ORDINANCE NO. 790

AN ORDINANCE AMENDING CHAPTER 6, BUILDINGS AND CONSTRUCTION, OF THE CITY OF BOX ELDER MUNICIPAL CODE

WHEREAS, the Municipal Code of the City of Box Elder provides Building and Construction regulations within its municipal boundaries; and

WHEREAS, the City of Box Elder finds it necessary to modify Chapter 6 of the municipal code which addresses buildings and construction within the city; and

WHEREAS, this ordinance supersedes and replaces all previous ordinances and resolutions hereto relating to the subject matter hereof.

NOW, THEREFORE, BE IT ORDAINED by the governing body of the City of Box Elder, that the City of Box Elder Municipal Code be amended to read as follows (new language shall be indicated by underscore, and language to be deleted shall be indicated by strike-through):

Chater 6 Buildings and Construction

Sec 6-158 IBC Chapter 9, Section [F] 903.2, Where Required, Amended
IBC chapter 9, section [F] 903.2, where required, is hereby amended to read in its entirety as follows:

[F] 903.2. *Where required*. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in sections 903.2.1 through 903.2.12.

[F] 903.2.4. *Group F-1*. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

a. A Group F-1 fire area exceeds 8,000 square feet (743 m^2).
b. A Group F-1 fire area is located more than three stories above grade plane.
c. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 16,000 square feet (1,486 m^2).
d. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m^2).

[F] 903.2.4.1. *Woodworking operations*. An automatic sprinkler system shall be provided throughout all Group F-1 occupancy fire areas that contain woodworking operations in excess of 2,500 square feet (232 m^2) in an area that generate finely divided combustible waste or use finely divided combustible materials.

[F] 903.2.5. *Group H*. Automatic sprinkler systems shall be provided in high-hazard occupancies as required in sections 903.2.5.1 through 903.2.5.3.

[F] 903.2.5.1. *General*. An automatic sprinkler system shall be installed in Group H occupancies.

[F] 903.2.5.2. *Group H-5 occupancies*. An automatic sprinkler system shall be installed throughout buildings containing Group H-5 occupancies. The design of the sprinkler system shall be not less than that required by this code for the occupancy hazard classifications in accordance with table 903.2.5.2.

Where the design area of the sprinkler system consists of a corridor protected by one row of sprinklers, the maximum number of sprinklers required to be calculated is 13.

[F] 903.2.5.3. *Pyroxylin plastics*. An automatic sprinkler system shall be provided in buildings, or portions thereof, where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 100 pounds (45 kg).

[F] 903.2.7. *Group M*. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:
a. A Group M fire area exceeds ~~8,000~~ 12,000 square feet (743 m^2).
b. A Group M fire area is located more than three stories above grade plane.
c. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds ~~16,000~~ 24,000 square feet (1,486 m^2).
d. A Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m^2).

[F] 903.2.8. *Group R*. An automatic sprinkler system installed in accordance with section 903.3 shall be provided throughout all buildings with a Group R-1, R-3, R-4 and R-2 multifamily residents having six or more dwelling units.
(Ord. No. 642, § 150.03.180, 2-14-2020)

Sec 6-254 IRC Chapter 5, Section 507, Exterior Decks, Deleted And Replaced
IRC section 507, exterior decks, is hereby accepted in its entirety with the following exceptions:

In place of TABLE R507.3.1 MINIMUM FOOTING SIZE FOR DECKS

1. A minimum of a 12 inch diameter footing is required.

2. All footings must be a minimum of 6 inches thick and extend below the frost line.
3. For posts larger than 6 inches, the diameter of the footing must be double the size of the widest part of the post.
    a. E.g. 6x6 inch post would require a 12 inch footing
    b. E.g. 8x8 inch post would require a 16 inch footing

~~deleted in its entirety and replaced with 2015 IRC section 507.~~

~~R507. Exterior decks.~~

~~R507.1. *Decks.* Wood-framed decks shall be in accordance with this section or section R301 for materials and conditions not prescribed herein. Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads.~~

~~Such attachment shall not be accomplished using toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting. For decks with cantilevered framing members connections to exterior walls or other framing members shall be designed and constructed to resist uplift resulting from the full live load specified in table R301.5 acting on the cantilevered portion of the deck.~~

~~R507.2. *Deck ledger connection to band joist.* Deck ledger connections to band joists shall be in accordance with this section, tables R507.2 and R507.2.1, and figures R507.2.1 (1) and R507.2.1 (2). For other grades, species, connection details and loading conditions, deck ledger connections shall be designed in accordance with section R301.~~

~~R507.2.1. *Wood materials.* All wood materials shall be installed in accordance with section R507.2 shall be a minimum two inch by eight inch (51 mm by 203 mm) nominal, pressure preservative treated southern pine, incised pressure preservative treated Hem-Fir, or approved, naturally durable, No. 2 grade or better lumber. Deck ledgers installed in accordance with section R507.2 shall not support concentrated loads from beams or girders. Deck ledgers shall not be supported on stone or masonry veneer.~~

~~R507.2.2. *Band joist details.* Band joists attached by a ledger in accordance with section R507.2 shall be a minimum two-inch nominal (51 mm), solid sawn, spruce, pine, fir lumber or a minimum one inch by 9 1/2 inch (25 mm by 241 mm) dimensional, Douglas fir, laminated veneer lumber. Band joists attached by a ledger in accordance with section R507.2 shall be fully supported by a wall or sill plate below.~~

~~R507.2.3. *Ledger to band joist fastener details.* Fasteners used in deck ledger connections in accordance with table R507.2 shall be hot dipped galvanized or stainless steel and shall be installed in accordance with table R507.2.1 and figures R507.2.1(l) and R507.2.1(2).~~

~~R507.2.4. *Deck lateral load connection.* The lateral load connection required by section R507.1 shall be permitted to be in accordance with figure R507.2.3(1) or R507.2.3(2). Where the lateral load connection is provided in accordance with figure R507.2.3(1), hold-down tension devices shall be installed in not less than two locations per deck, within 24 inches of each end of the deck. Each device shall have an allowable stress design capacity of not~~

less than 1,500 pounds (6,672 N). Where the lateral load connections are provided in accordance with figure R507.2.3(2), the hold-down tension devices shall be installed in not less than four locations per deck, and each device shall have an allowable stress design capacity of not less than 750 pounds (3,336 N).

Table R507.2. Deck Ledger Connection to Band Joist[a, b]

(Deck live load = 40 psf, deck dead load = 10 psf, snow load < 40 psf)

onnection Details	*Joist Span*						
	6' and less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
/2-inch diameter lag screw with /2-inch maximum sheathing[c, d]	30	23	18	15	13	11	10
/2-inch diameter bolt with 1/2-ch maximum sheathing[d]	36	36	34	29	24	21	19
/2-inch diameter bolt with one-ch maximum sheathing[e]	36	36	29	24	21	18	16

or SI: one inch = 25.4 mm, one foot = 304.8 mm, one pound per square foot = 0.0479 kPa.

[a] Ledgers shall be flashed in accordance with section R703.8 to prevent water from contacting the house band joist.

[b] Snow load shall not be assumed to act concurrently with live load.

[c] The tip of the lag screw shall fully extend beyond the inside face of the band joist.

[d] Sheathing shall be wood structural panel or solid sawn lumber.

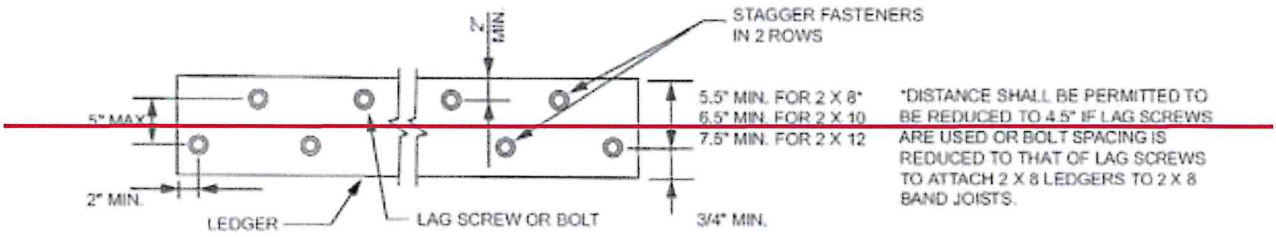
[e] Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber or foam sheathing. Up to 1/2-inch-thickness of stacked washers shall be permitted to substitute for up to 1/2 inch of allowable sheathing thickness where combined with wood structural panel or lumber sheathing.

Table R507.2.1. Placement of Lag Screws and Bolts in Deck Ledgers and Band Joists

Minimum End and Edge Distances and Spacing Between Rows				
	Top Edge	*Bottom Edge*	*Ends*	*Row Spacing*
Ledger[a]	2 inches[d]	3/4 inch	2 inches[b]	1 5/8 inches[b]
Band Joist[e]	3/4 inch	2 inches	2 inches[b]	1 5/8 inches[b]
For SI: l inch = 25.4 mm.				

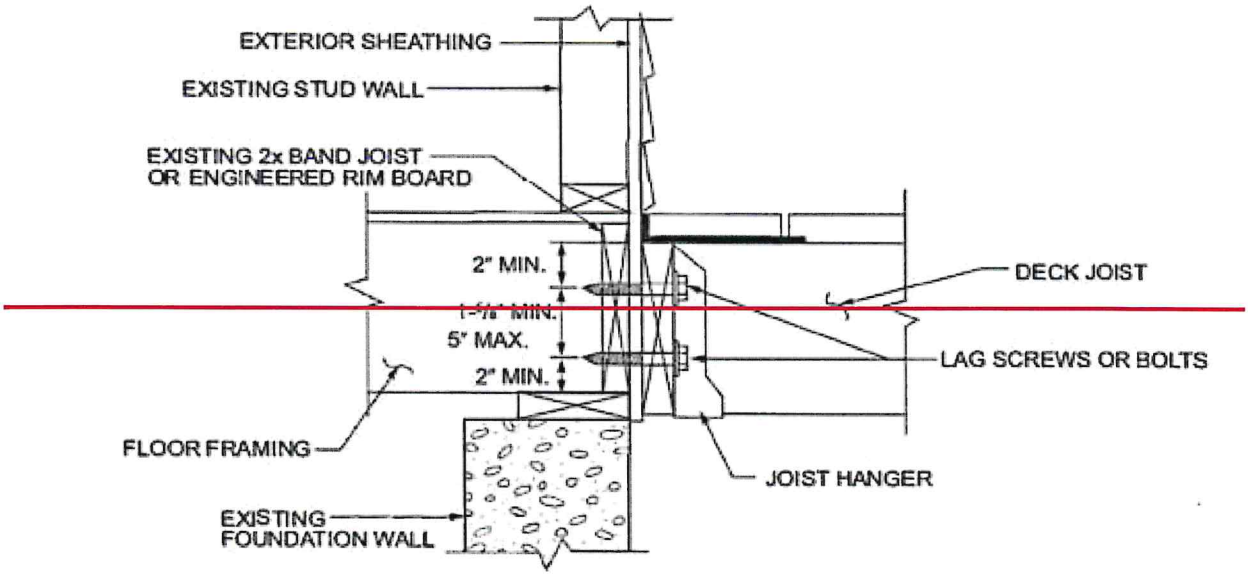
[a] Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger in accordance with figure R507.2.1(l).
[b] Maximum five inches.
[c] For engineered rim joists, the manufacturer's recommendations shall govern.
[d] The minimum distance from bottom row of lag screws or bolts to the top edge of the ledger shall be in accordance with figure R507.2.1(l).

Placement of Lag Screws and Bolts in Deck Ledgers



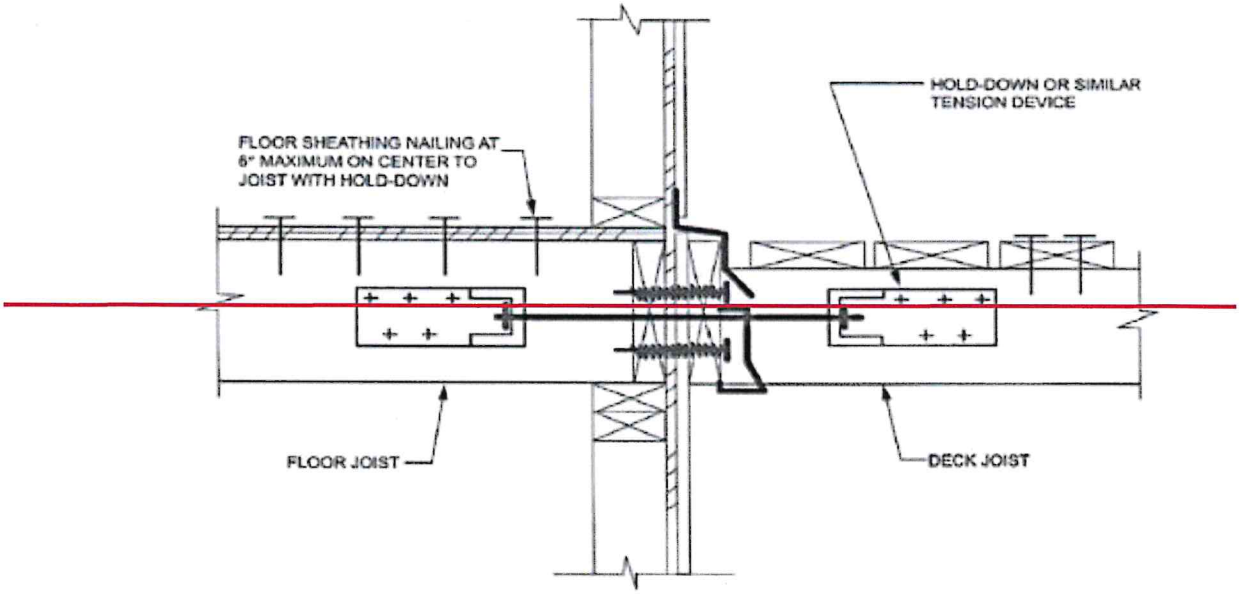
For SI: 1 inch = 25.4 mm.

Placement of Lag Screws and Bolts in Band Joists



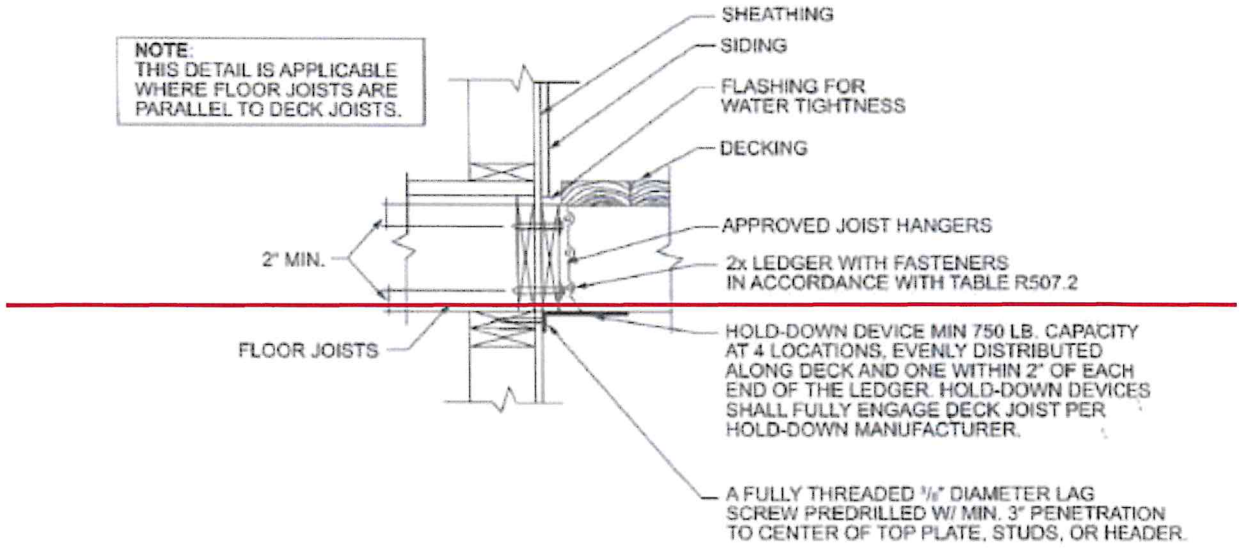
For SI: 1 inch = 25.4 mm.

Deck Attachment for Lateral Loads



For SI: 1 inch = 25.4 mm.

~~Deck Attachment for Lateral Loads~~



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

~~R507.3. *Plastic composite deck boards: stair treads, guards, or handrails.* Plastic composite exterior deck boards, stair treads, guards and handrails shall comply with the requirements of ASTM D 7032 and the requirements of section 507.3.~~

~~R507.3.1. *Labeling.* Plastic composite deck boards and stair treads, or their packaging, shall bear a label that indicates compliance to ASTM D 7032 and~~

~~includes the allowable load and maximum allowable span determined in accordance with ASTM D 7032. Plastic or composite handrails and guards, or their~~

~~packaging, shall bear a label that indicates compliance to ASTM D 7032 and includes the maximum allowable span determined in accordance with ASTM D 7032.~~

~~R507.3.2 *Flame spread index*. Plastic composite deck boards, stair treads, guards, and handrails shall exhibit a flame spread index not exceeding 200 when tested in accordance with ASTM E 84 or UL 723 with the test specimen remaining in place during the test.~~

~~Exception: Plastic composites determined to be non-combustible.~~

~~R507.3.3. *Decay resistance*. Plastic composite deck boards, stair treads, guards and handrails containing wood, cellulosic or other biodegradable materials shall be decay resistant in accordance with ASTM D 7032.~~

~~R507.3.4. *Termite resistance*. Where required by section 318, plastic composite deck boards, stair treads, guards and handrails containing wood, cellulosic or other biodegradable materials shall be termite resistant in accordance with ASTM D 7032.~~

~~R507.3.5. *Installation of plastic composites*. Plastic composite deck boards, stair treads, guards and handrails shall be installed in accordance with this code and the manufacturer's instructions.~~

~~R507.4. *Decking*. Maximum allowable spacing for joists supporting decking shall be in accordance with table R507.4. Wood decking shall be attached to each supporting member with not less than (2) 8d threaded nails or (2) No. 8 wood screws.~~

~~Table R507.4. Maximum Joist Spacing~~

Material Type and Normal Size	*Maximum on Center Joist Spacing*	
	Perpendicular to joist	*Diagonal to joist*[a]
1 1/4-inch-thick wood	16 inches	12 inches
2-inch-thick wood	24 inches	16 inches
Plastic composite	In accordance with R507.3	In accordance with R507.3
For SI: one inch = 25.4 mm, one foot = 304.8 mm, one degree = 0.01745 rad.		

[a] Maximum angle of 45 degrees from perpendicular for wood deck boards.

Table R507.5. Deck Joist Spans for Common Lumber Species' (ft.—in.)

Species[a]	Size	Spacing of Deck Joists W/No Cantilever (Inches)[b]			Spacing of Deck W/Cantilever (Inches)[c]		
		12	16	24	12	16	24
Southern Pine	2 x 6	9-11	9-0	7-7	6-8	6-8	6-8
	2 x 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 x 10	16-2	14-0	11-5	14-6	14-0	11-5
	2 x 12	18-0	16-6	13-6	18-0	16-6	13-6
Douglas Firlarch[d], Hem-Fir[d], Spruce-pine-Fir[d]	2 x 6	9-6	8-8	7-2	6-3	6-3	6-3
	2 x 8	12-6	11-1	9-1	9-5	9-5	9-1
	2 x 10	15-8	13-7	11-1	13-7	13-7	11-1
	2 x 12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood western cedars, ponderosa pine[e], redpine[e]	2 x 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 x 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 x 10	14-11	13-0	10-7	12-3	12-3	12-4
	2 x 12	17-5	15-1	12-4	16-5	15-1	12-4
For SI: one inch = 25.4 mm, one foot = 304.8 mm, one pound per square foot = 0.0479 kPa, one pound = 0.454 kg.							

[a] No. 2 grade with wet service factor.
[b] Ground snow load, live load = 40 psf, dead load = ten psf, L/Δ = 360.
[c] Ground snow load, live load = 40 psf, dead load = ten psf, L/Δ = 360 at main span, U.i = 180 at cantilever with a 220-pound point load applied to end.
[d] Includes incising factor.
[e] Northern species with no incising factor.
[f] Cantilevered spans not exceeding the nominal depth of the joist are permitted.

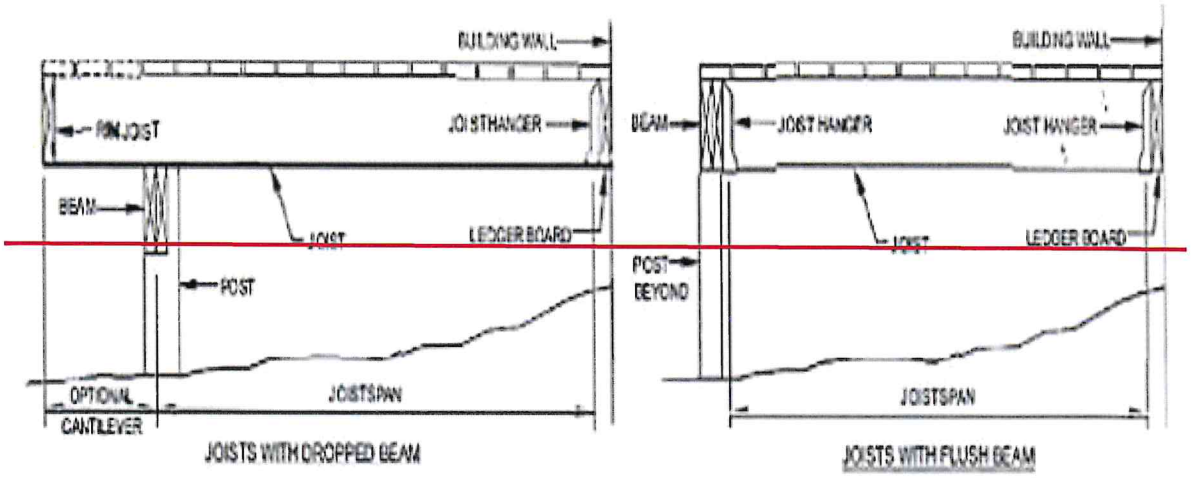
R507.5. *Deck joists.* Maximum allowable spans for wood deck joists, as shown in figure R507.5, shall be in accordance with table R507.5. Deck joists shall be permitted to cantilever not greater than one-fourth of the actual, adjacent joist span.

Table R507.6. Deck Beam Span Lengths[a,b] (ft.-in.)

Species[a]	*Size*	*Deck Joist Span Less Than or Equal To (Feet)*						
		6	8	10	12	14	16	18
Southern Pine	2 x 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 x 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 x 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 x 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 x 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 x 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 x 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 x 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas Fir-larch[d,e], Hem-Fir[d,e], Spruce-pine-fir[d,e], Redwood, western cedars, ponderosa pine[f], redpine[e,f]	3 x 6 or 2 x 6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3 x 8 or 2 x 8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3 x 12 or 2 x 10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3 x 12 or 2 x 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 x 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 x 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 x 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 x 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3 x 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6

	3-2 x 8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3-2 x 10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3-2 x 12	13-11	12-1	10-9	9-1	8-6	8-1	-
For SI: one inch = 25.4 mm, one foot = 304.8 mm, one pound per square foot = 0.0479 kPa, one pound = 0.454 kg.								

R507.5.1. *Lateral restraint at supports.* Joist ends and bearing locations shall be provided with lateral restraint to prevent rotation. Where lateral restraint is provided by joist hangers or blocking between joists, their depth shall equal not less than 60 percent of the joist depth. Where lateral restraint is provided by rim joists, they shall be secured to the end of each joist with not less than (3) 10d (three-inch by 0.128-inch) nails or (3) No. 10 by three-inch (76 mm) long wood screws.



Typical Joist Spans Floors

R507.6. *Deck beams.* Maximum allowable spans for wood deck beams, as shown in figure R507.6, shall be in accordance with table R507.6. Beam plies shall be fastened with two rows of 10d (three-inch by 0.128-inch) nails minimum at 16 inches (406 mm) on center along each edge. Beams shall be permitted to cantilever at each end up to one-fourth of the actual beam span. Splices of multi-span beams shall be located at interior post locations.

R507.7. *Deck joist and deck beam bearing.* The ends of each joist and beam shall have not less than 1 1/2 inches (38 mm) of bearing on wood or metal and not less than three inches (76 mm) on concrete or masonry for the entire width of the beam. Joist framing into the

~~side of a ledger board or beam shall be supported by approved joist hangers. Joists bearing on a beam shall be connected to the beam to resist lateral displacement.~~

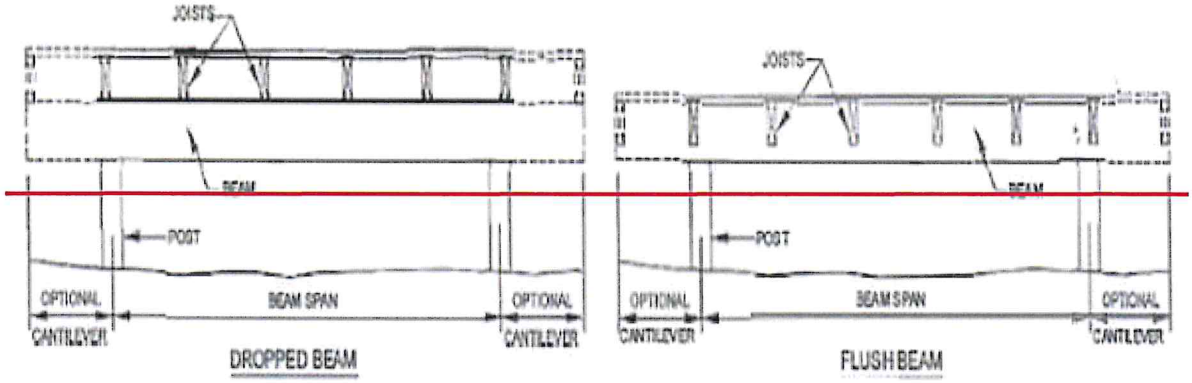
~~Table R507.6. Maximum Allowable Spans for Wood Deck Beams~~

Species[a]	*Size*	*Deck Joist Span Less Than or Equal to (feet)*						
		6	8	10	12	14	16	18
Southern Pine	2 2 X 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 2 X 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 2 X 10	10-4	9-0	8-0	74	6-9	6-4	6-0
	2 2 X 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 2 X 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 2 X 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 2 X 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 2 X 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas Fir-larch[d], Hem-Fir[d], Spruce-pine-fir[d] Redwood, western	3 x 6 or 2 2 x 6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3 x 8 or 2-	6-10	5-11	5-4	4-10	4-6	4-1	3-8

cedars, ponderosa pine[f], redpine[e]	2 x 8							
	3 x 10 or 2 – 2 x 10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3 x 12 or 2 – 2 x 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 X 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 X 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 X 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 X 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3-2 X 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3-2 X 8	9-8	86	7-7	6-11	6-5	6-0	5-8
	3-2X 10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3-2 X 12	13-11	12-1	10-9	9-1	8-6	8-1	-

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

[a] Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360 at main span, L/Δ = 180 at cantilever with a 220-pound point load applied at the end.
[b] Beams supporting deck joists from one side only.
[c] No. 2 grade, wet service factor.
[d] Beam depth shall be greater than or equal to depth of joists with a flush beam condition.
[e] Includes incising factor.
[f] Northern species. Incising factor not included.



Typical Deck Beam Spans

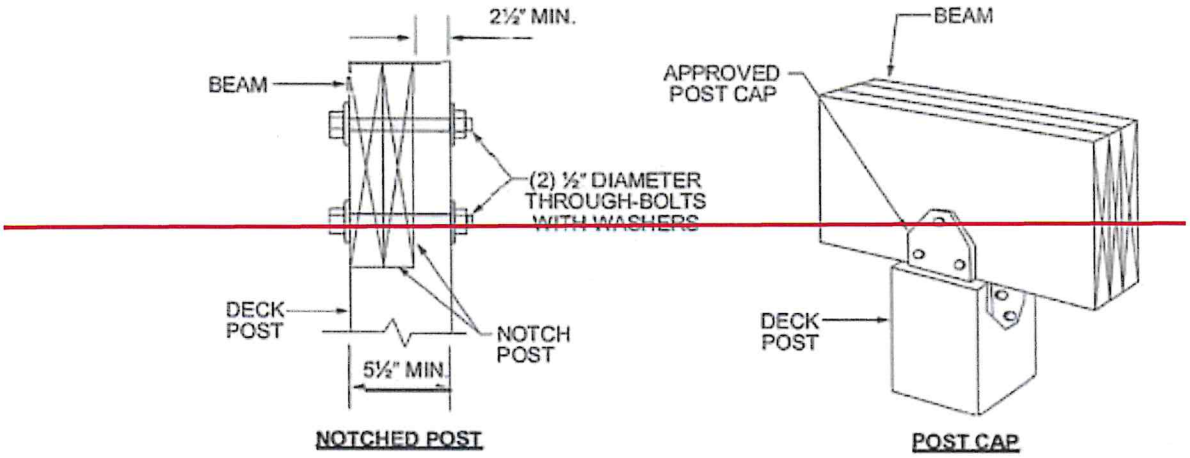
R507.7.1. *Deck post to deck beam.* Deck beams shall be attached to deck posts in accordance with figure R507.71 or by other equivalent means capable to resist lateral dis-placement. Manufactured post-to-beam connectors shall be sized for the post and beam sizes. All bolts shall have washers under the head and nut.

Exception: Where deck beams bear directly on footings in accordance with section R507.8.1.

R507.8. *Deck posts.* For single level wood framed decks with beams sized in accordance with table R507.6, deck post size shall be in accordance with table R507.8.

Table R507.8. Deck Post Height[a]

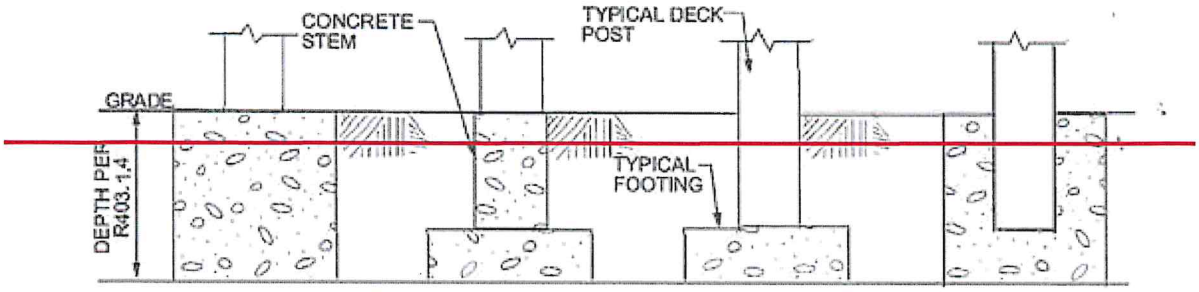
Deck Post Size	*Maximum Height*[a]
4 x 4	8'
4 x 6	8'
6 x 6	14'
For SI: One foot = 304.8mm [a] Measured to the underside of the beam.	



For SI: 1 inch = 25.4 mm.

Deck beam to deck post.

R507.8.1. *Deck post to deck footing.* Posts shall bear on footings in accordance with section R403 and figure R507.8.1. Posts shall be restrained to prevent lateral displacement at the bottom support. Such lateral restraint shall be provided by manufactured connectors installed in accordance with section R507 and the manufacturer's instructions or a minimum post embedment of 12 inches (305 mm) in surrounding soils or concrete piers.



~~Typical Deck Posts to Deck Footings~~

~~(Ord. No. 642, § 150.04.301, 2-14-2020)~~

Sec 6-259 IRC Chapter 11, Amended

IRC chapter 11, is hereby amended to read as follows all other provisions shall be deleted:
Chapter 11, energy efficiency.
Habitable living spaces, at a minimum, shall be insulated to the following specifications:
R-38 in the attic and R-19 in exterior walls.
Exception: Manufactured sunroom components installed as per manufacturer's recommendations.
(Ord. No. 642, § 150.04.350, 2-14-2020)

Sec 6-422 IPMC Section 302.3 Sidewalks And Driveways. Amended

Sidewalks, walkways, stairs, driveways, parking spaces and similar areas shall be kept in a proper state of repair, and maintained free from hazardous conditions.

a. Responsibility – The owner of record of any property abutting a sidewalk located within a public right-of-way shall be responsible for the maintenance, repair, and replacement of such sidewalk, including sidewalks located between the property line and the street curb, in accordance with this Code and applicable City specifications.
b. Condition Requirements – All sidewalks shall be maintained in good repair and in a condition safe for public travel, as determined by the City. Failure to maintain a sidewalk in a safe condition constitutes a public nuisance.
c. Replacement Required – When a sidewalk is determined by the City to be defective or unsafe beyond reasonable repair, the owner of record shall replace the sidewalk in accordance with City specifications and standards.
d. Liability; Hold Harmless – The City shall not be responsible for injury to persons or damage to property caused by the failure of an abutting property owner to maintain a sidewalk as required by this section. The abutting property owner shall be responsible for such failure, consistent with SDCL § 9-46-2.

NOW, THEREFORE, BE IT ORDAINED by the governing body of the City of Box Elder, that the City of Box Elder Municipal Code be amended to read as follows (new language shall be indicated by underscore, and language to be deleted shall be indicated by strike-through):

PASSED AND APPROVED ON FIRST READING this 7th day of April, 2026.

PASSED, APPROVED AND ADOPTED ON SECOND AND FINAL READING this 21st day of April, 2026.

Larry Larson, Mayor

ATTEST:

Renee Baker, Finance Officer

(SEAL)

ATTESTATION

I, Chaz Kokesh, the City Clerk of the City of Box Elder, South Dakota, do hereby attest and state the above resolution was published in the manner required by law and that all procedures required by the State of South Dakota law were complied with. This resolution shall become effective on May 21st, 2026.

Chaz Kokesh, City Clerk