

# Deck Evaluation Checklist

Date: \_\_\_\_\_ Reported By: \_\_\_\_\_

Project Name/Client: \_\_\_\_\_ Year Deck was Built: \_\_\_\_\_

## I. Stairs

A. Not Applicable

B. Are there any visible signs of cracks, decay or over-notching?  No  Yes

1. If yes, where? \_\_\_\_\_

C. Stairway width: \_\_\_\_\_ (Hint: Residential deck stairway width shall not be < 36")

D. Riser Height: \_\_\_\_\_ E. Tread Depth: \_\_\_\_\_

Hint: The greatest riser height or tread depth within a flight of stairs shall not exceed  $\frac{3}{8}$ "

1. Is something restricting the passage of a 4" sphere between the treads?  Yes  No

F. Are there guards and/or handrails on the stairway?  Yes  No

1. Is the handrail height 34"-38"?  Yes  No

2. Is the handrail graspable?  Yes  No

3. Is the opening between the balusters less than  $4\frac{3}{8}$ "?  No  Yes

4. If a separate handrail, does the handrail return to a post or safety terminal?  Yes  No

5. Is there a method to safely support the required load (applied in any direction) and the deflection on the guardrail?  Yes  No *If no, needs attention*

Describe: (e.g.; hardware, post connected to the footings and stringer, etc.)

\_\_\_\_\_

G. Stringer:  Solid  Notched

Hint: Solid stringers are permitted to have a total run of 13'-3" between landings or supports.

Based on AWC DCA6-12, notched stringers are limited to 6' between supports.

1. Span between stringers? \_\_\_\_\_

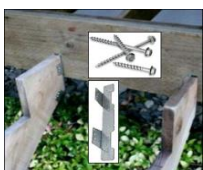
2. Total rise of the stairs? \_\_\_\_\_ Total run of the stairs? \_\_\_\_\_

Hint: Stairs are permitted to have a total vertical rise of 12' between landings.

3. What is supporting/connecting the stringer to the deck?

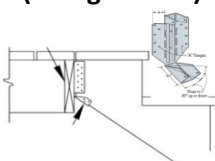
Hint: If "Other" is checked, evaluation by a design professional is recommended as the connection detail from stair stringers to the deck structure is a critical structural connection.

Hardware



Hardware

(stringer flush)



Blocking



Nails, only



Other

4. If the stringers are notched, does the triangular opening formed by the riser, tread & bottom rail of the guard permit the passage of a 6" sphere?  No  Yes

H. Is there a means of artificial illumination for the stairs?  Yes  No

I. Are there any visible signs of red rust on the hardware (fasteners or connectors)?  No  Yes

If yes, where? \_\_\_\_\_

J. If connectors are used, are all the holes filled?  Yes  No

If no, where? \_\_\_\_\_

## Deck Evaluation Checklist

### II. Footings/Deck Support and Posts/Columns

A. Footing/Deck Support-type?  Unable to Determine  Pier, only  Pad or Spread

No footing/Improper footing  Other (describe): \_\_\_\_\_

1. Size: \_\_\_\_\_ *Hint: Must be at least a 12"x12" or equivalent.*

2. Depth/Thickness: \_\_\_\_\_  Unable to Determine

3. Is it at least 12" below undisturbed ground  Yes  No  Unable to determine

B. Post size?  4x4  6x6  8x8  Other (e.g. metal): \_\_\_\_\_

C. Post Height? \_\_\_\_\_

*Hint: Maximum post height is determined by the tributary load the post will carry.*

*See AWC DCA6 for 6x6 post height maximums ( [www.awc.org](http://www.awc.org) ).*

D. Any visible signs of decay, cracks or post corrosion (if metal)?  No  Yes: \_\_\_\_\_

*Hint: Decay or corrosion may appear just below the surface to ground interface.*

*Cracks and decay may appear at the corner of the top of a notched post.*

E. What is connecting the post to the footing?

Post base hardware  Unable to determine  Nothing

*Hint: Look for hardware that connects to the footing to help resist the deck from moving and has a 1" standoff base plate to help prevent decay at the post end.*

F. What is connecting the post to the beam?

Post cap hardware  Notched  Other: \_\_\_\_\_

*Hint: Notching a 4x4 post for a double 2x is not permitted.*

*Notching a 6x6 post to let-in a triple 2x or a 6x is not permitted.*

1. Has a post-to-beam connector been bent or improperly modified?  No  Yes

*Hint: Bending steel in the field may cause fractures at the bend line.*

*Fractured steel will not carry the load and must be replaced.*

2. Are the beams alongside the post?  No  Yes

If yes, is the beam attached with a metal connector to provide bearing?  Yes  No

*Hint: The beams alongside the post attached by bolts, lag screws or nails are prohibited by AWC DCA 6 and does not provide proper bearing for the beam.*

G. Is diagonal bracing provided on the posts and beams?  Yes  No

*Hint: Required by AWC DCA 6 at the corner posts that are greater than 2' in height.*

1. If the deck is not attached to the building, what method is used for lateral support?

Describe: \_\_\_\_\_

H. Are there any visible signs of red rust on the hardware (fasteners or connectors)?  No  Yes

If yes, where? \_\_\_\_\_

I. If connectors are used, are all the holes filled with the proper fasteners?  Yes  No

If no, where? \_\_\_\_\_

*Hint: Slotted and Phillips head screws have never been appropriate for connectors.*

## Deck Evaluation Checklist

### III. Beams and Joists

- A. Are multiple lumber members fastened together to act as a single unit?  Yes  No

Spacing: \_\_\_\_\_ Fastener type (nails, bolts, screws): \_\_\_\_\_

*Hint: If bolts are used, there should be washers between the bolt head and nuts and the wood. And, the drilled holes should be no larger than 1/16" over the size of the bolt.*

- B. Are all beam splices occurring over a support with at least 1½" of bearing?  Yes  No

If no, describe location; \_\_\_\_\_ (Needs attention)

- C. Are there connections where the joist bears on top of the beam?  Yes  No

Type of connection: \_\_\_\_\_

- D. Joist: Size: \_\_\_\_\_ Spacing: \_\_\_\_\_ Span: \_\_\_\_\_

- E. What is providing the minimum 1½" of bearing under the joists?

- Joist Hangers  Ledger strips  Nothing (Needs attention)

*Hint: Ledger strips must be nailed directly underneath the joist with 3 or 4 nails (depending on the standard), concentrically placed right under the joist. (2015 IRC-not permitted)*

1. Have any of the joist hangers been bent or modified?  No  Yes

*Hint: Bending steel in the field may cause fractures at the bend line. Fractured steel will not carry the load and must be replaced.*

2. Does the hanger have "double-shear" fastening? See Figure B.  Yes  No

- a. If the hanger has "double-shear" fastening, was the correct (full length) fastener used for the joist-to-header fastener? See Figure "A" for incorrect nailing.

- Yes  No (Needs attention)

*Hint: Full length fastener = 0.148 x 3" or 0.162 x 3½" HDG or ring shank 316 stainless steel nail or equivalent "approved" structural screws*



Figure "A"

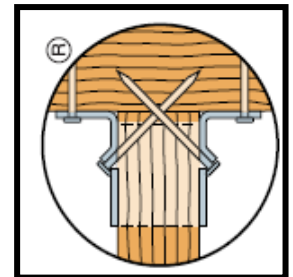


Figure "B"

- F. What is providing lateral support for the deck diaphragm?

- Lateral load hardware  Freestanding deck (blocking, bracing, etc.)

- Nothing  Unknown/Unable to Determine (Needs additional analysis)

*Hint: Nails in joist hangers and ledger strips are subject to withdraw from the lateral forces and do not perform well in withdraw. Therefore, the lateral forces must be addressed by some other means.*

- G. Are there any visible signs of red rust on the hardware (fasteners/connectors)?  No  Yes

If yes, where? \_\_\_\_\_

- H. If connectors are used, are all the holes filled with the proper fasteners?  Yes  No

If no, where? \_\_\_\_\_

*Hint: Slotted and Phillips head screws have never been appropriate for connectors.*

- I. Is there any decay or rot of the wood?  No  Cannot Determine  Yes

## Deck Evaluation Checklist

### IV. Ledger

A. Not applicable: Free Standing Deck

B. Not acceptable: Ledger attached to Stucco, Brick or Masonry veneer, or over Siding

C. Ledger attached to;

Unable to Determine

a. Cannot gain access to the rim joist area due to attached ceiling (or other obstacles).

b. Deck ledger is attached to structural sheathing only (typically 15/32" OSB of plywood covering a floor truss), to the web of an I-joist only, or to a cantilever.

Note: If a or b, it is not possible to evaluate the deck ledger connection. A design professional is recommended to evaluate the deck ledger connection that is known to be critical to deck safety.

Wood Rim Joist - Type; \_\_\_\_\_

Fastener type;  Lag Screws  Machine Bolts  Other \_\_\_\_\_

Fastener diameter: \_\_\_\_\_

Fastener spacing: \_\_\_\_\_ Staggered:  Yes  No

*Hint: Nails, alone and carriage bolts are not acceptable. Check if seen →*

*Hint: Washers are required under the head and nuts of all bolts.*

Concrete

CMU (Concrete Masonry Unit-e.g. block) (*Needs additional analysis*)

Fastener type;  Unable to Determine  Other \_\_\_\_\_

Fastener spacing: \_\_\_\_\_ Staggered:  Yes  No

*Hint: Concrete & Masonry screws-not acceptable for permanent, exterior applications (exc. 316SS).*

1. Are there any visible signs of red rust on the fasteners?  No  Yes

If yes, where? \_\_\_\_\_

D. Is flashing installed above the ledger and behind the exterior cladding, shingle fashion, and installed in such a manner as to prevent entry of water into the building?

Yes  No  No flashing can be seen

1. Is there any decay or rot behind the ledger?  No  Cannot identify  Yes

### V. Deck Boards/Deck Surface

A. What type of decking? See below. Describe type and condition.  Unable to Determine

Wood: \_\_\_\_\_

Wood Plastic Composite/Encapsulated-brand: \_\_\_\_\_

PVC-brand: \_\_\_\_\_  Other-type: \_\_\_\_\_

B. Is there any visible sign of decay, deterioration or cracking?  No  Yes

If yes, describe: \_\_\_\_\_

C. Fastener type?  Nails \_\_\_\_\_  Screws \_\_\_\_\_  Hidden Fasteners

1. If hidden fasteners are used, what lateral support has been provided?

Cross Bracing  Angled Bracing  Blocking  Other: \_\_\_\_\_

2. Are any nails or screws exposed?  No  Yes-explain \_\_\_\_\_

D. Are there any visible signs of red rust on the fasteners?  No  Yes

If yes, where? \_\_\_\_\_

## Deck Evaluation Checklist

### VI. Handrail Assemblies and Guards

*Hint: A guard is required when the walking surface is more than 30 inches above grade.*

*Measurement is taken up to 36" away from deck.*

A. What is the guard height?  36"  42"  Other: \_\_\_\_\_

*Hint: Must not be less than 36" for most residential and 42" for most commercial guards.*

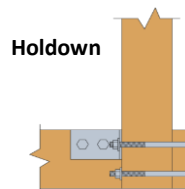
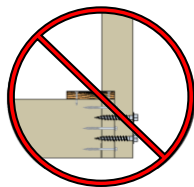
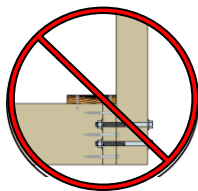
B. What is the connection between the top rail of the guard and the post?

Nails: \_\_\_\_\_  Screws: \_\_\_\_\_  Unable to Determine  No Posts

*Hint: Posts and proper fasteners are needed to transfer the load into the deck framing.*

C. Is there a "shear" connection between the posts and the frame of the deck?  Yes  No

Bolts, only  Lag Screws, only  Holdown  Other: \_\_\_\_\_



"Shear" Connection

*Hint: Bolts or lag screws, only, failed to meet the load and deflection standards.*

*Hint: Notched posts failed to meet the load and deflection standards.*

D. Is the opening between the balusters less than 4"?  Yes  No

E. Is there any visible sign of decay, deterioration or cracking?  No  Yes

F. Are there any visible signs of corrosion or rust in the hardware?  No  Yes

### VII. Miscellaneous

Additional Comments: (e.g. Special Features such as a Hot Tub, Condition of Deck Lighting, Trim Appearance, etc.)



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Deck Evaluation Form: <http://www.nadra.org>

Deck Safety: [http://www.nadra.org/consumers/deck\\_safety\\_month.html](http://www.nadra.org/consumers/deck_safety_month.html)

Deck For A Soldier: <http://www.nadra.org/consumers/D4S/Welcome.html>

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