

# Deck Inspection Resources (2020)

by

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Spring is a great time to inspect your deck to make sure it is safe for continued use by your family and friends. The inspection resources listed herein should be useful for accomplishing a meaningful inspection of an existing deck for occupant safety.

## Nailed-Only Deck Ledger Connections

### Anatomy of an Inherently Dangerous Deck

by Frank Woeste

<https://componentadvertiser.com/Portals/0/EasyDNNews/Uploads/220/1707%20ATW.pdf>



*Photo: A nailed-only deck ledger connection is dangerous.*

### Repairs needed for more than 150 decks after balcony collapse

<https://abc6onyourside.com/on-your-side/6-on-your-side/repairs-needed-for-more-than-150-decks-after-balcony-collapse> (14 photos included)



*Photo: Deck with **nailed-only** ledger that was loaded by **only** father and daughter.*

## Deck Inspection

### Evaluating an Existing Residential Deck

by Frank Woeste

<https://componentadvertiser.com/Portals/0/EasyDNNnews/Uploads/207/1708%20ATW.pdf>

### Deck Codes and Standards (Black + Decker, 2017)

by Bruce Barker

<https://www.amazon.com/Black-Decker-Deck-Codes-Standards/dp/1591866855>

### DCA6 Prescriptive Residential Wood Deck Construction Guide

by the American Wood Council

(This document can be used as a benchmark for safe deck details. Frank Woeste)

<https://www.awc.org/pdf/codes-standards/publications/dca/AWC-DCA62015-DeckGuide-1804.pdf>

## Coastal Deck Issues



*Photo: Comparison of a new 1/2-inch carriage bolt and a 1/2-inch carriage bolt after 13-years of coastal deck service*

### Coastal Decks: Red Rust on Decks is a Safety Warning.

by Frank Woeste, Joe Loferski, and Bruce Barker. **ICC BSJ Weekly**, 2019 Sept. 12<sup>th</sup>

<https://www.iccsafe.org/building-safety-journal/bsj-technical/coastal-decks-red-rust-on-decks-is-a-safety-warning>

### Coastal Decks: Red Rust on Decks is a Safety Warning.

by Frank Woeste, Joe Loferski, and Bruce Barker. **ASHI Reporter**, August, 2019.

<http://www.ashireporter.org/HomeInspection/Articles/Coastal-Decks-Red-Rust-on-Decks-Is-a-Safety-Warning-/15420>



*Photo: Coastal joist hanger after wedding party deck collapse*

**Corrosion Information for Connectors and Fasteners with Wood**  
by Simpson Strong-Tie

<https://www.strongtie.com/solutions/corrosion/wood-connectors-fasteners>



*Photo: Coastal North Carolina*

**Safe and durable coastal decks. (Coastal Contractor, 2008)**

by Frank Woeste

[http://www.jlconline.com/how-to/exterior/coastal-resources-safe-and-durable-coastal-decks\\_o](http://www.jlconline.com/how-to/exterior/coastal-resources-safe-and-durable-coastal-decks_o)

## Decay of Deck Components

### Detecting Early Wood Decay

by Cheryl Anderson, Joe Loferski and Frank Woeste

[https://sbio.vt.edu/content/dam/sbio\\_vt\\_edu/documents/Decay\\_article.pdf](https://sbio.vt.edu/content/dam/sbio_vt_edu/documents/Decay_article.pdf)

## Design of Decks and Balconies

### DCA6 Prescriptive Residential Wood Deck Construction Guide

by the American Wood Council

<https://www.awc.org/pdf/codes-standards/publications/dca/AWC-DCA62015-DeckGuide-1804.pdf>

### Typical Deck Details

by Fairfax County, Virginia

<https://www.fairfaxcounty.gov/landdevelopment/sites/landdevelopment/files/assets/documents/pdf/publications/deck-details.pdf>

### Deck Ledger Flashing and Stair Solutions/American Wood Council (2020)

by Mike Guertin.

<https://www.youtube.com/watch?v=aalVZoMn6uk&feature=youtu.be>



*Photo: House band joist with no house wrap or flashing behind the deck ledger*

### AWPA U1-20 Use Category System: User Specification for Treated Wood

(See [Table 2-1 Service Conditions for Use Category Designations](#) for selecting and specifying the appropriate pressure-treated lumber and timbers for deck and balcony constructions.)

<https://awpa.com/images/standards/U1excerpt.pdf>

## Balcony Design is a Life Safety Issue

### Balcony Design – IBC Changes and Wood Durability Considerations

by Frank Woeste, Virginia Tech and Don Bender, Washington State University

<https://cseengineermag.com/article/balcony-design/>

### Five people hospitalized after 4th floor apartment balcony collapses in Grand Forks (Valley News Live, June 8, 2019)

<https://www.valleynewslive.com/content/news/Five-people-hospitalized-after-balcony-collapses-in-Grand-Forks-511010752.html>

### Condo deck collapses, leaving owners in dilemma

(WCPO Cincinnati, Oct., 2018)

<https://www.wcpo.com/money/consumer/dont-waste-your-money/condo-deck-collapses-leaving-owners-in-dilemma>



*Photo: 2018 Balcony Collapse Courtesy WCPO-TV*

### About the Author

Frank Woeste, P.E., is Professor Emeritus at Virginia Tech in Blacksburg, VA. He frequently consults with the public, design professionals, contractors and building code officials on various aspects of engineered-wood construction and residential construction, including decks and balconies. To request additional deck and balcony inspection and design information, e-mail [fwoeste@vt.edu](mailto:fwoeste@vt.edu).