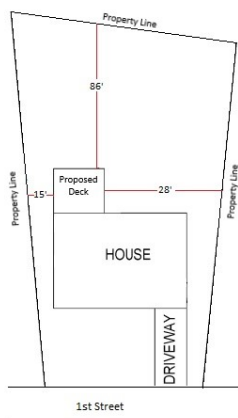


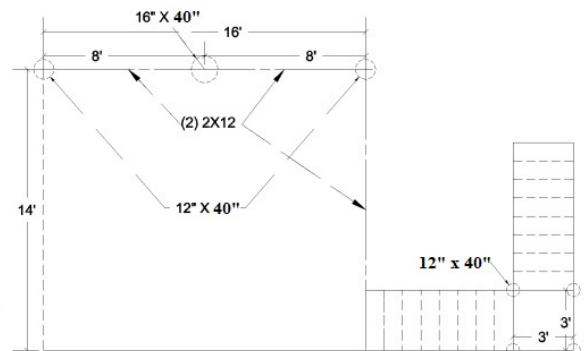
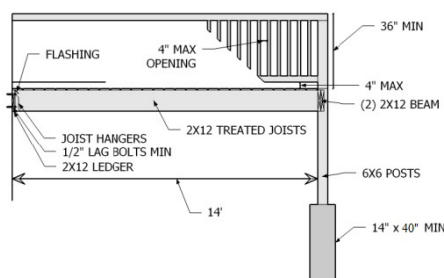
# City of Woonsocket Residential Deck Guidelines

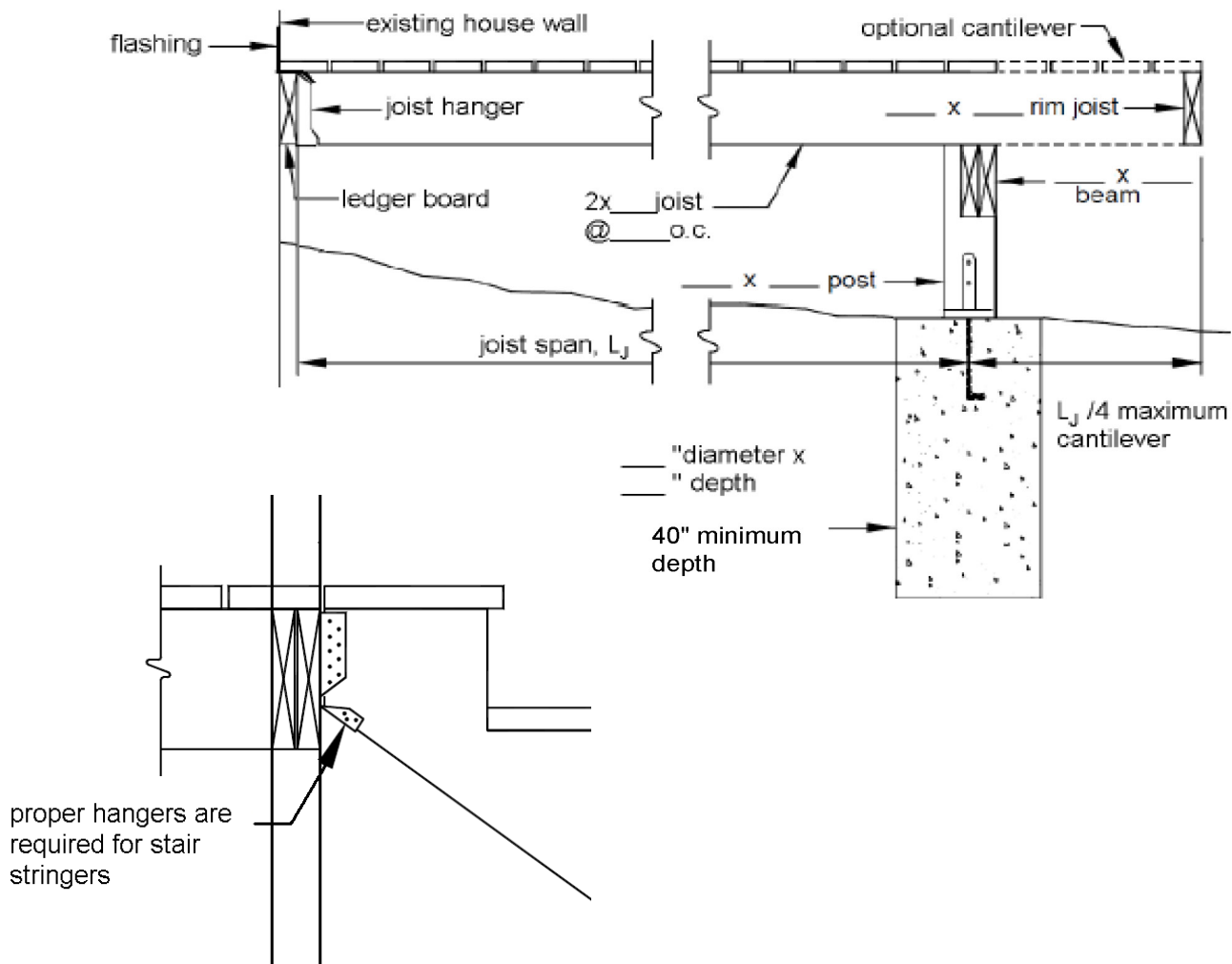
1. Permits are required for all new decks and deck replacements. Repairs on existing decks involving the handrails, guardrails, floor joists, beams, posts or footings require a permit. Permit applications must include a copy of a plot or site plan, a cross section drawing and a footing layout plan.
    - a. The site plan must show the proposed deck in relation to the house, all streets must be shown/labeled, and all lot lines must be shown with the distances labeled from each side of the proposed deck to the lot lines.
    - b. The cross section must show all the construction details from the footings to the house connection.
    - c. The footing layout plan must clearly show the deck size, footing diameter, depth and locations.
  2. All lumber used in construction that is exposed to the weather must be naturally durable or pressure-preservative-treated wood.
  3. Footings for decks must extend 40" minimum below grade to the bottom of the footing if the deck is attached to the residence. The footing diameter will vary depending on the size of the deck and the load on the footing but in no case should be less than 12" diameter. **Hot tubs or pools cannot be supported on decks unless the plans are approved by a Rhode Island licensed engineer.**
  4. Posts must be anchored to the footing by an approved mechanical fastener.
  5. Extreme care should be taken to assure the ledger board is properly fastened to the house.
- Generally, a ½" diameter lag bolt installed in accordance with figures R507.2.1(1) and R507.2.1(2) is sufficient to connect the ledger to the band joist, however, this will vary, see section R507.2 and table R507.2 for details. Lateral load tension devices will be required to be installed in accordance with section R507.2.4 and figures R507.2.3(1) and R507.2.3(2).
6. A 36" min. high guardrail is required around any deck that is more than 30" above the adjoining grade. A 34" min. high guardrail is required at any open sides of stairs more than 30" above grade. No guardrail shall allow the passage of a 4" sphere through the rail at any location within the guardrail.
  7. A 34" to 38" handrail is required on one side of any stairway with four (4) or more risers (if both sides are open see # 6 above). The ends of the handrails must terminate into, or return to, the posts or floor.
  8. Refer to tables R507.5, R507.6 and R507.8 for joist and beam sizes and spans as well as post sizes. If you have any unanswered questions, you may also refer to document DCA 6 from The American Wood Council.
  9. Any product used in the construction of the deck that has manufacturer specific installation instructions must be installed per that manufacturer's instructions and according to the 2019 State of RI Building Code. The installation manual must be on site and available for the inspector.
  10. Decks require a footing, a framing and a final inspection. If the underside of a deck that is over 6ft off the ground is left open, the framing and the final inspections can be combined.



Site Plan

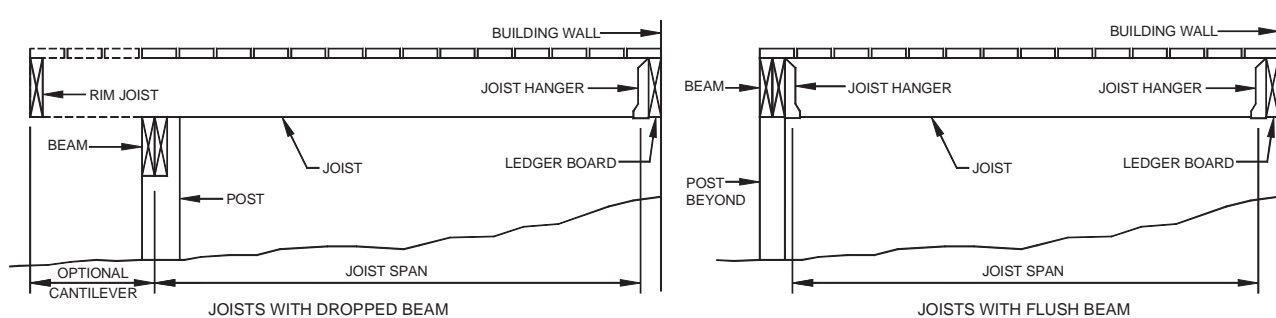
## REQUIRED PLAN EXAMPLES





## Floor Joists

Floor joist span is determined by the size of the floor joist. The measurement must be made from the inside face of the beam to the inside face of the ledger board for flush mounted beams and the middle of the beam to the inside face of the ledger board for drop beams. This distance is the floor joist span. Different sizes of floor joists will be able to span greater distances. The floor joist must be attached to the ledger by hangers. If the floor joists are cantilevered at the beam, the maximum cantilever can be no more than one-fourth ( $1/4$ ) of the actual, adjacent joist span per section R507.5, and must be attached in a way to resist uplift. All joist ends and bearing locations shall be provided with lateral restraint to prevent rotation.



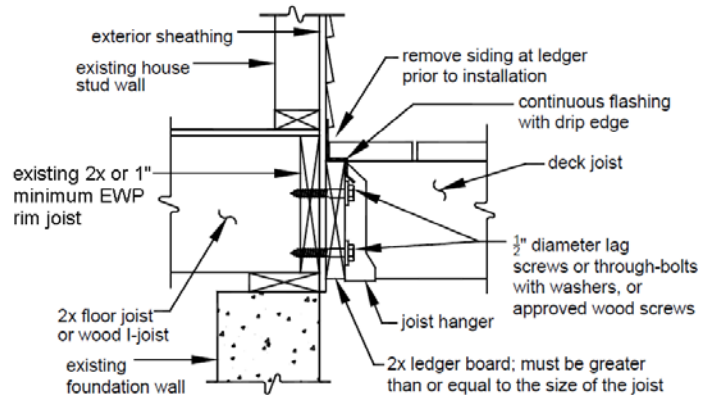
1. Deck must be attached to a continuous rim joist or it must be designed as a self-supporting deck.
2. The tip of the lag screw shall fully extend beyond the inside face of the rim joist.
3. Ledgers shall be flashed to prevent water from contacting the house rim joist.
4. Lag screws and bolts need to be staggered along the length of the ledger.
5. Lag screws and bolts shall be placed at least 2" in from the bottom and tops of the ledger and at least 2" from the ends.
6. The width of the ledger shall not be less than the width of the floor joists.
7. Lateral load connectors shall be installed per section R507.2.4. see figures R507.2.3(1) and R507.2.3(2)

## LEDGER LAG SPACING (Staggered)

JOIST SPAN	6'	8'	10'	12'	14'	16'	18'
MINIMUM LAG SCREW	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
MAXIMUM LAG SPACING	30"	23"	18"	15"	13"	11"	10"

## Ledger Attachment

Spacing above is based on 1/2" lag screw with 1/2" sheathing. For other approved bolts see table R507.2 for maximum spacing requirements.



## 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.

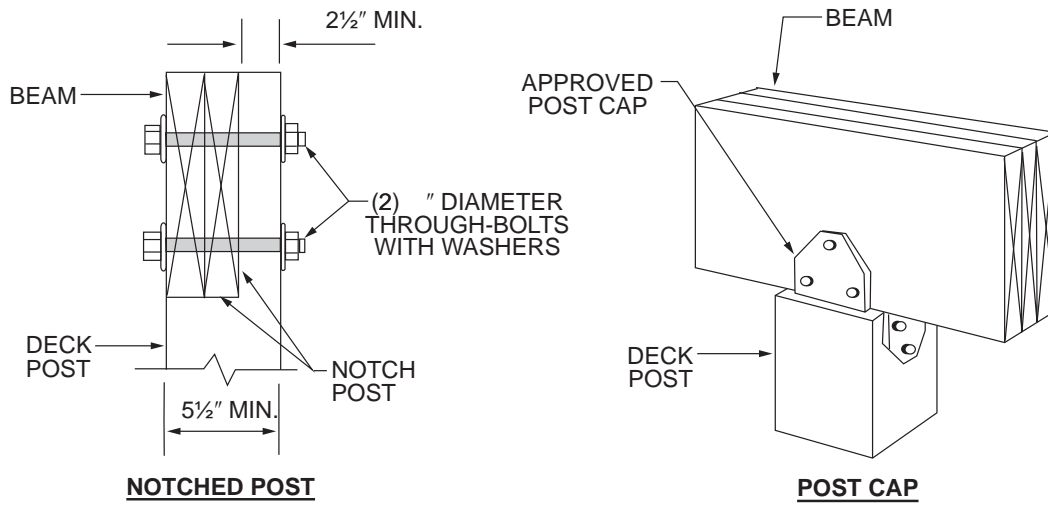
\*Any post that is to be notched must be a minimum 6" x 6" Post and must be done in accordance with Figure R507.7.1 (see below).

**TABLE R507.8  
DECK POST HEIGHT<sup>a</sup>**

DECK POST SIZE	MAXIMUM HEIGHT <sup>a</sup>
4 × 4	8'
4 × 6	8'
6 × 6	14'

For SI: 1 foot = 304.8 mm.

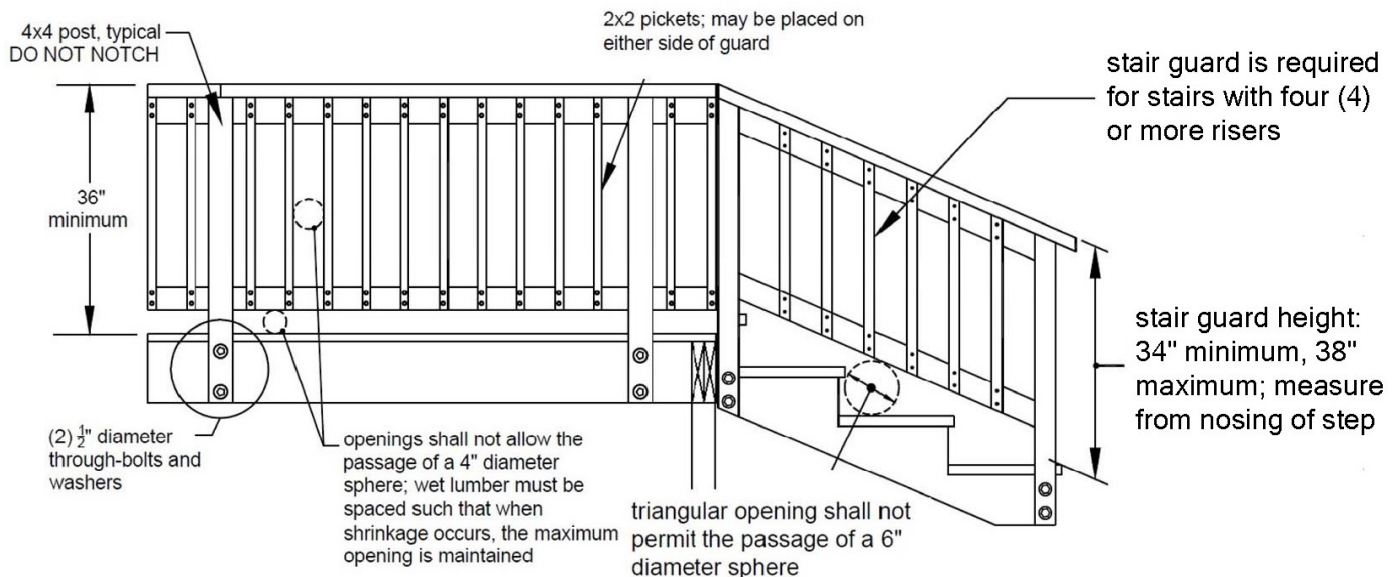
a. Measured to the underside of the beam.



For SI: 1 inch = 25.4 mm.

**FIGURE R507.7.1**  
**DECK BEAM TO DECK POST**

## Guardrails



## Handrails

