



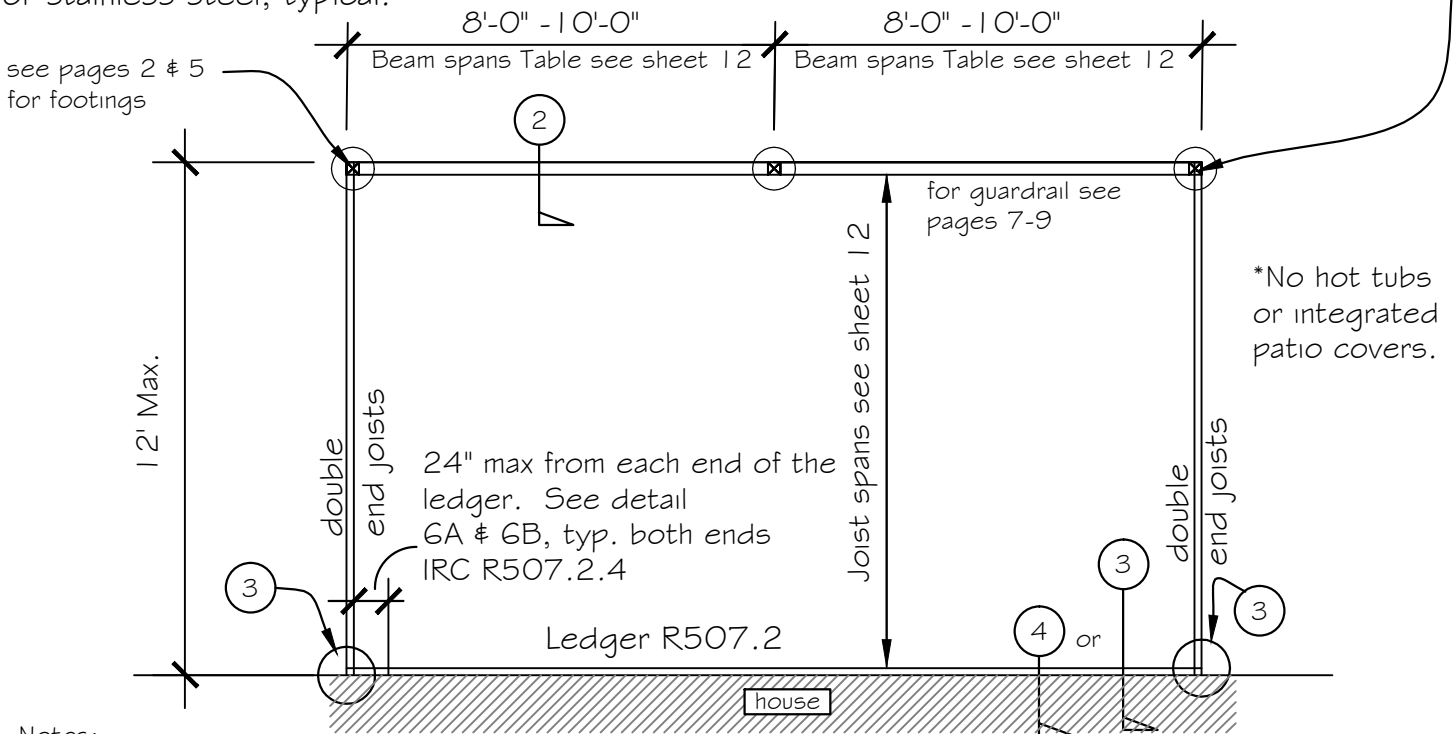
# Southwest Washington Chapter of ICC

This construction detail is illustrative of the minimum standard of construction based upon the 2015 IRC / WAC 51-51

Visit our web site at: [www.sww-icc.org](http://www.sww-icc.org)

NOTE: All exposed lumber to be pressure treated (P.T.) or decay resistant. Fasteners for P.T. wood shall be hot-dipped galv. or stainless steel, typical.

Deck Post Size	Maximum height
4 x 4 or 4 x 6	8'-0"
6 x 6	14'-0"



Notes:

- 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.
- R507.5 Deck joists shall not be permitted to cantilever not greater than  $\frac{1}{4}$  of the actual, adjacent joist span.
- R507.5.1 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% 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 nails or (3) No. 10 x 3" long wood screws.
- R507.6 Beam plies shall be fastened with two rows of 10d nails minimum at 16" o.c. along each edge. Beams shall be permitted to cantilever at each end up to  $\frac{1}{4}$  of the actual beam span. Splices of multispan beams shall be located at interior post locations.
- R507.7 The ends of each joist and beam shall have not less than  $1\frac{1}{2}$ " of bearing on wood or metal and not less 3" 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.
- R507.7.1 Deck post to Deck beams shall be capable of resisting lateral displacement. All bolts shall have washers under the head and nut.
- R507.8.1 Post shall bear on footings and be restrained to prevent lateral displacement at the bottom support with a manufactured connector or post embedment of 12" in concrete piers.



## DECK FLOOR PLAN - Elevated Deck

Table R507.5 Deck Joist spans  
 Table R507.6 Deck Beam spans for beams supporting deck joists from one side only.  
 Table WAC R301.5 Balconies (exterior) and decks live load 60 psf (see section R507.1 for decks attached to exterior walls. Dead load 10 psf.

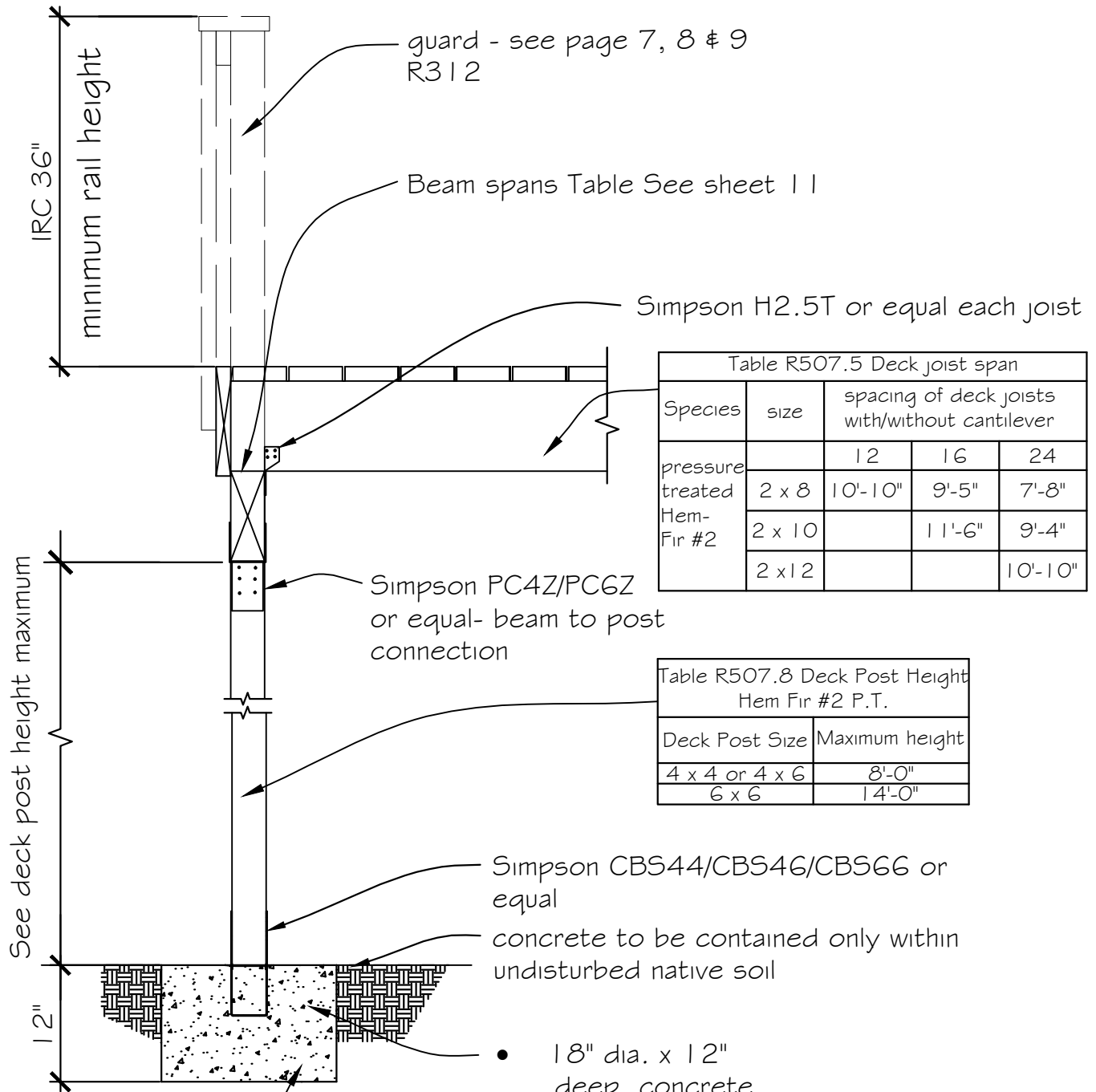


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Species	size	spacing of deck joists with/without cantilever		
		12	16	24
pressure treated Hem-Fir #2	2 x 8	10'-10"	9'-5"	7'-8"
	2 x 10		11'-6"	9'-4"
	2 x 12			10'-10"

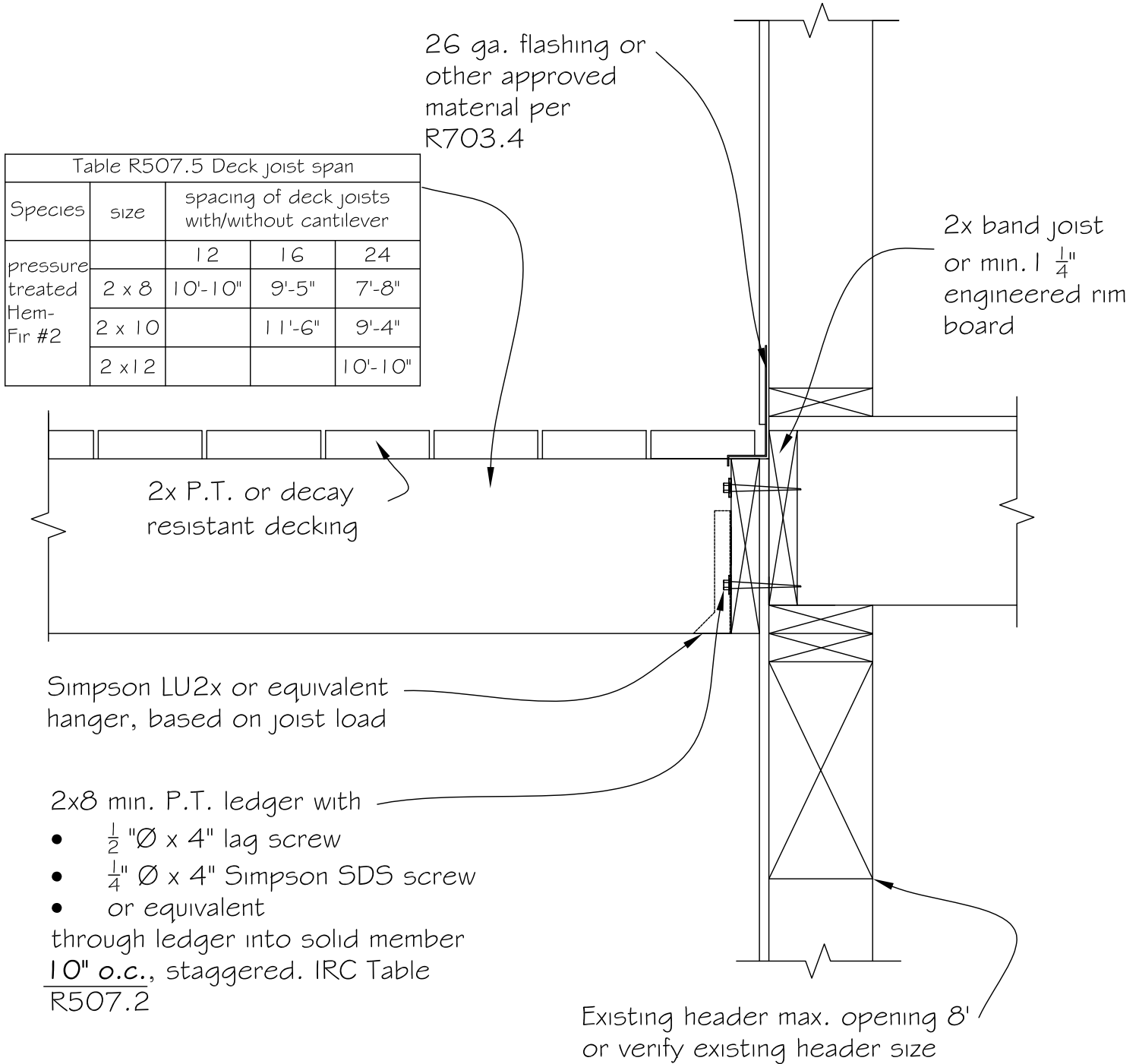
Deck Post Size	Maximum height
4 x 4 or 4 x 6	8'-0"
6 x 6	14'-0"

- 18" dia. x 12" deep concrete footing for the outer post
- 21" dia. x 12" deep concrete footing for the middle post

2500 psi concrete

2 SECTION

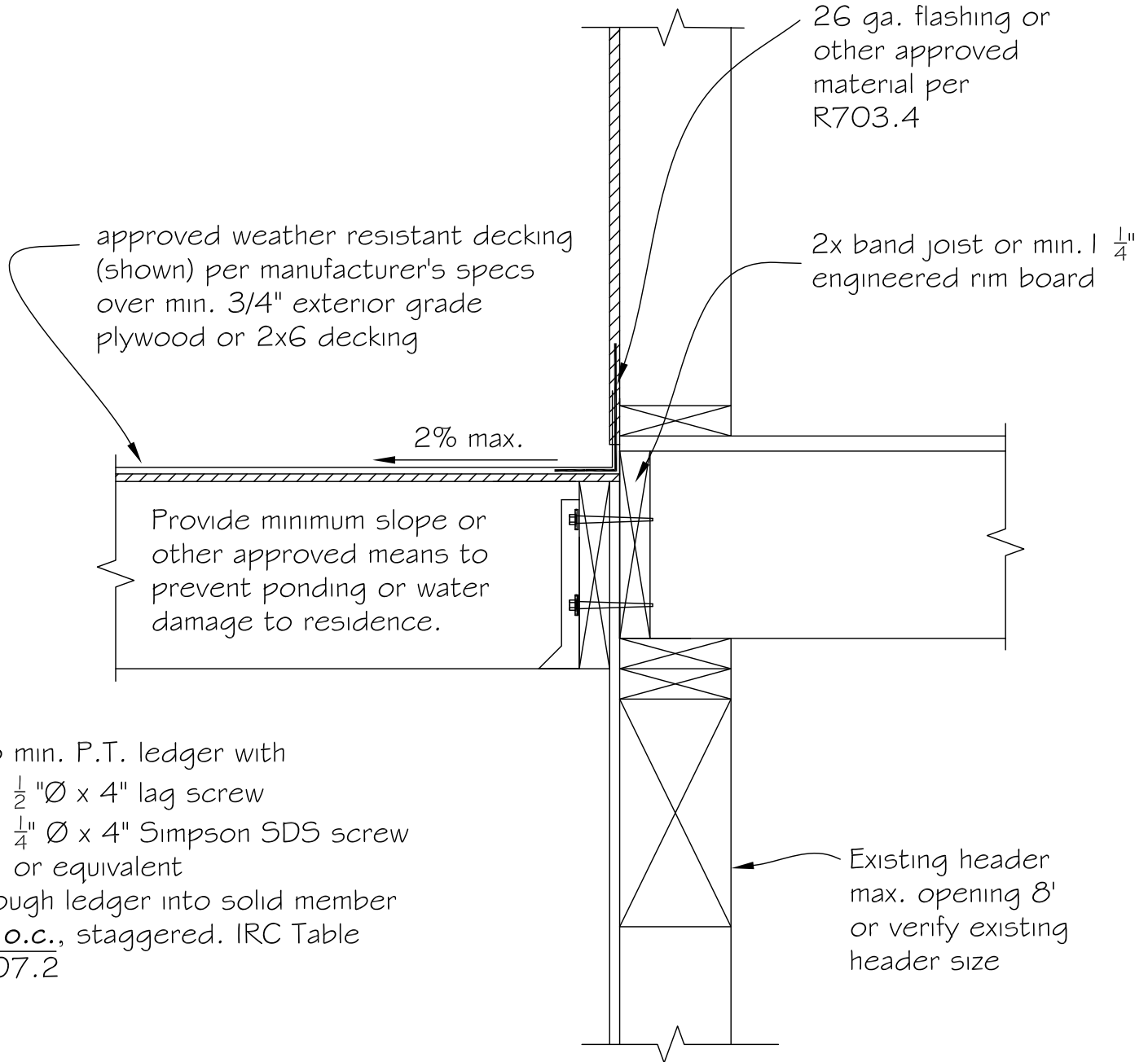
NOTE: All exposed lumber to be pressure treated (P.T.) or decay resistant.  
Fasteners for P.T. wood shall be hot-dipped galvanized or stainless steel



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TYPICAL LEDGER CONNECTION

NOTE: All exposed lumber to be pressure treated (P.T.) or decay resistant.  
Fasteners for P.T. wood shall be hot-dipped galv. or stainless steel

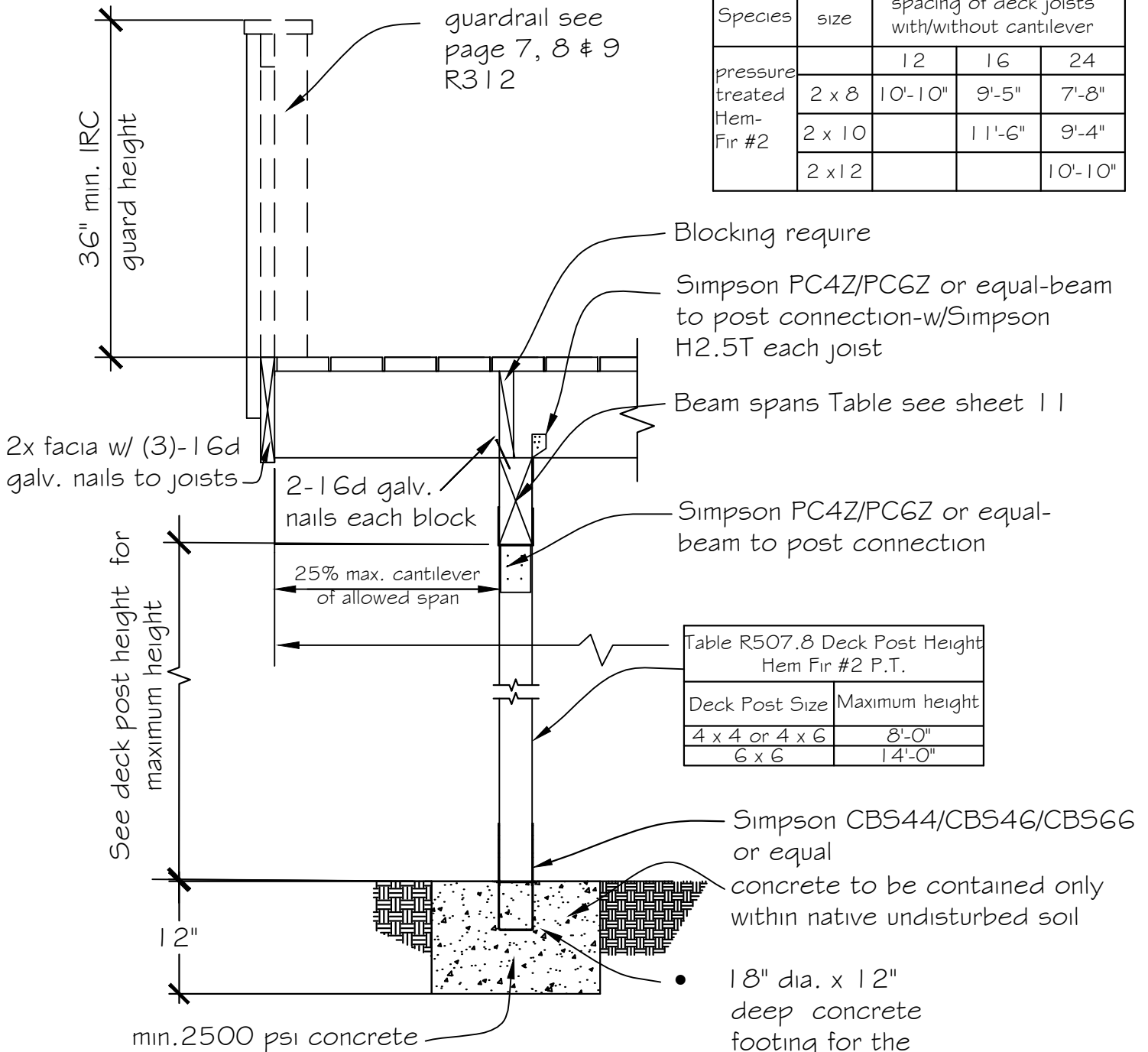


4

## TYPICAL LEDGER CONNECTION

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 Fasteners for P.T. wood shall be hot-dipped galv. or stainless steel

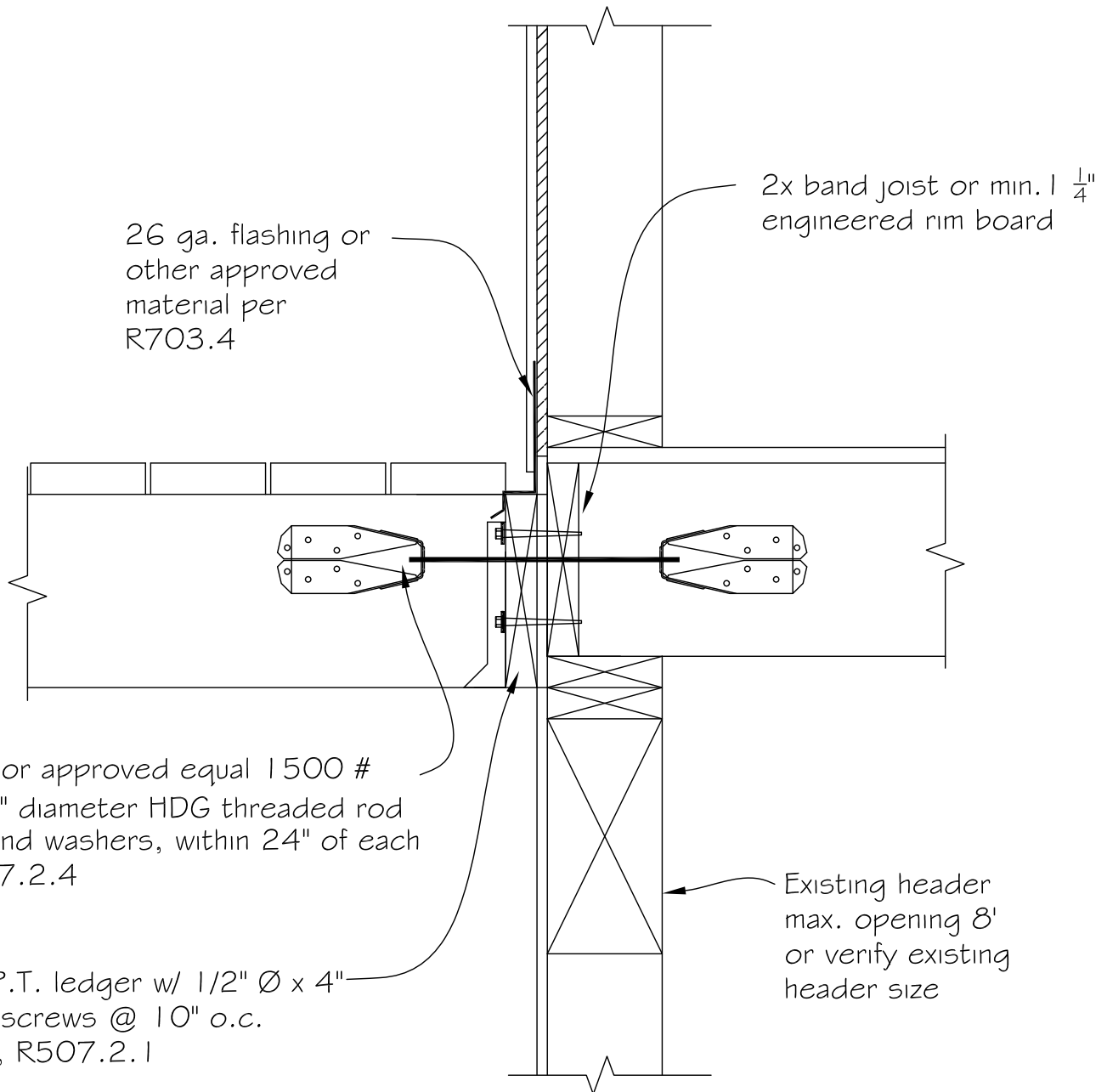
Species	size	spacing of deck joists with/without cantilever		
		12	16	24
pressure treated	2 x 8	10'-10"	9'-5"	7'-8"
	2 x 10		11'-6"	9'-4"
	2 x 12			10'-10"



Deck Post Size	Maximum height
4 x 4 or 4 x 6	8'-0"
6 x 6	14'-0"

**5** SECTION  
 Cantilever Deck

- Simpson CBS44/CBS46/CBS66 or equal concrete to be contained only within native undisturbed soil
- 18" dia. x 12" deep concrete footing for the outer post
- 21" dia. x 12" deep concrete footing for the middle post



NOTES:

1. All exposed lumber to be pressure treated (P.T.) or decay resistant. Fasteners for P.T. wood shall be hot-dipped galvanize or stainless steel.
2. All hardware to be installed per manufacturer specifications.

6A

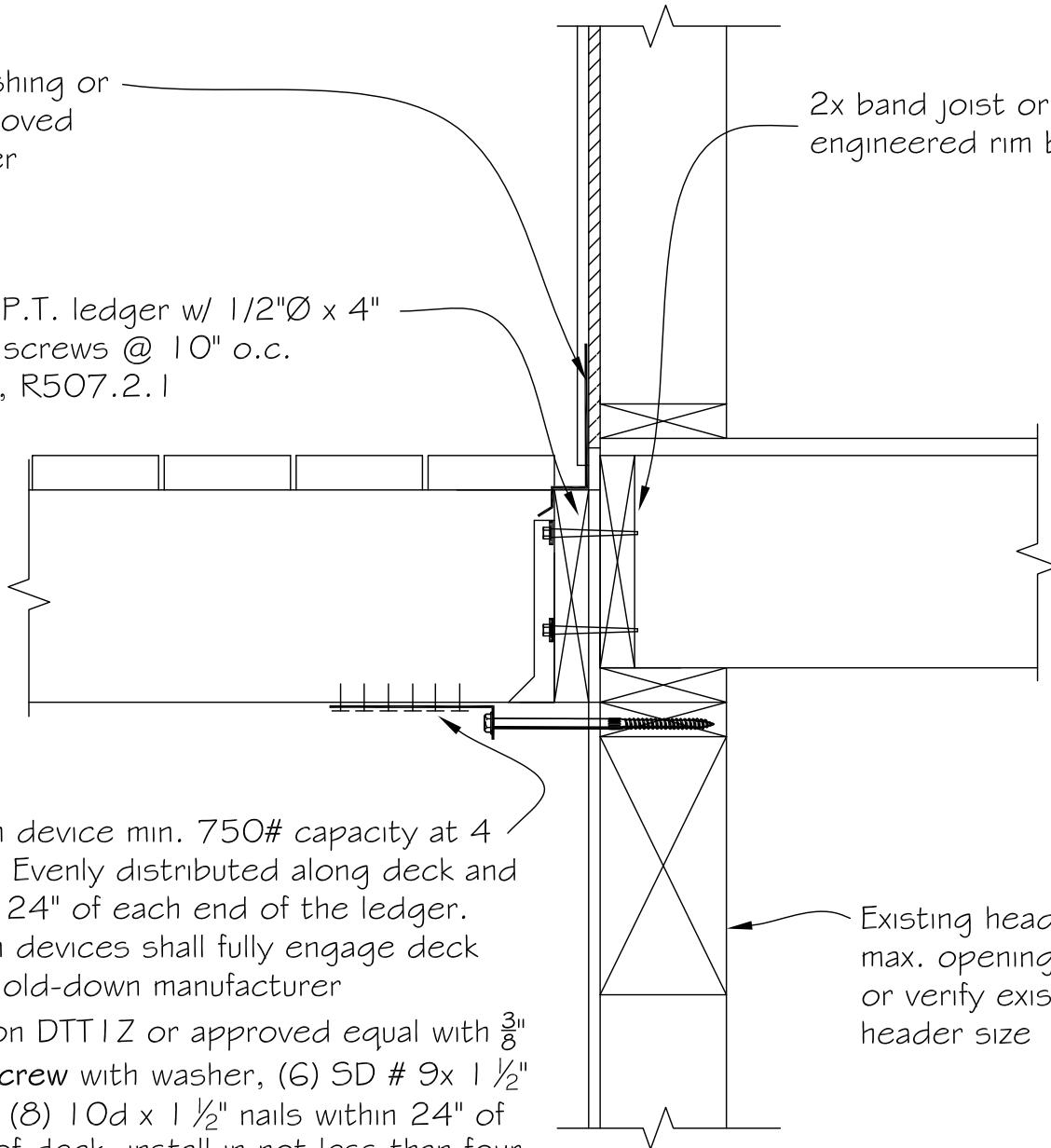
DECK ATTACHMENT FOR LATERAL LOADS

for (2) 1500# connectors

26 ga. flashing or  
other approved  
material per  
R703.4

2 x 8 min. P.T. ledger w/ 1/2"Ø x 4"  
long (min.) screws @ 10" o.c.  
staggered, R507.2.1

2x band joist or min. 1 1/4"  
engineered rim board



Hold-down device min. 750# capacity at 4  
locations. Evenly distributed along deck and  
one within 24" of each end of the ledger.  
Hold-down devices shall fully engage deck  
joist per hold-down manufacturer

(4) Simpson DTT1Z or approved equal with 3/8"  
HDG lag screw with washer, (6) SD # 9 x 1 1/2"  
screws Or (8) 10d x 1 1/2" nails within 24" of  
each end of deck, install in not less than four  
locations. R507.2.4.

Existing header  
max. opening 8'  
or verify existing  
header size

#### NOTES:

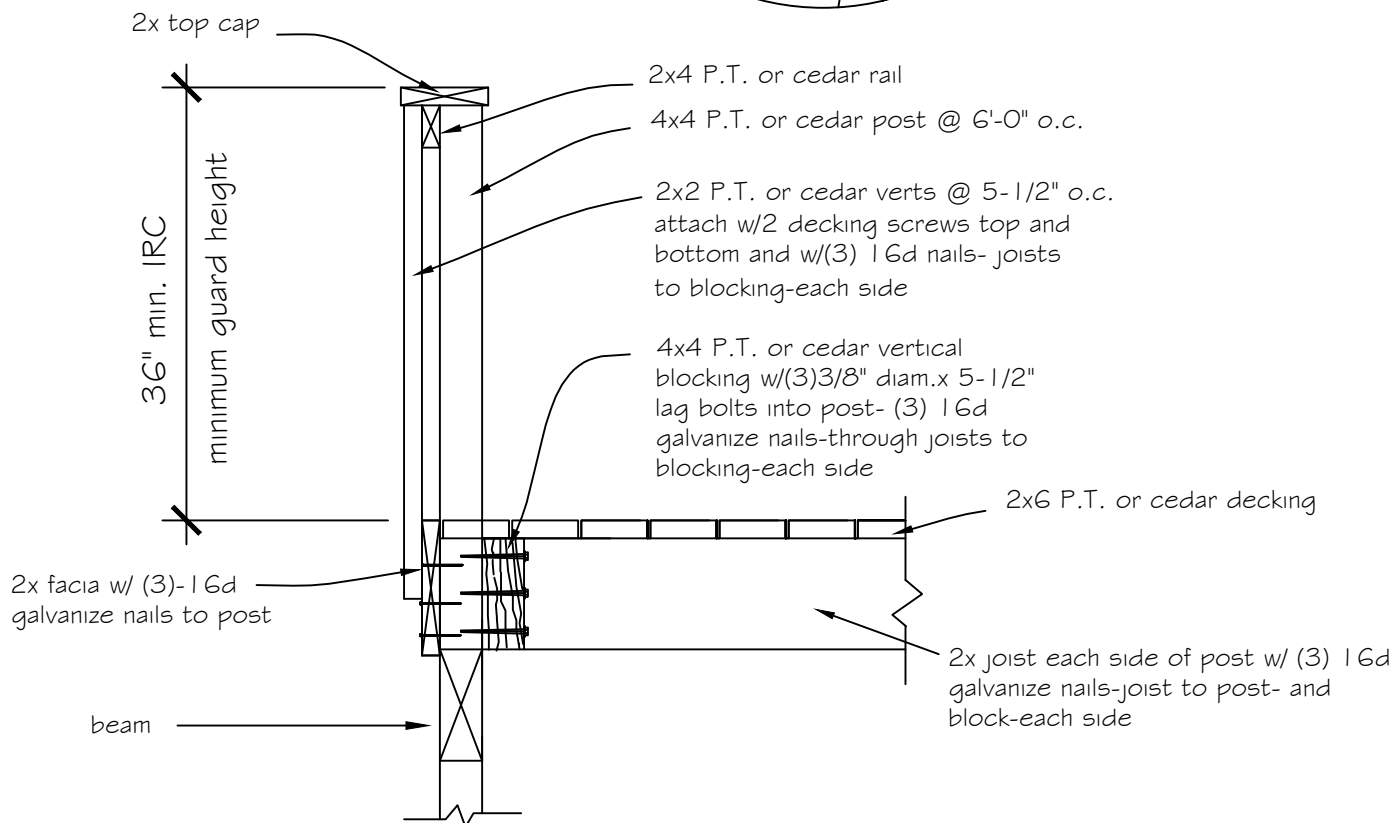
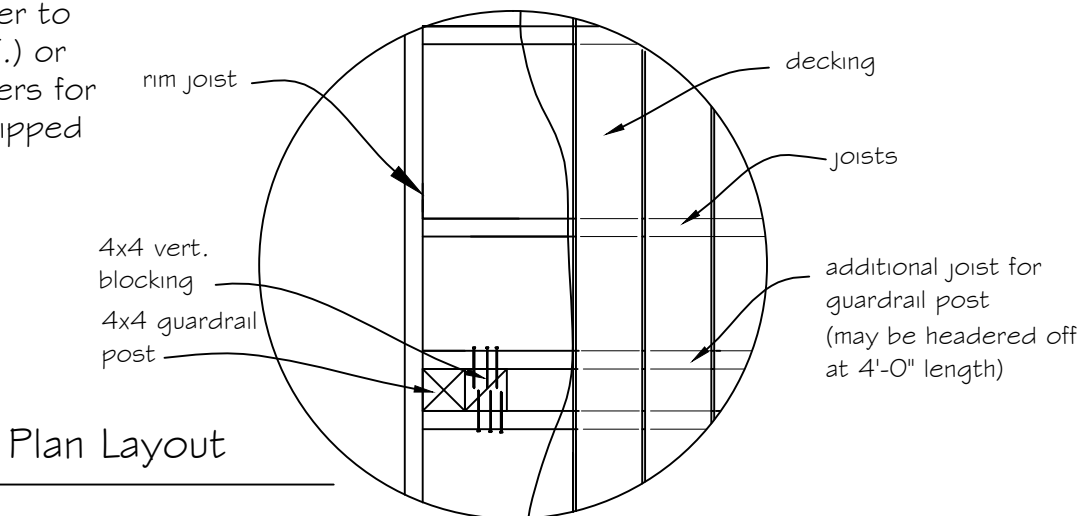
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2. All hardware to be installed per manufacturer specifications.

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DECK ATTACHMENT FOR LATERAL LOADS

for (4) 750# connectors

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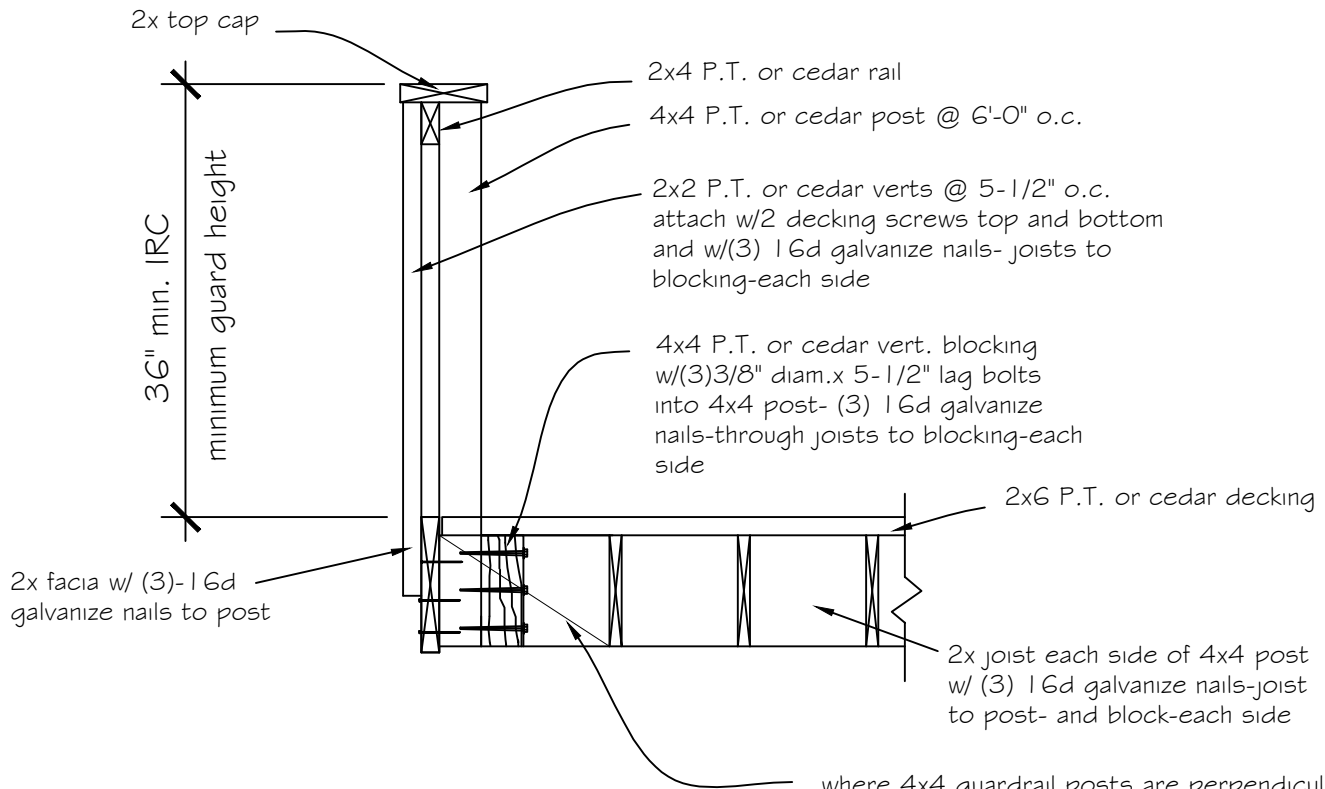
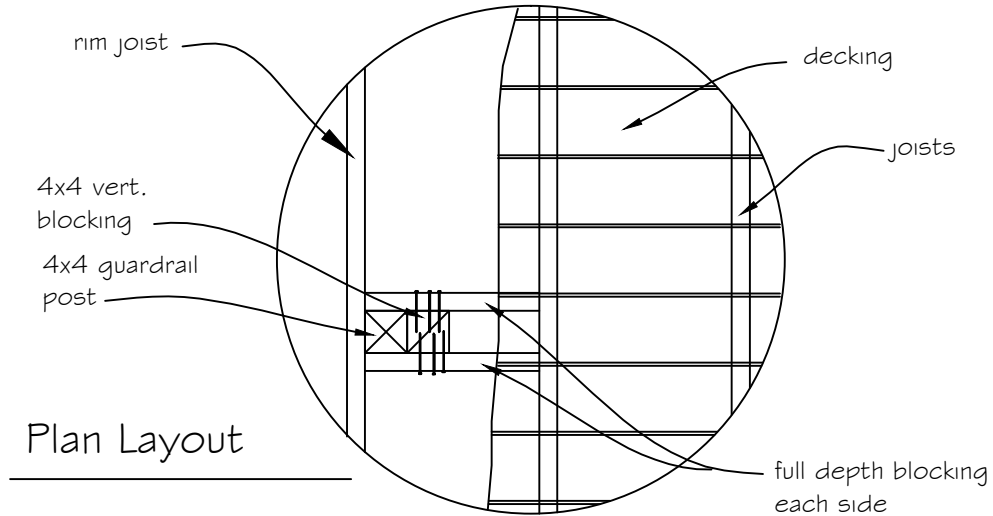
## 7 SECTION THROUGH GUARDRAIL

### Non-Cantilever

NOTE: See Sheets 1 through 5 for items not noted.  
See page 5 for cantilever deck



NOTE: All exposed  
lumber to be  
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or stainless steel



Section- Guardrail post parallel to joists

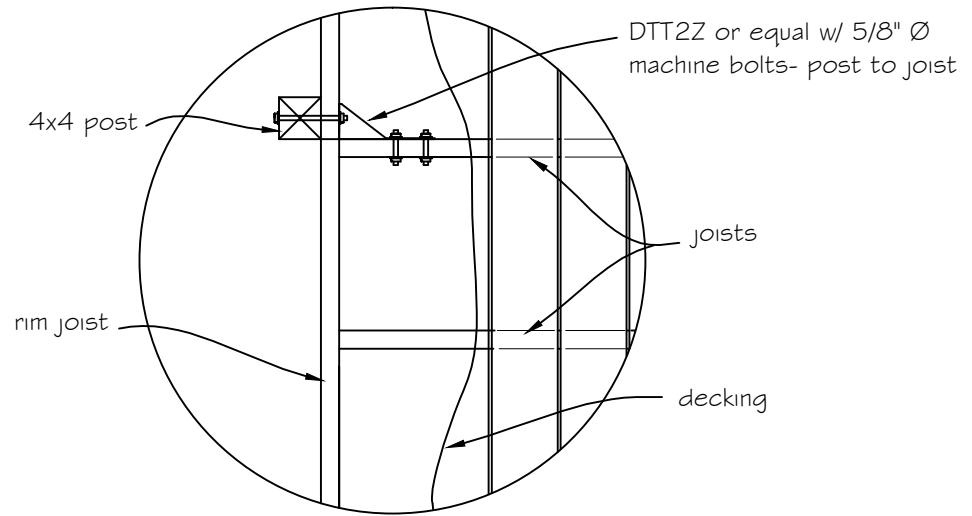
where 4x4 guardrail posts are perpendicular to joists, use 2x solid blocking each side of 4x4 vert. block and 4x4 guardrail post and nail to joists and 4x4's w/ (3) 16d

## 8 SECTION THROUGH GUARDRAIL

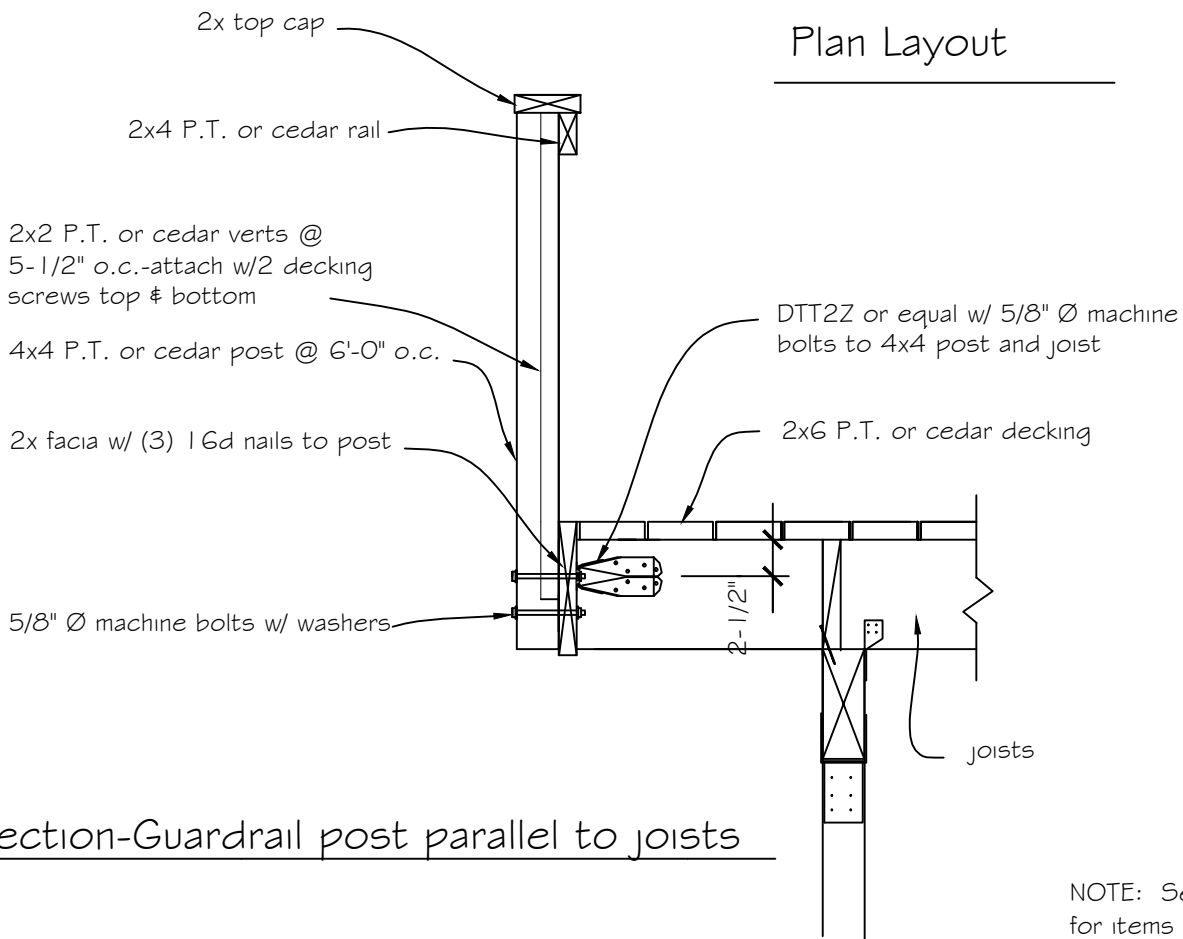
### Non-Cantilever

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P.T. wood shall be  
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stainless steel



Plan Layout



Section-Guardrail post parallel to joists

NOTE: See page 5  
for items not noted.

## 9 GUARDRAIL ATTACHMENT

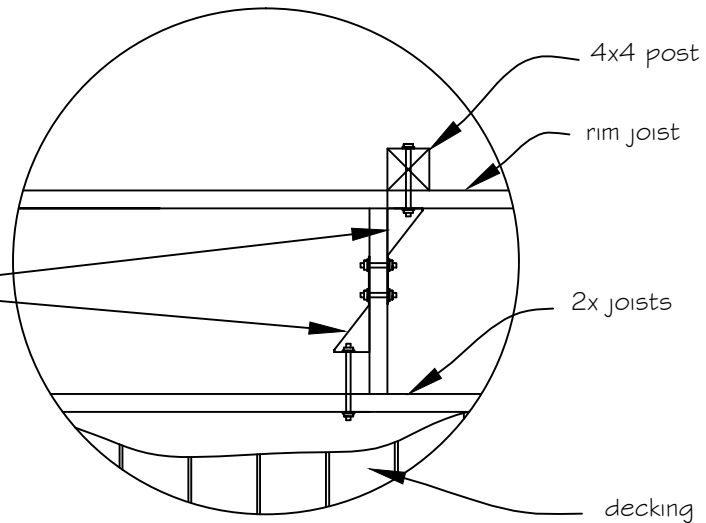
### Cantilever

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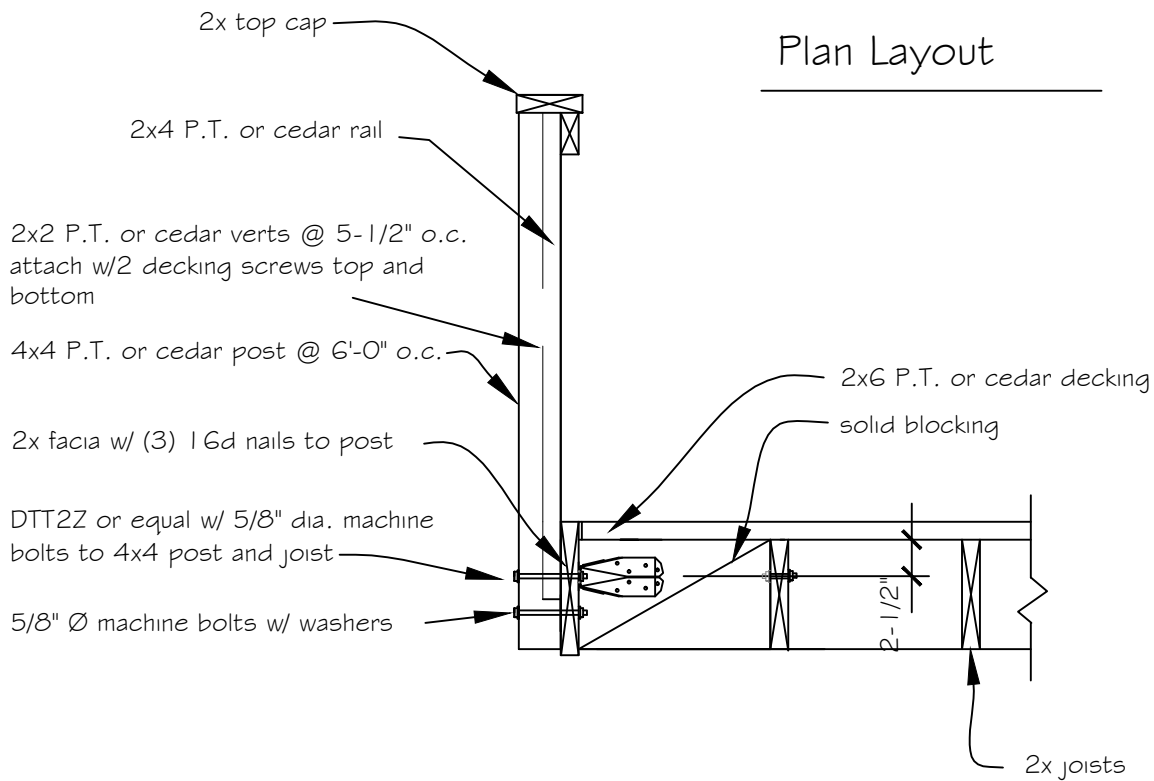
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(2) DTT2Z or equal w/ 5/8" Ø. machine bolts- post to joist and joist to solid blocking



Plan Layout



Section- Guardrail post perpendicular to joists

NOTE: See page 5  
for items not noted.

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GUARDRAIL ATTACHMENT

Cantilever



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 Shaded area meets beam span

## Beams

Species	size	Joist Deck Span Less than or equal		
		8	10	12
H. F. #1	4 x 8			
H.F. #1	4 x 10			
H.F. #2	4 x 12			
H.F. #1	6 x 8			
H.F. #2	6 x 10			

Species	size	Joist Deck Span Less than or equal		
		6+2 cant	8+2 cant	10+2 cant
H.F. #1	4 x 10			
H.F. #2	4 x 10			
H.F. #2	4 x 12			
H.F.#1	6 x 8			
H.F #1	6 x 10			
H.F #2	6 x 10			

Species	size	Joist Deck Span Less than or equal		
		8	10	12
H.F. #1	4 x 10			
H.F. #2	4 x 12			
H.F. #1	6 x 10			
H.F. #2	6 x 10			
H.F. #2	6 x 12			

Species	size	Joist Deck Span Less than or equal		
		6+2 cant	8+2 cant	10+2 cant
H.F. #1	6 x 10			
H.F. #1	6 x 12			
H.F. #2	6 x 12			

## Joist

Species	size	spacing of deck joists with/without cantilever		
		12	16	24
pressure treated				
Hem-Fir #2	2 x 8	10'-10"	9'-5"	7'-8"
	2 x 10		11'-6"	9'-4"
	2 x 12			10'-10"

## Post

Deck Post Size	Maximum height
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