

# Joint Evaluation Report



## ESR-1305

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**DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES**

**Section: 06 17 33—Wood I-Joists**

### REPORT HOLDER:

LOUISIANA-PACIFIC CORPORATION

### EVALUATION SUBJECT:

LP® SOLIDSTART® I-JOISTS

### 1.0 EVALUATION SCOPE

#### Compliance with the following codes:

- 2021, 2018, 2015 and 2012 *International Building Code*® (IBC)
- 2021, 2018, 2015 and 2012 *International Residential Code*® (IRC)

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see [ESR-1305 LABC and LARC Supplement](#).

#### Properties evaluated:

- Structural
- Sound ratings
- Fire-resistance ratings

### 2.0 USES

LP® SolidStart® I-Joists are used as, but not limited to, floor joists, roof joists, blocking panels and rim joists.

LP® SolidStart® I-Joists described in this report comply with Section 2303.1.2 of the IBC and Section R502.1.2 of the 2021, 2018 and 2015 IRC (Section R502.1.4 of the 2012 IRC), for allowable stress design.

### 3.0 DESCRIPTION

#### 3.1 General:

LP® SolidStart® I-Joists are prefabricated wood I-Joists and have sawn lumber or laminated veneer lumber (LVL) flanges and a single web as specified in the quality documentation that contains the manufacturing standards. The top and bottom flanges are parallel, creating constant-depth joists. Web sections are end-joined together to form a continuous web. Web end joints must be of the types specified in the quality documentation. The web-to-flange connection is a proprietary grooved connection, also conforming to the quality documentation.

LP® SolidStart® I-Joists are available in various lengths and depths, and are produced in the configurations shown in Table 1.

#### 3.2 Material Specifications:

**3.2.1 Flanges:** Flange material is either sawn lumber or laminated veneer lumber that meets the requirements noted in the quality documentation. Flange material and sizes are listed in Table 1.

**3.2.2 Web:** Web material is oriented strand board (OSB) that complies with U.S. Voluntary Product Standard PS 2 and the quality documentation. Web thickness is listed in Table 1.

**3.2.3 Adhesives:** Adhesives are exterior wet-use types complying with ASTM D2559 and ASTM D7247, and are of the types specified in the quality documentation.

### 4.0 DESIGN AND INSTALLATION

Design of the prefabricated wood I-Joists described in this report is governed by the ANSI/AWC *National Design Specification*® for Wood Construction (NDS), and the applicable code. Additionally, the design and installation of the prefabricated wood I-Joists must comply with Sections 4.1 through 4.7, Tables 2 through 11, Figures 1 and 2, and the manufacturer's published installation instructions. LP® SolidStart® I-Joists may also be used as floor joists in fire-resistance-rated and sound-rated floor-ceiling assemblies as described in Sections 4.8 and 4.9, and in Figures 3, 4, 5 and 6.

#### 4.1 Reference Design Values:

The reference design moment ( $M_r$ ), vertical shear ( $V_r$ ), bending stiffness ( $EI$ ), and shear stiffness coefficient ( $K$ ) are given in Table 2. Reference design reactions ( $R_r$ ) and flange bearing capacities are given in Table 3. Adjustments to the reference design values must be made as applicable, in accordance with Sections 4.1.1 through 4.1.5, and corresponding requirements must be met.

**4.1.1 Duration of Load:** Tabulated reference design values and capacities of Tables 2 and 3 are for normal load duration. Adjustments for other durations of load must be in accordance with Section 7.3.2 of the NDS. Reference design reaction values are permitted to be adjusted for other load durations in accordance with the NDS, provided the Flange Compression Perpendicular-to-Grain values, as given in Table 3, are not exceeded. Tabulated Flange Compression Perpendicular-to-grain Values must not be increased by a load duration factor,  $C_D$ .

**4.1.2 Wet Service Factor:** LP® SolidStart® I-Joists must be installed in dry, well-ventilated interior applications in

which the in-service moisture content of lumber does not exceed 16 percent. The wet service factor,  $C_M$ , is 1.0 when the requirements of this section are met.

**4.1.3 Temperature Factor:** Adjustments for sustained exposure to elevated temperatures between 100°F and 150°F must be in accordance with Section 7.3.4 of the NDS.

**4.1.4 Beam Stability:** Continuous lateral support must be provided for the compression flange, and the I-Joists must be restrained against lateral movement and rotation at all supports. Methods specified in the applicable code for lateral support of sawn lumber are acceptable. Bridging is not required for floor and roof joist applications, unless specified as the method for providing lateral support for the compression flange, or unless otherwise required by the applicable code. The beam stability factor,  $C_L$ , is 1.0 when the requirements of this section are met.

**4.1.5 Repetitive Member Use:** The repetitive member use factor,  $C_r$ , applicable to the reference design moments given in Table 2, must be limited to 1.0.

#### 4.2 Fasteners:

The design of fasteners driven into the flanges of LP® SolidStart® I-Joists must comply with the applicable code and this Section. Table 5 specifies the equivalent specific gravity of the flanges for fastener design. Table 6 specifies the nail spacing and end and edge distances for nails into the wide face of the I-Joist flanges.

Table 7 specifies the limitations on the allowable lateral design values for LP® SolidStart® I-Joists used as framing members in horizontal wood structural panel diaphragms.

#### 4.3 Web Stiffeners and Web Fillers:

**4.3.1 Web Stiffeners:** The material, size, and attachment of web reinforcement must be as illustrated and described in Figure 1 and Table 4. Web stiffeners are required to develop the “End Reaction” and “Interior Reaction” capacities in Table 2 in cases where the table says “YES” for web stiffeners. Web stiffeners are also required for a Bird’s Mouth cut.

**4.3.2 Web Fillers:** Web fillers (web stiffeners that fill out the web cavity to provide a surface that is flush with the edges of the flanges) are required for any of the following conditions:

- At birds mouth cut locations.
- Where sloped joist hangers support I-Joists.
- Where joist hangers do not laterally support the I-Joist’s top flange.

#### 4.4 Holes in I-joist Web:

The size and placement of holes cut into the webs of LP® SolidStart® I-Joists must be in accordance with Figure 2 and Tables 8A, 8B, 9A and 9B. Alternately, the allowable shear at the location of circular and rectangular web holes ( $V_{\text{hole}}$ ) may be calculated as function of the I-joist depth ( $D$ ), the height of the hole ( $H$ ) and, for rectangular holes, the width of the hole ( $W$ ), using the equation and constants given in Table 10. The allowable shear for obround holes is a fixed value for a specific series and depth as specified in Table 11. The design for shear at web holes must account for partial span loading in accordance with Section 7.4.3 of the NDS.

#### 4.5 Member Spans:

I-joist span must be determined in accordance with Section 3.2.1 of the NDS, and the applicable code. Shear calculations must include all loads within the design span.

#### 4.6 Deflection:

Total I-joist deflection must be calculated by using the

formula for deflection due to both bending and shear as follows:

For example, for a simply supported joist with uniformly distributed loads:

$$\Delta = \frac{22.5 WL^4}{EI} + \frac{WL^2}{K}$$

and for a simply supported joist with a concentrated load at midspan:

$$\Delta = \frac{36 PL^3}{EI} + \frac{PL}{K}$$

where:

$W$  is the uniform load, in pounds per lineal foot.

$L$  is the design span, in feet.

$EI$  is the flexural stiffness, provided in Table 2.

$P$  is the concentrated load, in pounds.

$K$  is the shear stiffness coefficient, provided in Table 2.

$\Delta$  is the deflection, in inches.

#### 4.7 Blocking Panels and Rim Joists:

Vertical and lateral loads from bearing, brace, and shear walls crossing (not parallel to) a wood I-joist floor or roof framing system must be transferred through the framing system utilizing rim board, blocking panels, or squash blocks (vertical loads only).

LP® SolidStart® I-Joists may be used as rim joists (rim board) and blocking panels for the following applications subject to the allowable loads and limitations in Table 12:

- Transfer, from bearing, shear, and/or brace walls above, to continuous support below, all vertical and lateral loads at the rim board location.
- Provide diaphragm attachment (sheathing to top of rim board).
- Provide lateral support to floor or roof joists (resistance to joist end rotation).

#### 4.8 I-Joists Used in Fire-resistance-rated Floor and Roof Assemblies:

One-hour fire-resistance-rated floor-ceiling assemblies are described in Figures 3, 4 and 5, while a two-hour fire-resistance-rated floor-ceiling assembly is shown in Figure 6. LP® SolidStart® I-Joists may also be used in assemblies 21, and 23 through 28, and 30, as listed in 2021, 2018 and 2015 IBC Table 721.1(3); assemblies 21 and 23 through 28, as listed in 2012 IBC Table 720.1(3); and those assemblies containing wood I-Joists that qualify under footnote  $q$  of 2021, 2018 and 2015 IBC Table 721.1(3), and 2012 IBC Table 720.1(3).

#### 4.9 Fire Protection of Floors:

LP® SolidStart® I-Joists may be used in the fire protection assemblies described in Section 4.3 of ICC-ES evaluation report [ESR-1405](#), to meet the provisions of 2021, 2018 and 2015 IRC Section R302.13 (Section R501.3 of the 2012 IRC).

#### 4.10 Sound Ratings:

The assembly described in Figure 3 has the sound transmission and impact insulation classification noted in that figure.

### 5.0 CONDITIONS OF USE

The LP® SolidStart® I-Joists described in this report comply with, or are suitable alternatives to what is specified in, those codes specifically listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 LP® SolidStart® I-Joists must be designed and installed in accordance with this report, the approved construction documents and the manufacturer's installation instructions, which must be available at job site at all times during installation. In the event of a conflict, the most stringent requirement governs. Information provided in Figures 1 through 6 and Tables 1 through 12 must be confirmed for applicability for each project. Engineering calculations and drawings including design details demonstrating that the LP® SolidStart® I-Joists comply with this report must be submitted to the code official when requested. The calculations and drawings including design details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.2 No cutting or notching of joist flanges is permitted.
- 5.3 Deflections must be limited as set forth in the applicable code, using design properties in Table 2.
- 5.4 Where a one-hour or two-hour fire-resistance rating is required, construction must comply with Section 4.8.
- 5.5 LP® SolidStart® I-Joists must be installed in dry, well-ventilated interior applications in which the in-service moisture content of lumber does not exceed 16 percent.
- 5.6 LP® SolidStart® I-Joists are manufactured at the Louisiana-Pacific Corporation Engineered Wood Products facilities in Red Bluff, California; Larouche, Quebec, Canada; and St. Prime, Quebec, Canada under a quality control program with inspections by ICC-ES and APA—The Engineered Wood Association (AA-649).

## 6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Prefabricated Wood I-Joists (AC14), dated June 2019 (editorially revised February 2021).
- 6.2 Data in accordance with the ICC-ES Acceptance Criteria for Rim Board Products (AC124), dated June 2019 (editorially revised February 2021).
- 6.3 Reports of fire tests conducted in accordance with ASTM E119.
- 6.4 Reports of sound transmission tests conducted in accordance with ASTM E90 and E492.

## 7.0 IDENTIFICATION

- 7.1 LP® SolidStart® I-Joists are identified with the Louisiana-Pacific Corporation name; the joist series; the inspection agency name (APA—The Engineered Wood Association); the evaluation report number (ESR-1305); the mill number; and the date of fabrication.
- 7.2 The report holder's contact information is the following:

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TABLE 1—LP® SolidStart® I-JOIST CONFIGURATIONS

JOIST SERIES	FLANGE SIZE WIDTH x DEPTH (inches)	NOMINAL FLANGE WIDTH <sup>1</sup> (inches)	MINIMUM WEB THICKNESS (inch)	JOIST DEPTH RANGE (inches)
<b>SAWN LUMBER FLANGES</b>				
LPI® 18	2½ x 1½	3	¾	9½ to 16
LPI 20Plus	2½ x 1½	3	¾	9½ to 16
LPI 20x4	3½ x 1½	3	¾	9½ to 16
LPI 32Plus	2½ x 1½	3	¾	9½ to 16
LPI 42Plus	3½ x 1½	3	¾	9½ to 16
		3	7/16	18 to 24
LPI 52Plus	3½ x 1½	3	7/16	9½ to 24
<b>LVL FLANGES</b>				
LPI 26	1½ x 1½	na <sup>2</sup>	¾	9½ to 117/8
LPI 30	1¾ x 1½	2	¾	9½ to 16
LPI 36	2¼ x 1½	3	¾	117/8 to 24
LPI 56	3½ x 1½	3	7/16	117/8 to 24
LPI 450	1¾ x 15/16	2	¾	9½ to 16
LPI 530	21/16 x 15/16	2	¾	9½ to 16

For SI: 1 in = 25.4 mm.

<sup>1</sup>Nominal flange width designates the equivalent minimum nominal width of framing members at adjoining panel edges and boundaries for use in horizontal wood structural panel diaphragms framed with LP® SolidStart® I-Joists as shown in Table 7.

<sup>2</sup>The LPI 26 series I-Joists have not been evaluated for use in diaphragms.

TABLE 2—REFERENCE DESIGN VALUES FOR LP® SolidStart® I-JOISTS<sup>1,2,3,4</sup>

JOIST SERIES	JOIST DEPTH (in)	MOMENT, M <sub>r</sub> (lbf-ft)	EI (x10 <sup>6</sup> lbf-in <sup>2</sup> )	SHEAR, V <sub>r</sub> (lbf)	SHEAR STIFFNESS COEFF., K (x10 <sup>6</sup> lbf-ft./in)
<b>SAWN LUMBER FLANGES</b>					
LPI 18	9½	2365	142	1130	0.355
	117/8	3100	248	1335	0.435
	14	3720	371	1510	0.508
	16	4230	514	1680	0.577
LPI 20Plus LPI 20x4	9½ <sup>5</sup>	2810	185	1260	0.358
	117/8 <sup>5</sup>	3755	318	1485	0.438
	14 <sup>5</sup>	4400	474	1680	0.512
	16 <sup>5</sup>	5050	652	1870	0.582
LPI 32Plus	9½ <sup>6</sup>	3620	243	1260	0.213
	117/8 <sup>6</sup>	4690	406	1485	0.267
	14 <sup>6</sup>	5645	589	1680	0.313
	16 <sup>6</sup>	6545	791	1870	0.358
LPI 42Plus	9½	5375	321	1340	0.412
	117/8 <sup>7</sup>	6965	547	1625	0.515
	14 <sup>7</sup>	8390	802	1875	0.607
	16 <sup>7</sup>	9725	1092	2115	0.693
	18	11000	1333	2555	0.960
	20	12170	1688	2795	1.067
	24	14480	2534	3270	1.280
LPI 52Plus	9½	6540	356	1745	0.507
	117/8	8475	600	2055	0.633
	14	10205	874	2330	0.747
	16	11835	1183	2585	0.853
	18	13380	1540	2845	0.960
	20	14810	1948	3105	1.067
	24	17615	2919	3620	1.280

For SI: 1 inch = 25.4 mm, 1 ft-lb = 1.356 N-m, 1 lb = 4.448 N, 1 in<sup>2</sup>-lb = 0.00287 N-m<sup>2</sup>.

See Notes for Table 2 on the following page.

TABLE 2 (Continued)—REFERENCE DESIGN VALUES FOR LP® SolidStart® I-JOISTS<sup>1,2,3,4</sup>

JOIST SERIES	JOIST DEPTH (in)	MOMENT, M <sub>r</sub> (lbf-ft)	EI (x10 <sup>6</sup> lbf-in <sup>2</sup> )	SHEAR, V <sub>r</sub> (lbf)	SHEAR STIFFNESS COEFF., K (x10 <sup>6</sup> lbf-ft./in)
<b>LVL FLANGES</b>					
LPI 26	9 <sup>1</sup> / <sub>2</sub>	3250	165	1125	0.368
	11 <sup>7</sup> / <sub>8</sub>	4205	286	1425	0.447
LPI 30	9 <sup>1</sup> / <sub>2</sub>	3825	199	1125	0.357
	11 <sup>7</sup> / <sub>8</sub>	4950	334	1425	0.451
	14	5960	484	1725	0.541
	16	6910	650	1980	0.613
LPI 36	11 <sup>7</sup> / <sub>8</sub>	6445	429	1615	0.468
	14	7755	622	1830	0.550
	16	8995	836	2020	0.625
	18	10135	1082	2185	0.700
	20	11270	1360	2320	0.774
	22	12390	1669	2435	0.850
LPI 56	11 <sup>7</sup> / <sub>8</sub>	10170	668	2055	0.549
	14	12250	968	2330	0.641
	16	14205	1301	2585	0.729
	18	16010	1684	2845	0.817
	20	17800	2115	3105	0.905
	22	19575	2597	3360	0.993
LPI 450	14	21340	3127	3620	1.081
	9 <sup>1</sup> / <sub>2</sub>	3350	170	1230	0.473
	11 <sup>7</sup> / <sub>8</sub>	4320	286	1430	0.585
	16	5120	419	1605	0.686
LPI 530	16	5860	569	1775	0.782
	9 <sup>1</sup> / <sub>2</sub>	4000	200	1340	0.478
	11 <sup>7</sup> / <sub>8</sub>	5150	337	1565	0.591
	14	6110	492	1765	0.693
	16	6990	666	1955	0.789

For **SI**: 1 inch = 25.4 mm, 1 ft-lb = 1.356 N-m, 1 lb = 4.448 N, 1 in<sup>2</sup>-lb = 0.00287 N-m<sup>2</sup>.

<sup>1</sup>The allowable design values are for dry use conditions only. Dry use applies to products installed in dry, covered and well ventilated interior conditions, in which the in-service moisture content of lumber does not exceed 16%.

<sup>2</sup>Reference design values are for normal load duration. Adjustments to the reference design values must be made as applicable, in accordance with Sections 4.1.1 through 4.1.5 of this report, and corresponding requirements must be met.

<sup>3</sup>When calculating deflection, both bending and shear deformation must be determined (See Section 4.6). For bending deflection use the standard engineering formulas.

Example: Formula for uniform load on a simple span I-joist:

$$\Delta = \frac{22.5WL^4}{EI} + \frac{WL^2}{K}$$

- Where:
- Δ = Deflection in inches.
  - W = Uniform load in pounds per lineal foot (plf).
  - L = Design span in feet.
  - K = Shear stiffness coefficient in x10<sup>6</sup> lbf-ft/in.
  - EI = Flexural stiffness in x10<sup>6</sup> lbf-in.<sup>2</sup>.

<sup>4</sup>For reference design reaction values, see Table 3.

<sup>5</sup>The 9<sup>1</sup>/<sub>2</sub>, 11<sup>7</sup>/<sub>8</sub>, 14 and 16 inch LPI 20Plus stamped with mill number 1068 (Larouche, QC), and the 9<sup>1</sup>/<sub>2</sub>, 11<sup>7</sup>/<sub>8</sub>, and 14 inch LPI 20Plus stamped with mill number 1077 (St. Prime, QC) shall be permitted to be designed as the PRI-40 I-joists in accordance with ESR-1405.

<sup>6</sup>The 9<sup>1</sup>/<sub>2</sub>, 11<sup>7</sup>/<sub>8</sub>, 14 and 16 inch LPI 32Plus stamped with mill number 1068 (Larouche, QC), and the 9<sup>1</sup>/<sub>2</sub>, 11<sup>7</sup>/<sub>8</sub>, and 14 inch LPI 32Plus stamped with mill number 1077 (St. Prime, QC) shall be permitted to be designed as the PRI-60 I-joists in accordance with ESR-1405.

<sup>7</sup>The 11<sup>7</sup>/<sub>8</sub>, 14 and 16 inch LPI 42Plus stamped with mill number 1068 (Larouche, QC) or 1069 (Red Bluff, CA), and the 11<sup>7</sup>/<sub>8</sub> and 14 inch LPI 42Plus stamped with mill number 1077 (St. Prime, QC) are recognized as the PRI-80 in accordance with ESR-1405.

TABLE 3—REFERENCE DESIGN REACTIONS AND FLANGE BEARING CAPACITIES<sup>1,2,3,4</sup>

JOIST SERIES	JOIST DEPTH (in)	END REACTION (lbf)				INTERMEDIATE REACTION (lbf)				FLANGE COMPRESSION PERP-TO-GRAIN (psi)	
		Minimum Bearing		Minimum Bearing Length (in)	Maximum Bearing (4 in.)		Minimum Bearing <sup>5</sup> (3 1/2 in.)		Maximum Bearing (5 1/2 in.)		
		Web Stiffeners			Web Stiffeners		Web Stiffeners		Web Stiffeners		
		NO	YES <sup>6</sup>	NO	YES <sup>6</sup>	NO	YES <sup>6</sup>	NO	YES <sup>6</sup>		
<b>SAWN LUMBER FLANGES</b>											
LPI 18	9 1/2	870	1025	1 1/2	995	1130	1975	2135	2205	2370	425
	11 7/8	870	1145		1040	1335	2095	2270	2335	2545	
	14	870	1255		1080	1510	2205	2395	2450	2700	
	16	870	1355		1115	1680	2310	2515	2565	2855	
LPI 20Plus, LPI 20x4	9 1/2 <sup>8</sup>	970	1140	1 1/2	1110	1260	2195	2375	2450	2635	425
	11 7/8 <sup>8</sup>	970	1275		1160	1485	2330	2525	2595	2830	
	14 <sup>8</sup>	970	1395		1200	1680	2455	2665	2725	3005	
	16 <sup>8</sup>	970	1510		1240	1870	2570	2795	2850	3175	
LPI 32Plus	9 1/2 <sup>9</sup>	970	1140	1 1/2	1110	1260	2195	2375	2450	2635	525
	11 7/8 <sup>9</sup>	970	1275		1160	1485	2330	2525	2595	2830	
	14 <sup>9</sup>	970	1395		1200	1680	2455	2665	2725	3005	
	16 <sup>9</sup>	970	1510		1240	1870	2570	2795	2850	3175	
LPI 42Plus	9 1/2	1185	1340	1 1/2	1305	1340	2900	3095	2940	3195	525 <sup>7</sup>
	11 7/8 <sup>10</sup>	1245	1510		1595	1625	3025	3340	3120	3515	
	14 <sup>10</sup>	1300	1660		1595	1875	3140	3565	3280	3805	
	16 <sup>10</sup>	1350	1800		1595	2115	3245	3775	3435	4080	
	18	1500	2305	2 1/2	1690	2555	3450	4285	3850	4625	
	20	1500	2450		1690	2795	3450	4410	3850	4835	
	22	1500	2595		1690	3030	3450	4530	3850	5030	
	24	1500	2705		1690	3270	3450	4640	3850	5210	
LPI 52Plus	9 1/2	1335	1650	1 1/2	1600	1745	3400	3710	3515	3840	615
	11 7/8	1370	1820		1690	2055	3420	4000	3635	4210	
	14	1385	1970		1845	2330	3435	4260	3745	4540	
	16	1400	2110		1985	2585	3450	4505	3850	4855	
	18	1700	2490	2 1/2	2130	2845	3450	4750	3850	5165	
	20	1700	2675		2130	3105	3450	4990	3850	5475	
	22	1700	2865		2130	3360	3450	5235	3850	5790	
	24	1700	3055		2130	3620	3450	5480	3850	6100	

For SI: 1 inch = 25.4 mm, 1 lb = 4.448 N, 1 lb/in = 0.175 N/mm.

See Notes for Table 3 on the following page.

TABLE 3 (Continued)—REFERENCE DESIGN REACTIONS AND FLANGE BEARING CAPACITIES<sup>1,2,3,4</sup>

JOIST SERIES	JOIST DEPTH (in)	END REACTION (lbf)					INTERMEDIATE REACTION (lbf)				FLANGE COMPRESSION PERP-TO-GRAIN (psi)
		Minimum Bearing		Minimum Bearing Length (in)	Maximum Bearing (4 in.)		Minimum Bearing <sup>5</sup> (3 1/2 in.)		Maximum Bearing (5 1/2 in.)		
		Web Stiffeners			Web Stiffeners		Web Stiffeners		Web Stiffeners		
		NO	YES <sup>6</sup>	NO	YES <sup>6</sup>	NO	YES <sup>6</sup>	NO	YES <sup>6</sup>		
<b>LVL FLANGES</b>											
LPI 26	9 1/2	800	1075	1 1/2	980	1115	1790	2065	2120	2390	550
	11 7/8	800	1170		1015	1290	1860	2185	2180	2465	
LPI 30	9 1/2	840	1100	1 1/2	1040	1230	1855	2085	2195	2415	550
	11 7/8	840	1210		1070	1430	1920	2230	2255	2510	
	14	840	1305		1100	1605	1985	2360	2305	2595	
	16	840	1395		1125	1775	2045	2485	2360	2680	
LPI 36	11 7/8	1025	1500	1 1/2	1290	1615	2500	3105	2835	3470	550
	14	1025	1515		1325	1830	2500	3205	2835	3565	
	16	1025	1525		1360	2020	2500	3305	2835	3655	
	18	1175	1800	2 1/2	1395	2185	2500	3405	2835	3750	
	20	1185	1860		1430	2320	2500	3500	2835	3840	
	22	1200	1915		1465	2435	2500	3600	2835	3930	
	24	1215	1960		1500	2525	2500	3700	2835	4025	
LPI 56	11 7/8	1145	1660	1 1/2	1515	2055	3130	3860	3670	4060	550
	14	1145	1755		1535	2330	3130	4055	3670	4300	
	16	1145	1845		1555	2585	3130	4245	3670	4525	
	18	1315	2300	2 1/2	1575	2845	3130	4435	3670	4750	
	20	1325	2455		1595	3105	3130	4620	3670	4975	
	22	1335	2610		1615	3360	3130	4810	3670	5200	
	24	1340	2770		1635	3620	3130	5000	3670	5430	
LPI 450	9 1/2	840	1100	1 1/2	1040	1230	1855	2085	2195	2415	550
	11 7/8	840	1210		1070	1430	1920	2230	2255	2510	
	14	840	1305		1100	1605	1985	2360	2305	2595	
	16	840	1395		1125	1775	2045	2485	2360	2680	
	9 1/2	880	1125		1 1/2	1095	1340	2065	2300	2265	
11 7/8	880	1245	1120	1565		2120	2485	2400	2735		
14	880	1350	1145	1765		2165	2655	2525	2945		
16	880	1450	1165	1955		2210	2810	2640	3140		

For SI: 1 inch = 25.4 mm, 1 lb = 4.448 N, 1 lb/in = 0.175 N/mm.

<sup>1</sup>The reference design values are for dry conditions of use only. Dry use applies to products installed in dry covered and well ventilated interior conditions in which the in-service moisture content of lumber does not exceed 16%.

<sup>2</sup>Reference design values are for normal load duration. Adjustments to the tabulated reference design reaction values must be made as applicable, in accordance with Sections 4.1.1 through 4.1.5 of this report, and corresponding requirements must be met. Reference design reaction values are permitted to be adjusted for other load durations in accordance with the code, provided the tabulated flange compression perpendicular-to grain values are not exceeded. Tabulated flange compression perpendicular-to-grain values must not be increased for duration of load.

<sup>3</sup>The applied flange compression perpendicular-to-grain stress must be calculated based on the reaction divided by the bearing length and net flange width. To determine the net flange width, subtract 0.25 inches from the flange width of the LPI 18, LPI 20Plus, LPI 20x4, LPI 32Plus, LPI 42Plus, and LPI 52Plus, or subtract 0.10 inches from the flange width of the LPI 26, LPI 30, LPI 36, LPI 56, LPI 450 and LPI 530. The applied flange compression perpendicular-to-grain based on net flange width must also not exceed the bearing capacity of the supporting material.

<sup>4</sup>Reaction Capacity may be linearly interpolated between the minimum and maximum bearing length values. Bearing lengths longer than the maximum do not further increase Reaction Capacity.

<sup>5</sup>For all series except the LPI 26 and LPI 30, the Intermediate Reaction may be linearly extrapolated a minimum bearing length of 3 inches, based on the 3 1/2-inch and 5 1/2-inch values.

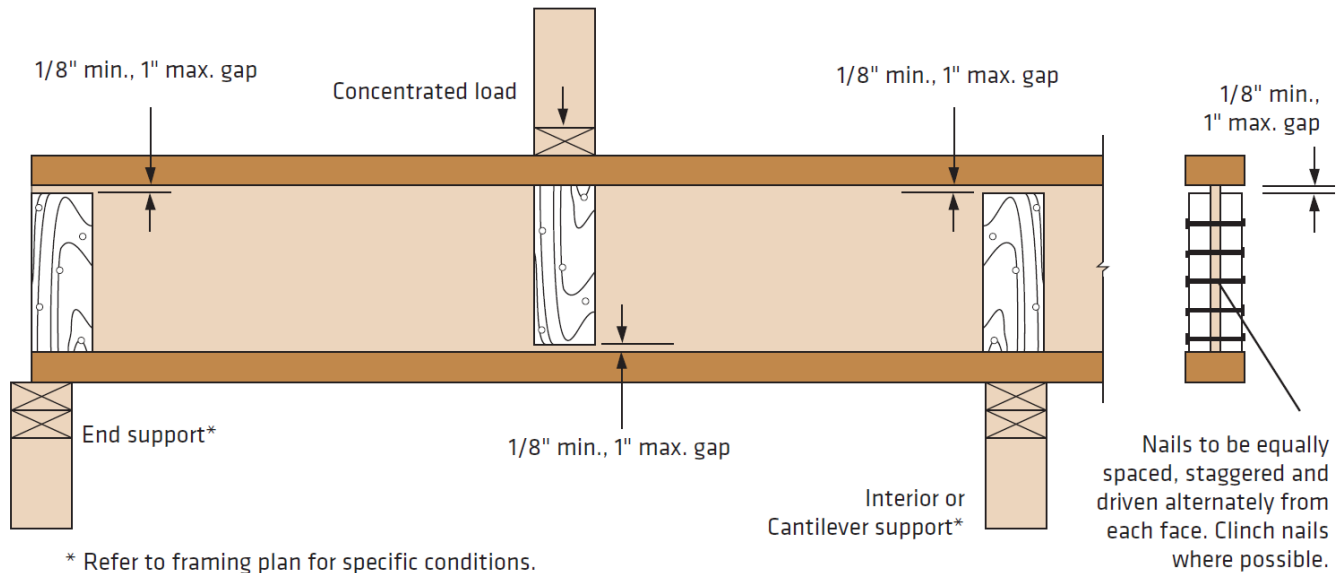
<sup>6</sup>See Figure 1 for required web stiffener details.

<sup>7</sup>The reference design compression perpendicular-to-grain of flanges of the LPI 42Plus stamped with mill number 1069 (Red Bluff, CA) is permitted to be increased to 615 psi.

<sup>8</sup>The 9 1/2, 11 7/8, 14 and 16 inch LPI 20Plus stamped with mill number 1068 (Larouche, QC), and the 9 1/2, 11 7/8 and 14 inch LPI 20Plus stamped with mill number 1077 (St. Prime, QC) shall be permitted to be designed as the PRI-40 in accordance with ESR-1405.

<sup>9</sup>The 9 1/2, 11 7/8, 14 and 16 inch LPI 32Plus stamped with mill number 1068 (Larouche, QC), and the 9 1/2, 11 7/8, and 14 inch LPI 32Plus stamped with mill number 1077 (St. Prime, QC) shall be permitted to be designed as the PRI-60 I-joists in accordance with ESR-1405.

<sup>10</sup>The 11 7/8, 14 and 16 inch LPI 42Plus stamped with mill number 1068 (Larouche, QC) or 1069 (Red Bluff, CA), and the 11 7/8 and 14 inch LPI 42Plus stamped with mill number 1077 (St. Prime, QC) are recognized as the PRI-80 in accordance with ESR-1405.



\* Refer to framing plan for specific conditions.

For SI: 1 in. = 25.4 mm

- <sup>1</sup>Web stiffeners, when required, must be installed in pairs – one to each side of the web. In addition to the requirements noted in Table 3.
- <sup>2</sup>Web stiffeners should be cut to fit between the flanges of the I-joist, leaving a minimum 1/8-inch gap (1-inch maximum). At bearing locations, the stiffeners should be installed tight to the bottom flange with the gap to the top flange. At locations of concentrated loads, the stiffeners should be installed tight to the top flange with the gap to the bottom flange.
- <sup>3</sup>Web stiffeners should be cut from APA Rated (or equal) OSB or plywood, or from 2x lumber or structural composite lumber.
- <sup>4</sup>Web stiffeners should be the same width as the bearing surface, with a minimum of 3 1/2 inches.
- <sup>5</sup>See Table 4 for minimum stiffener thickness, maximum stiffener height, nail size and total number of nails for each pair of stiffeners.
- <sup>6</sup>Nails must be equally spaced, staggered and driven alternately from each face.

FIGURE 1—I-JOIST WEB STIFFENER DETAILS

TABLE 4—WEB STIFFENER SCHEDULE

JOIST DEPTH	MAXIMUM STIFFENER HEIGHT	JOIST SERIES						
		SAWN LUMBER FLANGES		LVL FLANGES				
		LPI 18 LPI 20Plus LPI 32Plus	LPI 20x4 LPI 42Plus LPI 52Plus	LPI 26	LPI 30	LPI 36	LPI 56	LPI 450 LPI 530
		MINIMUM STIFFENER THICKNESS						
		23/32"	1 1/2"	15/32"	23/32"	23/32"	1 1/2"	23/32"
		NAIL SIZE						
8d Box (2 1/2" x 0.113")	10d Box (3" x 0.128")	8d Box (2 1/2" x 0.113")			10d Box (3" x 0.128")	8d Box (2 1/2" x 0.113")		
TOTAL NAILS REQUIRED								
9 1/2"	6 3/8"	3	3	3	3	-	-	3
11 7/8"	8 3/4"	3	3	3	3	4	4	3
14"	10 7/8"	3	3	-	4	5	5	3
16"	12 7/8"	3	3	-	4	6	6	3
18"	14 7/8"	-	7	-	-	7	7	-
20"	16 7/8"	-	8	-	-	8	8	-
22"	18 7/8"	-	9	-	-	9	9	-
24"	20 7/8"	-	10	-	-	10	10	-

For SI: 1 in = 25.4 mm.



TABLE 5—EQUIVALENT SPECIFIC GRAVITY FOR DESIGN OF NAIL CONNECTIONS

JOIST SERIES	WITHDRAWAL		DOWEL BEARING	
	Installed in Edge	Installed in Face	Installed in Edge	Installed in Face
<b>SAWN LUMBER FLANGES<sup>1</sup></b>				
LPI 18, LPI 20Plus, LPI 20x4	0.42 (SPF lumber)			
LPI 32Plus LPI 42Plus	0.46 <sup>3</sup> (SPF MSR lumber with E = 1.8 to 1.9)			
LPI 52Plus	0.50 (SPF MSR lumber with E = 2.0 and higher)			
<b>LVL FLANGES<sup>2</sup></b>				
LPI 26 LPI 30 LPI 36 LPI 56 LPI 450 LPI 530	0.46	0.50	0.50	0.50

<sup>1</sup>Equivalent specific gravity for sawn lumber flanges is in accordance with the NDS for the lumber grade indicated in the parentheses.

<sup>2</sup>Equivalent specific gravity for LVL flanges is in accordance with Table 2 of ICC-ES report [ESR-2403](#) for LP<sup>®</sup> SolidStart<sup>®</sup> LVL with a grade of 2250F<sub>v</sub>-1.5E and above.

<sup>3</sup>Equivalent specific gravity for flanges of the LPI 42Plus stamped with mill number 1069 (Red Bluff, CA) is permitted to be increased to 0.50.

TABLE 6—FLANGE FACE NAILING <sup>1</sup>

JOIST SERIES	NAIL SIZE	MINIMUM DISTANCE FROM JOIST END	CLOSEST O.C. SPACING
<b>SAWN LUMBER FLANGES <sup>2</sup></b>			
LPI 18 LPI 20Plus LPI 20x4 LPI 32Plus LPI 42Plus LPI 52Plus	8d Box (2 1/2" x 0.113") 8d Common (2 1/2" x 0.131")	1"	2"
	10d Box (3" x 0.128") 12d Box (3 1/4" x 0.128")	1"	2"
	10 Common (3" x 0.148") 12d Common (3 1/4" x 0.148") 16d Sinker (3 1/4" x 0.148")	1 1/2"	3"
	16d Box (3 1/2" x 0.135") 16d Common (3 1/2" x 0.162")	1 1/2"	4"
<b>LVL FLANGES <sup>3</sup></b>			
LPI 26 LPI 30	8d Box (2 1/2" x 0.113") 8d Common (2 1/2" x 0.131")	1 1/2"	3"
	10d Box (3" x 0.128") 12d Box (3 1/4" x 0.128")	1 1/2"	3"
	10 Common (3" x 0.148") 12d Common (3 1/4" x 0.148") 16d Sinker (3 1/4" x 0.148")	1 1/2"	3"
	16d Box (3 1/2" x 0.135") 16d Common (3 1/2" x 0.162")	NA	NA
LPI 36 LPI 56	8d Box (2 1/2" x 0.113") 8d Common (2 1/2" x 0.131")	1 1/2"	3"
	10d Box (3" x 0.128") 12d Box (3 1/4" x 0.128")	1 1/2"	3"
	10 Common (3" x 0.148") 12d Common (3 1/4" x 0.148") 16d Sinker (3 1/4" x 0.148")	1 1/2"	3"
	16d Box (3 1/2" x 0.135") 16d Common (3 1/2" x 0.162")	1 1/2"	5"
LPI 450 LPI 530	8d Box (2 1/2" x 0.113") 8d Common (2 1/2" x 0.131")	1 1/2"	3"
	10d Box (3" x 0.128") 12d Box (3 1/4" x 0.128")	1 1/2"	3"
	10 Common (3" x 0.148") 12d Common (3 1/4" x 0.148") 16d Sinker (3 1/4" x 0.148")	1 1/2"	3"
	16d Box (3 1/2" x 0.135") 16d Common (3 1/2" x 0.162")	1 1/2"	5"

For SI: 1 in = 25.4 mm.

<sup>1</sup>For two rows of nails into the wide face of flanges, the rows must be offset 1/2 inch or more from each other, and staggered.

<sup>2</sup>Nails into the edges of sawn lumber flanges may be spaced in accordance with the provisions in the NDS.

<sup>3</sup>Nails into the edges of LVL lumber flanges must be spaced in accordance with Table 3 of ICC-ES report [ESR-2403](#).

**TABLE 7—ALLOWABLE SHEAR (Pounds Per Foot) FOR HORIZONTAL WOOD STRUCTURAL PANEL DIAPHRAGMS FRAMED WITH LP® SolidStart® I-JOISTS FOR WIND<sup>1</sup> OR SEISMIC LOADING<sup>2,3</sup>**

Panel Grade	Common Nail Size	Minimum Nominal Panel Thickness (in.)	Minimum Nominal Width of Framing Members at Adjoining Panel Edges and Boundaries <sup>4,5</sup> (in.)	BLOCKED DIAPHRAGMS		UNBLOCKED DIAPHRAGMS	
				Nail spacing (in.) at diaphragm boundaries (all cases), at continuous panel edges parallel to load (Cases 3 & 4), and at all panel edges (Cases 5 & 6) <sup>6,7</sup>		Nails Spaced 6 in. max. at supported edges <sup>6</sup>	
				6	4	Case 1 (No unblocked edges or continuous joints parallel to load)	All other configurations (Cases 2, 3, 4, 5 & 6)
				Nail spacing (in.) at other panel edges (Cases 1, 2, 3, & 4) <sup>6</sup>			
				6	6		
Structural 1 Grades	6d <sup>8</sup>	5/16	2	185	250	165	125
			3	210	280	185	140
	8d	3/8	2	270	360	240	180
			3	300	400	265	200
	10d	15/32	2	320	425	285	215
			3	360	480	320	240
Sheathing, single floor and other grades covered in DOC PS 1 and PS 2	6d <sup>8</sup>	5/16	2	170	225	150	110
			3	190	250	170	125
		3/8	2	185	250	165	125
			3	210	280	185	140
	8d	3/8	2	240	320	215	160
			3	270	360	240	180
		7/16	2	255	340	230	170
			3	285	380	255	190
		15/32	2	270	360	240	180
			3	300	400	265	200
	10d	15/32	2	290	385	255	190
			3	325	430	290	215
		19/32	2	320	425	285	215
			3	360	480	320	240

**For SI:** 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 lbf = 4.448 N, 1 lbf/ft = 0.0146 N/mm.

<sup>1</sup>For wind load applications, the values in the table above shall be permitted to be multiplied by 1.4.

<sup>2</sup>For shear loads of normal or permanent load duration as defined by the NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

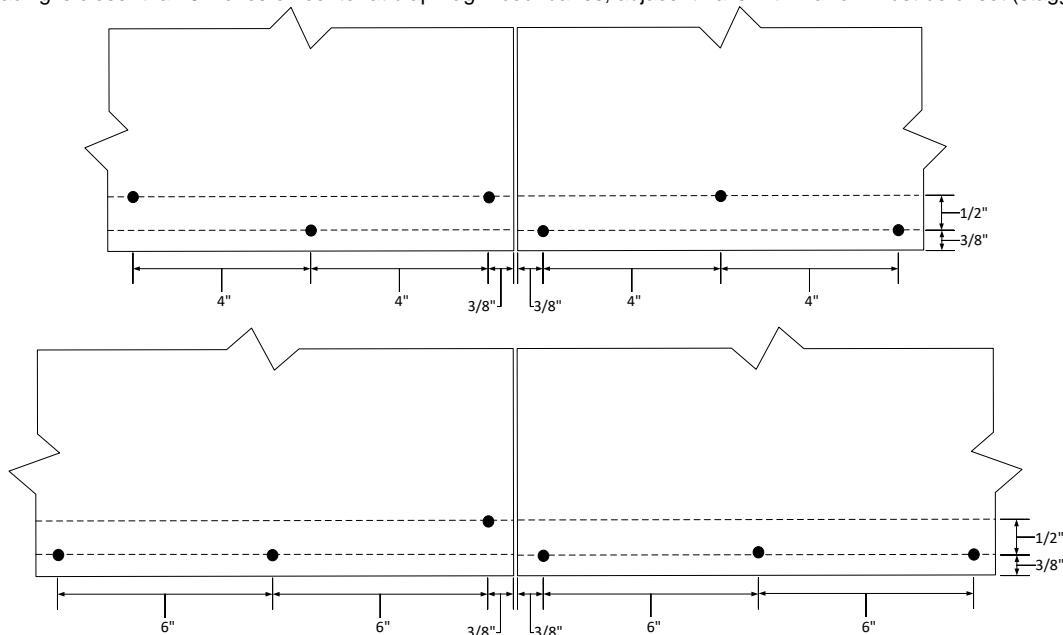
<sup>3</sup>The tabulated allowable shear capacities are for I-Joist series with flanges having a specific gravity (G) of 0.50 or higher (see Table 5). For G < 0.50 the allowable shear capacities shall be reduced by multiplying the allowable shear capacities by the Specific Gravity Adjustment Factor = [1-(0.5-G)]. The Specific Gravity Adjustment Factor shall not be greater than 1.

<sup>4</sup>See Table 1 for equivalent minimum nominal framing width of the flanges for LP® SolidStart® I-Joists.

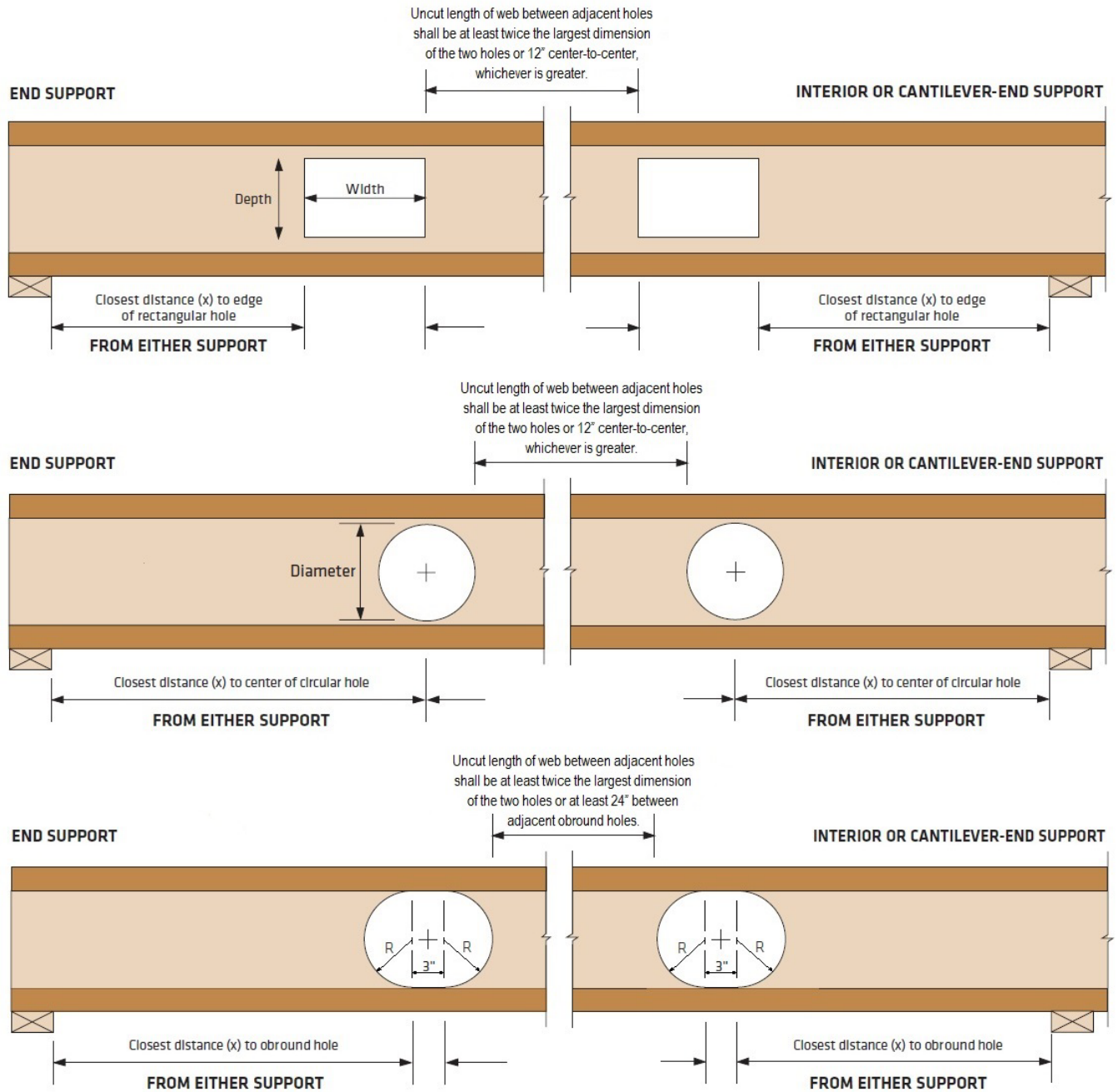
<sup>5</sup>The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.

<sup>6</sup>Space nails maximum 12 inches o.c. along intermediate framing members (6 inches o.c. when supports are spaced 48 inches o.c. or greater). Fasteners shall be located 3/8 inch minimum from panel edges.

<sup>7</sup>When nail spacing is closer than 6 inches on center at diaphragm boundaries, adjacent nails within a row must be offset (staggered) 1/2 inch:



<sup>8</sup>8d common nails minimum are recommended for roofs due to negative pressures of high winds.



**<sup>1</sup>CUT HOLES CAREFULLY. DO NOT OVERCUT HOLES. DO NOT CUT I-JOIST FLANGES.**

<sup>2</sup>Holes may be placed anywhere within the depth of the web. A minimum 1/4-inch clear distance is recommended between the hole and the flanges.

<sup>3</sup>Obround holes are (up to) full web-depth holes with semi-circular ends defined by three overlapping circular holes spaced (up to) 1 1/2 inches apart, center-to-center of the holes. Obround holes are not allowed in the LPI 26, LPI 450 and LPI 530 I-Joists (see Table 10).

<sup>4</sup>Circular holes up to 1 1/2-inch diameter may be placed anywhere in the web.

<sup>5</sup>Perforated “knockouts” may be neglected when locating web holes.

<sup>6</sup>Holes with dimensions larger than 1 1/2 inches are not permitted in cantilevers without special engineering.

<sup>7</sup>Multiple holes must have a minimum clear separation along the length of the joist of at least twice the large dimension of the larger adjacent hole or a minimum center-to-center distance of 12 inches, whichever is greater. In addition, the minimum clear separation between adjacent obround holes must not be less than 24 inches.

<sup>8</sup>Multiple holes may be spaced closer than required in footnote 7 above, provided they fit within the boundary of an acceptable larger hole. Example: two 3-inch round holes aligned parallel to the joist length may be spaced 2 inches apart (clear distance) provided that a 3-inch-high-by-8-inch-long rectangular, or an 8-inch-diameter circular hole are acceptable for the joist depth at that location and completely encompass the holes.

<sup>9</sup>Except as noted in 4, web holes cannot be located any closer than 1 foot from the inside face of the closest bearing to the critical location of the hole (see figure), without further analysis by a design professional.

**FIGURE 2—WEB HOLE INSTALLATION REQUIREMENTS**

**TABLE 8A—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 18	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-3"	-	-	-	1'-0"		
		10'	1'-0"	1'-0"	1'-4"	-	-	-	1'-0"	1'-0"	1'-0"	2'-6"	-	-	-	1'-11"		
		12'	1'-0"	1'-0"	2'-6"	-	-	-	1'-10"	1'-0"	1'-7"	3'-9"	-	-	-	3'-2"		
		14'	1'-0"	1'-2"	3'-9"	-	-	-	3'-0"	1'-0"	2'-10"	5'-0"	-	-	-	4'-5"		
		16'	1'-0"	2'-3"	5'-0"	-	-	-	4'-3"	1'-11"	4'-1"	6'-3"	-	-	-	5'-8"		
		18'	1'-0"	3'-5"	6'-3"	-	-	-	5'-6"	3'-2"	5'-4"	7'-6"	-	-	-	6'-11"		
		20'	2'-0"	4'-7"	7'-7"	-	-	-	6'-9"	4'-5"	6'-7"	8'-11"	-	-	-	8'-2"		
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	-	-	1'-0"		
		10'	1'-0"	1'-0"	1'-0"	1'-2"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	-	-	1'-11"		
		12'	1'-0"	1'-0"	1'-0"	2'-4"	-	-	1'-9"	1'-0"	1'-0"	1'-7"	3'-7"	-	-	3'-2"		
		14'	1'-0"	1'-0"	1'-1"	3'-6"	-	-	2'-11"	1'-0"	1'-0"	2'-10"	4'-10"	-	-	4'-5"		
		16'	1'-0"	1'-0"	2'-2"	4'-9"	-	-	4'-2"	1'-0"	2'-0"	4'-1"	6'-1"	-	-	5'-8"		
		18'	1'-0"	1'-0"	3'-4"	6'-0"	-	-	5'-4"	1'-3"	3'-3"	5'-4"	7'-4"	-	-	6'-11"		
		20'	1'-0"	2'-1"	4'-6"	7'-4"	-	-	6'-8"	2'-6"	4'-6"	6'-7"	8'-8"	-	-	8'-2"		
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	-	1'-3"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	-	1'-4"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	-	2'-6"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	-	2'-5"	1'-0"	1'-0"	1'-0"	1'-8"	3'-8"	-	3'-9"		
		14'	1'-0"	1'-0"	1'-0"	1'-3"	3'-7"	-	3'-8"	1'-0"	1'-0"	1'-0"	2'-11"	4'-11"	-	5'-0"		
		16'	1'-0"	1'-0"	1'-0"	2'-4"	4'-10"	-	4'-11"	1'-0"	1'-0"	2'-3"	4'-2"	6'-2"	-	6'-3"		
		18'	1'-0"	1'-0"	1'-3"	3'-6"	6'-1"	-	6'-2"	1'-0"	1'-6"	3'-6"	5'-5"	7'-5"	-	7'-6"		
		20'	1'-0"	1'-0"	2'-4"	4'-8"	7'-5"	-	7'-6"	1'-0"	2'-9"	4'-9"	6'-8"	8'-8"	-	8'-10"		
		22'	1'-0"	1'-3"	3'-6"	5'-11"	8'-8"	-	8'-10"	2'-1"	4'-0"	6'-0"	7'-11"	10'-2"	-	10'-3"		
		24'	1'-0"	2'-4"	4'-7"	7'-2"	10'-1"	-	10'-2"	3'-4"	5'-3"	7'-3"	9'-2"	11'-7"	-	11'-9"		
		26'	1'-4"	3'-5"	5'-10"	8'-5"	11'-5"	-	11'-7"	4'-7"	6'-6"	8'-6"	10'-5"	-	-	-		
	28'	2'-5"	4'-7"	7'-0"	9'-9"	12'-10"	-	12'-11"	5'-10"	7'-9"	9'-9"	11'-8"	-	-	-			
	16"	8'	3'-6"	5'-9"	8'-3"	11'-0"	14'-2"	-	14'-4"	7'-1"	9'-0"	11'-0"	13'-0"	-	-	-		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-7"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	2'-10"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	2'-11"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	3'-9"	4'-1"		
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	3'-8"	4'-2"	1'-0"	1'-0"	1'-0"	1'-2"	3'-1"	5'-0"	5'-4"		
		18'	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	4'-11"	5'-5"	1'-0"	1'-0"	1'-0"	2'-5"	4'-4"	6'-3"	6'-7"		
		20'	1'-0"	1'-0"	1'-0"	1'-6"	3'-8"	6'-3"	6'-9"	1'-0"	1'-0"	1'-9"	3'-8"	5'-7"	7'-6"	7'-11"		
		22'	1'-0"	1'-0"	1'-0"	2'-7"	4'-10"	7'-6"	8'-1"	1'-0"	1'-1"	3'-0"	4'-11"	6'-10"	8'-10"	9'-5"		
		24'	1'-0"	1'-0"	1'-7"	3'-8"	6'-1"	8'-10"	9'-5"	1'-0"	2'-4"	4'-3"	6'-2"	8'-1"	10'-4"	10'-10"		
26'		1'-0"	1'-0"	2'-8"	4'-10"	7'-4"	10'-3"	10'-10"	1'-8"	3'-7"	5'-6"	7'-5"	9'-4"	11'-9"	-			
28'	1'-0"	1'-8"	3'-9"	6'-1"	8'-8"	11'-7"	12'-2"	2'-11"	4'-10"	6'-9"	8'-8"	10'-7"	-	-				
30'	1'-0"	2'-9"	4'-11"	7'-3"	9'-11"	13'-0"	13'-7"	4'-2"	6'-1"	8'-0"	9'-11"	11'-10"	-	-				
30'	1'-9"	3'-10"	6'-1"	8'-6"	11'-3"	14'-4"	-	5'-5"	7'-4"	9'-3"	11'-2"	13'-3"	-	-				

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8A on page 20.

**TABLE 8A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)						
			Hole Diameter (inches)						Obround	Hole Diameter (inches)						Obround
			2"	4"	6"	8"	10"	12"		2"	4"	6"	8"	10"	12"	
LPI 20Plus, LPI 20x4, LPI 32Plus, LPI 42Plus, LPI 52Plus	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"
		8'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"
		10'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-6"
		12'	1'-0"	1'-0"	1'-0"	-	-	-	1'-3"	1'-0"	1'-0"	1'-0"	-	-	-	2'-9"
		14'	1'-0"	1'-0"	1'-0"	-	-	-	2'-5"	1'-0"	1'-0"	2'-0"	-	-	-	4'-0"
		16'	1'-0"	1'-0"	1'-4"	-	-	-	3'-7"	1'-0"	1'-4"	3'-3"	-	-	-	5'-3"
		18'	1'-0"	1'-0"	2'-5"	-	-	-	4'-10"	1'-0"	2'-7"	4'-6"	-	-	-	6'-6"
		20'	1'-0"	1'-4"	3'-7"	-	-	-	6'-1"	1'-10"	3'-10"	5'-9"	-	-	-	7'-9"
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-5"
		12'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-2"	1'-0"	1'-0"	1'-0"	1'-2"	-	-	2'-8"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-4"	1'-0"	1'-0"	1'-0"	2'-5"	-	-	3'-11"
		16'	1'-0"	1'-0"	1'-0"	1'-9"	-	-	3'-6"	1'-0"	1'-0"	2'-1"	3'-8"	-	-	5'-2"
		18'	1'-0"	1'-0"	1'-1"	2'-11"	-	-	4'-8"	1'-0"	1'-9"	3'-4"	4'-11"	-	-	6'-5"
		20'	1'-0"	1'-0"	2'-2"	4'-1"	-	-	5'-11"	1'-5"	3'-0"	4'-7"	6'-2"	-	-	7'-8"
		22'	1'-0"	1'-6"	3'-4"	5'-3"	-	-	7'-3"	2'-8"	4'-3"	5'-10"	7'-5"	-	-	8'-11"
		24'	1'-0"	2'-8"	4'-6"	6'-6"	-	-	8'-6"	3'-11"	5'-6"	7'-1"	8'-8"	-	-	10'-2"
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-1"
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-11"	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	-	3'-4"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	-	3'-1"	1'-0"	1'-0"	1'-6"	2'-10"	-	-	4'-7"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	4'-4"	1'-0"	1'-0"	1'-4"	2'-9"	4'-1"	-	5'-10"
		18'	1'-0"	1'-0"	1'-0"	1'-10"	3'-4"	-	5'-7"	1'-0"	1'-3"	2'-7"	4'-0"	5'-4"	-	7'-1"
		20'	1'-0"	1'-0"	1'-5"	2'-11"	4'-7"	-	6'-10"	1'-2"	2'-6"	3'-10"	5'-3"	6'-7"	-	8'-4"
		22'	1'-0"	1'-0"	2'-6"	4'-1"	5'-9"	-	8'-2"	2'-5"	3'-9"	5'-1"	6'-6"	7'-10"	-	9'-8"
		24'	1'-0"	2'-1"	3'-7"	5'-3"	7'-0"	-	9'-6"	3'-8"	5'-0"	6'-4"	7'-9"	9'-1"	-	11'-1"
		26'	1'-8"	3'-2"	4'-9"	6'-5"	8'-3"	-	10'-10"	4'-11"	6'-3"	7'-7"	9'-0"	10'-4"	-	12'-6"
		28'	2'-9"	4'-4"	5'-11"	7'-8"	9'-7"	-	12'-3"	6'-2"	7'-6"	8'-10"	10'-3"	11'-7"	-	-
		30'	3'-11"	5'-6"	7'-2"	8'-11"	10'-10"	-	13'-7"	7'-5"	8'-9"	10'-1"	11'-6"	12'-10"	-	-
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	3'-8"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-8"	1'-0"	1'-0"	1'-0"	2'-0"	3'-2"	4'-11"	6'-2"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-7"	4'-11"	1'-0"	1'-0"	1'-0"	2'-1"	3'-3"	4'-5"	6'-2"
		18'	1'-0"	1'-0"	1'-0"	1'-1"	2'-4"	3'-9"	6'-2"	1'-0"	1'-0"	2'-1"	3'-4"	4'-6"	5'-8"	7'-5"
		20'	1'-0"	1'-0"	1'-0"	2'-2"	3'-6"	5'-0"	7'-6"	1'-0"	2'-2"	3'-4"	4'-7"	5'-9"	6'-11"	8'-10"
		22'	1'-0"	1'-0"	1'-11"	3'-3"	4'-8"	6'-3"	8'-10"	2'-3"	3'-5"	4'-7"	5'-10"	7'-0"	8'-2"	10'-3"
		24'	1'-0"	1'-9"	3'-0"	4'-5"	5'-11"	7'-6"	10'-2"	3'-6"	4'-8"	5'-10"	7'-1"	8'-3"	9'-5"	11'-8"
		26'	1'-6"	2'-10"	4'-2"	5'-7"	7'-1"	8'-9"	11'-6"	4'-9"	5'-11"	7'-1"	8'-4"	9'-6"	10'-8"	-
		28'	2'-7"	3'-11"	5'-4"	6'-10"	8'-4"	10'-1"	12'-11"	6'-0"	7'-2"	8'-4"	9'-7"	10'-9"	11'-11"	-
		30'	3'-8"	5'-1"	6'-6"	8'-0"	9'-8"	11'-5"	14'-4"	7'-3"	8'-5"	9'-7"	10'-10"	12'-0"	13'-4"	-

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8A on page 20.

**TABLE 8A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)									
			Hole Diameter (inches)							Hole Diameter (inches)									
			2"	4"	6"	8"	10"	12"	14"	2"	4"	6"	8"	10"	12"	14"			
LPI 42Plus, LPI 52Plus	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	4'-3"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-6"	1'-0"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	4'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-3"	6'-9"	1'-0"
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	6'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-6"	8'-0"	1'-0"	1'-0"
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	4'-0"	7'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-2"	6'-9"	9'-3"	1'-0"
		26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	5'-2"	8'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-5"	8'-0"	10'-6"	1'-0"
		28'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-5"	6'-5"	9'-9"	1'-0"	1'-0"	1'-8"	4'-2"	6'-8"	9'-3"	11'-9"	1'-0"	1'-0"
		30'	1'-0"	1'-0"	1'-0"	1'-9"	4'-6"	7'-7"	11'-1"	1'-0"	1'-0"	2'-11"	5'-5"	7'-11"	10'-6"	13'-1"	1'-0"	1'-0"	1'-0"
		32'	1'-0"	1'-0"	1'-0"	2'-9"	5'-8"	8'-10"	12'-5"	1'-0"	1'-8"	4'-2"	6'-8"	9'-2"	11'-9"	14'-6"	1'-0"	1'-0"	1'-0"
	34'	1'-0"	1'-0"	1'-2"	3'-11"	6'-10"	10'-1"	13'-9"	1'-0"	2'-11"	5'-5"	7'-11"	10'-5"	13'-0"	16'-0"	1'-0"	1'-0"	1'-0"	
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-9"	1'-0"	1'-0"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-0"	1'-0"	1'-0"
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	3'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-0"	6'-3"	1'-0"	1'-0"
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-11"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-3"	7'-6"	1'-0"	1'-0"
		26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-5"	6'-2"	1'-0"	1'-0"	1'-0"	1'-11"	4'-2"	6'-6"	8'-9"	1'-0"	1'-0"
		28'	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-6"	7'-4"	1'-0"	1'-0"	1'-0"	3'-2"	5'-5"	7'-9"	10'-0"	1'-0"	1'-0"	1'-0"
		30'	1'-0"	1'-0"	1'-0"	1'-0"	3'-1"	5'-8"	8'-7"	1'-0"	1'-0"	2'-2"	4'-5"	6'-8"	9'-0"	11'-3"	1'-0"	1'-0"	1'-0"
		32'	1'-0"	1'-0"	1'-0"	1'-9"	4'-2"	6'-11"	9'-10"	1'-0"	1'-2"	3'-5"	5'-8"	7'-11"	10'-3"	12'-6"	1'-0"	1'-0"	1'-0"
	34'	1'-0"	1'-0"	1'-0"	2'-9"	5'-4"	8'-1"	11'-2"	1'-0"	2'-5"	4'-8"	6'-11"	9'-2"	11'-6"	13'-9"	1'-0"	1'-0"	1'-0"	
	22"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"	1'-0"	1'-0"	1'-0"
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	4'-9"	1'-0"	1'-0"	1'-0"
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	4'-0"	6'-0"	1'-0"	1'-0"
		26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-4"	1'-0"	1'-0"	1'-0"	1'-1"	3'-2"	5'-3"	7'-3"	1'-0"	1'-0"	1'-0"
		28'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-2"	5'-6"	1'-0"	1'-0"	1'-0"	2'-4"	4'-5"	6'-6"	8'-6"	1'-0"	1'-0"	1'-0"
		30'	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-3"	6'-9"	1'-0"	1'-0"	1'-7"	3'-7"	5'-8"	7'-9"	9'-9"	1'-0"	1'-0"	1'-0"
		32'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-5"	7'-11"	1'-0"	1'-0"	2'-10"	4'-10"	6'-11"	9'-0"	11'-0"	1'-0"	1'-0"	1'-0"
		34'	1'-0"	1'-0"	1'-0"	1'-11"	4'-2"	6'-7"	9'-2"	1'-0"	2'-0"	4'-1"	6'-1"	8'-2"	10'-3"	12'-3"	1'-0"	1'-0"	1'-0"
		36'	1'-0"	1'-0"	1'-0"	3'-0"	5'-3"	7'-9"	10'-5"	1'-2"	3'-3"	5'-4"	7'-4"	9'-5"	11'-6"	13'-6"	1'-0"	1'-0"	1'-0"
	38'	1'-0"	1'-0"	1'-10"	4'-1"	6'-5"	8'-11"	11'-8"	2'-5"	4'-6"	6'-7"	8'-7"	10'-8"	12'-9"	14'-9"	1'-0"	1'-0"	1'-0"	
	24"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"	1'-0"	1'-0"	1'-0"
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	1'-0"	1'-0"	1'-0"	1'-1"	2'-11"	4'-10"	1'-0"	1'-0"	1'-0"
		26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-2"	6'-1"	1'-0"	1'-0"	1'-0"
28'		1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-1"	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"	5'-5"	7'-4"	1'-0"	1'-0"	1'-0"	
30'		1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	3'-1"	5'-3"	1'-0"	1'-0"	1'-0"	2'-11"	4'-10"	6'-8"	8'-7"	1'-0"	1'-0"	1'-0"	
32'		1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-2"	6'-5"	1'-0"	1'-0"	2'-3"	4'-2"	6'-1"	7'-11"	9'-10"	1'-0"	1'-0"	1'-0"	
34'		1'-0"	1'-0"	1'-0"	1'-2"	3'-2"	5'-4"	7'-7"	1'-0"	1'-8"	3'-6"	5'-5"	7'-4"	9'-2"	11'-1"	1'-0"	1'-0"	1'-0"	
36'	1'-0"	1'-0"	1'-0"	2'-3"	4'-3"	6'-6"	8'-10"	1'-0"	2'-11"	4'-9"	6'-8"	8'-7"	10'-5"	12'-4"	1'-0"	1'-0"	1'-0"		
38'	1'-0"	1'-0"	1'-4"	3'-4"	5'-5"	7'-8"	10'-0"	2'-3"	4'-2"	6'-0"	7'-11"	9'-10"	11'-8"	13'-7"	1'-0"	1'-0"	1'-0"		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8A on page 20.

**TABLE 8A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 26	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-		
		10'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-9"	-	-	-	-		
		12'	1'-0"	1'-0"	1'-7"	-	-	-	-	1'-0"	1'-0"	3'-0"	-	-	-	-		
		14'	1'-0"	1'-0"	2'-9"	-	-	-	-	1'-0"	1'-11"	4'-3"	-	-	-	-		
		16'	1'-0"	1'-2"	4'-0"	-	-	-	-	1'-0"	3'-2"	5'-6"	-	-	-	-		
		18'	1'-0"	2'-3"	5'-2"	-	-	-	-	2'-0"	4'-5"	6'-9"	-	-	-	-		
		20'	1'-0"	3'-5"	6'-6"	-	-	-	-	3'-3"	5'-8"	8'-0"	-	-	-	-		
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	2'-3"	-	-	-		
		12'	1'-0"	1'-0"	1'-0"	2'-2"	-	-	-	1'-0"	1'-0"	1'-7"	3'-6"	-	-	-		
		14'	1'-0"	1'-0"	1'-2"	3'-4"	-	-	-	1'-0"	1'-0"	2'-10"	4'-9"	-	-	-		
		16'	1'-0"	1'-0"	2'-3"	4'-7"	-	-	-	1'-0"	2'-2"	4'-1"	6'-0"	-	-	-		
		18'	1'-0"	1'-3"	3'-5"	5'-10"	-	-	-	1'-7"	3'-5"	5'-4"	7'-3"	-	-	-		
		20'	1'-0"	2'-4"	4'-7"	7'-2"	-	-	-	2'-10"	4'-8"	6'-7"	8'-6"	-	-	-		
LPI 30	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-9"		
		10'	1'-0"	1'-0"	1'-0"	-	-	-	2'-0"	1'-0"	1'-0"	1'-0"	-	-	-	3'-0"		
		12'	1'-0"	1'-0"	1'-0"	-	-	-	3'-2"	1'-0"	1'-0"	1'-0"	-	-	-	4'-3"		
		14'	1'-0"	1'-0"	1'-0"	-	-	-	4'-5"	1'-0"	1'-0"	2'-0"	-	-	-	5'-6"		
		16'	1'-0"	1'-0"	1'-4"	-	-	-	5'-9"	1'-0"	1'-4"	3'-3"	-	-	-	6'-9"		
		18'	1'-0"	1'-0"	2'-5"	-	-	-	7'-1"	1'-0"	2'-7"	4'-6"	-	-	-	8'-3"		
		20'	1'-0"	1'-4"	3'-7"	-	-	-	8'-5"	1'-10"	3'-10"	5'-9"	-	-	-	9'-8"		
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-9"	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	3'-0"	
		12'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	3'-2"	1'-0"	1'-0"	1'-0"	1'-2"	-	-	4'-3"	
		14'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	4'-5"	1'-0"	1'-0"	1'-0"	2'-5"	-	-	5'-6"	
		16'	1'-0"	1'-0"	1'-0"	1'-9"	-	-	-	5'-9"	1'-0"	1'-0"	2'-1"	3'-8"	-	-	6'-9"	
		18'	1'-0"	1'-0"	1'-1"	2'-11"	-	-	-	7'-1"	1'-0"	1'-9"	3'-4"	4'-11"	-	-	8'-3"	
		20'	1'-0"	1'-0"	2'-2"	4'-1"	-	-	-	8'-5"	1'-5"	3'-0"	4'-7"	6'-2"	-	-	9'-8"	
14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-9"		
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	3'-0"		
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	3'-2"	1'-0"	1'-0"	1'-0"	1'-7"	-	-	4'-3"		
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	-	-	4'-5"	1'-0"	1'-0"	1'-0"	1'-6"	2'-10"	-	5'-6"		
	16'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	-	5'-9"	1'-0"	1'-0"	1'-4"	2'-9"	4'-1"	-	6'-9"		
	18'	1'-0"	1'-0"	1'-0"	1'-10"	3'-4"	-	-	7'-1"	1'-0"	1'-3"	2'-7"	4'-0"	5'-4"	-	8'-3"		
	20'	1'-0"	1'-0"	1'-5"	2'-11"	4'-7"	-	-	8'-5"	1'-2"	2'-6"	3'-10"	5'-3"	6'-7"	-	9'-8"		
	22'	1'-0"	1'-0"	2'-6"	4'-1"	5'-9"	-	-	9'-9"	2'-5"	3'-9"	5'-1"	6'-6"	7'-10"	-	-		
	24'	1'-0"	2'-1"	3'-7"	5'-3"	7'-0"	-	-	11'-2"	3'-8"	5'-0"	6'-4"	7'-9"	9'-1"	-	-		
	26'	1'-8"	3'-2"	4'-9"	6'-5"	8'-3"	-	-	12'-6"	4'-11"	6'-3"	7'-7"	9'-0"	10'-4"	-	-		
16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"		
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"		
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	3'-2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	4'-3"		
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	-	4'-5"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-2"	5'-6"		
	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-7"	-	5'-9"	1'-0"	1'-0"	1'-0"	2'-1"	3'-3"	4'-5"	6'-9"		
	18'	1'-0"	1'-0"	1'-0"	1'-1"	2'-4"	3'-9"	-	7'-1"	1'-0"	1'-0"	2'-1"	3'-4"	4'-6"	5'-8"	8'-3"		
	20'	1'-0"	1'-0"	1'-0"	2'-2"	3'-6"	5'-0"	-	8'-5"	1'-0"	2'-2"	3'-4"	4'-7"	5'-9"	6'-11"	9'-8"		
	22'	1'-0"	1'-0"	1'-11"	3'-3"	4'-8"	6'-3"	-	9'-9"	2'-3"	3'-5"	4'-7"	5'-10"	7'-0"	8'-2"	-		
	24'	1'-0"	1'-9"	3'-0"	4'-5"	5'-11"	7'-6"	-	11'-2"	3'-6"	4'-8"	5'-10"	7'-1"	8'-3"	9'-5"	-		
	26'	1'-6"	2'-10"	4'-2"	5'-7"	7'-1"	8'-9"	-	12'-6"	4'-9"	5'-11"	7'-1"	8'-4"	9'-6"	10'-8"	-		
28'	2'-7"	3'-11"	5'-4"	6'-10"	8'-4"	10'-1"	-	-	6'-0"	7'-2"	8'-4"	9'-7"	10'-9"	11'-11"	-			
30'	3'-8"	5'-1"	6'-6"	8'-0"	9'-8"	11'-5"	-	-	7'-3"	8'-5"	9'-7"	10'-10"	12'-0"	13'-4"	-			

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8A on page 20.

**TABLE 8A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 36, LPI 56	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-3"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-4"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-6"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-6"	1'-0"	1'-0"	1'-0"	1'-7"	-	-	3'-9"		
		14'	1'-0"	1'-0"	1'-0"	1'-2"	-	-	3'-8"	1'-0"	1'-0"	1'-0"	2'-10"	-	-	5'-0"		
		16'	1'-0"	1'-0"	1'-0"	2'-3"	-	-	4'-11"	1'-0"	1'-0"	1'-8"	4'-1"	-	-	6'-3"		
		18'	1'-0"	1'-0"	1'-0"	3'-5"	-	-	6'-3"	1'-0"	1'-0"	2'-11"	5'-4"	-	-	7'-6"		
		20'	1'-0"	1'-0"	1'-8"	4'-7"	-	-	7'-6"	1'-0"	1'-8"	4'-2"	6'-7"	-	-	8'-10"		
		22'	1'-0"	1'-0"	2'-10"	5'-10"	-	-	8'-10"	1'-0"	2'-11"	5'-5"	7'-10"	-	-	10'-4"		
	24'	1'-0"	1'-2"	3'-11"	7'-1"	-	-	10'-3"	1'-8"	4'-2"	6'-8"	9'-1"	-	-	11'-9"			
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-3"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-6"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	-	3'-9"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	-	3'-8"	1'-0"	1'-0"	1'-0"	1'-4"	3'-6"	-	5'-0"		
		16'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	-	4'-11"	1'-0"	1'-0"	1'-0"	2'-7"	4'-9"	-	6'-3"		
		18'	1'-0"	1'-0"	1'-0"	1'-8"	4'-2"	-	6'-3"	1'-0"	1'-0"	1'-9"	3'-10"	6'-0"	-	7'-6"		
		20'	1'-0"	1'-0"	1'-0"	2'-9"	5'-5"	-	7'-6"	1'-0"	1'-0"	3'-0"	5'-1"	7'-3"	-	8'-10"		
		22'	1'-0"	1'-0"	1'-7"	3'-11"	6'-8"	-	8'-10"	1'-0"	2'-2"	4'-3"	6'-4"	8'-6"	-	10'-4"		
		24'	1'-0"	1'-0"	2'-8"	5'-1"	7'-11"	-	10'-3"	1'-4"	3'-5"	5'-6"	7'-7"	9'-9"	-	11'-9"		
		26'	1'-0"	1'-5"	3'-9"	6'-4"	9'-2"	-	11'-7"	2'-7"	4'-8"	6'-9"	8'-10"	11'-0"	-	-		
		28'	1'-0"	2'-6"	4'-11"	7'-7"	10'-6"	-	13'-0"	3'-10"	5'-11"	8'-0"	10'-1"	12'-4"	-	-		
	30'	1'-4"	3'-7"	6'-1"	8'-9"	11'-10"	-	14'-4"	5'-1"	7'-2"	9'-3"	11'-4"	13'-10"	-	-			
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	2'-6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	3'-9"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	3'-8"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	4'-0"	5'-0"		
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	3'-7"	4'-11"	1'-0"	1'-0"	1'-0"	1'-7"	3'-5"	5'-3"	6'-3"		
		18'	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	4'-10"	6'-3"	1'-0"	1'-0"	1'-0"	2'-10"	4'-8"	6'-6"	7'-6"		
		20'	1'-0"	1'-0"	1'-0"	1'-7"	3'-9"	6'-1"	7'-6"	1'-0"	1'-0"	2'-3"	4'-1"	5'-11"	7'-9"	8'-10"		
		22'	1'-0"	1'-0"	1'-0"	2'-9"	4'-11"	7'-5"	8'-10"	1'-0"	1'-8"	3'-6"	5'-4"	7'-2"	9'-0"	10'-4"		
24'		1'-0"	1'-0"	1'-9"	3'-10"	6'-1"	8'-8"	10'-3"	1'-0"	2'-11"	4'-9"	6'-7"	8'-5"	10'-3"	11'-9"			
26'		1'-0"	1'-0"	2'-10"	5'-0"	7'-4"	10'-0"	11'-7"	2'-3"	4'-2"	6'-0"	7'-10"	9'-8"	11'-8"	-			
28'		1'-0"	1'-11"	4'-0"	6'-2"	8'-7"	11'-4"	13'-0"	3'-6"	5'-5"	7'-3"	9'-1"	10'-11"	13'-2"	-			
30'	1'-0"	3'-0"	5'-1"	7'-5"	9'-11"	12'-8"	14'-4"	4'-9"	6'-8"	8'-6"	10'-4"	12'-2"	14'-7"	-				

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8A on page 20.



**TABLE 8A (Continued)—CIRCULAR AND OBROUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Hole Diameter (inches)								
			2"	4"	6"	8"	10"	12"	14"	2"	4"	6"	8"	10"	12"	14"		
LPI 36, LPI 56	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	4'-3"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-6"	
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	4'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-3"	6'-9"	
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	6'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-6"	8'-0"	
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	4'-0"	7'-3"	1'-0"	1'-0"	1'-0"	1'-8"	4'-2"	6'-9"	9'-3"		
		26'	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	5'-2"	8'-6"	1'-0"	1'-0"	1'-0"	2'-11"	5'-5"	8'-0"	10'-6"		
		28'	1'-0"	1'-0"	1'-0"	1'-0"	3'-5"	6'-5"	9'-9"	1'-0"	1'-0"	1'-8"	4'-2"	6'-8"	9'-3"	11'-9"		
		30'	1'-0"	1'-0"	1'-0"	1'-9"	4'-6"	7'-7"	11'-1"	1'-0"	1'-0"	2'-11"	5'-5"	7'-11"	10'-6"	13'-1"		
	32'	1'-0"	1'-0"	1'-0"	2'-9"	5'-8"	8'-10"	12'-5"	1'-0"	1'-8"	4'-2"	6'-8"	9'-2"	11'-9"	14'-6"			
	34'	1'-0"	1'-0"	1'-2"	3'-11"	6'-10"	10'-1"	13'-9"	1'-0"	2'-11"	5'-5"	7'-11"	10'-5"	13'-0"	16'-0"			
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-9"	
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-0"	
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	3'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-0"	6'-3"		
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-11"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-3"	7'-6"		
		26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-5"	6'-2"	1'-0"	1'-0"	1'-0"	1'-11"	4'-2"	6'-6"	8'-9"		
		28'	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-6"	7'-4"	1'-0"	1'-0"	1'-0"	3'-2"	5'-5"	7'-9"	10'-0"		
		30'	1'-0"	1'-0"	1'-0"	1'-0"	3'-1"	5'-8"	8'-7"	1'-0"	1'-0"	2'-2"	4'-5"	6'-8"	9'-0"	11'-3"		
	32'	1'-0"	1'-0"	1'-0"	1'-9"	4'-2"	6'-11"	9'-10"	1'-0"	1'-2"	3'-5"	5'-8"	7'-11"	10'-3"	12'-6"			
	34'	1'-0"	1'-0"	1'-0"	2'-9"	5'-4"	8'-1"	11'-2"	1'-0"	2'-5"	4'-8"	6'-11"	9'-2"	11'-6"	13'-9"			
	22"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"		
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	4'-9"		
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	4'-0"	6'-0"		
		26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-4"	1'-0"	1'-0"	1'-0"	1'-1"	3'-2"	5'-3"	7'-3"		
		28'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-2"	5'-6"	1'-0"	1'-0"	1'-0"	2'-4"	4'-5"	6'-6"	8'-6"		
		30'	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-3"	6'-9"	1'-0"	1'-0"	1'-7"	3'-7"	5'-8"	7'-9"	9'-9"		
		32'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-5"	7'-11"	1'-0"	1'-0"	2'-10"	4'-10"	6'-11"	9'-0"	11'-0"		
		34'	1'-0"	1'-0"	1'-0"	1'-11"	4'-2"	6'-7"	9'-2"	1'-0"	2'-0"	4'-1"	6'-1"	8'-2"	10'-3"	12'-3"		
	36'	1'-0"	1'-0"	1'-0"	3'-0"	5'-3"	7'-9"	10'-5"	1'-2"	3'-3"	5'-4"	7'-4"	9'-5"	11'-6"	13'-6"			
	38'	1'-0"	1'-0"	1'-10"	4'-1"	6'-5"	8'-11"	11'-8"	2'-5"	4'-6"	6'-7"	8'-7"	10'-8"	12'-9"	14'-9"			
	24"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	
20'		1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"		
22'		1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"			
24'		1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	1'-0"	1'-0"	1'-0"	1'-1"	2'-11"	4'-10"			
26'		1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	4'-1"	1'-0"	1'-0"	1'-0"	2'-4"	4'-2"	6'-1"			
28'		1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-1"	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"	5'-5"	7'-4"			
30'		1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	3'-1"	5'-3"	1'-0"	1'-0"	1'-0"	2'-11"	4'-10"	6'-8"	8'-7"			
32'		1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-2"	6'-5"	1'-0"	1'-0"	2'-3"	4'-2"	6'-1"	7'-11"	9'-10"			
34'		1'-0"	1'-0"	1'-0"	1'-2"	3'-2"	5'-4"	7'-7"	1'-0"	1'-8"	3'-6"	5'-5"	7'-4"	9'-2"	11'-1"			
36'	1'-0"	1'-0"	1'-0"	2'-3"	4'-3"	6'-6"	8'-10"	1'-0"	2'-11"	4'-9"	6'-8"	8'-7"	10'-5"	12'-4"				
38'	1'-0"	1'-0"	1'-4"	3'-4"	5'-5"	7'-8"	10'-0"	2'-3"	4'-2"	6'-0"	7'-11"	9'-10"	11'-8"	13'-7"				

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8A on page 20.

**TABLE 8A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)						
			Hole Diameter (inches)						Obround	Hole Diameter (inches)						Obround
			2"	4"	6"	8"	10"	12"		2"	4"	6"	8"	10"	12"	
LPI 450	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-
		8'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-
		10'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	2'-2"	-	-	-	-
		12'	1'-0"	1'-0"	2'-1"	-	-	-	-	1'-0"	1'-1"	3'-5"	-	-	-	-
		14'	1'-0"	1'-0"	3'-4"	-	-	-	-	1'-0"	2'-4"	4'-8"	-	-	-	-
		16'	1'-0"	1'-8"	4'-6"	-	-	-	-	1'-3"	3'-7"	5'-11"	-	-	-	-
		18'	1'-0"	2'-9"	5'-9"	-	-	-	-	2'-6"	4'-10"	7'-2"	-	-	-	-
		20'	1'-3"	3'-11"	7'-1"	-	-	-	-	3'-9"	6'-1"	8'-5"	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	2'-1"	-	-	-
		12'	1'-0"	1'-0"	1'-0"	2'-0"	-	-	-	1'-0"	1'-0"	1'-2"	3'-4"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	3'-2"	-	-	-	1'-0"	1'-0"	2'-5"	4'-7"	-	-	-
		16'	1'-0"	1'-0"	1'-8"	4'-4"	-	-	-	1'-0"	1'-5"	3'-8"	5'-10"	-	-	-
		18'	1'-0"	1'-0"	2'-10"	5'-7"	-	-	-	1'-0"	2'-8"	4'-11"	7'-1"	-	-	-
		20'	1'-0"	1'-6"	4'-0"	6'-11"	-	-	-	1'-9"	3'-11"	6'-2"	8'-4"	-	-	-
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	-	-	1'-0"	1'-0"	1'-0"	1'-4"	3'-5"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	-	-	1'-0"	1'-0"	1'-0"	2'-7"	4'-8"	-	-
		16'	1'-0"	1'-0"	1'-0"	1'-11"	4'-5"	-	-	1'-0"	1'-0"	1'-9"	3'-10"	5'-11"	-	-
		18'	1'-0"	1'-0"	1'-0"	3'-0"	5'-9"	-	-	1'-0"	1'-0"	3'-0"	5'-1"	7'-2"	-	-
		20'	1'-0"	1'-0"	1'-9"	4'-2"	7'-0"	-	-	1'-0"	2'-2"	4'-3"	6'-4"	8'-5"	-	-
		22'	1'-0"	1'-0"	2'-11"	5'-5"	8'-4"	-	-	1'-4"	3'-5"	5'-6"	7'-7"	9'-9"	-	-
		24'	1'-0"	1'-8"	4'-0"	6'-8"	9'-8"	-	-	2'-7"	4'-8"	6'-9"	8'-10"	11'-3"	-	-
		26'	1'-0"	2'-9"	5'-2"	7'-11"	11'-0"	-	-	3'-10"	5'-11"	8'-0"	10'-1"	12'-8"	-	-
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-5"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	4'-9"	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	4'-8"	-	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	6'-0"	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	5'-11"	-	1'-0"	1'-0"	1'-3"	3'-3"	5'-3"	7'-3"	-
		20'	1'-0"	1'-0"	1'-0"	2'-1"	4'-6"	7'-3"	-	1'-0"	1'-0"	2'-6"	4'-6"	6'-6"	8'-6"	-
		22'	1'-0"	1'-0"	1'-0"	3'-2"	5'-8"	8'-6"	-	1'-0"	1'-8"	3'-9"	5'-9"	7'-9"	10'-0"	-
		24'	1'-0"	1'-0"	2'-1"	4'-4"	6'-11"	9'-11"	-	1'-0"	2'-11"	5'-0"	7'-0"	9'-0"	11'-5"	-
		26'	1'-0"	1'-0"	3'-2"	5'-6"	8'-2"	11'-3"	-	2'-2"	4'-2"	6'-3"	8'-3"	10'-3"	12'-11"	-
30'	1'-0"	2'-0"	4'-3"	6'-9"	9'-6"	12'-7"	-	3'-5"	5'-5"	7'-6"	9'-6"	11'-6"	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8A on page 20.

**TABLE 8A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)						
			Hole Diameter (inches)						Obround	Hole Diameter (inches)						Obround
			2"	4"	6"	8"	10"	12"		2"	4"	6"	8"	10"	12"	
LPI 530	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-
		8'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-
		10'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-10"	-	-	-	-
		12'	1'-0"	1'-0"	1'-8"	-	-	-	-	1'-0"	1'-0"	3'-1"	-	-	-	-
		14'	1'-0"	1'-0"	2'-10"	-	-	-	-	1'-0"	1'-9"	4'-4"	-	-	-	-
		16'	1'-0"	1'-0"	4'-0"	-	-	-	-	1'-0"	3'-0"	5'-7"	-	-	-	-
		18'	1'-0"	2'-1"	5'-3"	-	-	-	-	1'-8"	4'-3"	6'-10"	-	-	-	-
		20'	1'-0"	3'-3"	6'-7"	-	-	-	-	2'-11"	5'-6"	8'-1"	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-8"	-	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-6"	-	-	-	1'-0"	1'-0"	1'-0"	2'-11"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	2'-8"	-	-	-	1'-0"	1'-0"	1'-9"	4'-2"	-	-	-
		16'	1'-0"	1'-0"	1'-0"	3'-10"	-	-	-	1'-0"	1'-0"	3'-0"	5'-5"	-	-	-
		18'	1'-0"	1'-0"	2'-2"	5'-1"	-	-	-	1'-0"	1'-10"	4'-3"	6'-8"	-	-	-
		20'	1'-0"	1'-0"	3'-3"	6'-4"	-	-	-	1'-0"	3'-1"	5'-6"	7'-11"	-	-	-
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	-	-	1'-0"	1'-0"	1'-0"	1'-11"	4'-3"	-	-
		16'	1'-0"	1'-0"	1'-0"	1'-3"	3'-11"	-	-	1'-0"	1'-0"	1'-0"	3'-2"	5'-6"	-	-
		18'	1'-0"	1'-0"	1'-0"	2'-4"	5'-2"	-	-	1'-0"	1'-0"	2'-2"	4'-5"	6'-9"	-	-
		20'	1'-0"	1'-0"	1'-0"	3'-5"	6'-5"	-	-	1'-0"	1'-1"	3'-5"	5'-8"	8'-0"	-	-
		22'	1'-0"	1'-0"	2'-0"	4'-7"	7'-8"	-	-	1'-0"	2'-4"	4'-8"	6'-11"	9'-3"	-	-
		24'	1'-0"	1'-0"	3'-1"	5'-10"	9'-0"	-	-	1'-4"	3'-7"	5'-11"	8'-2"	10'-7"	-	-
		26'	1'-0"	1'-8"	4'-2"	7'-1"	10'-4"	-	-	2'-7"	4'-10"	7'-2"	9'-5"	12'-1"	-	-
		28'	1'-0"	2'-9"	5'-4"	8'-4"	11'-8"	-	-	3'-10"	6'-1"	8'-5"	10'-8"	13'-6"	-	-
		30'	1'-4"	3'-10"	6'-6"	9'-7"	13'-11"	-	-	5'-1"	7'-4"	9'-8"	11'-11"	15'-0"	-	-
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-1"	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	4'-4"	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	4'-1"	-	1'-0"	1'-0"	1'-0"	1'-2"	3'-5"	5'-7"	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-4"	-	1'-0"	1'-0"	1'-0"	2'-5"	4'-8"	6'-10"	-
		20'	1'-0"	1'-0"	1'-0"	1'-2"	3'-8"	6'-7"	-	1'-0"	1'-0"	1'-5"	3'-8"	5'-11"	8'-1"	-
		22'	1'-0"	1'-0"	1'-0"	2'-3"	4'-11"	7'-11"	-	1'-0"	1'-0"	2'-8"	4'-11"	7'-2"	9'-5"	-
		24'	1'-0"	1'-0"	1'-0"	3'-5"	6'-1"	9'-3"	-	1'-0"	1'-9"	3'-11"	6'-2"	8'-5"	10'-10"	-
		26'	1'-0"	1'-0"	2'-0"	4'-6"	7'-4"	10'-7"	-	1'-0"	3'-0"	5'-2"	7'-5"	9'-8"	12'-3"	-
		28'	1'-0"	1'-0"	3'-1"	5'-8"	8'-7"	11'-11"	-	2'-0"	4'-3"	6'-5"	8'-8"	10'-11"	13'-9"	-
		30'	1'-0"	1'-9"	4'-3"	6'-11"	9'-11"	13'-4"	-	3'-3"	5'-6"	7'-8"	9'-11"	12'-2"	-	-

For **SI**: 1 inch = 25.4 mm, 1 foot = 305 mm.

<sup>1</sup>The hole locations listed above are valid for joists supporting only uniform loads. The total uniform load must not exceed 110 plf (e.g., 40 psf Live Load and a 15 psf Dead Load, spaced up to 24 inches o.c.). The uniform Dead Load must be at least 10 plf.

<sup>2</sup>Hole location is measured from the inside face of the nearest support to the center of a circular hole or to the center of radius of the nearest semi-circular end of an obround hole.

<sup>3</sup>Obround holes are not allowed for the LPI 26, LPI 450 and LPI 530 I-Joists.

<sup>4</sup>Maximum hole diameter for circular holes is the Joist Depth less 4 inches, except the maximum hole diameter is 6 inches for 9 1/2-inch-deep joists, and 8 inches for 11 7/8-inch-deep joists.

<sup>5</sup>Holes cannot be located in the span where designated "–", without further analysis by a design professional (see note 7 below).

<sup>6</sup>Clear Span has NOT been verified for these joists and is shown for informational purposes only. Verify that the joist selected will work for the span and loading conditions needed before checking hole location.

<sup>7</sup>Larger holes, greater uniform loads or nonuniform loads, and closer proximity to supports and other holes may be possible with further analysis (See Section 4.4 and the web hole shear equations listed in Table 10).

**TABLE 8B—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)							
			Maximum Hole Dimension: Depth or Width (inches)															
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"
LPI 18	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-1"	1'-6"	1'-10"	-	-
		8'	1'-0"	1'-0"	1'-1"	1'-6"	1'-11"	2'-5"	-	-	1'-0"	1'-0"	2'-0"	2'-4"	2'-9"	3'-1"	-	-
		10'	1'-0"	1'-0"	2'-3"	2'-8"	3'-2"	3'-9"	-	-	1'-0"	1'-10"	3'-3"	3'-7"	4'-0"	4'-5"	-	-
		12'	1'-0"	1'-8"	3'-5"	3'-11"	4'-6"	5'-1"	-	-	1'-8"	3'-1"	4'-6"	4'-10"	5'-4"	-	-	-
		14'	1'-2"	2'-10"	4'-9"	5'-3"	5'-10"	6'-6"	-	-	2'-11"	4'-4"	5'-9"	6'-2"	-	-	-	-
		16'	2'-3"	4'-0"	6'-0"	6'-7"	7'-3"	-	-	-	4'-2"	5'-7"	7'-1"	7'-8"	-	-	-	-
		18'	3'-5"	5'-3"	7'-4"	8'-0"	8'-7"	-	-	-	5'-5"	6'-10"	8'-6"	-	-	-	-	-
		20'	4'-7"	6'-6"	8'-9"	9'-4"	-	-	-	-	6'-8"	8'-1"	-	-	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-4"	1'-8"	-	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-9"	2'-3"	-	-	-	1'-0"	1'-0"	1'-4"	2'-7"	2'-11"	-	-	-
		10'	1'-0"	1'-0"	1'-5"	3'-0"	3'-6"	-	-	-	1'-0"	1'-5"	2'-7"	3'-10"	4'-2"	-	-	-
		12'	1'-0"	1'-2"	2'-7"	4'-3"	4'-10"	-	-	-	1'-5"	2'-8"	3'-10"	5'-1"	5'-7"	-	-	-
		14'	1'-0"	2'-4"	3'-10"	5'-7"	6'-2"	-	-	-	2'-8"	3'-11"	5'-1"	6'-6"	-	-	-	-
		16'	2'-0"	3'-6"	5'-1"	6'-11"	7'-7"	-	-	-	3'-11"	5'-2"	6'-4"	-	-	-	-	-
		18'	3'-2"	4'-8"	6'-5"	8'-4"	-	-	-	-	5'-2"	6'-5"	7'-7"	-	-	-	-	-
		20'	4'-4"	5'-11"	7'-8"	-	-	-	-	-	6'-5"	7'-8"	9'-0"	-	-	-	-	-
	14"	22'	5'-7"	7'-3"	9'-1"	-	-	-	-	-	7'-8"	8'-11"	10'-6"	-	-	-	-	-
		24'	6'-9"	8'-6"	10'-5"	-	-	-	-	-	8'-11"	10'-2"	-	-	-	-	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	2'-4"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	2'-6"	3'-0"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	2'-10"	3'-7"	-	1'-0"	1'-0"	1'-0"	1'-4"	3'-2"	3'-9"	4'-3"	-
		12'	1'-0"	1'-0"	1'-0"	1'-1"	3'-4"	4'-1"	4'-11"	-	1'-0"	1'-0"	2'-7"	3'-10"	4'-5"	5'-0"	-	-
		14'	1'-0"	1'-0"	2'-3"	4'-7"	5'-5"	6'-4"	-	-	1'-0"	1'-0"	2'-0"	3'-10"	5'-8"	6'-4"	-	-
		16'	1'-0"	1'-0"	1'-3"	3'-5"	5'-11"	6'-9"	-	-	1'-0"	1'-5"	3'-3"	5'-1"	6'-11"	-	-	-
		18'	1'-0"	1'-0"	2'-5"	4'-7"	7'-3"	8'-2"	-	-	1'-0"	2'-8"	4'-6"	6'-4"	8'-5"	-	-	-
		20'	1'-0"	1'-6"	3'-6"	5'-10"	8'-7"	9'-6"	-	-	2'-1"	3'-11"	5'-9"	7'-7"	-	-	-	-
		22'	1'-0"	2'-7"	4'-8"	7'-2"	9'-11"	-	-	-	3'-4"	5'-2"	7'-0"	8'-10"	-	-	-	-
	24'	1'-8"	3'-8"	5'-11"	8'-5"	11'-4"	-	-	-	4'-7"	6'-5"	8'-3"	10'-1"	-	-	-	-	
	26'	2'-9"	4'-10"	7'-2"	9'-9"	-	-	-	-	5'-10"	7'-8"	9'-6"	11'-5"	-	-	-	-	
	28'	3'-10"	6'-0"	8'-5"	11'-1"	-	-	-	-	7'-1"	8'-11"	10'-9"	12'-11"	-	-	-	-	
	30'	5'-0"	7'-3"	9'-8"	12'-5"	-	-	-	-	8'-4"	10'-2"	12'-0"	14'-4"	-	-	-	-	
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	2'-9"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	3'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-0"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-7"	-	-	1'-0"	1'-0"	1'-0"	1'-11"	3'-7"	5'-4"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"	5'-11"	-	-	1'-0"	1'-0"	1'-6"	3'-2"	4'-10"	-	-	-
		16'	1'-0"	1'-0"	1'-0"	2'-8"	4'-9"	7'-4"	-	-	1'-0"	1'-1"	2'-9"	4'-5"	6'-1"	-	-	-
		18'	1'-0"	1'-0"	1'-10"	3'-10"	6'-0"	-	-	-	1'-0"	2'-4"	4'-0"	5'-8"	7'-4"	-	-	-
20'		1'-0"	1'-1"	3'-0"	5'-0"	7'-4"	-	-	-	1'-11"	3'-7"	5'-3"	6'-11"	8'-8"	-	-	-	
22'		1'-0"	2'-2"	4'-1"	6'-3"	8'-8"	-	-	-	3'-2"	4'-10"	6'-6"	8'-2"	10'-1"	-	-	-	
24'		1'-6"	3'-4"	5'-4"	7'-6"	10'-0"	-	-	-	4'-5"	6'-1"	7'-9"	9'-5"	11'-7"	-	-	-	
26'		2'-7"	4'-5"	6'-6"	8'-10"	11'-5"	-	-	-	5'-8"	7'-4"	9'-0"	10'-8"	-	-	-	-	
28'	3'-8"	5'-7"	7'-9"	10'-1"	12'-9"	-	-	-	6'-11"	8'-7"	10'-3"	12'-0"	-	-	-	-		
30'	4'-9"	6'-10"	9'-0"	11'-5"	14'-2"	-	-	-	8'-2"	9'-10"	11'-6"	13'-5"	-	-	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8B on page 28.

**TABLE 8B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)									
			Maximum Hole Dimension: Depth or Width (inches)																	
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"		
LPI 20Plus, LPI 20x4, LPI 32Plus, LPI 42Plus, LPI 52Plus	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	2'-2"	-	-	1'-0"	1'-0"	1'-8"	2'-1"	2'-6"	2'-11"	-	-	-	-
		10'	1'-0"	1'-0"	1'-10"	2'-4"	2'-10"	3'-5"	-	-	1'-0"	1'-4"	2'-11"	3'-4"	3'-9"	4'-2"	-	-	-	-
		12'	1'-0"	1'-2"	3'-0"	3'-7"	4'-2"	4'-9"	-	-	1'-0"	2'-7"	4'-2"	4'-7"	5'-0"	5'-6"	-	-	-	-
		14'	1'-0"	2'-3"	4'-3"	4'-10"	5'-6"	6'-1"	-	-	2'-3"	3'-10"	5'-5"	5'-10"	6'-5"	-	-	-	-	-
		16'	1'-7"	3'-5"	5'-7"	6'-2"	6'-10"	7'-6"	-	-	3'-6"	5'-1"	6'-8"	7'-3"	-	-	-	-	-	-
		18'	2'-8"	4'-8"	6'-10"	7'-6"	8'-2"	-	-	-	4'-9"	6'-4"	8'-1"	8'-8"	-	-	-	-	-	-
		20'	3'-10"	5'-11"	8'-3"	8'-10"	9'-7"	-	-	-	6'-0"	7'-7"	9'-6"	-	-	-	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-1"	1'-6"	1'-11"	-	-	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-5"	1'-11"	2'-6"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	2'-9"	3'-2"	-	-	-	-
		10'	1'-0"	1'-0"	1'-0"	2'-8"	3'-2"	3'-9"	-	-	1'-0"	1'-0"	2'-3"	3'-7"	4'-0"	4'-5"	-	-	-	-
		12'	1'-0"	1'-0"	2'-2"	3'-11"	4'-6"	5'-2"	-	-	1'-0"	2'-2"	3'-6"	4'-10"	5'-3"	-	-	-	-	-
		14'	1'-0"	1'-9"	3'-4"	5'-2"	5'-10"	6'-6"	-	-	2'-1"	3'-5"	4'-9"	6'-1"	-	-	-	-	-	-
		16'	1'-4"	2'-10"	4'-7"	6'-6"	7'-2"	-	-	-	3'-4"	4'-8"	6'-0"	7'-7"	-	-	-	-	-	-
		18'	2'-5"	4'-1"	5'-10"	7'-11"	8'-7"	-	-	-	4'-7"	5'-11"	7'-3"	-	-	-	-	-	-	-
		20'	3'-7"	5'-3"	7'-2"	9'-3"	-	-	-	-	5'-10"	7'-2"	8'-6"	-	-	-	-	-	-	-
	22'	4'-9"	6'-6"	8'-5"	10'-8"	-	-	-	-	7'-1"	8'-5"	9'-11"	-	-	-	-	-	-	-	
	24'	6'-0"	7'-9"	9'-10"	-	-	-	-	-	8'-4"	9'-8"	11'-4"	-	-	-	-	-	-	-	
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-1"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	2'-2"	2'-10"	-	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-6"	3'-4"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	3'-5"	4'-1"	-	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	3'-9"	4'-8"	-	1'-0"	1'-0"	1'-0"	2'-1"	4'-1"	4'-8"	5'-5"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-8"	4'-2"	5'-0"	6'-0"	-	1'-0"	1'-0"	1'-4"	3'-4"	5'-4"	5'-11"	-	-	-	-
		16'	1'-0"	1'-0"	1'-0"	2'-10"	5'-5"	6'-4"	7'-4"	-	1'-0"	1'-0"	2'-7"	4'-7"	6'-7"	7'-5"	-	-	-	-
		18'	1'-0"	1'-0"	1'-7"	4'-0"	6'-9"	7'-8"	-	-	1'-0"	1'-10"	3'-10"	5'-10"	7'-11"	-	-	-	-	-
		20'	1'-0"	1'-0"	2'-9"	5'-2"	8'-1"	9'-1"	-	-	1'-1"	3'-1"	5'-1"	7'-1"	9'-4"	-	-	-	-	-
		22'	1'-0"	1'-7"	3'-10"	6'-5"	9'-5"	10'-6"	-	-	2'-4"	4'-4"	6'-4"	8'-4"	-	-	-	-	-	-
		24'	1'-0"	2'-8"	5'-1"	7'-8"	10'-10"	-	-	-	3'-7"	5'-7"	7'-7"	9'-7"	-	-	-	-	-	-
		26'	1'-7"	3'-10"	6'-3"	9'-0"	12'-2"	-	-	-	4'-10"	6'-10"	8'-10"	10'-10"	-	-	-	-	-	-
		28'	2'-8"	4'-11"	7'-6"	10'-4"	13'-7"	-	-	-	6'-1"	8'-1"	10'-1"	12'-2"	-	-	-	-	-	-
		30'	3'-9"	6'-1"	8'-9"	11'-8"	-	-	-	-	7'-4"	9'-4"	11'-4"	13'-7"	-	-	-	-	-	-
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	3'-2"	-	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	3'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-10"	-	-	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	4'-3"	5'-2"	-	1'-0"	1'-0"	1'-0"	1'-5"	3'-3"	5'-1"	-	-	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-7"	-	-	1'-0"	1'-0"	1'-0"	2'-8"	4'-6"	6'-6"	-	-	-	-
		16'	1'-0"	1'-0"	1'-0"	2'-0"	4'-3"	6'-11"	-	-	1'-0"	1'-0"	2'-0"	3'-11"	5'-9"	-	-	-	-	-
		18'	1'-0"	1'-0"	1'-1"	3'-1"	5'-6"	8'-3"	-	-	1'-0"	1'-5"	3'-3"	5'-2"	7'-0"	-	-	-	-	-
20'		1'-0"	1'-0"	2'-2"	4'-4"	6'-9"	-	-	-	1'-0"	2'-8"	4'-6"	6'-5"	8'-3"	-	-	-	-	-	
22'		1'-0"	1'-3"	3'-3"	5'-6"	8'-1"	-	-	-	2'-1"	3'-11"	5'-9"	7'-8"	9'-6"	-	-	-	-	-	
24'		1'-0"	2'-4"	4'-5"	6'-9"	9'-5"	-	-	-	3'-4"	5'-2"	7'-0"	8'-11"	10'-11"	-	-	-	-	-	
26'		1'-5"	3'-5"	5'-7"	8'-0"	10'-9"	-	-	-	4'-7"	6'-5"	8'-3"	10'-2"	12'-5"	-	-	-	-	-	
28'		2'-5"	4'-6"	6'-9"	9'-3"	12'-1"	-	-	-	5'-10"	7'-8"	9'-6"	11'-5"	-	-	-	-	-	-	
30'		3'-7"	5'-8"	8'-0"	10'-7"	13'-6"	-	-	-	7'-1"	8'-11"	10'-9"	12'-8"	-	-	-	-	-	-	

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8B on page 28.

**TABLE 8B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)									
			Maximum Hole Dimension: Depth or Width (inches)																	
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"		
LPI 42Plus, LPI 52Plus	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	4'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-4"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	5'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	3'-10"	-	-	-	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-4"	7'-3"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	5'-1"	-	-	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	4'-7"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	6'-4"	-	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	5'-10"	-	-	1'-0"	1'-0"	1'-0"	2'-2"	4'-10"	7'-7"	-	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	7'-1"	-	-	1'-0"	1'-0"	1'-0"	3'-5"	6'-1"	8'-10"	-	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-8"	4'-9"	8'-4"	-	-	1'-0"	1'-0"	2'-0"	4'-8"	7'-4"	10'-1"	-	-	-	-
		26'	1'-0"	1'-0"	1'-0"	2'-9"	6'-0"	9'-8"	-	-	1'-0"	1'-0"	3'-3"	5'-11"	8'-7"	11'-5"	-	-	-	-
		28'	1'-0"	1'-0"	1'-0"	3'-11"	7'-2"	11'-0"	-	-	1'-0"	1'-9"	4'-6"	7'-2"	9'-10"	12'-10"	-	-	-	-
		30'	1'-0"	1'-0"	2'-0"	5'-0"	8'-5"	12'-4"	-	-	1'-0"	3'-0"	5'-9"	8'-5"	11'-1"	14'-3"	-	-	-	-
	32'	1'-0"	1'-0"	3'-1"	6'-2"	9'-8"	13'-9"	-	-	1'-7"	4'-3"	7'-0"	9'-8"	12'-4"	-	-	-	-	-	
	34'	1'-0"	1'-3"	4'-2"	7'-5"	10'-11"	15'-1"	-	-	2'-10"	5'-6"	8'-3"	10'-11"	13'-7"	-	-	-	-	-	
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-0"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	4'-1"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-3"	-	-	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	5'-4"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-0"	6'-6"	-	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	6'-7"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-3"	7'-10"	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-5"	7'-11"	-	1'-0"	1'-0"	1'-0"	1'-5"	4'-0"	6'-6"	9'-3"	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-8"	9'-4"	-	1'-0"	1'-0"	1'-0"	2'-8"	5'-3"	7'-9"	-	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-0"	3'-9"	6'-11"	10'-8"	-	1'-0"	1'-0"	1'-5"	3'-11"	6'-6"	9'-0"	-	-	-	-
		26'	1'-0"	1'-0"	1'-0"	2'-0"	4'-11"	8'-2"	12'-1"	-	1'-0"	1'-0"	2'-8"	5'-2"	7'-9"	10'-3"	-	-	-	-
		28'	1'-0"	1'-0"	1'-0"	3'-1"	6'-1"	9'-5"	13'-5"	-	1'-0"	1'-5"	3'-11"	6'-5"	9'-0"	11'-6"	-	-	-	-
		30'	1'-0"	1'-0"	1'-5"	4'-3"	7'-3"	10'-9"	-	-	1'-0"	2'-8"	5'-2"	7'-8"	10'-3"	12'-9"	-	-	-	-
	32'	1'-0"	1'-0"	2'-6"	5'-4"	8'-6"	12'-1"	-	-	1'-5"	3'-11"	6'-5"	8'-11"	11'-6"	14'-2"	-	-	-	-	
	34'	1'-0"	1'-0"	3'-7"	6'-6"	9'-9"	13'-5"	-	-	2'-8"	5'-2"	7'-8"	10'-2"	12'-9"	15'-7"	-	-	-	-	
	22"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	3'-11"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-2"	5'-6"	-	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	5'-2"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-5"	6'-9"	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-5"	6'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	5'-8"	8'-0"	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	4'-7"	7'-9"	-	1'-0"	1'-0"	1'-0"	2'-2"	4'-6"	6'-11"	9'-3"	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-9"	9'-1"	-	1'-0"	1'-0"	1'-0"	3'-5"	5'-9"	8'-2"	10'-8"	-	-	-
		26'	1'-0"	1'-0"	1'-0"	1'-5"	4'-0"	7'-0"	10'-5"	-	1'-0"	1'-0"	2'-3"	4'-8"	7'-0"	9'-5"	12'-1"	-	-	-
		28'	1'-0"	1'-0"	1'-0"	2'-6"	5'-2"	8'-3"	11'-9"	-	1'-0"	1'-2"	3'-6"	5'-11"	8'-3"	10'-8"	-	-	-	-
		30'	1'-0"	1'-0"	1'-0"	3'-7"	6'-4"	9'-6"	13'-1"	-	1'-0"	2'-5"	4'-9"	7'-2"	9'-6"	11'-11"	-	-	-	-
		32'	1'-0"	1'-0"	2'-1"	4'-8"	7'-7"	10'-9"	14'-6"	-	1'-3"	3'-8"	6'-0"	8'-5"	10'-9"	13'-2"	-	-	-	-
		34'	1'-0"	1'-0"	3'-2"	5'-10"	8'-10"	12'-1"	15'-11"	-	2'-6"	4'-11"	7'-3"	9'-8"	12'-0"	14'-5"	-	-	-	-
	36'	1'-0"	1'-8"	4'-3"	7'-0"	10'-0"	13'-5"	17'-3"	-	3'-9"	6'-2"	8'-6"	10'-11"	13'-3"	15'-9"	-	-	-	-	
	38'	1'-0"	2'-8"	5'-4"	8'-2"	11'-3"	14'-9"	-	-	5'-0"	7'-5"	9'-9"	12'-2"	14'-6"	17'-3"	-	-	-	-	
	24"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-11"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	4'-8"	7'-0"	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-1"	7'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	3'-8"	5'-11"	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-4"	8'-8"	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	7'-2"	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	3'-8"	6'-7"	10'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-11"	6'-2"	8'-5"	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	4'-10"	7'-10"	-	1'-0"	1'-0"	1'-0"	2'-11"	5'-2"	7'-5"	9'-8"	-	-	-
		26'	1'-0"	1'-0"	1'-0"	1'-0"	3'-4"	6'-1"	9'-2"	-	1'-0"	1'-0"	1'-11"	4'-2"	6'-5"	8'-8"	10'-11"	-	-	-
		28'	1'-0"	1'-0"	1'-0"	1'-11"	4'-6"	7'-3"	10'-5"	-	1'-0"	1'-0"	3'-2"	5'-5"	7'-8"	9'-11"	12'-4"	-	-	-
		30'	1'-0"	1'-0"	1'-0"	3'-0"	5'-8"	8'-6"	11'-9"	-	1'-0"	2'-2"	4'-5"	6'-8"	8'-11"	11'-2"	13'-9"	-	-	-
		32'	1'-0"	1'-0"	1'-8"	4'-2"	6'-10"	9'-9"	13'-2"	-	1'-2"	3'-5"	5'-8"	7'-11"	10'-2"	12'-5"	15'-2"	-	-	-
		34'	1'-0"	1'-0"	2'-9"	5'-3"	8'-0"	11'-1"	14'-6"	-	2'-5"	4'-8"	6'-11"	9'-2"	11'-5"	13'-8"	-	-	-	-
	36'	1'-0"	1'-5"	3'-10"	6'-5"	9'-3"	12'-4"	15'-10"	-	3'-8"	5'-11"	8'-2"	10'-5"	12'-8"	14'-11"	-	-	-	-	
	38'	1'-0"	2'-5"	4'-11"	7'-7"	10'-6"	13'-8"	17'-3"	-	4'-11"	7'-2"	9'-5"	11'-8"	13'-11"	16'-2"	-	-	-	-	

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8B on page 28.

**TABLE 8B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Maximum Hole Dimension: Depth or Width (inches)																
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"	
LPI 26	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	2'-2"	-	-	1'-0"	1'-0"	1'-8"	2'-1"	2'-6"	2'-11"	-	-	
		10'	1'-0"	1'-0"	1'-10"	2'-4"	2'-10"	3'-5"	-	-	1'-0"	1'-4"	2'-11"	3'-4"	3'-9"	4'-2"	-	-	
		12'	1'-0"	1'-2"	3'-0"	3'-7"	4'-2"	4'-9"	-	-	1'-0"	2'-7"	4'-2"	4'-7"	5'-0"	5'-6"	-	-	
		14'	1'-0"	2'-3"	4'-3"	4'-10"	5'-6"	6'-1"	-	-	2'-3"	3'-10"	5'-5"	5'-10"	6'-5"	-	-	-	
		16'	1'-7"	3'-5"	5'-7"	6'-2"	6'-10"	7'-6"	-	-	3'-6"	5'-1"	6'-8"	7'-3"	-	-	-	-	
		18'	2'-8"	4'-8"	6'-10"	7'-6"	8'-2"	-	-	-	4'-9"	6'-4"	8'-1"	8'-8"	-	-	-	-	
		20'	3'-10"	5'-11"	8'-3"	8'-10"	9'-7"	-	-	-	6'-0"	7'-7"	9'-6"	-	-	-	-	-	
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-1"	1'-6"	1'-11"	-	-	
		8'	1'-0"	1'-0"	1'-0"	1'-5"	1'-11"	2'-6"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	2'-9"	3'-2"	-	-	
		10'	1'-0"	1'-0"	1'-0"	2'-8"	3'-2"	3'-9"	-	-	1'-0"	1'-0"	2'-3"	3'-7"	4'-0"	4'-5"	-	-	
		12'	1'-0"	1'-0"	2'-2"	3'-11"	4'-6"	5'-2"	-	-	1'-0"	2'-2"	3'-6"	4'-10"	5'-3"	-	-	-	
		14'	1'-0"	1'-9"	3'-4"	5'-2"	5'-10"	6'-6"	-	-	2'-1"	3'-5"	4'-9"	6'-1"	-	-	-	-	
		16'	1'-4"	2'-10"	4'-7"	6'-6"	7'-2"	-	-	-	3'-4"	4'-8"	6'-0"	7'-7"	-	-	-	-	
		18'	2'-5"	4'-1"	5'-10"	7'-11"	8'-7"	-	-	-	4'-7"	5'-11"	7'-3"	-	-	-	-	-	
		20'	3'-7"	5'-3"	7'-2"	9'-3"	-	-	-	-	5'-10"	7'-2"	8'-6"	-	-	-	-	-	
		22'	4'-9"	6'-6"	8'-5"	10'-8"	-	-	-	-	7'-1"	8'-5"	9'-11"	-	-	-	-	-	
		24'	6'-0"	7'-9"	9'-10"	-	-	-	-	-	8'-4"	9'-8"	11'-4"	-	-	-	-	-	
LPI 30	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	-	-	
		8'	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	2'-2"	-	-	1'-0"	1'-0"	1'-8"	2'-1"	2'-6"	2'-11"	-	-	
		10'	1'-0"	1'-0"	1'-10"	2'-4"	2'-10"	3'-5"	-	-	1'-0"	1'-4"	2'-11"	3'-4"	3'-9"	4'-2"	-	-	
		12'	1'-0"	1'-2"	3'-0"	3'-7"	4'-2"	4'-9"	-	-	1'-0"	2'-7"	4'-2"	4'-7"	5'-0"	5'-6"	-	-	
		14'	1'-0"	2'-3"	4'-3"	4'-10"	5'-6"	6'-1"	-	-	2'-3"	3'-10"	5'-5"	5'-10"	6'-5"	-	-	-	
		16'	1'-7"	3'-5"	5'-7"	6'-2"	6'-10"	7'-6"	-	-	3'-6"	5'-1"	6'-8"	7'-3"	-	-	-	-	
		18'	2'-8"	4'-8"	6'-10"	7'-6"	8'-2"	-	-	-	4'-9"	6'-4"	8'-1"	8'-8"	-	-	-	-	
		20'	3'-10"	5'-11"	8'-3"	8'-10"	9'-7"	-	-	-	6'-0"	7'-7"	9'-6"	-	-	-	-	-	
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-1"	1'-6"	1'-11"	-	-	
		8'	1'-0"	1'-0"	1'-0"	1'-5"	1'-11"	2'-6"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	2'-9"	3'-2"	-	-	
		10'	1'-0"	1'-0"	1'-0"	2'-8"	3'-2"	3'-9"	-	-	1'-0"	1'-0"	2'-3"	3'-7"	4'-0"	4'-5"	-	-	
		12'	1'-0"	1'-0"	2'-2"	3'-11"	4'-6"	5'-2"	-	-	1'-0"	2'-2"	3'-6"	4'-10"	5'-3"	-	-	-	
		14'	1'-0"	1'-9"	3'-4"	5'-2"	5'-10"	6'-6"	-	-	2'-1"	3'-5"	4'-9"	6'-1"	-	-	-	-	
		16'	1'-4"	2'-10"	4'-7"	6'-6"	7'-2"	-	-	-	3'-4"	4'-8"	6'-0"	7'-7"	-	-	-	-	
		18'	2'-5"	4'-1"	5'-10"	7'-11"	8'-7"	-	-	-	4'-7"	5'-11"	7'-3"	-	-	-	-	-	
		20'	3'-7"	5'-3"	7'-2"	9'-3"	-	-	-	-	5'-10"	7'-2"	8'-6"	-	-	-	-	-	
		22'	4'-9"	6'-6"	8'-5"	10'-8"	-	-	-	-	7'-1"	8'-5"	9'-11"	-	-	-	-	-	
		24'	6'-0"	7'-9"	9'-10"	-	-	-	-	-	8'-4"	9'-8"	11'-4"	-	-	-	-	-	
		14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-1"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	2'-2"	2'-10"	-
			10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-6"	3'-4"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	3'-5"	4'-1"	-
	12'		1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	3'-9"	4'-8"	-	1'-0"	1'-0"	1'-0"	2'-1"	4'-1"	4'-8"	5'-5"	-	
	14'		1'-0"	1'-0"	1'-0"	1'-8"	4'-2"	5'-0"	6'-0"	-	1'-0"	1'-0"	1'-4"	3'-4"	5'-4"	5'-11"	-	-	
	16'		1'-0"	1'-0"	1'-0"	2'-10"	5'-5"	6'-4"	7'-4"	-	1'-0"	1'-0"	2'-7"	4'-7"	6'-7"	7'-5"	-	-	
	18'		1'-0"	1'-0"	1'-7"	4'-0"	6'-9"	7'-8"	-	-	1'-0"	1'-10"	3'-10"	5'-10"	7'-11"	-	-	-	
	20'		1'-0"	1'-0"	2'-9"	5'-2"	8'-1"	9'-1"	-	-	1'-1"	3'-1"	5'-1"	7'-1"	9'-4"	-	-	-	
	22'		1'-0"	1'-7"	3'-10"	6'-5"	9'-5"	10'-6"	-	-	2'-4"	4'-4"	6'-4"	8'-4"	-	-	-	-	
	24'		1'-0"	2'-8"	5'-1"	7'-8"	10'-10"	-	-	-	3'-7"	5'-7"	7'-7"	9'-7"	-	-	-	-	
	26'		1'-7"	3'-10"	6'-3"	9'-0"	12'-2"	-	-	-	4'-10"	6'-10"	8'-10"	10'-10"	-	-	-	-	
	28'		2'-8"	4'-11"	7'-6"	10'-4"	13'-7"	-	-	-	6'-1"	8'-1"	10'-1"	12'-2"	-	-	-	-	
	30'		3'-9"	6'-1"	8'-9"	11'-8"	-	-	-	-	7'-4"	9'-4"	11'-4"	13'-7"	-	-	-	-	
16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	3'-2"	-		
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	3'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-10"	-	-		
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	4'-3"	5'-2"	-	1'-0"	1'-0"	1'-0"	1'-5"	3'-3"	5'-1"	-	-		
	14'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-7"	-	-	1'-0"	1'-0"	1'-0"	2'-8"	4'-6"	6'-6"	-	-		
	16'	1'-0"	1'-0"	1'-0"	2'-0"	4'-3"	6'-11"	-	-	1'-0"	1'-0"	2'-0"	3'-11"	5'-9"	-	-	-		
	18'	1'-0"	1'-0"	1'-1"	3'-1"	5'-6"	8'-3"	-	-	1'-0"	1'-5"	3'-3"	5'-2"	7'-0"	-	-	-		
	20'	1'-0"	1'-0"	2'-2"	4'-4"	6'-9"	-	-	-	1'-0"	2'-8"	4'-6"	6'-5"	8'-3"	-	-	-		
	22'	1'-0"	1'-3"	3'-3"	5'-6"	8'-1"	-	-	-	2'-1"	3'-11"	5'-9"	7'-8"	9'-6"	-	-	-		
	24'	1'-0"	2'-4"	4'-5"	6'-9"	9'-5"	-	-	-	3'-4"	5'-2"	7'-0"	8'-11"	10'-11"	-	-	-		
	26'	1'-5"	3'-5"	5'-7"	8'-0"	10'-9"	-	-	-	4'-7"	6'-5"	8'-3"	10'-2"	12'-5"	-	-	-		
28'	2'-5"	4'-6"	6'-9"	9'-3"	12'-1"	-	-	-	5'-10"	7'-8"	9'-6"	11'-5"	-	-	-	-			
30'	3'-7"	5'-8"	8'-0"	10'-7"	13'-6"	-	-	-	7'-1"	8'-11"	10'-9"	12'-8"	-	-	-	-			

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8B on page 28.

**TABLE 8B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)							
			Maximum Hole Dimension: Depth or Width (inches)															
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"
LPI 36, LPI 56	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-4"	1'-6"	1'-11"	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-5"	1'-11"	2'-6"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	2'-9"	3'-2"	-	-
		10'	1'-0"	1'-0"	1'-0"	2'-8"	3'-2"	3'-9"	-	-	1'-0"	1'-0"	2'-3"	3'-7"	4'-0"	4'-5"	-	-
		12'	1'-0"	1'-0"	2'-2"	3'-11"	4'-6"	5'-2"	-	-	1'-0"	2'-2"	3'-6"	4'-10"	5'-3"	-	-	-
		14'	1'-0"	1'-9"	3'-4"	5'-2"	5'-10"	6'-6"	-	-	2'-1"	3'-5"	4'-9"	6'-1"	-	-	-	-
		16'	1'-4"	2'-10"	4'-7"	6'-6"	7'-2"	-	-	-	3'-4"	4'-8"	6'-0"	7'-7"	-	-	-	-
		18'	2'-5"	4'-1"	5'-10"	7'-11"	8'-7"	-	-	-	4'-7"	5'-11"	7'-3"	-	-	-	-	-
		20'	3'-7"	5'-3"	7'-2"	9'-3"	-	-	-	-	5'-10"	7'-2"	8'-6"	-	-	-	-	-
		22'	4'-9"	6'-6"	8'-5"	10'-8"	-	-	-	-	7'-1"	8'-5"	9'-11"	-	-	-	-	-
		24'	6'-0"	7'-9"	9'-10"	-	-	-	-	-	8'-4"	9'-8"	11'-4"	-	-	-	-	-
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-1"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	2'-2"	2'-10"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-6"	3'-4"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	3'-5"	4'-1"	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	3'-9"	4'-8"	-	1'-0"	1'-0"	1'-0"	2'-1"	4'-1"	4'-8"	5'-5"	-
		14'	1'-0"	1'-0"	1'-0"	1'-8"	4'-2"	5'-0"	6'-0"	-	1'-0"	1'-0"	1'-4"	3'-4"	5'-4"	5'-11"	-	-
		16'	1'-0"	1'-0"	1'-0"	2'-10"	5'-5"	6'-4"	7'-4"	-	1'-0"	1'-0"	2'-7"	4'-7"	6'-7"	7'-5"	-	-
		18'	1'-0"	1'-0"	1'-7"	4'-0"	6'-9"	7'-8"	-	-	1'-0"	1'-10"	3'-10"	5'-10"	7'-11"	-	-	-
		20'	1'-0"	1'-0"	2'-9"	5'-2"	8'-1"	9'-1"	-	-	1'-1"	3'-1"	5'-1"	7'-1"	9'-4"	-	-	-
		22'	1'-0"	1'-7"	3'-10"	6'-5"	9'-5"	10'-6"	-	-	2'-4"	4'-4"	6'-4"	8'-4"	-	-	-	-
		24'	1'-0"	2'-8"	5'-1"	7'-8"	10'-10"	-	-	-	3'-7"	5'-7"	7'-7"	9'-7"	-	-	-	-
		26'	1'-7"	3'-10"	6'-3"	9'-0"	12'-2"	-	-	-	4'-10"	6'-10"	8'-10"	10'-10"	-	-	-	-
	28'	2'-8"	4'-11"	7'-6"	10'-4"	13'-7"	-	-	-	6'-1"	8'-1"	10'-1"	12'-2"	-	-	-	-	
	30'	3'-9"	6'-1"	8'-9"	11'-8"	-	-	-	-	7'-4"	9'-4"	11'-4"	13'-7"	-	-	-	-	
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	3'-2"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	3'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-10"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	4'-3"	5'-2"	-	1'-0"	1'-0"	1'-0"	1'-5"	3'-3"	5'-1"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-7"	-	-	1'-0"	1'-0"	1'-0"	2'-8"	4'-6"	6'-6"	-	-
		16'	1'-0"	1'-0"	1'-0"	2'-0"	4'-3"	6'-11"	-	-	1'-0"	1'-0"	2'-0"	3'-11"	5'-9"	-	-	-
		18'	1'-0"	1'-0"	1'-1"	3'-1"	5'-6"	8'-3"	-	-	1'-0"	1'-5"	3'-3"	5'-2"	7'-0"	-	-	-
		20'	1'-0"	1'-0"	2'-2"	4'-4"	6'-9"	-	-	-	1'-0"	2'-8"	4'-6"	6'-5"	8'-3"	-	-	-
		22'	1'-0"	1'-3"	3'-3"	5'-6"	8'-1"	-	-	-	2'-1"	3'-11"	5'-9"	7'-8"	9'-6"	-	-	-
24'		1'-0"	2'-4"	4'-5"	6'-9"	9'-5"	-	-	-	3'-4"	5'-2"	7'-0"	8'-11"	10'-11"	-	-	-	
26'		1'-5"	3'-5"	5'-7"	8'-0"	10'-9"	-	-	-	4'-7"	6'-5"	8'-3"	10'-2"	12'-5"	-	-	-	
28'	2'-5"	4'-6"	6'-9"	9'-3"	12'-1"	-	-	-	5'-10"	7'-8"	9'-6"	11'-5"	-	-	-	-		
30'	3'-7"	5'-8"	8'-0"	10'-7"	13'-6"	-	-	-	7'-1"	8'-11"	10'-9"	12'-8"	-	-	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8B on page 28.



**TABLE 8B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)									
			Maximum Hole Dimension: Depth or Width (inches)																	
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"		
LPI 36, LPI 56	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	4'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-4"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	5'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	3'-10"	-	-	-	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-4"	7'-3"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	5'-1"	-	-	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	4'-7"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	6'-4"	-	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	5'-10"	-	-	1'-0"	1'-0"	1'-0"	2'-2"	4'-10"	7'-7"	-	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	7'-1"	-	-	1'-0"	1'-0"	1'-0"	3'-5"	6'-1"	8'-10"	-	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-8"	4'-9"	8'-4"	-	-	1'-0"	1'-0"	2'-0"	4'-8"	7'-4"	10'-1"	-	-	-	-
		26'	1'-0"	1'-0"	1'-0"	2'-9"	6'-0"	9'-8"	-	-	1'-0"	1'-0"	3'-3"	5'-11"	8'-7"	11'-5"	-	-	-	-
		28'	1'-0"	1'-0"	1'-0"	3'-11"	7'-2"	11'-0"	-	-	1'-0"	1'-9"	4'-6"	7'-2"	9'-10"	12'-10"	-	-	-	-
		30'	1'-0"	1'-0"	2'-0"	5'-0"	8'-5"	12'-4"	-	-	1'-0"	3'-0"	5'-9"	8'-5"	11'-1"	14'-3"	-	-	-	-
		32'	1'-0"	1'-0"	3'-1"	6'-2"	9'-8"	13'-9"	-	-	1'-7"	4'-3"	7'-0"	9'-8"	12'-4"	-	-	-	-	-
		34'	1'-0"	1'-3"	4'-2"	7'-5"	10'-11"	15'-1"	-	-	2'-10"	5'-6"	8'-3"	10'-11"	13'-7"	-	-	-	-	-
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-0"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	4'-1"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-3"	-	-	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	5'-4"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-0"	6'-6"	-	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	6'-7"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-3"	7'-10"	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-5"	7'-11"	-	1'-0"	1'-0"	1'-0"	1'-5"	4'-0"	6'-6"	9'-3"	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-8"	9'-4"	-	1'-0"	1'-0"	1'-0"	2'-8"	5'-3"	7'-9"	-	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-0"	3'-9"	6'-11"	10'-8"	-	1'-0"	1'-0"	1'-5"	3'-11"	6'-6"	9'-0"	-	-	-	-
		26'	1'-0"	1'-0"	1'-0"	2'-0"	4'-11"	8'-2"	12'-1"	-	1'-0"	1'-0"	2'-8"	5'-2"	7'-9"	10'-3"	-	-	-	-
		28'	1'-0"	1'-0"	1'-0"	3'-1"	6'-1"	9'-5"	13'-5"	-	1'-0"	1'-5"	3'-11"	6'-5"	9'-0"	11'-6"	-	-	-	-
		30'	1'-0"	1'-0"	1'-5"	4'-3"	7'-3"	10'-9"	-	-	1'-0"	2'-8"	5'-2"	7'-8"	10'-3"	12'-9"	-	-	-	-
		32'	1'-0"	1'-0"	2'-6"	5'-4"	8'-6"	12'-1"	-	-	1'-5"	3'-11"	6'-5"	8'-11"	11'-6"	14'-2"	-	-	-	-
		34'	1'-0"	1'-0"	3'-7"	6'-6"	9'-9"	13'-5"	-	-	2'-8"	5'-2"	7'-8"	10'-2"	12'-9"	15'-7"	-	-	-	-
	22"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	3'-11"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-2"	5'-6"	-	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	5'-2"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	4'-5"	6'-9"	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-5"	6'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	5'-8"	8'-0"	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	4'-7"	7'-9"	-	1'-0"	1'-0"	1'-0"	2'-2"	4'-6"	6'-11"	9'-3"	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-9"	9'-1"	-	1'-0"	1'-0"	1'-0"	3'-5"	5'-9"	8'-2"	10'-8"	-	-	-
		26'	1'-0"	1'-0"	1'-0"	1'-5"	4'-0"	7'-0"	10'-5"	-	1'-0"	1'-0"	2'-3"	4'-8"	7'-0"	9'-5"	12'-1"	-	-	-
		28'	1'-0"	1'-0"	1'-0"	2'-6"	5'-2"	8'-3"	11'-9"	-	1'-0"	1'-2"	3'-6"	5'-11"	8'-3"	10'-8"	-	-	-	-
		30'	1'-0"	1'-0"	1'-0"	3'-7"	6'-4"	9'-6"	13'-1"	-	1'-0"	2'-5"	4'-9"	7'-2"	9'-6"	11'-11"	-	-	-	-
		32'	1'-0"	1'-0"	2'-1"	4'-8"	7'-7"	10'-9"	14'-6"	-	1'-3"	3'-8"	6'-0"	8'-5"	10'-9"	13'-2"	-	-	-	-
		34'	1'-0"	1'-0"	3'-2"	5'-10"	8'-10"	12'-1"	15'-11"	-	2'-6"	4'-11"	7'-3"	9'-8"	12'-0"	14'-5"	-	-	-	-
		36'	1'-0"	1'-8"	4'-3"	7'-0"	10'-0"	13'-5"	17'-3"	-	3'-9"	6'-2"	8'-6"	10'-11"	13'-3"	15'-9"	-	-	-	-
		38'	1'-0"	2'-8"	5'-4"	8'-2"	11'-3"	14'-9"	-	-	5'-0"	7'-5"	9'-9"	12'-2"	14'-6"	17'-3"	-	-	-	-
	24"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-11"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	4'-8"	7'-0"	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-1"	7'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	3'-8"	5'-11"	-	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-4"	8'-8"	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	7'-2"	-	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	3'-8"	6'-7"	10'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-11"	6'-2"	8'-5"	-	-	-
		24'	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	4'-10"	7'-10"	-	1'-0"	1'-0"	1'-0"	2'-11"	5'-2"	7'-5"	9'-8"	-	-	-
		26'	1'-0"	1'-0"	1'-0"	1'-0"	3'-4"	6'-1"	9'-2"	-	1'-0"	1'-0"	1'-11"	4'-2"	6'-5"	8'-8"	10'-11"	-	-	-
		28'	1'-0"	1'-0"	1'-0"	1'-11"	4'-6"	7'-3"	10'-5"	-	1'-0"	1'-0"	3'-2"	5'-5"	7'-8"	9'-11"	12'-4"	-	-	-
		30'	1'-0"	1'-0"	1'-0"	3'-0"	5'-8"	8'-6"	11'-9"	-	1'-0"	2'-2"	4'-5"	6'-8"	8'-11"	11'-2"	13'-9"	-	-	-
		32'	1'-0"	1'-0"	1'-8"	4'-2"	6'-10"	9'-9"	13'-2"	-	1'-2"	3'-5"	5'-8"	7'-11"	10'-2"	12'-5"	15'-2"	-	-	-
		34'	1'-0"	1'-0"	2'-9"	5'-3"	8'-0"	11'-1"	14'-6"	-	2'-5"	4'-8"	6'-11"	9'-2"	11'-5"	13'-8"	-	-	-	-
		36'	1'-0"	1'-5"	3'-10"	6'-5"	9'-3"	12'-4"	15'-10"	-	3'-8"	5'-11"	8'-2"	10'-5"	12'-8"	14'-11"	-	-	-	-
		38'	1'-0"	2'-5"	4'-11"	7'-7"	10'-6"	13'-8"	17'-3"	-	4'-11"	7'-2"	9'-5"	11'-8"	13'-11"	16'-2"	-	-	-	-

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8B on page 28.

**TABLE 8B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)							
			Maximum Hole Dimension: Depth or Width (inches)															
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"
LPI 450	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-2"	1'-6"	1'-10"	-	-
		8'	1'-0"	1'-0"	1'-1"	1'-6"	2'-0"	2'-6"	-	-	1'-0"	1'-0"	2'-0"	2'-5"	2'-9"	3'-1"	-	-
		10'	1'-0"	1'-0"	2'-3"	2'-9"	3'-3"	3'-9"	-	-	1'-0"	1'-10"	3'-3"	3'-8"	4'-0"	4'-5"	-	-
		12'	1'-0"	1'-8"	3'-6"	4'-0"	4'-6"	5'-1"	-	-	1'-8"	3'-1"	4'-6"	4'-11"	5'-4"	-	-	-
		14'	1'-3"	2'-10"	4'-9"	5'-4"	5'-10"	6'-6"	-	-	2'-11"	4'-4"	5'-9"	6'-3"	-	-	-	-
		16'	2'-4"	4'-1"	6'-1"	6'-8"	7'-3"	-	-	-	4'-2"	5'-7"	7'-1"	7'-8"	-	-	-	-
		18'	3'-6"	5'-4"	7'-5"	8'-0"	-	-	-	-	5'-5"	6'-10"	8'-7"	-	-	-	-	-
		20'	4'-8"	6'-7"	8'-9"	9'-5"	-	-	-	-	6'-8"	8'-1"	-	-	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-4"	1'-9"	-	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-9"	2'-3"	-	-	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-0"	-	-	-
		10'	1'-0"	1'-0"	1'-6"	3'-0"	3'-6"	-	-	-	1'-0"	1'-5"	2'-8"	3'-10"	4'-3"	-	-	-
		12'	1'-0"	1'-3"	2'-8"	4'-4"	4'-10"	-	-	-	1'-6"	2'-8"	3'-11"	5'-1"	-	-	-	-
		14'	1'-0"	2'-4"	3'-10"	5'-7"	6'-3"	-	-	-	2'-9"	3'-11"	5'-2"	6'-6"	-	-	-	-
		16'	2'-1"	3'-6"	5'-2"	7'-0"	7'-7"	-	-	-	4'-0"	5'-2"	6'-5"	-	-	-	-	-
		18'	3'-3"	4'-9"	6'-5"	8'-4"	-	-	-	-	5'-3"	6'-5"	7'-8"	-	-	-	-	-
		20'	4'-5"	6'-0"	7'-9"	-	-	-	-	-	6'-6"	7'-8"	9'-1"	-	-	-	-	-
	22'	5'-7"	7'-3"	9'-1"	-	-	-	-	-	7'-9"	8'-11"	10'-6"	-	-	-	-	-	
	24'	6'-10"	8'-7"	10'-5"	-	-	-	-	-	9'-0"	10'-2"	-	-	-	-	-	-	
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	2'-2"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	2'-11"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	3'-5"	-	-	1'-0"	1'-0"	1'-0"	2'-2"	3'-8"	4'-2"	-	-
		12'	1'-0"	1'-0"	1'-0"	2'-1"	4'-1"	4'-9"	-	-	1'-0"	1'-0"	1'-11"	3'-5"	4'-11"	-	-	-
		14'	1'-0"	1'-0"	1'-5"	3'-3"	5'-5"	6'-2"	-	-	1'-0"	1'-8"	3'-2"	4'-8"	6'-4"	-	-	-
		16'	1'-0"	1'-0"	2'-7"	4'-6"	6'-9"	7'-6"	-	-	1'-4"	2'-11"	4'-5"	5'-11"	-	-	-	-
		18'	1'-0"	2'-0"	3'-9"	5'-9"	8'-1"	-	-	-	2'-7"	4'-2"	5'-8"	7'-2"	-	-	-	-
		20'	1'-5"	3'-1"	4'-11"	7'-1"	9'-6"	-	-	-	3'-10"	5'-5"	6'-11"	8'-5"	-	-	-	-
		22'	2'-6"	4'-3"	6'-2"	8'-4"	-	-	-	-	5'-1"	6'-8"	8'-2"	9'-10"	-	-	-	-
		24'	3'-7"	5'-5"	7'-5"	9'-8"	-	-	-	-	6'-4"	7'-11"	9'-5"	11'-3"	-	-	-	-
		26'	4'-9"	6'-8"	8'-9"	11'-1"	-	-	-	-	7'-7"	9'-2"	10'-8"	-	-	-	-	-
	28'	5'-11"	7'-11"	10'-0"	12'-5"	-	-	-	-	8'-10"	10'-5"	11'-11"	-	-	-	-	-	
	30'	7'-1"	9'-2"	11'-4"	13'-10"	-	-	-	-	10'-1"	11'-8"	13'-4"	-	-	-	-	-	
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-2"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	3'-10"	-	-	1'-0"	1'-0"	1'-0"	1'-8"	3'-0"	4'-6"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-6"	3'-2"	5'-2"	-	-	1'-0"	1'-0"	1'-6"	2'-11"	4'-3"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	2'-7"	4'-5"	-	-	-	1'-0"	1'-4"	2'-9"	4'-2"	5'-6"	-	-	-
		16'	1'-0"	1'-0"	2'-1"	3'-10"	5'-8"	-	-	-	1'-3"	2'-7"	4'-0"	5'-5"	6'-9"	-	-	-
		18'	1'-0"	1'-8"	3'-3"	5'-0"	7'-0"	-	-	-	2'-6"	3'-10"	5'-3"	6'-8"	8'-2"	-	-	-
20'		1'-3"	2'-9"	4'-5"	6'-4"	8'-5"	-	-	-	3'-9"	5'-1"	6'-6"	7'-11"	-	-	-	-	
22'		2'-4"	3'-11"	5'-8"	7'-7"	9'-9"	-	-	-	5'-0"	6'-4"	7'-9"	9'-2"	-	-	-	-	
24'		3'-5"	5'-1"	6'-11"	8'-11"	11'-2"	-	-	-	6'-3"	7'-7"	9'-0"	10'-6"	-	-	-	-	
26'		4'-7"	6'-4"	8'-2"	10'-3"	12'-6"	-	-	-	7'-6"	8'-10"	10'-3"	11'-11"	-	-	-	-	
28'	5'-9"	7'-6"	9'-5"	11'-7"	-	-	-	-	8'-9"	10'-1"	11'-6"	13'-4"	-	-	-	-		
30'	6'-11"	8'-9"	10'-9"	12'-11"	-	-	-	-	10'-0"	11'-4"	12'-9"	-	-	-	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 8B on page 28.

**TABLE 8B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 15 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Maximum Hole Dimension: Depth or Width (inches)																
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"	
LPI 530	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	2'-2"	-	-	1'-0"	1'-0"	1'-8"	2'-1"	2'-6"	2'-11"	-	-	
		10'	1'-0"	1'-0"	1'-10"	2'-4"	2'-10"	3'-5"	-	-	1'-0"	1'-4"	2'-11"	3'-4"	3'-9"	4'-2"	-	-	
		12'	1'-0"	1'-2"	3'-0"	3'-7"	4'-2"	4'-9"	-	-	1'-0"	2'-7"	4'-2"	4'-7"	5'-0"	5'-6"	-	-	
		14'	1'-0"	2'-3"	4'-3"	4'-10"	5'-6"	6'-1"	-	-	2'-3"	3'-10"	5'-5"	5'-10"	6'-5"	-	-	-	
		16'	1'-7"	3'-5"	5'-7"	6'-2"	6'-10"	7'-6"	-	-	3'-6"	5'-1"	6'-8"	7'-3"	-	-	-	-	
		18'	2'-8"	4'-8"	6'-10"	7'-6"	8'-2"	-	-	-	4'-9"	6'-4"	8'-1"	8'-8"	-	-	-	-	
		20'	3'-10"	5'-11"	8'-3"	8'-10"	9'-7"	-	-	-	6'-0"	7'-7"	9'-6"	-	-	-	-	-	
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-1"	1'-6"	1'-11"	-	-	
		8'	1'-0"	1'-0"	1'-0"	1'-5"	1'-11"	2'-6"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	2'-9"	3'-2"	-	-	
		10'	1'-0"	1'-0"	1'-0"	2'-8"	3'-2"	3'-9"	-	-	1'-0"	1'-0"	2'-3"	3'-7"	4'-0"	4'-5"	-	-	
		12'	1'-0"	1'-0"	2'-2"	3'-11"	4'-6"	5'-2"	-	-	1'-0"	2'-2"	3'-6"	4'-10"	5'-3"	-	-	-	
		14'	1'-0"	1'-9"	3'-4"	5'-2"	5'-10"	6'-6"	-	-	2'-1"	3'-5"	4'-9"	6'-1"	-	-	-	-	
		16'	1'-4"	2'-10"	4'-7"	6'-6"	7'-2"	-	-	-	3'-4"	4'-8"	6'-0"	7'-7"	-	-	-	-	
		18'	2'-5"	4'-1"	5'-10"	7'-11"	8'-7"	-	-	-	4'-7"	5'-11"	7'-3"	-	-	-	-	-	
		20'	3'-7"	5'-3"	7'-2"	9'-3"	-	-	-	-	5'-10"	7'-2"	8'-6"	-	-	-	-	-	
	22'	4'-9"	6'-6"	8'-5"	10'-8"	-	-	-	-	7'-1"	8'-5"	9'-11"	-	-	-	-	-		
	24'	6'-0"	7'-9"	9'-10"	-	-	-	-	-	8'-4"	9'-8"	11'-4"	-	-	-	-	-		
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-10"	2'-7"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	2'-8"	3'-2"	-	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	3'-1"	3'-10"	-	1'-0"	1'-0"	1'-0"	1'-8"	3'-5"	3'-11"	-	-	
		12'	1'-0"	1'-0"	1'-0"	1'-6"	3'-8"	4'-5"	5'-2"	-	1'-0"	1'-0"	1'-3"	2'-11"	4'-8"	5'-2"	-	-	
		14'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	-	-	1'-0"	1'-0"	2'-6"	4'-2"	5'-11"	-	-	-	
		16'	1'-0"	1'-0"	1'-10"	3'-11"	6'-3"	7'-1"	-	-	1'-0"	2'-1"	3'-9"	5'-5"	7'-4"	-	-	-	
		18'	1'-0"	1'-1"	3'-0"	5'-1"	7'-7"	8'-6"	-	-	1'-8"	3'-4"	5'-0"	6'-8"	-	-	-	-	
		20'	1'-0"	2'-2"	4'-2"	6'-5"	9'-0"	-	-	-	2'-11"	4'-7"	6'-3"	7'-11"	-	-	-	-	
		22'	1'-5"	3'-4"	5'-4"	7'-8"	10'-4"	-	-	-	4'-2"	5'-10"	7'-6"	9'-2"	-	-	-	-	
		24'	2'-6"	4'-5"	6'-7"	9'-0"	-	-	-	-	5'-5"	7'-1"	8'-9"	10'-7"	-	-	-	-	
		26'	3'-7"	5'-8"	7'-10"	10'-4"	-	-	-	-	6'-8"	8'-4"	10'-0"	12'-0"	-	-	-	-	
		28'	4'-9"	6'-10"	9'-1"	11'-8"	-	-	-	-	7'-11"	9'-7"	11'-3"	13'-6"	-	-	-	-	
		30'	5'-11"	8'-1"	10'-5"	13'-0"	-	-	-	-	9'-2"	10'-10"	12'-6"	-	-	-	-	-	
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	2'-11"	-	-	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"	-	-	1'-0"	1'-0"	1'-0"	1'-1"	2'-8"	4'-2"	-	-	
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-10"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	3'-11"	-	-	-	
		14'	1'-0"	1'-0"	1'-0"	2'-0"	3'-11"	6'-2"	-	-	1'-0"	1'-0"	2'-1"	3'-7"	5'-2"	-	-	-	
		16'	1'-0"	1'-0"	1'-4"	3'-2"	5'-2"	-	-	-	1'-0"	1'-9"	3'-4"	4'-10"	6'-5"	-	-	-	
		18'	1'-0"	1'-0"	2'-6"	4'-4"	6'-6"	-	-	-	1'-6"	3'-0"	4'-7"	6'-1"	7'-8"	-	-	-	
20'		1'-0"	1'-10"	3'-7"	5'-7"	7'-9"	-	-	-	2'-9"	4'-3"	5'-10"	7'-4"	9'-1"	-	-	-		
22'		1'-3"	2'-11"	4'-10"	6'-10"	9'-2"	-	-	-	4'-0"	5'-6"	7'-1"	8'-7"	10'-7"	-	-	-		
24'		2'-4"	4'-1"	6'-0"	8'-1"	10'-6"	-	-	-	5'-3"	6'-9"	8'-4"	9'-10"	-	-	-	-		
26'		3'-5"	5'-3"	7'-3"	9'-5"	11'-11"	-	-	-	6'-6"	8'-0"	9'-7"	11'-2"	-	-	-	-		
28'		4'-7"	6'-5"	8'-6"	10'-9"	13'-3"	-	-	-	7'-9"	9'-3"	10'-10"	12'-7"	-	-	-	-		
30'		5'-9"	7'-8"	9'-9"	12'-1"	-	-	-	-	9'-0"	10'-6"	12'-1"	14'-0"	-	-	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

<sup>1</sup>The hole locations listed above are valid for joists supporting only uniform loads. The total uniform load must not exceed 110 plf (e.g., 40 psf Live Load and a 15 psf Dead Load, spaced up to 24 inches o.c.). The uniform Dead Load must be at least 10 plf.

<sup>2</sup>Hole location is measured from the inside face of the nearest support to the nearest edge of a rectangular hole.

<sup>3</sup>Maximum hole depth for rectangular holes is the Joist Depth less 4 inches, except the maximum hole depth is 6 inches for 9 1/2-inch-deep joists, and 8 inches for 11 7/8-inch-deep joists. Maximum hole width for rectangular holes is 18 inches. Where the Maximum Hole Dimension for rectangular holes exceeds the maximum hole depth, the dimension refers to hole width and the hole depth is assumed to be the maximum for that joist depth.

<sup>4</sup>Holes cannot be located in the span where designated "-", without further analysis by a design professional (see note 6 below).

<sup>5</sup>Clear Span has NOT been verified for these joists and is shown for informational purposes only. Verify that the joist selected will work for the span and loading conditions needed before checking hole location.

<sup>6</sup>Larger holes, greater uniform loads or nonuniform loads, and closer proximity to supports and other holes may be possible with further analysis (See Section 4.4 and the web hole shear equations listed in Table 10).

**TABLE 9A—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 18	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-10"	-	-	-	1'-5"		
		10'	1'-0"	1'-0"	2'-1"	-	-	-	1'-6"	1'-0"	1'-3"	3'-1"	-	-	-	2'-8"		
		12'	1'-0"	1'-1"	3'-3"	-	-	-	2'-8"	1'-0"	2'-6"	4'-4"	-	-	-	3'-11"		
		14'	1'-0"	2'-2"	4'-6"	-	-	-	3'-10"	1'-11"	3'-9"	5'-7"	-	-	-	5'-2"		
		16'	1'-3"	3'-4"	5'-10"	-	-	-	5'-2"	3'-2"	5'-0"	6'-11"	-	-	-	6'-5"		
		18'	2'-4"	4'-7"	7'-2"	-	-	-	6'-5"	4'-5"	6'-3"	8'-4"	-	-	-	7'-8"		
		20'	3'-6"	5'-10"	8'-7"	-	-	-	7'-9"	5'-8"	7'-6"	9'-10"	-	-	-	9'-1"		
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	-	-	1'-4"		
		10'	1'-0"	1'-0"	1'-0"	1'-10"	-	-	1'-5"	1'-0"	1'-0"	1'-3"	3'-0"	-	-	2'-7"		
		12'	1'-0"	1'-0"	1'-0"	3'-1"	-	-	2'-7"	1'-0"	1'-0"	2'-6"	4'-3"	-	-	3'-10"		
		14'	1'-0"	1'-0"	2'-1"	4'-4"	-	-	3'-10"	1'-0"	2'-0"	3'-9"	5'-6"	-	-	5'-1"		
		16'	1'-0"	1'-3"	3'-3"	5'-7"	-	-	5'-1"	1'-6"	3'-3"	5'-0"	6'-9"	-	-	6'-4"		
		18'	1'-0"	2'-5"	4'-6"	6'-11"	-	-	6'-4"	2'-9"	4'-6"	6'-3"	8'-1"	-	-	7'-7"		
		20'	1'-7"	3'-6"	5'-9"	8'-4"	-	-	7'-8"	4'-0"	5'-9"	7'-6"	9'-7"	-	-	9'-0"		
	22'	2'-8"	4'-9"	7'-0"	9'-8"	-	-	9'-0"	5'-3"	7'-0"	8'-9"	11'-0"	-	-	10'-5"			
	24'	3'-10"	5'-11"	8'-4"	11'-1"	-	-	10'-5"	6'-6"	8'-3"	10'-0"	-	-	-	11'-11"			
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	-	1'-10"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	-	2'-0"	1'-0"	1'-0"	1'-0"	1'-4"	3'-0"	-	3'-1"		
		12'	1'-0"	1'-0"	1'-0"	1'-1"	3'-1"	-	3'-3"	1'-0"	1'-0"	1'-0"	2'-7"	4'-3"	-	4'-4"		
		14'	1'-0"	1'-0"	1'-0"	2'-3"	4'-5"	-	4'-6"	1'-0"	1'-0"	2'-2"	3'-10"	5'-6"	-	5'-7"		
		16'	1'-0"	1'-0"	1'-6"	3'-5"	5'-8"	-	5'-9"	1'-0"	1'-9"	3'-5"	5'-1"	6'-9"	-	6'-10"		
		18'	1'-0"	1'-0"	2'-7"	4'-8"	7'-0"	-	7'-1"	1'-4"	3'-0"	4'-8"	6'-4"	8'-2"	-	8'-3"		
		20'	1'-0"	1'-10"	3'-9"	5'-11"	8'-4"	-	8'-6"	2'-7"	4'-3"	5'-11"	7'-7"	9'-7"	-	9'-9"		
		22'	1'-1"	2'-11"	4'-11"	7'-2"	9'-9"	-	9'-10"	3'-10"	5'-6"	7'-2"	8'-10"	-	-	-		
		24'	2'-2"	4'-1"	6'-2"	8'-6"	11'-1"	-	11'-3"	5'-1"	6'-9"	8'-5"	10'-1"	-	-	-		
		26'	3'-3"	5'-3"	7'-5"	9'-9"	12'-6"	-	12'-8"	6'-4"	8'-0"	9'-8"	11'-6"	-	-	-		
		28'	4'-5"	6'-5"	8'-8"	11'-2"	13'-11"	-	-	7'-7"	9'-3"	10'-11"	12'-11"	-	-	-		
		30'	5'-7"	7'-8"	9'-11"	12'-6"	-	-	-	8'-10"	10'-6"	12'-2"	14'-4"	-	-	-		
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	2'-2"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-1"	3'-5"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	3'-3"	3'-8"	1'-0"	1'-0"	1'-0"	1'-1"	2'-9"	4'-4"	4'-8"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	4'-6"	4'-11"	1'-0"	1'-0"	1'-0"	2'-4"	4'-0"	5'-7"	5'-11"		
		16'	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"	5'-10"	6'-3"	1'-0"	1'-0"	2'-0"	3'-7"	5'-3"	6'-10"	7'-3"		
		18'	1'-0"	1'-0"	1'-0"	2'-10"	4'-10"	7'-2"	7'-7"	1'-0"	1'-7"	3'-3"	4'-10"	6'-6"	8'-3"	8'-9"		
		20'	1'-0"	1'-0"	2'-1"	4'-0"	6'-1"	8'-6"	9'-0"	1'-3"	2'-10"	4'-6"	6'-1"	7'-9"	9'-9"	-		
		22'	1'-0"	1'-5"	3'-2"	5'-2"	7'-4"	9'-11"	10'-5"	2'-6"	4'-1"	5'-9"	7'-4"	9'-0"	-	-		
		24'	1'-0"	2'-6"	4'-4"	6'-5"	8'-8"	11'-3"	11'-10"	3'-9"	5'-4"	7'-0"	8'-7"	10'-3"	-	-		
		26'	1'-10"	3'-7"	5'-6"	7'-8"	10'-0"	12'-8"	-	5'-0"	6'-7"	8'-3"	9'-10"	11'-8"	-	-		
		28'	2'-11"	4'-9"	6'-9"	8'-11"	11'-4"	-	-	6'-3"	7'-10"	9'-6"	11'-1"	13'-1"	-	-		
		30'	4'-0"	5'-11"	8'-0"	10'-2"	12'-8"	-	-	7'-6"	9'-1"	10'-9"	12'-4"	14'-7"	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9A on page 36.

**TABLE 9A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 20Plus, LPI 20x4, LPI 32Plus, LPI 42Plus, LPI 52Plus	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"		
		10'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	2'-3"		
		12'	1'-0"	1'-0"	1'-0"	-	-	-	2'-2"	1'-0"	1'-0"	1'-10"	-	-	-	3'-6"		
		14'	1'-0"	1'-0"	1'-5"	-	-	-	3'-4"	1'-0"	1'-5"	3'-1"	-	-	-	4'-9"		
		16'	1'-0"	1'-0"	2'-6"	-	-	-	4'-7"	1'-0"	2'-8"	4'-4"	-	-	-	6'-0"		
		18'	1'-0"	1'-9"	3'-8"	-	-	-	5'-10"	2'-3"	3'-11"	5'-7"	-	-	-	7'-3"		
		20'	1'-0"	2'-10"	4'-11"	-	-	-	7'-2"	3'-6"	5'-2"	6'-10"	-	-	-	8'-6"		
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-2"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-1"	1'-0"	1'-0"	1'-0"	2'-2"	-	-	3'-5"		
		14'	1'-0"	1'-0"	1'-0"	1'-9"	-	-	3'-3"	1'-0"	1'-0"	2'-1"	3'-5"	-	-	4'-8"		
		16'	1'-0"	1'-0"	1'-4"	2'-11"	-	-	4'-6"	1'-0"	2'-0"	3'-4"	4'-8"	-	-	5'-11"		
		18'	1'-0"	1'-0"	2'-6"	4'-1"	-	-	5'-9"	1'-10"	3'-3"	4'-7"	5'-11"	-	-	7'-2"		
		20'	1'-0"	2'-1"	3'-7"	5'-4"	-	-	7'-1"	3'-1"	4'-6"	5'-10"	7'-2"	-	-	8'-5"		
	14"	22'	1'-8"	3'-2"	4'-10"	6'-7"	-	-	8'-4"	4'-4"	5'-9"	7'-1"	8'-5"	-	-	9'-9"		
		24'	2'-9"	4'-4"	6'-0"	7'-10"	-	-	9'-9"	5'-7"	7'-0"	8'-4"	9'-8"	-	-	11'-3"		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-5"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	2'-8"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-9"	1'-0"	1'-0"	1'-0"	1'-4"	2'-6"	-	3'-11"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	4'-0"	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-	5'-2"		
		16'	1'-0"	1'-0"	1'-0"	1'-11"	3'-4"	-	5'-3"	1'-0"	1'-7"	2'-8"	3'-10"	5'-0"	-	6'-5"		
		18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	6'-7"	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-	7'-9"		
		20'	1'-0"	1'-7"	2'-11"	4'-3"	5'-9"	-	7'-11"	2'-11"	4'-1"	5'-2"	6'-4"	7'-6"	-	9'-2"		
		22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	9'-3"	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-	10'-8"		
		24'	2'-6"	3'-10"	5'-3"	6'-9"	8'-4"	-	10'-8"	5'-5"	6'-7"	7'-8"	8'-10"	10'-0"	-	-		
		26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	-	12'-0"	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-	-		
	28'	4'-10"	6'-2"	7'-8"	9'-3"	11'-0"	-	13'-5"	7'-11"	9'-1"	10'-2"	11'-4"	12'-9"	-	-			
	30'	6'-0"	7'-5"	8'-11"	10'-7"	12'-4"	-	14'-10"	9'-2"	10'-4"	11'-5"	12'-7"	14'-3"	-	-			
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-1"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	3'-2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-9"	4'-4"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	2'-6"	4'-5"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-7"		
		16'	1'-0"	1'-0"	1'-0"	1'-4"	2'-5"	3'-8"	5'-9"	1'-0"	1'-3"	2'-3"	3'-3"	4'-3"	5'-3"	6'-10"		
		18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	7'-1"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"	8'-3"		
		20'	1'-0"	1'-4"	2'-5"	3'-7"	4'-10"	6'-2"	8'-5"	2'-9"	3'-9"	4'-9"	5'-9"	6'-9"	7'-9"	9'-8"		
		22'	1'-4"	2'-5"	3'-6"	4'-9"	6'-1"	7'-5"	9'-10"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	-		
		24'	2'-5"	3'-6"	4'-8"	6'-0"	7'-4"	8'-9"	11'-3"	5'-3"	6'-3"	7'-3"	8'-3"	9'-3"	10'-4"	-		
		26'	3'-6"	4'-8"	5'-11"	7'-2"	8'-7"	10'-1"	12'-8"	6'-6"	7'-6"	8'-6"	9'-6"	10'-6"	11'-9"	-		
		28'	4'-8"	5'-10"	7'-1"	8'-6"	9'-11"	11'-5"	-	7'-9"	8'-9"	9'-9"	10'-9"	11'-9"	13'-3"	-		
		30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	-	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9A on page 36.

**TABLE 9A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)						
			Hole Diameter (inches)							Hole Diameter (inches)						
			2"	4"	6"	8"	10"	12"	14"	2"	4"	6"	8"	10"	12"	14"
LPI 42Plus, LPI 52Plus	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-11"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-2"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-8"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-3"	6'-5"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	5'-11"	1'-0"	1'-0"	1'-0"	1'-3"	3'-4"	5'-6"	7'-8"
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	4'-5"	7'-3"	1'-0"	1'-0"	1'-0"	2'-6"	4'-7"	6'-9"	8'-11"
		24'	1'-0"	1'-0"	1'-0"	1'-0"	3'-1"	5'-7"	8'-6"	1'-0"	1'-0"	1'-7"	3'-9"	5'-10"	8'-0"	10'-2"
		26'	1'-0"	1'-0"	1'-0"	1'-10"	4'-2"	6'-10"	9'-10"	1'-0"	1'-0"	2'-10"	5'-0"	7'-1"	9'-3"	11'-6"
		28'	1'-0"	1'-0"	1'-0"	2'-10"	5'-4"	8'-1"	11'-2"	1'-0"	2'-0"	4'-1"	6'-3"	8'-4"	10'-6"	13'-0"
		30'	1'-0"	1'-0"	1'-8"	4'-0"	6'-6"	9'-4"	12'-7"	1'-1"	3'-3"	5'-4"	7'-6"	9'-7"	11'-9"	14'-5"
		32'	1'-0"	1'-0"	2'-9"	5'-1"	7'-9"	10'-8"	13'-11"	2'-4"	4'-6"	6'-7"	8'-9"	10'-10"	13'-0"	15'-11"
		34'	1'-0"	1'-6"	3'-10"	6'-3"	9'-0"	11'-11"	15'-4"	3'-7"	5'-9"	7'-10"	10'-0"	12'-1"	14'-3"	-
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-8"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	3'-0"	4'-11"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	4'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-3"	6'-2"
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-3"	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"	5'-6"	7'-5"
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	4'-0"	6'-5"	1'-0"	1'-0"	1'-0"	2'-11"	4'-10"	6'-9"	8'-8"
		26'	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-2"	7'-8"	1'-0"	1'-0"	2'-3"	4'-2"	6'-1"	8'-0"	9'-11"
		28'	1'-0"	1'-0"	1'-0"	1'-11"	4'-1"	6'-5"	9'-0"	1'-0"	1'-7"	3'-6"	5'-5"	7'-4"	9'-3"	11'-2"
		30'	1'-0"	1'-0"	1'-0"	3'-0"	5'-3"	7'-7"	10'-3"	1'-0"	2'-10"	4'-9"	6'-8"	8'-7"	10'-6"	12'-5"
		32'	1'-0"	1'-0"	2'-0"	4'-2"	6'-5"	8'-10"	11'-7"	2'-2"	4'-1"	6'-0"	7'-11"	9'-10"	11'-9"	13'-8"
		34'	1'-0"	1'-1"	3'-1"	5'-3"	7'-7"	10'-1"	12'-11"	3'-5"	5'-4"	7'-3"	9'-2"	11'-1"	13'-0"	15'-1"
	22"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	3'-8"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	3'-2"	4'-11"
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-8"	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-5"	6'-2"
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	4'-11"	1'-0"	1'-0"	1'-0"	2'-2"	3'-11"	5'-8"	7'-5"
		26'	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-11"	6'-1"	1'-0"	1'-0"	1'-9"	3'-5"	5'-2"	6'-11"	8'-8"
		28'	1'-0"	1'-0"	1'-0"	1'-3"	3'-1"	5'-1"	7'-4"	1'-0"	1'-3"	3'-0"	4'-8"	6'-5"	8'-2"	9'-11"
		30'	1'-0"	1'-0"	1'-0"	2'-3"	4'-2"	6'-3"	8'-7"	1'-0"	2'-6"	4'-3"	5'-11"	7'-8"	9'-5"	11'-2"
		32'	1'-0"	1'-0"	1'-6"	3'-4"	5'-4"	7'-6"	9'-10"	2'-0"	3'-9"	5'-6"	7'-2"	8'-11"	10'-8"	12'-5"
		34'	1'-0"	1'-0"	2'-6"	4'-6"	6'-6"	8'-9"	11'-1"	3'-3"	5'-0"	6'-9"	8'-5"	10'-2"	11'-11"	13'-8"
		36'	1'-0"	1'-9"	3'-7"	5'-7"	7'-8"	9'-11"	12'-5"	4'-6"	6'-3"	8'-0"	9'-8"	11'-5"	13'-2"	14'-11"
		38'	1'-0"	2'-10"	4'-9"	6'-9"	8'-11"	11'-3"	13'-8"	5'-9"	7'-6"	9'-3"	10'-11"	12'-8"	14'-5"	16'-2"
24"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	
	18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	2'-8"	
	20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	3'-11"	
	22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-7"	5'-2"	
	24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	3'-8"	1'-0"	1'-0"	1'-0"	1'-7"	3'-3"	4'-10"	6'-5"	
	26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-11"	4'-10"	1'-0"	1'-3"	2'-10"	4'-6"	6'-1"	7'-8"	8'-11"	
	28'	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	4'-1"	6'-0"	1'-0"	1'-0"	2'-6"	4'-1"	5'-9"	7'-4"	8'-11"	
	30'	1'-0"	1'-0"	1'-0"	1'-8"	3'-5"	5'-3"	7'-2"	1'-0"	2'-2"	3'-9"	5'-4"	7'-0"	8'-7"	10'-2"	
	32'	1'-0"	1'-0"	1'-0"	2'-9"	4'-6"	6'-5"	8'-5"	1'-10"	3'-5"	5'-0"	6'-7"	8'-3"	9'-10"	11'-5"	
	34'	1'-0"	1'-0"	2'-1"	3'-10"	5'-8"	7'-7"	9'-8"	3'-1"	4'-8"	6'-3"	7'-10"	9'-6"	11'-1"	12'-8"	
36'	1'-0"	1'-5"	3'-2"	4'-11"	6'-10"	8'-10"	10'-11"	4'-4"	5'-11"	7'-6"	9'-1"	10'-9"	12'-4"	13'-11"		
38'	1'-0"	2'-6"	4'-3"	6'-1"	8'-0"	10'-0"	12'-3"	5'-7"	7'-2"	8'-9"	10'-4"	12'-0"	13'-7"	15'-2"		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9A on page 36.

**TABLE 9A (Continued)—CIRCULAR AND OBROUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 26	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-3"	-	-	-	-		
		10'	1'-0"	1'-0"	1'-3"	-	-	-	-	1'-0"	1'-0"	2'-6"	-	-	-	-		
		12'	1'-0"	1'-0"	2'-5"	-	-	-	-	1'-0"	1'-9"	3'-9"	-	-	-	-		
		14'	1'-0"	1'-3"	3'-8"	-	-	-	-	1'-0"	3'-0"	5'-0"	-	-	-	-		
		16'	1'-0"	2'-4"	4'-11"	-	-	-	-	2'-3"	4'-3"	6'-3"	-	-	-	-		
		18'	1'-3"	3'-6"	6'-2"	-	-	-	-	3'-6"	5'-6"	7'-6"	-	-	-	-		
		20'	2'-4"	4'-9"	7'-6"	-	-	-	-	4'-9"	6'-9"	8'-10"	-	-	-	-		
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-7"	-	-	-		
		10'	1'-0"	1'-0"	1'-0"	1'-9"	-	-	-	1'-0"	1'-0"	1'-3"	2'-10"	-	-	-		
		12'	1'-0"	1'-0"	1'-1"	2'-11"	-	-	-	1'-0"	1'-0"	2'-6"	4'-1"	-	-	-		
		14'	1'-0"	1'-0"	2'-2"	4'-2"	-	-	-	1'-0"	2'-2"	3'-9"	5'-4"	-	-	-		
		16'	1'-0"	1'-6"	3'-4"	5'-6"	-	-	-	1'-10"	3'-5"	5'-0"	6'-7"	-	-	-		
		18'	1'-0"	2'-7"	4'-7"	6'-10"	-	-	-	3'-1"	4'-8"	6'-3"	8'-0"	-	-	-		
		20'	1'-11"	3'-9"	5'-9"	8'-2"	-	-	-	4'-4"	5'-11"	7'-6"	9'-5"	-	-	-		
		22'	3'-0"	4'-11"	7'-1"	9'-6"	-	-	-	5'-7"	7'-2"	8'-9"	10'-11"	-	-	-		
		24'	4'-2"	6'-2"	8'-4"	10'-11"	-	-	-	6'-10"	8'-5"	10'-0"	-	-	-	-		
LPI 30	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	1'-5"	1'-0"	1'-0"	1'-0"	-	-	-	2'-3"		
		10'	1'-0"	1'-0"	1'-0"	-	-	-	2'-7"	1'-0"	1'-0"	1'-0"	-	-	-	3'-6"		
		12'	1'-0"	1'-0"	1'-0"	-	-	-	3'-10"	1'-0"	1'-0"	1'-0"	2'-2"	-	-	-	4'-9"	
		14'	1'-0"	1'-0"	1'-5"	-	-	-	5'-2"	1'-0"	1'-5"	3'-1"	-	-	-	-	6'-1"	
		16'	1'-0"	1'-0"	2'-6"	-	-	-	6'-6"	1'-0"	2'-8"	4'-4"	-	-	-	-	7'-6"	
		18'	1'-0"	1'-9"	3'-8"	-	-	-	7'-11"	2'-3"	3'-11"	5'-7"	-	-	-	-	-	
		20'	1'-0"	2'-10"	4'-11"	-	-	-	9'-3"	3'-6"	5'-2"	6'-10"	-	-	-	-	-	
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-5"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-3"	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	2'-7"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	3'-6"	
		12'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	3'-10"	1'-0"	1'-0"	1'-0"	2'-2"	-	-	4'-9"	
		14'	1'-0"	1'-0"	1'-0"	1'-9"	-	-	-	5'-2"	1'-0"	1'-0"	2'-1"	3'-5"	-	-	6'-1"	
		16'	1'-0"	1'-0"	1'-4"	2'-11"	-	-	-	6'-6"	1'-0"	2'-0"	3'-4"	4'-8"	-	-	7'-6"	
		18'	1'-0"	1'-0"	2'-6"	4'-1"	-	-	-	7'-11"	1'-10"	3'-3"	4'-7"	5'-11"	-	-	-	
		20'	1'-0"	2'-1"	3'-7"	5'-4"	-	-	-	9'-3"	3'-1"	4'-6"	5'-10"	7'-2"	-	-	-	
		22'	1'-8"	3'-2"	4'-10"	6'-7"	-	-	-	10'-8"	4'-4"	5'-9"	7'-1"	8'-5"	-	-	-	
		24'	2'-9"	4'-4"	6'-0"	7'-10"	-	-	-	5'-7"	7'-0"	8'-4"	9'-8"	-	-	-	-	
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-3"	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	3'-6"	
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	3'-10"	1'-0"	1'-0"	1'-0"	1'-4"	2'-6"	-	4'-9"	
		14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	-	5'-2"	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-	6'-1"	
		16'	1'-0"	1'-0"	1'-0"	1'-11"	3'-4"	-	-	6'-6"	1'-0"	1'-7"	2'-8"	3'-10"	5'-0"	-	7'-6"	
		18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	-	7'-11"	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-	-	
		20'	1'-0"	1'-7"	2'-11"	4'-3"	5'-9"	-	-	9'-3"	2'-11"	4'-1"	5'-2"	6'-4"	7'-6"	-	-	
		22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	-	10'-8"	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-	-	
		24'	2'-6"	3'-10"	5'-3"	6'-9"	8'-4"	-	-	5'-5"	6'-7"	7'-8"	8'-10"	10'-0"	-	-	-	
		26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	-	-	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-	-	-	
		28'	4'-10"	6'-2"	7'-8"	9'-3"	11'-0"	-	-	7'-11"	9'-1"	10'-2"	11'-4"	12'-9"	-	-	-	
		30'	6'-0"	7'-5"	8'-11"	10'-7"	12'-4"	-	-	9'-2"	10'-4"	11'-5"	12'-7"	14'-3"	-	-	-	
		16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"
			10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"
			12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	-	3'-10"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-9"	4'-9"
			14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	2'-6"	-	5'-2"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	6'-1"
			16'	1'-0"	1'-0"	1'-0"	1'-4"	2'-5"	3'-8"	-	6'-6"	1'-0"	1'-3"	2'-3"	3'-3"	4'-3"	5'-3"	7'-6"
			18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	-	7'-11"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"	-
20'	1'-0"		1'-4"	2'-5"	3'-7"	4'-10"	6'-2"	-	9'-3"	2'-9"	3'-9"	4'-9"	5'-9"	6'-9"	7'-9"	-		
22'	1'-4"		2'-5"	3'-6"	4'-9"	6'-1"	7'-5"	-	10'-8"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	-		
24'	2'-5"		3'-6"	4'-8"	6'-0"	7'-4"	8'-9"	-	5'-3"	6'-3"	7'-3"	8'-3"	9'-3"	10'-4"	-	-		
26'	3'-6"		4'-8"	5'-11"	7'-2"	8'-7"	10'-1"	-	6'-6"	7'-6"	8'-6"	9'-6"	10'-6"	11'-9"	-	-		
28'	4'-8"	5'-10"	7'-1"	8'-6"	9'-11"	11'-5"	-	7'-9"	8'-9"	9'-9"	10'-9"	11'-9"	13'-3"	-	-			
30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	-	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"	-	-			

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9A on page 36.

**TABLE 9A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 36, LPI 56	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-10"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	2'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	3'-1"		
		12'	1'-0"	1'-0"	1'-0"	1'-1"	-	-	3'-3"	1'-0"	1'-0"	1'-0"	2'-6"	-	-	4'-4"		
		14'	1'-0"	1'-0"	1'-0"	2'-2"	-	-	4'-6"	1'-0"	1'-0"	1'-8"	3'-9"	-	-	5'-7"		
		16'	1'-0"	1'-0"	1'-0"	3'-4"	-	-	5'-10"	1'-0"	1'-0"	2'-11"	5'-0"	-	-	6'-10"		
		18'	1'-0"	1'-0"	2'-0"	4'-7"	-	-	7'-2"	1'-0"	2'-1"	4'-2"	6'-3"	-	-	8'-3"		
		20'	1'-0"	1'-0"	3'-2"	5'-10"	-	-	8'-6"	1'-3"	3'-4"	5'-5"	7'-6"	-	-	9'-9"		
		22'	1'-0"	1'-11"	4'-4"	7'-1"	-	-	9'-11"	2'-6"	4'-7"	6'-8"	8'-9"	-	-	-		
	24'	1'-0"	3'-0"	5'-6"	8'-5"	-	-	11'-3"	3'-9"	5'-10"	7'-11"	10'-0"	-	-	-			
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-10"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	-	3'-1"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	-	3'-3"	1'-0"	1'-0"	1'-0"	1'-3"	3'-1"	-	4'-4"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	-	4'-6"	1'-0"	1'-0"	1'-0"	2'-6"	4'-4"	-	5'-7"		
		16'	1'-0"	1'-0"	1'-0"	1'-10"	4'-0"	-	5'-10"	1'-0"	1'-0"	2'-0"	3'-9"	5'-7"	-	6'-10"		
		18'	1'-0"	1'-0"	1'-0"	3'-0"	5'-3"	-	7'-2"	1'-0"	1'-5"	3'-3"	5'-0"	6'-10"	-	8'-3"		
		20'	1'-0"	1'-0"	2'-1"	4'-2"	6'-6"	-	8'-6"	1'-0"	2'-8"	4'-6"	6'-3"	8'-1"	-	9'-9"		
		22'	1'-0"	1'-3"	3'-2"	5'-4"	7'-10"	-	9'-11"	2'-2"	3'-11"	5'-9"	7'-6"	9'-4"	-	-		
		24'	1'-0"	2'-4"	4'-4"	6'-7"	9'-2"	-	11'-3"	3'-5"	5'-2"	7'-0"	8'-9"	10'-8"	-	-		
		26'	1'-5"	3'-5"	5'-6"	7'-10"	10'-6"	-	12'-8"	4'-8"	6'-5"	8'-3"	10'-0"	12'-2"	-	-		
	28'	2'-6"	4'-6"	6'-9"	9'-2"	11'-10"	-	-	5'-11"	7'-8"	9'-6"	11'-3"	13'-7"	-	-			
	30'	3'-7"	5'-8"	7'-11"	10'-5"	13'-3"	-	-	7'-2"	8'-11"	10'-9"	12'-6"	-	-	-			
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	3'-1"		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	3'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	3'-6"	4'-4"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-4"	4'-6"	1'-0"	1'-0"	1'-0"	1'-7"	3'-2"	4'-9"	5'-7"		
		16'	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-7"	5'-10"	1'-0"	1'-0"	1'-4"	2'-10"	4'-5"	6'-0"	6'-10"		
		18'	1'-0"	1'-0"	1'-0"	2'-0"	3'-10"	5'-11"	7'-2"	1'-0"	1'-0"	2'-7"	4'-1"	5'-8"	7'-3"	8'-3"		
		20'	1'-0"	1'-0"	1'-4"	3'-1"	5'-0"	7'-2"	8'-6"	1'-0"	2'-3"	3'-10"	5'-4"	6'-11"	8'-6"	9'-9"		
		22'	1'-0"	1'-0"	2'-5"	4'-3"	6'-3"	8'-6"	9'-11"	1'-11"	3'-6"	5'-1"	6'-7"	8'-2"	9'-11"	-		
		24'	1'-0"	1'-10"	3'-7"	5'-5"	7'-6"	9'-10"	11'-3"	3'-2"	4'-9"	6'-4"	7'-10"	9'-5"	11'-4"	-		
		26'	1'-3"	2'-11"	4'-8"	6'-8"	8'-10"	11'-3"	12'-8"	4'-5"	6'-0"	7'-7"	9'-1"	10'-8"	12'-10"	-		
		28'	2'-3"	4'-0"	5'-11"	7'-11"	10'-1"	12'-7"	-	5'-8"	7'-3"	8'-10"	10'-4"	11'-11"	-	-		
	30'	3'-4"	5'-2"	7'-1"	9'-2"	11'-5"	14'-0"	-	6'-11"	8'-6"	10'-1"	11'-7"	13'-5"	-	-			

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9A on page 36.



**TABLE 9A (Continued)—CIRCULAR AND OBROUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Hole Diameter (inches)								
			2"	4"	6"	8"	10"	12"	14"	2"	4"	6"	8"	10"	12"	14"		
LPI 36, LPI 56	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-11"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-2"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-8"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-3"	6'-5"		
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	5'-11"	1'-0"	1'-0"	1'-0"	1'-3"	3'-4"	5'-6"	7'-8"		
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	4'-5"	7'-3"	1'-0"	1'-0"	1'-0"	2'-6"	4'-7"	6'-9"	8'-11"		
		24'	1'-0"	1'-0"	1'-0"	1'-0"	3'-1"	5'-7"	8'-6"	1'-0"	1'-0"	1'-7"	3'-9"	5'-10"	8'-0"	10'-2"		
		26'	1'-0"	1'-0"	1'-0"	1'-10"	4'-2"	6'-10"	9'-10"	1'-0"	1'-0"	2'-10"	5'-0"	7'-1"	9'-3"	11'-6"		
		28'	1'-0"	1'-0"	1'-0"	2'-10"	5'-4"	8'-1"	11'-2"	1'-0"	2'-0"	4'-1"	6'-3"	8'-4"	10'-6"	13'-0"		
		30'	1'-0"	1'-0"	1'-8"	4'-0"	6'-6"	9'-4"	12'-7"	1'-1"	3'-3"	5'-4"	7'-6"	9'-7"	11'-9"	14'-5"		
		32'	1'-0"	1'-0"	2'-9"	5'-1"	7'-9"	10'-8"	13'-11"	2'-4"	4'-6"	6'-7"	8'-9"	10'-10"	13'-0"	15'-11"		
		34'	1'-0"	1'-6"	3'-10"	6'-3"	9'-0"	11'-11"	15'-4"	3'-7"	5'-9"	7'-10"	10'-0"	12'-1"	14'-3"	-		
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-8"	
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	3'-0"	4'-11"	
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	4'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-3"	6'-2"		
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-3"	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"	5'-6"	7'-5"		
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	4'-0"	6'-5"	1'-0"	1'-0"	1'-0"	2'-11"	4'-10"	6'-9"	8'-8"		
		26'	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	5'-2"	7'-8"	1'-0"	1'-0"	2'-3"	4'-2"	6'-1"	8'-0"	9'-11"		
		28'	1'-0"	1'-0"	1'-0"	1'-11"	4'-1"	6'-5"	9'-0"	1'-0"	1'-7"	3'-6"	5'-5"	7'-4"	9'-3"	11'-2"		
		30'	1'-0"	1'-0"	1'-0"	3'-0"	5'-3"	7'-7"	10'-3"	1'-0"	2'-10"	4'-9"	6'-8"	8'-7"	10'-6"	12'-5"		
		32'	1'-0"	1'-0"	2'-0"	4'-2"	6'-5"	8'-10"	11'-7"	2'-2"	4'-1"	6'-0"	7'-11"	9'-10"	11'-9"	13'-8"		
		34'	1'-0"	1'-1"	3'-1"	5'-3"	7'-7"	10'-1"	12'-11"	3'-5"	5'-4"	7'-3"	9'-2"	11'-1"	13'-0"	15'-1"		
	22"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	3'-8"		
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	3'-2"	4'-11"		
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-8"	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-5"	6'-2"		
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	4'-11"	1'-0"	1'-0"	1'-0"	2'-2"	3'-11"	5'-8"	7'-5"		
		26'	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-11"	6'-1"	1'-0"	1'-0"	1'-9"	3'-5"	5'-2"	6'-11"	8'-8"		
		28'	1'-0"	1'-0"	1'-0"	1'-3"	3'-1"	5'-1"	7'-4"	1'-0"	1'-3"	3'-0"	4'-8"	6'-5"	8'-2"	9'-11"		
		30'	1'-0"	1'-0"	1'-0"	2'-3"	4'-2"	6'-3"	8'-7"	1'-0"	2'-6"	4'-3"	5'-11"	7'-8"	9'-5"	11'-2"		
		32'	1'-0"	1'-0"	1'-6"	3'-4"	5'-4"	7'-6"	9'-10"	2'-0"	3'-9"	5'-6"	7'-2"	8'-11"	10'-8"	12'-5"		
		34'	1'-0"	1'-0"	2'-6"	4'-6"	6'-6"	8'-9"	11'-1"	3'-3"	5'-0"	6'-9"	8'-5"	10'-2"	11'-11"	13'-8"		
		36'	1'-0"	1'-9"	3'-7"	5'-7"	7'-8"	9'-11"	12'-5"	4'-6"	6'-3"	8'-0"	9'-8"	11'-5"	13'-2"	14'-11"		
		38'	1'-0"	2'-10"	4'-9"	6'-9"	8'-11"	11'-3"	13'-8"	5'-9"	7'-6"	9'-3"	10'-11"	12'-8"	14'-5"	16'-2"		
	24"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"		
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"	2'-8"		
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	3'-11"		
		22'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-7"	5'-2"		
		24'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	3'-8"	1'-0"	1'-0"	1'-0"	1'-7"	3'-3"	4'-10"	6'-5"		
		26'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-11"	4'-10"	1'-0"	1'-0"	1'-3"	2'-10"	4'-6"	6'-1"	7'-8"		
		28'	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	4'-1"	6'-0"	1'-0"	1'-0"	2'-6"	4'-1"	5'-9"	7'-4"	8'-11"		
		30'	1'-0"	1'-0"	1'-0"	1'-8"	3'-5"	5'-3"	7'-2"	1'-0"	2'-2"	3'-9"	5'-4"	7'-0"	8'-7"	10'-2"		
		32'	1'-0"	1'-0"	1'-0"	2'-9"	4'-6"	6'-5"	8'-5"	1'-10"	3'-5"	5'-0"	6'-7"	8'-3"	9'-10"	11'-5"		
		34'	1'-0"	1'-0"	2'-1"	3'-10"	5'-8"	7'-7"	9'-8"	3'-1"	4'-8"	6'-3"	7'-10"	9'-6"	11'-1"	12'-8"		
		36'	1'-0"	1'-5"	3'-2"	4'-11"	6'-10"	8'-10"	10'-11"	4'-4"	5'-11"	7'-6"	9'-1"	10'-9"	12'-4"	13'-11"		
		38'	1'-0"	2'-6"	4'-3"	6'-1"	8'-0"	10'-0"	12'-3"	5'-7"	7'-2"	8'-9"	10'-4"	12'-0"	13'-7"	15'-2"		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9A on page 36.

**TABLE 9A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)						
			Hole Diameter (inches)						Obround	Hole Diameter (inches)						Obround
			2"	4"	6"	8"	10"	12"		2"	4"	6"	8"	10"	12"	
LPI 450	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-
		8'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-7"	-	-	-	-
		10'	1'-0"	1'-0"	1'-8"	-	-	-	-	1'-0"	1'-0"	2'-10"	-	-	-	-
		12'	1'-0"	1'-0"	2'-11"	-	-	-	-	1'-0"	2'-1"	4'-1"	-	-	-	-
		14'	1'-0"	1'-8"	4'-2"	-	-	-	-	1'-4"	3'-4"	5'-4"	-	-	-	-
		16'	1'-0"	2'-10"	5'-5"	-	-	-	-	2'-7"	4'-7"	6'-7"	-	-	-	-
		18'	1'-8"	4'-0"	6'-9"	-	-	-	-	3'-10"	5'-10"	7'-11"	-	-	-	-
		20'	2'-9"	5'-3"	8'-1"	-	-	-	-	5'-1"	7'-1"	9'-4"	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-6"	-	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-7"	-	-	-	1'-0"	1'-0"	1'-0"	2'-9"	-	-	-
		12'	1'-0"	1'-0"	1'-0"	2'-9"	-	-	-	1'-0"	1'-0"	2'-1"	4'-0"	-	-	-
		14'	1'-0"	1'-0"	1'-8"	4'-0"	-	-	-	1'-0"	1'-6"	3'-4"	5'-3"	-	-	-
		16'	1'-0"	1'-0"	2'-10"	5'-3"	-	-	-	1'-0"	2'-9"	4'-7"	6'-6"	-	-	-
		18'	1'-0"	1'-10"	4'-0"	6'-7"	-	-	-	2'-2"	4'-0"	5'-10"	7'-9"	-	-	-
		20'	1'-0"	3'-0"	5'-3"	7'-11"	-	-	-	3'-5"	5'-3"	7'-1"	9'-2"	-	-	-
		22'	2'-0"	4'-1"	6'-6"	9'-3"	-	-	-	4'-8"	6'-6"	8'-4"	10'-8"	-	-	-
		24'	3'-1"	5'-4"	7'-9"	10'-8"	-	-	-	5'-11"	7'-9"	9'-7"	-	-	-	-
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	-	-	1'-0"	1'-0"	1'-0"	2'-3"	4'-0"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-11"	4'-1"	-	-	1'-0"	1'-0"	1'-9"	3'-6"	5'-3"	-	-
		16'	1'-0"	1'-0"	1'-0"	3'-0"	5'-4"	-	-	1'-0"	1'-3"	3'-0"	4'-9"	6'-6"	-	-
		18'	1'-0"	1'-0"	2'-1"	4'-3"	6'-8"	-	-	1'-0"	2'-6"	4'-3"	6'-0"	7'-10"	-	-
		20'	1'-0"	1'-3"	3'-3"	5'-5"	8'-0"	-	-	2'-0"	3'-9"	5'-6"	7'-3"	9'-3"	-	-
		22'	1'-0"	2'-4"	4'-5"	6'-9"	9'-5"	-	-	3'-3"	5'-0"	6'-9"	8'-6"	10'-9"	-	-
		24'	1'-6"	3'-6"	5'-7"	8'-0"	10'-9"	-	-	4'-6"	6'-3"	8'-0"	9'-9"	-	-	-
		26'	2'-7"	4'-7"	6'-10"	9'-4"	12'-2"	-	-	5'-9"	7'-6"	9'-3"	11'-0"	-	-	-
		28'	3'-8"	5'-10"	8'-1"	10'-8"	13'-7"	-	-	7'-0"	8'-9"	10'-6"	12'-5"	-	-	-
		30'	4'-10"	7'-0"	9'-4"	12'-0"	15'-0"	-	-	8'-3"	10'-0"	11'-9"	13'-11"	-	-	-
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	2'-11"	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	4'-2"	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-3"	-	1'-0"	1'-0"	1'-0"	2'-0"	3'-8"	5'-5"	-
		16'	1'-0"	1'-0"	1'-0"	1'-3"	3'-3"	5'-6"	-	1'-0"	1'-0"	1'-6"	3'-3"	4'-11"	6'-8"	-
		18'	1'-0"	1'-0"	1'-0"	2'-4"	4'-5"	6'-10"	-	1'-0"	1'-1"	2'-9"	4'-6"	6'-2"	8'-0"	-
		20'	1'-0"	1'-0"	1'-7"	3'-6"	5'-8"	8'-2"	-	1'-0"	2'-4"	4'-0"	5'-9"	7'-5"	9'-6"	-
		22'	1'-0"	1'-0"	2'-8"	4'-8"	7'-0"	9'-7"	-	1'-10"	3'-7"	5'-3"	7'-0"	8'-8"	10'-11"	-
		24'	1'-0"	1'-11"	3'-10"	5'-11"	8'-3"	10'-11"	-	3'-1"	4'-10"	6'-6"	8'-3"	9'-11"	-	-
		26'	1'-1"	3'-0"	5'-0"	7'-2"	9'-7"	12'-4"	-	4'-4"	6'-1"	7'-9"	9'-6"	11'-3"	-	-
		28'	2'-2"	4'-1"	6'-2"	8'-5"	10'-11"	13'-9"	-	5'-7"	7'-4"	9'-0"	10'-9"	12'-8"	-	-
		30'	3'-3"	5'-3"	7'-4"	9'-8"	12'-3"	-	-	6'-10"	8'-7"	10'-3"	12'-0"	14'-2"	-	-

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9A on page 36.

**TABLE 9A (Continued)—CIRCULAR AND OBOUND WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)							DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Hole Diameter (inches)							Obround	Hole Diameter (inches)							Obround
			2"	4"	6"	8"	10"	12"	2"		4"	6"	8"	10"	12"			
LPI 530	9 1/2"	6'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-0"	-	-	-	-		
		8'	1'-0"	1'-0"	1'-0"	-	-	-	-	1'-0"	1'-0"	1'-3"	-	-	-	-		
		10'	1'-0"	1'-0"	1'-4"	-	-	-	-	1'-0"	1'-0"	2'-6"	-	-	-	-		
		12'	1'-0"	1'-0"	2'-6"	-	-	-	-	1'-0"	1'-7"	3'-9"	-	-	-	-		
		14'	1'-0"	1'-1"	3'-9"	-	-	-	-	1'-0"	2'-10"	5'-0"	-	-	-	-		
		16'	1'-0"	2'-3"	5'-0"	-	-	-	-	1'-11"	4'-1"	6'-3"	-	-	-	-		
		18'	1'-0"	3'-5"	6'-3"	-	-	-	-	3'-2"	5'-4"	7'-6"	-	-	-	-		
		20'	2'-0"	4'-7"	7'-7"	-	-	-	-	4'-5"	6'-7"	8'-11"	-	-	-	-		
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-		
		8'	1'-0"	1'-0"	1'-0"	1'-0"	-	-	-	1'-0"	1'-0"	1'-0"	1'-2"	-	-	-		
		10'	1'-0"	1'-0"	1'-0"	1'-2"	-	-	-	1'-0"	1'-0"	1'-0"	2'-5"	-	-	-		
		12'	1'-0"	1'-0"	1'-0"	2'-4"	-	-	-	1'-0"	1'-0"	1'-7"	3'-8"	-	-	-		
		14'	1'-0"	1'-0"	1'-2"	3'-7"	-	-	-	1'-0"	1'-0"	2'-10"	4'-11"	-	-	-		
		16'	1'-0"	1'-0"	2'-3"	4'-10"	-	-	-	1'-0"	2'-1"	4'-1"	6'-2"	-	-	-		
		18'	1'-0"	1'-1"	3'-5"	6'-1"	-	-	-	1'-4"	3'-4"	5'-4"	7'-5"	-	-	-		
		20'	1'-0"	2'-2"	4'-7"	7'-5"	-	-	-	2'-7"	4'-7"	6'-7"	8'-8"	-	-	-		
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	-	-		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	-	-		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	-	-	1'-0"	1'-0"	1'-0"	1'-9"	3'-8"	-	-		
		14'	1'-0"	1'-0"	1'-0"	1'-3"	3'-7"	-	-	1'-0"	1'-0"	1'-1"	3'-0"	4'-11"	-	-		
		16'	1'-0"	1'-0"	1'-0"	2'-5"	4'-10"	-	-	1'-0"	1'-0"	2'-4"	4'-3"	6'-2"	-	-		
		18'	1'-0"	1'-0"	1'-4"	3'-7"	6'-2"	-	-	1'-0"	1'-7"	3'-7"	5'-6"	7'-5"	-	-		
		20'	1'-0"	1'-0"	2'-5"	4'-9"	7'-6"	-	-	1'-0"	2'-10"	4'-10"	6'-9"	8'-9"	-	-		
		22'	1'-0"	1'-5"	3'-7"	6'-0"	8'-10"	-	-	2'-2"	4'-1"	6'-1"	8'-0"	10'-3"	-	-		
		24'	1'-0"	2'-6"	4'-9"	7'-3"	10'-2"	-	-	3'-5"	5'-4"	7'-4"	9'-3"	11'-8"	-	-		
		26'	1'-5"	3'-7"	5'-11"	8'-6"	11'-7"	-	-	4'-8"	6'-7"	8'-7"	10'-6"	-	-	-		
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	-		
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	-		
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	3'-10"	-		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-9"	-	1'-0"	1'-0"	1'-0"	1'-3"	3'-2"	5'-1"	-		
		16'	1'-0"	1'-0"	1'-0"	1'-0"	2'-7"	5'-0"	-	1'-0"	1'-0"	1'-0"	2'-6"	4'-5"	6'-4"	-		
		18'	1'-0"	1'-0"	1'-0"	1'-7"	3'-9"	6'-4"	-	1'-0"	1'-0"	1'-11"	3'-9"	5'-8"	7'-7"	-		
		20'	1'-0"	1'-0"	1'-0"	2'-8"	5'-0"	7'-8"	-	1'-0"	1'-3"	3'-2"	5'-0"	6'-11"	8'-11"	-		
		22'	1'-0"	1'-0"	1'-9"	3'-10"	6'-3"	9'-0"	-	1'-0"	2'-6"	4'-5"	6'-3"	8'-2"	10'-5"	-		
		24'	1'-0"	1'-0"	2'-10"	5'-0"	7'-6"	10'-4"	-	1'-11"	3'-9"	5'-8"	7'-6"	9'-5"	11'-10"	-		
		26'	1'-0"	1'-10"	3'-11"	6'-3"	8'-10"	11'-9"	-	3'-2"	5'-0"	6'-11"	8'-9"	10'-8"	-	-		
30'	1'-0"	2'-11"	5'-1"	7'-6"	10'-1"	13'-2"	-	4'-5"	6'-3"	8'-2"	10'-0"	11'-11"	-	-				

For **SI**: 1 inch = 25.4 mm, 1 foot = 305 mm.

<sup>1</sup>The hole locations listed above are valid for joists supporting only uniform loads. The total uniform load must not exceed 130 plf (e.g., 40 psf Live Load and a 25 psf Dead Load, spaced up to 24 inches o.c.). The uniform Dead Load must be at least 10 plf.

<sup>2</sup>Hole location is measured from the inside face of the nearest support to the center of a circular hole or to the center of radius of the nearest semi-circular end of an obround hole.

<sup>3</sup>Obround holes are not allowed for the LPI 26, LPI 450 and LPI 530 I-Joists.

<sup>4</sup>Maximum hole diameter for circular holes is the Joist Depth less 4 inches, except the maximum hole diameter is 6 inches for 9 1/2-inch-deep joists, and 8 inches for 11 7/8-inch-deep joists.

<sup>5</sup>Holes cannot be located in the span where designated "–", without further analysis by a design professional (see note 7 below).

<sup>6</sup>Clear Span has NOT been verified for these joists and is shown for informational purposes only. Verify that the joist selected will work for the span and loading conditions needed before checking hole location.

<sup>7</sup>Larger holes, greater uniform loads or nonuniform loads, and closer proximity to supports and other holes may be possible with further analysis (See Section 4.4 and the web hole shear equations listed in Table 10).

**TABLE 9B—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)							
			Maximum Hole Dimension: Depth or Width (inches)															
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"
LPI 18	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-7"	-	-	1'-0"	1'-0"	1'-3"	1'-6"	1'-10"	2'-2"	-	-
		8'	1'-0"	1'-0"	1'-7"	2'-0"	2'-5"	2'-11"	-	-	1'-0"	1'-3"	2'-6"	2'-9"	3'-1"	3'-5"	-	-
		10'	1'-0"	1'-4"	2'-10"	3'-3"	3'-9"	4'-3"	-	-	1'-3"	2'-6"	3'-9"	4'-0"	4'-5"	-	-	-
		12'	1'-1"	2'-6"	4'-1"	4'-7"	5'-1"	-	-	-	2'-6"	3'-9"	5'-0"	5'-4"	-	-	-	-
		14'	2'-2"	3'-8"	5'-5"	5'-11"	6'-6"	-	-	-	3'-9"	5'-0"	6'-4"	-	-	-	-	-
		16'	3'-4"	5'-0"	6'-10"	7'-4"	-	-	-	-	5'-0"	6'-3"	-	-	-	-	-	-
		18'	4'-7"	6'-3"	8'-2"	-	-	-	-	-	6'-3"	7'-6"	-	-	-	-	-	-
		20'	5'-10"	7'-7"	9'-7"	-	-	-	-	-	7'-6"	8'-10"	-	-	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	-	-	-	1'-0"	1'-0"	1'-0"	1'-8"	2'-0"	-	-	-
		8'	1'-0"	1'-0"	1'-0"	2'-3"	2'-8"	-	-	-	1'-0"	1'-0"	1'-11"	2'-11"	3'-3"	-	-	-
		10'	1'-0"	1'-0"	2'-2"	3'-6"	4'-0"	-	-	-	1'-1"	2'-2"	3'-2"	4'-2"	-	-	-	-
		12'	1'-0"	2'-1"	3'-4"	4'-10"	5'-5"	-	-	-	2'-4"	3'-5"	4'-5"	5'-8"	-	-	-	-
		14'	2'-0"	3'-3"	4'-8"	6'-3"	-	-	-	-	3'-7"	4'-8"	5'-8"	-	-	-	-	-
		16'	3'-2"	4'-6"	5'-11"	7'-8"	-	-	-	-	4'-10"	5'-11"	7'-0"	-	-	-	-	-
		18'	4'-4"	5'-9"	7'-3"	-	-	-	-	-	6'-1"	7'-2"	8'-5"	-	-	-	-	-
		20'	5'-7"	7'-0"	8'-8"	-	-	-	-	-	7'-4"	8'-5"	-	-	-	-	-	-
	14"	22'	6'-10"	8'-4"	10'-1"	-	-	-	-	-	8'-7"	9'-9"	-	-	-	-	-	-
		24'	8'-2"	9'-8"	11'-5"	-	-	-	-	-	9'-10"	11'-3"	-	-	-	-	-	-
		8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-1"	2'-9"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	2'-10"	3'-4"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	3'-5"	4'-1"	-	1'-0"	1'-0"	1'-0"	2'-1"	3'-8"	4'-1"	-	-
		12'	1'-0"	1'-0"	1'-0"	2'-0"	4'-0"	4'-9"	-	-	1'-0"	1'-0"	1'-10"	3'-4"	4'-11"	5'-6"	-	-
		14'	1'-0"	1'-0"	1'-4"	3'-2"	5'-4"	6'-1"	-	-	1'-0"	1'-6"	3'-1"	4'-7"	6'-3"	-	-	-
		16'	1'-0"	1'-0"	2'-6"	4'-5"	6'-8"	7'-6"	-	-	1'-2"	2'-9"	4'-4"	5'-10"	-	-	-	-
		18'	1'-0"	1'-10"	3'-8"	5'-8"	8'-1"	-	-	-	2'-5"	4'-0"	5'-7"	7'-1"	-	-	-	-
		20'	1'-3"	2'-11"	4'-10"	7'-0"	9'-5"	-	-	-	3'-8"	5'-3"	6'-10"	8'-4"	-	-	-	-
		22'	2'-4"	4'-1"	6'-1"	8'-3"	-	-	-	-	4'-11"	6'-6"	8'-1"	9'-9"	-	-	-	-
	24'	3'-5"	5'-3"	7'-4"	9'-8"	-	-	-	-	6'-2"	7'-9"	9'-4"	11'-2"	-	-	-	-	
	26'	4'-7"	6'-6"	8'-7"	11'-0"	-	-	-	-	7'-5"	9'-0"	10'-7"	12'-7"	-	-	-	-	
	28'	5'-9"	7'-9"	9'-11"	12'-4"	-	-	-	-	8'-8"	10'-3"	11'-10"	-	-	-	-	-	
	30'	6'-11"	9'-0"	11'-3"	13'-9"	-	-	-	-	9'-11"	11'-6"	13'-2"	-	-	-	-	-	
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-2"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	3'-10"	-	-	1'-0"	1'-0"	1'-0"	1'-7"	3'-0"	4'-5"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-4"	3'-1"	5'-2"	-	-	1'-0"	1'-0"	1'-5"	2'-10"	4'-3"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	2'-6"	4'-4"	-	-	-	1'-0"	1'-3"	2'-8"	4'-1"	5'-6"	-	-	-
		16'	1'-0"	1'-0"	2'-0"	3'-8"	5'-8"	-	-	-	1'-1"	2'-6"	3'-11"	5'-4"	6'-9"	-	-	-
		18'	1'-0"	1'-6"	3'-2"	4'-11"	7'-0"	-	-	-	2'-4"	3'-9"	5'-2"	6'-7"	8'-1"	-	-	-
20'		1'-1"	2'-8"	4'-4"	6'-2"	8'-4"	-	-	-	3'-7"	5'-0"	6'-5"	7'-10"	9'-7"	-	-	-	
22'		2'-2"	3'-9"	5'-6"	7'-6"	9'-8"	-	-	-	4'-10"	6'-3"	7'-8"	9'-1"	-	-	-	-	
24'		3'-3"	4'-11"	6'-9"	8'-10"	11'-1"	-	-	-	6'-1"	7'-6"	8'-11"	10'-4"	-	-	-	-	
26'		4'-5"	6'-2"	8'-1"	10'-2"	12'-6"	-	-	-	7'-4"	8'-9"	10'-2"	11'-10"	-	-	-	-	
28'	5'-7"	7'-5"	9'-4"	11'-6"	-	-	-	-	8'-7"	10'-0"	11'-5"	13'-3"	-	-	-	-		
30'	6'-9"	8'-8"	10'-8"	12'-10"	-	-	-	-	9'-10"	11'-3"	12'-8"	-	-	-	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9B on page 44.

**TABLE 9B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Maximum Hole Dimension: Depth or Width (inches)																
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"	
LPI 20Plus, LPI 20x4, LPI 32Plus, LPI 42Plus, LPI 52Plus	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	-	-	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	2'-0"	-	-
		8'	1'-0"	1'-0"	1'-3"	1'-8"	2'-2"	2'-8"	-	-	1'-0"	1'-0"	2'-2"	2'-6"	2'-11"	3'-3"	-	-	
		10'	1'-0"	1'-0"	2'-6"	2'-11"	3'-5"	3'-11"	-	-	1'-0"	2'-1"	3'-5"	3'-9"	4'-2"	-	-	-	
		12'	1'-0"	2'-0"	3'-9"	4'-3"	4'-9"	5'-4"	-	-	2'-0"	3'-4"	4'-8"	5'-0"	5'-6"	-	-	-	
		14'	1'-7"	3'-2"	5'-0"	5'-7"	6'-1"	-	-	-	3'-3"	4'-7"	5'-11"	6'-5"	-	-	-	-	
		16'	2'-9"	4'-5"	6'-4"	6'-11"	7'-6"	-	-	-	4'-6"	5'-10"	7'-5"	-	-	-	-	-	
		18'	3'-11"	5'-8"	7'-9"	8'-4"	-	-	-	-	5'-9"	7'-1"	-	-	-	-	-	-	
		20'	5'-2"	7'-0"	9'-1"	-	-	-	-	-	7'-0"	8'-4"	-	-	-	-	-	-	
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-6"	1'-10"	2'-2"	-	-	
		8'	1'-0"	1'-0"	1'-0"	2'-0"	2'-5"	2'-11"	-	-	1'-0"	1'-0"	1'-7"	2'-9"	3'-1"	3'-5"	-	-	
		10'	1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	-	-	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-	-	-	
		12'	1'-0"	1'-7"	2'-11"	4'-6"	5'-1"	-	-	-	1'-10"	3'-0"	4'-1"	5'-4"	-	-	-	-	
		14'	1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	-	-	3'-1"	4'-3"	5'-4"	-	-	-	-	-	
		16'	2'-6"	3'-11"	5'-6"	7'-3"	-	-	-	-	4'-4"	5'-6"	6'-7"	-	-	-	-	-	
		18'	3'-8"	5'-2"	6'-9"	8'-8"	-	-	-	-	5'-7"	6'-9"	7'-11"	-	-	-	-	-	
		20'	4'-11"	6'-5"	8'-2"	-	-	-	-	-	6'-10"	8'-0"	9'-5"	-	-	-	-	-	
	14"	22'	6'-1"	7'-9"	9'-6"	-	-	-	-	-	8'-1"	9'-3"	-	-	-	-	-	-	
		24'	7'-5"	9'-1"	10'-11"	-	-	-	-	-	9'-4"	10'-7"	-	-	-	-	-	-	
		8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-10"	2'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	2'-8"	3'-2"	-	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	3'-1"	3'-10"	-	1'-0"	1'-0"	1'-0"	1'-8"	3'-4"	3'-11"	-	-	
		12'	1'-0"	1'-0"	1'-0"	1'-6"	3'-8"	4'-5"	5'-2"	-	1'-0"	1'-0"	1'-3"	2'-11"	4'-7"	5'-2"	-	-	
		14'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	-	-	1'-0"	1'-0"	2'-6"	4'-2"	5'-10"	-	-	-	
		16'	1'-0"	1'-0"	1'-10"	3'-10"	6'-3"	7'-1"	-	-	1'-0"	2'-0"	3'-9"	5'-5"	7'-3"	-	-	-	
		18'	1'-0"	1'-0"	2'-11"	5'-1"	7'-7"	8'-6"	-	-	1'-7"	3'-3"	5'-0"	6'-8"	-	-	-	-	
		20'	1'-0"	2'-1"	4'-1"	6'-4"	9'-0"	-	-	-	2'-10"	4'-6"	6'-3"	7'-11"	-	-	-	-	
		22'	1'-4"	3'-3"	5'-4"	7'-8"	10'-5"	-	-	-	4'-1"	5'-9"	7'-6"	9'-2"	-	-	-	-	
	24'	2'-5"	4'-5"	6'-7"	9'-0"	-	-	-	-	5'-4"	7'-0"	8'-9"	10'-6"	-	-	-	-		
	26'	3'-6"	5'-7"	7'-10"	10'-4"	-	-	-	-	6'-7"	8'-3"	10'-0"	12'-0"	-	-	-	-		
	28'	4'-8"	6'-9"	9'-1"	11'-8"	-	-	-	-	7'-10"	9'-6"	11'-3"	13'-5"	-	-	-	-		
	30'	5'-10"	8'-0"	10'-5"	13'-0"	-	-	-	-	9'-1"	10'-9"	12'-6"	-	-	-	-	-		
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	3'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	2'-11"	-	-	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"	4'-4"	-	1'-0"	1'-0"	1'-0"	1'-1"	2'-8"	4'-2"	-	-	
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-10"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	3'-11"	-	-	-	
		14'	1'-0"	1'-0"	1'-0"	1'-11"	3'-11"	6'-3"	-	-	1'-0"	1'-0"	2'-0"	3'-7"	5'-2"	-	-	-	
		16'	1'-0"	1'-0"	1'-4"	3'-1"	5'-2"	-	-	-	1'-0"	1'-9"	3'-3"	4'-10"	6'-5"	-	-	-	
		18'	1'-0"	1'-0"	2'-5"	4'-4"	6'-5"	-	-	-	1'-5"	3'-0"	4'-6"	6'-1"	7'-8"	-	-	-	
20'		1'-0"	1'-9"	3'-7"	5'-6"	7'-9"	-	-	-	2'-8"	4'-3"	5'-9"	7'-4"	9'-1"	-	-	-		
22'		1'-2"	2'-11"	4'-9"	6'-10"	9'-2"	-	-	-	3'-11"	5'-6"	7'-0"	8'-7"	10'-6"	-	-	-		
24'		2'-3"	4'-0"	6'-0"	8'-1"	10'-6"	-	-	-	5'-2"	6'-9"	8'-3"	9'-10"	-	-	-	-		
26'		3'-4"	5'-2"	7'-2"	9'-5"	11'-11"	-	-	-	6'-5"	8'-0"	9'-6"	11'-1"	-	-	-	-		
28'	4'-6"	6'-5"	8'-5"	10'-9"	13'-4"	-	-	-	7'-8"	9'-3"	10'-9"	12'-6"	-	-	-	-			
30'	5'-8"	7'-7"	9'-9"	12'-1"	-	-	-	-	8'-11"	10'-6"	12'-0"	14'-0"	-	-	-	-			

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9B on page 44.

**TABLE 9B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)							
			Maximum Hole Dimension: Depth or Width (inches)															
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"
LPI 42Plus, LPI 52Plus	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	5'-1"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-4"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-2"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	4'-7"	-	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	4'-4"	-	-	1'-0"	1'-0"	1'-0"	1'-3"	3'-6"	5'-10"	-	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-8"	-	-	1'-0"	1'-0"	1'-0"	2'-6"	4'-9"	7'-1"	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-3"	3'-11"	6'-11"	-	-	1'-0"	1'-0"	1'-6"	3'-9"	6'-0"	8'-4"	-	-
		22'	1'-0"	1'-0"	1'-0"	2'-4"	5'-1"	8'-3"	-	-	1'-0"	1'-0"	2'-9"	5'-0"	7'-3"	9'-8"	-	-
		24'	1'-0"	1'-0"	1'-0"	3'-6"	6'-4"	9'-7"	-	-	1'-0"	1'-8"	4'-0"	6'-3"	8'-6"	11'-1"	-	-
		26'	1'-0"	1'-0"	2'-0"	4'-8"	7'-7"	10'-11"	-	-	1'-0"	2'-11"	5'-3"	7'-6"	9'-9"	-	-	-
		28'	1'-0"	1'-0"	3'-2"	5'-10"	8'-10"	12'-4"	-	-	1'-11"	4'-2"	6'-6"	8'-9"	11'-0"	-	-	-
		30'	1'-0"	1'-9"	4'-3"	7'-0"	10'-1"	13'-8"	-	-	3'-2"	5'-5"	7'-9"	10'-0"	12'-3"	-	-	-
	32'	1'-0"	2'-10"	5'-5"	8'-3"	11'-5"	15'-1"	-	-	4'-5"	6'-8"	9'-0"	11'-3"	13'-6"	-	-	-	
	34'	1'-5"	3'-11"	6'-7"	9'-6"	12'-9"	16'-6"	-	-	5'-8"	7'-11"	10'-3"	12'-6"	14'-11"	-	-	-	
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	4'-7"	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	3'-8"	5'-10"	-
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	6'-2"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	4'-11"	7'-2"	-
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	4'-5"	7'-6"	-	1'-0"	1'-0"	1'-0"	1'-11"	4'-1"	6'-2"	-	-
		20'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-8"	8'-11"	-	1'-0"	1'-0"	1'-0"	3'-2"	5'-4"	7'-5"	-	-
		22'	1'-0"	1'-0"	1'-0"	1'-9"	4'-2"	6'-11"	10'-3"	-	1'-0"	1'-0"	2'-3"	4'-5"	6'-7"	8'-8"	-	-
		24'	1'-0"	1'-0"	1'-0"	2'-10"	5'-4"	8'-3"	-	-	1'-0"	1'-5"	3'-6"	5'-8"	7'-10"	9'-11"	-	-
		26'	1'-0"	1'-0"	1'-7"	3'-11"	6'-7"	9'-7"	-	-	1'-0"	2'-8"	4'-9"	6'-11"	9'-1"	11'-3"	-	-
		28'	1'-0"	1'-0"	2'-8"	5'-1"	7'-10"	10'-11"	-	-	1'-9"	3'-11"	6'-0"	8'-2"	10'-4"	12'-8"	-	-
		30'	1'-0"	1'-5"	3'-9"	6'-3"	9'-1"	12'-3"	-	-	3'-0"	5'-2"	7'-3"	9'-5"	11'-7"	14'-2"	-	-
	22"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		22'	1'-0"	1'-0"	1'-0"	1'-2"	3'-5"	5'-11"	8'-10"	-	1'-0"	1'-0"	1'-11"	3'-11"	5'-11"	7'-11"	10'-3"	-
		24'	1'-0"	1'-0"	1'-0"	2'-3"	4'-7"	7'-2"	10'-3"	-	1'-0"	1'-2"	3'-2"	5'-2"	7'-2"	9'-2"	-	-
		26'	1'-0"	1'-0"	1'-2"	3'-5"	5'-9"	8'-6"	11'-7"	-	1'-0"	2'-5"	4'-5"	6'-5"	8'-5"	10'-5"	-	-
		28'	1'-0"	1'-0"	2'-3"	4'-6"	7'-0"	9'-9"	13'-0"	-	1'-8"	3'-8"	5'-8"	7'-8"	9'-8"	11'-8"	-	-
		30'	1'-0"	1'-2"	3'-4"	5'-8"	8'-3"	11'-1"	14'-5"	-	2'-11"	4'-11"	6'-11"	8'-11"	10'-11"	13'-1"	-	-
	24"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
20'		1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-11"	6'-6"	-	1'-0"	1'-0"	1'-0"	2'-3"	4'-2"	6'-1"	8'-0"	-	
22'		1'-0"	1'-0"	1'-0"	1'-10"	4'-0"	6'-5"	9'-1"	-	1'-0"	1'-0"	2'-10"	4'-9"	6'-8"	8'-7"	10'-8"	-	
24'		1'-0"	1'-0"	1'-0"	2'-11"	5'-2"	7'-8"	10'-5"	-	1'-0"	2'-2"	4'-1"	6'-0"	7'-11"	9'-10"	12'-1"	-	
26'		1'-0"	1'-0"	1'-11"	4'-0"	6'-4"	8'-11"	11'-10"	-	1'-7"	3'-5"	5'-4"	7'-3"	9'-2"	11'-1"	-	-	
28'		1'-0"	1'-0"	3'-0"	5'-2"	7'-7"	10'-2"	13'-2"	-	2'-10"	4'-8"	6'-7"	8'-6"	10'-5"	12'-4"	-	-	
30'		1'-0"	2'-0"	4'-1"	6'-4"	8'-10"	11'-6"	14'-7"	-	4'-1"	5'-11"	7'-10"	9'-9"	11'-8"	13'-7"	-	-	
32'	1'-1"	3'-1"	5'-3"	7'-7"	10'-1"	12'-10"	16'-0"	-	5'-4"	7'-2"	9'-1"	11'-0"	12'-11"	15'-0"	-	-		
34'	2'-1"	4'-2"	6'-5"	8'-9"	11'-4"	14'-2"	17'-5"	-	6'-7"	8'-5"	10'-4"	12'-3"	14'-2"	16'-6"	-	-		
36'	3'-2"	5'-3"	7'-7"	10'-0"	12'-7"	15'-6"	-	-	7'-10"	9'-8"	11'-7"	13'-6"	15'-5"	17'-11"	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9B on page 44.

**TABLE 9B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Maximum Hole Dimension: Depth or Width (inches)																
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"	
LPI 26	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	-	-	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	2'-0"	-	-	
		8'	1'-0"	1'-0"	1'-3"	1'-8"	2'-2"	2'-8"	-	-	1'-0"	1'-0"	2'-2"	2'-6"	2'-11"	3'-3"	-	-	
		10'	1'-0"	1'-0"	2'-6"	2'-11"	3'-5"	3'-11"	-	-	1'-0"	2'-1"	3'-5"	3'-9"	4'-2"	-	-	-	
		12'	1'-0"	2'-0"	3'-9"	4'-3"	4'-9"	5'-4"	-	-	2'-0"	3'-4"	4'-8"	5'-0"	5'-6"	-	-	-	
		14'	1'-7"	3'-2"	5'-0"	5'-7"	6'-1"	-	-	-	3'-3"	4'-7"	5'-11"	6'-5"	-	-	-	-	
		16'	2'-9"	4'-5"	6'-4"	6'-11"	7'-6"	-	-	-	4'-6"	5'-10"	7'-5"	-	-	-	-	-	
		18'	3'-11"	5'-8"	7'-9"	8'-4"	-	-	-	-	5'-9"	7'-1"	-	-	-	-	-	-	
		20'	5'-2"	7'-0"	9'-1"	-	-	-	-	-	7'-0"	8'-4"	-	-	-	-	-	-	
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-6"	1'-10"	2'-2"	-	-	
		8'	1'-0"	1'-0"	1'-0"	2'-0"	2'-5"	2'-11"	-	-	1'-0"	1'-0"	1'-7"	2'-9"	3'-1"	3'-5"	-	-	
		10'	1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	-	-	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-	-	-	
		12'	1'-0"	1'-7"	2'-11"	4'-6"	5'-1"	-	-	-	1'-10"	3'-0"	4'-1"	5'-4"	-	-	-	-	
		14'	1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	-	-	3'-1"	4'-3"	5'-4"	-	-	-	-	-	
		16'	2'-6"	3'-11"	5'-6"	7'-3"	-	-	-	-	4'-4"	5'-6"	6'-7"	-	-	-	-	-	
		18'	3'-8"	5'-2"	6'-9"	8'-8"	-	-	-	-	5'-7"	6'-9"	7'-11"	-	-	-	-	-	
		20'	4'-11"	6'-5"	8'-2"	-	-	-	-	-	6'-10"	8'-0"	9'-5"	-	-	-	-	-	
		22'	6'-1"	7'-9"	9'-6"	-	-	-	-	-	8'-1"	9'-3"	-	-	-	-	-	-	
		24'	7'-5"	9'-1"	10'-11"	-	-	-	-	-	9'-4"	10'-7"	-	-	-	-	-	-	
	LPI 30	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	-	-	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	2'-0"	-	-
			8'	1'-0"	1'-0"	1'-3"	1'-8"	2'-2"	2'-8"	-	-	1'-0"	1'-0"	2'-2"	2'-6"	2'-11"	3'-3"	-	-
			10'	1'-0"	1'-0"	2'-6"	2'-11"	3'-5"	3'-11"	-	-	1'-0"	2'-1"	3'-5"	3'-9"	4'-2"	-	-	-
			12'	1'-0"	2'-0"	3'-9"	4'-3"	4'-9"	5'-4"	-	-	2'-0"	3'-4"	4'-8"	5'-0"	5'-6"	-	-	-
			14'	1'-7"	3'-2"	5'-0"	5'-7"	6'-1"	-	-	-	3'-3"	4'-7"	5'-11"	6'-5"	-	-	-	-
			16'	2'-9"	4'-5"	6'-4"	6'-11"	7'-6"	-	-	-	4'-6"	5'-10"	7'-5"	-	-	-	-	-
			18'	3'-11"	5'-8"	7'-9"	8'-4"	-	-	-	-	5'-9"	7'-1"	-	-	-	-	-	-
			20'	5'-2"	7'-0"	9'-1"	-	-	-	-	-	7'-0"	8'-4"	-	-	-	-	-	-
		11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-6"	1'-10"	2'-2"	-	-
			8'	1'-0"	1'-0"	1'-0"	2'-0"	2'-5"	2'-11"	-	-	1'-0"	1'-0"	1'-7"	2'-9"	3'-1"	3'-5"	-	-
10'			1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	-	-	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-	-	-	
12'			1'-0"	1'-7"	2'-11"	4'-6"	5'-1"	-	-	-	1'-10"	3'-0"	4'-1"	5'-4"	-	-	-	-	
14'			1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	-	-	3'-1"	4'-3"	5'-4"	-	-	-	-	-	
16'			2'-6"	3'-11"	5'-6"	7'-3"	-	-	-	-	4'-4"	5'-6"	6'-7"	-	-	-	-	-	
18'			3'-8"	5'-2"	6'-9"	8'-8"	-	-	-	-	5'-7"	6'-9"	7'-11"	-	-	-	-	-	
20'			4'-11"	6'-5"	8'-2"	-	-	-	-	-	6'-10"	8'-0"	9'-5"	-	-	-	-	-	
22'			6'-1"	7'-9"	9'-6"	-	-	-	-	-	8'-1"	9'-3"	-	-	-	-	-	-	
24'			7'-5"	9'-1"	10'-11"	-	-	-	-	-	9'-4"	10'-7"	-	-	-	-	-	-	
14"		8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-10"	2'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	2'-8"	3'-2"	-	
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	3'-1"	3'-10"	-	1'-0"	1'-0"	1'-0"	1'-8"	3'-4"	3'-11"	-	-	
		12'	1'-0"	1'-0"	1'-0"	1'-6"	3'-8"	4'-5"	5'-2"	-	1'-0"	1'-0"	1'-3"	2'-11"	4'-7"	5'-2"	-	-	
		14'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	-	-	1'-0"	1'-0"	2'-6"	4'-2"	5'-10"	-	-	-	
		16'	1'-0"	1'-0"	1'-10"	3'-10"	6'-3"	7'-1"	-	-	1'-0"	2'-0"	3'-9"	5'-5"	7'-3"	-	-	-	
		18'	1'-0"	1'-0"	2'-11"	5'-1"	7'-7"	8'-6"	-	-	1'-7"	3'-3"	5'-0"	6'-8"	-	-	-	-	
		20'	1'-0"	2'-1"	4'-1"	6'-4"	9'-0"	-	-	-	2'-10"	4'-6"	6'-3"	7'-11"	-	-	-	-	
		22'	1'-4"	3'-3"	5'-4"	7'-8"	10'-5"	-	-	-	4'-1"	5'-9"	7'-6"	9'-2"	-	-	-	-	
		24'	2'-5"	4'-5"	6'-7"	9'-0"	-	-	-	-	5'-4"	7'-0"	8'-9"	10'-6"	-	-	-	-	
		26'	3'-6"	5'-7"	7'-10"	10'-4"	-	-	-	-	6'-7"	8'-3"	10'-0"	12'-0"	-	-	-	-	
28'	4'-8"	6'-9"	9'-1"	11'-8"	-	-	-	-	7'-10"	9'-6"	11'-3"	13'-5"	-	-	-	-			
30'	5'-10"	8'-0"	10'-5"	13'-0"	-	-	-	-	9'-1"	10'-9"	12'-6"	-	-	-	-	-			
16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	3'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	2'-11"	-	-		
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"	4'-4"	-	1'-0"	1'-0"	1'-0"	1'-1"	2'-8"	4'-2"	-	-		
	12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-10"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	3'-11"	-	-	-		
	14'	1'-0"	1'-0"	1'-0"	1'-11"	3'-11"	6'-3"	-	-	1'-0"	1'-0"	2'-0"	3'-7"	5'-2"	-	-	-		
	16'	1'-0"	1'-0"	1'-4"	3'-1"	5'-2"	-	-	-	1'-0"	1'-9"	3'-3"	4'-10"	6'-5"	-	-	-		
	18'	1'-0"	1'-0"	2'-5"	4'-4"	6'-5"	-	-	-	1'-5"	3'-0"	4'-6"	6'-1"	7'-8"	-	-	-		
	20'	1'-0"	1'-9"	3'-7"	5'-6"	7'-9"	-	-	-	2'-8"	4'-3"	5'-9"	7'-4"	9'-1"	-	-	-		
	22'	1'-2"	2'-11"	4'-9"	6'-10"	9'-2"	-	-	-	3'-11"	5'-6"	7'-0"	8'-7"	10'-6"	-	-	-		
	24'	2'-3"	4'-0"	6'-0"	8'-1"	10'-6"	-	-	-	5'-2"	6'-9"	8'-3"	9'-10"	-	-	-	-		
	26'	3'-4"	5'-2"	7'-2"	9'-5"	11'-11"	-	-	-	6'-5"	8'-0"	9'-6"	11'-1"	-	-	-	-		
28'	4'-6"	6'-5"	8'-5"	10'-9"	13'-4"	-	-	-	7'-8"	9'-3"	10'-9"	12'-6"	-	-	-	-			
30'	5'-8"	7'-7"	9'-9"	12'-1"	-	-	-	-	8'-11"	10'-6"	12'-0"	14'-0"	-	-	-	-			

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9B on page 44.

**TABLE 9B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

Joist Series	Joist Depth	Clear Span	Distance from End Support								Distance from Interior Support							
			Maximum Hole Dimension: Depth or Width								Maximum Hole Dimension: Depth or Width							
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"
LPI 36, LPI 56	117/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-6"	1'-10"	2'-2"	-	-
		8'	1'-0"	1'-0"	1'-0"	2'-0"	2'-5"	2'-11"	-	-	1'-0"	1'-0"	1'-7"	2'-9"	3'-1"	3'-5"	-	-
		10'	1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	-	-	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-	-	-
		12'	1'-0"	1'-7"	2'-11"	4'-6"	5'-1"	-	-	-	1'-10"	3'-0"	4'-1"	5'-4"	-	-	-	-
		14'	1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	-	-	3'-1"	4'-3"	5'-4"	-	-	-	-	-
		16'	2'-6"	3'-11"	5'-6"	7'-3"	-	-	-	-	4'-4"	5'-6"	6'-7"	-	-	-	-	-
		18'	3'-8"	5'-2"	6'-9"	8'-8"	-	-	-	-	5'-7"	6'-9"	7'-11"	-	-	-	-	-
		20'	4'-11"	6'-5"	8'-2"	-	-	-	-	-	6'-10"	8'-0"	9'-5"	-	-	-	-	-
		22'	6'-1"	7'-9"	9'-6"	-	-	-	-	-	8'-1"	9'-3"	-	-	-	-	-	-
	24'	7'-5"	9'-1"	10'-11"	-	-	-	-	-	9'-4"	10'-7"	-	-	-	-	-	-	
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-10"	2'-6"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	2'-8"	3'-2"	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	3'-1"	3'-10"	-	1'-0"	1'-0"	1'-0"	1'-8"	3'-4"	3'-11"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-6"	3'-8"	4'-5"	5'-2"	-	1'-0"	1'-0"	1'-3"	2'-11"	4'-7"	5'-2"	-	-
		14'	1'-0"	1'-0"	1'-0"	2'-8"	4'-11"	5'-9"	-	-	1'-0"	1'-0"	2'-6"	4'-2"	5'-10"	-	-	-
		16'	1'-0"	1'-0"	1'-10"	3'-10"	6'-3"	7'-1"	-	-	1'-0"	2'-0"	3'-9"	5'-5"	7'-3"	-	-	-
		18'	1'-0"	1'-0"	2'-11"	5'-1"	7'-7"	8'-6"	-	-	1'-7"	3'-3"	5'-0"	6'-8"	-	-	-	-
		20'	1'-0"	2'-1"	4'-1"	6'-4"	9'-0"	-	-	-	2'-10"	4'-6"	6'-3"	7'-11"	-	-	-	-
		22'	1'-4"	3'-3"	5'-4"	7'-8"	10'-5"	-	-	-	4'-1"	5'-9"	7'-6"	9'-2"	-	-	-	-
		24'	2'-5"	4'-5"	6'-7"	9'-0"	-	-	-	-	5'-4"	7'-0"	8'-9"	10'-6"	-	-	-	-
		26'	3'-6"	5'-7"	7'-10"	10'-4"	-	-	-	-	6'-7"	8'-3"	10'-0"	12'-0"	-	-	-	-
	28'	4'-8"	6'-9"	9'-1"	11'-8"	-	-	-	-	7'-10"	9'-6"	11'-3"	13'-5"	-	-	-	-	
	30'	5'-10"	8'-0"	10'-5"	13'-0"	-	-	-	-	9'-1"	10'-9"	12'-6"	-	-	-	-	-	
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	3'-0"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	2'-11"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	3'-6"	4'-4"	-	1'-0"	1'-0"	1'-0"	1'-1"	2'-8"	4'-2"	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	4'-10"	-	-	1'-0"	1'-0"	1'-0"	2'-4"	3'-11"	-	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-11"	3'-11"	6'-3"	-	-	1'-0"	1'-0"	2'-0"	3'-7"	5'-2"	-	-	-
		16'	1'-0"	1'-0"	1'-4"	3'-1"	5'-2"	-	-	-	1'-0"	1'-9"	3'-3"	4'-10"	6'-5"	-	-	-
		18'	1'-0"	1'-0"	2'-5"	4'-4"	6'-5"	-	-	-	1'-5"	3'-0"	4'-6"	6'-1"	7'-8"	-	-	-
		20'	1'-0"	1'-9"	3'-7"	5'-6"	7'-9"	-	-	-	2'-8"	4'-3"	5'-9"	7'-4"	9'-1"	-	-	-
		22'	1'-2"	2'-11"	4'-9"	6'-10"	9'-2"	-	-	-	3'-11"	5'-6"	7'-0"	8'-7"	10'-6"	-	-	-
24'		2'-3"	4'-0"	6'-0"	8'-1"	10'-6"	-	-	-	5'-2"	6'-9"	8'-3"	9'-10"	-	-	-	-	
26'		3'-4"	5'-2"	7'-2"	9'-5"	11'-11"	-	-	-	6'-5"	8'-0"	9'-6"	11'-1"	-	-	-	-	
28'		4'-6"	6'-5"	8'-5"	10'-9"	13'-4"	-	-	-	7'-8"	9'-3"	10'-9"	12'-6"	-	-	-	-	
30'	5'-8"	7'-7"	9'-9"	12'-1"	-	-	-	-	8'-11"	10'-6"	12'-0"	14'-0"	-	-	-	-		

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9B on page 44.



**TABLE 9B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

Joist Series	Joist Depth	Clear Span	Distance from End Support							Distance from Interior Support										
			Maximum Hole Dimension: Depth or Width																	
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"		
LPI 36, LPI 56	18"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	5'-1"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-4"	-	-
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-2"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	4'-7"	-	-	
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	4'-4"	-	-	1'-0"	1'-0"	1'-0"	1'-3"	3'-6"	5'-10"	-	-		
		18'	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-8"	-	-	1'-0"	1'-0"	1'-0"	2'-6"	4'-9"	7'-1"	-	-		
		20'	1'-0"	1'-0"	1'-0"	1'-3"	3'-11"	6'-11"	-	-	1'-0"	1'-0"	1'-6"	3'-9"	6'-0"	8'-4"	-	-		
		22'	1'-0"	1'-0"	1'-0"	2'-4"	5'-1"	8'-3"	-	-	1'-0"	1'-0"	2'-9"	5'-0"	7'-3"	9'-8"	-	-		
		24'	1'-0"	1'-0"	1'-0"	3'-6"	6'-4"	9'-7"	-	-	1'-0"	1'-8"	4'-0"	6'-3"	8'-6"	11'-1"	-	-		
		26'	1'-0"	1'-0"	2'-0"	4'-8"	7'-7"	10'-11"	-	-	1'-0"	2'-11"	5'-3"	7'-6"	9'-9"	-	-			
		28'	1'-0"	1'-0"	3'-2"	5'-10"	8'-10"	12'-4"	-	-	1'-11"	4'-2"	6'-6"	8'-9"	11'-0"	-	-			
		30'	1'-0"	1'-9"	4'-3"	7'-0"	10'-1"	13'-8"	-	-	3'-2"	5'-5"	7'-9"	10'-0"	12'-3"	-	-			
	32'	1'-0"	2'-10"	5'-5"	8'-3"	11'-5"	15'-1"	-	-	4'-5"	6'-8"	9'-0"	11'-3"	13'-6"	-	-				
	34'	1'-5"	3'-11"	6'-7"	9'-6"	12'-9"	16'-6"	-	-	5'-8"	7'-11"	10'-3"	12'-6"	14'-11"	-	-				
	20"	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-7"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-5"	4'-7"	-		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	4'-10"	-	1'-0"	1'-0"	1'-0"	1'-0"	1'-7"	3'-8"	5'-10"	-		
		16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	6'-2"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	4'-11"	7'-2"	-		
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-11"	4'-5"	7'-6"	-	1'-0"	1'-0"	1'-0"	1'-11"	4'-1"	6'-2"	-	-		
		20'	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	5'-8"	8'-11"	-	1'-0"	1'-0"	1'-0"	3'-2"	5'-4"	7'-5"	-	-		
		22'	1'-0"	1'-0"	1'-0"	1'-9"	4'-2"	6'-11"	10'-3"	-	1'-0"	1'-0"	2'-3"	4'-5"	6'-7"	8'-8"	-	-		
		24'	1'-0"	1'-0"	1'-0"	2'-10"	5'-4"	8'-3"	-	-	1'-0"	1'-5"	3'-6"	5'-8"	7'-10"	9'-11"	-	-		
		26'	1'-0"	1'-0"	1'-7"	3'-11"	6'-7"	9'-7"	-	-	1'-0"	2'-8"	4'-9"	6'-11"	9'-1"	11'-3"	-	-		
		28'	1'-0"	1'-0"	2'-8"	5'-1"	7'-10"	10'-11"	-	-	1'-9"	3'-11"	6'-0"	8'-2"	10'-4"	12'-8"	-	-		
		30'	1'-0"	1'-5"	3'-9"	6'-3"	9'-1"	12'-3"	-	-	3'-0"	5'-2"	7'-3"	9'-5"	11'-7"	14'-2"	-	-		
	32'	1'-0"	2'-6"	4'-10"	7'-6"	10'-4"	13'-7"	-	-	4'-3"	6'-5"	8'-6"	10'-8"	12'-10"	-	-				
	34'	1'-3"	3'-7"	6'-0"	8'-8"	11'-8"	15'-0"	-	-	5'-6"	7'-8"	9'-9"	11'-11"	14'-1"	-	-				
	22"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-11"	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	4'-2"	6'-3"	-		
		18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	3'-6"	6'-2"	-	1'-0"	1'-0"	1'-0"	1'-5"	3'-5"	5'-5"	7'-6"	-		
		20'	1'-0"	1'-0"	1'-0"	1'-0"	2'-4"	4'-9"	7'-6"	-	1'-0"	1'-0"	1'-0"	2'-8"	4'-8"	6'-8"	8'-10"	-		
		22'	1'-0"	1'-0"	1'-0"	1'-2"	3'-5"	5'-11"	8'-10"	-	1'-0"	1'-0"	1'-11"	3'-11"	5'-11"	7'-11"	10'-3"	-		
		24'	1'-0"	1'-0"	1'-0"	2'-3"	4'-7"	7'-2"	10'-3"	-	1'-0"	1'-2"	3'-2"	5'-2"	7'-2"	9'-2"	-	-		
		26'	1'-0"	1'-0"	1'-2"	3'-5"	5'-9"	8'-6"	11'-7"	-	1'-0"	2'-5"	4'-5"	6'-5"	8'-5"	10'-5"	-	-		
		28'	1'-0"	1'-0"	2'-3"	4'-6"	7'-0"	9'-9"	13'-0"	-	1'-8"	3'-8"	5'-8"	7'-8"	9'-8"	11'-8"	-	-		
		30'	1'-0"	1'-2"	3'-4"	5'-8"	8'-3"	11'-1"	14'-5"	-	2'-11"	4'-11"	6'-11"	8'-11"	10'-11"	13'-1"	-	-		
		32'	1'-0"	2'-3"	4'-5"	6'-10"	9'-6"	12'-5"	-	-	4'-2"	6'-2"	8'-2"	10'-2"	12'-2"	14'-6"	-	-		
		34'	1'-2"	3'-4"	5'-7"	8'-1"	10'-9"	13'-9"	-	-	5'-5"	7'-5"	9'-5"	11'-5"	13'-5"	15'-11"	-	-		
	36'	2'-2"	4'-5"	6'-9"	9'-3"	12'-1"	15'-2"	-	-	6'-8"	8'-8"	10'-8"	12'-8"	14'-8"	17'-5"	-	-			
	38'	3'-3"	5'-6"	7'-11"	10'-6"	13'-4"	16'-6"	-	-	7'-11"	9'-11"	11'-11"	13'-11"	15'-11"	-	-				
24"	16'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-11"	6'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-7"	5'-6"	-			
	18'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	5'-2"	8'-1"	1'-0"	1'-0"	1'-0"	1'-0"	2'-11"	4'-10"	6'-9"	-			
	20'	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	3'-11"	6'-6"	-	1'-0"	1'-0"	1'-0"	2'-3"	4'-2"	6'-1"	8'-0"	-			
	22'	1'-0"	1'-0"	1'-0"	1'-0"	2'-10"	5'-2"	7'-9"	-	1'-0"	1'-0"	1'-7"	3'-6"	5'-5"	7'-4"	9'-3"	-			
	24'	1'-0"	1'-0"	1'-0"	1'-10"	4'-0"	6'-5"	9'-1"	-	1'-0"	1'-0"	2'-10"	4'-9"	6'-8"	8'-7"	10'-8"	-			
	26'	1'-0"	1'-0"	1'-0"	2'-11"	5'-2"	7'-8"	10'-5"	-	1'-0"	2'-2"	4'-1"	6'-0"	7'-11"	9'-10"	12'-1"	-			
	28'	1'-0"	1'-0"	1'-11"	4'-0"	6'-4"	8'-11"	11'-10"	-	1'-7"	3'-5"	5'-4"	7'-3"	9'-2"	11'-1"	-	-			
	30'	1'-0"	1'-0"	3'-0"	5'-2"	7'-7"	10'-2"	13'-2"	-	2'-10"	4'-8"	6'-7"	8'-6"	10'-5"	12'-4"	-	-			
	32'	1'-0"	2'-0"	4'-1"	6'-4"	8'-10"	11'-6"	14'-7"	-	4'-1"	5'-11"	7'-10"	9'-9"	11'-8"	13'-7"	-	-			
	34'	1'-1"	3'-1"	5'-3"	7'-7"	10'-1"	12'-10"	16'-0"	-	5'-4"	7'-2"	9'-1"	11'-0"	12'-11"	15'-0"	-	-			
36'	2'-1"	4'-2"	6'-5"	8'-9"	11'-4"	14'-2"	17'-5"	-	6'-7"	8'-5"	10'-4"	12'-3"	14'-2"	16'-6"	-	-				
38'	3'-2"	5'-3"	7'-7"	10'-0"	12'-7"	15'-6"	-	-	7'-10"	9'-8"	11'-7"	13'-6"	15'-5"	17'-11"	-	-				

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9B on page 44.

**TABLE 9B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)								
			Maximum Hole Dimension: Depth or Width (inches)																
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"	
LPI 450	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	1'-7"	-	-	1'-0"	1'-0"	1'-3"	1'-7"	1'-10"	2'-2"	-	-	
		8'	1'-0"	1'-0"	1'-8"	2'-0"	2'-5"	2'-11"	-	-	1'-0"	1'-3"	2'-6"	2'-10"	3'-1"	3'-5"	-	-	
		10'	1'-0"	1'-4"	2'-10"	3'-4"	3'-9"	4'-3"	-	-	1'-4"	2'-6"	3'-9"	4'-1"	4'-5"	-	-	-	
		12'	1'-1"	2'-6"	4'-2"	4'-7"	5'-1"	-	-	-	2'-7"	3'-9"	5'-0"	5'-5"	-	-	-	-	
		14'	2'-3"	3'-9"	5'-6"	6'-0"	6'-6"	-	-	-	3'-10"	5'-0"	6'-4"	-	-	-	-	-	
		16'	3'-5"	5'-0"	6'-10"	7'-4"	-	-	-	-	5'-1"	6'-3"	-	-	-	-	-	-	-
		18'	4'-8"	6'-4"	8'-3"	-	-	-	-	-	6'-4"	7'-6"	-	-	-	-	-	-	-
		20'	5'-11"	7'-8"	9'-7"	-	-	-	-	-	7'-7"	8'-11"	-	-	-	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-1"	1'-5"	-	-	-	1'-0"	1'-0"	1'-0"	1'-9"	2'-0"	-	-	-	
		8'	1'-0"	1'-0"	1'-0"	2'-3"	2'-8"	-	-	-	1'-0"	1'-0"	1'-11"	3'-0"	3'-3"	-	-	-	
		10'	1'-0"	1'-0"	2'-2"	3'-7"	4'-0"	-	-	-	1'-2"	2'-2"	3'-2"	4'-3"	-	-	-	-	
		12'	1'-0"	2'-1"	3'-5"	4'-11"	5'-5"	-	-	-	2'-5"	3'-5"	4'-5"	5'-8"	-	-	-	-	
		14'	2'-0"	3'-3"	4'-8"	6'-3"	-	-	-	-	3'-8"	4'-8"	5'-8"	-	-	-	-	-	
		16'	3'-2"	4'-6"	6'-0"	7'-8"	-	-	-	-	4'-11"	5'-11"	7'-0"	-	-	-	-	-	
		18'	4'-5"	5'-9"	7'-4"	-	-	-	-	-	6'-2"	7'-2"	8'-6"	-	-	-	-	-	
		20'	5'-8"	7'-1"	8'-8"	-	-	-	-	-	7'-5"	8'-5"	-	-	-	-	-	-	-
	22'	6'-11"	8'-5"	10'-1"	-	-	-	-	-	8'-8"	9'-10"	-	-	-	-	-	-	-	
	24'	8'-2"	9'-9"	11'-6"	-	-	-	-	-	9'-11"	11'-3"	-	-	-	-	-	-	-	
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	2'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-7"	2'-10"	3'-3"	-	-	
		10'	1'-0"	1'-0"	1'-0"	1'-8"	3'-4"	4'-0"	-	-	1'-0"	1'-0"	1'-6"	2'-10"	4'-1"	-	-	-	
		12'	1'-0"	1'-0"	1'-4"	2'-10"	4'-8"	5'-4"	-	-	1'-0"	1'-6"	2'-9"	4'-1"	5'-6"	-	-	-	
		14'	1'-0"	1'-0"	2'-6"	4'-1"	6'-1"	-	-	-	1'-5"	2'-9"	4'-0"	5'-4"	-	-	-	-	
		16'	1'-0"	2'-1"	3'-8"	5'-5"	7'-5"	-	-	-	2'-8"	4'-0"	5'-3"	6'-7"	-	-	-	-	
		18'	1'-9"	3'-3"	4'-11"	6'-9"	-	-	-	-	3'-11"	5'-3"	6'-6"	7'-11"	-	-	-	-	
		20'	2'-11"	4'-5"	6'-2"	8'-1"	-	-	-	-	5'-2"	6'-6"	7'-9"	9'-4"	-	-	-	-	
		22'	4'-0"	5'-8"	7'-5"	9'-5"	-	-	-	-	6'-5"	7'-9"	9'-0"	-	-	-	-	-	
		24'	5'-3"	6'-11"	8'-9"	10'-10"	-	-	-	-	7'-8"	9'-0"	10'-4"	-	-	-	-	-	-
		26'	6'-5"	8'-2"	10'-1"	12'-2"	-	-	-	-	8'-11"	10'-3"	11'-9"	-	-	-	-	-	-
	28'	7'-8"	9'-6"	11'-5"	13'-7"	-	-	-	-	10'-2"	11'-6"	13'-2"	-	-	-	-	-	-	
	30'	8'-11"	10'-9"	12'-9"	-	-	-	-	-	11'-5"	12'-9"	14'-8"	-	-	-	-	-	-	
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	3'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-1"	2'-3"	3'-6"	-	-	
		10'	1'-0"	1'-0"	1'-0"	1'-2"	2'-7"	4'-4"	-	-	1'-0"	1'-0"	1'-2"	2'-4"	3'-6"	-	-	-	
		12'	1'-0"	1'-0"	1'-0"	2'-4"	3'-10"	-	-	-	1'-0"	1'-3"	2'-5"	3'-7"	4'-9"	-	-	-	
		14'	1'-0"	1'-0"	2'-1"	3'-6"	5'-2"	-	-	-	1'-4"	2'-6"	3'-8"	4'-10"	6'-1"	-	-	-	
		16'	1'-0"	1'-10"	3'-3"	4'-9"	6'-6"	-	-	-	2'-7"	3'-9"	4'-11"	6'-1"	7'-6"	-	-	-	
		18'	1'-8"	3'-0"	4'-5"	6'-1"	7'-11"	-	-	-	3'-10"	5'-0"	6'-2"	7'-4"	-	-	-	-	
		20'	2'-9"	4'-2"	5'-8"	7'-4"	9'-3"	-	-	-	5'-1"	6'-3"	7'-5"	8'-8"	-	-	-	-	
		22'	3'-11"	5'-4"	6'-11"	8'-8"	-	-	-	-	6'-4"	7'-6"	8'-8"	10'-1"	-	-	-	-	
		24'	5'-1"	6'-7"	8'-3"	10'-1"	-	-	-	-	7'-7"	8'-9"	9'-11"	11'-7"	-	-	-	-	
		26'	6'-3"	7'-10"	9'-7"	11'-5"	-	-	-	-	8'-10"	10'-0"	11'-3"	-	-	-	-	-	
	28'	7'-6"	9'-2"	10'-11"	12'-10"	-	-	-	-	10'-1"	11'-3"	12'-8"	-	-	-	-	-		
	30'	8'-9"	10'-5"	12'-3"	14'-3"	-	-	-	-	11'-4"	12'-6"	14'-2"	-	-	-	-	-	-	

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

See notes for Table 9B on page 44.

**TABLE 9B (Continued)—RECTANGULAR WEB HOLE CHART:  
40 PSF LIVE LOAD, 25 PSF DEAD LOAD, 24" OC MAXIMUM JOIST SPACING**

JOIST SERIES	JOIST DEPTH (in.)	CLEAR SPAN (ft.)	DISTANCE FROM END SUPPORT (feet-inches)								DISTANCE FROM INTERIOR SUPPORT (feet-inches)							
			Maximum Hole Dimension: Depth or Width (inches)															
			2"	4"	6"	8"	10"	12"	14"	16"	2"	4"	6"	8"	10"	12"	14"	16"
LPI 530	9 1/2"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	-	-	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"	2'-0"	-	-
		8'	1'-0"	1'-0"	1'-3"	1'-8"	2'-2"	2'-8"	-	-	1'-0"	1'-0"	2'-2"	2'-6"	2'-11"	3'-3"	-	-
		10'	1'-0"	1'-0"	2'-6"	2'-11"	3'-5"	3'-11"	-	-	1'-0"	2'-1"	3'-5"	3'-9"	4'-2"	-	-	-
		12'	1'-0"	2'-0"	3'-9"	4'-3"	4'-9"	5'-4"	-	-	2'-0"	3'-4"	4'-8"	5'-0"	5'-6"	-	-	-
		14'	1'-7"	3'-2"	5'-0"	5'-7"	6'-1"	-	-	-	3'-3"	4'-7"	5'-11"	6'-5"	-	-	-	-
		16'	2'-9"	4'-5"	6'-4"	6'-11"	7'-6"	-	-	-	4'-6"	5'-10"	7'-5"	-	-	-	-	-
		18'	3'-11"	5'-8"	7'-9"	8'-4"	-	-	-	-	5'-9"	7'-1"	-	-	-	-	-	-
		20'	5'-2"	7'-0"	9'-1"	-	-	-	-	-	7'-0"	8'-4"	-	-	-	-	-	-
	11 7/8"	6'	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-6"	1'-10"	2'-2"	-	-
		8'	1'-0"	1'-0"	1'-0"	2'-0"	2'-5"	2'-11"	-	-	1'-0"	1'-0"	1'-7"	1'-10"	3'-1"	3'-5"	-	-
		10'	1'-0"	1'-0"	1'-9"	3'-3"	3'-9"	4'-3"	-	-	1'-0"	1'-9"	2'-10"	4'-0"	4'-5"	-	-	-
		12'	1'-0"	1'-7"	2'-11"	4'-6"	5'-1"	-	-	-	1'-10"	3'-0"	4'-1"	5'-4"	-	-	-	-
		14'	1'-5"	2'-9"	4'-2"	5'-11"	6'-6"	-	-	-	3'-1"	4'-3"	5'-4"	-	-	-	-	-
		16'	2'-6"	3'-11"	5'-6"	7'-3"	-	-	-	-	4'-4"	5'-6"	6'-7"	-	-	-	-	-
		18'	3'-8"	5'-2"	6'-9"	8'-8"	-	-	-	-	5'-7"	6'-9"	7'-11"	-	-	-	-	-
		20'	4'-11"	6'-5"	8'-2"	-	-	-	-	-	6'-10"	8'-0"	9'-5"	-	-	-	-	-
	14"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-9"	2'-4"	3'-0"	-	1'-0"	1'-0"	1'-0"	1'-2"	2'-7"	3'-0"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-3"	3'-0"	3'-8"	4'-4"	-	1'-0"	1'-0"	1'-0"	2'-5"	3'-10"	4'-4"	-	-
		12'	1'-0"	1'-0"	1'-0"	2'-5"	4'-4"	5'-0"	-	-	1'-0"	1'-0"	2'-3"	3'-8"	5'-1"	-	-	-
		14'	1'-0"	1'-0"	1'-10"	3'-7"	5'-8"	6'-4"	-	-	1'-0"	2'-1"	3'-6"	4'-11"	6'-6"	-	-	-
		16'	1'-0"	1'-4"	3'-0"	4'-10"	7'-0"	-	-	-	1'-10"	3'-4"	4'-9"	6'-2"	-	-	-	-
		18'	1'-0"	2'-5"	4'-2"	6'-2"	8'-5"	-	-	-	3'-1"	4'-7"	6'-0"	7'-5"	-	-	-	-
		20'	1'-11"	3'-7"	5'-5"	7'-5"	-	-	-	-	4'-4"	5'-10"	7'-3"	8'-9"	-	-	-	-
		22'	3'-1"	4'-9"	6'-8"	8'-9"	-	-	-	-	5'-7"	7'-1"	8'-6"	10'-2"	-	-	-	-
		24'	4'-3"	6'-0"	7'-11"	10'-2"	-	-	-	-	6'-10"	8'-4"	9'-9"	11'-8"	-	-	-	-
		26'	5'-5"	7'-3"	9'-3"	11'-6"	-	-	-	-	8'-1"	9'-7"	11'-0"	-	-	-	-	-
		28'	6'-7"	8'-6"	10'-7"	12'-11"	-	-	-	-	9'-4"	10'-10"	12'-5"	-	-	-	-	-
		30'	7'-10"	9'-9"	11'-11"	14'-4"	-	-	-	-	10'-7"	12'-1"	13'-10"	-	-	-	-	-
	16"	8'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-8"	-	-	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-3"	-	-
		10'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	4'-0"	-	-	1'-0"	1'-0"	1'-0"	1'-11"	3'-3"	-	-	-
		12'	1'-0"	1'-0"	1'-0"	1'-9"	3'-5"	5'-5"	-	-	1'-0"	1'-0"	1'-10"	3'-2"	4'-6"	-	-	-
		14'	1'-0"	1'-0"	1'-5"	2'-11"	4'-8"	-	-	-	1'-0"	1'-10"	3'-1"	4'-5"	5'-9"	-	-	-
		16'	1'-0"	1'-1"	2'-7"	4'-2"	6'-0"	-	-	-	1'-9"	3'-1"	4'-4"	5'-8"	7'-1"	-	-	-
		18'	1'-0"	2'-2"	3'-9"	5'-5"	7'-4"	-	-	-	3'-0"	4'-4"	5'-7"	6'-11"	8'-6"	-	-	-
		20'	1'-10"	3'-4"	4'-11"	6'-8"	8'-9"	-	-	-	4'-3"	5'-7"	6'-10"	8'-2"	-	-	-	-
		22'	2'-11"	4'-6"	6'-2"	8'-0"	10'-1"	-	-	-	5'-6"	6'-10"	8'-1"	9'-5"	-	-	-	-
		24'	4'-1"	5'-8"	7'-5"	9'-4"	11'-6"	-	-	-	6'-9"	8'-1"	9'-4"	10'-11"	-	-	-	-
		26'	5'-3"	6'-11"	8'-9"	10'-8"	-	-	-	-	8'-0"	9'-4"	10'-7"	12'-4"	-	-	-	-
		28'	6'-5"	8'-2"	10'-0"	12'-1"	-	-	-	-	9'-3"	10'-7"	11'-10"	-	-	-	-	-
		30'	7'-8"	9'-5"	11'-4"	13'-5"	-	-	-	-	10'-6"	11'-10"	13'-3"	-	-	-	-	-

For **SI**: 1 inch = 25.4 mm, 1 foot = 305 mm.

<sup>1</sup>The hole locations listed above are valid for joists supporting only uniform loads. The total uniform load must not exceed 130 plf (e.g., 40 psf Live Load and a 25 psf Dead Load, spaced up to 24 inches o.c.). The uniform Dead Load must be at least 10 plf.

<sup>2</sup>Hole location is measured from the inside face of the nearest support to the nearest edge of a rectangular hole.

<sup>3</sup>Maximum hole depth for rectangular holes is the Joist Depth less 4 inches, except the maximum hole depth is 6 inches for 9 1/2-inch-deep joists, and 8 inches for 11 7/8-inch-deep joists. Maximum hole width for rectangular holes is 18 inches. Where the Maximum Hole Dimension for rectangular holes exceeds the maximum hole depth, the dimension refers to hole width and the hole depth is assumed to be the maximum for that joist depth.

<sup>4</sup>Holes cannot be located in the span where designated “-”, without further analysis by a design professional (see note 6 below).

<sup>5</sup>Clear Span has NOT been verified for these joists and is shown for informational purposes only. Verify that the joist selected will work for the span and loading conditions needed before checking hole location.

<sup>6</sup>Larger holes, greater uniform loads or nonuniform loads, and closer proximity to supports and other holes may be possible with further analysis (See Section 4.4 and the web hole shear equations listed in Table 10).

**TABLE 10—CIRCULAR AND RECTANGULAR WEB HOLE SHEAR EQUATIONS**  
(May be used in lieu of the web hole charts)

CIRCULAR HOLE EQUATION CONSTANTS				
Joist Series	Joist Depth (in.)	C1	C2	C3
<b>SAWN LUMBER FLANGES</b>				
LPI 18	9½" to 16"	V <sub>r</sub>	0	0
LPI 20Plus, LPI 20x4 LPI 32Plus LPI 42Plus LPI 52Plus	9½" to 16"	1041	0	361
LPI 42Plus LPI 52Plus	18" to 24"	2489	0	88
<b>LVL FLANGES</b>				
LPI 26	9½" to 11 <sup>7</sup> / <sub>8</sub> "	1235	0	45
LPI 30	9½" to 16"	1041	0	361
LPI 36 LPI 56	11 <sup>7</sup> / <sub>8</sub> " to 16"	1621	0	124
	18" to 24"	2489	0	88
LPI 450 LPI 530	9½" to 16"	V <sub>r</sub>	0	0
<b>RECTANGULAR HOLE EQUATION CONSTANTS</b>				
Joist Series	Joist Depth (in.)	C1	C2	C3
<b>SAWN LUMBER FLANGES</b>				
LPI 18	9½" to 11 <sup>7</sup> / <sub>8</sub> "	554	-20.4	256
	14" & 16"	977	-30.7	375
LPI 20Plus, LPI 20x4 LPI 32Plus LPI 42Plus LPI 52Plus	9½" to 11 <sup>7</sup> / <sub>8</sub> "	610	-22.4	282
	14" & 16"	1075	-33.8	413
LPI 42Plus LPI 52Plus	18" to 24"	1731	-52.0	599
<b>LVL FLANGES</b>				
LPI 26 LPI 30 LPI 36 LPI 56	9½" to 11 <sup>7</sup> / <sub>8</sub> "	610	-22.4	282
	14" & 16"	1075	-33.8	413
	18" to 24"	1731	-52.0	599
LPI 450	9½" to 11 <sup>7</sup> / <sub>8</sub> "	549	-20.2	254
	14" & 16"	813	-25.6	312
LPI 530	9½" to 11 <sup>7</sup> / <sub>8</sub> "	610	-22.4	282
	14" & 16"	903	-28.4	347

For SI: 1 in = 25.4 mm, 1 lbf = 4.448 N.

<sup>1</sup>The equation to determine the allowable shear at the location of a web hole is:

$$V_{Hole} = C1 * (D_{Joist} - D_{Hole}) / D_{Joist} + C2 * W_{Hole} + C3$$

If  $V_{Hole} < 200$  lbf, then  $V_{Hole} = 0$  lbf (hole not allowed)

Where: C1, C2 and C3 are the tabulated constants

$V_{Hole}$  = allowable shear at critical location of hole (lbf) (see Note 3 below)

$D_{Joist}$  = Depth of I-joist (in)

$D_{Hole}$  = Diameter or Depth of hole (in)

$W_{Hole}$  = Width of hole (in)

For the LPI 18, LPI 450 and LPI 530:

$V_r$  = reference design shear (lbf) from Table 2, corresponding to the depth of the I-joist being used.

<sup>2</sup>The Allowable Web Hole Shear calculated from above is for normal load duration and can be adjusted for other durations.

<sup>3</sup>The critical location for web hole shear is the center of a circular hole or either edge of a rectangular hole.

<sup>4</sup>Web hole height may be full depth of the I-joist web. A minimum ¼-inch clear distance is recommended between the hole and the flanges: Do NOT cut the flanges. The maximum hole width for rectangular holes is 18 inches.

<sup>5</sup>Except as noted in Figure 2, web holes cannot be located any closer than 1 foot from the inside face of the closest bearing to the critical location of the hole (see note 3), without further analysis by a design professional.

<sup>6</sup>Refer to Figure 2 for general information pertaining to locating holes in I-joist webs.

**TABLE 11—OBROUND WEB HOLE SHEAR CAPACITY**  
(May be used in lieu of the web hole charts)

JOIST SERIES	JOIST DEPTH	HOLE SHEAR, $V_{Hole}$ (lbf)
<b>SAWN LUMBER FLANGES</b>		
LPI 18	9 <sup>1</sup> / <sub>2</sub> "	479
	11 <sup>7</sup> / <sub>8</sub> "	486
	14"	422
	16"	381
LPI 20Plus, LPI 20x4 LPI 32Plus LPI 42Plus LPI 52Plus	9 <sup>1</sup> / <sub>2</sub> "	533
	11 <sup>7</sup> / <sub>8</sub> "	541
	14"	469
	16"	424
LPI 42Plus LPI 52Plus	18" to 24" <sup>3</sup>	424
<b>LVL FLANGES</b>		
LPI 26	Not Allowed	
LPI 30	9 <sup>1</sup> / <sub>2</sub> " to 16"	360
LPI 36	11 <sup>7</sup> / <sub>8</sub> " to 16"	420
LPI 56	18" to 24" <sup>3</sup>	420
LPI 450 LPI 530	Not Allowed	

For **SI**: 1 in = 25.4 mm, 1 lbf = 4.448 N.

<sup>1</sup>Obround holes are (up to) full web-depth holes with semi-circular ends defined by three overlapping circular holes spaced up to 1<sup>1</sup>/<sub>2</sub> inches apart, center-to-center of holes.

<sup>2</sup>Obround hole allowable shears are based on the maximum size hole for a joist depth. Smaller obround holes are permissible but are limited to the same value.

<sup>3</sup>For I-joist depths greater than 16 inches, the maximum obround hole for the 16" Joist Depth is permitted to be cut using the allowable for the 16" Joist Depth. The obround hole shall be centered on the depth of the I-joist.

<sup>4</sup>The Allowable Web Hole Shear calculated from above is for normal load duration and can be adjusted for other durations.

<sup>5</sup>The critical location for web hole shear is at the center of either semi-circular end of an obround hole.

<sup>6</sup>Obround holes shall not be located any closer than 1 foot from the inside face of the closest bearing to the critical location of the hole (see note 5), without further analysis by a registered design professional.

<sup>7</sup>Refer to the Figure 2 for general information pertaining to locating holes in I-joist webs.

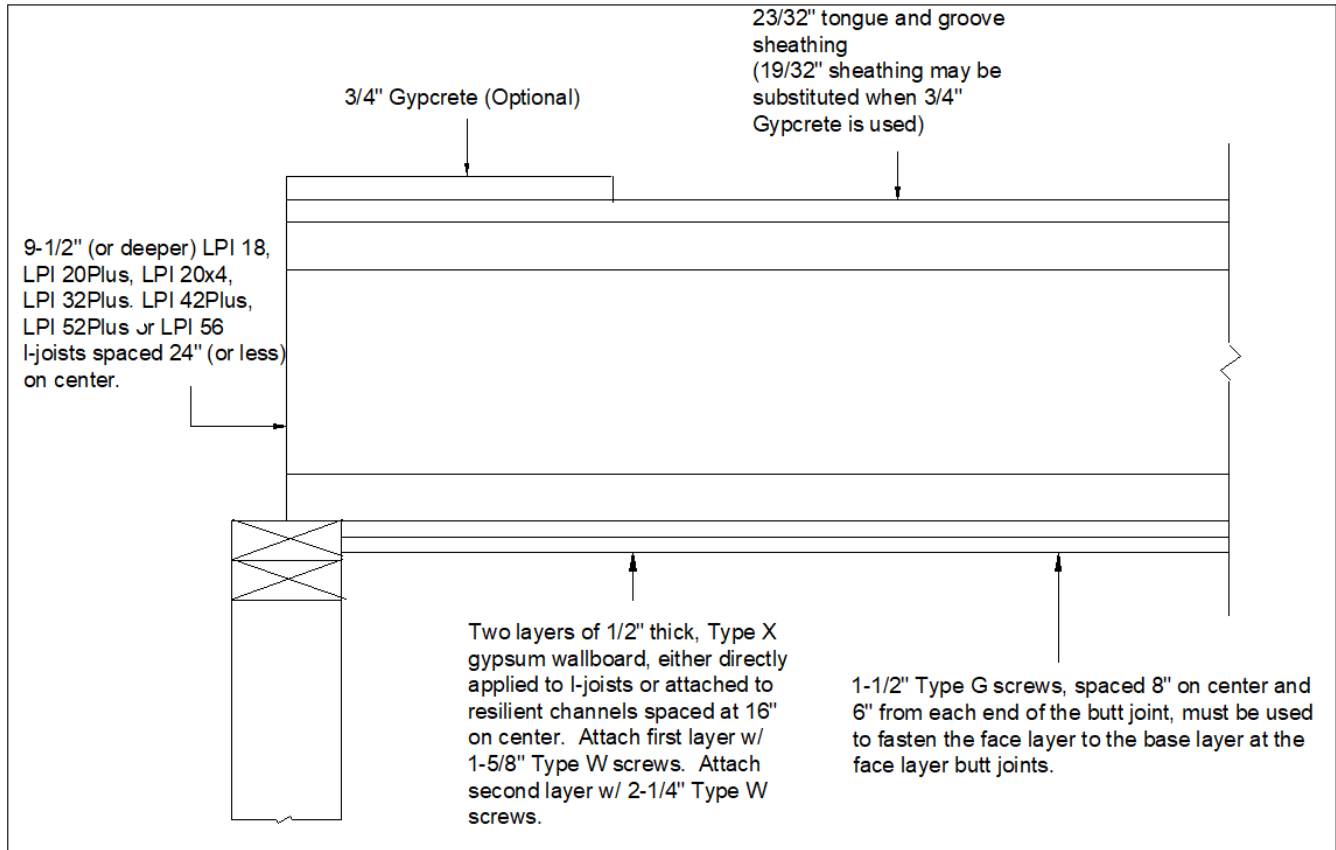
**TABLE 12—I-JOIST RIM JOIST AND BLOCKING PANEL CAPACITIES<sup>1,2</sup>**

JOIST DEPTH	UNIFORM VERTICAL LOAD CAPACITY (lbf/ft)									
	SAWN LUMBER FLANGES					LVL FLANGES				
	LPI 18	LPI 20Plus LPI 20x4	LPI 32Plus	LPI 42Plus	LPI 52Plus	LPI 26	LPI 30	LPI 36	LPI 56	LPI 450 LPI 530
9 <sup>1</sup> / <sub>2</sub> "	1900	1900	2200	2200	2400	1800	1800	-	-	2000
11 <sup>7</sup> / <sub>8</sub> "	1760	1760	2200	2200	2400	1800	1800	1800	2400	2000
14"	1600	1600	1600	2000	2200	-	1800	1800	2200	1100
16"	1200	1500	1500	2000	2000	-	1800	1800	1900	1100
18"	-	-	-	1700	1700	-	-	1300	1700	-
20"	-	-	-	1580	1580	-	-	1300	1580	-
22"	-	-	-	1300	1300	-	-	1200	1300	-
24"	-	-	-	1100	1100	-	-	1100	1100	-

For **SI**: 1 in = 25.4 mm; 1 lbf/ft = 14.6 N/m.

<sup>1</sup>LP® SolidStart® I-Joists with allowable uniform vertical load transfer capacities of 2000 lbf/ft or greater may be used either as rim joists or blocking panels in prescriptive framing. LP SolidStart I-Joists with allowable uniform vertical load transfer capacities less than 2000 lbf/ft may be used only as blocking panels unless designed as a rim joist by a registered design professional.

<sup>2</sup>LP I-Joists used as rim joists shall be limited to a maximum shear load of 200 lbf/ft for I-Joists with LVL flanges or 230 lbf/ft for I-Joists with sawn lumber flanges. These limits are permitted to be multiplied by 1.4 for wind load applications and shall be multiplied by 0.63 and 0.56 for shear loads of normal and permanent load durations, respectively. The minimum nail spacing and end distances shall not be less than as given in Table 6.



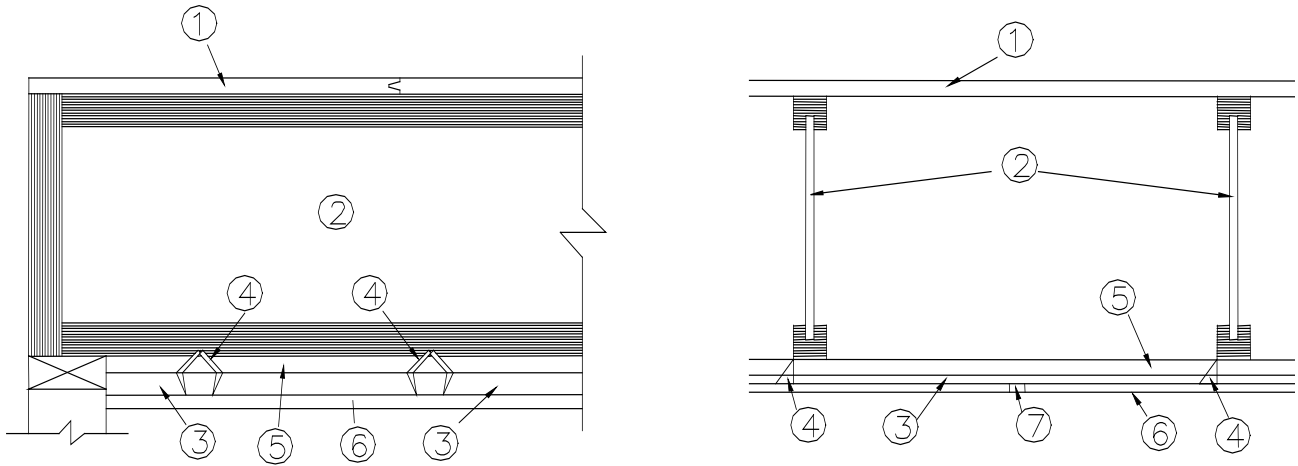
FLOOR ASSEMBLY	STC	IIC
w/o GYPCRETE	50	50
w/ RESILIENT CHANNEL w/ CARPET/PAD		
w/ GYPCRETE	50	50
w/ RESILIENT CHANNEL w/ CARPET/PAD		
w/ GYPCRETE	50	50
w/o RESILIENT CHANNEL w/ CARPET/PAD		

For SI: 1 in. = 25.4 mm.

**NOTES:**

1. Carpet is minimum 57 ounce carpet with 0.531 inch pile height and 1/2-inch-thick 4 pcf density foam pad.
2. Vinyl is minimum 0.06-inch thick with cushioned vinyl minimum 0.01-inch-thick wear layer.
3. Gypsum concrete is minimum 3/4-inch thick over 19/32-inch plywood.
4. The plywood must be glued at tongue and groove joints and to the I-Joists.
5. Cavity is insulated with 3 1/2-inch-thick fiberglass batts between joists.

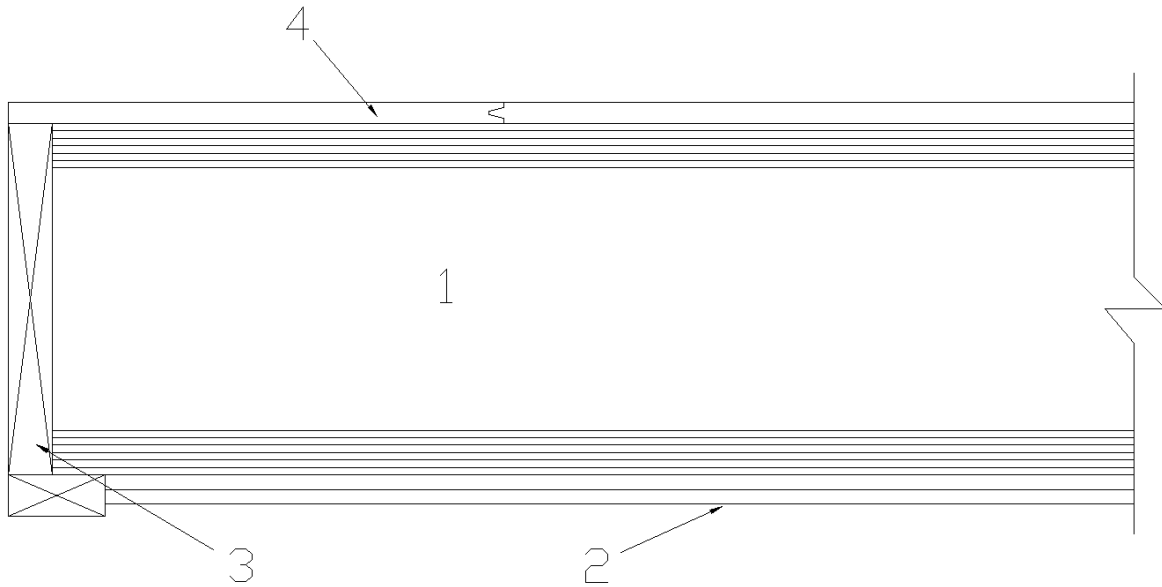
**FIGURE 3—ONE-HOUR FLOOR-CEILING FIRE-RESISTIVE ASSEMBLY**



For SI: 1 in = 25.4 mm, 1 ft = 305 mm.

- 1. Floor Sheathing** <sup>23</sup>/<sub>32</sub>-inch thick 4-ft by 8-ft tongue and groove (APA Rated Sturdi-I-Floor) sheets installed perpendicular to I-Joists and fastened with an AFG-01 construction adhesive and 6d deformed shank or 8d common nails, maximum 12 inches on center at all locations.
- 2. Wood I-Joists** LP® SolidStart® I-Joists shall be a minimum of 11<sup>1</sup>/<sub>4</sub>-inch deep with flange dimensions at least 1<sup>1</sup>/<sub>2</sub> inches x 1<sup>1</sup>/<sub>2</sub> inches of LVL or 1<sup>1</sup>/<sub>2</sub> inches x 2<sup>1</sup>/<sub>2</sub> inches of sawn lumber, and a minimum of <sup>3</sup>/<sub>8</sub>-inch thick OSB web. Maximum I-Joist spacing is 24 inches on center. Use 1 inch minimum rim board or blocking panels at the I-Joist ends, installed in accordance with the manufacturer's published installation instructions. Holes in the webs per manufacturers' instructions are permitted.
- 3. Furring Channels** Resilient furring channels measuring 2.636 inches wide by 0.838 inches deep formed from No. 26 gauge (0.0719 inch) galvanized steel sheet spaced 24-in. on center perpendicular to the joists. Supported by Simpson CSC clips (4). At splices, channels overlapped 6 inches, and tied with two double strands of No. 18 SWG galvanized steel wire at each end of overlap. At wallboard end joints, a second length of channel is installed adjacent to the first to provide one channel for each wallboard end. Second channel span from joist to joist outside the wallboard width to support the entire end of the wallboard.
- 4. Hanger Clips** Simpson Type CSC hangers for furring channels. One at each intersection of joist and channel nailed with one 6d or 8d common nail.
- 5. Insulation** 1-inch thick 24x48-inch mineral wood batts with nine pounds per cubic foot density.
- 6. Gypsum Wallboard** <sup>5</sup>/<sub>8</sub>-inch thick US Gypsum Company Firecode C in 4-foot wide sheets installed perpendicular to furring channels with 1-inch long Type S wallboard screws on 8-in. centers. End joints attached to the doubled channels, long joints backed by sheet metal Tee-Sections (7). Edges of wallboard attached to Tee-Sections by 1-inch Type S wallboard screws 8-in. on center with one screw at each Tee-Section-channel intersection.
- 7. Tee-Section** Formed from No. 20 gauge (0.0359 inch) galvanized steel sheet. Sections are 1<sup>7</sup>/<sub>8</sub>-in. wide overall with the short leg <sup>1</sup>/<sub>2</sub>-inch long overall.
- 8. Finish System** (Not Shown) Paper tape embedded in joint compound over joints with edges of compound feathered out and exposed screw heads covered with compound.

**FIGURE 4—ONE-HOUR FLOOR-CEILING FIRE-RESISTIVE ASSEMBLY**

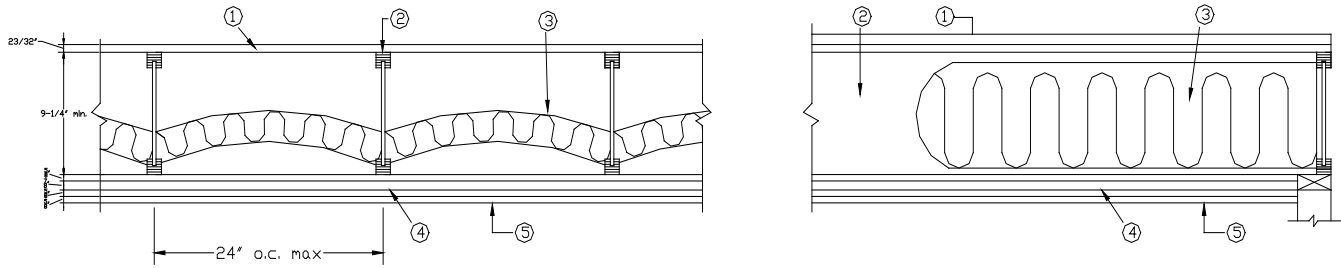


For SI: 1 in = 25.4 mm, 1 ft = 305 mm.

- 1. **Wood I-Joists** LP® SolidStart® I-Joists shall be a minimum of 11<sup>1</sup>/<sub>4</sub> inches deep with flange dimensions at least 1<sup>1</sup>/<sub>2</sub> inches x 1<sup>1</sup>/<sub>2</sub> inches of LVL and minimum of <sup>3</sup>/<sub>8</sub>-inch thick OSB web. Maximum spacing is 24 inches on center. Holes in the webs per manufacturers' instructions are permitted.
- 2. **Gypsum Wallboard** 2 layers of <sup>1</sup>/<sub>2</sub>-inch thick Type FSW-C gypsum wallboard in 4-foot wide sheets, manufactured by National Gypsum, are directly attached to the bottom flanges of the joists. The long dimension of the wallboard is oriented perpendicular to the joists. The first layer is fastened to the joists with <sup>1</sup>/<sub>4</sub>-inch Type S drywall screws spaced 24 inches on center, butt joints being staggered 25 inches from the adjacent rows of the face layer. The second layer is fastened to the joists with <sup>1</sup>/<sub>8</sub>-inch Type S drywall screws spaced 12 inches on center with its joints being staggered 24 inches in each direction from joints of the first layer.
- 3. **End Rim/Blocking** Use 1-inch minimum rim board or blocking panels installed in accordance with the manufacturer's published installation instructions.
- 4. **Floor Sheathing** <sup>19</sup>/<sub>32</sub>-inch thick tongue-and-groove in 4-foot x 8-foot sheets installed with long edge perpendicular to the joists and fastened with 8d common or 6d shank nails at a maximum 6 inches on center at all locations. End joints are staggered 24 inches from adjacent rows.
- 5. **Finish System (Not Shown)** Exposed wallboard joints are treated with paper tape embedded in joint compound and covered with two coats of compound. Screw heads are covered with two coats of joint compound.

**FIGURE 5—ONE-HOUR FLOOR-CEILING FIRE-RESISTIVE ASSEMBLY**





For SI: 1 in = 25.4 mm, 1 ft = 305 mm.

- 1. Floor Sheathing** Panels shall conform to the requirements of PS 1-83, Exposure 1, interior type with exterior glue, minimum  $\frac{23}{32}$ -inch thick, tongue-and-groove long edges for floors and a minimum  $\frac{15}{32}$ -inch thick square edges for roofs. Install long edges perpendicular to the I-Joists. Stagger end joints on I-Joists. For floors, apply AFG-01 construction adhesive in a  $\frac{3}{8}$ -inch bead on the top surface of the I-Joists, and grooved edges of the sheathing. Nail with 6d deformed shank nails, 8d common nails, or equivalent-sized screws a maximum of 6 inches on center on the panel ends, and a maximum of 12 inches on center in the field. Optionally, with minimum  $\frac{3}{4}$ -inch thick light-weight concrete or floor topping mixture, panels shall be minimum  $\frac{19}{32}$ -inch thick.
- 2. Wood I-Joists** LP® SolidStart® I-Joists shall be minimum 9 $\frac{1}{4}$ -inch deep with flange dimensions of at least 1 $\frac{1}{2}$  inches x 1 $\frac{1}{2}$  inches of LVL or 1 $\frac{1}{2}$  inches x 2 $\frac{1}{2}$  inches of sawn lumber, and minimum  $\frac{3}{8}$ -inch-thick OSB webs. Maximum spacing is 24 inches on center. Holes in the webs per manufacturers' instructions are permitted.
- 3. Insulation** Unfaced fiberglass batts 24 inches wide by 48 inches long by 3 $\frac{1}{2}$ -inches thick with 3.5 pcf density placed in the plenum and supported by stay wires spaced about 12 inches apart.
- 4. Furring channels** Resilient furring channels formed from No. 28 gauge (0.0179 inch) galvanized sheet steel measuring 2.636 inches wide by 0.838 inches deep spaced 16 inches on center perpendicular to the joists and attached to the joist by 1 $\frac{5}{8}$ -inch Type S wallboard screws.
- 5. Gypsum Wallboard** Wallboard is  $\frac{5}{8}$ -inch-thick US Gypsum Firecode C, Celotex Fi-Rok Plus, Georgia-Pacific Fire Stop C, or Gold Bond Fire-Shield FSW-C. Install the base layer perpendicular to the joists with the ends staggered at the joists with 1 $\frac{5}{8}$ -inch-long Type S wallboard screws at 12 inches on center. Furring channels are installed as described above between the base and intermediate layers. The intermediate layer is attached perpendicular to the channels with the ends staggered at the channels with one-inch-long Type S wallboard screws at 12 inches on center. The finish layer is attached to the channels with 1 $\frac{5}{8}$ -inch-long Type S wallboard screws spaced 8 inches on center. The ends of the finish layer are staggered at the channels with respect to each other and with respect to the intermediate layer end joints. Long joints of the finish layer are staggered with respect to the long joints of the intermediate layer.
- 6. Finish System (Not Shown)** On finish layer only. Paper tape embedded in joint compound over joints with compound edges feathered out and exposed screw heads covered with compound. As an alternative, nominal  $\frac{23}{32}$ -inch-thick veneer plaster may be applied over the entire surface of the wallboard.

**FIGURE 6—TWO-HOUR FLOOR-CEILING FIRE RESISTIVE ASSEMBLY**

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**DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES****Section: 06 17 33—Wood I-joists****REPORT HOLDER:****LOUISIANA-PACIFIC CORPORATION****EVALUATION SUBJECT:****LP® SOLIDSTART® I-JOISTS****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that LP® SolidStart® I-joists, described in ICC-ES evaluation report [ESR-1305](#), have 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:**

- 2020 *City of Los Angeles Building Code* (LABC)
- 2020 *City of Los Angeles Residential Code* (LARC)

**2.0 CONCLUSIONS**

The LP® SolidStart® I-joists, described in Sections 2.0 through 7.0 of the evaluation report [ESR-1305](#), comply with the LABC Chapter 23, and the LARC, and are subjected to the conditions of use described in this supplement.

**3.0 CONDITIONS OF USE**

The LP® SolidStart® I-joists, described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-1305](#).
- The design, installation, conditions of use and identification are in accordance with the 2018 *International Building Code*® (IBC) and 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report [ESR-1305](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- Flanges must not be subjected to dynamic or static outward forces which may tend to separate the flanges from the web. Bottom flanges must not support load exceeding 250 pounds on each side of flange at 5 feet on center or 100 pounds per linear foot.

This supplement expires concurrently with the evaluation report, reissued August 2021.

# Joint Evaluation Report

# ESR-1305 FBC Supplement

Reissued August 2021

This report is subject to renewal August 2023.

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**DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES**  
**Section: 06 17 33—Wood I-Joists**

## REPORT HOLDER:

LOUISIANA-PACIFIC CORPORATION

## EVALUATION SUBJECT:

LP® SOLIDSTART® I-JOISTS

## 1.0 REPORT PURPOSE AND SCOPE

### Purpose:

The purpose of this evaluation report supplement is to indicate that LP® SolidStart® I-Joists, described in ICC-ES evaluation report ESR-1305, have also been evaluated for compliance with the codes noted below.

### Applicable code editions:

- 2020 *Florida Building Code—Building*
- 2020 *Florida Building Code—Residential*

## 2.0 CONCLUSIONS

The LP® SolidStart® I-Joists, described in Sections 2.0 through 7.0 of the evaluation report ESR-1305, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, provided the design requirements are determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-1305 for the 2018 *International Building Code*® (IBC) meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the LP® SolidStart® I-Joists for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this evaluation report.

For products falling under Florida Rule 61G20-3, 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 August 2021.