,100 2x12 (11.25) 17,900 1,993 14,700 2x12 (11.25) 17,900 1,993 14,700 2x4 (3.5) 1,655 51 3,850 2x6 (5.5) 3,570 200 6,650 No.3 2x8 (7.25) 5,355 457 9,100 2x12 (11.25) 10,625 1,709 14,700 NortHERN SPECIES DLT NortHERN SPECIES DLT Select Structural 2x4 (3.5) 3,400 47	YELLOW CEDAR DLT							
Select Structural 2x6 (5.5) 9,020 266 6,650	R ⁸ (lbf/ft-in.)	-			Size ¹ (Panel Thickness)	Grade		
Select Structural 2x6 (5.5) 9,020 266 6,650	6,480	3,850	69	4,185	2x4 (3.5)			
Structural 288 (7.25)	6,480	6,650	266	9,020		0.1.		
2x10 (9.25)	6,480	9,100	610	13,525	2x8 (7.25)			
No.1/No.2	6,480	11,900	1,266			Structurai		
No.1/No.2 2x4 (3.5)	6,480	14,700		26,845				
No.1/No.2	6,480	•						
No.1/No.2	6,480	6,650	233	6,015				
Description	6,480	9,100	534			No.1/No.2		
No.3 2x4 (3.5) 17,900 1,993 14,700 2x4 (3.5) 1,655 51 3,850 2x6 (5.5) 3,570 200 6,650 2x10 (9.25) 7,770 950 11,900 2x12 (11.25) 10,625 1,709 14,700	6,480		1.108					
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			ECIES DLT	NORTHERN SPI				
Select Structural 2x6 (5.5) 7,330 183 4,180 2x8 (7.25) 10,990 419 5,720 2x10 (9.25) 15,950 871 7,480 2x12 (11.25) 21,815 1,566 9,240 2x4 (3.5) 2,180 47 2,420 2x6 (5.5) 4,700 183 4,180	R ⁸ (lbf/ft-in.)	-			Size ¹ (Panel Thickness)	Grade		
Select Structural 2x8 (7.25) 10,990 419 5,720 2x10 (9.25) 15,950 871 7,480 2x12 (11.25) 21,815 1,566 9,240 2x4 (3.5) 2,180 47 2,420 2x6 (5.5) 4,700 183 4,180	4,200	2,420	47	3,400	2x4 (3.5)			
Structural 2x8 (7.25) 10,990 419 5,720 2x10 (9.25) 15,950 871 7,480 2x12 (11.25) 21,815 1,566 9,240 2x4 (3.5) 2,180 47 2,420 2x6 (5.5) 4,700 183 4,180	4,200	4,180	183	7,330	2x6 (5.5)	Calaat		
2x10 (9.25) 15,950 871 7,480 2x12 (11.25) 21,815 1,566 9,240 2x4 (3.5) 2,180 47 2,420 2x6 (5.5) 4,700 183 4,180	4,200	5,720	419	10,990	2x8 (7.25)			
2x4 (3.5) 2,180 47 2,420 2x6 (5.5) 4,700 183 4,180	4,200	7,480	871	15,950	2x10 (9.25)			
2x6 (5.5) 4,700 183 4,180	4,200	9,240	1,566	21,815	2x12 (11.25)			
	4,200	2,420	47	2,180	2x4 (3.5)	No.1/No.2		
No 1/No 2 2x8 (7.25) 7.045 419 5.720	4,200	4,180	183	4,700	2x6 (5.5)			
110.1/110.2 2/0/(1/20) 1/0/10 1/0	4,200	5,720	419	7,045	2x8 (7.25)			
2x10 (9.25) 10,225 871 7,480	4,200							
2x12 (11.25) 13,985 1,566 9,240	4,200							
2x4 (3.5) 1,220 43 2,420	4,200			·	,			
2x6 (5.5) 2,630 166 4,180	4,200		166	,				
No.3 2x8 (7.25) 3,945 381 5,720	4,200					No.3		
2x10 (9.25) 5,725 791 7,480	4,200			,				

For SI: 1 inch = 25.4 mm; 1 lb = 4.45 N

1. Nominal size of panel laminations. Actual thickness is the actual width (depth) of the panel laminations.

7,830

- 2. S_{eff} is the effective section modulus of the DLT panel.
- 3. V is the reference shear resistance of the panel at the dowel locations.

2x12 (11.25)

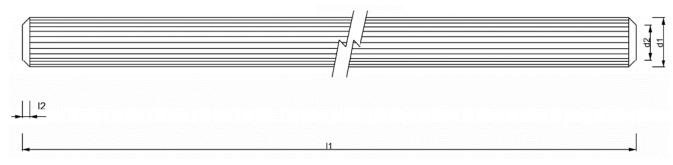
4. Design values are for panels spanning the direction of the lamination axes and supported at bearing lines crossing the lamination axes at ends and/or intermediate locations.

1,424

9,240

4,200

- 5. Design values are given per foot panel width.
- 6. Design values are for flat-face rectangular section panels.
- 7. Design values are subject to the adjustment requirements of Section 4.3, noting C_F (where applicable) and C_r = 1.15 are already considered in the table values.
- 8. Reaction values are based on the NDS values for bearing-perpendicular-to-grain per foot of panel width and inch of bearing length.



d1 = 0.78 in., l1 < 30 in., d2 >0.5 in., l2 < 0.25 in.

FIGURE 1—HARDWOOD DOWEL USED IN STRUCTURECRAFT DOWEL-LAMINATED TIMBER

owel Pa	tterns						Nominal Thickness
0	0	0	0	0	0	0	4"
0	0	0	o	0	o	o	6"
0	0	0	0	0	0	0	8"
0	o	0	0	0	0	o	10"
0	0	0	0	۰	0	· †	12"
ote: Mii	n. Edge o	listance owel.	1 1 "	7.87"	- 27.5"	min 1 ½"	1

FIGURE 2—DOWEL PATTERNS OF STRUCTURECRAFT DOWEL-LAMINATED TIMBER DECKING



ESR-4069 LABC and LARC Supplement

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DIVISION: 06 00 00 —WOOD, PLASTICS AND COMPOSITES

Section: 06 17 21—Dowel-Laminated Timber

REPORT HOLDER:

STRUCTURECRAFT BUILDERS INC.

EVALUATION SUBJECT:

DOWEL LAMINATED TIMBER (DLT)

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Dowel Laminated Timber, described in ICC-ES evaluation report <u>ESR-4069</u>, has also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2017 City of Los Angeles Building Code (LABC)
- 2017 City of Los Angeles Residential Code (LARC)

2.0 CONCLUSIONS

The Dowel Laminated Timber, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-4069</u>, complies with the LABC Chapters 16 and 23, and the LARC, and is subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Dowel Laminated Timber described in this evaluation report must comply with all of the following conditions:

- All applicable sections in the evaluation report <u>ESR-4069</u>.
- The design, installation, conditions of use and identification of the Dowel Laminated Timber are in accordance with the 2015
 International Building Code® (2015 IBC) provisions noted in the evaluation report <u>ESR-4069</u>.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16, 17 and 23, as applicable.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.

This supplement expires concurrently with the evaluation report, reissued November 2022 and revised December 2022.





ESR-4069 CBC and CRC Supplement

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 17 21—Dowel-Laminated Timber

REPORT HOLDER:

STRUCTURECRAFT BUILDERS INC.

EVALUATION SUBJECT:

DOWEL LAMINATED TIMBER (DLT)

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Dowel Laminated Timber, described in ICC-ES evaluation report ESR-4069, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

■ 2016 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

■ 2016 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Dowel Laminated Timber, described in Sections 2.0 through 7.0 of the evaluation report ESR-4069, complies with CBC Chapters 16 and 23, provided the design and installation are in accordance with the 2015 *International Building Code*[®] (IBC) provisions noted in the evaluation report and the additional requirements of the CBC Chapters 16, 17 and 23, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Dowel Laminated Timber, described in Sections 2.0 through 7.0 of the evaluation report ESR-4069, complies with CRC Chapter 3, provided the design and installation are in accordance with the 2015 *International Residential Code*[®] (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued November 2022 and revised December 2022.





ESR-4069 Chicago Title 14 Supplement

Issued December 2022

This report is subject to renewal November 2024.

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A Subsidiary of the International Code Council®

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 17 21—Dowel-Laminated Timber

REPORT HOLDER:

STRUCTURECRAFT BUILDERS INC.

EVALUATION SUBJECT:

DOWEL-LAMINATED TIMBER (DLT)

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Dowel-Laminated Timber (DLT) panels, described in ICC-ES evaluation report ESR-4069, have also been evaluated for compliance with the Chicago Construction Codes (Title 14 of the Chicago Municipal Code) as noted below.

Applicable code edition:

■ 2019 Chicago Building Code (Title 14B)

2.0 CONCLUSIONS

The Dowel-Laminated Timber (DLT) panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-4069, comply with Chapters 6 and 23 of Title 14B, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Dowel-Laminated Timber (DLT) panels, described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-4069.
- The design, installation, conditions of use and identification of the Dowel-Laminated Timber (DLT) panels are in accordance
 with the 2018 International Building Code® (IBC) provisions noted in the evaluation report ESR-4069, except that the use of
 Dowel-Laminated Timber (DLT) panels in floor and roof deck is in Type III, IV (Heavy Timber) and V construction, in
 accordance with Chapter 6 of Title 14B.
- The design, installation and inspection are in accordance with additional requirements of Chapters 16 and 17 of Title 14B, as applicable.

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ESR-4069 FBC Supplement

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 17 21—Dowel-Laminated Timber

REPORT HOLDER:

STRUCTURECRAFT BUILDERS INC.

EVALUATION SUBJECT:

DOWEL LAMINATED TIMBER (DLT)

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Dowel Laminated Timber, described in ICC-ES evaluation report ESR-4069, has also been evaluated for compliance with the code noted below.

Applicable code edition:

2017 Florida Building Code—Building

2.0 CONCLUSIONS

The Dowel Laminated Timber, described in Sections 2.0 through 7.0 of the evaluation report ESR-4069, complies with the *Florida Building Code—Building*, provided the design and installation are in accordance with the 2015 *International Building Code*[®] (IBC) provisions noted in the evaluation report.

Use of the Dowel Laminated Timber for compliance with the High-Velocity Hurricane Zone provisions of the FBC has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued November 2022 and revised December 2022.

