

# TEXAS DEPARTMENT OF INSURANCE

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## Proposed Change to Windstorm Building Requirements or Procedures in the Texas Windstorm Insurance Association Plan of Operation

Name: Engineering Staff \_\_\_\_\_ Date: May 2, 2006 \_\_\_\_\_  
Organization/Company: Texas Department of Insurance \_\_\_\_\_ Telephone: (512) 322-2212 \_\_\_\_\_  
Address: 333 Guadalupe \_\_\_\_\_ Fax No.: (512) 463-6693 \_\_\_\_\_  
City, State, Zip: Austin, TX 78714 \_\_\_\_\_

**Please complete the following for each proposed change:  
(A separate form must be submitted for each proposed change.)**

**1. Proposed change to the following building requirement or procedure:**

Refer to attached pages.

**2. Proposed change is to:**

**Document:** 2006 International Residential Code \_\_\_\_\_  
**Section:** R325 (new section) \_\_\_\_\_  
**Table** \_\_\_\_\_  
**Figure** \_\_\_\_\_  
**Appendix** \_\_\_\_\_

**3. Please use the following format to present the proposed change:**

~~LINE THROUGH LANGUAGE TO BE DELETED~~ UNDERLINE NEW LANGUAGE TO BE ADDED

**4. Proposed Change. Please specify change. Attach additional sheets if needed.**

Refer to attached pages.

**5. Reason for Change. Please state purpose and reason for change. Attach additional sheets if needed.**

Refer to attached pages.

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- 6. Attach supporting written or printed information, including, but not limited to, test data, structural calculations, and/or documentation that the proposed change complies with the minimum wind load criteria and design standards specified in the building requirements adopted by the Texas Department of Insurance. Attach supporting written or printed information relating to the proposed changes to the building requirements or procedures contained in the Texas Windstorm Insurance Association Plan of Operation.**

*Pursuant to Article 21.49, §6C of the Insurance Code, this proposal form must be complete and submitted to the address specified above not later than the 30<sup>th</sup> day before the date of a scheduled advisory committee meeting for the proposal to be considered at that meeting.*

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Add the following new section:

**SECTION R325**  
**CORROSION RESISTANCE**

**R325.1 Corrosion resistance.** Metal connectors and fasteners shall be corrosion resistant in accordance with the following:

**R325.1.1 Seaward areas.**

**R325.1.1.1 Open Areas.** Metal connectors and fasteners located in open areas shall be either stainless steel and meet ASTM A167; hot-dip galvanized after fabrication and meet ASTM A123 or ASTM A153; or hot-dip galvanized or galvanized prior to fabrication and meet ASTM A653. Open areas shall include:

1. Porches
2. Decks
3. Carports
4. Exterior wall coverings
5. Roof coverings
6. Metal ties for stone and masonry veneer
7. The underside of elevated structures
8. Anchors for securing mechanical equipment
9. Garage door attachments
10. Roof vent attachments
11. Skylight attachments
12. Impact protective systems (shutters)

**R325.1.1.2 Vented or Enclosed Areas.** Metal connectors and fasteners located in vented or enclosed areas may meet the requirements of Section R325.1.1.1 or shall be hot-dip galvanized or electrogalvanized in accordance with ASTM A641; mechanically deposited zinc coatings in accordance with ASTM B695; or electrodeposited zinc coatings in accordance with ASTM B633. Vented or enclosed areas shall include:

1. Attics
2. Exterior wall stud cavities
3. Crawl spaces
4. Window and exterior door attachments
5. Roof sheathing
6. Wall sheathing

**Exceptions (corrosion resistance not required):**

1. One-half inch diameter or greater steel bolts

**R325.1.1.3 Conditioned Areas.** Metal connectors and fasteners located in conditioned areas are not required to be corrosion resistant. Conditioned areas include:

1. Heated and cooled living areas

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**R325.1.2 Inland I and Inland II areas.**

**R325.1.2.1 Open Areas.** Metal connectors and fasteners located in open areas shall be either stainless steel and meet ASTM A167; hot-dip galvanized after fabrication and meet ASTM A123 or ASTM A153; hot-dip galvanized or galvanized prior to fabrication and meet ASTM A653; hot-dip galvanized or electrogalvanized in accordance with ASTM A641; mechanically deposited zinc coatings in accordance with ASTM B695; or electrodeposited zinc coatings in accordance with ASTM B633. Open areas shall include:

1. Porches
2. Decks
3. Carports
4. Exterior wall coverings
5. Roof coverings
6. Metal ties for stone and masonry veneer
7. The underside of elevated structures
8. Anchors for securing mechanical equipment
9. Garage door attachments
10. Roof vent attachments
11. Skylight attachments
12. Impact protective systems (shutters)

**Exceptions (corrosion resistance not required):**

1. One-half inch diameter or greater steel bolts

**R325.1.2.2 Vented or Enclosed Areas.** Metal connectors and fasteners located in vented or enclosed areas may meet the requirements of Section R325.1.2.1 or shall be epoxy-coated in accordance with ASTM A899. Vented or enclosed areas shall include:

1. Attics
2. Exterior wall stud cavities
3. Crawl spaces
4. Window and exterior door attachments
5. Roof sheathing
6. Wall sheathing

**Exceptions (corrosion resistance not required):**

1. One-half inch diameter or greater steel bolts.

**R325.1.2.3 Conditioned Areas.** Metal connectors and fasteners located in conditioned areas are not required to be corrosion resistant. Conditioned areas include:

1. Heated and cooled living areas

Add the following standards to the ASTM section of Chapter 43 Referenced Standards:

ASTM A 123/A 123M – 97e1 Specification for Zinc (Hot-Dip Galvanized) Coating on Iron and Steel Products

ASTM A 899 – 91(1999) Specification for Steel Wire Epoxy - Coated

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Reason for Texas Revision:

The proposed revision to the IRC provides much needed guidance for corrosion resistance for fasteners and metal connectors. As currently written, the IRC does not provide clear guidance for corrosion resistance of metal connectors and fasteners when used on all types of structures that are built in an environment where fastener and connector corrosion is likely. The proposed clarification provides guidance for the different levels of corrosion resistance as a function of the geographic location of the structure as well as the location on and within the structure. The proposal itemizes type of construction and building products that applicable under each category. The proposed clarification references ASTM standards for corrosion resistance typically used for fasteners and metal connectors. Two ASTM standards (A 123 and A 899) are proposed to be added to Chapter 43 Referenced Standards that are referenced in the IBC, but not in the IRC.

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