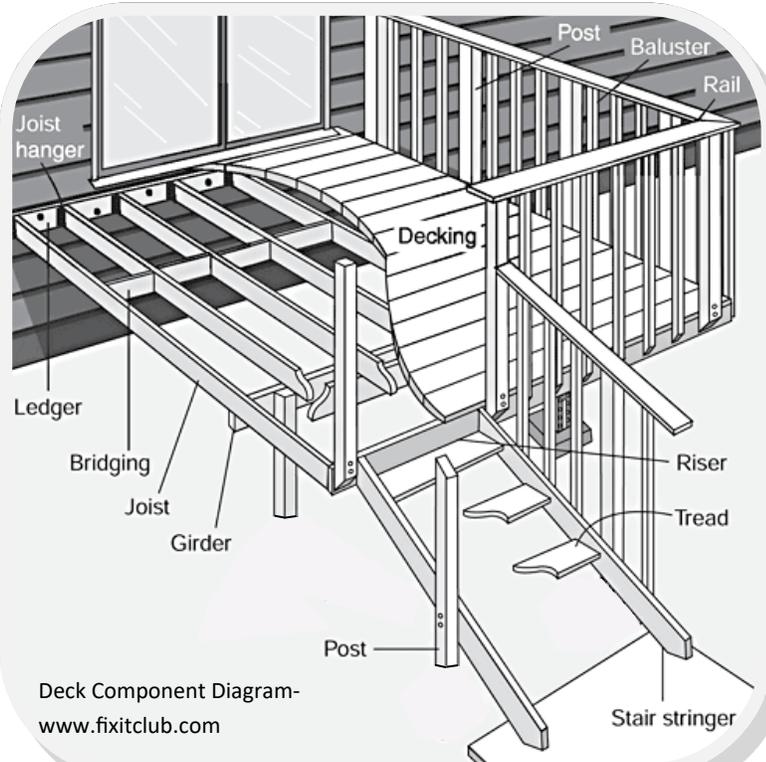


# Property Owner's Guide to Deck Safety

This guide is being provided to raise awareness on deck safety, particularly regarding structural components that may become compromised over time in a harsh coastal environment.

## KNOW YOUR DECK COMPONENTS

First and foremost, every homeowner should familiarize themselves with the terminology used when referring to their deck components. Knowing the name of the component as well as what it looks like will go a long way when determining the safety of your deck. Common components are pier, post, ledger, joist, girder, bridging, decking, stair stringer, tread, riser, baluster and rail. Other hardware components include joist hanger, lag bolts/screws, washers, nuts, and nails. The picture to the right illustrates these common components.



## KNOW WHAT TO CHECK

As a general reference, these items will give you a clear indication as to the safety of your decking system. Talk to a licensed home inspector or building contractor to assist

### Deck Attachment to House



Closely check the attachment points between the deck and the house, including the ledger and fasteners. If the deck is connected to the house with a ledger, it should be attached with 5/8 inch bolts. Pay close attention to corroded fasteners.

### Support Posts and Pilings



Investigate the deck support posts/pilings for bug damage, rot, or decay. Inspect rot with a screwdriver or ice pick. Decay may be present in wood if you can easily penetrate  $\frac{1}{4}$  –  $\frac{1}{2}$  inch, break off a sliver of wood without splinters, or if the wood is soft and spongy.

### Flashing at the House



Improper flashing may lead to rot over time. Flashing should run from top to bottom between the house and the ledger. There should be counter flashing on the house that bends over the ledger and joists covered by house wrap.



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## KNOW WHAT TO CHECK (cont’d)

### Proper joist support

Joists can be supported by either a ledger board or by joist hangers. Problems to look for concerning joist hangers:

- Nails should be installed in every hole with proper nails. Most screws are not approved for use with joist hangers.
- Joist hangers shouldn’t be bent or cut. Change rusted joist hangers.
- The joists should be seated fully in the joist hanger.

A minimum 2 x 2 ledger with three, 16 penny (16d) nails under each joist is the other method of supporting the joist.



### Stairs and Guardrails

Check guardrails or handrails to be sure they are firmly held in place. Also check the risers and stair stringers to be certain they are securely attached and not decayed. *Current Code Requirements*— Maximum post spacing for the guardrail is 8 foot on-center, post to post, connected to the deck with two, 3/8 inch bolts. If the riser of the stair treads is open, this opening should not allow a 4-inch sphere to pass through. Guardrail height is a minimum 36 inches high above the deck walking surface. Vertical baluster (picket) spacing shall not allow for a 4-inch sphere to pass between balusters. Guardrails with horizontal balusters shall not allow for a 6-inch sphere to pass between balusters.



**Over-spanned Joists**—The joists that support the decking are designed to be a certain length to carry the intended load (weight) of the deck. If joists are too long, they could be at risk of failure and may need additional support. Consult a licensed general contractor or the Nags Head Building Inspections Office with questions. A reference for deck joist spans can be found at — [http://www.southernpine.com/app/uploads/SPtable12\\_060113.pdf](http://www.southernpine.com/app/uploads/SPtable12_060113.pdf)

The Town maintains copies of Appendix M of the 2012 NC Residential Code (pertaining to residential wood decks), which is available at Town Hall. *Helpful deck construction links* — [www.ncdoi.org](http://www.ncdoi.org) [www.NADRA.org](http://www.NADRA.org)

Please note that all components of a deck are structural and repair or replacement requires a building permit. For more information, contact Chief Building Inspector, Cory Tate, at 252-449-6043 or Senior Building Inspector, Steve Szymanski, at 252-449-2005.

