

GENERAL NOTES

SCOPE

SINGLE-LEVEL EXTERIOR WOOD-FRAMED DECKS ATTACHED TO AN EXTERIOR WALL OF A BUILDING REGULATED BY THE OREGON RESIDENTIAL SPECIALTY CODE.

PERMIT APPLICATION

THE PERMIT APPLICANT SHALL REFERENCE THE PRESCRIBED DETAILS AND TABLES CONTAINED HEREIN TO DEVELOP AND RECORD THEIR PROJECT SPECIFIC DECK DESIGN PARAMETERS ([X]) ON **SHEET S28** PRIOR TO PERMIT APPLICATION. THE PERMIT APPLICANT IS RESPONSIBLE FOR PRODUCING AND ATTACHING A SITE PLAN IN ACCORDANCE WITH THE LOCAL MUNICIPALITY'S SUBMISSION REQUIREMENTS. EXTERIOR DECKS WHERE THE WALKING SURFACE IS NOT MORE THAN 30 INCHES ABOVE ADJACENT GRADE MEASURED AT ANY POINT WITHIN 3 FEET HORIZONTALLY OF THE WALKING SURFACE ARE EXEMPT FROM PERMIT [R105.2].

APPLICABLE BUILDING CODE

2023 OREGON RESIDENTIAL SPECIALTY CODE (ORSC).

LIMITATIONS OF USE

USE OF AND ANY MODIFICATIONS TO THIS PERMIT-READY PLAN IS SUBJECT TO REVIEW AND APPROVAL BY THE LOCAL MUNICIPALITY.

- SINGLE-SPAN DECK JOISTS WITH OR WITHOUT A CANTILEVER
- BASIC DESIGN WIND SPEED: ≤ 120 MPH
- WIND EXPOSURE CATEGORY: B, C, OR D
- SEISMIC DESIGN CATEGORY: B, C, D₀, D₁, D₂, OR E RECLASSIFIED TO D₂
- DECK DEAD LOAD: ≤ 10 PSF
- DECK LIVE LOAD: ≤ 40 PSF
- GROUND SNOW LOAD: ≤ 70 PSF
- NOT SUPPORTING FINISH MATERIALS, SUCH AS CONCRETE, TILE, ETC., ON TOP OF THE DECKING.
- NOT SUPPORTING LARGE CONCENTRATED LOADS SUCH AS HOT TUBS, ETC.
- WHERE PROPOSED CONSTRUCTION IS IN A FLOOD HAZARD AREA, AS ESTABLISHED BY THE LOCAL FLOODPLAIN ADMINISTRATOR, THE PERMIT APPLICANT IS RESPONSIBLE FOR MODIFYING THESE PLANS AS NECESSARY FOR COMPLIANCE WITH ORSC SECTIONS R301.2.4 AND R322.
- WHERE PROPOSED CONSTRUCTION IS IN AN AREA SUBJECT TO WILDFIRE HAZARD MITIGATION, THE PERMIT APPLICANT IS RESPONSIBLE FOR MODIFYING THESE PLANS AS NECESSARY FOR COMPLIANCE WITH ORSC SECTION R327.

LEGEND

[X] = PROJECT SPECIFIC DECK COMPONENT DESIGN PARAMETER TO BE PROVIDED BY THE PERMIT APPLICANT ON **SHEET S28**

[R###.#] = ORSC SECTION REFERENCE

APPROVED = ACCEPTABLE TO THE BUILDING OFFICIAL [R202]

ORSC = OREGON RESIDENTIAL SPECIALTY CODE

MIN = MINIMUM

MAX = MAXIMUM

TYP = TYPICAL

MFR = MANUFACTURER

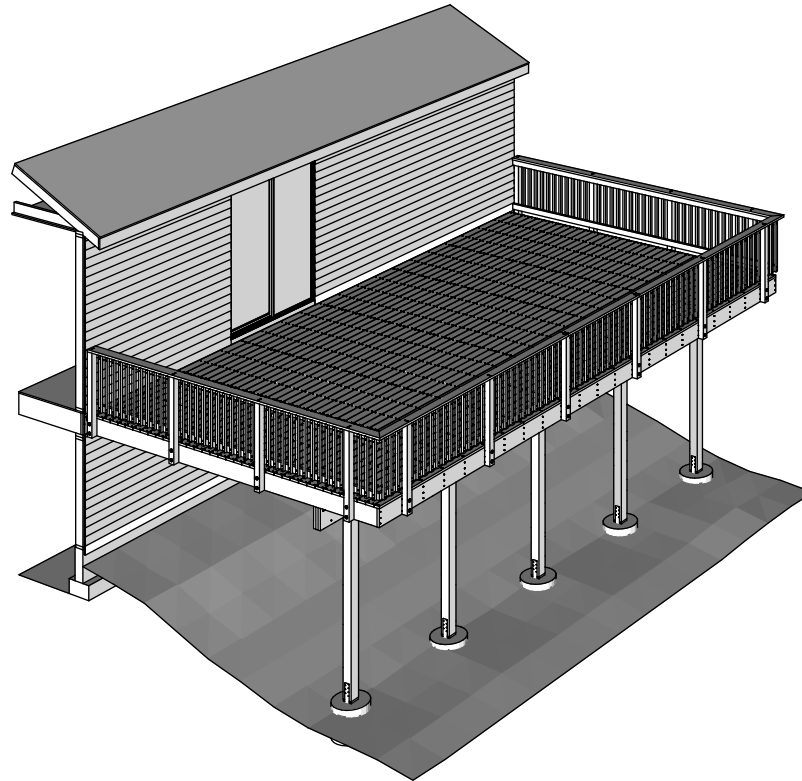
#/S# = DETAIL NUMBER ON SHEET NUMBER

FOUNDATION

FOOTINGS SHALL BEAR ON NATIVE, INORGANIC, UNDISTURBED SOIL BELOW EXISTING GRADE. CONCRETE STRENGTH SHALL BE 3,000 PSI MIN IN MODERATE WEATHERING REGIONS AND 3,500 PSI MIN IN SEVERE WEATHERING REGIONS (SEE SHEET S28) [R301.2 AND R402.2].

WOOD FRAMING, FASTENERS AND CONNECTORS

ALL WOOD SHALL BE IDENTIFIED BY A GRADE MARK OF AN ACCREDITED LUMBER GRADING OR INSPECTION AGENCY AND BE NATURALLY DURABLE OR PRESSURE-PRESERVATIVE-TREATED UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL (R317.1). ALL WOOD IN CONTACT WITH THE GROUND, OR EMBEDDED IN CONCRETE SHALL BE APPROVED PRESSURE-PRESERVATIVE-TREATED WOOD SUITABLE FOR GROUND CONTACT USE (R317.1.2). ANY FIELD CUTS OF PRESSURE-PRESERVATIVE-TREATED WOOD SHALL BE TREATED WITH COPPER NAPHTHENATE (2% COPPER) [R317.1.1]. ALL FASTENERS, ANCHORS, AND CONNECTORS SHALL BE EXTERIOR RATED AND APPROVED FOR STRUCTURAL USE (SEE DETAIL 2/S16 FOR SPECIFICATIONS). MANUFACTURER'S (MFR'S) INSTRUCTIONS FOR APPROVED PROPRIETARY PRODUCTS SHALL BE AVAILABLE ON THE JOB SITE AT THE TIME OF INSPECTION [R106.1.2].



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS

NO.	DATE

General Notes
Sheet

S1



Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

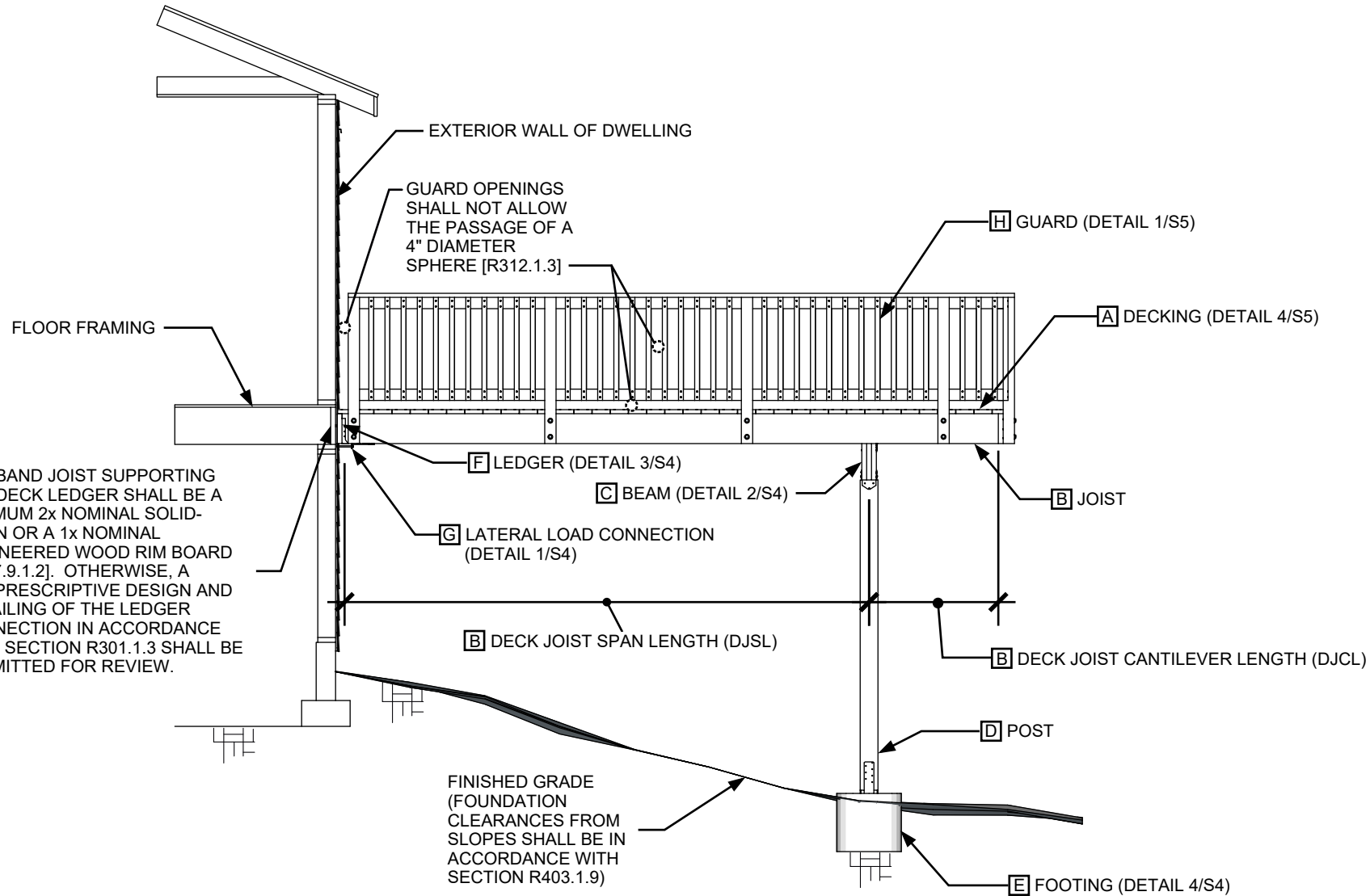
2023 ORSC

REVISIONS

NO.	DATE

Side Elevation
Sheet

S2





PERMIT-READY PLAN

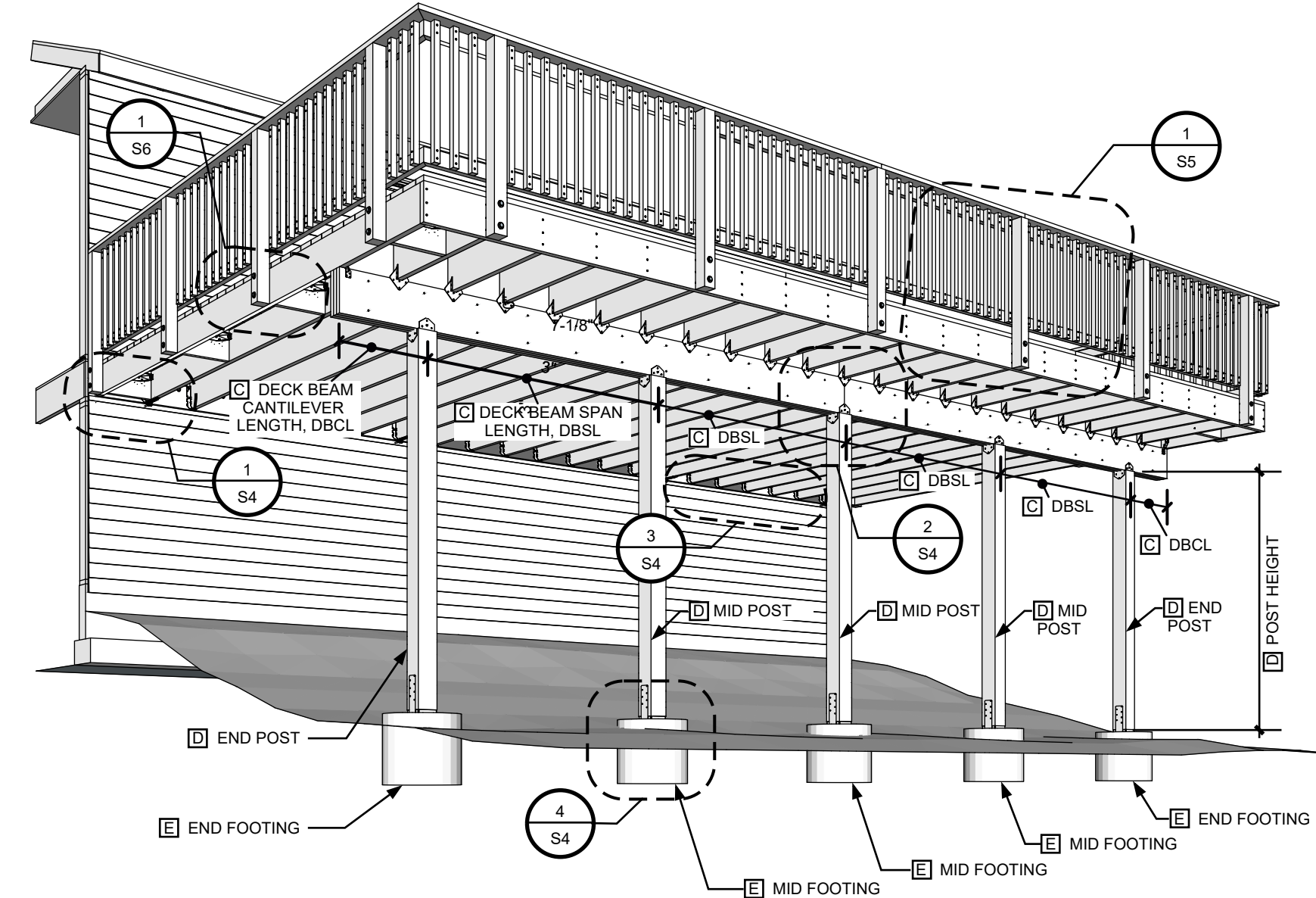
EXTERIOR DECK

2023 ORSC

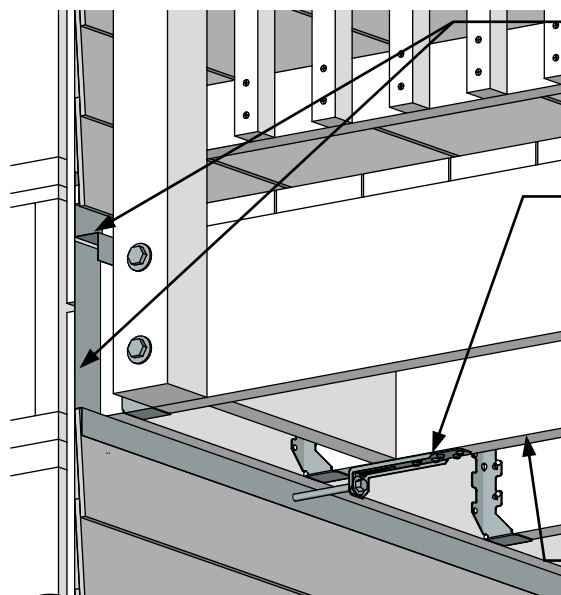
REVISIONS
NO. DATE

Perspective
Sheet

S3



1 Deck Perspective
S3 NTS



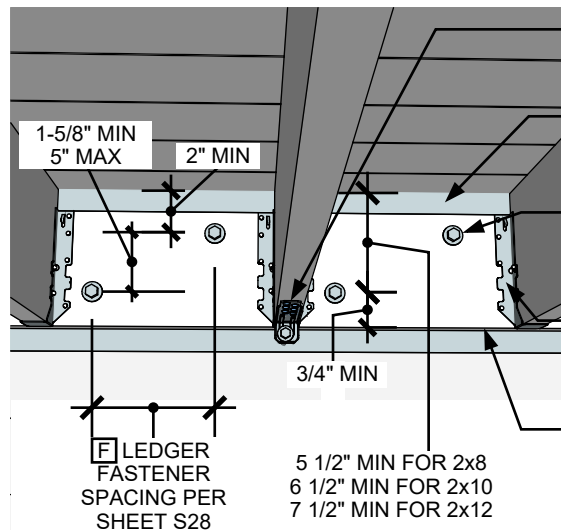
APPROVED CORROSION-RESISTANT FLASHING INSTALLED IN SHINGLE-FASHION FOR WATER TIGHTNESS WHERE DECK MEETS EXTERIOR WALL [R507.2.4 AND R703.4]

G HOLD-DOWN DEVICE WITH MIN 750 LB. CAPACITY AT FOUR LOCATIONS, EVENLY DISTRIBUTED ALONG DECK AND ONE WITHIN 24" OF EACH END OF THE LEDGER. DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS [R507.9.2]. SEE DETAIL 2/S6 FOR ALTERNATE CONNECTION

B DECK JOIST PER SHEET S28

1 Lateral load connection [R507.9.2]

S4 NTS



G LATERAL LOAD CONNECTION PER DETAIL 1/S4 OR 2/S6

FLASHING BETWEEN DECK AND EXTERIOR WALL PER DETAIL 1/S4

F DECK LEDGER FASTENING PER SHEET S28, STAGGERED AS SHOWN

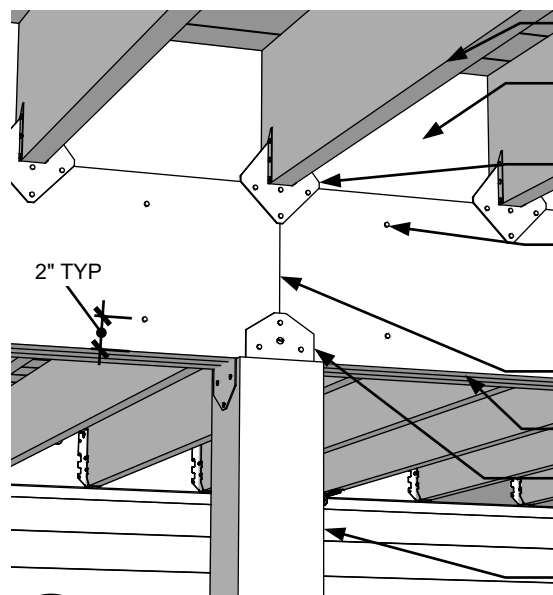
APPROVED JOIST HANGER WITH DEPTH NOT LESS THAN 60% OF JOIST DEPTH [R507.6.1 AND R507.6.2]

F DECK LEDGER PER SHEET S28 (2x8 MIN AND EQUAL TO OR GREATER THAN THE DECK JOIST DEPTH)

NOTE: LEDGER FASTENERS SHALL BE PLACED A MINIMUM OF TWO INCHES FROM ENDS OF LEDGER MEMBERS .

3 Ledger connection [R507.9.1.1 and R507.9.1.3]

S4 NTS



B DECK JOIST PER SHEET S28, TYP

2X BLOCKING EACH CANTILEVER JOIST BAY OVER BEAM [R507.6.2]

APPROVED JOIST TO BEAM CONNECTION [R507.6.1]

EACH BEAM PLY SHALL BE FASTENED WITH (2) ROWS OF 10D NAILS MIN AT 16" O.C. ALONG EACH EDGE [R507.6]

BEAM SPLICES SHALL OCCUR OVER POSTS

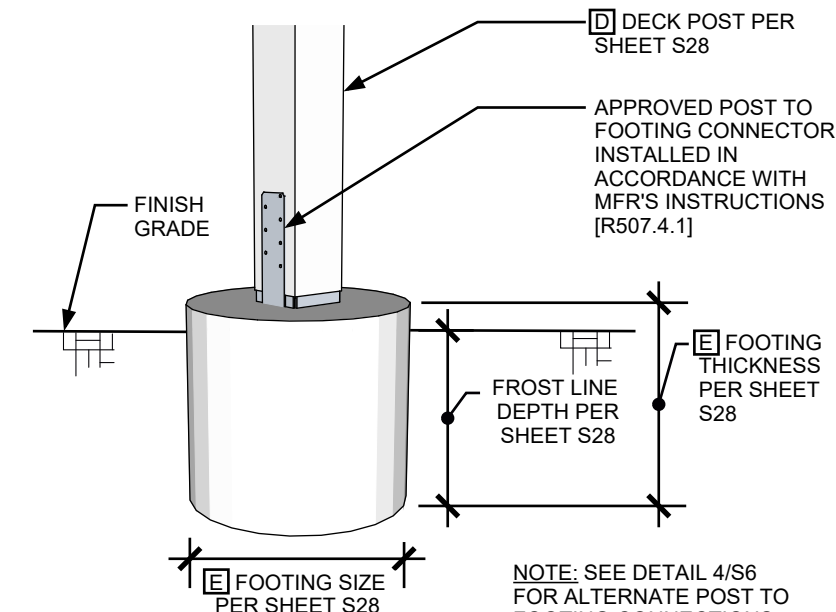
C DECK BEAM PER SHEET S28

APPROVED BEAM TO POST CONNECTOR [R507.5.2]; SEE DETAIL 3/S6 FOR ALTERNATE

D DECK POST PER SHEET S28

2 Joist to beam and beam to post connection [R507.6 and R507.5]

S4 NTS



D DECK POST PER SHEET S28

APPROVED POST TO FOOTING CONNECTOR INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS [R507.4.1]

E FOOTING THICKNESS PER SHEET S28

FROST LINE DEPTH PER SHEET S28

NOTE: SEE DETAIL 4/S6 FOR ALTERNATE POST TO FOOTING CONNECTIONS

E FOOTING SIZE PER SHEET S28

4 Post to footing connection [R507.3 and R507.4.1]

S4 NTS



BCD

Building Codes Division

Department of Consumer and Business Services

PERMIT-READY PLAN

EXTERIOR DECK

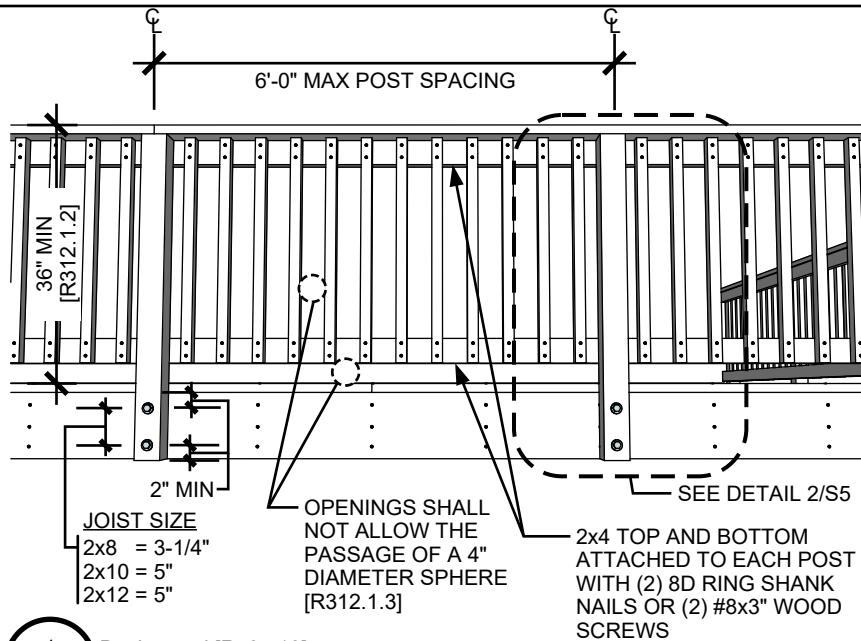
2023 ORSC

REVISIONS
NO. DATE

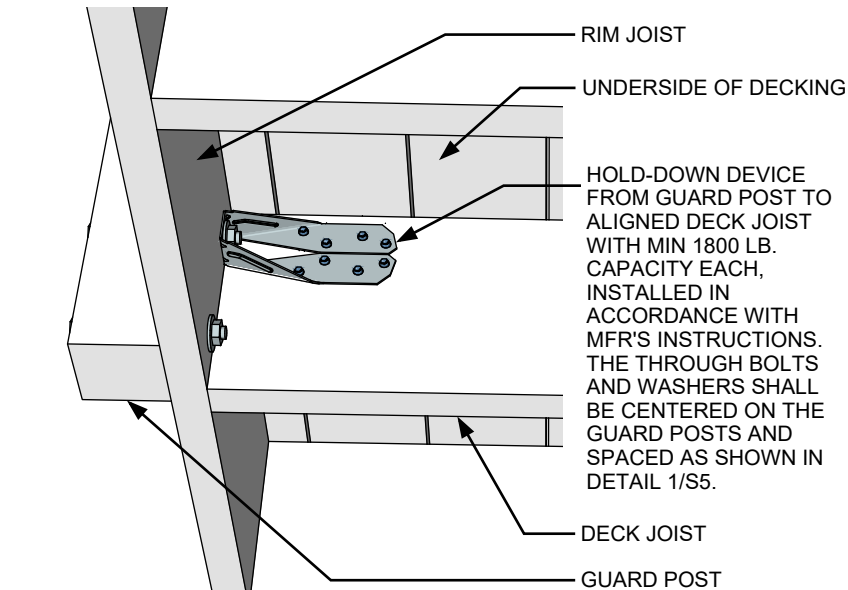
NO.	DATE

Details Sheet

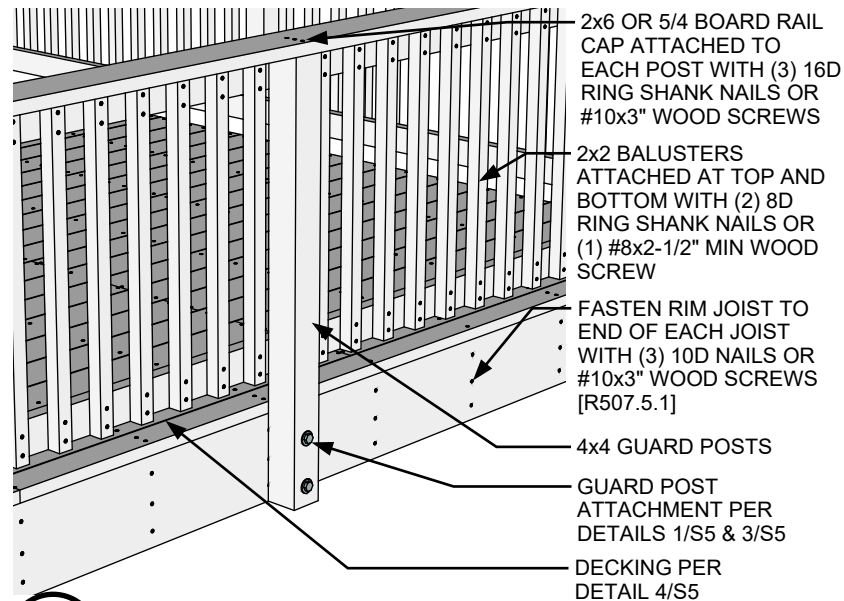
S4



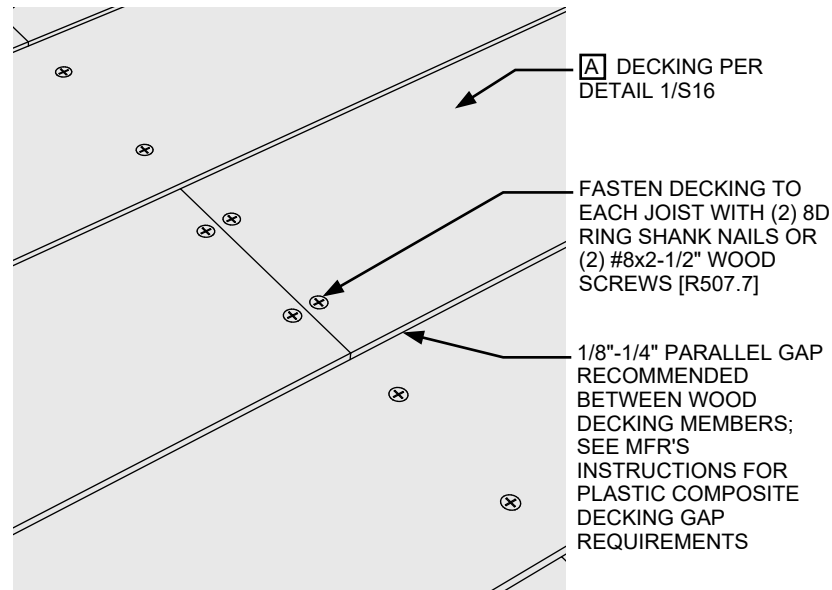
1 Deck guard [R507.10]
S5 NTS



3 Guard post to joist connection [R507.10]
S5 NTS



2 Deck guard [R507.10]
S5 NTS



4 Decking connection [R507.7]
S5 NTS



BCD

Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

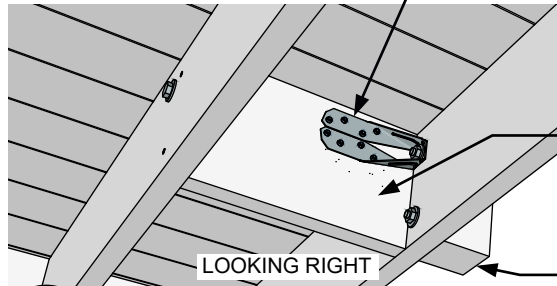
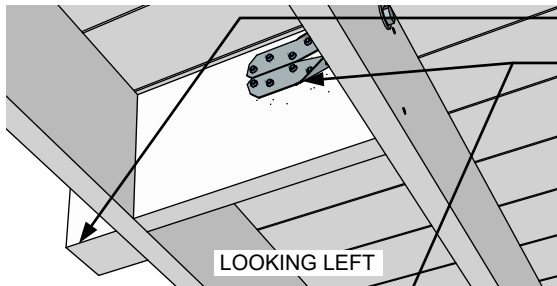
2023 ORSC

REVISIONS

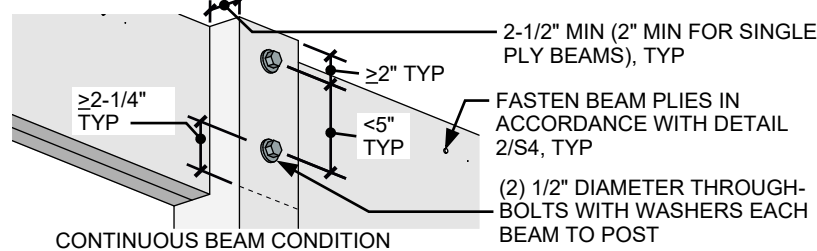
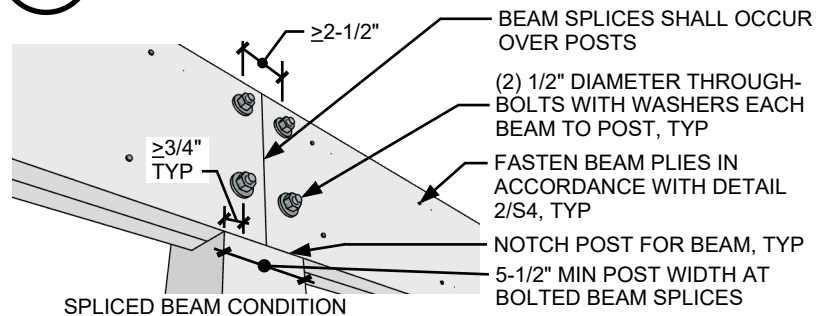
NO.	DATE

Details
Sheet

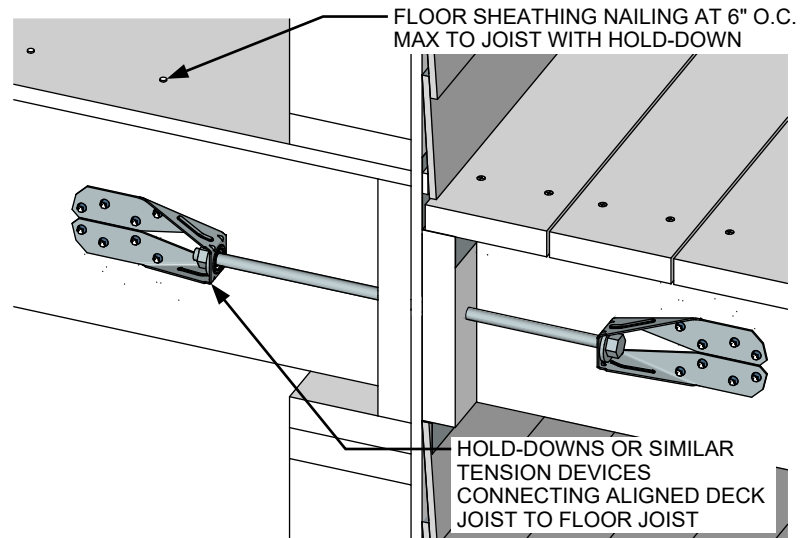
S5



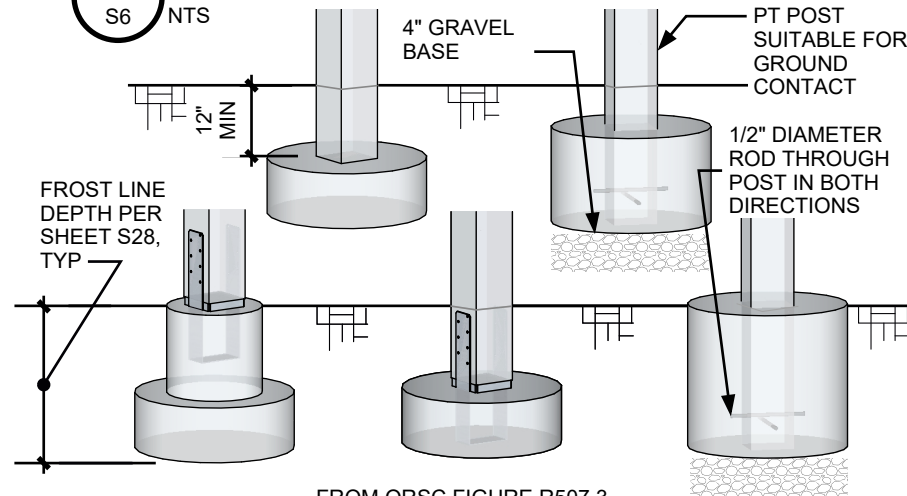
1 Guard post to blocking connection [R507.10]
S6 NTS



NOTE: ALL BOLTS SHALL HAVE WASHERS UNDER THE HEAD AND NUT.
3 Alternate beam to post connection [R507.5.2]
S6 NTS



NOTE: HOLD-DOWN TENSION DEVICES PER THIS DETAIL SHALL HAVE A 1,500 LB. MINIMUM DESIGN CAPACITY, BE INSTALLED IN NOT LESS THAN TWO LOCATIONS, AND BE WITHIN 24 INCHES OF EACH END OF DECK.
2 Alternate deck attachment for lateral loads [R507.9.2]
S6 NTS



NOTE: POSTS SHALL BE CENTERED ON OR IN FOOTING, AND RESTRAINED TO PREVENT LATERAL DISPLACEMENT AT THE BOTTOM OF SUPPORT. SUCH RESTRAINT SHALL BE PROVIDED BY APPROVED MANUFACTURED CONNECTORS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS OR A MINIMUM POST EMBEDMENT OF 12 INCHES IN SURROUNDING SOILS OR CONCRETE.
4 Alternate post to footing connections [R507.3 and R507.4.1]
S6 NTS



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS	
NO.	DATE

Details
Sheet

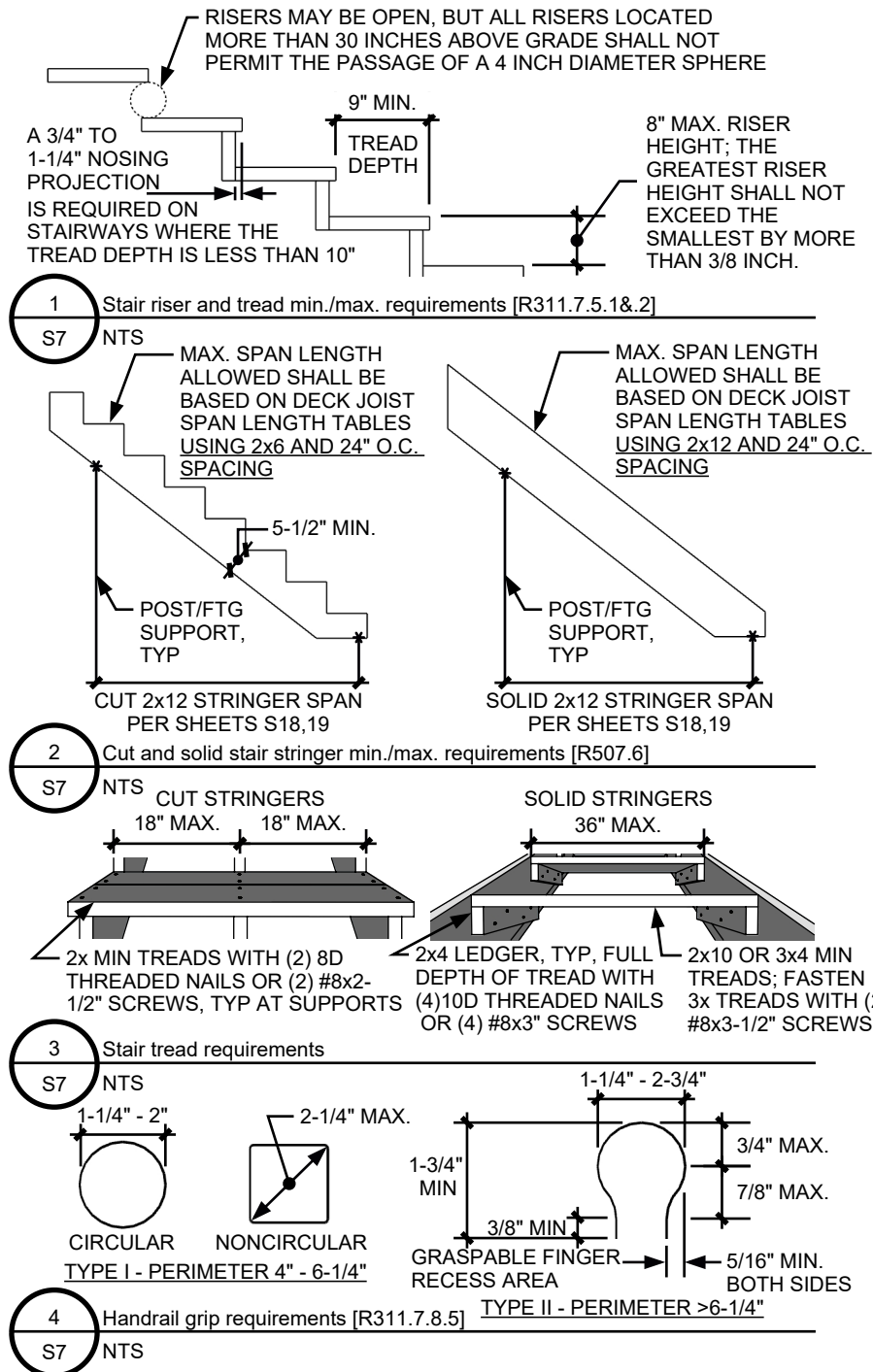
S6

STAIRWAY REQUIREMENTS [R311.7]

ALL STAIR ELEMENTS SHALL MEET THE REQUIREMENTS IN THIS PLAN EXCEPT WHERE OTHERWISE APPROVED BY THE LOCAL BUILDING OFFICIAL. ALL STAIRWAYS CONSTRUCTED IN ACCORDANCE WITH THIS PLAN SHALL BE SELF-SUPPORTING TO RESIST GRAVITY LOADS WITH THE USE OF POSTS AND FOOTINGS, AND POSITIVELY ANCHORED TO THE DECK TO RESIST LATERAL FORCES (ATTACHMENT SHALL NOT BE ACCOMPLISHED BY USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL) [R311.5]. ALL STRINGERS, CUT OR SOLID, SHALL BE A MINIMUM OF 2x12. STAIR STRINGERS SHALL NOT SPAN MORE THAN THE DIMENSIONS SHOWN ON THIS SHEET. IF THE STRINGER SPAN EXCEEDS THESE DIMENSIONS, THEN A 4x4 POST MAY BE PROVIDED TO SUPPORT THE STRINGER AND SHORTEN ITS SPAN LENGTH. THE 4x4 POST SHALL BE NOTCHED AND BOLTED TO THE STRINGER WITH (2) 1/2" DIAMETER THROUGH BOLTS WITH WASHERS. THE POST SHALL BE CENTERED ON A FOOTING THAT IS SIZED IN ACCORDANCE WITH THE TABLES ON SHEETS S22 AND S23. STAIRWAYS SHALL BE A MINIMUM OF 36 INCHES IN CLEAR WIDTH AT ALL POINTS ABOVE THE HANDRAIL HEIGHT; THE CLEAR WIDTH OF STAIRWAYS AT AND BELOW THE ACTUAL HANDRAIL HEIGHT SHALL NOT BE LESS THAN 31-1/2 INCHES WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES WHERE A HANDRAIL IS INSTALL ON BOTH SIDES [R311.7.1]. A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE GREATER THAN 12 FEET 7 INCHES BETWEEN THE TOP OF DECK AND FINISH GRADE (INTERMEDIATE LANDINGS ARE BEYOND THE SCOPE OF THIS PLAN AND WOULD REQUIRE LOCAL APPROVAL) [R311.7.3]. LANDINGS HAVING A MINIMUM DIMENSION OF 36 INCHES IN THE DIRECTION OF TRAVEL AND WIDTH PERPENDICULAR TO TRAVEL NOT LESS THAN THE WIDTH OF THE FLIGHT SERVED ARE REQUIRED AT THE TOP AND BOTTOM OF THE STAIRWAY [R311.7.6]. THE TOP LANDING OF STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE [R303.8]. APPROVED GUARDS COMPLYING WITH SECTION R301.5 AND R312 SHALL BE PROVIDED ON OPEN SIDES OF STAIRWAYS HAVING A TOTAL RISE OF 30 INCHES OR MORE [R312.1.1].

STAIRWAY HANDRAIL REQUIREMENTS [R311.7.8]

ALL STAIRWAYS WITH 4 OR MORE RISERS SHALL HAVE A HANDRAIL ON AT LEAST ONE SIDE [R311.7.8]. THE HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, SHALL NOT BE LESS THAN 30 INCHES (OR 34 INCHES WHERE INCORPORATED AS THE TOP OF A GUARD) AND NOT MORE THAN 38 INCHES [R311.7.8.1]. HANDRAILS SHALL NOT PROJECT MORE THAN 4-1/2 INCHES ON EITHER SIDE OF THE STAIRWAY [R311.7.8.2]. HANDRAILS ADJACENT TO A WALL OR GUARD SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2 INCHES BETWEEN THE WALL OR GUARD AND THE HANDRAIL [R311.7.8.3]. A HANDRAIL END SHALL BE RETURNED TO ITSELF OR TOWARD A WALL, GUARD OR WALKING SURFACE, OR SHALL TERMINATE TO A POST. HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE STAIRWAY, FROM A POINT DIRECTLY ABOVE THE TOP RISER TO A POINT DIRECTLY ABOVE THE LOWEST RISER, EXCEPT THAT A HANDRAIL RETURN OR STARTING EASING IS ALLOWED TO BEGIN/TERMINATE OVER THE LOWEST TREAD AND OVER THE TOP LANDING [R311.7.8.4]. REQUIRED HANDRAILS SHALL BE OF TYPE I OR TYPE II AS SHOWN IN DETAIL 4/S7 OR PROVIDE EQUIVALENT GRASPABILITY. EDGES OF HANDRAILS SHALL HAVE RADIUS OF NOT LESS THAN 0.01 INCH (NO SHARP CORNERS).



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

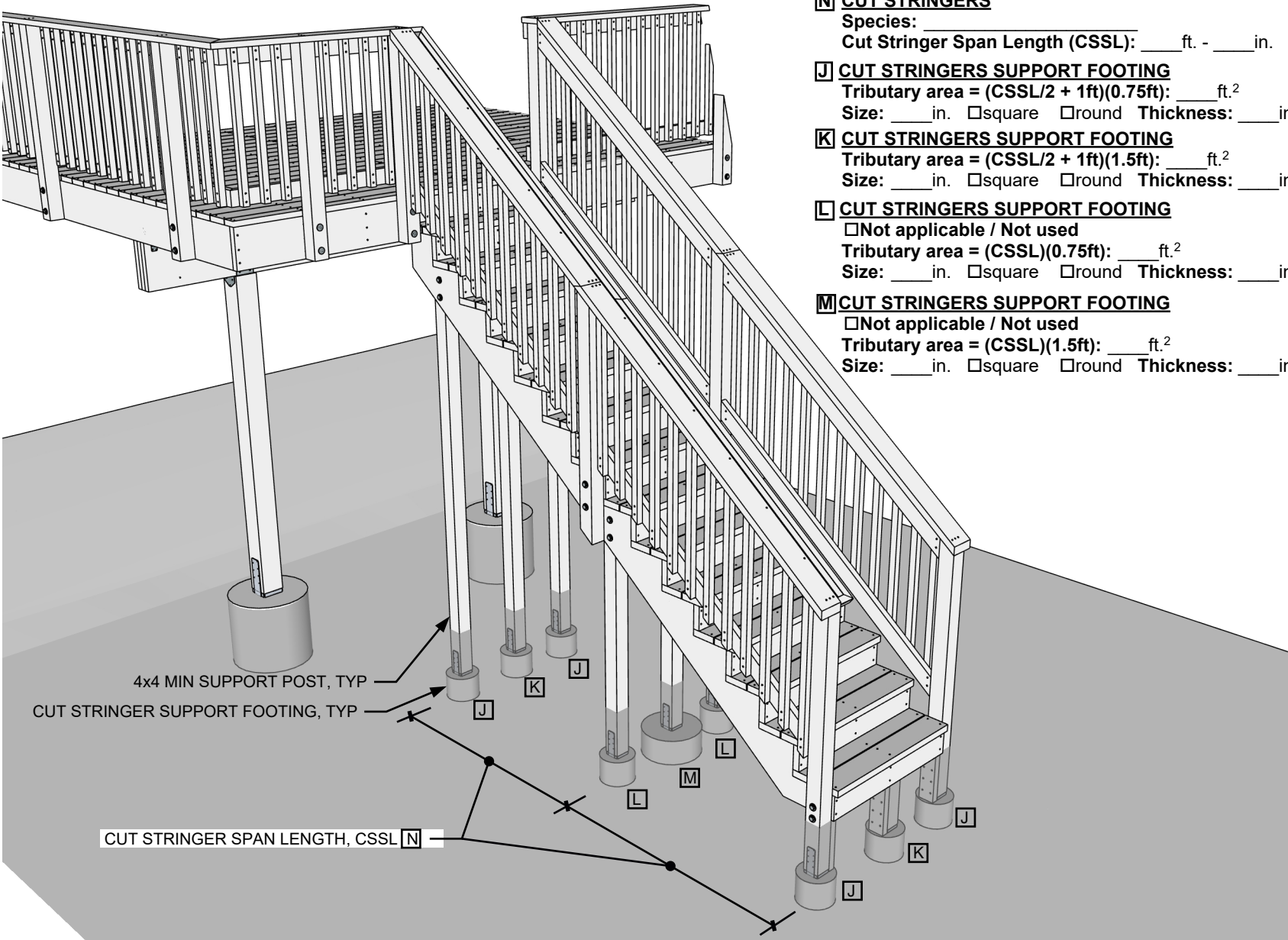
2023 ORSC

REVISIONS	
NO.	DATE

Stairways
Sheet

S7

WHERE USING SHEETS S8-S11 FOR CUT STRINGERS STAIRWAY CONSTRUCTION, THE PERMIT APPLICANT SHALL PROVIDE THEIR PROJECT-SPECIFIC CUT STRINGER AND FOOTING INFORMATION BELOW PRIOR TO PERMIT APPLICATION:



N CUT STRINGERS

Species: _____
Cut Stringer Span Length (CSSL): ____ ft. - ____ in.

J CUT STRINGERS SUPPORT FOOTING

Tributary area = $(\text{CSSL}/2 + 1\text{ft})(0.75\text{ft})$: ____ ft.²
Size: ____ in. ☐square ☐round Thickness: ____ in.

K CUT STRINGERS SUPPORT FOOTING

Tributary area = $(\text{CSSL}/2 + 1\text{ft})(1.5\text{ft})$: ____ ft.²
Size: ____ in. ☐square ☐round Thickness: ____ in.

L CUT STRINGERS SUPPORT FOOTING

☐Not applicable / Not used
Tributary area = $(\text{CSSL})(0.75\text{ft})$: ____ ft.²
Size: ____ in. ☐square ☐round Thickness: ____ in.

M CUT STRINGERS SUPPORT FOOTING

☐Not applicable / Not used
Tributary area = $(\text{CSSL})(1.5\text{ft})$: ____ ft.²
Size: ____ in. ☐square ☐round Thickness: ____ in.



Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

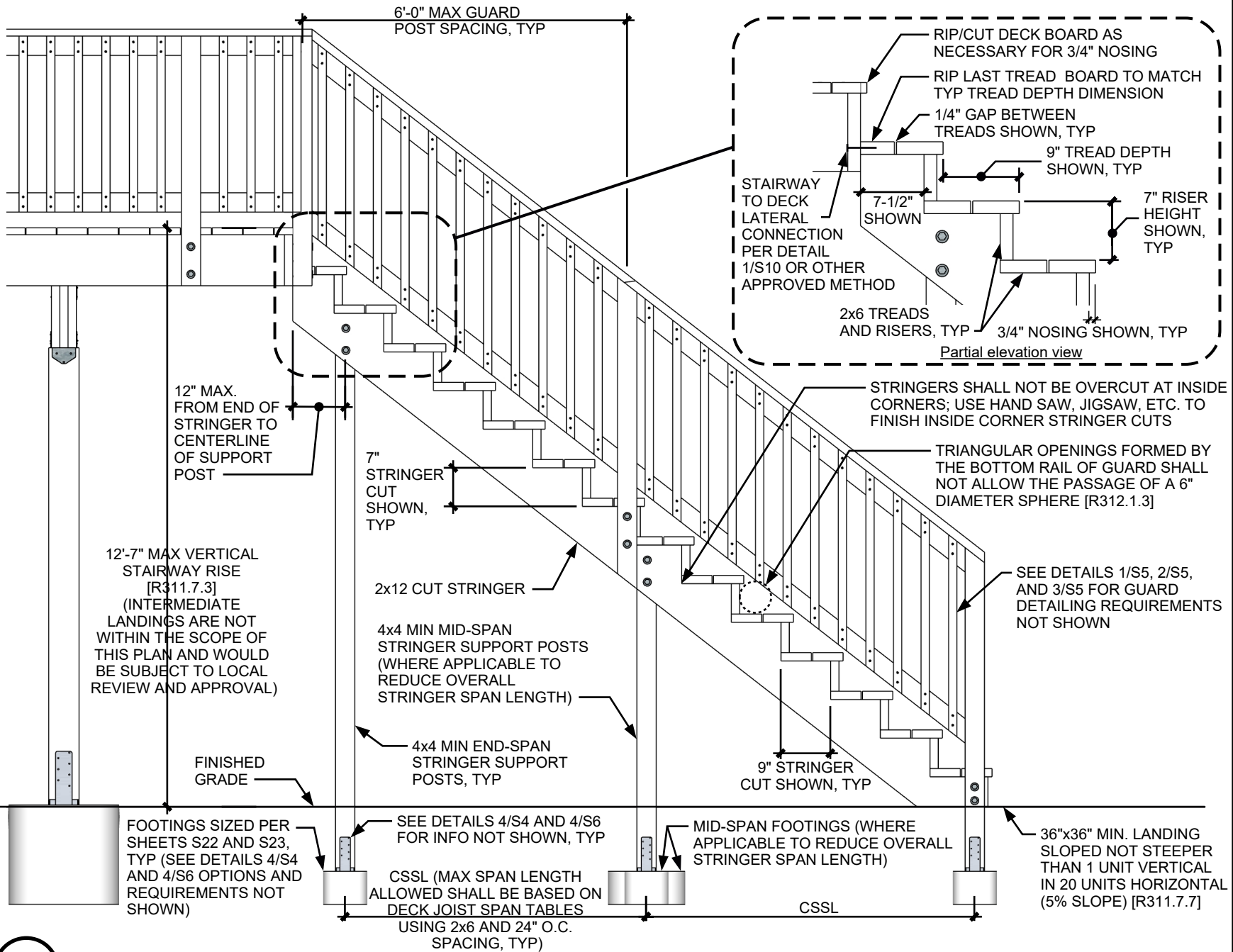
2023 ORSC

REVISIONS

NO.	DATE

Cut Stringers
Stairways
Sheet

S8



BCD
Building Codes Division
Department of Consumer and Business Services

PERMIT-READY PLAN

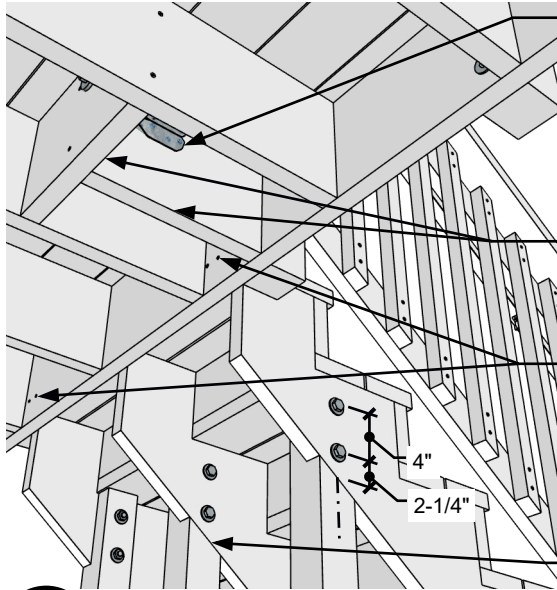
EXTERIOR DECK

2023 ORSC

REVISIONS	
NO.	DATE

Cut Stringers Stairways Sheet

S9

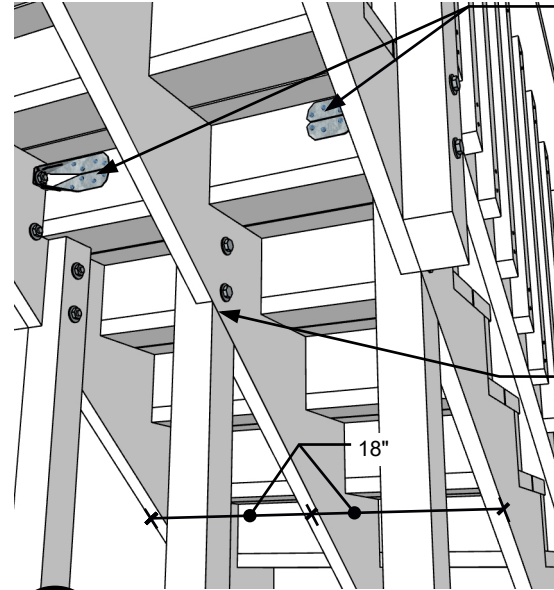


HOLD-DOWN DEVICES FROM GUARD POST TO ALIGNED BLOCKING AND FROM ALIGNED BLOCKING TO PERP BLOCKING WITH MIN 1800 LB. CAPACITY EACH, INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS (SEE DETAIL 1/S5 FOR INFO NOT SHOWN).

ATTACH BLOCKING TO PERP FRAMING WITH (2) 10D RING SHANK NAILS OR (2) #10x3" WOOD SCREWS EACH END, TYP

(2) #10x3" WOOD SCREWS AT 30" O.C. MAX FROM BACK OF DECK RIM JOIST THROUGH CENTER OF THICKNESS OF 2X6 TOP TREAD

4x4 POST EACH STRINGER, NOTCHED AND BOLTED AS SHOWN WITH (2) 1/2" DIAMETER THROUGH-BOLTS WITH WASHERS, TYP

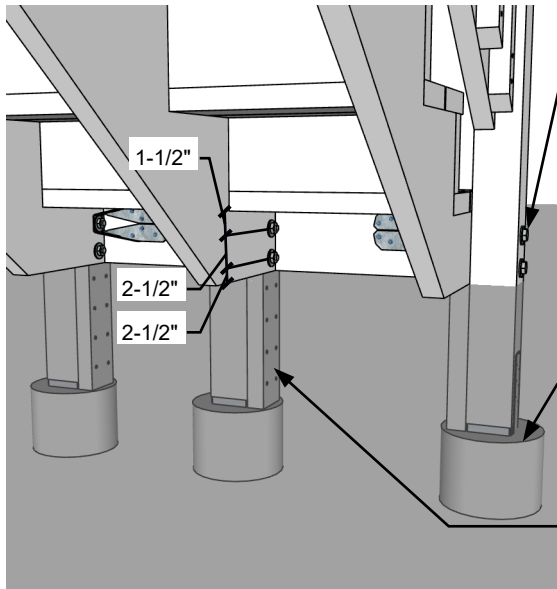


HOLD-DOWN DEVICES FROM ALIGNED GUARD POSTS TO 2x6 RISER WITH MIN 1800 LB. CAPACITY EACH, INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS. THE THROUGH BOLTS AND WASHERS SHALL BE CENTERED ON THE GUARD POSTS AND SPACED AS SHOWN IN DETAIL 1/S5.

4x4 POST EACH STRINGER, NOTCHED AND BOLTED AS SHOWN WITH (2) 1/2" DIAMETER THROUGH-BOLTS WITH WASHERS (SEE DETAIL 1/S10 FOR INFO NOT SHOWN)

1 Top of stairway (from below)
S10 NTS

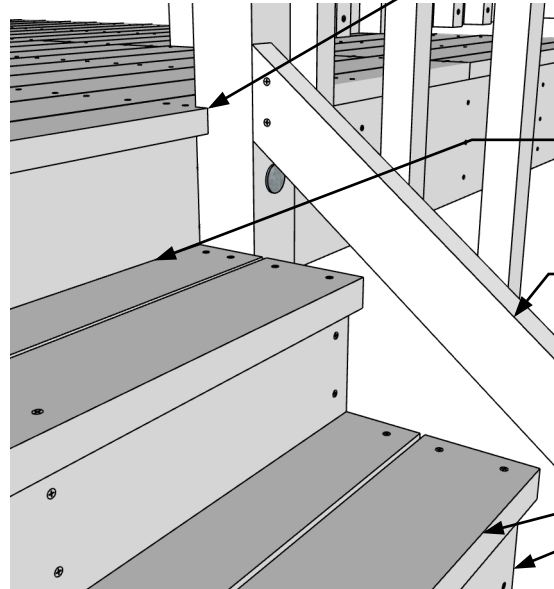
2 Mid-height of stairway
S10 NTS



(2) 1/2" DIAMETER THROUGH-BOLTS WITH WASHERS, TYP EA STRINGER TO POST. AT BOTTOM OF STAIRWAY GUARD POSTS PROVIDE HOLD-DOWN DEVICE TO 2X6 RISER AS SHOWN WITH MIN 1800 LB CAPACITY, INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS.

FOOTING, TYP (SEE SHEETS S8 AND S9)

ATTACH 2x4 BEARING BLOCK TO EACH POST WITH (8) 16D THREADED NAILS OR (8) #8x3-1/2" WOOD SCREWS, TYP



RIP/CUT DECK BOARD AS NECESSARY FOR 3/4" NOSING

RIP/CUT TOP TREAD AS NECESSARY (1-1/2" RIP SHOWN) TO MATCH 9" TYP TREAD DEPTH

2x4 GUARD BOTTOM RAIL FASTENED BOTH SIDES WITH (2) 10D TOENAILS OR (2) #8x3" ANGLED WOOD SCREWS (4 FASTENERS TOTAL), OR OTHER APPROVED CONNECTOR, EACH END TO GUARD POSTS

2x6 TREAD SHOWN, TYP
2x6 RISER SHOWN, TYP

3 Bottom of stairway
S10 NTS

4 Top of stairway (from above)
S10 NTS



BCD

Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

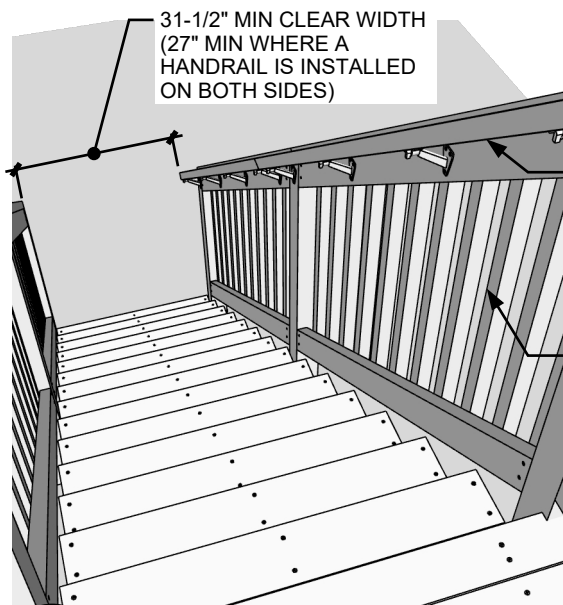
EXTERIOR DECK

2023 ORSC

REVISIONS	
NO.	DATE

Cut Stringers
Stairways
Sheet

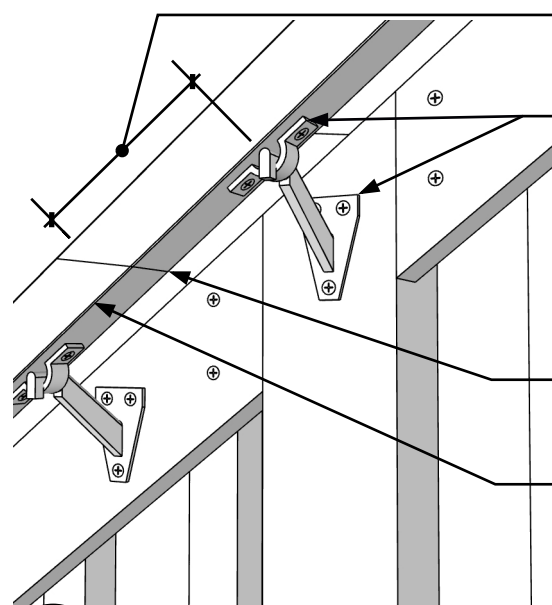
S10



31-1/2" MIN CLEAR WIDTH
(27" MIN WHERE A
HANDRAIL IS INSTALLED
ON BOTH SIDES)

AN APPROVED HANDRAIL
SHALL BE PROVIDED ON
AT LEAST ONE SIDE OF
STAIRWAYS HAVING
FOUR OR MORE RISERS
[R311.7.8]

APPROVED GUARDS
SHALL BE PROVIDED ON
OPEN SIDES OF
STAIRWAYS HAVING A
TOTAL RISE OF 30 INCHES
OR MORE [R312.1.1]



6" MAX FROM HANDRAIL
ENDS OR SPLICES TO
HARDWARE SUPPORTS,
TYP

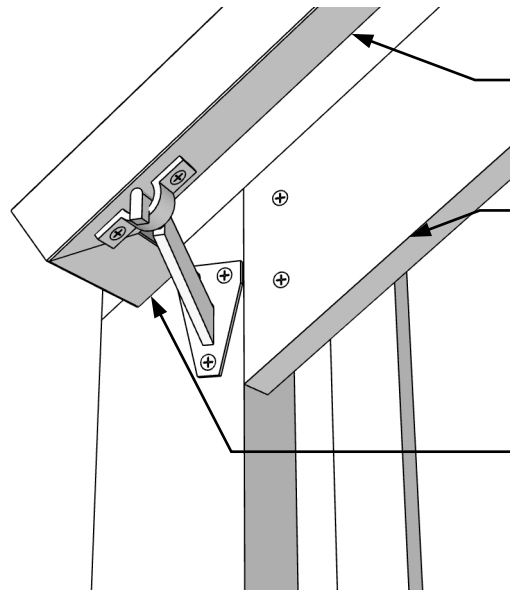
APPROVED HANDRAIL
HARDWARE SUPPORTS,
TYP. CAPABLE OF
SUPPORTING A SINGLE
200-LB LOAD APPLIED IN
ANY DIRECTION ALONG
THE TOP OF THE
HANDRAIL [R301.5]

HANDRAIL SPLICE AS
NECESSARY (SHOWN
WITH 45-DEGREE CUT)

2x2 CEDAR HANDRAIL
SHOWN WITH
HARDWARE SUPPORTS
AT 24" O.C. MAX SHOWN
(TYPE I HANDRAIL - SEE
SHEET 7)

1 Stairway with guards and handrail
S11 NTS

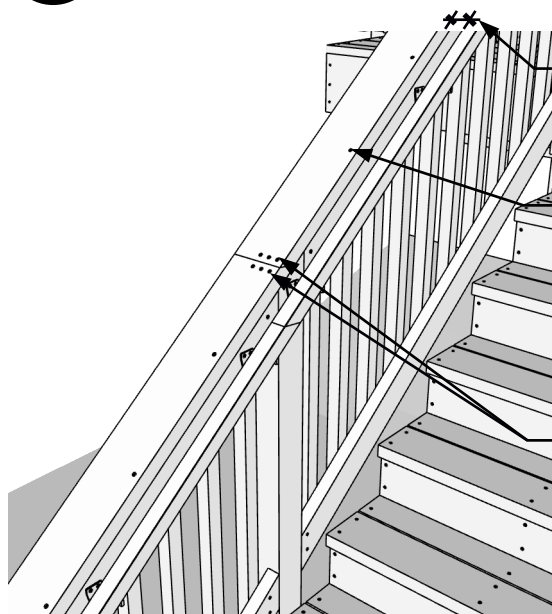
2 Handrail splice
S11 NTS



2x2 CEDAR HANDRAIL
SHOWN WITH HARDWARE
SUPPORTS AT 24" O.C.
MAX SHOWN

2x4 GUARD TOP RAIL
FASTENED BOTH SIDES
WITH (2) 10D TOENAILS
OR (2) #8x3" ANGLED
WOOD SCREWS ((4)
FASTENERS TOTAL), OR
OTHER APPROVED
CONNECTOR, EACH END
TO GUARD POSTS, TYP

RETURN HANDRAIL TO
GUARD AS SHOWN AT
TOP AND BOTTOM OF
STAIRWAY, TYP
[R311.7.8.4]



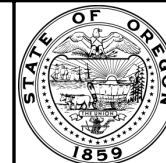
1-1/2" MIN CLEARANCE
BETWEEN THE HANDRAIL
AND THE GUARD (OR
WALL) [R311.7.8.3]

ON THE SIDE WHERE A
HANDRAIL OCCURS,
FASTEN GUARD CAP TO
GUARD TOP RAIL WITH
#12x3" WOOD SCREWS
OR 16D THREADED
NAILS AT 12" O.C.
CENTERED IN GUARD
TOP RAIL, TYP

FASTEN GUARD CAPS
(2x6 SHOWN) TO EACH
GUARD POST WITH (3)
#12x3" WOOD SCREWS
OR (3) 16D THREADED
NAILS, TYP

3 Bottom of handrail
S11 NTS

4 Guard caps and handrail
S11 NTS



BCD

Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

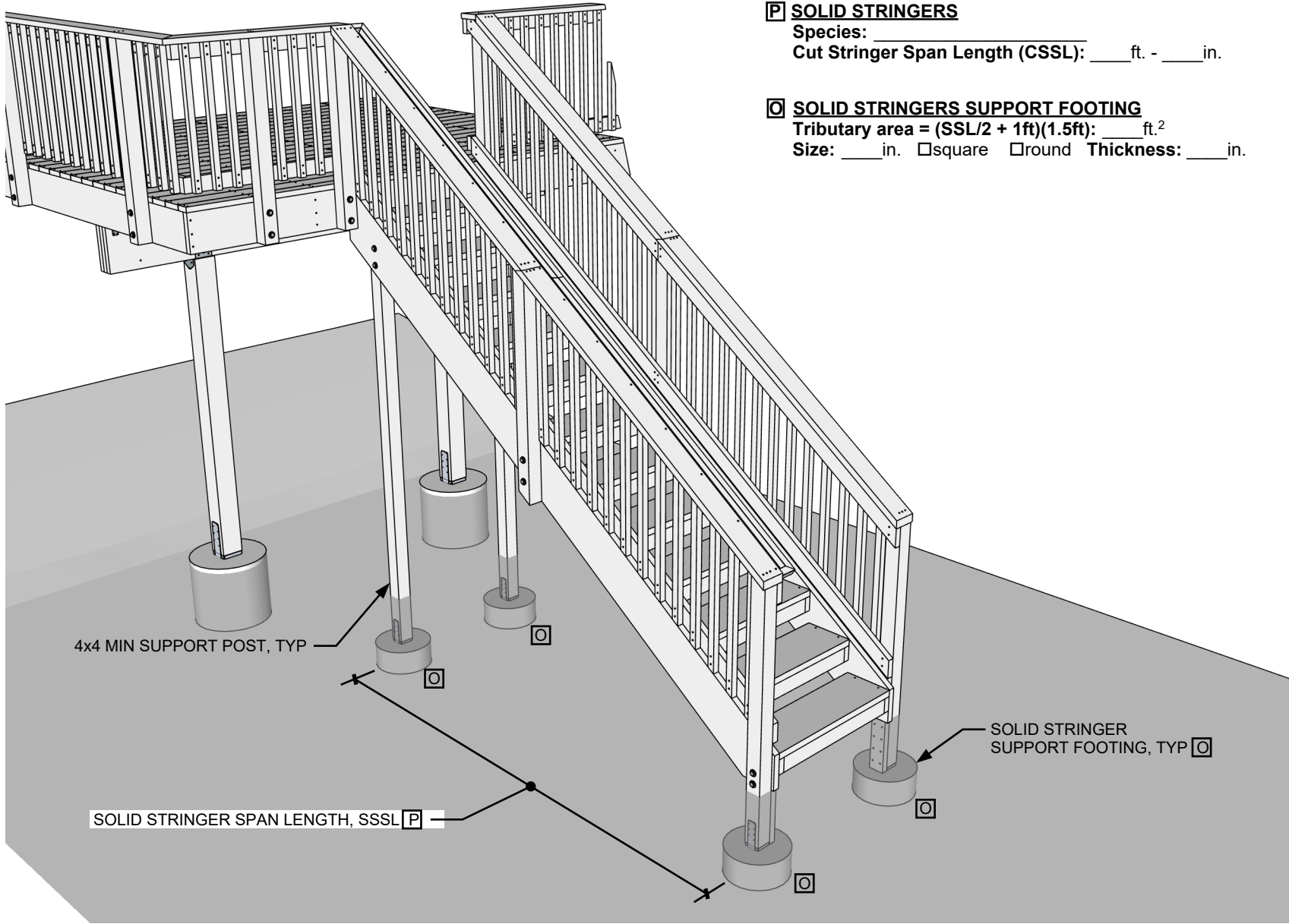
2023 ORSC

REVISIONS
NO. DATE

Cut Stringers
Stairways
Sheet

S11

WHERE USING SHEETS S12-S15 FOR SOLID STRINGERS STAIRWAY CONSTRUCTION, THE PERMIT APPLICANT SHALL PROVIDE THEIR PROJECT-SPECIFIC SOLID STRINGER AND FOOTING INFORMATION BELOW PRIOR TO PERMIT APPLICATION:



☐ **SOLID STRINGERS**

Species: _____
Cut Stringer Span Length (CSSL): ____ ft. - ____ in.

☐ **SOLID STRINGERS SUPPORT FOOTING**

Tributary area = $(SSL/2 + 1ft)(1.5ft)$: ____ ft.²
Size: ____ in. ☐square ☐round Thickness: ____ in.



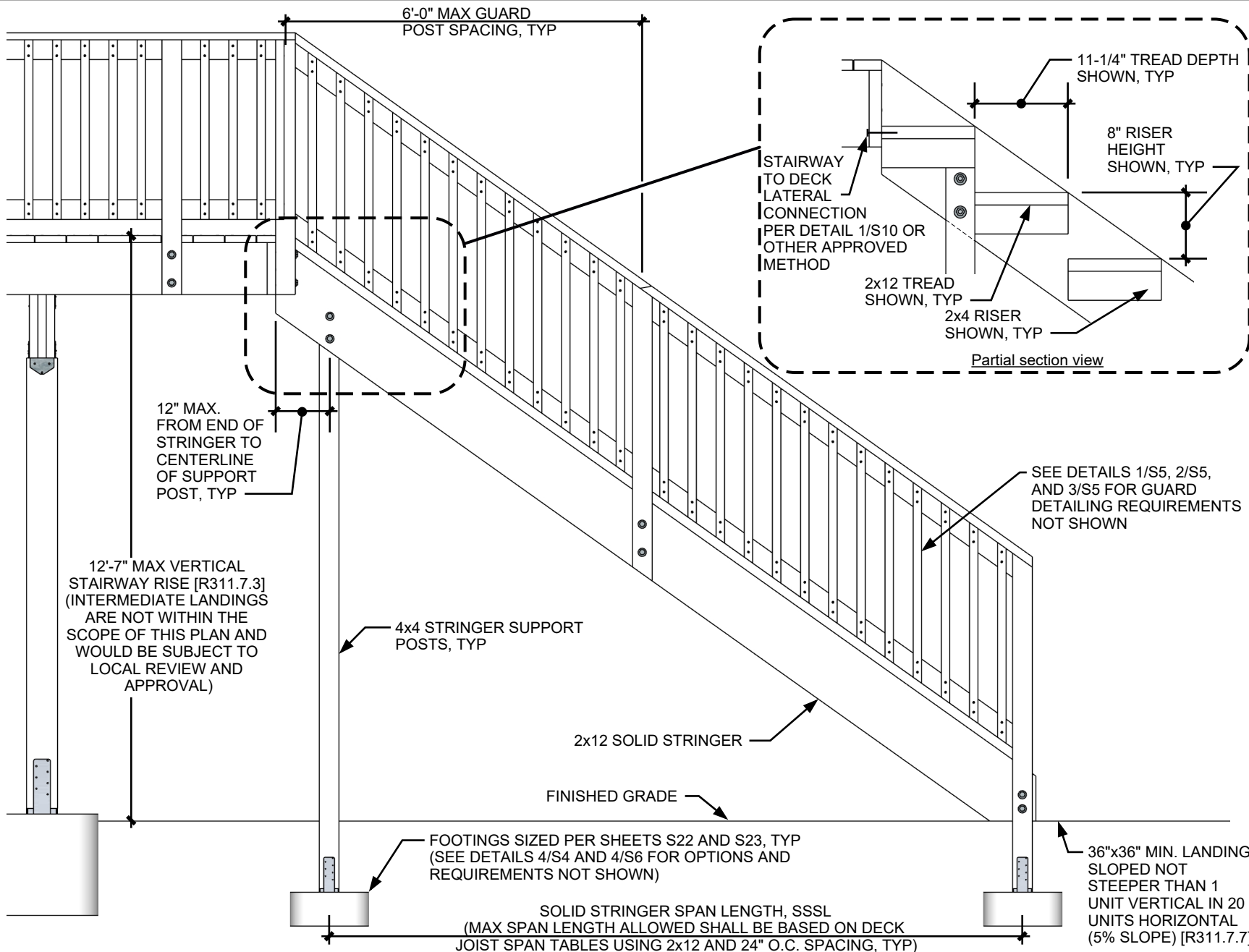
BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN
EXTERIOR DECK
2023 ORSC

REVISIONS	
NO.	DATE

Solid Stringers
Stairways
Sheet

S12



BCD

Building Codes Division

Department of Consumer and Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

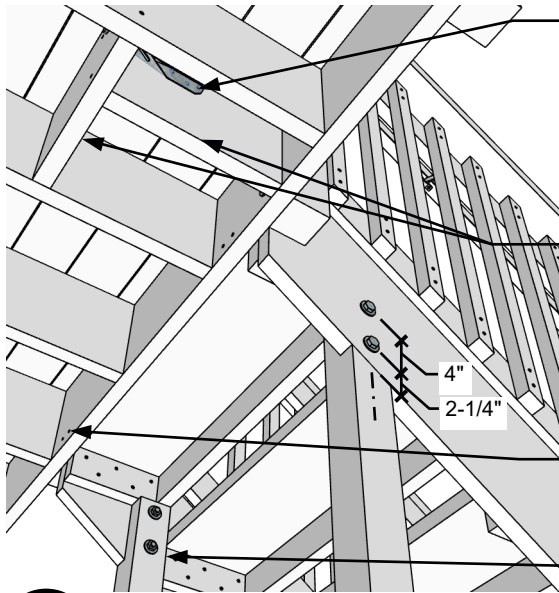
REVISIONS

NO.	DATE

Solid Stringers Stairways Sheet

S13

1 Solid Stringers Option - Side Elevation
S03 NTS

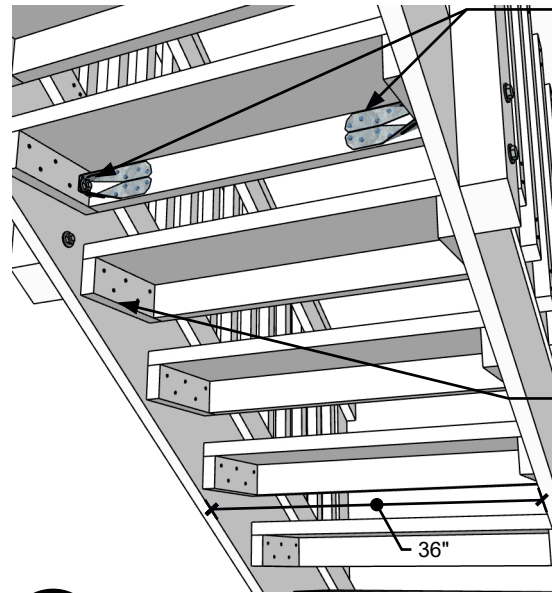


HOLD-DOWN DEVICES FROM GUARD POST TO ALIGNED BLOCKING AND FROM ALIGNED BLOCKING TO PERP BLOCKING WITH MIN 1800 LB. CAPACITY EACH, INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS (SEE DETAIL 1/S5 FOR INFO NOT SHOWN).

ATTACH BLOCKING TO PERP FRAMING WITH (2) 10D RING SHANK NAILS OR (2) #10x3" WOOD SCREWS EACH END, TYP

(2) #10x3" WOOD SCREWS AT 36" O.C. MAX FROM BACK OF DECK RIM JOIST THROUGH CENTER OF THICKNESS OF 2X6 TOP TREAD

4x4 POST EACH STRINGER, NOTCHED AND BOLTED AS SHOWN WITH (2) 1/2" DIAMETER THROUGH-BOLTS WITH WASHERS

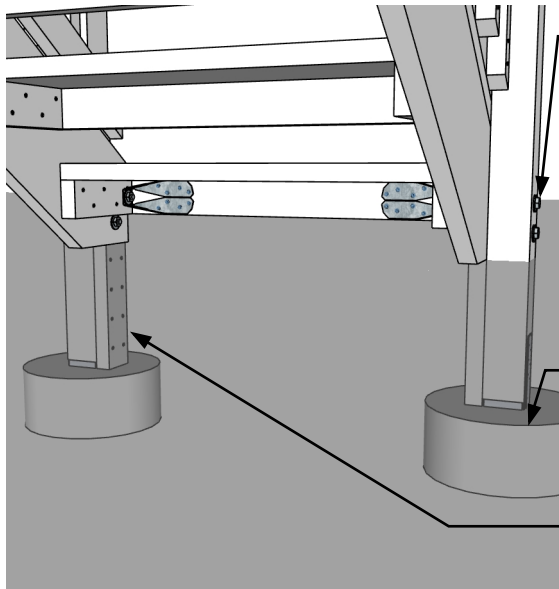


HOLD-DOWN DEVICES FROM ALIGNED GUARD POSTS TO 2x4 RISER WITH MIN 1800 LB. CAPACITY EACH, INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS. THE THROUGH BOLTS AND WASHERS SHALL BE CENTERED ON THE GUARD POSTS AND SPACED AS SHOWN IN DETAIL 1/S5.

2x4 TREAD SUPPORT LEDGERS EACH SIDE, FULL DEPTH OF TREAD, FASTENED TO STRINGERS WITH (5) 8D THREADED NAILS OR (5) #8x2-1/2" WOOD SCREWS, TYP

1 Top of stairway (from below)
S14 NTS

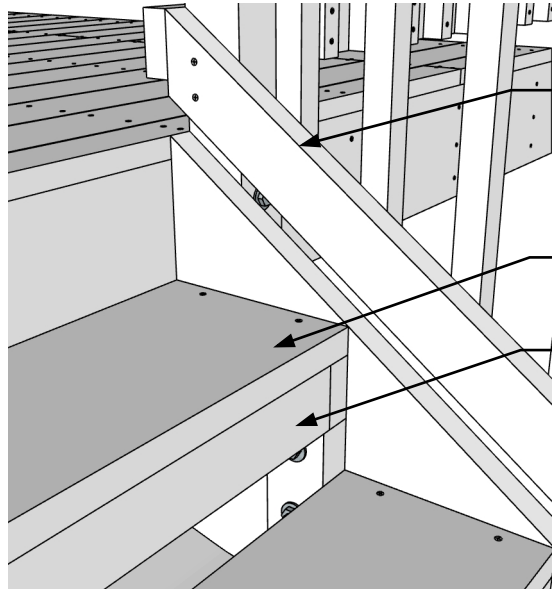
2 Mid-height of stairway
S14 NTS



(2) 1/2" DIAMETER THROUGH-BOLTS WITH WASHERS, TYP EA STRINGER TO POST (SEE DETAIL 3/S10 FOR INFO NOT SHOWN). AT BOTTOM OF STAIRWAY GUARD POSTS PROVIDE HOLD-DOWN DEVICE TO 2x4 RISER AS SHOWN WITH MIN 1800 LB CAPACITY, INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS.

FOOTING, TYP (SEE SHEETS S8 AND S9)

ATTACH 2x4 BEARING BLOCK TO EACH POST WITH (8) 16D THREADED NAILS OR (8) #8x3-1/2" WOOD SCREWS, TYP



2x4 GUARD BOTTOM RAIL ATTACHED EACH END TO GUARD POSTS WITH (2) 8D RING SHANK NAILS OR (2) #8x3" WOOD SCREWS, TYP

2x12 TREAD SHOWN, TYP (SEE DETAIL 3/S7 FOR INFO NOT SHOWN)

2x4 RISER SHOWN, TYP

3 Bottom of stairway
S14 NTS

4 Top of stairway (from above)
S14 NTS



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN

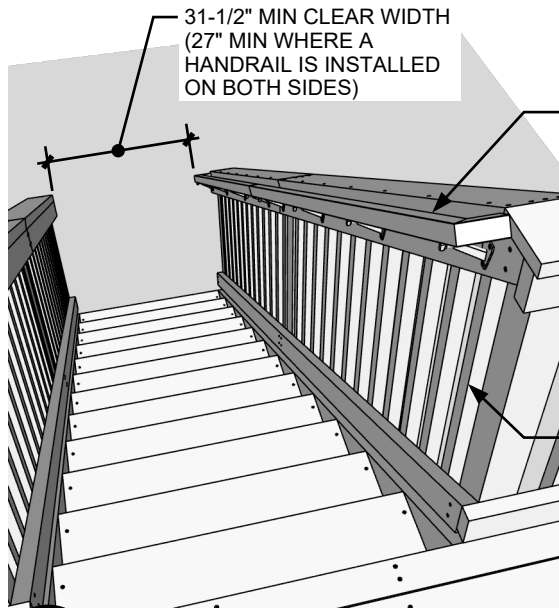
EXTERIOR DECK

2023 ORSC

REVISIONS	
NO.	DATE

Solid Stringers
Stairways
Sheet

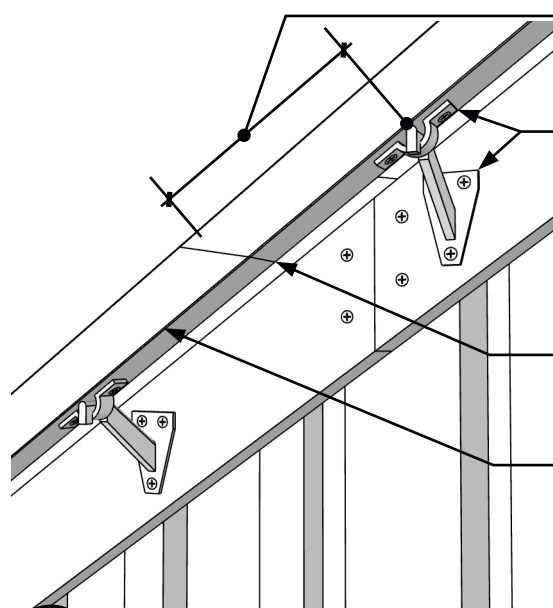
S14



31-1/2" MIN CLEAR WIDTH
(27" MIN WHERE A
HANDRAIL IS INSTALLED
ON BOTH SIDES)

AN APPROVED HANDRAIL
SHALL BE PROVIDED ON
AT LEAST ONE SIDE OF
STAIRWAYS HAVING
FOUR OR MORE RISERS
[R311.7.8]

APPROVED GUARDS
SHALL BE PROVIDED ON
OPEN SIDES OF
STAIRWAYS HAVING A
TOTAL RISE OF 30 INCHES
OR MORE [R312.1.1]



6" MAX FROM HANDRAIL
ENDS OR SPLICES TO
HARDWARE SUPPORTS,
TYP

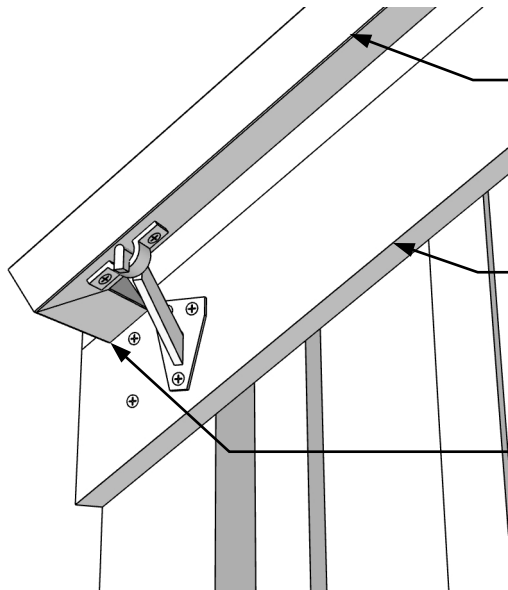
APPROVED HANDRAIL
HARDWARE SUPPORTS,
TYP, CAPABLE OF
SUPPORTING A SINGLE
200-LB LOAD APPLIED IN
ANY DIRECTION ALONG
THE TOP OF THE
HANDRAIL [R301.5]

HANDRAIL SPLICE AS
NECESSARY (SHOWN
WITH 45-DEGREE CUT)

2x2 CEDAR HANDRAIL
SHOWN WITH
HARDWARE SUPPORTS
AT 24" O.C. MAX SHOWN
(TYPE I HANDRAIL - SEE
SHEET 7)

1 Stairway with guards and handrail
S15 NTS

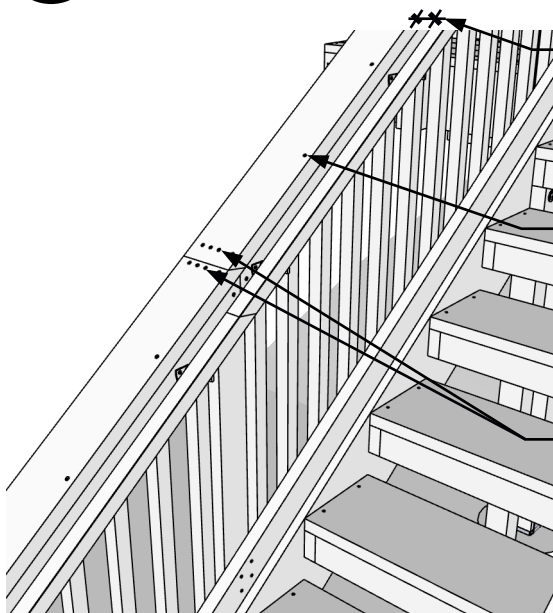
2 Handrail splice
S15 NTS



2x2 CEDAR HANDRAIL
SHOWN [R311.7.8.5] WITH
HARDWARE SUPPORTS AT
24" O.C. MAX SHOWN

2x4 GUARD TOP RAIL
ATTACHED EACH END TO
GUARD POSTS WITH (2)
8D RING SHANK NAILS OR
(2) #8x3" WOOD SCREWS,
TYP

RETURN HANDRAIL TO
GUARD AS SHOWN AT
TOP AND BOTTOM OF
STAIRWAY, TYP
[R311.7.8.4]



1-1/2" MIN CLEARANCE
BETWEEN THE GUARD
(OR WALL) AND THE
GRASPABLE PORTION
OF THE HANDRAIL
[R311.7.8.3]

ON THE SIDE WHERE A
HANDRAIL OCCURS,
FASTEN GUARD CAP TO
GUARD TOP RAIL WITH
#12x3" WOOD SCREWS
OR 16D THREADED
NAILS AT 12" O.C., TYP

FASTEN GUARD CAPS
(2x6 SHOWN) TO EACH
GUARD POST WITH (3)
#12x3" WOOD SCREWS
OR (3) 16D THREADED
NAILS, TYP

3 Bottom of handrail
S15 NTS

4 Guard caps and handrail
S15 NTS



BCD

Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS
NO. DATE

Solid Stringers
Stairways
Sheet

S15



REVISIONS	
NO.	DATE

MAXIMUM JOIST SPACING FOR DECKING

DECKING MATERIAL TYPE AND NOMINAL SIZE	DECKING PERPENDICULAR TO JOIST		DECKING DIAGONAL TO JOIST ^a	
	Single span ^c	Multiple span ^c	Single span ^c	Multiple span ^c
	Maximum on-center joist spacing (inches)			
5/4x wood ^b	12	16	8	12
2x wood	24	24	18	24
Plastic composite ^d	Per decking manufacturer	Per decking manufacturer	Per decking manufacturer	Per decking manufacturer

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

b. Other maximum span provided by an accredited lumber grading or inspection agency also allowed.

c. Individual wood deck boards supported by two joists shall be considered single span and three or more joists shall be considered multiple span.

d. Plastic composite decking materials or their packaging shall bear a label that indicates compliance with ASTM D7032 and maximum allowable span.

1 Maximum Joist Spacing Table (from ORSC Table R507.7)

S16

DECK FASTENER AND CONNECTOR SPECIFICATIONS^{a, b}

ITEM	MATERIAL	MINIMUM FINISH/COATING	ALTERNATE FINISH/COATING ^c
Nails and glulam rivets	In accordance with ASTM F1667	Hot-Dipped galvanized per ASTM A153, Class D for 3/8-inch diameter and less	Stainless steel, silicon bronze or copper
Approved wood screws	Per manufacturer's code-compliance report and specification for structural use	Per manufacturer's code-compliance report and specification for exterior use	Per manufacturer's code-compliance report and specification for exterior use
Bolts	In accordance with ASTM A307 (bolts), ASMT A563 (nuts), ASTM F844 (washers)	Hot-Dipped galvanized per ASTM A153, Class C (Class D for 3/8-inch diameter and less) or mechanically galvanized per ASTM B695, Class 55 or 410 stainless steel	Stainless steel, silicon bronze or copper
Lag screws (including nuts and washers)			
Metal connectors	Per manufacturer's code-compliance report and specification	ASTM A653 Type G185 zinc-coated galvanized steel or post hot-dipped galvanized per ASTM A123 providing a minimum average coating weight of 2.0 oz./ft ² (total both sides)	Stainless steel

a. Equivalent materials, coatings and finishes shall be permitted.

b. Fasteners and connectors exposed to salt water or located within 300 feet of a salt water shoreline shall be stainless steel.

c. Stainless-steel-driven fasteners shall be in accordance with ASTM F1667.

2 Deck fastener and connector specifications (from ORSC Table R507.2.3)

S16

DECK LEDGER CONNECTION TO BAND JOIST



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN
EXTERIOR DECK
2023 ORSC

REVISIONS	
NO.	DATE

Tables
Sheet

S17

GROUND SNOW LOAD (psf)	JOIST SPAN ^a (feet)	ON-CENTER SPACING OF FASTENERS ^b (inches)		
		1/2-inch diameter lag screw with 1/2-inch maximum sheathing ^{c, d}	1/2-inch diameter bolt with 1/2-inch maximum sheathing ^d	1/2-inch diameter bolt with 1-inch maximum sheathing ^e
≤ 40	6	30	36	36
	8	23	36	36
	10	18	34	29
	12	15	29	24
	14	13	24	21
	16	11	21	18
	18	10	19	16
≤ 50	6	29	36	36
	8	22	36	35
	10	17	33	28
	12	14	27	23
	14	12	23	20
	16	11	20	17
	18	9	18	15
≤ 60	6	25	36	36
	8	18	35	30
	10	15	28	24
	12	12	23	20
	14	10	20	17
	16	9	17	15
	18	8	15	13
≤ 70	6	22	36	35
	8	16	31	26
	10	13	25	21
	12	11	20	17
	14	9	17	15
	16	8	15	13
	18	7	13	11

a. Interpolation is allowed. Extrapolation is not allowed.

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

c. The tip of the lag screw shall fully extend beyond the inside face of the band joist. Lag screws shall be full-body diameter screws.

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.



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN
EXTERIOR DECK
2023 ORSC

REVISIONS	
NO.	DATE

Tables
Sheet

S18

MAXIMUM DECK JOIST SPAN LENGTHS, DJSL

GROUND SNOW LOAD (psf)	JOIST SPECIES ^a	JOIST SIZE	MAXIMUM DECK JOIST SPAN LENGTH, DJSL (feet- inches)			MAXIMUM DECK JOIST CANTILEVER LENGTH, DJCL (feet-inches)							
			Joist spacing (inches)			DECK JOIST BACK SPAN LENGTH ^b , DJSL (feet)							
			12	16	24	4	6	8	10	12	14	16	18
≤ 40	Southern pine	2x6	9-11	9-0	7-7	1-0	1-6	1-5	NP	NP	NP	NP	NP
		2x8	13-1	11-10	9-8	1-0	1-6	2-0	2-6	2-3	NP	NP	NP
		2x10	16-2	14-0	11-5	1-0	1-6	2-0	2-6	3-0	3-4	3-4	NP
		2x12	18-0	16-6	13-6	1-0	1-6	2-0	2-6	3-0	3-6	4-0	4-1
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	2x6	9-6	8-4	6-10	1-0	1-6	1-4	NP	NP	NP	NP	NP
		2x8	12-6	11-1	9-1	1-0	1-6	2-0	2-3	2-0	NP	NP	NP
		2x10	15-8	13-7	11-1	1-0	1-6	2-0	2-6	3-0	3-3	NP	NP
		2x12	18-0	15-9	12-10	1-0	1-6	2-0	2-6	3-0	3-6	3-11	3-11
	Redwood, Western cedars, Ponderosa pine, Red pine	2x6	8-10	8-0	6-10	1-0	1-4	1-1	NP	NP	NP	NP	NP
		2x8	11-8	10-7	8-8	1-0	1-6	2-0	1-11	NP	NP	NP	NP
		2x10	14-11	13-0	10-7	1-0	1-6	2-0	2-6	3-0	2-9	NP	NP
		2x12	17-5	15-1	12-4	1-0	1-6	2-0	2-6	3-0	3-6	3-8	NP
≤ 50	Southern pine	2x6	9-2	8-4	7-4	1-0	1-6	1-5	NP	NP	NP	NP	NP
		2x8	12-1	11-0	9-5	1-0	1-6	2-0	2-5	2-3	NP	NP	NP
		2x10	15-5	13-9	11-3	1-0	1-6	2-0	2-6	3-0	3-1	NP	NP
		2x12	18-0	16-2	13-2	1-0	1-6	2-0	2-6	3-0	3-6	3-10	3-10
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	2x6	8-10	8-0	6-8	1-0	1-6	1-4	NP	NP	NP	NP	NP
		2x8	11-7	10-7	8-11	1-0	1-6	2-0	2-3	NP	NP	NP	NP
		2x10	14-10	13-3	10-10	1-0	1-6	2-0	2-6	3-0	3-0	NP	NP
		2x12	17-9	15-5	12-7	1-0	1-6	2-0	2-6	3-0	3-6	3-8	NP
	Redwood, Western cedars, Ponderosa pine, Red pine	2x6	8-3	7-6	6-6	1-0	1-4	1-1	NP	NP	NP	NP	NP
		2x8	10-10	9-10	8-6	1-0	1-6	2-0	1-11	NP	NP	NP	NP
		2x10	13-10	12-7	10-5	1-0	1-6	2-0	2-6	2-9	NP	NP	NP
		2x12	16-10	14-9	12-1	1-0	1-6	2-0	2-6	3-0	3-5	3-5	NP

NP = Not Permitted

a. No. 2 grade.

b. Interpolation is allowed. Extrapolation is not allowed.

1

S18

Maximum Deck Joist Span Lengths For Ground Snow Loads ≤ 40 PSF and ≤ 50 PSF (from ORSC Table R507.6)



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN
EXTERIOR DECK
2023 ORSC

REVISIONS	
NO.	DATE

Tables
Sheet

S19

MAXIMUM DECK JOIST SPAN LENGTHS, DJSL

GROUND SNOW LOAD (psf)	JOIST SPECIES ^a	JOIST SIZE	MAXIMUM DECK JOIST SPAN LENGTH, DJSL (feet- inches)			MAXIMUM DECK JOIST CANTILEVER LENGTH, DJCL (feet-inches)							
			Joist spacing (inches)			DECK JOIST BACK SPAN LENGTH ^b , DJSL (feet)							
			12	16	24	4	6	8	10	12	14	16	18
≤ 60	Southern pine	2x6	8-8	7-10	6-10	1-0	1-6	1-5	NP	NP	NP	NP	NP
		2x8	11-5	10-4	8-9	1-0	1-6	2-0	2-4	NP	NP	NP	NP
		2x10	14-7	12-9	10-5	1-0	1-6	2-0	2-6	2-11	2-11	NP	NP
		2x12	17-3	15-0	12-3	1-0	1-6	2-0	2-6	3-0	3-6	3-7	NP
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	2x6	8-4	7-6	6-2	1-0	1-6	1-4	NP	NP	NP	NP	NP
		2x8	10-11	9-11	8-3	1-0	1-6	2-0	2-2	NP	NP	NP	NP
		2x10	13-11	12-4	10-0	1-0	1-6	2-0	2-6	2-10	NP	NP	NP
		2x12	16-6	14-3	11-8	1-0	1-6	2-0	2-6	3-0	3-5	3-5	NP
	Redwood, Western cedars, Ponderosa pine, Red pine	2x6	7-9	7-0	6-2	1-0	1-4	NP	NP	NP	NP	NP	NP
		2x8	10-2	9-3	7-11	1-0	1-6	2-0	1-11	NP	NP	NP	NP
		2x10	13-0	11-9	9-7	1-0	1-6	2-0	2-6	2-7	NP	NP	NP
		2x12	15-9	13-8	11-2	1-0	1-6	2-0	2-6	3-0	3-2	NP	NP
≤ 70	Southern pine	2x6	8-3	7-6	6-5	1-0	1-6	1-5	NP	NP	NP	NP	NP
		2x8	10-10	9-10	8-2	1-0	1-6	2-0	2-2	NP	NP	NP	NP
		2x10	13-9	11-11	9-9	1-0	1-6	2-0	2-6	2-9	NP	NP	NP
		2x12	16-2	14-0	11-5	1-0	1-6	2-0	2-6	3-0	3-5	3-5	NP
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	2x6	7-11	7-1	5-9	1-0	1-6	NP	NP	NP	NP	NP	NP
		2x8	1-05	9-5	7-8	1-0	1-6	2-0	2-1	NP	NP	NP	NP
		2x10	13-3	11-6	9-5	1-0	1-6	2-0	2-6	2-8	NP	NP	NP
		2x12	15-5	13-4	10-11	1-0	1-6	2-0	2-6	3-0	3-3	NP	NP
	Redwood, Western cedars, Ponderosa pine, Red pine	2x6	7-4	6-8	5-10	1-0	1-4	NP	NP	NP	NP	NP	NP
		2x8	9-8	8-10	7-4	1-0	1-6	1-11	NP	NP	NP	NP	NP
		2x10	12-4	11-0	9-0	1-0	1-6	2-0	2-6	2-6	NP	NP	NP
		2x12	14-9	12-9	10-5	1-0	1-6	2-0	2-6	3-0	3-0	NP	NP

NP = Not Permitted

a. No. 2 grade.

b. Interpolation is allowed. Extrapolation is not allowed.

1

S19

Maximum Deck Joist Span Lengths For Ground Snow Loads ≤ 60 PSF and ≤ 70 PSF (from ORSC Table R507.6)



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN
EXTERIOR DECK
2023 ORSC

REVISIONS	
NO.	DATE

Tables
Sheet

S20

MAXIMUM DECK POST HEIGHTS

GROUND SNOW LOAD (psf)	POST SPECIES ^a	POST SIZE	TRIBUTARY AREA (ft ²) ^{b, c}							
			20	40	60	80	100	120	140	160
			MAXIMUM DECK POST HEIGHT ^a (feet-inches)							
≤ 40	Southern pine	4x4	14-0	13-8	11-0	9-5	5-4	7-5	6-9	6-2
		4x6	14-0	14-0	13-11	12-0	10-8	9-8	8-10	8-2
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	4x4	14-0	13-6	10-10	9-3	8-0	7-0	6-2	5-3
		4x6	14-0	14-0	13-10	11-10	10-6	9-5	8-7	7-10
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Redwood, Western cedars, Ponderosa pine, Red pine	4x4	14-0	13-2	10-3	8-1	5-8	NP	NP	NP
		4x6	14-0	14-0	13-6	11-4	9-9	8-4	6-9	4-7
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	13-7	9-7
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
≤ 50	Southern pine	4x4	14-0	12-2	9-10	8-5	7-5	6-7	5-11	5-4
		4x6	14-0	14-0	12-6	10-9	9-6	8-7	7-10	7-3
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	13-4
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	4x4	14-0	12-1	9-8	8-2	7-1	6-2	5-3	4-2
		4x6	14-0	14-0	12-4	10-7	9-4	8-4	7-7	6-11
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	14-0	12-10
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Redwood, Western cedars, Ponderosa pine, Red pine	4x4	14-0	11-8	9-0	6-10	3-7	NP	NP	NP
		4x6	14-0	14-0	12-0	10-0	8-6	7-0	5-3	NP
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	10-8	2-4
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0

NP = Not Permitted

a. Measured from the underside of the beam to the top of footing or pier.

b. Deck floor area, in square feet, supported by post and footing.

c. Interpolation is allowed. Extrapolation is not allowed.



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN
EXTERIOR DECK
2023 ORSC

REVISIONS	
NO.	DATE

Tables
Sheet

S21

MAXIMUM DECK POST HEIGHTS

GROUND SNOW LOAD (psf)	POST SPECIES ^a	POST SIZE	TRIBUTARY AREA (ft ²) ^{b, c}							
			20	40	60	80	100	120	140	160
			MAXIMUM DECK POST HEIGHT ^a (feet-inches)							
≤ 60	Southern pine	4x4	14-0	11-1	8-11	7-7	6-7	5-10	5-2	4-6
		4x6	14-0	14-0	11-4	9-9	8-7	7-9	7-1	6-6
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	12-9	11-2
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	4x4	14-0	10-11	8-8	7-3	6-2	5-0	3-7	NP
		4x6	14-0	13-11	11-2	9-7	8-4	7-5	6-8	5-11
		6x6	14-0	14-0	14-0	14-0	14-0	14-0	12-2	10-2
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Redwood, Western cedars, Ponderosa pine, Red pine	4x4	14-0	10-6	7-9	4-7	NP	NP	NP	NP
		4x6	14-0	13-7	10-9	8-9	7-0	4-9	NP	NP
		6x6	14-0	14-0	14-0	14-0	14-0	9-9	NP	NP
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
≤ 70	Southern pine	4x4	14-0	10-2	8-2	6-11	5-11	5-2	4-4	3-4
		4x6	14-0	12-11	10-5	8-11	7-10	7-1	6-5	5-10
		6x6	14-0	14-0	14-0	14-0	14-0	12-9	10-11	8-7
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Douglas fir-larch, Hem-fir, Spruce-pine-fir	4x4	14-0	10-1	7-11	6-6	5-3	3-7	NP	NP
		4x6	14-0	12-10	10-3	8-9	7-7	6-8	5-10	4-11
		6x6	14-0	14-0	14-0	14-0	14-0	12-2	9-9	5-9
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0
	Redwood, Western cedars, Ponderosa pine, Red pine	4x4	14-0	9-5	6-5	NP	NP	NP	NP	NP
		4x6	14-0	12-6	9-8	7-7	5-3	NP	NP	NP
		6x6	14-0	14-0	14-0	14-0	10-8	NP	NP	NP
		8x8	14-0	14-0	14-0	14-0	14-0	14-0	14-0	14-0

NP = Not Permitted

a. Measured from the underside of the beam to the top of footing or pier.

b. Deck floor area, in square feet, supported by post and footing.

c. Interpolation is allowed. Extrapolation is not allowed.

1

S21

Maximum Deck Post Heights For Ground Snow Loads ≤ 60 PSF and ≤ 70 PSF (from ORSC Table R507.4)

MINIMUM DECK FOOTING SIZES

GROUND SNOW LOAD (psf)	TRIBUTARY AREA ^b (ft ²)	LOAD-BEARING VALUE OF SOIL ^{a, c, d} (psf)								
		1,500			2,000			≥ 3,000		
		Side length of square footing (inches)	Diameter of round footing (inches)	Thickness (inches)	Side length of square footing (inches)	Diameter of round footing (inches)	Thickness (inches)	Side length of square footing (inches)	Diameter of round footing (inches)	Thickness (inches)
≤ 40	5	7	8	6	7	8	6	7	8	6
	20	10	12	6	9	9	6	7	8	6
	40	14	16	6	12	14	6	10	12	6
	60	17	19	6	15	17	6	12	14	6
	80	20	22	7	17	19	6	14	16	6
	100	22	25	8	19	21	6	15	17	6
	120	24	27	9	21	23	7	17	19	6
	140	26	29	10	22	25	8	18	21	6
	160	28	31	11	24	27	9	20	22	7
≤ 50	5	7	8	6	7	8	6	7	8	6
	20	11	13	6	10	11	6	8	9	6
	40	15	17	6	13	15	6	11	13	6
	60	19	21	6	16	18	6	13	15	6
	80	21	24	8	19	21	6	15	17	6
	100	24	27	9	21	23	7	17	19	6
	120	26	30	10	23	26	8	19	21	6
	140	28	32	11	25	28	9	20	23	7
	160	30	34	12	26	30	10	21	24	8

a. Footing dimensions shall allow complete bearing of the post.

b. Deck floor area, in square feet, supported by post and footing.

c. Interpolation is allowed. Extrapolation is not allowed.

d. A default value of 1,500 psf shall be used unless otherwise required or approved by the building official.



Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS

NO.	DATE

Tables
Sheet

S22

1

S22

Minimum Deck Footing Sizes For Ground Snow Loads ≤ 40 PSF and ≤ 50 PSF (from ORSC Table R507.3.1)

MINIMUM DECK FOOTING SIZES

GROUND SNOW LOAD (psf)	TRIBUTARY AREA ^b (ft ²)	LOAD-BEARING VALUE OF SOIL ^{a, c, d} (psf)								
		1,500			2,000			≥ 3,000		
		Side length of square footing (inches)	Diameter of round footing (inches)	Thickness (inches)	Side length of square footing (inches)	Diameter of round footing (inches)	Thickness (inches)	Side length of square footing (inches)	Diameter of round footing (inches)	Thickness (inches)
≤ 60	5	7	8	6	7	8	6	7	8	6
	20	12	14	6	11	12	6	9	10	6
	40	16	19	6	14	16	8	12	14	6
	60	20	23	7	17	20	6	14	16	6
	80	23	26	9	20	23	7	16	19	6
	100	26	29	10	22	25	8	18	21	6
	120	28	32	11	25	28	9	20	23	7
	140	31	35	12	27	30	10	22	24	8
	160	33	37	13	28	32	11	23	26	9
≤ 70	5	7	8	6	7	8	6	7	8	6
	20	12	14	6	11	13	6	9	10	6
	40	18	20	6	15	17	6	12	14	6
	60	21	24	8	19	21	6	15	17	6
	80	25	28	9	21	24	8	18	20	6
	100	28	31	11	24	27	9	20	22	7
	120	30	34	12	26	30	10	21	24	8
	140	33	37	13	28	32	11	23	26	9
	160	35	40	15	30	34	12	25	28	9

a. Footing dimensions shall allow complete bearing of the post.

b. Deck floor area, in square feet, supported by post and footing.

c. Interpolation is allowed. Extrapolation is not allowed.

d. A default value of 1,500 psf shall be used unless otherwise required or approved by the building official.



Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS

NO.	DATE

Tables
Sheet

S23

1

S23

Minimum Deck Footing Sizes For Ground Snow Loads ≤ 60 PSF and ≤ 70 PSF (from ORSC Table R507.3.1)

MAXIMUM DECK BEAM SPAN LENGTHS, DBSL - ≤ 40 PSF GROUND SNOW LOAD

	JOIST SPAN (feet)	DECK JOIST SPAN LENGTH, DJSL, AND DECK JOIST CANTILEVER LENGTH ^b , DJCL (feet & feet)									
	6	6 & 0	6 & 1.5								
	8		8 & 0	8 & 1	8 & 2						
	10			10 & 0	10 & 1	10 & 2.5					
	12				12 & 0	12 & 1	12 & 2	12 & 3			
	14					14 & 0	14 & 1	14 & 2	14 & 3.5		
	16						16 & 0	16 & 1	16 & 2.5	16 & 4	
	18							18 & 0	18 & 1.5	18 & 3	18 & 4.5
BEAM SPECIES ^a	BEAM SIZE ^e	MAXIMUM DECK BEAM SPAN LENGTH ^{b,c,d} , DBSL (feet-inches)									
Southern pine	1-2x6	4-10	4-7	4-3	4-0	3-7	3-5	3-3	3-0	2-10	2-8
	1-2x8	6-4	5-11	5-6	5-1	4-7	4-4	4-2	3-10	3-7	3-5
	1-2x10	7-6	7-0	6-6	6-0	5-5	5-2	4-11	4-7	4-3	4-0
	1-2x12	8-8	8-3	7-8	7-1	6-4	6-1	5-10	5-5	5-0	4-9
	2-2x6	7-4	6-11	6-5	5-11	5-4	5-1	4-10	4-6	4-3	4-0
	2-2x8	9-4	8-9	8-2	7-7	6-9	6-5	6-2	5-9	5-4	5-0
	2-2x10	11-0	10-4	9-8	9-0	8-0	7-8	7-4	6-9	6-4	6-0
	2-2x12	13-0	12-2	11-4	10-7	9-5	9-0	8-7	8-0	7-5	7-0
	3-2x6	9-0	8-6	7-11	7-5	6-8	6-4	6-1	5-8	5-3	4-11
	3-2x8	11-7	10-11	10-3	9-6	8-6	8-1	7-9	7-2	6-8	6-4
	3-2x10	13-11	13-0	12-1	11-2	10-0	9-7	9-2	8-6	7-11	7-6
	3-2x12	16-3	15-3	14-3	13-3	11-10	11-3	10-9	10-0	9-4	8-10
Douglas fir-larch, Hem-fir, Spruce-pine-fir	1-2x6	4-5	4-1	3-9	3-6	3-0	2-10	2-8	2-5	2-3	2-1
	1-2x8	5-11	5-6	5-1	4-8	4-0	3-9	3-6	3-2	2-11	2-9
	1-2x10	7-1	6-8	6-3	5-10	5-1	4-9	4-6	4-1	3-9	3-6
	1-2x12	8-3	7-9	7-3	6-9	6-0	5-9	5-6	5-0	3-9	3-6
	2-2x6	6-6	6-1	5-8	5-3	4-9	4-6	4-4	3-11	3-7	3-3
	2-2x8	8-8	8-2	7-7	7-1	6-4	6-0	5-9	5-2	4-8	4-4
	2-2x10	10-8	10-0	9-3	8-7	7-9	7-4	7-0	6-6	6-0	5-6
	2-2x12	12-4	11-7	10-9	10-0	8-11	8-6	8-2	7-7	7-1	6-8
	3-2x6	8-2	7-8	7-2	6-8	6-0	5-9	5-6	5-1	4-9	4-6
	3-2x8	10-11	10-3	9-6	8-10	7-11	7-7	7-3	6-8	6-3	5-11
	3-2x10	13-4	12-6	11-8	10-10	9-8	9-3	8-10	8-2	7-8	7-2
	3-2x12	15-6	14-6	13-6	12-7	11-3	10-9	10-3	9-6	8-11	8-5
Redwood, Western cedars, Ponderosa pine, Red pine	1-2x6	4-5	4-2	3-10	3-7	3-1	2-11	2-9	2-6	2-3	2-2
	1-2x8	5-8	5-4	4-11	4-7	4-1	3-10	3-7	3-3	3-0	2-10
	1-2x10	6-11	6-6	6-0	5-7	5-0	4-9	4-7	4-2	3-10	3-7
	1-2x12	8-0	7-6	7-0	6-6	5-10	5-7	5-4	4-11	4-7	4-4
	2-2x6	6-7	6-2	5-9	5-4	4-10	4-7	4-5	4-0	3-8	3-4
	2-2x8	8-4	7-10	7-4	6-10	6-1	5-10	5-7	5-2	4-10	4-5
	2-2x10	12-2	9-7	8-11	8-4	7-5	7-1	6-9	6-3	5-10	5-6
	2-2x12	11-9	11-1	10-4	9-8	8-7	8-2	7-10	7-3	6-10	6-5
	3-2x6	8-1	7-8	7-2	6-9	6-0	5-9	5-6	5-1	4-9	4-6
	3-2x8	10-6	9-10	9-2	8-6	7-7	7-3	6-11	6-5	6-0	5-8
	3-2x10	12-9	12-0	11-2	10-5	9-4	8-11	8-6	7-10	7-4	6-11
	3-2x12	14-10	13-11	13-0	12-1	10-9	10-3	9-10	9-1	8-6	8-1

- a. No. 2 grade or better.
b. Interpolation is only allowed for conditions with zero Deck Joist Cantilever Length, DJCL. Extrapolation is not allowed.
c. For deck beams supporting a single span of joists with or without joist cantilever.
d. Deck Beam Cantilever Lengths, DBCL, are limited to the actual Deck Beam Span Length, DBSL, divided by 4 (DBSL/4).
e. Beam depth shall be equal to or greater than the depth of intersecting joist for a flush beam connection.

1 Maximum Deck Beam Span Lengths For Ground Snow Loads ≤ 40 PSF (from ORSC Table R507.5(1))

S24



BCD

Building Codes
Division

Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS

NO.	DATE

Tables
Sheet

S24

MAXIMUM DECK BEAM SPAN LENGTHS, DBSL — ≤ 50 PSF GROUND SNOW LOAD

	JOIST SPAN (feet)	DECK JOIST SPAN LENGTH, DJSL, AND DECK JOIST CANTILEVER LENGTH ^b , DJCL (feet & feet)									
	6	6 & 0	6 & 1.5								
	8		8 & 0	8 & 1	8 & 2						
	10			10 & 0	10 & 1	10 & 2.5					
	12				12 & 0	12 & 1	12 & 2	12 & 3			
	14					14 & 0	14 & 1	14 & 2	14 & 3.5		
	16						16 & 0	16 & 1	16 & 2.5	16 & 4	
	18							18 & 0	18 & 1.5	18 & 3	18 & 4.5
BEAM SPECIES ^a	BEAM SIZE ^e	MAXIMUM DECK BEAM SPAN LENGTH ^{b,c,d} , DBSL (feet-inches)									
Southern pine	1-2x6	4-9	4-6	4-2	3-11	3-6	3-4	3-2	2-11	2-9	2-7
	1-2x8	6-2	5-9	5-4	4-11	4-5	4-2	4-0	3-9	3-6	3-3
	1-2x10	7-2	6-9	6-3	5-10	5-3	5-0	4-9	4-5	4-2	3-11
	1-2x12	8-6	8-0	7-5	6-11	6-2	5-11	5-8	5-3	4-11	4-7
	2-2x6	7-1	6-8	6-2	5-9	5-2	4-11	4-9	4-4	4-1	3-10
	2-2x8	9-1	8-6	7-11	7-4	6-7	6-3	6-0	5-7	5-2	4-11
	2-2x10	10-9	10-1	9-5	8-9	7-10	7-5	7-1	6-7	6-2	5-10
	2-2x12	12-9	11-11	11-1	10-3	9-2	8-9	8-5	7-9	7-3	6-10
	3-2x6	8-3	7-11	7-6	7-2	6-6	6-2	5-11	5-6	5-1	4-10
	3-2x8	11-0	10-5	9-10	9-3	8-3	7-10	7-6	6-11	6-6	6-2
	3-2x10	13-6	12-8	11-9	10-11	9-9	8-4	8-11	8-3	7-9	7-3
	3-2x12	15-11	14-11	13-11	12-11	11-6	11-0	10-6	9-9	9-1	8-7
Douglas fir-larch, Hem-fir, Spruce-pine-fir	1-2x6	4-3	4-0	3-8	3-5	2-11	2-9	2-7	2-4	2-2	2-0
	1-2x8	5-9	5-4	4-11	4-7	3-11	3-8	3-5	3-1	2-10	2-8
	1-2x10	7-0	6-7	6-1	5-8	4-11	4-8	4-5	4-0	3-8	3-5
	1-2x12	8-1	7-7	7-1	6-7	5-11	5-7	5-4	4-10	4-6	4-2
	2-2x6	6-5	6-0	5-7	5-2	4-7	4-4	4-2	3-10	3-5	3-2
	2-2x8	8-6	8-0	7-5	6-11	6-2	5-11	5-8	5-0	4-7	4-2
	2-2x10	10-5	9-9	9-1	8-5	7-7	7-3	6-11	6-4	5-10	5-4
	2-2x12	12-1	11-4	10-7	9-10	8-9	8-4	8-0	7-5	6-11	6-6
	3-2x6	8-0	7-6	7-0	6-6	5-9	5-6	5-3	4-11	4-7	4-4
	3-2x8	10-8	10-0	9-4	8-8	7-9	7-5	7-1	6-6	6-1	5-8
	3-2x10	13-1	12-3	11-5	10-7	9-6	9-1	8-8	8-0	7-6	7-0
	3-2x12	15-2	14-3	13-3	12-4	11-0	10-6	10-1	9-4	8-9	8-3
Redwood, Western cedars, Ponderosa pine, Red pine	1-2x6	4-4	4-1	3-9	3-6	3-0	2-10	2-8	2-5	2-3	2-1
	1-2x8	5-6	5-2	4-10	4-6	4-0	3-9	3-6	3-2	2-11	2-9
	1-2x10	6-9	6-4	5-11	5-6	4-11	4-8	4-6	4-1	3-9	3-6
	1-2x12	7-10	7-4	6-10	6-4	5-8	5-5	5-2	4-10	4-6	4-3
	2-2x6	6-6	6-1	5-8	5-3	4-8	4-6	4-4	3-11	3-6	3-3
	2-2x8	8-2	7-8	7-2	6-8	5-11	5-8	5-5	5-0	4-8	4-3
	2-2x10	10-0	9-5	8-9	8-2	7-3	6-11	6-8	6-2	5-9	5-5
	2-2x12	11-8	10-11	10-2	9-5	8-5	8-0	7-8	7-2	6-8	6-3
	3-2x6	7-5	7-1	6-9	6-5	5-11	5-8	5-5	5-0	4-8	4-5
	3-2x8	9-10	9-4	8-10	8-4	7-5	7-1	6-10	6-4	5-11	5-7
	3-2x10	12-6	11-9	10-11	10-2	9-1	8-8	8-4	7-8	7-2	6-9
	3-2x12	14-7	13-8	12-9	11-10	10-7	10-1	9-8	8-11	8-4	7-10

- a. No. 2 grade or better.
b. Interpolation is only allowed for conditions with zero Deck Joist Cantilever Length, DJCL. Extrapolation is not allowed.
c. For deck beams supporting a single span of joists with or without joist cantilever.
d. Deck Beam Cantilever Lengths, DBCL, are limited to the actual Deck Beam Span Length, DBSL, divided by 4 (DBSL/4).
e. Beam depth shall be equal to or greater than the depth of intersecting joist for a flush beam connection.

1

S25

Maximum Deck Beam Span Lengths For Ground Snow Loads ≤ 50 PSF (from ORSC Table R507.5(2))



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS

NO.	DATE

Tables
Sheet

S25

MAXIMUM DECK BEAM SPAN LENGTHS, DBSL — ≤ 60 PSF GROUND SNOW LOAD

	JOIST SPAN (feet)	DECK JOIST SPAN LENGTH, DJSL, AND DECK JOIST CANTILEVER LENGTH ^b , DJCL (feet & feet)									
	6	6 & 0	6 & 1.5								
	8		8 & 0	8 & 1	8 & 2						
	10			10 & 0	10 & 1	10 & 2.5					
	12				12 & 0	12 & 1	12 & 2	12 & 3			
	14					14 & 0	14 & 1	14 & 2	14 & 3.5		
	16						16 & 0	16 & 1	16 & 2.5	16 & 4	
	18							18 & 0	18 & 1.5	18 & 3	18 & 4.5
BEAM SPECIES ^a	BEAM SIZE ^e	MAXIMUM DECK BEAM SPAN LENGTH ^{b,c,d} , DBSL (feet-inches)									
Southern pine	1-2x6	4-5	4-2	3-10	3-7	3-3	3-1	2-11	2-9	2-6	2-5
	1-2x8	5-7	5-3	4-11	4-7	4-1	3-11	3-9	3-5	3-3	3-0
	1-2x10	6-8	6-3	5-10	5-5	4-10	4-7	4-5	4-1	3-10	3-7
	1-2x12	7-11	7-5	6-11	6-5	5-9	5-6	5-3	4-10	4-6	4-3
	2-2x6	6-7	6-2	5-9	5-4	4-9	4-6	4-4	4-0	3-9	3-7
	2-2x8	8-4	7-10	7-4	6-10	6-1	5-10	5-7	5-2	4-10	4-6
	2-2x10	9-10	9-4	8-8	8-1	7-3	6-11	6-7	6-1	5-8	5-4
	2-2x12	11-9	11-0	10-3	9-6	8-6	8-1	7-9	7-2	6-9	6-4
	3-2x6	7-9	7-5	7-1	6-9	6-0	5-9	5-6	5-1	4-9	4-6
	3-2x8	10-4	9-9	9-1	8-6	7-8	7-3	6-11	6-5	6-0	5-8
	3-2x10	12-5	11-8	10-11	10-2	9-1	8-8	8-3	7-8	7-2	6-9
	3-2x12	14-8	13-9	12-10	11-11	10-8	10-2	9-9	9-0	8-5	7-11
Douglas fir-larch, Hem-fir, Spruce-pine-fir	1-2x6	3-11	3-8	3-4	3-1	2-8	2-6	2-4	2-2	2-0	1-10
	1-2x8	5-5	5-0	4-6	4-1	3-6	3-3	3-1	2-10	2-7	2-5
	1-2x10	6-6	6-1	5-7	5-2	4-6	4-3	4-0	3-7	3-4	3-2
	1-2x12	7-7	7-1	6-7	6-1	5-5	5-1	4-10	4-5	4-1	3-10
	2-2x6	5-10	5-6	5-1	4-9	4-3	4-0	3-10	3-5	3-1	2-10
	2-2x8	7-11	7-5	6-11	6-5	5-9	5-4	5-0	4-6	4-1	3-9
	2-2x10	9-7	9-0	8-5	7-10	7-0	6-8	6-4	5-9	5-2	4-10
	2-2x12	11-2	10-6	9-9	9-1	8-1	7-9	7-5	6-10	6-4	5-10
	3-2x6	7-4	6-11	6-5	6-0	5-4	5-1	4-11	4-6	4-2	3-10
	3-2x8	9-10	9-3	8-7	8-0	7-2	6-10	6-6	6-1	5-6	5-0
	3-2x10	12-1	11-4	10-7	9-10	8-9	8-4	8-0	7-5	6-11	6-5
	3-2x12	13-6	13-2	11-9	11-5	10-2	9-9	9-4	8-7	8-1	7-7
Redwood, Western cedars, Ponderosa pine, Red pine	1-2x6	4-0	3-9	3-5	3-2	2-9	2-7	2-5	2-2	2-0	1-11
	1-2x8	5-2	4-10	4-6	4-2	3-7	3-4	3-2	2-11	2-8	2-6
	1-2x10	6-2	5-10	5-5	5-1	4-6	4-3	4-1	3-8	3-5	3-3
	1-2x12	7-3	6-10	6-4	5-11	5-3	5-0	4-10	4-5	4-2	3-11
	2-2x6	5-11	5-7	5-2	4-10	4-4	4-1	3-11	3-6	3-2	2-11
	2-2x8	7-6	7-1	6-7	6-2	5-6	5-3	5-0	4-7	4-2	3-10
	2-2x10	9-3	8-8	8-1	7-6	6-9	6-5	6-2	5-8	5-4	4-11
	2-2x12	10-8	10-1	9-5	8-9	7-10	7-6	7-2	6-7	6-2	5-10
	3-2x6	6-11	6-8	6-4	6-1	5-5	5-2	5-0	4-7	4-3	3-11
	3-2x8	9-3	8-9	8-3	7-9	6-11	6-7	6-4	5-10	5-5	5-3
	3-2x10	11-8	10-11	10-2	9-5	8-5	8-0	7-8	7-3	6-8	6-3
	3-2x12	13-6	12-8	11-9	10-11	9-9	8-4	8-11	8-3	7-9	7-3

- a. No. 2 grade or better.
b. Interpolation is only allowed for conditions with zero Deck Joist Cantilever Length, DJCL. Extrapolation is not allowed.
c. For deck beams supporting a single span of joists with or without joist cantilever.
d. Deck Beam Cantilever Lengths, DBCL, are limited to the actual Deck Beam Span Length, DBSL, divided by 4 (DBSL/4).
e. Beam depth shall be equal to or greater than the depth of intersecting joist for a flush beam connection.

1 Maximum Deck Beam Span Lengths For Ground Snow Loads ≤ 60 PSF (from ORSC Table R507.5(3))

S26



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS

NO.	DATE

Tables
Sheet

S26

MAXIMUM DECK BEAM SPAN LENGTHS, DBSL — ≤ 70 PSF GROUND SNOW LOAD

	JOIST SPAN (feet)	DECK JOIST SPAN LENGTH, DJSL, AND DECK JOIST CANTILEVER LENGTH ^b , DJCL (feet & feet)									
	6	6 & 0	6 & 1.5								
	8		8 & 0	8 & 1	8 & 2						
	10			10 & 0	10 & 1	10 & 2.5					
	12				12 & 0	12 & 1	12 & 2	12 & 3			
	14					14 & 0	14 & 1	14 & 2	14 & 3.5		
	16						16 & 0	16 & 1	16 & 2.5	16 & 4	
	18							18 & 0	18 & 1.5	18 & 3	18 & 4.5
BEAM SPECIES ^a	BEAM SIZE ^e	MAXIMUM DECK BEAM SPAN LENGTH ^{b,c,d} , DBSL (feet-inches)									
Southern pine	1-2x6	4-2	3-11	3-7	3-4	3-0	2-10	2-9	2-6	2-4	2-3
	1-2x8	5-4	4-11	4-8	4-3	3-10	3-8	3-6	3-3	3-0	2-10
	1-2x10	6-2	5-10	5-5	5-1	4-6	4-4	4-2	3-10	3-7	3-4
	1-2x12	7-4	6-11	6-5	6-0	5-4	5-1	4-11	4-6	4-3	4-0
	2-2x6	6-3	5-9	5-4	5-0	4-6	4-3	4-1	3-9	3-6	3-4
	2-2x8	7-10	7-4	6-10	6-4	5-8	5-5	5-2	4-10	4-6	4-3
	2-2x10	9-6	8-9	8-2	7-7	6-9	6-5	6-2	5-8	5-4	5-0
	2-2x12	10-11	10-3	9-7	8-11	8-0	7-7	7-3	6-9	6-3	5-11
	3-2x6	7-4	7-0	6-7	6-3	5-7	5-4	5-1	4-9	4-5	4-2
	3-2x8	9-10	9-3	8-7	8-0	7-2	6-10	6-6	6-0	5-8	5-4
	3-2x10	11-7	10-11	10-2	9-6	8-6	8-1	7-9	7-2	6-8	6-4
	3-2x12	13-9	12-11	12-0	11-2	10-0	9-6	9-1	8-5	7-11	7-5
Douglas fir-larch, Hem-fir, Spruce-pine-fir	1-2x6	3-8	3-5	3-1	2-10	2-5	2-3	2-2	2-0	1-10	1-9
	1-2x8	4-10	4-7	4-1	3-8	3-2	3-0	2-10	2-7	2-5	2-4
	1-2x10	6-1	5-8	5-2	4-9	4-1	3-10	3-8	3-4	3-1	2-11
	1-2x12	7-0	6-7	6-1	5-8	5-0	4-9	4-6	4-1	3-10	3-7
	2-2x6	5-6	5-2	4-10	4-6	4-0	3-8	3-5	3-1	2-10	2-7
	2-2x8	7-4	6-11	6-5	6-0	5-3	4-11	4-7	4-1	3-8	3-5
	2-2x10	8-11	8-5	7-10	7-4	6-6	6-2	5-10	5-2	4-9	4-5
	2-2x12	10-6	9-10	9-2	8-6	7-7	7-3	6-11	6-4	5-9	5-4
	3-2x6	6-11	6-6	6-0	5-7	5-0	4-9	4-7	4-2	3-9	3-5
	3-2x8	9-3	8-8	8-1	7-6	6-8	6-4	6-1	5-6	5-0	4-7
	3-2x10	11-3	10-7	9-10	9-2	8-2	7-10	7-6	6-11	6-4	5-10
	3-2x12	13-2	12-4	11-6	10-8	9-7	9-2	8-9	8-1	7-7	7-1
Redwood, Western cedars, Ponderosa pine, Red pine	1-2x6	3-9	3-6	3-2	2-11	2-6	2-4	2-3	2-0	1-11	1-9
	1-2x8	4-10	4-6	4-2	3-10	3-3	3-1	2-11	2-8	2-6	2-4
	1-2x10	5-10	5-6	5-1	4-9	4-2	3-11	3-9	3-5	3-2	3-0
	1-2x12	6-9	6-4	5-11	5-6	4-11	4-8	4-6	4-2	3-11	3-8
	2-2x6	5-7	5-3	4-11	4-7	4-1	3-9	3-6	3-2	2-11	2-8
	2-2x8	7-1	6-8	6-2	5-9	5-2	4-11	4-8	4-2	3-10	3-6
	2-2x10	8-8	8-2	7-7	7-1	6-4	6-0	5-9	5-4	4-10	4-6
	2-2x12	10-0	9-5	8-9	8-2	7-4	7-0	6-8	6-2	5-9	5-5
	3-2x6	6-8	6-4	6-0	5-8	5-1	4-10	4-8	4-3	3-10	3-6
	3-2x8	8-10	8-4	7-9	7-3	6-5	6-2	5-11	5-5	5-1	4-8
	3-2x10	10-10	10-2	9-6	8-10	7-11	7-6	7-2	6-8	6-3	5-11
	3-2x12	12-7	11-10	11-0	10-3	9-2	8-9	8-4	7-9	7-3	6-10

- a. No. 2 grade or better.
b. Interpolation is only allowed for conditions with zero Deck Joist Cantilever Length, DJCL. Extrapolation is not allowed.
c. For deck beams supporting a single span of joists with or without joist cantilever.
d. Deck Beam Cantilever Lengths, DBCL, are limited to the actual Deck Beam Span Length, DBSL, divided by 4 (DBSL/4).
e. Beam depth shall be equal to or greater than the depth of intersecting joist for a flush beam connection.

1 Maximum Deck Beam Span Lengths For Ground Snow Loads ≤ 70 PSF (from ORSC Table R507.5(4))

S27



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN

EXTERIOR DECK

2023 ORSC

REVISIONS

NO.	DATE

Tables
Sheet

S27

[A] DECKING [R507.7] (Sheet S16)

Material: ☐ preservative-treated ☐ naturally durable (e.g. cedar) ☐ plastic composite
Nominal Size: ☐ 2-inch-thick wood ☐ 5/4-in-thick wood ☐ plastic composite (attach report)
Orientation: ☐ perpendicular to joists ☐ diagonal to joists

[B] JOISTS [R507.6] (Sheets S18-19)

Species: _____
Size: ☐ 2x6 ☐ 2x8 ☐ 2x10 ☐ 2x12
Spacing: ☐ 12 in. ☐ 16 in. ☐ 24 in.
Deck Joist Span Length (DJSL): _____ ft. - _____ in.
Deck Joist Cantilever Length (DJCL): _____ ft. - _____ in.

[C] BEAMS [R507.5] (Sheets S24-27)

Species: _____
Plies: ☐ 1 ☐ 2 ☐ 3
Size: ☐ 2x6 ☐ 2x8 ☐ 2x10 ☐ 2x12 ☐ _____ x _____ (subject to review)
Deck Beam Span Length (DBSL): _____ ft. - _____ in.
Deck Beam Cantilever Length (DBCL): _____ ft. - _____ in.

[D] POSTS [R507.4] (Sheets S20-S21)

Species: _____
Height: _____ ft. - _____ in.
End posts & footings tributary area = (DJSL/2 + DJCL)(DBSL/2 + DBCL): _____ ft.²
End posts size: ☐ 4x4 ☐ 4x6 ☐ 6x6 ☐ 8x8
Mid posts & footings tributary area = (DJSL/2 + DJCL)(DBSL): _____ ft.²
Mid posts size: ☐ 4x4 ☐ 4x6 ☐ 6x6 ☐ 8x8

[E] FOOTINGS [R507.3] (Sheets S22-S23 using same tributary area as supported post)

End footings size: _____ in. ☐ square ☐ round **Thickness:** _____ in.
Mid footings size: _____ in. ☐ square ☐ round **Thickness:** _____ in.

[F] LEDGER [R507.9.1] (Sheet S17)

Size: ☐ 2x8 ☐ 2x10 ☐ 2x12
Fasteners: ☐ 1/2" through-bolts ☐ 1/2" lag screws ☐ alternate (attach report)
Fastener spacing: _____ in. on-center

[G] LATERAL LOAD CONNECTION [R507.9.2]

☐ (4) 750 pound hold-down tension devices (detail 1/S4)
☐ (2) 1,500 pound hold-down tension devices (detail 2/S6)
☐ code-compliant alternate (attach details/report)

NOTE: THE PERMIT APPLICANT SHALL PROVIDE THEIR PROJECT-SPECIFIC PRESCRIPTIVE DESIGN BY CHECKING THE APPLICABLE BOXES AND ENTERING THE APPROPRIATE INFORMATION ABOVE PRIOR TO PERMIT APPLICATION.

CLIMATIC DESIGN CRITERIA

The permit applicant shall obtain a site-specific summary report from the Oregon Design Criteria Hub and attach it to this permit-ready plan. The Oregon Design Criteria Hub can be accessed here: <https://www.oregon.gov/bcd/codes-stand/Pages/design-criteria.aspx>. The summary report provides the ground snow load, frost line depth, and weathering and decay potential needed to check the climatic design criteria boxes below.

GROUND SNOW LOAD (psf) [R301.2]:

☐ ≤ 40 ☐ ≤ 50 ☐ ≤ 60 ☐ ≤ 70

FROST LINE DEPTH (inches) [R301.2]

☐ 12 ☐ 18 ☐ 24

WEATHERING POTENTIAL [R301.2]

☐ moderate (use 3,000 psi min concrete)
☐ severe (use 3,500 psi min concrete)

DECAY POTENTIAL [R301.2]

☐ slight ☐ moderate

[H] GUARD SYSTEM [R507.10]

☐ details 1-3/S05 & 1/S06
☐ code-compliant alternate system (attach details/report)

[I] STAIRWAY [R311.7]

☐ not provided/not applicable (N/A)
☐ cut stringers - see sheets S7-S11 (provide project-specific info on sheet S8)
☐ solid stringers - see sheets S7, S12-S15 (provide project-specific info on sheet S12)
☐ code-compliant alternate system (attach details/report)



BCD
Building Codes
Division
Department of
Consumer and
Business Services

PERMIT-READY PLAN
EXTERIOR DECK
2023 ORSC

REVISIONS	
NO.	DATE

Project-Specific
Design
Parameters
Sheet

S28