

# Katerra CLT Pre-Analysis Span Tables

Updated October 2020

# Introduction

---

This document provides a series of pre-analysis span tables for Kattera Cross-Laminated Timber for use in floor and roof applications. It is intended to be a useful tool for the design practitioner to make an initial selection of the required layup type and grade of Kattera CLT panel for their project application.

The span tables consider the following design criteria:

- Strength under the design load
- Deflection under the design load
- Human footfall induced vibrations
- 0hr and 1hr fire exposure

For the limiting design criteria listed above the tables provide a maximum span for the following conditions:

- Kattera CLT V2 and CE1 stress grade layups
- Major axis spans
- Minor axis spans
- Single span
- Double span
- Cantilever span

For further information about Kattera Mass Timber products and services offerings, please visit our [product website](#).

# Table of Contents

---

## Introduction

### 1. Summary of Katerra CLT Product Layup and Stress Grades 04

Table 1: Floor   LL = 40psf, SDL = 20psf + 15psf (partition)	05
Table 2: Floor   LL = 40psf, SDL = 35psf + 15psf (partition)	06
Table 3: Floor   LL = 50psf, SDL = 20psf + 15psf (partition)	07
Table 4: Floor   LL = 50psf, SDL = 35psf + 15psf (partition)	08
Table 5: Floor   LL = 80psf, SDL = 20psf	09
Table 6: Floor   LL = 80psf, SDL = 35psf	10
Table 7: Floor   LL = 100psf, SDL = 20psf	11
Table 8: Floor   LL = 100psf, SDL = 35psf	12
Table 9: Roof   Lr = 20psf, SDL = 15psf	13
Table 10: Roof   S = 20psf, SDL = 15psf	14
Table 11: Roof   S = 40psf, SDL = 15psf	15
Table 12: Roof   S = 60psf, SDL = 15psf	16

### 2. User Notes 17

## Summary of Katerra CLT Layups and Grades

CLT Grade	CLT Layup Destination	Total Thickness (in)	Lamination Thickness in CLT Layup (in)									
			=	⊥	=	⊥	=	⊥	=	⊥	=	
V2	K3-0320	3.24	1.08	1.08	1.08							
	K3-0350	3.54	1.08	1.38	1.08							
	K3-0380	3.84	1.38	1.08	1.38							
	K3-0410	4.14	1.38	1.38	1.38							
	K5-0540	5.40	1.08	1.08	1.08	1.08	1.08					
	K5-0600	6.00	1.08	1.38	1.08	1.38	1.08					
	K5-0630	6.30	1.38	1.08	1.38	1.08	1.38					
	K5-0690	6.90	1.38	1.38	1.38	1.38	1.38					
	K7-0880	8.76	1.38	1.08	1.38	1.08	1.38	1.08	1.38			
	K7-0970	9.66	1.38	1.38	1.38	1.38	1.38	1.38	1.38			
	K9-1120	11.22	1.38	1.08	1.38	1.08	1.38	1.08	1.38	1.08	1.38	
	K9-1240	12.42	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
CE1	K3-0380	3.84	1.38	1.08	1.38							
	K3-0410	4.14	1.38	1.38	1.38							
	K5-0630	6.30	1.38	1.08	1.38	1.08	1.38					
	K5-0690	6.90	1.38	1.38	1.38	1.38	1.38					

# Table 1

## Floor | LL = 40psf, SDL = 20psf + 15psf (partition)

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		3' - 0"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 10"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		3' - 0"	Strength	
			CE1	11' - 3"	Vibration		3' - 0"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 10"	Strength	
			CE1	13' - 2"	Vibration		3' - 10"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Vibration	14' - 3"	8' - 9"	Strength	5' - 6"
	K5-0600	6.00	V2	15' - 2"	Vibration	15' - 2"	10' - 4"	Strength	9' - 9"
	K5-0630	6.30	V2	16' - 3"	Vibration	16' - 3"	9' - 4"	Strength	9' - 4"
			CE1	17' - 5"	Vibration	17' - 5"	9' - 3"	Strength	9' - 3"
	K5-0690	6.90	V2	17' - 2"	Vibration	17' - 2"	10' - 11"	Strength	10' - 11"
			CE1	18' - 5"	Vibration	18' - 5"	10' - 11"	Strength	10' - 11"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	13' - 9"	Strength	13' - 9"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	16' - 1"	Strength	16' - 1"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	17' - 9"	Strength	17' - 9"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	20' - 7"	Vibration	20' - 7"

### Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	11' - 0"	Strength		3' - 0"	Strength	
	K3-0350	3.54	V2	11' - 9"	Vibration		3' - 10"	Strength	
	K3-0380	3.84	V2	12' - 8"	Vibration		3' - 0"	Strength	
			CE1	13' - 6"	Vibration		3' - 0"	Strength	
	K3-0410	4.14	V2	13' - 4"	Vibration		3' - 10"	Strength	
			CE1	15' - 10"	Vibration		3' - 10"	Strength	
5-Ply	K5-0540	5.40	V2	16' - 2"	Strength	16' - 2"	8' - 9"	Strength	5' - 6"
	K5-0600	6.00	V2	17' - 4"	Strength	17' - 4"	10' - 4"	Strength	9' - 9"
	K5-0630	6.30	V2	19' - 1"	Strength	19' - 1"	9' - 4"	Strength	9' - 4"
			CE1	20' - 11"	Vibration	20' - 11"	9' - 3"	Strength	9' - 3"
	K5-0690	6.90	V2	20' - 3"	Strength	20' - 3"	10' - 11"	Strength	10' - 11"
			CE1	22' - 1"	Vibration	22' - 1"	10' - 11"	Strength	10' - 11"
7-Ply	K7-0880	8.76	V2	24' - 5"	Vibration	24' - 5"	13' - 9"	Strength	13' - 9"
	K7-0970	9.66	V2	25' - 10"	Vibration	25' - 10"	16' - 1"	Strength	16' - 1"
9-Ply	K9-1120	11.22	V2	26' - 2"	Vibration	26' - 2"	17' - 8"	Strength	17' - 8"
	K9-1240	12.42	V2	26' - 2"	Vibration	26' - 2"	20' - 9"	Strength	20' - 9"

### Cantilever Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	5' - 6"	Strength		1' - 6"	Strength	
	K3-0350	3.54	V2	5' - 11"	Strength		1' - 11"	Strength	
	K3-0380	3.84	V2	6' - 6"	Strength		1' - 6"	Strength	
			CE1	7' - 10"	Deflection		1' - 6"	Strength	
	K3-0410	4.14	V2	6' - 11"	Strength		1' - 11"	Strength	
			CE1	8' - 4"	Deflection		1' - 11"	Strength	
5-Ply	K5-0540	5.40	V2	8' - 1"	Strength	8' - 1"	4' - 4"	Strength	2' - 9"
	K5-0600	6.00	V2	8' - 8"	Strength	8' - 8"	5' - 2"	Strength	4' - 10"
	K5-0630	6.30	V2	9' - 6"	Strength	9' - 6"	4' - 8"	Strength	4' - 8"
			CE1	12' - 0"	Deflection	12' - 0"	4' - 7"	Strength	4' - 7"
	K5-0690	6.90	V2	10' - 1"	Strength	10' - 1"	5' - 5"	Strength	5' - 5"
			CE1	12' - 10"	Deflection	12' - 10"	5' - 5"	Strength	5' - 5"
7-Ply	K7-0880	8.76	V2	12' - 4"	Strength	12' - 4"	6' - 10"	Strength	6' - 10"
	K7-0970	9.66	V2	13' - 0"	Strength	13' - 0"	8' - 0"	Strength	8' - 0"
9-Ply	K9-1120	11.22	V2	14' - 11"	Strength	14' - 11"	8' - 10"	Strength	8' - 10"
	K9-1240	12.42	V2	15' - 8"	Strength	15' - 8"	10' - 4"	Strength	10' - 4"

### Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		3' - 0"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 10"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		3' - 0"	Strength	
			CE1	11' - 3"	Vibration		3' - 0"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 10"	Strength	
			CE1	13' - 2"	Vibration		3' - 10"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Vibration	14' - 3"	8' - 9"	Strength	5' - 6"
	K5-0600	6.00	V2	15' - 2"	Vibration	15' - 2"	10' - 4"	Strength	9' - 9"
	K5-0630	6.30	V2	16' - 3"	Vibration	16' - 3"	9' - 4"	Strength	9' - 4"
			CE1	17' - 5"	Vibration	17' - 5"	9' - 3"	Strength	9' - 3"
	K5-0690	6.90	V2	17' - 2"	Vibration	17' - 2"	10' - 11"	Strength	10' - 11"
			CE1	18' - 5"	Vibration	18' - 5"	10' - 11"	Strength	10' - 11"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	13' - 9"	Strength	13' - 9"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	16' - 1"	Strength	16' - 1"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	17' - 9"	Strength	17' - 9"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	20' - 7"	Vibration	20' - 7"

# Table 2

## Floor | LL = 40psf, SDL = 35psf + 15psf (partition)

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		2' - 9"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 7"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 9"	Strength	
			CE1	11' - 3"	Vibration		2' - 9"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 6"	Strength	
			CE1	11' - 10"	Vibration		3' - 6"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 10"	Vibration	12' - 10"	8' - 1"	Strength	5' - 1"
	K5-0600	6.00	V2	13' - 8"	Vibration	13' - 8"	9' - 7"	Strength	9' - 0"
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	8' - 8"	Strength	8' - 8"
			CE1	15' - 8"	Vibration	15' - 8"	8' - 7"	Strength	8' - 7"
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	10' - 2"	Strength	10' - 2"
			CE1	16' - 6"	Vibration	16' - 6"	10' - 1"	Strength	10' - 1"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	12' - 9"	Strength	12' - 9"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	15' - 0"	Strength	15' - 0"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	16' - 6"	Strength	16' - 6"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	19' - 5"	Strength	19' - 5"

### Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	10' - 1"	Strength		2' - 9"	Strength	
	K3-0350	3.54	V2	10' - 10"	Strength		3' - 7"	Strength	
	K3-0380	3.84	V2	12' - 0"	Strength		2' - 9"	Strength	
			CE1	13' - 6"	Vibration		2' - 9"	Strength	
	K3-0410	4.14	V2	12' - 9"	Strength		3' - 6"	Strength	
			CE1	14' - 3"	Vibration		3' - 6"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 11"	Strength	14' - 11"	8' - 1"	Strength	5' - 1"
	K5-0600	6.00	V2	16' - 0"	Strength	16' - 0"	9' - 7"	Strength	9' - 0"
	K5-0630	6.30	V2	17' - 7"	Vibration	17' - 7"	8' - 8"	Strength	8' - 8"
			CE1	18' - 9"	Vibration	18' - 9"	8' - 7"	Strength	8' - 7"
	K5-0690	6.90	V2	18' - 7"	Vibration	18' - 7"	10' - 2"	Strength	10' - 2"
			CE1	19' - 10"	Vibration	19' - 10"	10' - 1"	Strength	10' - 1"
7-Ply	K7-0880	8.76	V2	22' - 11"	Strength	22' - 11"	12' - 9"	Strength	12' - 9"
	K7-0970	9.66	V2	24' - 3"	Strength	24' - 3"	15' - 0"	Strength	15' - 0"
9-Ply	K9-1120	11.22	V2	26' - 2"	Vibration	26' - 2"	16' - 6"	Strength	16' - 6"
	K9-1240	12.42	V2	26' - 2"	Vibration	26' - 2"	19' - 5"	Strength	19' - 5"

### Cantilever Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	5' - 0"	Strength		1' - 4"	Strength	
	K3-0350	3.54	V2	5' - 5"	Strength		1' - 9"	Strength	
	K3-0380	3.84	V2	6' - 0"	Strength		1' - 4"	Strength	
			CE1	7' - 5"	Deflection		1' - 4"	Strength	
	K3-0410	4.14	V2	6' - 4"	Strength		1' - 9"	Strength	
			CE1	7' - 11"	Deflection		1' - 9"	Strength	
5-Ply	K5-0540	5.40	V2	7' - 5"	Strength	7' - 5"	4' - 0"	Strength	2' - 6"
	K5-0600	6.00	V2	8' - 0"	Strength	8' - 0"	4' - 9"	Strength	4' - 6"
	K5-0630	6.30	V2	8' - 10"	Strength	8' - 10"	4' - 4"	Strength	4' - 4"
			CE1	11' - 5"	Deflection	11' - 5"	4' - 3"	Strength	4' - 3"
	K5-0690	6.90	V2	9' - 5"	Strength	9' - 5"	5' - 1"	Strength	5' - 1"
			CE1	12' - 2"	Deflection	12' - 2"	5' - 0"	Strength	5' - 0"
7-Ply	K7-0880	8.76	V2	11' - 5"	Strength	11' - 5"	6' - 4"	Strength	6' - 4"
	K7-0970	9.66	V2	12' - 1"	Strength	12' - 1"	7' - 6"	Strength	7' - 6"
9-Ply	K9-1120	11.22	V2	13' - 11"	Strength	13' - 11"	8' - 3"	Strength	8' - 3"
	K9-1240	12.42	V2	14' - 8"	Strength	14' - 8"	9' - 8"	Strength	9' - 8"

### Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		2' - 9"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 7"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 9"	Strength	
			CE1	11' - 3"	Vibration		2' - 9"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 6"	Strength	
			CE1	11' - 10"	Vibration		3' - 6"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 10"	Vibration	12' - 10"	8' - 1"	Strength	5' - 1"
	K5-0600	6.00	V2	13' - 8"	Vibration	13' - 8"	9' - 7"	Strength	9' - 0"
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	8' - 8"	Strength	8' - 8"
			CE1	15' - 8"	Vibration	15' - 8"	8' - 7"	Strength	8' - 7"
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	10' - 2"	Strength	10' - 2"
			CE1	16' - 6"	Vibration	16' - 6"	10' - 1"	Strength	10' - 1"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	12' - 9"	Strength	12' - 9"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	15' - 0"	Strength	15' - 0"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	16' - 6"	Strength	16' - 6"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	19' - 5"	Strength	19' - 5"

# Table 3

Floor | LL = 50psf, SDL = 20psf + 15psf (partition)

Note: Refer to the User Notes section for additional information.

## Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		2' - 10"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 8"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 10"	Strength	
			CE1	11' - 3"	Vibration		2' - 10"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 7"	Strength	
			CE1	13' - 2"	Vibration		3' - 7"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Vibration	14' - 3"	8' - 3"	Strength	5' - 2"
	K5-0600	6.00	V2	15' - 2"	Vibration	15' - 2"	9' - 10"	Strength	9' - 3"
	K5-0630	6.30	V2	16' - 3"	Vibration	16' - 3"	8' - 10"	Strength	8' - 10"
			CE1	17' - 5"	Vibration	17' - 5"	8' - 10"	Strength	8' - 10"
	K5-0690	6.90	V2	17' - 2"	Vibration	17' - 2"	10' - 5"	Strength	10' - 5"
			CE1	18' - 5"	Vibration	18' - 5"	10' - 4"	Strength	10' - 4"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	13' - 1"	Strength	13' - 1"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	15' - 4"	Strength	15' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	16' - 11"	Strength	16' - 11"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	19' - 10"	Strength	19' - 10"

## Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	10' - 4"	Strength		2' - 10"	Strength	
	K3-0350	3.54	V2	11' - 2"	Strength		3' - 8"	Strength	
	K3-0380	3.84	V2	12' - 3"	Strength		2' - 10"	Strength	
			CE1	13' - 6"	Vibration		2' - 10"	Strength	
	K3-0410	4.14	V2	13' - 1"	Strength		3' - 7"	Strength	
			CE1	15' - 10"	Vibration		3' - 7"	Strength	
5-Ply	K5-0540	5.40	V2	15' - 4"	Strength	15' - 4"	8' - 3"	Strength	5' - 2"
	K5-0600	6.00	V2	16' - 5"	Strength	16' - 5"	9' - 10"	Strength	9' - 3"
	K5-0630	6.30	V2	18' - 2"	Strength	18' - 2"	8' - 10"	Strength	8' - 10"
			CE1	20' - 11"	Vibration	20' - 11"	8' - 10"	Strength	8' - 10"
	K5-0690	6.90	V2	19' - 3"	Strength	19' - 3"	10' - 5"	Strength	10' - 5"
			CE1	22' - 1"	Vibration	22' - 1"	10' - 4"	Strength	10' - 4"
7-Ply	K7-0880	8.76	V2	23' - 6"	Strength	23' - 6"	13' - 1"	Strength	13' - 1"
	K7-0970	9.66	V2	24' - 10"	Strength	24' - 10"	15' - 4"	Strength	15' - 4"
9-Ply	K9-1120	11.22	V2	26' - 2"	Vibration	26' - 2"	16' - 11"	Strength	16' - 11"
	K9-1240	12.42	V2	26' - 2"	Vibration	26' - 2"	19' - 10"	Strength	19' - 10"

## Cantilever Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	5' - 2"	Strength		1' - 5"	Strength	
	K3-0350	3.54	V2	5' - 7"	Strength		1' - 10"	Strength	
	K3-0380	3.84	V2	6' - 1"	Strength		1' - 5"	Strength	
			CE1	7' - 6"	Deflection		1' - 5"	Strength	
	K3-0410	4.14	V2	6' - 6"	Strength		1' - 9"	Strength	
			CE1	8' - 0"	Deflection		1' - 9"	Strength	
5-Ply	K5-0540	5.40	V2	7' - 8"	Strength	7' - 8"	4' - 1"	Strength	2' - 7"
	K5-0600	6.00	V2	8' - 2"	Strength	8' - 2"	4' - 11"	Strength	4' - 7"
	K5-0630	6.30	V2	9' - 1"	Strength	9' - 1"	4' - 5"	Strength	4' - 5"
			CE1	11' - 7"	Deflection	11' - 7"	4' - 5"	Strength	4' - 5"
	K5-0690	6.90	V2	9' - 7"	Strength	9' - 7"	5' - 2"	Strength	5' - 2"
			CE1	12' - 5"	Deflection	12' - 5"	5' - 2"	Strength	5' - 2"
7-Ply	K7-0880	8.76	V2	11' - 9"	Strength	11' - 9"	6' - 6"	Strength	6' - 6"
	K7-0970	9.66	V2	12' - 5"	Strength	12' - 5"	7' - 8"	Strength	7' - 8"
9-Ply	K9-1120	11.22	V2	14' - 3"	Strength	14' - 3"	8' - 5"	Strength	8' - 5"
	K9-1240	12.42	V2	15' - 0"	Strength	15' - 0"	9' - 11"	Strength	9' - 11"

## Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		2' - 10"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 8"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 10"	Strength	
			CE1	11' - 3"	Vibration		2' - 10"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 7"	Strength	
			CE1	13' - 2"	Vibration		3' - 7"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Vibration	14' - 3"	8' - 3"	Strength	5' - 2"
	K5-0600	6.00	V2	15' - 2"	Vibration	15' - 2"	9' - 10"	Strength	9' - 3"
	K5-0630	6.30	V2	16' - 3"	Vibration	16' - 3"	8' - 10"	Strength	8' - 10"
			CE1	17' - 5"	Vibration	17' - 5"	8' - 10"	Strength	8' - 10"
	K5-0690	6.90	V2	17' - 2"	Vibration	17' - 2"	10' - 5"	Strength	10' - 5"
			CE1	18' - 5"	Vibration	18' - 5"	10' - 4"	Strength	10' - 4"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	13' - 1"	Strength	13' - 1"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	15' - 4"	Strength	15' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	16' - 11"	Strength	16' - 11"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	19' - 10"	Strength	19' - 10"

# Table 4

## Floor | LL = 50psf, SDL = 35psf + 15psf (partition)

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		2' - 8"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 5"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 8"	Strength	
			CE1	11' - 3"	Vibration		2' - 7"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 4"	Strength	
			CE1	11' - 10"	Vibration		3' - 4"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 10"	Vibration	12' - 10"	7' - 8"	Strength	4' - 10"
	K5-0600	6.00	V2	13' - 8"	Vibration	13' - 8"	9' - 2"	Strength	8' - 7"
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	8' - 3"	Strength	8' - 3"
			CE1	15' - 8"	Vibration	15' - 8"	8' - 3"	Strength	8' - 3"
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	9' - 8"	Strength	9' - 8"
			CE1	16' - 6"	Vibration	16' - 6"	9' - 8"	Strength	9' - 8"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	12' - 2"	Strength	12' - 2"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	14' - 4"	Strength	14' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	15' - 10"	Strength	15' - 10"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	18' - 7"	Strength	18' - 7"

### Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 7"	Strength		2' - 8"	Strength	
	K3-0350	3.54	V2	10' - 4"	Strength		3' - 5"	Strength	
	K3-0380	3.84	V2	11' - 5"	Strength		2' - 8"	Strength	
			CE1	13' - 6"	Vibration		2' - 7"	Strength	
	K3-0410	4.14	V2	12' - 2"	Strength		3' - 4"	Strength	
			CE1	14' - 3"	Vibration		3' - 4"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Strength	14' - 3"	7' - 8"	Strength	4' - 10"
	K5-0600	6.00	V2	15' - 3"	Strength	15' - 3"	9' - 2"	Strength	8' - 7"
	K5-0630	6.30	V2	16' - 11"	Strength	16' - 11"	8' - 3"	Strength	8' - 3"
			CE1	18' - 9"	Vibration	18' - 9"	8' - 3"	Strength	8' - 3"
	K5-0690	6.90	V2	18' - 0"	Strength	18' - 0"	9' - 8"	Strength	9' - 8"
			CE1	19' - 10"	Vibration	19' - 10"	9' - 8"	Strength	9' - 8"
7-Ply	K7-0880	8.76	V2	22' - 0"	Strength	22' - 0"	12' - 2"	Strength	12' - 2"
	K7-0970	9.66	V2	23' - 3"	Strength	23' - 3"	14' - 4"	Strength	14' - 4"
9-Ply	K9-1120	11.22	V2	26' - 2"	Vibration	26' - 2"	15' - 10"	Strength	15' - 10"
	K9-1240	12.42	V2	26' - 2"	Vibration	26' - 2"	18' - 7"	Strength	18' - 7"

### Cantilever Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	4' - 9"	Strength		1' - 4"	Strength	
	K3-0350	3.54	V2	5' - 2"	Strength		1' - 8"	Strength	
	K3-0380	3.84	V2	5' - 8"	Strength		1' - 4"	Strength	
			CE1	7' - 2"	Deflection		1' - 3"	Strength	
	K3-0410	4.14	V2	6' - 1"	Strength		1' - 8"	Strength	
			CE1	7' - 7"	Deflection		1' - 8"	Strength	
5-Ply	K5-0540	5.40	V2	7' - 1"	Strength	7' - 1"	3' - 10"	Strength	2' - 5"
	K5-0600	6.00	V2	7' - 7"	Strength	7' - 7"	4' - 7"	Strength	4' - 3"
	K5-0630	6.30	V2	8' - 5"	Strength	8' - 5"	4' - 1"	Strength	4' - 1"
			CE1	11' - 0"	Deflection	11' - 0"	4' - 1"	Strength	4' - 1"
	K5-0690	6.90	V2	9' - 0"	Strength	9' - 0"	4' - 10"	Strength	4' - 10"
			CE1	11' - 10"	Deflection	11' - 10"	4' - 10"	Strength	4' - 10"
7-Ply	K7-0880	8.76	V2	11' - 0"	Strength	11' - 0"	6' - 1"	Strength	6' - 1"
	K7-0970	9.66	V2	11' - 7"	Strength	11' - 7"	7' - 2"	Strength	7' - 2"
9-Ply	K9-1120	11.22	V2	13' - 4"	Strength	13' - 4"	7' - 11"	Strength	7' - 11"
	K9-1240	12.42	V2	14' - 1"	Strength	14' - 1"	9' - 3"	Strength	9' - 3"

### Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		2' - 8"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 5"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 8"	Strength	
			CE1	11' - 3"	Vibration		2' - 7"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 4"	Strength	
			CE1	11' - 10"	Vibration		3' - 4"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 10"	Vibration	12' - 10"	7' - 8"	Strength	4' - 10"
	K5-0600	6.00	V2	13' - 8"	Vibration	13' - 8"	9' - 2"	Strength	8' - 7"
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	8' - 3"	Strength	8' - 3"
			CE1	15' - 8"	Vibration	15' - 8"	8' - 3"	Strength	8' - 3"
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	9' - 8"	Strength	9' - 8"
			CE1	16' - 6"	Vibration	16' - 6"	9' - 8"	Strength	9' - 8"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	12' - 2"	Strength	12' - 2"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	14' - 4"	Strength	14' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	15' - 10"	Strength	15' - 10"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	18' - 7"	Strength	18' - 7"



# Table 5

## Floor | LL = 80psf, SDL = 20psf

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 1"	Deflection		2' - 8"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 5"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 8"	Strength	
			CE1	11' - 3"	Vibration		2' - 7"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 4"	Strength	
			CE1	12' - 7"	Deflection		3' - 4"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Strength	14' - 3"	7' - 8"	Strength	4' - 10"
	K5-0600	6.00	V2	15' - 2"	Vibration	15' - 2"	9' - 2"	Strength	8' - 7"
	K5-0630	6.30	V2	16' - 3"	Vibration	16' - 3"	8' - 3"	Strength	8' - 3"
			CE1	17' - 5"	Vibration	17' - 5"	8' - 3"	Strength	8' - 3"
	K5-0690	6.90	V2	17' - 2"	Vibration	17' - 2"	9' - 8"	Strength	9' - 8"
			CE1	18' - 5"	Vibration	18' - 5"	9' - 8"	Strength	9' - 8"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	12' - 2"	Strength	12' - 2"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	14' - 4"	Strength	14' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	15' - 10"	Strength	15' - 10"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	18' - 7"	Strength	18' - 7"

### Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 7"	Strength		2' - 8"	Strength	
	K3-0350	3.54	V2	10' - 4"	Strength		3' - 5"	Strength	
	K3-0380	3.84	V2	11' - 5"	Strength		2' - 8"	Strength	
			CE1	13' - 6"	Vibration		2' - 7"	Strength	
	K3-0410	4.14	V2	12' - 2"	Strength		3' - 4"	Strength	
			CE1	15' - 10"	Vibration		3' - 4"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Strength	14' - 3"	7' - 8"	Strength	4' - 10"
	K5-0600	6.00	V2	15' - 3"	Strength	15' - 3"	9' - 2"	Strength	8' - 7"
	K5-0630	6.30	V2	16' - 11"	Strength	16' - 11"	8' - 3"	Strength	8' - 3"
			CE1	20' - 11"	Vibration	20' - 11"	8' - 3"	Strength	8' - 3"
	K5-0690	6.90	V2	18' - 0"	Strength	18' - 0"	9' - 8"	Strength	9' - 8"
			CE1	22' - 1"	Vibration	22' - 1"	9' - 8"	Strength	9' - 8"
7-Ply	K7-0880	8.76	V2	22' - 0"	Strength	22' - 0"	12' - 2"	Strength	12' - 2"
	K7-0970	9.66	V2	23' - 3"	Strength	23' - 3"	14' - 4"	Strength	14' - 4"
9-Ply	K9-1120	11.22	V2	26' - 2"	Vibration	26' - 2"	15' - 10"	Strength	15' - 10"
	K9-1240	12.42	V2	26' - 2"	Vibration	26' - 2"	18' - 7"	Strength	18' - 7"

### Cantilever Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	4' - 9"	Strength		1' - 4"	Strength	
	K3-0350	3.54	V2	5' - 2"	Strength		1' - 8"	Strength	
	K3-0380	3.84	V2	5' - 8"	Strength		1' - 4"	Strength	
			CE1	6' - 11"	Deflection		1' - 3"	Strength	
	K3-0410	4.14	V2	6' - 1"	Strength		1' - 8"	Strength	
			CE1	7' - 5"	Deflection		1' - 8"	Strength	
5-Ply	K5-0540	5.40	V2	7' - 1"	Strength	7' - 1"	3' - 10"	Strength	2' - 5"
	K5-0600	6.00	V2	7' - 7"	Strength	7' - 7"	4' - 7"	Strength	4' - 3"
	K5-0630	6.30	V2	8' - 5"	Strength	8' - 5"	4' - 1"	Strength	4' - 1"
			CE1	10' - 11"	Deflection	10' - 11"	4' - 1"	Strength	4' - 1"
	K5-0690	6.90	V2	9' - 0"	Strength	9' - 0"	4' - 10"	Strength	4' - 10"
			CE1	11' - 8"	Deflection	11' - 8"	4' - 10"	Strength	4' - 10"
7-Ply	K7-0880	8.76	V2	11' - 0"	Strength	11' - 0"	6' - 1"	Strength	6' - 1"
	K7-0970	9.66	V2	11' - 7"	Strength	11' - 7"	7' - 2"	Strength	7' - 2"
9-Ply	K9-1120	11.22	V2	13' - 4"	Strength	13' - 4"	7' - 11"	Strength	7' - 11"
	K9-1240	12.42	V2	14' - 1"	Strength	14' - 1"	9' - 3"	Strength	9' - 3"

### Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	9' - 2"	Vibration		2' - 8"	Strength	
	K3-0350	3.54	V2	9' - 9"	Vibration		3' - 5"	Strength	
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 8"	Strength	
			CE1	11' - 3"	Vibration		2' - 7"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 4"	Strength	
			CE1	13' - 2"	Vibration		3' - 4"	Strength	
5-Ply	K5-0540	5.40	V2	14' - 3"	Strength	14' - 3"	7' - 8"	Strength	4' - 10"
	K5-0600	6.00	V2	15' - 2"	Vibration	15' - 2"	9' - 2"	Strength	8' - 7"
	K5-0630	6.30	V2	16' - 3"	Vibration	16' - 3"	8' - 3"	Strength	8' - 3"
			CE1	17' - 5"	Vibration	17' - 5"	8' - 3"	Strength	8' - 3"
	K5-0690	6.90	V2	17' - 2"	Vibration	17' - 2"	9' - 8"	Strength	9' - 8"
			CE1	18' - 5"	Vibration	18' - 5"	9' - 8"	Strength	9' - 8"
7-Ply	K7-0880	8.76	V2	20' - 4"	Vibration	20' - 4"	12' - 2"	Strength	12' - 2"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	14' - 4"	Strength	14' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	15' - 10"	Strength	15' - 10"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	18' - 7"	Strength	18' - 7"

# Table 6

## Floor | LL = 80psf, SDL = 35psf

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction		
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire
3-Ply	K3-0320	3.24	V2	9' - 0"	Deflection		2' - 6"	Strength
	K3-0350	3.54	V2	9' - 8"	Strength		3' - 2"	Strength
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 6"	Strength
			CE1	11' - 3"	Vibration		2' - 5"	Strength
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 2"	Strength
			CE1	11' - 10"	Vibration		3' - 2"	Strength
5-Ply	K5-0540	5.40	V2	12' - 10"	Vibration	12' - 10"	7' - 3"	Strength
	K5-0600	6.00	V2	13' - 8"	Vibration	13' - 8"	8' - 7"	Strength
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	7' - 9"	Strength
			CE1	15' - 8"	Vibration	15' - 8"	7' - 9"	Strength
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	9' - 1"	Strength
			CE1	16' - 6"	Vibration	16' - 6"	9' - 1"	Strength
7-Ply	K7-0970	9.66	V2	20' - 4"	Vibration	20' - 4"	11' - 6"	Strength
	K7-0760	7.56	V2	21' - 6"	Vibration	21' - 6"	13' - 6"	Strength
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	15' - 0"	Strength
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	17' - 7"	Strength

### Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction		
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire
3-Ply	K3-0320	3.24	V2	9' - 0"	Strength		2' - 6"	Strength
	K3-0350	3.54	V2	9' - 8"	Strength		3' - 2"	Strength
	K3-0380	3.84	V2	10' - 8"	Strength		2' - 6"	Strength
			CE1	13' - 6"	Vibration		2' - 5"	Strength
	K3-0410	4.14	V2	11' - 5"	Strength		3' - 2"	Strength
			CE1	14' - 3"	Vibration		3' - 2"	Strength
5-Ply	K5-0540	5.40	V2	13' - 5"	Strength	13' - 5"	7' - 3"	Strength
	K5-0600	6.00	V2	14' - 4"	Strength	14' - 4"	8' - 7"	Strength
	K5-0630	6.30	V2	15' - 11"	Strength	15' - 11"	7' - 9"	Strength
			CE1	18' - 9"	Vibration	18' - 9"	7' - 9"	Strength
	K5-0690	6.90	V2	16' - 11"	Strength	16' - 11"	9' - 1"	Strength
			CE1	19' - 10"	Vibration	19' - 10"	9' - 1"	Strength
7-Ply	K7-0970	9.66	V2	20' - 9"	Strength	20' - 9"	11' - 6"	Strength
	K7-0760	7.56	V2	21' - 11"	Strength	21' - 11"	13' - 6"	Strength
9-Ply	K9-1120	11.22	V2	25' - 3"	Strength	25' - 3"	15' - 0"	Strength
	K9-1240	12.42	V2	26' - 2"	Vibration	26' - 2"	17' - 7"	Strength

### Cantilever Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction		
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire
3-Ply	K3-0320	3.24	V2	4' - 6"	Strength		1' - 3"	Strength
	K3-0350	3.54	V2	4' - 10"	Strength		1' - 7"	Strength
	K3-0380	3.84	V2	5' - 4"	Strength		1' - 3"	Strength
			CE1	6' - 10"	Deflection		1' - 2"	Strength
	K3-0410	4.14	V2	5' - 8"	Strength		1' - 7"	Strength
			CE1	7' - 3"	Deflection		1' - 7"	Strength
5-Ply	K5-0540	5.40	V2	6' - 8"	Strength	6' - 8"	3' - 7"	Strength
	K5-0600	6.00	V2	7' - 2"	Strength	7' - 2"	4' - 3"	Strength
	K5-0630	6.30	V2	7' - 11"	Strength	7' - 11"	3' - 10"	Strength
			CE1	10' - 7"	Deflection	10' - 7"	3' - 10"	Strength
	K5-0690	6.90	V2	8' - 5"	Strength	8' - 5"	4' - 6"	Strength
			CE1	11' - 4"	Deflection	11' - 4"	4' - 6"	Strength
7-Ply	K7-0970	9.66	V2	10' - 4"	Strength	10' - 4"	5' - 9"	Strength
	K7-0760	7.56	V2	10' - 11"	Strength	10' - 11"	6' - 9"	Strength
9-Ply	K9-1120	11.22	V2	12' - 7"	Strength	12' - 7"	7' - 6"	Strength
	K9-1240	12.42	V2	13' - 4"	Strength	13' - 4"	8' - 9"	Strength

### Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction		
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire
3-Ply	K3-0320	3.24	V2	9' - 0"	Strength		2' - 6"	Strength
	K3-0350	3.54	V2	9' - 8"	Strength		3' - 2"	Strength
	K3-0380	3.84	V2	10' - 6"	Vibration		2' - 6"	Strength
			CE1	11' - 3"	Vibration		2' - 5"	Strength
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 2"	Strength
			CE1	11' - 10"	Vibration		3' - 2"	Strength
5-Ply	K5-0540	5.40	V2	12' - 10"	Vibration	12' - 10"	7' - 3"	Strength
	K5-0600	6.00	V2	13' - 8"	Vibration	13' - 8"	8' - 7"	Strength
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	7' - 9"	Strength
			CE1	15' - 8"	Vibration	15' - 8"	7' - 9"	Strength
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	9' - 1"	Strength
			CE1	16' - 6"	Vibration	16' - 6"	9' - 1"	Strength
7-Ply	K7-0970	9.66	V2	20' - 4"	Vibration	20' - 4"	11' - 6"	Strength
	K7-0760	7.56	V2	21' - 6"	Vibration	21' - 6"	13' - 6"	Strength
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	15' - 0"	Strength
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	17' - 7"	Strength

# Table 7

## Floor | LL = 100psf, SDL = 20psf

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 4"	Deflection		2' - 5"	Strength	
	K3-0350	3.54	V2	9' - 1"	Deflection		3' - 1"	Strength	
	K3-0380	3.84	V2	10' - 0"	Deflection		2' - 5"	Strength	
			CE1	10' - 10"	Deflection		2' - 5"	Strength	
	K3-0410	4.14	V2	10' - 8"	Deflection		3' - 1"	Strength	
CE1			11' - 7"	Deflection		3' - 1"	Strength		
5-Ply	K5-0540	5.40	V2	13' - 2"	Strength	13' - 2"	7' - 1"	Strength	4' - 5"
	K5-0600	6.00	V2	14' - 1"	Strength	14' - 1"	8' - 5"	Strength	7' - 11"
	K5-0630	6.30	V2	15' - 7"	Strength	15' - 7"	7' - 7"	Strength	7' - 7"
			CE1	17' - 1"	Deflection	17' - 1"	7' - 7"	Strength	7' - 7"
	K5-0690	6.90	V2	16' - 7"	Strength	16' - 7"	8' - 11"	Strength	8' - 11"
CE1			18' - 4"	Deflection	18' - 4"	8' - 11"	Strength	8' - 11"	
7-Ply	K7-0880	8.76	V2	20' - 4"	Strength	20' - 4"	11' - 4"	Strength	11' - 4"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	13' - 4"	Strength	13' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	14' - 9"	Strength	14' - 9"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	17' - 4"	Strength	17' - 4"

### Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 10"	Strength		2' - 5"	Strength	
	K3-0350	3.54	V2	9' - 6"	Strength		3' - 1"	Strength	
	K3-0380	3.84	V2	10' - 6"	Strength		2' - 5"	Strength	
			CE1	13' - 6"	Vibration		2' - 5"	Strength	
	K3-0410	4.14	V2	11' - 2"	Strength		3' - 1"	Strength	
CE1			15' - 2"	Deflection		3' - 1"	Strength		
5-Ply	K5-0540	5.40	V2	13' - 2"	Strength	13' - 2"	7' - 1"	Strength	4' - 5"
	K5-0600	6.00	V2	14' - 1"	Strength	14' - 1"	8' - 5"	Strength	7' - 11"
	K5-0630	6.30	V2	15' - 7"	Strength	15' - 7"	7' - 7"	Strength	7' - 7"
			CE1	20' - 11"	Vibration	20' - 11"	7' - 7"	Strength	7' - 7"
	K5-0690	6.90	V2	16' - 7"	Strength	16' - 7"	8' - 11"	Strength	8' - 11"
CE1			22' - 1"	Vibration	22' - 1"	8' - 11"	Strength	8' - 11"	
7-Ply	K7-0880	8.76	V2	20' - 4"	Strength	20' - 4"	11' - 4"	Strength	11' - 4"
	K7-0970	9.66	V2	21' - 7"	Strength	21' - 7"	13' - 4"	Strength	13' - 4"
9-Ply	K9-1120	11.22	V2	24' - 10"	Strength	24' - 10"	14' - 9"	Strength	14' - 9"
	K9-1240	12.42	V2	26' - 2"	Vibration	26' - 2"	17' - 4"	Strength	17' - 4"

### Cantilever Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	4' - 5"	Strength		1' - 2"	Strength	
	K3-0350	3.54	V2	4' - 9"	Strength		1' - 6"	Strength	
	K3-0380	3.84	V2	5' - 3"	Strength		1' - 2"	Strength	
			CE1	6' - 4"	Deflection		1' - 2"	Strength	
	K3-0410	4.14	V2	5' - 7"	Strength		1' - 6"	Strength	
CE1			6' - 10"	Deflection		1' - 6"	Strength		
5-Ply	K5-0540	5.40	V2	6' - 7"	Strength	6' - 7"	3' - 6"	Strength	2' - 2"
	K5-0600	6.00	V2	7' - 0"	Strength	7' - 0"	4' - 2"	Strength	3' - 11"
	K5-0630	6.30	V2	7' - 9"	Strength	7' - 9"	3' - 9"	Strength	3' - 9"
			CE1	10' - 0"	Deflection	10' - 0"	3' - 9"	Strength	3' - 9"
	K5-0690	6.90	V2	8' - 3"	Strength	8' - 3"	4' - 5"	Strength	4' - 5"
CE1			10' - 9"	Deflection	10' - 9"	4' - 5"	Strength	4' - 5"	
7-Ply	K7-0880	8.76	V2	10' - 2"	Strength	10' - 2"	5' - 8"	Strength	5' - 8"
	K7-0970	9.66	V2	10' - 9"	Strength	10' - 9"	6' - 8"	Strength	6' - 8"
9-Ply	K9-1120	11.22	V2	12' - 5"	Strength	12' - 5"	7' - 4"	Strength	7' - 4"
	K9-1240	12.42	V2	13' - 1"	Strength	13' - 1"	8' - 8"	Strength	8' - 8"

### Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 10"	Strength		2' - 5"	Strength	
	K3-0350	3.54	V2	9' - 6"	Strength		3' - 1"	Strength	
	K3-0380	3.84	V2	10' - 6"	Strength		2' - 5"	Strength	
			CE1	11' - 3"	Vibration		2' - 5"	Strength	
	K3-0410	4.14	V2	11' - 1"	Vibration		3' - 1"	Strength	
CE1			13' - 2"	Vibration		3' - 1"	Strength		
5-Ply	K5-0540	5.40	V2	13' - 2"	Strength	13' - 2"	7' - 1"	Strength	4' - 5"
	K5-0600	6.00	V2	14' - 1"	Strength	14' - 1"	8' - 5"	Strength	7' - 11"
	K5-0630	6.30	V2	15' - 7"	Strength	15' - 7"	7' - 7"	Strength	7' - 7"
			CE1	17' - 5"	Vibration	17' - 5"	7' - 7"	Strength	7' - 7"
	K5-0690	6.90	V2	16' - 7"	Strength	16' - 7"	8' - 11"	Strength	8' - 11"
CE1			18' - 5"	Vibration	18' - 5"	8' - 11"	Strength	8' - 11"	
7-Ply	K7-0880	8.76	V2	20' - 4"	Strength	20' - 4"	11' - 4"	Strength	11' - 4"
	K7-0970	9.66	V2	21' - 6"	Vibration	21' - 6"	13' - 4"	Strength	13' - 4"
9-Ply	K9-1120	11.22	V2	24' - 2"	Vibration	24' - 2"	14' - 9"	Strength	14' - 9"
	K9-1240	12.42	V2	25' - 7"	Vibration	25' - 7"	17' - 4"	Strength	17' - 4"

# Table 8

Floor | LL = 100psf, SDL = 35psf

Note: Refer to the User Notes section for additional information.

## Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 4"	Strength		2' - 4"	Strength	
	K3-0350	3.54	V2	9' - 0"	Strength		2' - 11"	Strength	
	K3-0380	3.84	V2	9' - 11"	Strength		2' - 3"	Strength	
			CE1	10' - 10"	Deflection		2' - 3"	Strength	
	K3-0410	4.14	V2	10' - 7"	Strength		2' - 11"	Strength	
			CE1	11' - 7"	Deflection		2' - 11"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 5"	Strength	12' - 5"	6' - 9"	Strength	4' - 2"
	K5-0600	6.00	V2	13' - 4"	Strength	13' - 4"	8' - 0"	Strength	7' - 6"
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	7' - 3"	Strength	7' - 3"
			CE1	15' - 8"	Vibration	15' - 8"	7' - 2"	Strength	7' - 2"
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	8' - 6"	Strength	8' - 6"
			CE1	16' - 6"	Vibration	16' - 6"	8' - 6"	Strength	8' - 6"
7-Ply	K7-0880	8.76	V2	19' - 4"	Strength	19' - 4"	10' - 9"	Strength	10' - 9"
	K7-0970	9.66	V2	20' - 6"	Strength	20' - 6"	12' - 8"	Strength	12' - 8"
9-Ply	K9-1120	11.22	V2	23' - 8"	Strength	23' - 8"	14' - 0"	Strength	14' - 0"
	K9-1240	12.42	V2	25' - 0"	Strength	25' - 0"	16' - 6"	Strength	16' - 6"

## Double Span: Including 20% Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 4"	Strength		2' - 4"	Strength	
	K3-0350	3.54	V2	9' - 0"	Strength		2' - 11"	Strength	
	K3-0380	3.84	V2	9' - 11"	Strength		2' - 3"	Strength	
			CE1	13' - 6"	Vibration		2' - 3"	Strength	
	K3-0410	4.14	V2	10' - 7"	Strength		2' - 11"	Strength	
			CE1	14' - 3"	Vibration		2' - 11"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 5"	Strength	12' - 5"	6' - 9"	Strength	4' - 2"
	K5-0600	6.00	V2	13' - 4"	Strength	13' - 4"	8' - 0"	Strength	7' - 6"
	K5-0630	6.30	V2	14' - 10"	Strength	14' - 10"	7' - 3"	Strength	7' - 3"
			CE1	18' - 9"	Vibration	18' - 9"	7' - 2"	Strength	7' - 2"
	K5-0690	6.90	V2	15' - 9"	Strength	15' - 9"	8' - 6"	Strength	8' - 6"
			CE1	19' - 10"	Vibration	19' - 10"	8' - 6"	Strength	8' - 6"
7-Ply	K7-0880	8.76	V2	19' - 4"	Strength	19' - 4"	10' - 9"	Strength	10' - 9"
	K7-0970	9.66	V2	20' - 6"	Strength	20' - 6"	12' - 8"	Strength	12' - 8"
9-Ply	K9-1120	11.22	V2	23' - 8"	Strength	23' - 8"	14' - 0"	Strength	14' - 0"
	K9-1240	12.42	V2	25' - 0"	Strength	25' - 0"	16' - 6"	Strength	16' - 6"

## Cantilever Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	4' - 2"	Strength		1' - 2"	Strength	
	K3-0350	3.54	V2	4' - 6"	Strength		1' - 5"	Strength	
	K3-0380	3.84	V2	4' - 11"	Strength		1' - 1"	Strength	
			CE1	6' - 4"	Deflection		1' - 1"	Strength	
	K3-0410	4.14	V2	5' - 3"	Strength		1' - 5"	Strength	
			CE1	6' - 10"	Deflection		1' - 5"	Strength	
5-Ply	K5-0540	5.40	V2	6' - 2"	Strength	6' - 2"	3' - 4"	Strength	2' - 1"
	K5-0600	6.00	V2	6' - 8"	Strength	6' - 8"	4' - 0"	Strength	3' - 9"
	K5-0630	6.30	V2	7' - 4"	Strength	7' - 4"	3' - 7"	Strength	3' - 7"
			CE1	10' - 0"	Deflection	10' - 0"	3' - 7"	Strength	3' - 7"
	K5-0690	6.90	V2	7' - 10"	Strength	7' - 10"	4' - 3"	Strength	4' - 3"
			CE1	10' - 9"	Deflection	10' - 9"	4' - 3"	Strength	4' - 3"
7-Ply	K7-0880	8.76	V2	9' - 8"	Strength	9' - 8"	5' - 4"	Strength	5' - 4"
	K7-0970	9.66	V2	10' - 3"	Strength	10' - 3"	6' - 4"	Strength	6' - 4"
9-Ply	K9-1120	11.22	V2	11' - 10"	Strength	11' - 10"	7' - 0"	Strength	7' - 0"
	K9-1240	12.42	V2	12' - 6"	Strength	12' - 6"	8' - 3"	Strength	8' - 3"

## Double Span: No Vibration-Controlled Span Increase

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 4"	Strength		2' - 4"	Strength	
	K3-0350	3.54	V2	9' - 0"	Strength		2' - 11"	Strength	
	K3-0380	3.84	V2	9' - 11"	Strength		2' - 3"	Strength	
			CE1	11' - 3"	Vibration		2' - 3"	Strength	
	K3-0410	4.14	V2	10' - 7"	Strength		2' - 11"	Strength	
			CE1	11' - 10"	Vibration		2' - 11"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 5"	Strength	12' - 5"	6' - 9"	Strength	4' - 2"
	K5-0600	6.00	V2	13' - 4"	Strength	13' - 4"	8' - 0"	Strength	7' - 6"
	K5-0630	6.30	V2	14' - 8"	Vibration	14' - 8"	7' - 3"	Strength	7' - 3"
			CE1	15' - 8"	Vibration	15' - 8"	7' - 2"	Strength	7' - 2"
	K5-0690	6.90	V2	15' - 6"	Vibration	15' - 6"	8' - 6"	Strength	8' - 6"
			CE1	16' - 6"	Vibration	16' - 6"	8' - 6"	Strength	8' - 6"
7-Ply	K7-0880	8.76	V2	19' - 4"	Strength	19' - 4"	10' - 9"	Strength	10' - 9"
	K7-0970	9.66	V2	20' - 6"	Strength	20' - 6"	12' - 8"	Strength	12' - 8"
9-Ply	K9-1120	11.22	V2	23' - 8"	Strength	23' - 8"	14' - 0"	Strength	14' - 0"
	K9-1240	12.42	V2	25' - 0"	Strength	25' - 0"	16' - 6"	Strength	16' - 6"

# Table 9

## Roof | $L_r = 20\text{psf}$ , $SDL = 15\text{psf}$

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layout Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	14' - 5"	Deflection		4' - 8"	Deflection	
	K3-0350	3.54	V2	15' - 7"	Deflection		5' - 11"	Deflection	
	K3-0380	3.84	V2	17' - 0"	Deflection		4' - 7"	Deflection	
			CE1	18' - 5"	Deflection		4' - 7"	Deflection	
	K3-0410	4.14	V2	18' - 2"	Deflection		5' - 10"	Deflection	
			CE1	19' - 8"	Deflection		5' - 10"	Deflection	
5-Ply	K5-0540	5.40	V2	21' - 10"	Deflection	21' - 10"	13' - 3"	Strength	7' - 5"
	K5-0600	6.00	V2	23' - 7"	Deflection	23' - 7"	15' - 7"	Strength	13' - 1"
	K5-0630	6.30	V2	25' - 7"	Deflection	25' - 7"	14' - 0"	Strength	14' - 0"
			CE1	27' - 7"	Deflection	27' - 7"	13' - 11"	Strength	13' - 11"
	K5-0690	6.90	V2	27' - 3"	Deflection	27' - 3"	16' - 4"	Strength	16' - 4"
			CE1	29' - 5"	Deflection	29' - 5"	16' - 3"	Strength	16' - 3"
7-Ply	K7-0880	8.76	V2	33' - 4"	Deflection	33' - 4"	20' - 2"	Strength	20' - 2"
	K7-0970	9.66	V2	35' - 6"	Deflection	35' - 6"	23' - 5"	Strength	23' - 5"
9-Ply	K9-1120	11.22	V2	40' - 7"	Deflection	40' - 7"	25' - 6"	Strength	25' - 6"
	K9-1240	12.42	V2	43' - 1"	Deflection	43' - 1"	29' - 7"	Strength	29' - 7"

### Double Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	17' - 1"	Strength		4' - 9"	Strength	
	K3-0350	3.54	V2	18' - 4"	Strength		6' - 0"	Strength	
	K3-0380	3.84	V2	20' - 1"	Strength		4' - 8"	Strength	
			CE1	24' - 6"	Deflection		4' - 8"	Strength	
	K3-0410	4.14	V2	21' - 4"	Strength		5' - 11"	Strength	
			CE1	26' - 1"	Deflection		5' - 11"	Strength	
5-Ply	K5-0540	5.40	V2	24' - 7"	Strength	24' - 5"	13' - 3"	Strength	7' - 5"
	K5-0600	6.00	V2	26' - 1"	Strength	26' - 0"	15' - 7"	Strength	13' - 1"
	K5-0630	6.30	V2	28' - 9"	Strength	28' - 7"	14' - 0"	Strength	14' - 0"
			CE1	36' - 8"	Deflection	36' - 8"	13' - 11"	Strength	13' - 11"
	K5-0690	6.90	V2	30' - 4"	Strength	30' - 2"	16' - 4"	Strength	16' - 4"
			CE1	39' - 1"	Deflection	39' - 1"	16' - 3"	Strength	16' - 3"
7-Ply	K7-0880	8.76	V2	36' - 3"	Strength	36' - 3"	20' - 2"	Strength	20' - 2"
	K7-0970	9.66	V2	37' - 11"	Strength	37' - 11"	23' - 5"	Strength	23' - 5"
9-Ply	K9-1120	11.22	V2	43' - 0"	Strength	43' - 0"	25' - 6"	Strength	25' - 6"
	K9-1240	12.42	V2	44' - 10"	Strength	44' - 10"	29' - 7"	Strength	29' - 7"

### Cantilever Span

CLT Layout Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 6"	Deflection		2' - 4"	Strength	
	K3-0350	3.54	V2	9' - 2"	Strength		3' - 0"	Strength	
	K3-0380	3.84	V2	10' - 0"	Strength		2' - 4"	Strength	
			CE1	10' - 11"	Deflection		2' - 4"	Strength	
	K3-0410	4.14	V2	10' - 8"	Strength		2' - 11"	Strength	
			CE1	11' - 7"	Deflection		2' - 11"	Strength	
5-Ply	K5-0540	5.40	V2	12' - 3"	Strength	12' - 2"	6' - 7"	Strength	3' - 8"
	K5-0600	6.00	V2	13' - 0"	Strength	13' - 0"	7' - 9"	Strength	6' - 6"
	K5-0630	6.30	V2	14' - 4"	Strength	14' - 3"	7' - 0"	Strength	7' - 0"
			CE1	16' - 4"	Deflection	16' - 4"	6' - 11"	Strength	6' - 11"
	K5-0690	6.90	V2	15' - 1"	Strength	15' - 1"	8' - 2"	Strength	8' - 2"
			CE1	17' - 5"	Deflection	17' - 5"	8' - 1"	Strength	8' - 1"
7-Ply	K7-0880	8.76	V2	18' - 1"	Strength	18' - 1"	10' - 1"	Strength	10' - 1"
	K7-0970	9.66	V2	18' - 11"	Strength	18' - 11"	11' - 8"	Strength	11' - 8"
9-Ply	K9-1120	11.22	V2	21' - 6"	Strength	21' - 6"	12' - 9"	Strength	12' - 9"
	K9-1240	12.42	V2	22' - 5"	Strength	22' - 5"	14' - 9"	Strength	14' - 9"

**Table 10**

**Roof | S = 20psf, SDL = 15psf**

Note: Refer to the User Notes section for additional information.

**Single Span**

CLT Layup Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	16' - 5"	Strength		4' - 6"	Strength	
	K3-0350	3.54	V2	17' - 7"	Strength		5' - 9"	Strength	
	K3-0380	3.84	V2	19' - 3"	Strength		4' - 6"	Strength	
			CE1	22' - 0"	Deflection		4' - 5"	Strength	
	K3-0410	4.14	V2	20' - 6"	Strength		5' - 8"	Strength	
			CE1	23' - 7"	Deflection		5' - 8"	Strength	
5-Ply	K5-0540	5.40	V2	23' - 7"	Strength	23' - 7"	12' - 9"	Strength	7' - 5"
	K5-0600	6.00	V2	25' - 0"	Strength	25' - 0"	15' - 0"	Strength	13' - 1"
	K5-0630	6.30	V2	27' - 7"	Strength	27' - 7"	13' - 5"	Strength	13' - 5"
			CE1	32' - 9"	Deflection	32' - 9"	13' - 4"	Strength	13' - 4"
	K5-0690	6.90	V2	29' - 1"	Strength	29' - 1"	15' - 8"	Strength	15' - 8"
			CE1	34' - 9"	Deflection	34' - 9"	15' - 7"	Strength	15' - 7"
7-Ply	K7-0880	8.76	V2	34' - 9"	Strength	34' - 9"	19' - 4"	Strength	19' - 4"
	K7-0970	9.66	V2	36' - 5"	Strength	36' - 5"	22' - 6"	Strength	22' - 6"
9-Ply	K9-1120	11.22	V2	41' - 3"	Strength	41' - 3"	24' - 5"	Strength	24' - 5"
	K9-1240	12.42	V2	43' - 0"	Strength	43' - 0"	28' - 4"	Strength	28' - 4"

**Double Span**

CLT Layup Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	16' - 5"	Strength		4' - 6"	Strength	
	K3-0350	3.54	V2	17' - 7"	Strength		5' - 9"	Strength	
	K3-0380	3.84	V2	19' - 3"	Strength		4' - 6"	Strength	
			CE1	29' - 3"	Deflection		4' - 5"	Strength	
	K3-0410	4.14	V2	20' - 6"	Strength		5' - 8"	Strength	
			CE1	31' - 4"	Deflection		5' - 8"	Strength	
5-Ply	K5-0540	5.40	V2	23' - 7"	Strength	23' - 7"	12' - 9"	Strength	7' - 5"
	K5-0600	6.00	V2	25' - 0"	Strength	25' - 0"	15' - 0"	Strength	13' - 1"
	K5-0630	6.30	V2	27' - 7"	Strength	27' - 7"	13' - 5"	Strength	13' - 5"
			CE1	42' - 4"	Strength	42' - 4"	13' - 4"	Strength	13' - 4"
	K5-0690	6.90	V2	29' - 1"	Strength	29' - 1"	15' - 8"	Strength	15' - 8"
			CE1	44' - 7"	Strength	44' - 7"	15' - 7"	Strength	15' - 7"
7-Ply	K7-0880	8.76	V2	34' - 9"	Strength	34' - 9"	19' - 4"	Strength	19' - 4"
	K7-0970	9.66	V2	36' - 5"	Strength	36' - 5"	22' - 6"	Strength	22' - 6"
9-Ply	K9-1120	11.22	V2	41' - 3"	Strength	41' - 3"	24' - 5"	Strength	24' - 5"
	K9-1240	12.42	V2	43' - 0"	Strength	43' - 0"	28' - 4"	Strength	28' - 4"

**Cantilever Span**

CLT Layup Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	8' - 2"	Strength		2' - 3"	Strength	
	K3-0350	3.54	V2	8' - 9"	Strength		2' - 10"	Strength	
	K3-0380	3.84	V2	9' - 7"	Strength		2' - 3"	Strength	
			CE1	13' - 0"	Deflection		2' - 2"	Strength	
	K3-0410	4.14	V2	10' - 3"	Strength		2' - 10"	Strength	
			CE1	13' - 11"	Deflection		2' - 10"	Strength	
5-Ply	K5-0540	5.40	V2	11' - 9"	Strength	11' - 9"	6' - 4"	Strength	3' - 8"
	K5-0600	6.00	V2	12' - 6"	Strength	12' - 6"	7' - 6"	Strength	6' - 6"
	K5-0630	6.30	V2	13' - 9"	Strength	13' - 9"	6' - 8"	Strength	6' - 8"
			CE1	19' - 5"	Deflection	19' - 5"	6' - 8"	Strength	6' - 8"
	K5-0690	6.90	V2	14' - 6"	Strength	14' - 6"	7' - 10"	Strength	7' - 10"
			CE1	20' - 7"	Deflection	20' - 7"	7' - 9"	Strength	7' - 9"
7-Ply	K7-0880	8.76	V2	17' - 4"	Strength	17' - 4"	9' - 8"	Strength	9' - 8"
	K7-0970	9.66	V2	18' - 2"	Strength	18' - 2"	11' - 3"	Strength	11' - 3"
9-Ply	K9-1120	11.22	V2	20' - 7"	Strength	20' - 7"	12' - 2"	Strength	12' - 2"
	K9-1240	12.42	V2	21' - 6"	Strength	21' - 6"	14' - 2"	Strength	14' - 2"

# Table 11

## Roof | S = 40psf, SDL = 15psf

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layup Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	11' - 7"	Deflection		3' - 3"	Strength	
	K3-0350	3.54	V2	12' - 7"	Deflection		4' - 2"	Strength	
	K3-0380	3.84	V2	13' - 10"	Deflection		3' - 3"	Strength	
			CE1	15' - 0"	Deflection		3' - 2"	Strength	
	K3-0410	4.14	V2	14' - 10"	Deflection		4' - 1"	Strength	
			CE1	16' - 1"	Deflection		4' - 1"	Strength	
5-Ply	K5-0540	5.40	V2	17' - 4"	Strength	17' - 4"	9' - 4"	Strength	5' - 6"
	K5-0600	6.00	V2	18' - 7"	Strength	18' - 7"	11' - 1"	Strength	9' - 9"
	K5-0630	6.30	V2	20' - 6"	Strength	20' - 6"	10' - 0"	Strength	10' - 0"
			CE1	23' - 7"	Deflection	23' - 7"	9' - 11"	Strength	9' - 11"
	K5-0690	6.90	V2	21' - 9"	Strength	21' - 9"	11' - 9"	Strength	11' - 9"
			CE1	25' - 4"	Deflection	25' - 4"	11' - 8"	Strength	11' - 8"
7-Ply	K7-0880	8.76	V2	26' - 6"	Strength	26' - 6"	14' - 9"	Strength	14' - 9"
	K7-0970	9.66	V2	27' - 11"	Strength	27' - 11"	17' - 3"	Strength	17' - 3"
9-Ply	K9-1120	11.22	V2	32' - 1"	Strength	32' - 1"	19' - 0"	Strength	19' - 0"
	K9-1240	12.42	V2	33' - 9"	Strength	33' - 9"	22' - 3"	Strength	22' - 3"

### Double Span

CLT Layup Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	11' - 9"	Strength		3' - 3"	Strength	
	K3-0350	3.54	V2	12' - 8"	Strength		4' - 2"	Strength	
	K3-0380	3.84	V2	13' - 11"	Strength		3' - 3"	Strength	
			CE1	19' - 11"	Deflection		3' - 2"	Strength	
	K3-0410	4.14	V2	14' - 10"	Strength		4' - 1"	Strength	
			CE1	21' - 3"	Deflection		4' - 1"	Strength	
5-Ply	K5-0540	5.40	V2	17' - 4"	Strength	17' - 4"	9' - 4"	Strength	5' - 6"
	K5-0600	6.00	V2	18' - 7"	Strength	18' - 7"	11' - 1"	Strength	9' - 9"
	K5-0630	6.30	V2	20' - 6"	Strength	20' - 6"	10' - 0"	Strength	10' - 0"
			CE1	31' - 3"	Deflection	31' - 3"	9' - 11"	Strength	9' - 11"
	K5-0690	6.90	V2	21' - 9"	Strength	21' - 9"	11' - 9"	Strength	11' - 9"
			CE1	33' - 6"	Strength	33' - 6"	11' - 8"	Strength	11' - 8"
7-Ply	K7-0880	8.76	V2	26' - 6"	Strength	26' - 6"	14' - 9"	Strength	14' - 9"
	K7-0970	9.66	V2	27' - 11"	Strength	27' - 11"	17' - 3"	Strength	17' - 3"
9-Ply	K9-1120	11.22	V2	32' - 1"	Strength	32' - 1"	19' - 0"	Strength	19' - 0"
	K9-1240	12.42	V2	33' - 9"	Strength	33' - 9"	22' - 3"	Strength	22' - 3"

### Cantilever Span

CLT Layup Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	5' - 10"	Strength		1' - 7"	Strength	
	K3-0350	3.54	V2	6' - 4"	Strength		2' - 1"	Strength	
	K3-0380	3.84	V2	6' - 11"	Strength		1' - 7"	Strength	
			CE1	8' - 10"	Deflection		1' - 7"	Strength	
	K3-0410	4.14	V2	7' - 5"	Strength		2' - 0"	Strength	
			CE1	9' - 6"	Deflection		2' - 0"	Strength	
5-Ply	K5-0540	5.40	V2	8' - 8"	Strength	8' - 8"	4' - 8"	Strength	2' - 9"
	K5-0600	6.00	V2	9' - 3"	Strength	9' - 3"	5' - 6"	Strength	4' - 10"
	K5-0630	6.30	V2	10' - 3"	Strength	10' - 3"	5' - 0"	Strength	5' - 0"
			CE1	13' - 11"	Deflection	13' - 11"	4' - 11"	Strength	4' - 11"
	K5-0690	6.90	V2	10' - 10"	Strength	10' - 10"	5' - 10"	Strength	5' - 10"
			CE1	15' - 0"	Deflection	15' - 0"	5' - 10"	Strength	5' - 10"
7-Ply	K7-0880	8.76	V2	13' - 3"	Strength	13' - 3"	7' - 4"	Strength	7' - 4"
	K7-0970	9.66	V2	13' - 11"	Strength	13' - 11"	8' - 7"	Strength	8' - 7"
9-Ply	K9-1120	11.22	V2	16' - 0"	Strength	16' - 0"	9' - 6"	Strength	9' - 6"
	K9-1240	12.42	V2	16' - 10"	Strength	16' - 10"	11' - 1"	Strength	11' - 1"

# Table 12

## Roof | S = 60psf, SDL = 15psf

Note: Refer to the User Notes section for additional information.

### Single Span

CLT Layup Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	11' - 7"	Deflection		3' - 3"	Strength	
	K3-0350	3.54	V2	12' - 7"	Deflection		4' - 2"	Strength	
	K3-0380	3.84	V2	13' - 10"	Deflection		3' - 3"	Strength	
			CE1	15' - 0"	Deflection		3' - 2"	Strength	
	K3-0410	4.14	V2	14' - 10"	Deflection		4' - 1"	Strength	
			CE1	16' - 1"	Deflection		4' - 1"	Strength	
5-Ply	K5-0540	5.40	V2	17' - 4"	Strength	17' - 4"	9' - 4"	Strength	5' - 6"
	K5-0600	6.00	V2	18' - 7"	Strength	18' - 7"	11' - 1"	Strength	9' - 9"
	K5-0630	6.30	V2	20' - 6"	Strength	20' - 6"	10' - 0"	Strength	10' - 0"
			CE1	23' - 7"	Deflection	23' - 7"	9' - 11"	Strength	9' - 11"
	K5-0690	6.90	V2	21' - 9"	Strength	21' - 9"	11' - 9"	Strength	11' - 9"
			CE1	25' - 4"	Deflection	25' - 4"	11' - 8"	Strength	11' - 8"
7-Ply	K7-0880	8.76	V2	26' - 6"	Strength	26' - 6"	14' - 9"	Strength	14' - 9"
	K7-0970	9.66	V2	27' - 11"	Strength	27' - 11"	17' - 3"	Strength	17' - 3"
9-Ply	K9-1120	11.22	V2	32' - 1"	Strength	32' - 1"	19' - 0"	Strength	19' - 0"
	K9-1240	12.42	V2	33' - 9"	Strength	33' - 9"	22' - 3"	Strength	22' - 3"

### Double Span

CLT Layup Designation	CLT Thickness (in)	Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	11' - 9"	Strength		3' - 3"	Strength	
	K3-0350	3.54	V2	12' - 8"	Strength		4' - 2"	Strength	
	K3-0380	3.84	V2	13' - 11"	Strength		3' - 3"	Strength	
			CE1	19' - 11"	Deflection		3' - 2"	Strength	
	K3-0410	4.14	V2	14' - 10"	Strength		4' - 1"	Strength	
			CE1	21' - 3"	Deflection		4' - 1"	Strength	
5-Ply	K5-0540	5.40	V2	17' - 4"	Strength	17' - 4"	9' - 4"	Strength	5' - 6"
	K5-0600	6.00	V2	18' - 7"	Strength	18' - 7"	11' - 1"	Strength	9' - 9"
	K5-0630	6.30	V2	20' - 6"	Strength	20' - 6"	10' - 0"	Strength	10' - 0"
			CE1	31' - 3"	Deflection	31' - 3"	9' - 11"	Strength	9' - 11"
	K5-0690	6.90	V2	21' - 9"	Strength	21' - 9"	11' - 9"	Strength	11' - 9"
			CE1	33' - 6"	Strength	33' - 6"	11' - 8"	Strength	11' - 8"
7-Ply	K7-0880	8.76	V2	26' - 6"	Strength	26' - 6"	14' - 9"	Strength	14' - 9"
	K7-0970	9.66	V2	27' - 11"	Strength	27' - 11"	17' - 3"	Strength	17' - 3"
9-Ply	K9-1120	11.22	V2	32' - 1"	Strength	32' - 1"	19' - 0"	Strength	19' - 0"
	K9-1240	12.42	V2	33' - 9"	Strength	33' - 9"	22' - 3"	Strength	22' - 3"

### Cantilever Span

CLT Layup Designation	CLT Thickness (in)	CLT Grade	Major Direction			Minor Direction			
			Max Span	Controlling Criteria	Max Span 1hr Fire	Max Span	Controlling Criteria	Max Span 1hr Fire	
3-Ply	K3-0320	3.24	V2	5' - 10"	Strength		1' - 7"	Strength	
	K3-0350	3.54	V2	6' - 4"	Strength		2' - 1"	Strength	
	K3-0380	3.84	V2	6' - 11"	Strength		1' - 7"	Strength	
			CE1	8' - 10"	Deflection		1' - 7"	Strength	
	K3-0410	4.14	V2	7' - 5"	Strength		2' - 0"	Strength	
			CE1	9' - 6"	Deflection		2' - 0"	Strength	
5-Ply	K5-0540	5.40	V2	8' - 8"	Strength	8' - 8"	4' - 8"	Strength	2' - 9"
	K5-0600	6.00	V2	9' - 3"	Strength	9' - 3"	5' - 6"	Strength	4' - 10"
	K5-0630	6.30	V2	10' - 3"	Strength	10' - 3"	5' - 0"	Strength	5' - 0"
			CE1	13' - 11"	Deflection	13' - 11"	4' - 11"	Strength	4' - 11"
	K5-0690	6.90	V2	10' - 10"	Strength	10' - 10"	5' - 10"	Strength	5' - 10"
			CE1	15' - 0"	Deflection	15' - 0"	5' - 10"	Strength	5' - 10"
7-Ply	K7-0880	8.76	V2	13' - 3"	Strength	13' - 3"	7' - 4"	Strength	7' - 4"
	K7-0970	9.66	V2	13' - 11"	Strength	13' - 11"	8' - 7"	Strength	8' - 7"
9-Ply	K9-1120	11.22	V2	16' - 0"	Strength	16' - 0"	9' - 6"	Strength	9' - 6"
	K9-1240	12.42	V2	16' - 10"	Strength	16' - 10"	11' - 1"	Strength	11' - 1"



## User Notes

- The span tables are based on Katterra CLT layouts and grades provided in the Katterra CLT Product Definition document. Please visit the [Katterra CLT product website](#) to view this document.
- DL = Dead Load, SDL = Superimposed Dead Load, LL = Live Load, Lr = Roof Live Load, S = Snow Load.
- All loads are uniform loads. Unbalanced live load on double spans is not considered.
- Self-weight of the CLT panel is included in the calculations and is in addition to the stated SDL.
- Strength and deflections have been calculated in accordance with the 2018 International Building Code and the 2018 National Design Specification for Wood Construction (NDS).
- Deflection limits used in the tables are as follows:

Floor	$\Delta DL + \Delta LL = L/240$	$\Delta LL = L/360$
Roof	$\Delta DL + \Delta Lr = L/180, \Delta DL + \Delta S = L/180$	$\Delta Lr = L/240, \Delta S = L/240$

- Cantilever deflection limits are calculated by using 2x the cantilever span length.
- Only the creep portion of dead load deflection is included in the total deflection calculations as permitted by the 2018 International Building Code Table 1604.3, footnote d.
- The potential effects of ponding on flat and low slope roofs have not been considered.
- Spans provided represent centerline distance between support points.
- For double-span cases, the spans are assumed to be equal.
- Total panel length is limited to 60ft in the longitudinal direction due to limitation of the manufacturing process. Transverse direction maximum spans in excess of 12' - 0" may not be achievable due to manufacturing limitations. Please contact Katterra for more information.
- For floors, footfall vibrations are evaluated for one and two span conditions, but not the cantilever condition.
- For roofs, footfall vibrations are not evaluated for any of the span conditions.
- The US CLT Handbook and Canadian CSA O86 vibration methods are utilized as the basis for simply supported and two-span conditions and modified as follows:
  - The CLT panel  $EI_{eff}$  is used in lieu of  $EI_{app}$ .
  - For two-span conditions the provision to increase the span by up to 20% is included in a separate table.
- Where partition loads are required, it is included as SDL.

## User Notes, con't

---

- Partition loads are not considered when determining whether or not to reduce effective stiffness in vibration calculations.
- Strength under the fire design criteria is calculated per NDS 2018 Chapter 16.
- The fire design criteria assumes the underside of the CLT is exposed and chars during a fire. If the CLT is appropriately protected in order to achieve the rating, it is not necessary to check the fire rated spans.
- Blank table cells indicate that a calculation for fire maximum span under fire conditions has not been performed.
- Consult Katterra for maximum CLT spans based on Katterra CLT ASTM E119 furnace testing for exposed 1hr and 2hr cases.
- These tables are provided for pre-analysis use only. Final engineered design and documentation of Katterra CLT for floor and roof applications is the sole responsibility of the registered design professional providing these services.

To discuss in-house specialty vibration design services, please contact us at [clt@katterra.com](mailto:clt@katterra.com) or visit [katterra.com/clt](https://katterra.com/clt).