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DESIGN GUIDE

8

Cold-Formed Steel "L" Header Field Guide

April 2000



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Introduction

This publication was developed by Nader R. Elhadj, P.E., for the North American Steel Framing Alliance (NASFA). It is intended to provide span tables and construction details for L-shaped headers in residential and light commercial construction. In the production of this publication, due diligence has been exercised in consulting a wide range of pertinent authorities and experiences. Efforts have been made to present accurate, reliable and useful information. NASFA acknowledges the principal author of this publication, Nader Elhadj, and reviewers. Special appreciation is extended to Kevin Bielat of NASFA for his assistance and guidance.

The materials set forth herein are for general information only. They are not a substitute for competent professional assistance. Application of this information to a specific project or setting should be reviewed by a qualified individual. NASFA believes that the information contained in this publication substantially represents industry practice and related scientific and technical information, but the information is not intended to represent an official position of NASFA or to restrict or exclude any other construction or design technique. Anyone making use of the information set forth herein does so at his or her own risk and assumes any resulting liability.

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Overview

This publication provides construction details and span tables for double L-headers with varied sizes and thickness. As the name suggests, the main component of an L-shaped header is a piece of cold-formed steel formed into a shape resembling the letter L. An L-header consists of a cold-formed steel angle with one short leg lapping over the top track of the wall and one leg extending down the side of the wall above window or door openings as shown in Figure 1. Each angle is fastened to the top track above an opening with minimum #8 screws spaced at 12-inches on center. The “L” angle is placed on both sides of the wall opening to form a double angle L-shaped header (double L-header).

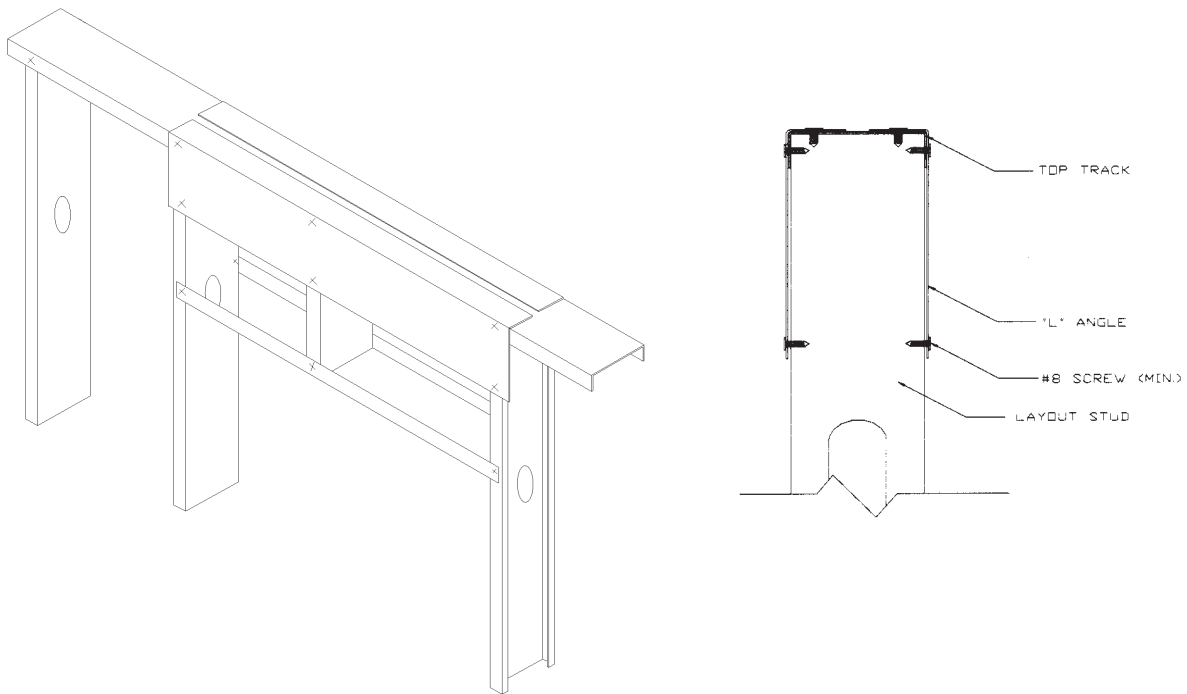


Figure 1
L-Shaped Header Configuration

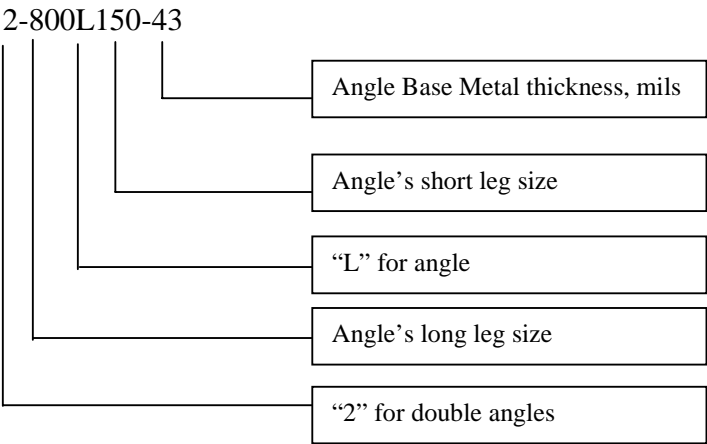
Scope

The tables in this document apply to the construction of double L-headers installed in buildings not more than two stories in height with each story not more than 10 feet high. Steel L-headers constructed in accordance with this document shall be limited by the applicability limits of the *Prescriptive Method for Residential Cold-Formed Steel Framing*, second edition, which are reproduced as Table 2 on page 6.

L-Header Identification

The size and thickness of the “L” angle, following the Steel Stud Manufacturers Association (SSMA) identification criteria, identify an L-header. All L-headers designed per this document are based on 33-ksi minimum yield strength. Table 2 provides the physical dimensions of L-headers considered in this document.

Example: A double L-header with 8-inch long leg angle dimension, 1 1/2-inch short leg angle dimension, and 18 gauge (43 mils) base metal thickness is designated as 2-800L150-43:



Span Tables

Tables 3 through 18 provide the maximum allowable span for the double L-headers, listed in Table 1, due to gravity loads. Tables 19 through 23 provide the maximum allowable span for the double L-headers due to uplift loads. The uplift span tables provided are applicable for the top floor of a two-story building or for a one-story building. Uplift loads were found negligible for the bottom floor of a two-story building and therefore, no uplift span tables were generated. Furthermore, L-headers constructed in buildings subjected to wind speeds less than 80 mph, exposure A/B are not subject to uplift loads. The span tables were developed based on the following assumptions:

- 1. Each L-angle is fastened to a minimum of 33 mil top track,
- 2. A cripple stud is located under each point load, and
- 3. The L-header fastening schedule is in accordance with Figure 3.

Construction Details

Figures 2 through 4 provide a step by step construction of a typical double L-header.

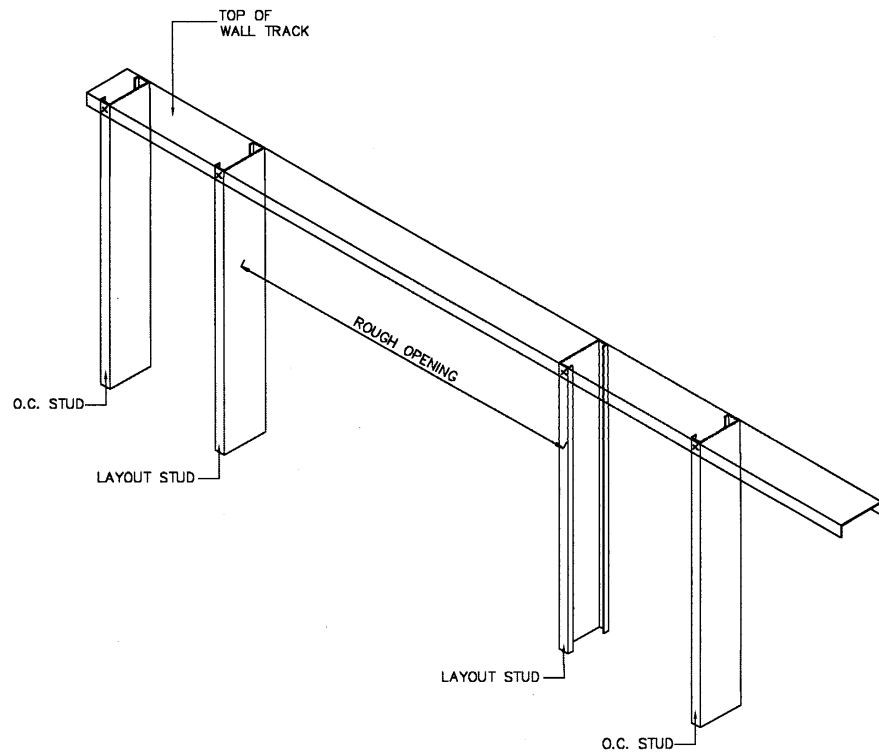


Figure 2
Rough Opening

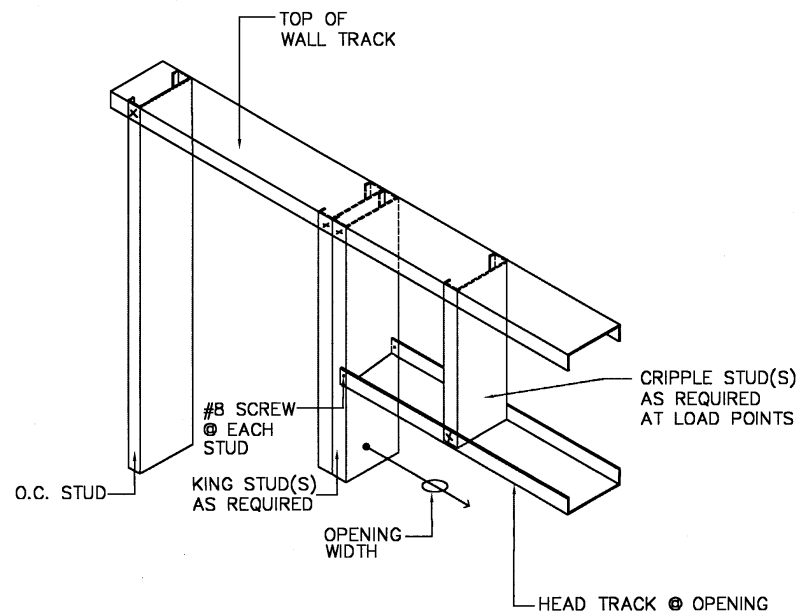


Figure 3
Framing of Rough Opening

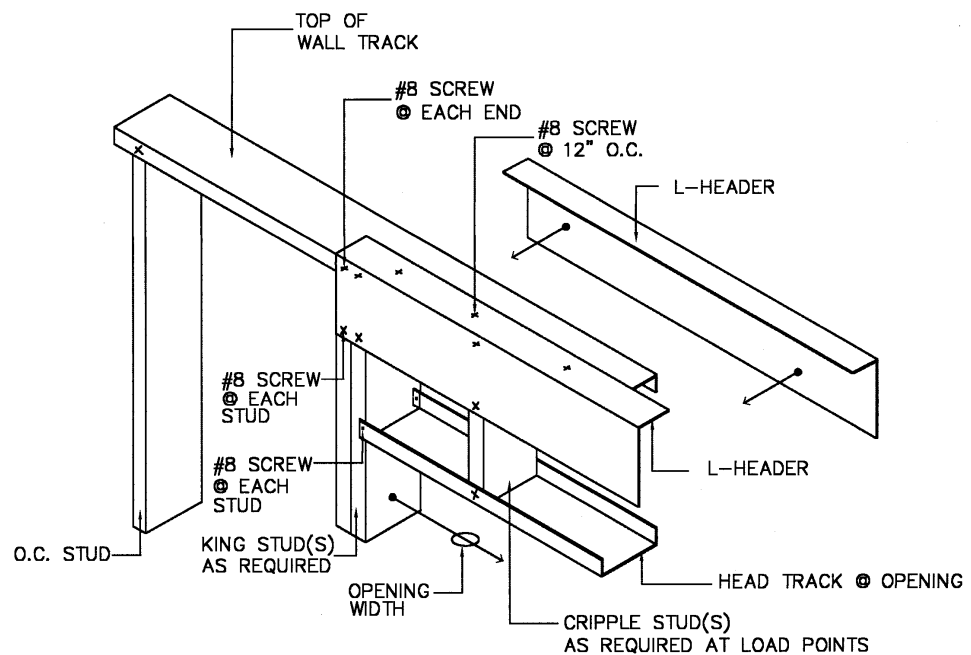


Figure 4
Installation of a Double L-Shaped Header

Table 1
L-Header Dimensions

L-Header Designation	Long Angle Leg Size (in.)	Short Angle Leg Size (in.)	Angle Thickness	
			Gauge	Mils
600L150-43	6	1.50	18	43
600L150-54	6	1.50	16	54
600L150-68	6	1.50	14	68
800L150-43	8	1.50	18	43
800L150-54	8	1.50	16	54
800L150-68	8	1.50	14	68
1000L150-43	10	1.50	18	43
1000L150-54	10	1.50	16	54
1000L150-68	10	1.50	14	68

Table 2
Applicability Limits

ATTRIBUTE	LIMITATION
General	
Building dimension	Maximum width ¹ is 40 feet (11 m) Maximum length ² is 60 feet (18 m)
Number of stories	2 story
Design wind speed	110 mph maximum (177 km/sec) fastest-mile wind speed [except as noted for header uplift] ³
Wind exposure	Exposures C (open terrain) Exposures A/B (suburban/wooded)
Ground snow load	70 psf (3.35 kN/m ²) maximum ground snow load
Seismic zone	Zones 0, 1, and 2
Floors	
Floor dead load	10 psf (0.48 kN/m ²) maximum
Floor live load	
First floor	40 psf (1.92 kN/m ²) maximum
Second floor (sleeping rooms)	30 psf (1.44 kN/m ²) maximum
Cantilever	24 inches (610 mm) maximum
Walls	
Wall dead load	10 psf (0.48 kN/m ²) maximum
Load bearing wall height	10 feet (3 m) maximum
Roofs	
Roof dead load	12 psf (0.48 kN/m ²) maximum total load [7 psf (0.34 kN/m ²) maximum for roof covering only]
Roof live load	70 psf (3.35 kN/m ²) maximum ground snow load
Ceiling dead load	5 psf (0.24 kN/m ²) maximum
Roof slope	3:12 to 12:12
Rake overhang	12 inches (305 mm) maximum
Soffit overhang	24 inches (610 mm) maximum
Attic live load (for attics with storage)	20 psf (0.96 kN/m ²) maximum
Attic live load (for attics without storage)	10 psf (0.48 kN/m ²) maximum

¹ Building width is in the direction of horizontal framing members supported by the wall studs.

² Building length is in the direction perpendicular to floor joists, ceiling joists, or roof trusses.

³ Header uplift tables are limited to 110-mph exposure A/B (90-mph exposure C).

Table 3
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
24-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	4' 10"	4' 8"	4' 4"	4' 0"	3' 8"	3' 5"	3' 2"
2-600L150-54	5' 6"	5' 4"	4' 10"	4' 6"	4' 2"	3' 10"	3' 8"
2-600L150-68	6' 3"	6' 1"	5' 7"	5' 1"	4' 9"	4' 5"	4' 2"
2-800L150-43	6' 4"	6' 2"	5' 4"	5' 2"	4' 9"	4' 5"	4' 2"
2-800L150-54	7' 3"	6' 11"	6' 8"	5' 11"	5' 5"	5' 1"	4' 9"
2-800L150-68	8' 2"	7' 11"	7' 3"	6' 8"	6' 2"	5' 9"	5' 5"
2-1000L150-43	7' 0"	6' 9"	6' 2"	5' 9"	5' 3"	4' 11"	4' 7"
2-1000L150-54	8' 11"	8' 7"	7' 0"	6' 6"	6' 0"	5' 7"	5' 3"
2-1000L150-68	10' 1"	9' 8"	8' 11"	7' 4"	6' 9"	6' 4"	5' 11"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

Table 4
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
28-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	4' 6"	4' 4"	4' 0"	3' 9"	3' 5"	3' 2"	3' 0"
2-600L150-54	5' 2"	4' 11"	4' 6"	4' 2"	3' 10"	3' 7"	3' 5"
2-600L150-68	5' 10"	5' 8"	5' 2"	4' 9"	4' 5"	4' 1"	3' 10"
2-800L150-43	5' 11"	5' 8"	5' 3"	4' 10"	4' 6"	4' 2"	3' 11"
2-800L150-54	6' 9"	6' 6"	5' 11"	5' 6"	5' 1"	4' 9"	4' 5"
2-800L150-68	7' 8"	7' 4"	6' 9"	6' 3"	5' 9"	5' 4"	5' 0"
2-1000L150-43	6' 7"	6' 4"	5' 9"	5' 4"	4' 11"	4' 7"	4' 4"
2-1000L150-54	7' 5"	7' 2"	6' 7"	6' 1"	5' 7"	5' 2"	4' 11"
2-1000L150-68	9' 5"	9' 0"	7' 5"	6' 10"	6' 4"	5' 11"	5' 7"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

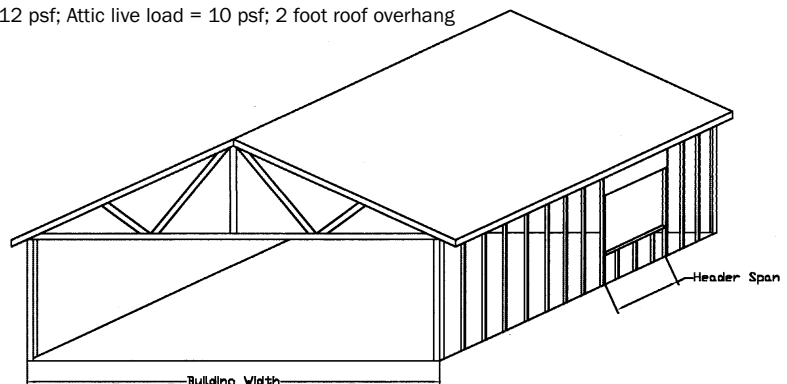


Table 5
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
30-Foot-Wide Building^{1,2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	4' 5"	4' 9"	3' 11"	3' 7"	3' 4"	3' 1"	2' 11"
2-600L150-54	5' 0"	4' 11"	4' 5"	4' 1"	3' 9"	3' 6"	3' 3"
2-600L150-68	5' 8"	5' 1"	5' 0"	4' 8"	4' 3"	4' 0"	3' 9"
2-800L150-43	5' 9"	5' 1"	5' 1"	4' 8"	4' 4"	4' 0"	3' 10"
2-800L150-54	6' 6"	6' 3"	5' 9"	5' 4"	4' 11"	4' 7"	4' 4"
2-800L150-68	7' 5"	7' 6"	6' 6"	6' 1"	5' 7"	5' 2"	4' 11"
2-1000L150-43	6' 4"	6' 5"	5' 7"	5' 2"	4' 9"	4' 5"	4' 2"
2-1000L150-54	7' 2"	6' 9"	6' 4"	5' 10"	5' 5"	5' 1"	4' 9"
2-1000L150-68	9' 1"	8' 3"	7' 2"	6' 8"	6' 2"	5' 9"	5' 5"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

Table 6
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
32-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	4' 3"	4' 1"	3' 9"	3' 6"	3' 3"	3' 0"	2' 10"
2-600L150-54	4' 10"	4' 8"	4' 3"	3' 11"	3' 8"	3' 5"	3' 2"
2-600L150-68	5' 6"	5' 4"	4' 10"	4' 6"	4' 2"	3' 10"	3' 8"
2-800L150-43	5' 7"	5' 4"	4' 11"	4' 7"	4' 3"	3' 11"	3' 8"
2-800L150-54	6' 4"	6' 1"	5' 7"	5' 2"	4' 9"	4' 5"	4' 2"
2-800L150-68	7' 2"	6' 11"	6' 4"	5' 11"	5' 5"	5' 1"	4' 9"
2-1000L150-43	6' 2"	5' 11"	5' 5"	5' 1"	4' 8"	4' 4"	4' 1"
2-1000L150-54	7' 0"	6' 8"	6' 2"	5' 8"	5' 3"	4' 11"	4' 7"
2-1000L150-68	8' 10"	8' 6"	7' 0"	6' 6"	6' 0"	5' 7"	5' 3"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

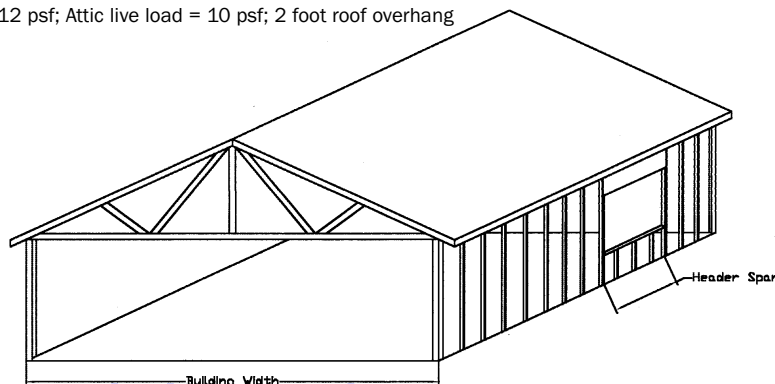


Table 7
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
34-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	4' 2"	4' 0"	3' 8"	3' 5"	3' 2"	2' 11"	2' 9"
2-600L150-54	4' 8"	4' 6"	4' 2"	3' 10"	3' 7"	3' 4"	3' 1"
2-600L150-68	5' 4"	5' 2"	4' 9"	4' 5"	4' 1"	3' 9"	3' 7"
2-800L150-43	5' 5"	5' 3"	4' 10"	4' 5"	4' 1"	3' 10"	3' 7"
2-800L150-54	6' 2"	5' 11"	5' 5"	5' 0"	4' 8"	4' 4"	4' 1"
2-800L150-68	7' 0"	6' 9"	6' 2"	5' 9"	5' 3"	5' 11"	4' 7"
2-1000L150-43	6' 0"	5' 9"	5' 3"	4' 11"	4' 6"	4' 3"	4' 0"
2-1000L150-54	6' 9"	6' 6"	6' 0"	5' 7"	5' 1"	4' 9"	4' 6"
2-1000L150-68	8' 7"	7' 5"	6' 9"	6' 4"	5' 10"	5' 5"	5' 1"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

Table 8
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
36-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	4' 0"	3' 11"	3' 7"	3' 4"	3' 1"	2' 10"	2' 8"
2-600L150-54	4' 7"	4' 5"	4' 0"	3' 9"	3' 5"	3' 3"	3' 0"
2-600L150-68	5' 2"	5' 0"	4' 7"	4' 3"	3' 11"	3' 8"	3' 5"
2-800L150-43	5' 3"	5' 1"	4' 8"	4' 4"	4' 0"	3' 9"	3' 6"
2-800L150-54	6' 0"	5' 9"	5' 3"	4' 11"	4' 6"	4' 3"	4' 0"
2-800L150-68	6' 9"	6' 6"	6' 0"	5' 7"	5' 2"	4' 9"	4' 6"
2-1000L150-43	5' 10"	5' 7"	5' 2"	4' 9"	4' 5"	4' 1"	3' 10"
2-1000L150-54	6' 7"	6' 4"	5' 10"	5' 5"	5' 0"	4' 8"	4' 4"
2-1000L150-68	8' 4"	7' 2"	6' 7"	6' 2"	5' 8"	5' 3"	4' 11"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

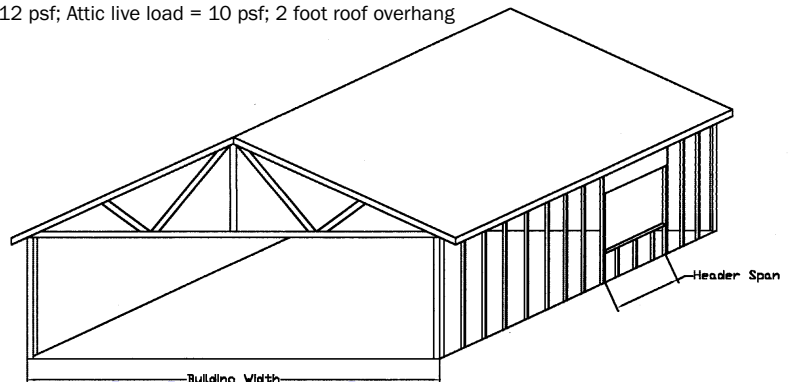


Table 9
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
38-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	3' 11"	3' 9"	3' 6"	3' 3"	3' 0"	2' 9"	2' 7"
2-600L150-54	4' 5"	4' 3"	3' 11"	3' 8"	3' 4"	3' 2"	2' 11"
2-600L150-68	5' 1"	4' 11"	4' 6"	4' 2"	3' 10"	3' 7"	3' 4"
2-800L150-43	5' 2"	4' 11"	4' 7"	4' 3"	4' 0"	3' 8"	3' 5"
2-800L150-54	5' 10"	5' 7"	5' 2"	4' 9"	4' 5"	4' 1"	3' 10"
2-800L150-68	6' 7"	6' 4"	5' 10"	5' 5"	5' 0"	4' 8"	4' 5"
2-1000L150-43	5' 8"	5' 6"	5' 0"	4' 8"	4' 4"	4' 0"	3' 9"
2-1000L150-54	6' 5"	6' 2"	5' 8"	5' 3"	4' 11"	4' 6"	4' 3"
2-1000L150-68	7' 3"	7' 0"	6' 5"	6' 0"	5' 6"	5' 2"	4' 10"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

Table 10
Double L-Header Span Table—Headers Supporting Roof and Ceiling Only
40-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	3' 10"	3' 8"	3' 5"	3' 2"	2' 11"	2' 9"	2' 7"
2-600L150-54	4' 4"	4' 2"	3' 10"	3' 7"	3' 4"	3' 1"	2' 11"
2-600L150-68	4' 11"	4' 9"	4' 5"	4' 1"	3' 9"	3' 6"	3' 3"
2-800L150-43	5' 0"	4' 10"	4' 5"	4' 2"	3' 10"	3' 7"	3' 4"
2-800L150-54	5' 8"	5' 6"	5' 0"	4' 8"	4' 4"	4' 0"	3' 9"
2-800L150-68	6' 5"	6' 3"	5' 9"	5' 4"	4' 11"	4' 7"	4' 3"
2-1000L150-43	5' 6"	5' 4"	5' 11"	4' 7"	4' 2"	3' 11"	3' 8"
2-1000L150-54	6' 3"	6' 0"	5' 7"	5' 2"	4' 9"	4' 5"	4' 2"
2-1000L150-68	7' 1"	6' 10"	6' 4"	5' 10"	5' 5"	5' 0"	4' 9"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang

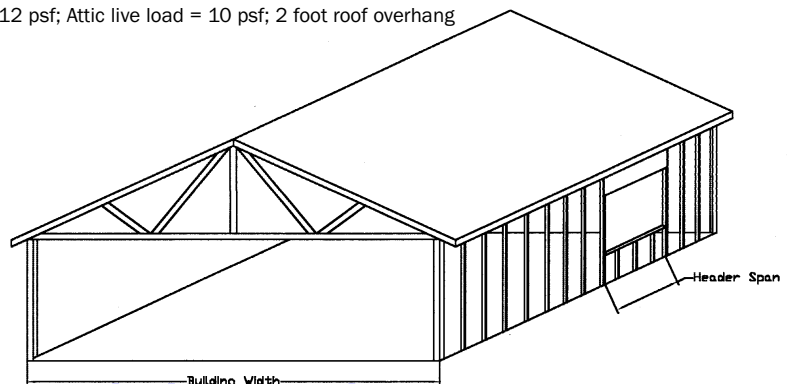


Table 11**Double L-Header Span Table—Headers Supporting One Floor, Roof, and Ceiling
24-Foot-Wide Building^{1, 2}**

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	3' 3"	3' 2"	3' 0"	2' 11"	2' 10"	2' 9"	2' 8"
2-600L150-54	3' 8"	3' 7"	3' 5"	3' 4"	3' 2"	3' 1"	3' 0"
2-600L150-68	4' 2"	4' 1"	3' 11"	3' 9"	3' 8"	3' 6"	3' 5"
2-800L150-43	4' 3"	4' 2"	4' 0"	3' 10"	3' 8"	3' 7"	3' 6"
2-800L150-54	4' 9"	4' 8"	4' 6"	4' 4"	4' 2"	4' 1"	3' 11"
2-800L150-68	5' 5"	5' 4"	5' 1"	4' 11"	4' 9"	4' 7"	4' 6"
2-1000L150-43	4' 8"	4' 7"	4' 5"	4' 3"	4' 1"	3' 11"	3' 10"
2-1000L150-54	5' 3"	5' 2"	5' 0"	4' 9"	4' 7"	4' 6"	4' 4"
2-1000L150-68	6' 0"	5' 10"	5' 8"	5' 5"	5' 3"	5' 1"	4' 11"

¹ Building width is measured in the direction of horizontal framing members supported by the header.² Design assumptions:Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live load = 30 psf; Floor dead load = 10 psf;
2 foot roof overhang**Table 12****Double L-Header Span Table—Headers Supporting One Floor, Roof, and Ceiling
28-Foot-Wide Building^{1, 2}**

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	3' 0"	3' 0"	2' 10"	2' 9"	2' 8"	2' 7"	2' 6"
2-600L150-54	3' 5"	3' 4"	3' 3"	3' 1"	3' 0"	2' 11"	2' 10"
2-600L150-68	3' 11"	3' 10"	3' 8"	3' 6"	3' 5"	3' 4"	3' 2"
2-800L150-43	3' 11"	3' 10"	3' 9"	3' 7"	3' 5"	3' 4"	3' 3"
2-800L150-54	4' 6"	4' 5"	4' 3"	4' 1"	3' 11"	3' 9"	3' 8"
2-800L150-68	5' 1"	5' 0"	4' 9"	4' 7"	4' 5"	4' 4"	4' 2"
2-1000L150-43	4' 4"	4' 3"	4' 1"	3' 11"	3' 10"	3' 8"	3' 7"
2-1000L150-54	4' 11"	4' 10"	4' 8"	4' 6"	4' 4"	4' 2"	4' 1"
2-1000L150-68	5' 7"	5' 6"	5' 3"	5' 1"	4' 11"	4' 9"	4' 7"

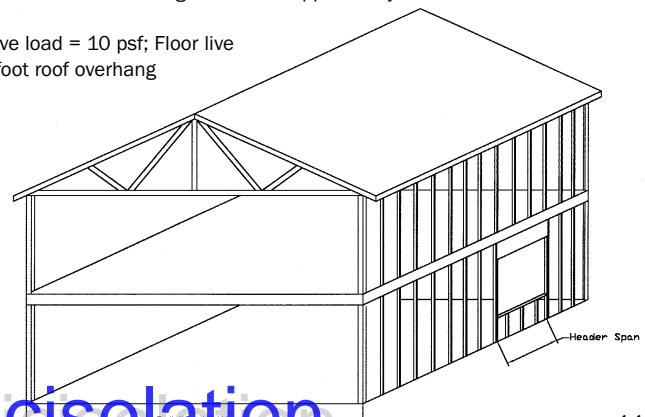
¹ Building width is measured in the direction of horizontal framing members supported by the header.² Design assumptions:Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live
load = 30 psf; Floor dead load = 10 psf; 2 foot roof overhang

Table 13**Double L-Header Span Table—Headers Supporting One Floor, Roof, and Ceiling
30-Foot-Wide Building^{1, 2}**

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	2' 11"	2' 10"	2' 9"	2' 8"	2' 7"	2' 6"	2' 5"
2-600L150-54	3' 4"	3' 3"	3' 1"	3' 0"	2' 11"	2' 10"	2' 9"
2-600L150-68	3' 9"	3' 8"	3' 7"	3' 5"	3' 4"	3' 2"	3' 1"
2-800L150-43	3' 10"	3' 9"	3' 7"	3' 6"	3' 4"	3' 3"	3' 2"
2-800L150-54	4' 4"	4' 3"	4' 1"	3' 11"	3' 10"	3' 8"	3' 7"
2-800L150-68	4' 11"	4' 10"	4' 8"	4' 6"	4' 4"	4' 2"	4' 1"
2-1000L150-43	4' 3"	4' 2"	4' 0"	3' 10"	3' 8"	3' 7"	3' 6"
2-1000L150-54	4' 9"	4' 8"	4' 6"	4' 4"	4' 2"	4' 1"	3' 11"
2-1000L150-68	5' 5"	5' 4"	5' 1"	4' 11"	4' 9"	4' 7"	4' 5"

¹ Building width is measured in the direction of horizontal framing members supported by the header.² Design assumptions:Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live load = 30 psf; Floor dead load = 10 psf;
2 foot roof overhang**Table 14****Double L-Header Span Table—Headers Supporting One Floor, Roof, and Ceiling
32-Foot-Wide Building^{1, 2}**

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	2' 10"	2' 9"	2' 8"	2' 7"	2' 6"	2' 5"	2' 4"
2-600L150-54	3' 3"	3' 2"	3' 0"	2' 11"	2' 10"	2' 9"	2' 8"
2-600L150-68	3' 8"	3' 7"	3' 5"	3' 4"	3' 3"	3' 1"	3' 0"
2-800L150-43	3' 9"	3' 8"	3' 6"	3' 4"	3' 3"	3' 2"	3' 1"
2-800L150-54	4' 2"	4' 2"	4' 0"	3' 10"	3' 8"	3' 7"	3' 6"
2-800L150-68	4' 9"	4' 8"	4' 6"	4' 4"	4' 2"	4' 1"	3' 11"
2-1000L150-43	4' 1"	4' 0"	3' 10"	3' 9"	3' 7"	3' 6"	3' 4"
2-1000L150-54	4' 8"	4' 7"	4' 4"	4' 3"	4' 1"	3' 11"	3' 10"
2-1000L150-68	5' 3"	5' 2"	4' 11"	4' 9"	4' 7"	4' 6"	4' 4"

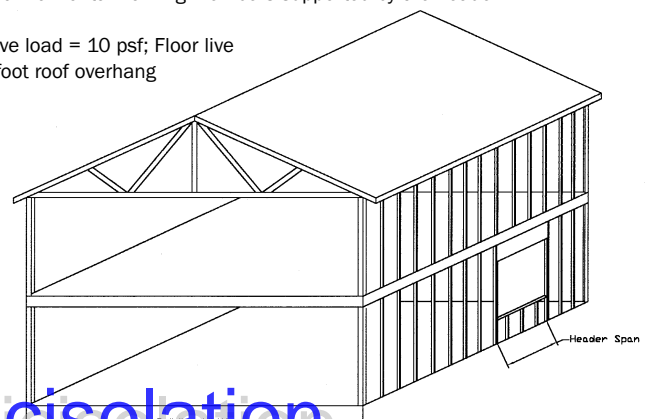
¹ Building width is measured in the direction of horizontal framing members supported by the header.² Design assumptions:Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live
load = 30 psf; Floor dead load = 10 psf; 2 foot roof overhang

Table 15
Double L-Header Span Table—Headers Supporting One Floor, Roof, and Ceiling
34-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	2' 9"	2' 9"	2' 7"	2' 6"	2' 5"	2' 4"	2' 3"
2-600L150-54	3' 1"	3' 1"	2' 11"	2' 10"	2' 9"	2' 8"	2' 7"
2-600L150-68	3' 7"	3' 6"	3' 4"	3' 3"	3' 2"	3' 0"	2' 11"
2-800L150-43	3' 7"	3' 7"	3' 5"	3' 3"	3' 2"	3' 1"	3' 0"
2-800L150-54	4' 1"	4' 0"	3' 10"	3' 9"	3' 7"	3' 6"	3' 4"
2-800L150-68	4' 8"	4' 7"	4' 5"	4' 3"	4' 1"	3' 11"	3' 10"
2-1000L150-43	4' 0"	3' 11"	3' 9"	3' 7"	3' 6"	3' 5"	3' 3"
2-1000L150-54	4' 6"	4' 5"	4' 3"	4' 1"	3' 11"	3' 10"	3' 9"
2-1000L150-68	5' 1"	5' 0"	4' 10"	4' 8"	4' 6"	4' 4"	4' 3"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live load = 30 psf; Floor dead load = 10 psf; 2 foot roof overhang

Table 16
Double L-Header Span Table—Headers Supporting One Floor, Roof, and Ceiling
36-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	2' 8"	2' 8"	2' 6"	2' 5"	2' 4"	2' 3"	2' 3"
2-600L150-54	3' 1"	3' 0"	2' 10"	2' 9"	2' 8"	2' 7"	2' 6"
2-600L150-68	3' 6"	3' 5"	3' 3"	3' 2"	3' 1"	2' 11"	2' 10"
2-800L150-43	3' 6"	3' 5"	3' 4"	3' 2"	3' 1"	3' 0"	2' 11"
2-800L150-54	4' 0"	3' 11"	3' 9"	3' 7"	3' 6"	3' 5"	3' 3"
2-800L150-68	4' 6"	4' 5"	4' 3"	4' 1"	4' 0"	3' 10"	3' 9"
2-1000L150-43	3' 11"	3' 10"	3' 8"	3' 6"	3' 5"	3' 4"	3' 2"
2-1000L150-54	4' 5"	4' 4"	4' 2"	4' 0"	3' 10"	3' 9"	3' 7"
2-1000L150-68	5' 0"	4' 11"	4' 8"	4' 6"	4' 4"	4' 3"	4' 1"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live load = 30 psf; Floor dead load = 10 psf; 2 foot roof overhang

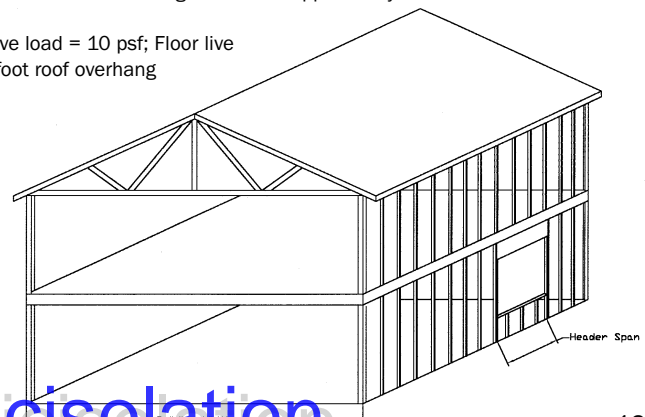


Table 17

Double L-Header Span Table—Headers Supporting One Floor, Roof and Ceiling
38-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	2' 8"	2' 7"	2' 6"	2' 5"	2' 4"	2' 3"	2' 2"
2-600L150-54	3' 0"	2' 11"	2' 10"	2' 8"	2' 7"	2' 6"	2' 5"
2-600L150-68	3' 5"	3' 4"	3' 2"	3' 1"	3' 0"	2' 11"	2' 9"
2-800L150-43	3' 5"	3' 4"	3' 3"	3' 1"	3' 0"	2' 11"	2' 10"
2-800L150-54	3' 11"	3' 10"	3' 8"	3' 6"	3' 5"	3' 4"	3' 2"
2-800L150-68	4' 5"	4' 4"	4' 2"	4' 0"	3' 11"	3' 9"	3' 8"
2-1000L150-43	3' 9"	3' 9"	3' 7"	3' 5"	3' 4"	3' 3"	3' 1"
2-1000L150-54	4' 3"	4' 3"	4' 1"	3' 11"	3' 9"	3' 8"	3' 6"
2-1000L150-68	4' 10"	4' 9"	4' 7"	4' 5"	4' 3"	4' 2"	4' 0"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live load = 30 psf; Floor dead load = 10 psf; 2 foot roof overhang

Table 18

Double L-Header Span Table—Headers Supporting One Floor, Roof and Ceiling
40-Foot-Wide Building^{1, 2}

Double L-Header Designation	Ground Snow Load (psf)						
	16	20	30	40	50	60	70
2-600L150-43	2' 7"	2' 6"	2' 5"	2' 4"	2' 3"	2' 2"	2' 1"
2-600L150-54	2' 11"	2' 10"	2' 9"	2' 8"	2' 7"	2' 6"	2' 5"
2-600L150-68	3' 4"	3' 3"	3' 1"	3' 0"	2' 11"	2' 10"	2' 9"
2-800L150-43	3' 4"	3' 4"	3' 2"	3' 1"	2' 11"	2' 10"	2' 9"
2-800L150-54	3' 10"	3' 9"	3' 7"	3' 5"	3' 4"	3' 3"	3' 2"
2-800L150-68	4' 4"	4' 3"	4' 1"	3' 11"	3' 9"	3' 8"	3' 7"
2-1000L150-43	3' 8"	3' 8"	3' 6"	3' 4"	3' 3"	3' 2"	3' 1"
2-1000L150-54	4' 2"	4' 1"	3' 11"	3' 10"	3' 8"	3' 7"	3' 5"
2-1000L150-68	4' 9"	4' 8"	4' 6"	4' 4"	4' 2"	4' 0"	3' 11"

¹ Building width is measured in the direction of horizontal framing members supported by the header.

² Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; Floor live load = 30 psf; Floor dead load = 10 psf; 2 foot roof overhang

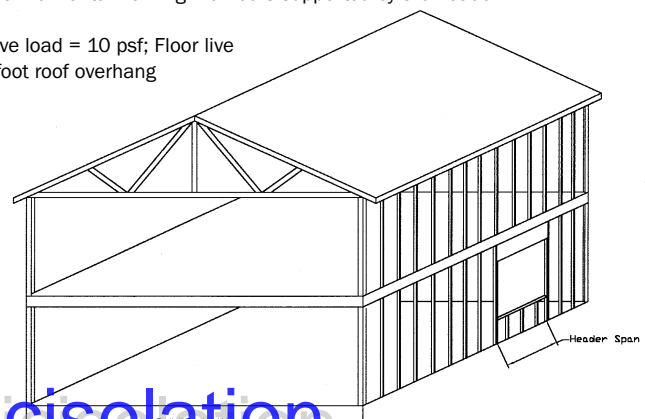


Table 19
Double L-Header Uplift Span Table
Headers Supporting Roof and Ceiling Only
24-Foot-Wide Building^{1, 2}

Double L-Header Designation	Wind Speed ⁴ (mph) and Exposure			
	80 A/B ³ Seismic Zones 0, 1, & 2	90 A/B 70 C	100 A/B 80 C	110 A/B 90 C
2-600L150-43	No Uplift	7' 3"	4' 11"	3' 9"
2-600L150-54	No Uplift	8' 3"	5' 7"	4' 3"
2-600L150-68	No Uplift	9' 5"	6' 4"	4' 10"
2-800L150-43	No Uplift	8' 6"	5' 9"	4' 4"
2-800L150-54	No Uplift	10' 9"	7' 3"	5' 6"
2-800L150-68	No Uplift	12' 3"	8' 3"	6' 3"
2-1000L150-43	No Uplift	10' 6"	7' 1"	5' 5"
2-1000L150-54	No Uplift	10' 3"	6' 11"	5' 3"
2-1000L150-68	No Uplift	15' 1"	10' 2"	7' 9"

1 Building width is measured in the direction of horizontal framing members supported by the header.

2 Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang.

3 No uplift loads acting on building for wind speeds up to 80 mph, exposure A/B.

4 Wind speeds are based on fastest mile measurements. When using wind speed maps based on 3 second gust wind speeds, the fastest mile wind speed should be multiplied by a conversion factor of 1.2.

Table 20
Double L-Header Uplift Span Table
Headers Supporting Roof and Ceiling Only
28-Foot-Wide Building^{1, 2}

Double L-Header Designation	Wind Speed ⁴ (mph) and Exposure			
	80 A/B ³ Seismic Zones 0, 1, & 2	90 A/B 70 C	100 A/B 80 C	110 A/B 90 C
2-600L150-43	No Uplift	6' 10"	4' 8"	3' 6"
2-600L150-54	No Uplift	7' 9"	5' 3"	4' 0"
2-600L150-68	No Uplift	8' 10"	6' 0"	4' 6"
2-800L150-43	No Uplift	9' 0"	6' 1"	4' 7"
2-800L150-54	No Uplift	10' 2"	6' 11"	5' 3"
2-800L150-68	No Uplift	11' 7"	7' 10"	5' 11"
2-1000L150-43	No Uplift	11' 1"	7' 6"	5' 8"
2-1000L150-54	No Uplift	9' 8"	6' 7"	5' 0"
2-1000L150-68	No Uplift	14' 2"	9' 8"	7' 3"

1 Building width is measured in the direction of horizontal framing members supported by the header.

2 Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang.

3 No uplift loads acting on building for wind speeds up to 80 mph, exposure A/B.

4 Wind speeds are based on fastest mile measurements. When using wind speed maps based on 3 second gust wind speeds, the fastest mile wind speed should be multiplied by a conversion factor of 1.2.

Table 21
Double L-Header Uplift Span Table
Headers Supporting Roof and Ceiling Only
32-Foot-Wide Building^{1, 2}

Double L-Header Designation	Wind Speed ⁴ (mph) and Exposure			
	80 A/B ³ Seismic Zones 0, 1, & 2	90 A/B 70 C	100 A/B 80 C	110 A/B 90 C
2-600L150-43	No Uplift	6' 6"	4' 5"	3' 4"
2-600L150-54	No Uplift	7' 5"	5' 0"	3' 10"
2-600L150-68	No Uplift	8' 5"	5' 9"	4' 4"
2-800L150-43	No Uplift	8' 6"	5' 10"	4' 5"
2-800L150-54	No Uplift	9' 8"	6' 7"	5' 0"
2-800L150-68	No Uplift	11' 0"	7' 6"	5' 8"
2-1000L150-43	No Uplift	10' 6"	7' 2"	5' 5"
2-1000L150-54	No Uplift	9' 3"	6' 3"	4' 9"
2-1000L150-68	No Uplift	13' 6"	9' 2"	6' 11"

1 Building width is measured in the direction of horizontal framing members supported by the header.

2 Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang.

3 No uplift loads acting on building for wind speeds up to 80 mph, exposure A/B.

4 Wind speeds are based on fastest mile measurements. When using wind speed maps based on 3 second gust wind speeds, the fastest mile wind speed should be multiplied by a conversion factor of 1.2.

Table 22
Double L-Header Uplift Span Table
Headers Supporting Roof and Ceiling Only
36-Foot-Wide Building^{1, 2}

Double L-Header Designation	Wind Speed ⁴ (mph) and Exposure			
	80 A/B ³ Seismic Zones 0, 1, & 2	90 A/B 70 C	100 A/B 80 C	110 A/B 90 C
2-600L150-43	No Uplift	6' 3"	4' 2"	3' 3"
2-600L150-54	No Uplift	7' 0"	4' 9"	3' 8"
2-600L150-68	No Uplift	8' 0"	5' 4"	4' 2"
2-800L150-43	No Uplift	8' 2"	5' 5"	4' 3"
2-800L150-54	No Uplift	9' 3"	6' 2"	4' 10"
2-800L150-68	No Uplift	10' 6"	7' 0"	5' 6"
2-1000L150-43	No Uplift	10' 0"	6' 9"	5' 3"
2-1000L150-54	No Uplift	8' 10"	5' 11"	4' 7"
2-1000L150-68	No Uplift	12' 11"	8' 7"	6' 9"

1 Building width is measured in the direction of horizontal framing members supported by the header.

2 Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang.

3 No uplift loads acting on building for wind speeds up to 80 mph, exposure A/B.

4 Wind speeds are based on fastest mile measurements. When using wind speed maps based on 3 second gust wind speeds, the fastest mile wind speed should be multiplied by a conversion factor of 1.2.

Table 23
Double L-Header Uplift Span Table
Headers Supporting Roof and Ceiling Only
40-Foot-Wide Building^{1, 2}

Double L-Header Designation	Wind Speed ⁴ (mph) and Exposure			
	80 A/B ³ Seismic Zones 0, 1, & 2	90 A/B 70 C	100 A/B 80 C	110 A/B 90 C
2-600L150-43	No Uplift	6' 0"	4' 0"	3' 0"
2-600L150-54	No Uplift	6' 9"	4' 6"	3' 5"
2-600L150-68	No Uplift	7' 8"	5' 2"	3' 11"
2-800L150-43	No Uplift	7' 10"	5' 3"	4' 0"
2-800L150-54	No Uplift	8' 10"	5' 11"	4' 6"
2-800L150-68	No Uplift	10' 0"	6' 9"	5' 1"
2-1000L150-43	No Uplift	9' 7"	6' 6"	4' 11"
2-1000L150-54	No Uplift	8' 5"	5' 8"	4' 4"
2-1000L150-68	No Uplift	12' 4"	8' 4"	6' 3"

1 Building width is measured in the direction of horizontal framing members supported by the header.

2 Design assumptions:

Roof and ceiling dead load = 12 psf; Attic live load = 10 psf; 2 foot roof overhang.

3 No uplift loads acting on building for wind speeds up to 80 mph, exposure A/B.

4 Wind speeds are based on fastest mile measurements. When using wind speed maps based on 3 second gust wind speeds, the fastest mile wind speed should be multiplied by a conversion factor of 1.2.

References

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