



Polk County Public Works

5885 NE 14th Street

Des Moines, IA 50313

PHONE: (515) 286-3352

EMAIL: publicworks@polkcountyiowa.gov

Fee Schedule

Deck, 3 or 4 Season Porch and Covered Patio Permit Application and Checklist

PLEASE PRINT

Please allow 5-7 Business Days for Permit Review and Approval

JOB SITE ADDRESS: _____

OWNER: _____ **PHONE:** (____) _____ - _____

ADDRESS: _____ **CITY:** _____ **STATE:** _____ **ZIP CODE:** _____

EMAIL: _____

CONTRACTOR: _____ **PHONE:** (____) _____ - _____

COMPANY: _____

ADDRESS: _____ **CITY:** _____ **STATE:** _____ **ZIP CODE:** _____

EMAIL: _____

Size of proposed deck (dimensions)? _____ **X** _____ **and total square feet** _____

Is the deck going to be covered? Yes No (If yes, must provide engineered truss specifications)

If yes, what is the height of covered deck from grade to peak? _____

Additional Information (if any)

Checklist of items to be filled out or completed prior to submitting application packet:

Deck Permit Application and Checklist Detailed

Site Plan Drawing

Building Spec Sheet for Decks

Staked - Proposed Building Layout Staked

Truss Specifications (If Covered)

- ** No construction shall start until the permit is issued.
- ** All work must be permitted prior to inspections.
- ** Unresolved zoning, subdivision, floodplain and health items may delay the issuance of any permit.
- ** No structure should be used or occupied until the Certificate of Occupancy is issued.
- ** If an electrical or plumbing permit is needed, they must be applied for separately.

Contractor/ Owner/Applicant Statement:

I have included all of the above checked items and I understand that that all the items listed above must be reviewed and fees paid before a permit will be issued. I further understand that construction work cannot begin until the building permit has been issued. All the information supplied by me is true and correct to the best of my knowledge and belief.

Print Name

Signature

Date

Building Spec sheet for decks

Please provide the following information:

Job Address: _____

Type of Use (Including size): _____

1. Footings: (42" minimum frost depth)

Depth below grade: _____

Size of footing or trench: _____

Size and type of reinforcement: _____

2. Floor framing: (list size and grade of lumber)

Size of support beam(s): _____

Spacing of support beam posts: _____

Size, span and spacing of floor joist: _____

Type of floor sheathing: _____

3. Roof and ceiling: (List size and grade of lumber)

Size, span and spacing of ceiling joists: _____

Size, span and spacing of roof rafters: _____

Truss rafters: **Must provide design data from manufacturer**

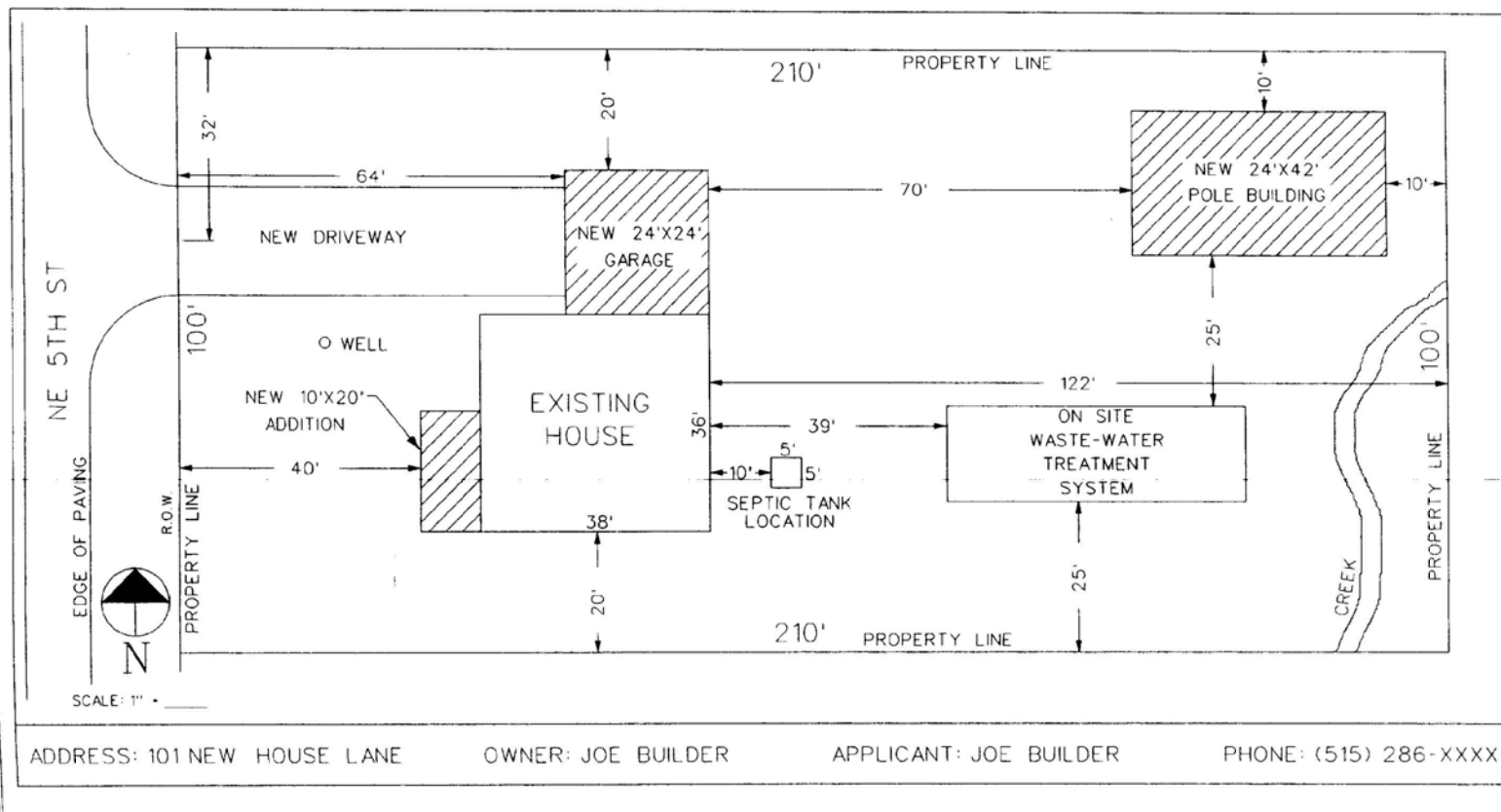
Comments/ Additional Information _____

Questions or to schedule inspections after the permit is issued 286-3705

RESIDENTIAL SITE PLAN INSTRUCTIONS

Required Information:

1. Specify Site Address and Owner's Name.
2. Specify Name and Phone Number of person furnishing Site Plan information.
3. All streets must be identified.
4. Indicate Lot Dimensions.
5. All structures, existing and proposed, must be shown on the Site Plan. Dimensions of and distances to all lot lines from existing/proposed buildings must be indicated as well as distances between all proposed/and existing structures.
6. Indicate location of and distance to property entrance(s), existing and/or proposed. Dimensions from corner of property to center of drive should be indicated.
7. Indicate location of and distance to existing and proposed septic tank(s) and/or on site waste-water treatment system(s), if possible.
8. Indicate location of ponds, streams, drainage ways, and/or ravines. All physical features must be shown.
9. Identify North Directional Arrow and indicate scale of site plan.



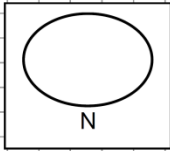
Polk County Public Works – Detailed Site Plan Drawing

SITE ADDRESS: _____

OWNER'S NAME: _____

APPLICANT'S NAME: _____

APPLICANT'S PHONE: _____



INSTRUCTIONS TO APPLICANT

Specify Site Address and Owner's Name.

Specify Name and Phone Number of person furnishing Site Plan information.

all streets must be identified.

Indicate lot dimensions.

All structures, existing and proposed, must be shown on the Site Plan. Dimensions of and distances to all lot lines from existing/proposed buildings must be indicated as well as distances between all proposed/and existing structures.

Indicate location of and distance to property entrance(s), existing and/or proposed. Dimensions from corner of property to center of drive should be indicated.

Indicate location of and distance to existing and proposed septic tank(s) and/or on site waste-water treatment system(s) and if applicable geothermal heat pumps.

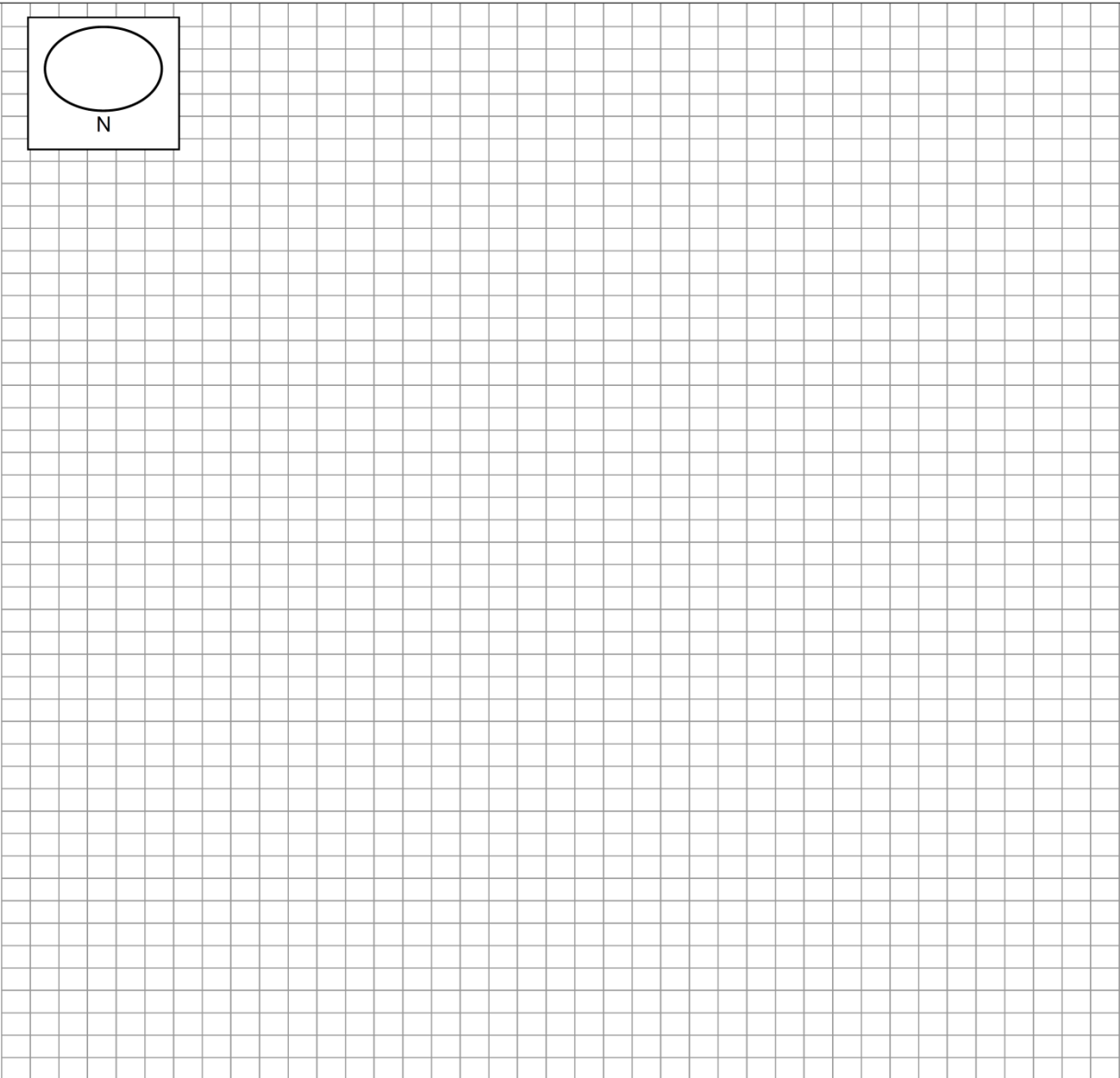
Indicate location of ponds, streams, drainage ways, and/or ravines. All physical features must be shown.

Identify North Directional Arrow and indicate scale of Site Plan.

I, WE CERTIFY THAT THE PROPOSED CONSTRUCTION WILL CONFORM TO THE DIMENSIONS AND USES SHOWN ABOVE AND THAT NO CHANGES WILL BE MADE WITHOUT FIRST OBTAINING APPROVAL.

APPLICANT'S SIGNATURE _____

DATE _____



DECK LEDGER CONNECTION TO BAND JOIST^{a, b} (Deck live load = 40 psf, deck dead load = 10 psf, snow load ≤ 40 psf)

CONNECTION 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'
	On-center spacing of fasteners						
1/2-inch diameter lag screw with 1/2-inch maximum sheathing ^{c, d}	30	23	18	15	13	11	10
1/2-inch diameter bolt with 1/2-inch maximum sheathing ^d	36	36	34	29	24	21	19
1/2-inch diameter bolt with 1-inch maximum sheathing ^e	36	36	29	24	21	18	16

a. Ledgers shall be flashed in accordance with Section R703.4 to prevent water from contacting the house band joist.

b. Deck Ledger shall be 2x8 (No. 2 grade or better Pressure Treated Southern Pine, Hem-Fir or other approved material)

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.

PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS

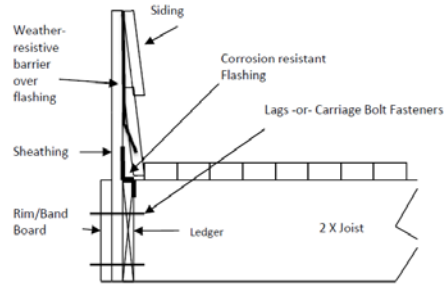
MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS				
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING
Ledger ^a	2 inches ^d	3/4 inch	2 inches ^b	1 ⁵ / ₈ inches ^b
Band Joist ^c	3/4 inch	2 inches	2 inches ^b	1 ⁵ / ₈ inches ^b

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(1).

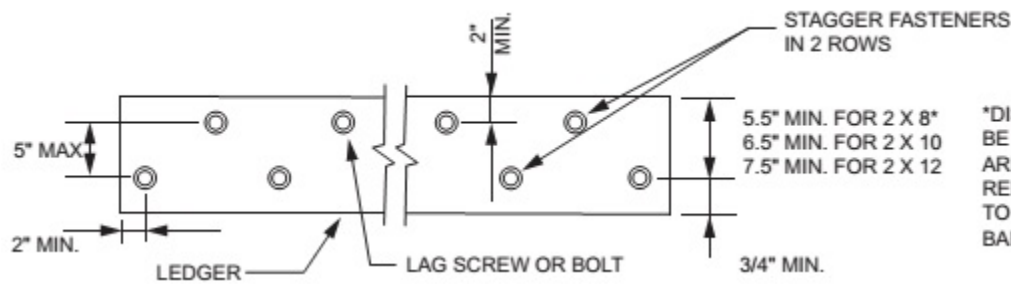
b. Maximum 5 inches.

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(1).

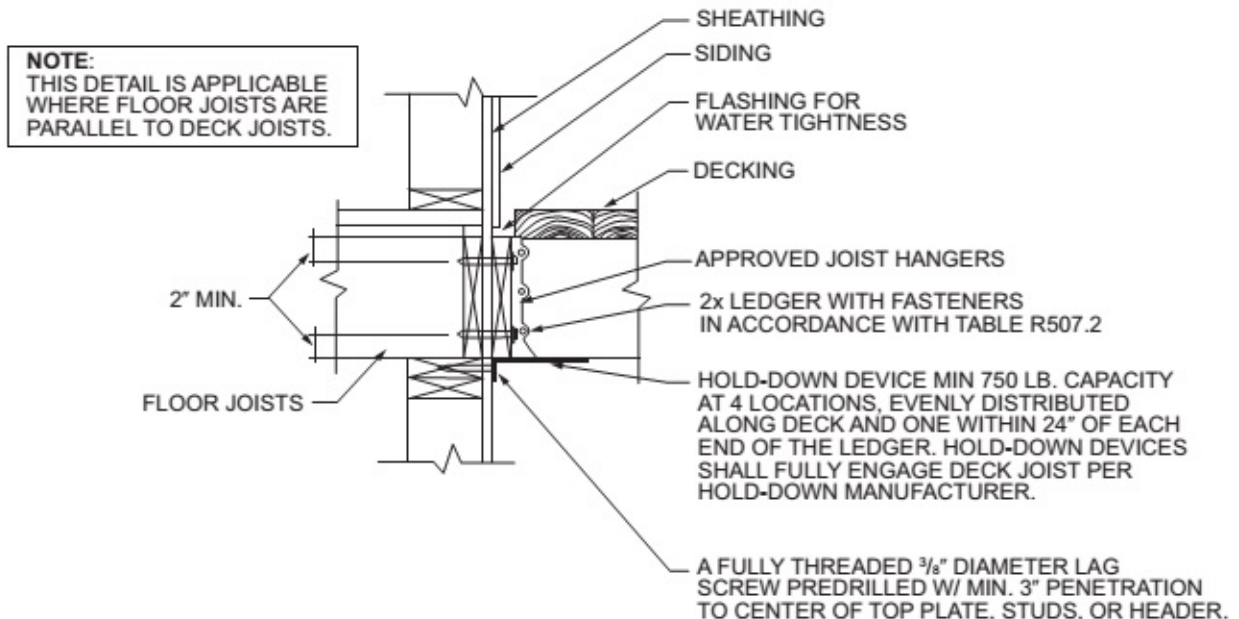


PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS

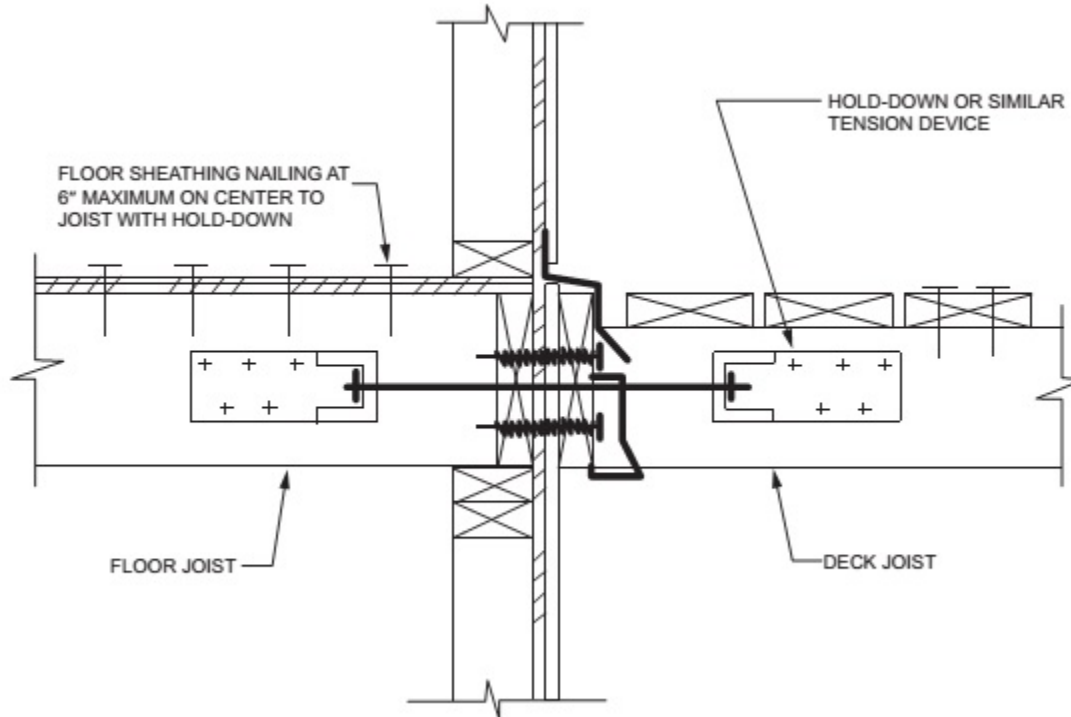


*DISTANCE SHALL BE PERMITTED TO BE REDUCED TO 4.5" IF LAG SCREWS ARE USED OR BOLT SPACING IS REDUCED TO THAT OF LAG SCREWS TO ATTACH 2 X 8 LEDGERS TO 2 X 8 BAND JOISTS.

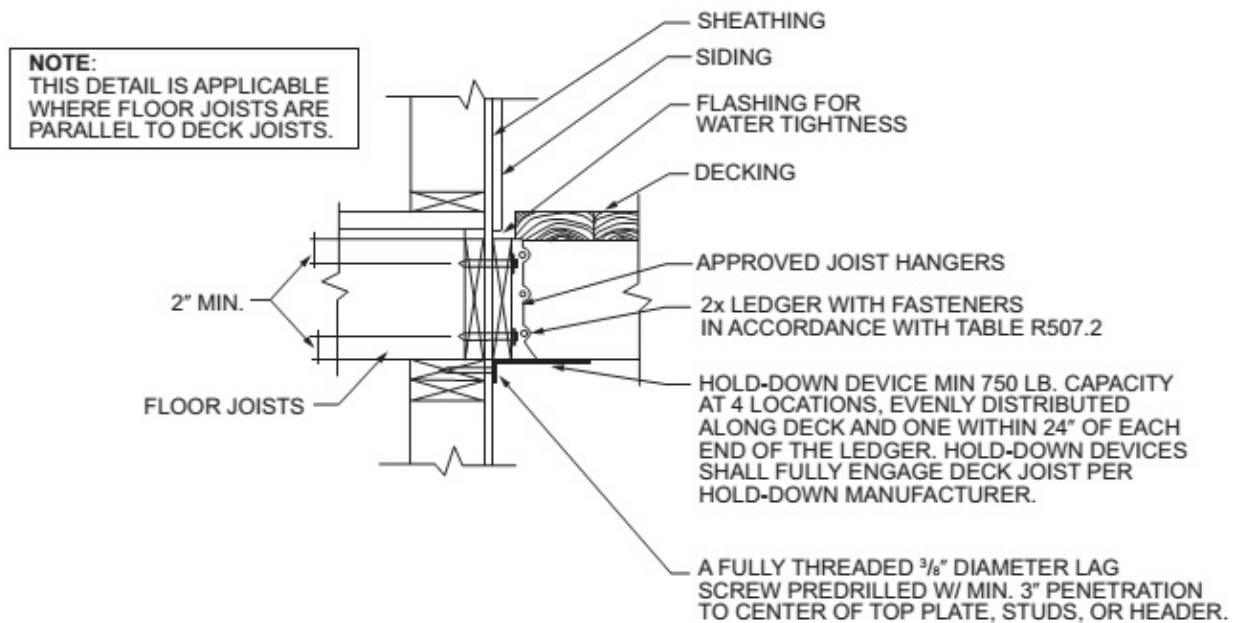
PLACEMENT OF LAG SCREWS AND BOLTS IN BAND JOISTS



DECK ATTACHMENT FOR LATERAL LOADS



OR



MAXIMUM JOIST SPACING

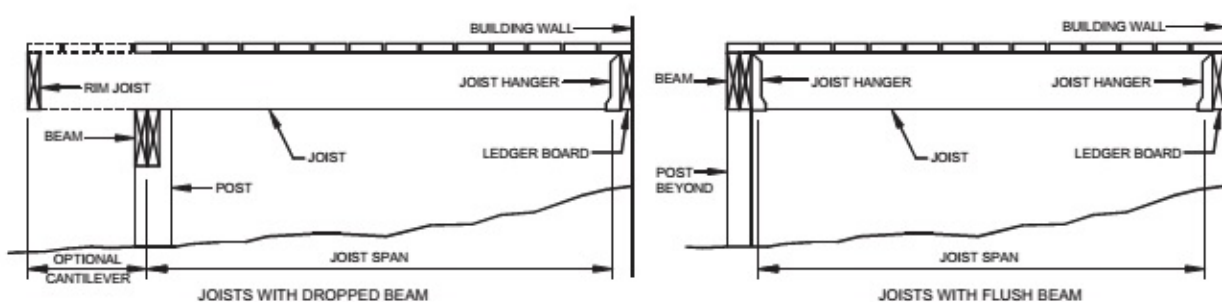
MATERIAL TYPE AND NOMINAL SIZE	MAXIMUM ON-CENTER JOIST SPACING	
	Perpendicular to joist	Diagonal to joist ^a
1 ¹ / ₄ -inch-thick wood	16 inches	12 inches
2-inch-thick wood	24 inches	16 inches
Plastic composite	In accordance with Section R507.3	In accordance with Section R507.3

DECK JOIST SPANS FOR COMMON LUMBER SPECIES (ft. - in.)

SPECIES ^a	SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER ^{bf} (inches)			SPACING OF DECK JOISTS WITH CANTILEVERS ^c (inches)		
		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 fir-larch ^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 , red pine ^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	10-7
	2 x 12	17-5	15-1	12-4	16-5	15-1	12-4

- a. Cantilevered spans of 2 ft maximum are permitted
 b. No. 2 Grade with wet service factor

TYPICAL DECK JOIST SPANS



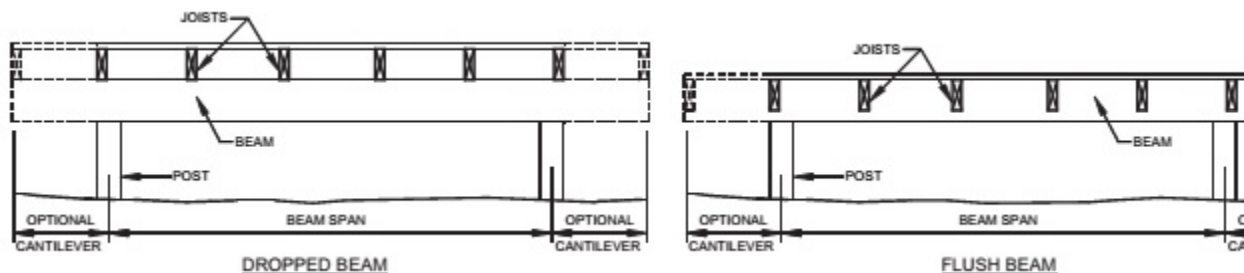
*Max 2 ft cantilever

DECK BEAM SPAN LENGTHS^{a, b} (ft. - in.)

SPECIES ^c	SIZE ^d	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18
Southern pine	2 – 2 × 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 – 2 × 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 – 2 × 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 – 2 × 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 – 2 × 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 – 2 × 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 – 2 × 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 – 2 × 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas fir-larch ^e , hem-fir ^e , spruce-pine-fir ^e , redwood, western cedars, ponderosa pine ^f , red pine ^f	3 × 6 or 2 – 2 × 6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3 × 8 or 2 – 2 × 8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3 × 10 or 2 – 2 × 10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3 × 12 or 2 – 2 × 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 × 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 × 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 × 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 × 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3 – 2 × 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3 – 2 × 8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3 – 2 × 10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3 – 2 × 12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

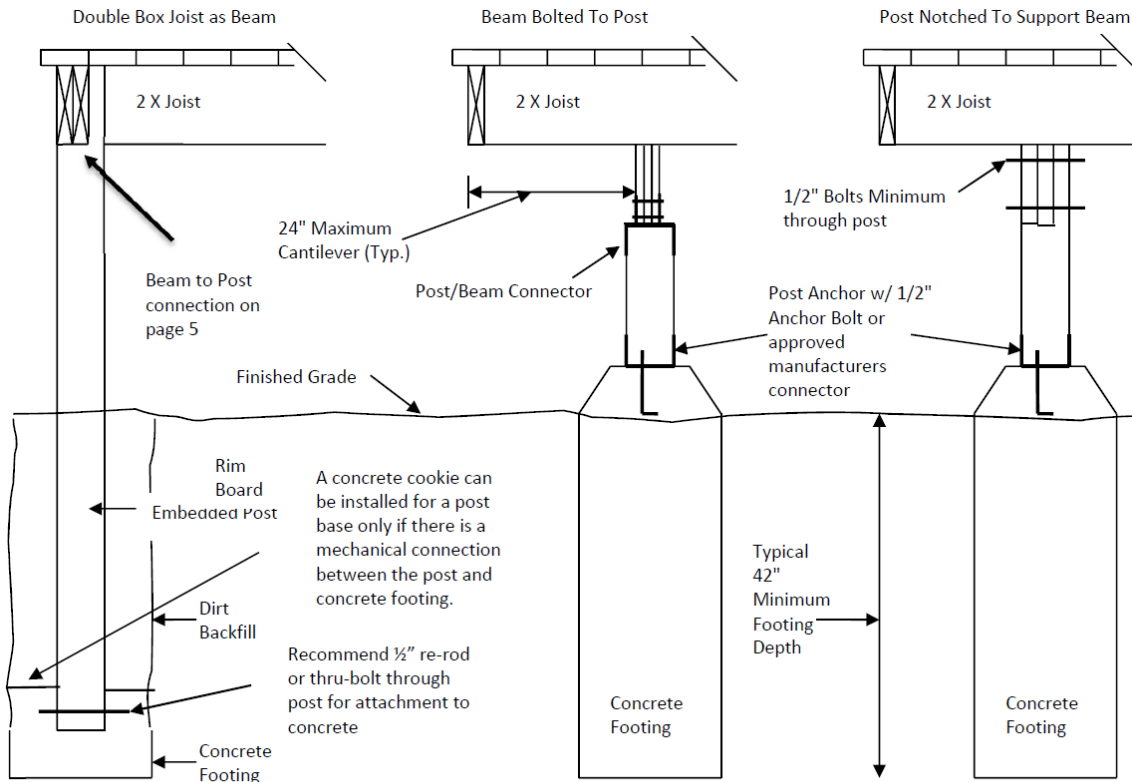
- Beam depth shall be greater than or equal to depth of joists with a flush beam condition.
- Beams supporting deck joists from one side only.
- No. 2 Grade wet service factor

TYPICAL DECK BEAM SPANS



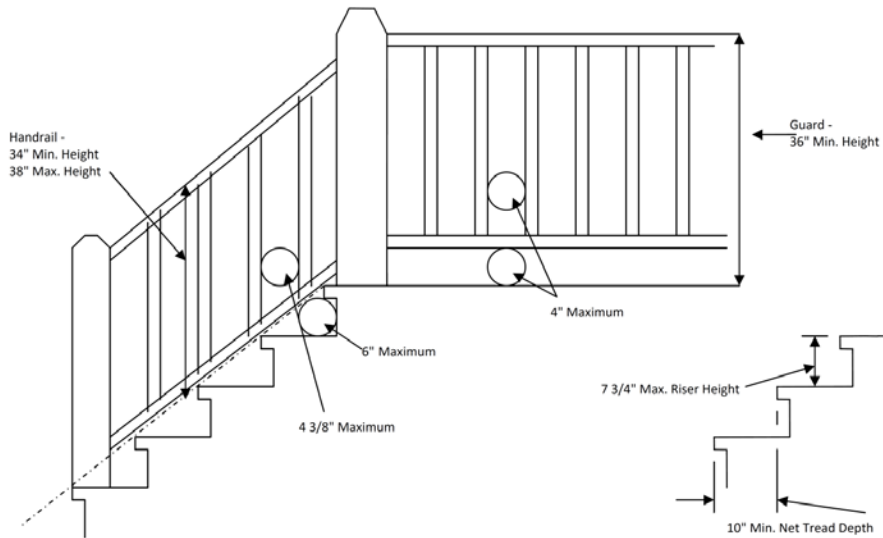
*Max 2 ft cantilever

FOOTINGS AND ATTACHMENTS

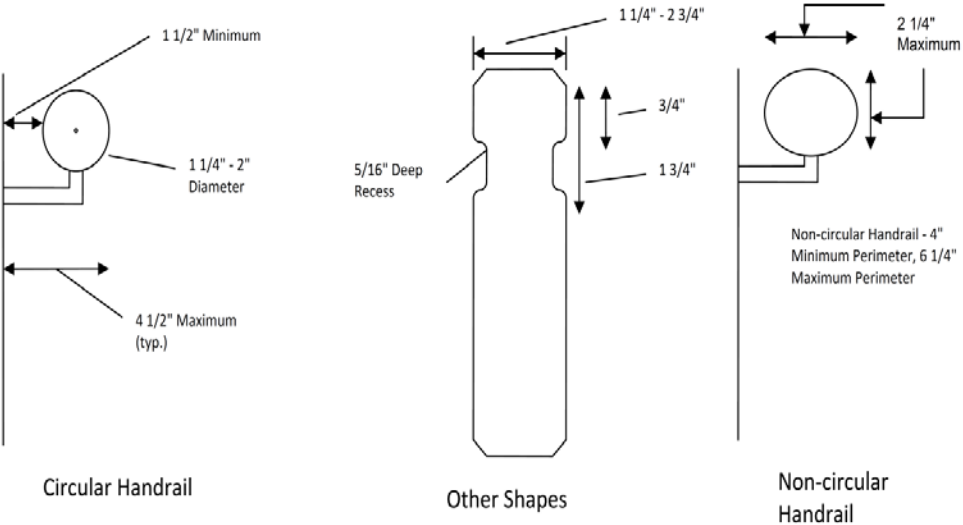


NOTE: All fasteners shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper.
 Exception - 1/2" diameter or greater steel bolts

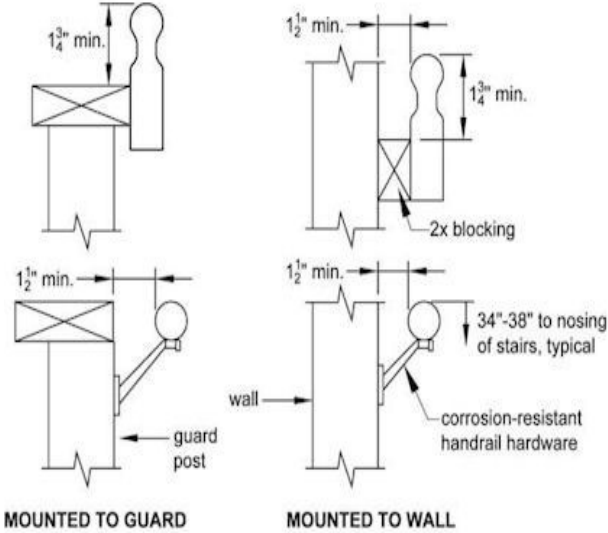
Guard, Handrail & Stair Details



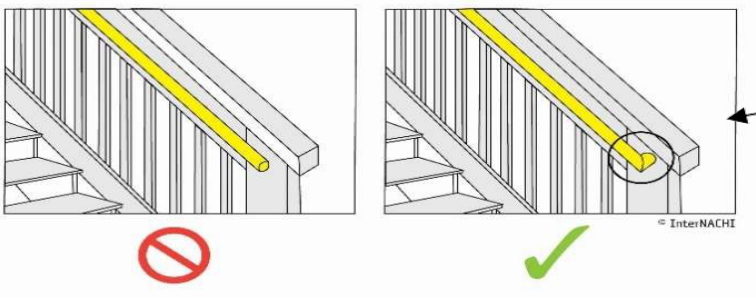
General Handrail Requirements



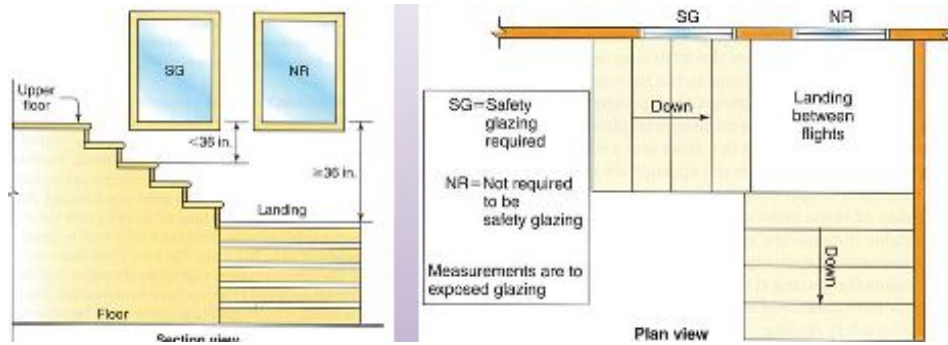
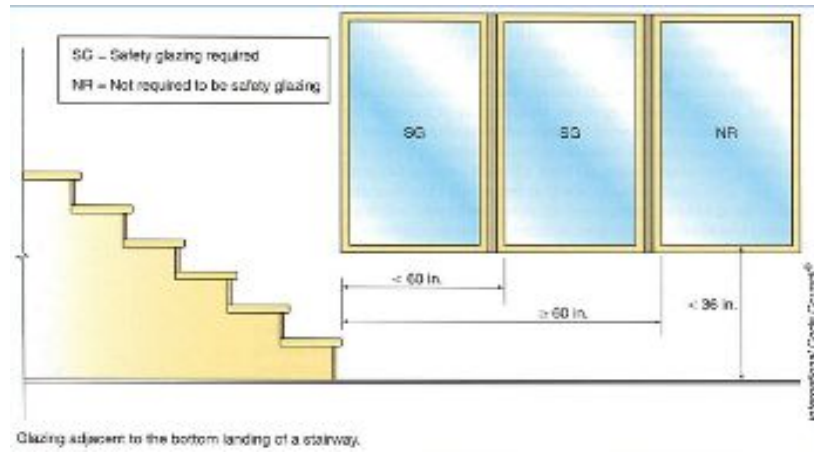
Fasten handrails per manufacturer recommendations



Handrails shall return or terminate in newel posts, safety terminals or wall.
 Handrails shall not encroach into the stair width more than 4 1/2".



GLAZING ADJACENT TO STAIRS & WALKING SURFACE



Adding a Deck Might Require Changing the Windows

