

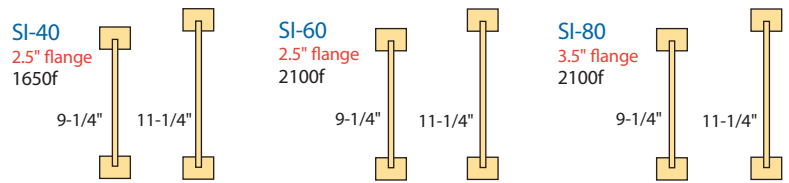
# SI Series (9.25" • 11.25")

# PERMA-STRAIGHT I

## SI Design Properties

Depth	Series	Cr	EI (106 lb-in <sup>2</sup> )	M (lbf-ft)	V (lbf)	IR (lbf)	ER (lbf)	K (106 lbf)
9-1/4"	SI-40	1.00	182	2,680	1,080	2,160	1,030	4.81
	SI-60	1.00	219	3,670	1,080	2,160	1,030	4.81
	SI-80	1.00	304	5,195	1,080	2,760	1,080	4.81
11-1/4"	SI-40	1.00	292	3,370	1,350	2,500	1,160	5.85
	SI-60	1.00	350	4,615	1,350	2,500	1,160	5.85
	SI-80	1.00	484	6,535	1,350	2,760	1,220	5.85

# FLOOR



## Floor Spans for Perma-Straight I

L/480 Live Load • Glued/Nailed Floors • Allowable Spans 40 psf LL + 10 psf DL

Depth	Designation	SIMPLE SPAN				MULTIPLE SPAN			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	17'-8"	16'-2"	15'-3"	14'-3"	19'-3"	17'-7"	16'-2"	14'-5"
	SI-60	18'-7"	17'-0"	16'-0"	14'-11"	20'-3"	18'-6"	17'-5"	16'-3"
	SI-80	20'-6"	18'-8"	17'-7"	16'-4"	22'-4"	20'-3"	19'-1"	17'-1"
11-1/4"	SI-40	20'-7"	18'-10"	17'-9"	16'-3"	22'-5"	19'-11"	18'-2"	16'-2"
	SI-60	21'-9"	19'-10"	18'-8"	17'-5"	23'-8"	21'-7"	20'-4"	18'-11"
	SI-80	23'-11"	21'-9"	20'-6"	19'-1"	26'-0"	23'-8"	22'-3"	20'-9"

L/360 Live Load • Glued/Nailed Floors • Allowable Spans 40 psf LL + 10 psf DL

Depth	Designation	SIMPLE SPAN				MULTIPLE SPAN			
		12" oc	16" oc	19.2" oc	24" oc	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	19'-6"	17'-9"	16'-3"	14'-6"	20'-6"	17'-9"	16'-2"	14'-5"
	SI-60	20'-7"	18'-10"	17'-9"	16'-7"	22'-5"	20'-6"	18'-11"	16'-11"
	SI-80	22'-8"	20'-8"	19'-6"	18'-2"	24'-8"	22'-6"	21'-3"	17'-1"
11-1/4"	SI-40	22'-9"	20'-0"	18'-3"	16'-3"	23'-0"	19'-11"	18'-2"	16'-2"
	SI-60	24'-0"	21'-11"	20'-9"	19'-1"	26'-2"	23'-4"	21'-3"	19'-0"
	SI-80	26'-5"	24'-1"	22'-9"	21'-2"	28'-10"	26'-3"	24'-9"	21'-5"

### Notes

- Spans noted in above chart are based on uniform loads.
- Spans are based on a composite floor with glued-nailed sheathing per PRI-400. Spans shall be reduced 12 inches when the floor sheathing is nailed only.

- Min. bearing length shall be 1-3/4" for the end bearings, and 3-1/2" for intermediate bearing.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.

# SI Series (9.25" • 11.25")

# PERMA-STRAIGHT I

50 psf LL • 15 psf DL at 1.15

## Roof Span Table (Snow Loads)

• Slope 6/12

SIMPLE SPAN • SLOPE: 6/12 • LL = 50 psf • DL = 15 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	18'-10"	16'-5"	14'-11"	13'-4"
	SI-60	20'-0"	18'-1"	17'-0"	15'-8"
	SI-80	22'-4"	20'-2"	18'-11"	16'-9"
11-1/4"	SI-40	21'-4"	18'-5"	16'-9"	15'-0"
	SI-60	23'-5"	21'-2"	19'-8"	17'-7"
	SI-80	26'-1"	23'-7"	22'-2"	20'-5"

## Roof Span Table (Snow Loads)

• Slope 5/12

SIMPLE SPAN • SLOPE: 5/12 • LL = 50 psf • DL = 15 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	19'-0"	16'-5"	15'-0"	13'-5"
	SI-60	20'-2"	18'-3"	17'-2"	15'-9"
	SI-80	22'-6"	20'-4"	19'-1"	16'-2"
11-1/4"	SI-40	21'-5"	18'-6"	16'-10"	15'-1"
	SI-60	23'-8"	21'-5"	19'-9"	17'-8"
	SI-80	26'-4"	23'-10"	22'-4"	20'-8"

# R O O F

### Notes

- Allowable clear spans are applicable to horizontal clear spans in simple-span roof construction with a LL/DL and roof slope as indicated.
- Spans are based on a duration of load (DOL) factor of 1.15 and are based on continuous lateral support of the compression flange.
- The live load deflection is limited to span/240 and total load deflection to span/180.
- Minimum bearing length shall be 1-3/4" for the end bearings and 3-1/2" on end bearing adjacent to cantilever.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required by hanger manufacturers.
- Spans include a cantilever of up to 2.0 ft. on one end of the I-joist.
- The maximum clear span measured horizontally between inside faces of the supports is limited to 36 feet.

40 psf LL • 10 psf DL at 1.15

## Roof Span Table (Snow Loads)

Slope 6/12

SIMPLE SPAN • SLOPE: 6/12 • LL = 40 psf • DL = 10 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	20'-4"	18'-5"	17'-1"	15'-3"
	SI-60	21'-7"	19'-7"	18'-4"	17'-0"
	SI-80	24'-1"	21'-10"	20'-6"	18'-11"
11-1/4"	SI-40	23'-10"	21'-1"	19'-2"	17'-2"
	SI-60	25'-4"	22'-11"	21'-6"	19'-11"
	SI-80	28'-2"	25'-6"	23'-11"	22'-2"

## Roof Span Table (Snow Loads)

Slope 5/12

SIMPLE SPAN • SLOPE: 5/12 • LL = 40 psf • DL = 10 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	20'-6"	18'-7"	17'-2"	15'-4"
	SI-60	21'-10"	19'-9"	18'-6"	17'-2"
	SI-80	24'-4"	22'-0"	20'-8"	19'-1"
11-1/4"	SI-40	24'-1"	21'-2"	19'-3"	17'-3"
	SI-60	25'-7"	23'-2"	21'-9"	20'-1"
	SI-80	28'-6"	25'-9"	24'-2"	22'-4"

# ROOF

### Notes

- Allowable clear spans are applicable to horizontal clear spans in simple-span roof construction with a LL/DL and roof slope as indicated.
- Spans are based on a duration of load (DOL) factor of 1.15 and are based on continuous lateral support of the compression flange.
- The live load deflection is limited to span/240 and total load deflection to span/180.
- Minimum bearing length shall be 1-3/4" for the end bearings and 3-1/2" on end bearing adjacent to cantilever.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required by hanger manufacturers.
- Spans include a cantilever of up to 2.0 ft. on one end of the I-joist.
- The maximum clear span measured horizontally between inside faces of the supports is limited to 36 feet.

# SI Series (9.25" • 11.25")

# PERMA-STRAIGHT I

30 psf LL • 10 psf DL at 1.15

## Roof Span Table (Snow Loads) • Slope 6/12

SIMPLE SPAN • SLOPE: 6/12 • LL = 30 psf • DL = 10 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	22'-3"	20'-1"	18'-11"	17'-1"
	SI-60	23'-8"	21'-5"	20'-1"	18'-7"
	SI-80	26'-4"	23'-10"	22'-5"	20'-9"
11-1/4"	SI-40	26'-1"	23'-6"	21'-5"	19'-2"
	SI-60	27'-8"	25'-1"	23'-7"	21'-9"
	SI-80	30'-10"	27'-11"	26'-3"	24'-3"

## Roof Span Table (Snow Loads) • Slope 5/12

SIMPLE SPAN • SLOPE: 5/12 • LL = 30 psf • DL = 10 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	22'-6"	20'-5"	19'-2"	17'-2"
	SI-60	23'-11"	21'-8"	20'-4"	18'-10"
	SI-80	26'-8"	24'-2"	22'-8"	21'-0"
11-1/4"	SI-40	26'-5"	23'-7"	21'-6"	19'-3"
	SI-60	28'-1"	25'-5"	23'-10"	22'-1"
	SI-80	31'-3"	28'-3"	26'-7"	24'-7"

# ROOF

### Notes

- Allowable clear spans are applicable to horizontal clear spans in simple-span roof construction with a LL/DL and roof slope as indicated.
- Spans are based on a duration of load (DOL) factor of 1.15 and are based on continuous lateral support of the compression flange.
- The live load deflection is limited to span/240 and total load deflection to span/180.
- Minimum bearing length shall be 1-3/4" for the end bearings and 3-1/2" on end bearing adjacent to cantilever.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required by hanger manufacturers.
- Spans include a cantilever of up to 2.0 ft. on one end of the I-joist.
- The maximum clear span measured horizontally between inside faces of the supports is limited to 36 feet.

# SI Series (9.25" • 11.25")

# PERMA-STRAIGHT I

25 psf LL • 15 psf DL at 1.15

## Roof Span Table (Snow Loads) • Slope 6/12

SIMPLE SPAN • SLOPE: 6/12 • LL = 25 psf • DL = 15 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	22'-1"	20'-0"	18'-10"	16'-11"
	SI-60	23'-6"	21'-4"	20'-0"	18'-6"
	SI-80	26'-3"	23'-9"	22'-3"	20'-7"
11-1/4"	SI-40	25'-11"	23'-4"	21'-3"	19'-0"
	SI-60	27'-7"	24'-11"	23'-5"	21'-8"
	SI-80	30'-8"	27'-9"	26'-1"	24'-2"

## Roof Span Table (Snow Loads) • Slope 5/12

SIMPLE SPAN • SLOPE: 5/12 • LL = 25 psf • DL = 15 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	22'-5"	20'-4"	19'-1"	17'-0"
	SI-60	23'-10"	21'-7"	20'-3"	18'-9"
	SI-80	26'-7"	24'-1"	22'-7"	20'-11"
11-1/4"	SI-40	26'-4"	23'-6"	21'-5"	19'-2"
	SI-60	27'-11"	25'-4"	23'-9"	22'-0"
	SI-80	31'-2"	28'-2"	26'-6"	24'-6"

# ROOF

### Notes

- Allowable clear spans are applicable to horizontal clear spans in simple-span roof construction with a LL/DL and roof slope as indicated.
- Spans are based on a duration of load (DOL) factor of 1.15 and are based on continuous lateral support of the compression flange.
- The live load deflection is limited to span/240 and total load deflection to span/180.
- Minimum bearing length shall be 1-3/4" for the end bearings and 3-1/2" on end bearing adjacent to cantilever.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required by hanger manufacturers.
- Spans include a cantilever of up to 2.0 ft. on one end of the I-joist.
- The maximum clear span measured horizontally between inside faces of the supports is limited to 36 feet.

# SI Series (9.25" • 11.25")

# PERMA-STRAIGHT I

20 psf LL • 10 psf DL at 1.15

## Roof Span Table (Snow Loads) • Slope 6/12

SIMPLE SPAN • SLOPE: 6/12 • LL = 20 psf • DL = 10 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	24'-5"	22'-2"	20'-10"	19'-3"
	SI-60	26'-0"	23'-7"	22'-1"	20'-6"
	SI-80	29'-0"	26'-3"	24'-8"	22'-10"
11-1/4"	SI-40	28'-8"	26'-0"	24'-5"	22'-1"
	SI-60	30'-6"	27'-7"	25'-11"	24'-0"
	SI-80	33'-11"	30'-9"	28'-10"	26'-9"

## Roof Span Table (Snow Loads) • Slope 5/12

SIMPLE SPAN • SLOPE: 5/12 • LL = 20 psf • DL = 10 psf at 1.15

Depth	Series	12" oc	16" oc	19.2" oc	24" oc
9-1/4"	SI-40	24'-10"	22'-6"	21'-1"	19'-6"
	SI-60	26'-5"	23'-11"	22'-5"	20'-9"
	SI-80	29'-5"	26'-8"	25'-0"	23'-2"
11-1/4"	SI-40	29'-1"	26'-4"	24'-9"	22'-2"
	SI-60	30'-11"	28'-0"	26'-3"	24'-4"
	SI-80	34'-5"	31'-2"	29'-3"	27'-1"

# ROOF

### Notes

- Allowable clear spans are applicable to horizontal clear spans in simple-span roof construction with a LL/DL and roof slope as indicated.
- Spans are based on a duration of load (DOL) factor of 1.15 and are based on continuous lateral support of the compression flange.
- The live load deflection is limited to span/240 and total load deflection to span/180.
- Minimum bearing length shall be 1-3/4" for the end bearings and 3-1/2" on end bearing adjacent to cantilever.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required by hanger manufacturers.
- Spans include a cantilever of up to 2.0 ft. on one end of the I-joist.
- The maximum clear span measured horizontally between inside faces of the supports is limited to 36 feet.