



## Technical Bulletin FH 2018-01

**First Release:**

March 20, 2018

**Prepared by:**

Fred Malik, Vice President,  
FORTIFIED Building Programs

**Applicable Standards:**

FORTIFIED Home™–Hurricane

**Applicable Designation Level:**



## New Documentation Requirements

### Abstract

Metals exposed to salt and moisture in the air in coastal areas are highly susceptible to accelerated corrosion. The intent of this bulletin is to highlight the requirement for metal structural connections and materials fasteners used to retrofit or construct FORTIFIED buildings less than 3,000 ft. from saltwater to be suitably protected from corrosion. The corrosion resistance outlined in the FORTIFIED standards is not new; however, there are new documentation requirements.

### Introduction

The minimum fastener and connector corrosion-protection retrofit requirements for FORTIFIED Home are outlined in Appendix D (page 85) of the FORTIFIED Home–Hurricane standards at [DisasterSafety.org/wp-content/uploads/FORTIFIED-Home-Hurricane-Standards-2012.pdf](http://DisasterSafety.org/wp-content/uploads/FORTIFIED-Home-Hurricane-Standards-2012.pdf).

### Appendix D: Corrosion Protection Retrofit Requirements

Fasteners/ Connector	Structures within 300 ft. of saltwater	Structures more than 300 ft. but less than 1000 ft. from saltwater <sup>1</sup>	Structures more than 1000 ft. but less than 3000 ft. from saltwater	Structures more than 3000 ft. from saltwater
Roofing nails for shingles	Stainless steel	Stainless steel	Hot dip galvanized <sup>4</sup>	Corrosion resistant <sup>5</sup>
Concrete and clay roof tile fasteners	Stainless steel	Stainless steel	Hot dip galvanized <sup>4</sup>	Corrosion resistant <sup>5</sup>
Metal roof clips and fasteners (exposed)	Stainless steel	Stainless steel	Stainless steel	Corrosion resistant <sup>5</sup>
Fasteners used for attachment of underlayment to roof deck	Hot dip galvanized <sup>4</sup>	Hot dip galvanized <sup>4</sup>	Hot dip galvanized <sup>4</sup>	Corrosion resistant <sup>5</sup>
Aluminum soffits	Not allowed	Not allowed	Not allowed	Allowed
Soffit and roof vent fasteners	Stainless steel	Stainless steel	Stainless steel	Corrosion resistant <sup>5</sup>
Metal framing connectors, fasteners, anchors, and hangers in exposed areas <sup>2</sup>	Stainless steel	Stainless steel	Stainless steel	Stainless steel or G185 galvanized
Metal framing connectors, fasteners, anchors, and hangers in vented enclosed areas <sup>3</sup>	Stainless steel	Stainless steel or G185 galvanized coating	Stainless steel or G185 galvanized coating	Corrosion resistant <sup>5</sup>



# Corrosion-Resistant Fasteners

## Technical Bulletin FH 2018-01

### First Release:

March 20, 2018

### Prepared by:

Fred Malik, Vice President,  
FORTIFIED Building Programs

### Applicable Standards:

FORTIFIED Home™–Hurricane

### Applicable Designation Level:



<sup>1</sup>Buildings on open, elevated foundations within 1,000 ft of saltwater shall follow the requirements of structures within 300 ft of saltwater.

<sup>2</sup>Examples of exposed areas include areas that are under roof overhangs, decks and covered walkways, or in any location that is openly or partially exposed to saltwater air.

<sup>3</sup>Examples of vented enclosed areas include attics with vents.

<sup>4</sup>Hot-dip galvanized shall meet the requirements of ASTM A153, Class D for nails and screws.

<sup>5</sup>Corrosion-resistant nails and screws shall meet the requirements of ASTM A641, Class 1 or an equal corrosion resistance by coating, galvanization, stainless steel, or other suitable corrosion-resistant material. Corrosion-resistant sheet metal connectors, anchors and hangers shall meet the requirements of ASTM A653, G90.

## FORTIFIED Home Evaluators Only: New Applications & Evaluation Form Input

When a new residential application is made, a notification will appear if the address is within a coastal zip code. You will be asked to select one of four approximate distances from a shoreline.

**3. Property Address**

\*Address Line1 :   
Address Line2 :   
\*City :   
\*State :   
\*ZIP / Postal Code :   
\*Country :

**Mailing Address**  If Mailing Address is

\*Address Line1 :   
Address Line2 :

NOTE: This home is in a coastal region. If the home is within 3000 linear feet of a salt water shore, special corrosion resistant requirements apply for all designation levels. See [Appendix D](#) of the FORTIFIED Standards - Hurricane.

Distance From Salt Water Shore:

- <Select>
- 300' or less
- More than 300' but less than 1000'
- More Than 1000' but less than 3000'
- More than 3000'

For reference, there is a direct weblink to Appendix D within the note.



# Corrosion-Resistant Fasteners

## Technical Bulletin FH 2018-01

### First Release:

March 20, 2018

### Prepared by:

Fred Malik, Vice President,  
FORTIFIED Building Programs

### Applicable Standards:

FORTIFIED Home™–Hurricane

### Applicable Designation Level:



## FORTIFIED Home Evaluators Only: Documentation Requirements

If the distance from a saltwater shoreline is MORE than 3,000 ft, no additional documentation is required. If the distance is LESS than 3,000 ft, documentation of the corrosion-resistant connections and fasteners used on the home is now required. This information will be entered on the first page of the evaluation.

The screenshot shows a web-based evaluation form. At the top, there are menu items: Errors, Save, Save & Exit, and Help. The form fields are as follows:

- Dwelling Type: Select Option
- Exposure Category: Select Option
- Finished Elevation Photos: Includes a camera icon and a text box with the instruction "Include at least 4 new photos of exposed connections".
- Indicate the distance from salt water shore: A dropdown menu with the selected option "More Than 1000 ft but less than 3000 ft". A red arrow points to this dropdown.
- Year Built: Text input field.
- How was year built determined?: Text input field.
- Building Height (to the nearest foot): Text input field.
- Is structure supported by dry stack or unreinforced foundation?: Select Option.
- Wind Speed (ASCE 7-05): Text input field with the value "130".

At the bottom of the form, there is a status bar with the text "FEH36612020180000014 | 4824 yahoo ave, tampa Florida" and a tab labeled "General/Site Information".

Photographs of labels, copies of invoices, and/or field delivery tickets indicating corrosion-resistance level for the connections and fasteners used are required. Photographs of the connections and fasteners should also be provided in this location.



# Corrosion-Resistant Fasteners

## Technical Bulletin FH 2018-01

**First Release:**

March 20, 2018

**Prepared by:**

Fred Malik, Vice President,  
FORTIFIED Building Programs

**Applicable Standards:**

FORTIFIED Home™–Hurricane

**Applicable Designation Level:**



### Examples

GULF SHORES, AL			
Sections		Notes	
Item Code	Description	Qty/Footage	Price
	EZ-FIT 17134 HDG 1-1/2"X.148 PP 2M JOIST HANGER NAIL 34DG	2 BOX	55
	EZ-FIT 650385 3X120 HDG RING 33D 2.5M/CTN	2 BOX	85
	EZ-FIT 650383 2-3/8"x.113 RS HDG 2.5M	2 BOX	65
	<b>STAINLESS STEEL JOIST HANGER 17154 PNEU 1-1/2X148 1M</b>	2 BOX	115
	<b>MFM WIND AND WATER SHIELD SMOOTH 2SQ/F</b>	4 EA	115
	<b>FRM RT7A-SS STAINLESS STEEL HURRICANE C</b>	100 EA	200
	SPF 2X6-18 #2 & BTR. SPRUCE-PINE-FIR	10 pc	150

