

**State Building Code Council**

**HAWAII STATE RESIDENTIAL CODE**

**Effective Date: January 1, 2018**

---

Scope..... 3

Definitions..... 3

Adoption of the International Residential Code for One- and Two-family Dwellings, 2012 Edition..... 4

Permit authorization..... 4

AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS, 2012 EDITION..... 4

    (1) R101.1 Title..... 4

    (2) R101.2 Scope..... 4

    (3) R103 Department of Building Safety..... 5

    (4) R104.10.1 Flood hazard areas..... 5

    (5) R105 Permits..... 5

    (6) R106 Construction Documents..... 5

    (7) R107 Temporary Structures and Uses..... 5

    (8) R108 Fees..... 5

    (9) R110 Certificate of Occupancy..... 5

    (10) R112 Board of Appeals..... 5

    (11) R301.1.1 Alternative Provisions..... 5

    (12) R301.1.3 Engineered design..... 6

    (13) R301.2.1 Wind design criteria..... 6

    (14) R301.2.1.3 Wind speed conversion..... 7

    (15) Effective Wind Speed Maps..... 8

    (16) R301.2.1.4 Exposure Category..... 14

    (17) R301.2.1.5 Topographic wind effects..... 19

    (18) R301.2.1.5.1 Simplified topographic wind speed-up method ... 19

    (19) Figures R301.2.1.5.1(1) and R301.2.1.5.1(2) and Table R301.2.1.5.1..... 19

    (20) R301.2.2.1 Determination of seismic design category..... 19

    (21) R301.2.2.1.1 Alternate determination of seismic design category..... 19

    (22) R301.2.2.2.5 Irregular buildings..... 19

    (23) R301.2.2.4 Seismic Design Category E..... 24

(24) R313.2 Automatic Fire Sprinkler Systems. . . . . 24

(25) R317.1 Protection Against Decay and Termites. . . . . 24

(26) R318.1 Subterranean termite control methods . . . . . 24

(27) R318.4 Foam plastic protection . . . . . 25

(28) R318.5 Water Splash. . . . . 25

(29) Section R318.6 Pipe and Other Penetrations. . . . . 25

(30) R401.5 Post or pier foundations. . . . . 25

(31) R406.1 Foundation Waterproofing. . . . . 25

(32) R406.2 Concrete and masonry foundation waterproofing . . . . . 25

(33) R406.3 Dampproofing for wood foundations . . . . . 25

(34) R406.3.2 Below-grade moisture barrier . . . . . 25

(35) R406.4 Precast concrete system dampproofing . . . . . 26

(36) R602.10.9 Braced wall panel support . . . . . 26

(37) Energy Efficiency. . . . . 26

(38) Mechanical Administration. . . . . 26

(39) Chapter 13 General Mechanical System Requirements. . . . . 26

(40) Heating and Cooling Equipment and Appliances. . . . . 26

(41) Exhaust Systems. . . . . 26

(42) Duct Systems. . . . . 27

(43) Combustion Air. . . . . 27

(44) Special Appliances, Equipment and Systems. . . . . 27

(45) Boilers and Water Heaters. . . . . 27

(46) Hydronic Piping. . . . . 27

(47) Special Piping and Storage Systems. . . . . 27

(48) Fuel Gas. . . . . 27

(49) Plumbing Administration. . . . . 27

(50) General Plumbing Requirements. . . . . 27

(51) Plumbing Fixtures. . . . . 27

(52) Water Heaters. . . . . 27

(53) Water Supply and Distribution. . . . . 27

(54) Sanitary Drainage. . . . . 27

(55) Vents. . . . . 27

(56) Traps. . . . . 27

(57) Storm Drainage. . . . . 27

(58) Electrical Requirements. . . . . 27

(59) Swimming Pools. . . . . 28

---

STATE OF HAWAII

State Building Code Council

STATE RESIDENTIAL CODE

Effective Date: January 1, 2018

---

**Scope.**

The State Residential Code is hereafter referred to as "this code". This code sets forth minimum requirements for the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of detached one and two family dwellings and multiple single family dwellings (townhouses) not more than three stories in height with separate means of egress.

**Definitions.**

Unless the context otherwise requires, in this code:

"IBC" means the "State Building Code" adopted by the State Building Code Council adopting and amending the "*International Building Code, 2012 Edition*", published by the International Code Council.

"ICC" means the International Code Council.

"IECC" means the "State Energy Conservation Code", Hawaii Administrative Rules, Chapter 3-181.1 adopting and amending the "International Energy Conservation Code, 2015 Edition" published by the International Code Council.

"IRC" means the "International Residential Code for One- and Two-family Dwellings, 2012 Edition", as copyrighted by the International Code Council.

"Section" means a section of a chapter of the International Residential Code for One- and Two-family Dwellings, 2012 Edition or a section of this code.

**Adoption of the International Residential Code for One- and Two-family Dwellings, 2012 Edition.**

The "International Residential Code for One- and Two-family Dwellings, 2012 Edition", as copyrighted and published in 2011 by International Code Council, Incorporated, 500 New Jersey Avenue, 6th Floor, Washington, DC 20001, is adopted by reference and made a part of this code. This incorporation by reference includes all parts of the International Residential Code subject to the amendments hereinafter set forth. The ICC International Residential Code for One- and Two-family Dwellings, 2012 Edition, is made a part of this chapter, subject to the amendments provided in this code. The appendices of the ICC IRC are not adopted except as provided in this code.

**Permit authorization.**

Each county of the State of Hawaii may, by ordinance, require that a permit be obtained from the building official for any area regulated by this code.

**AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS, 2012 EDITION**

**(1) R101.1 Title.**

Section R101.1 is amended to read as follows:

**"R101.1 Title.** These provisions shall be known as the *State Residential Code* and shall be cited as such and will be referred to herein as "this code"."

**(2) R101.2 Scope**

R101.2 Scope shall be amended to read as follows:

**"R101.2 Scope.** The provisions of ~~the International Residential Code for One- and Two-family Dwellings~~ this code shall be permitted to apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures.

**Exceptions:**

1. Live/work units complying with the requirements of Section 419 of the State Building Code shall be permitted to be built as one- and two-family dwellings or townhouses. Fire suppression required by Section 419.5 of the State Building Code when constructed under ~~the International Residential Code for One- and Two-family Dwellings~~ this code shall conform to Section P2904 903.3.1.3 of the State Building Code.

2. Owner-occupied lodging houses with five or fewer guestrooms shall be permitted to be constructed in accordance with ~~the International Residential Code for One- and Two-family Dwellings~~ this code when equipped with a fire sprinkler system in accordance with Section ~~P2904~~ 903.3.1.3 of the State Building Code."

(3) **R103 Department of Building Safety.**

Section R103 is deleted in its entirety.

(4) **R104.10.1 Flood hazard areas.**

Section R104.10.1 is deleted in its entirety.

(5) **R105 Permits.**

Section R105 is deleted in its entirety.

(6) **R106 Construction Documents.**

Section R106 is deleted in its entirety.

(7) **R107 Temporary Structures and Uses.**

Section R107 is deleted in its entirety.

(8) **R108 Fees.**

Section R108 is deleted in its entirety.

(9) **R110 Certificate of Occupancy.**

Section R110 is deleted in its entirety.

(10) **R112 Board of Appeals.**

Section R112 is deleted in its entirety.

(11) **R301.1.1 Alternative Provisions**

R301.1.1 Alternative provisions is amended to read as follows,

"**R301.1.1 Alternative provisions.** As an alternative to the requirements in Section R301.1 the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards, the design shall comply with the State Building Code. Where these standards use the basic wind speed as a design criteria, the Effective Ultimate Design Wind Speed,  $V_{eff-ult}$ , determined from Figures R301.2(8)(a) through R301.2(8)(f) shall be used.

1. ~~AF&PA~~ **AWC** Wood Frame Construction Manual (WFCM) **2012**.

2. AISI Standard for Cold-Formed Steel Framing—Prescriptive Method for One- and Two-Family Dwellings (AISI S230- **2015**).

~~3. ICC Standard on the Design and Construction of Log Structures (ICC 400).~~

3. ICC Standard for Residential Construction in High-Wind Regions (ICC 600-14); or

4. ASCE Minimum Design Loads for Buildings and Other Structures (ASCE 7-10); or

5. State Building Code."

(12) **R301.1.3 Engineered design.**

Section R301.1.3 Engineered design shall be amended to read as follows:

**"Section R301.1.3 Engineered design.** When a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301, or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice using the Alternative Provisions listed in R301.1.1. The extent of such design need only demonstrate compliance of nonconventional elements with other applicable provisions and shall be compatible with the performance of the conventional framed system. Engineered design in accordance with the State Building Code is permitted for all buildings and structures, and parts thereof, included in the scope of this code. Engineered design in accordance with the State Building Code shall be required when a building exceeds two stories or 3000 square feet of gross floor area."

(13) **R301.2.1 Wind design criteria**

Section R301.2.1 Wind design criteria shall be amended to read,

**"R301.2.1 Wind design criteria.** Buildings and portions thereof shall be constructed in accordance with the wind provisions ~~of this code using the basic wind speed in Table R301.2(1) as determined from Figure R301.2(4)A~~ as specified in Table R301.2.1 using the effective ultimate design wind speed,  $V_{eff-ult}$ , determined from Figures R301.2(8)(a) through R301.2(8)(f). Buildings and portions thereof constructed in accordance with the wind provisions of the State Building Code as amended shall be deemed to comply with this section.

Table R301.2.1 Wind speed based applicable wind design criteria.

<u>Effective Ultimate Design Wind Speed</u> <sup>a</sup>	<u>Effective Nominal Design Wind Speed</u> <sup>b</sup>	<u>Wind Provisions</u> <sup>c</sup>	<u>Windborne Debris Protection</u> <sup>e</sup>
$V_{eff-ult} < 130$	$V_{eff-asd} < 102$	<u>Residential Code</u> <sup>c</sup>	<u>Not required</u>
$130 \leq V_{eff-ult} < 139$	$102 \leq V_{eff-asd} < 110$	<u>Residential Code</u> <sup>c</sup>	<u>Required</u>
$139 \leq V_{eff-ult}$	$110 \leq V_{eff-asd}$	<u>Alternative Provisions</u> <sup>d</sup>	<u>Required</u>

<sup>a</sup> The Effective Ultimate Design Wind Speed,  $V_{eff-ult}$ , shall be obtained from Figures R301.2(8)(a) through R301.2(8)(f). The wind speed shown

in these figures include topographic effects and are based on the basic wind speed definition used for structural design of buildings in the 2012 IBC, ASCE7-10 and chapter 3-180.1.

<sup>b</sup> Wind speed conversion to the Effective Nominal Design Wind Speed,  $V_{eff-asd}$  shall be in accordance with section R301.2.1.3.

<sup>c</sup> Where the Residential Code requires the Basic Wind Speed, the Effective Nominal Design Wind Speed,  $V_{eff-asd}$ , shall be used.

<sup>d</sup> The applicability of the wind design provisions of the Residential Code are exceeded and shall not be used. R301.1.1 Alternative provisions provides a list other codes and standards which shall be used in conjunction with applicable requirements of the Residential Code to complete the design.

<sup>e</sup> When required, windborne debris protection shall comply with the requirements of section R301.2.1.2 Protection of Openings.

The structural provisions of this code for wind loads are not permitted where wind design is required as specified in Section R301.2.1.1. Where different construction methods and structural materials are used for various portions of a building, the applicable requirements of this section for each portion shall apply. Where not otherwise specified the wind loads listed in Table R301.2(2) adjusted for height and exposure using Table R301.2(3) shall be used to determine design load performance requirements for wall coverings, curtain walls, roof coverings, exterior windows, skylights, garage doors and exterior doors. Asphalt shingles shall be designed for wind speeds in accordance with Section R905.2.4. A continuous load path shall be provided to transmit the applicable uplift forces in Section R802.11.1 from the roof assembly to the foundation."

**(14) R301.2.1.3 Wind speed conversion.**

Wind speed conversion Section R301.2.1.3 is amended to read as follows:

**"R301.2.1.3 Wind speed conversion.** When referenced documents are based on fastest mile wind speeds,  $V_{fm}$ , or the three second gust basic effective nominal design wind speeds,  $V_{eff-asd}$ ,  $V_{3s}$ , of Figure R301.2(4) the effective ultimate design wind speed,  $V_{eff-ult}$ , obtained from Figures R301.2(8)(a) through R301.2(8)(f) shall be converted using Table R301.2.1.3.

**TABLE R301.2.1.3 CONVERSION OF EQUIVALENT BASIC WIND SPEEDS <sup>a,b</sup>**

$V_{eff-ult}$	107	114	120	126	133	139	152	158	164	177	183	190	202	215
$V_{eff-asd}$ <sup>b</sup>	85	90	95	100	105	110	120	125	130	140	145	150	160	170
$V_{fm}$	71	76	80	85	90	95	104	109	114	123	128	133	142	152

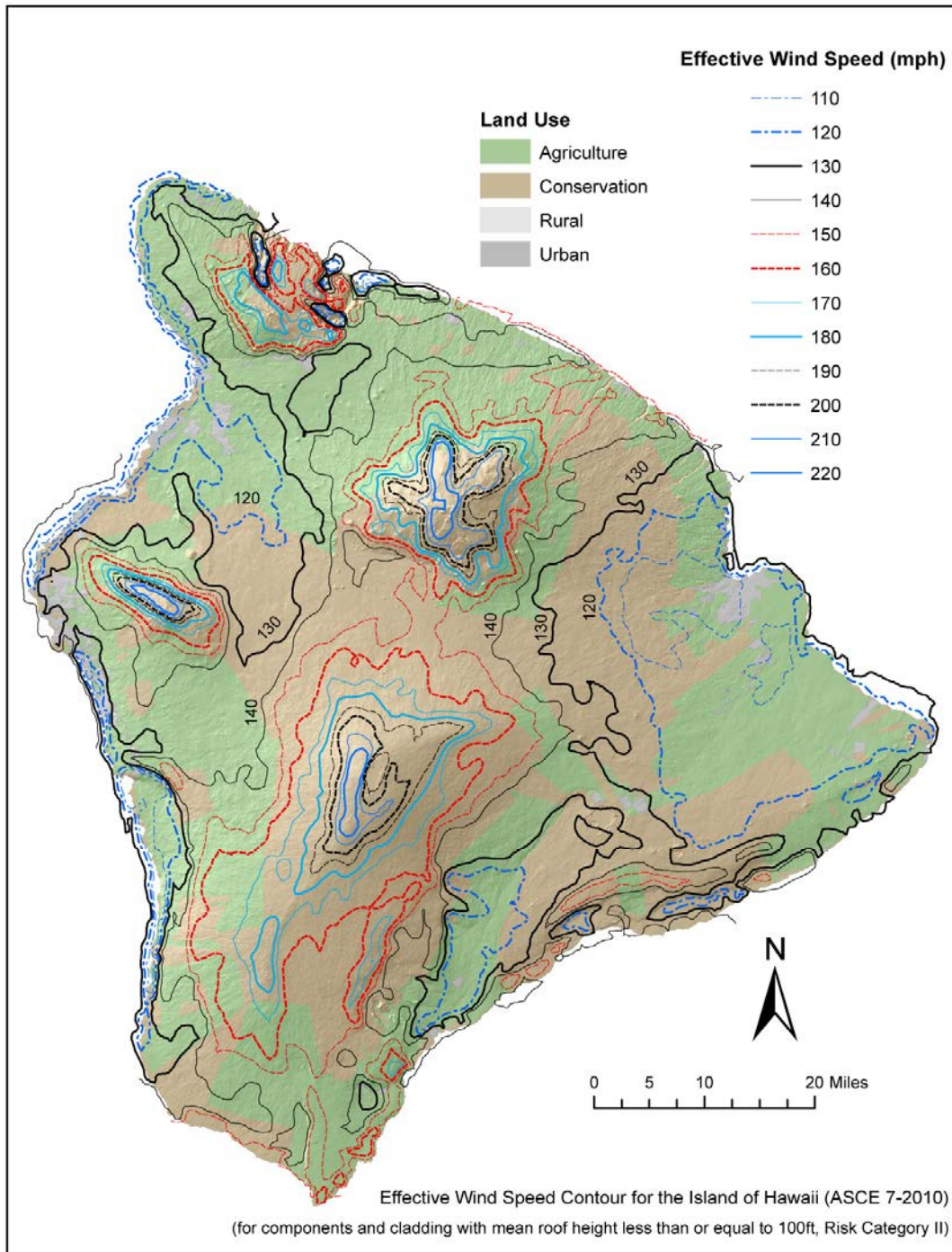
<sup>a</sup> Linear interpolation is permitted.

<sup>b</sup>  $V_{eff-asd} = 0.791 V_{eff-ult} \cdot "$

**(15) Effective Wind Speed Maps.**

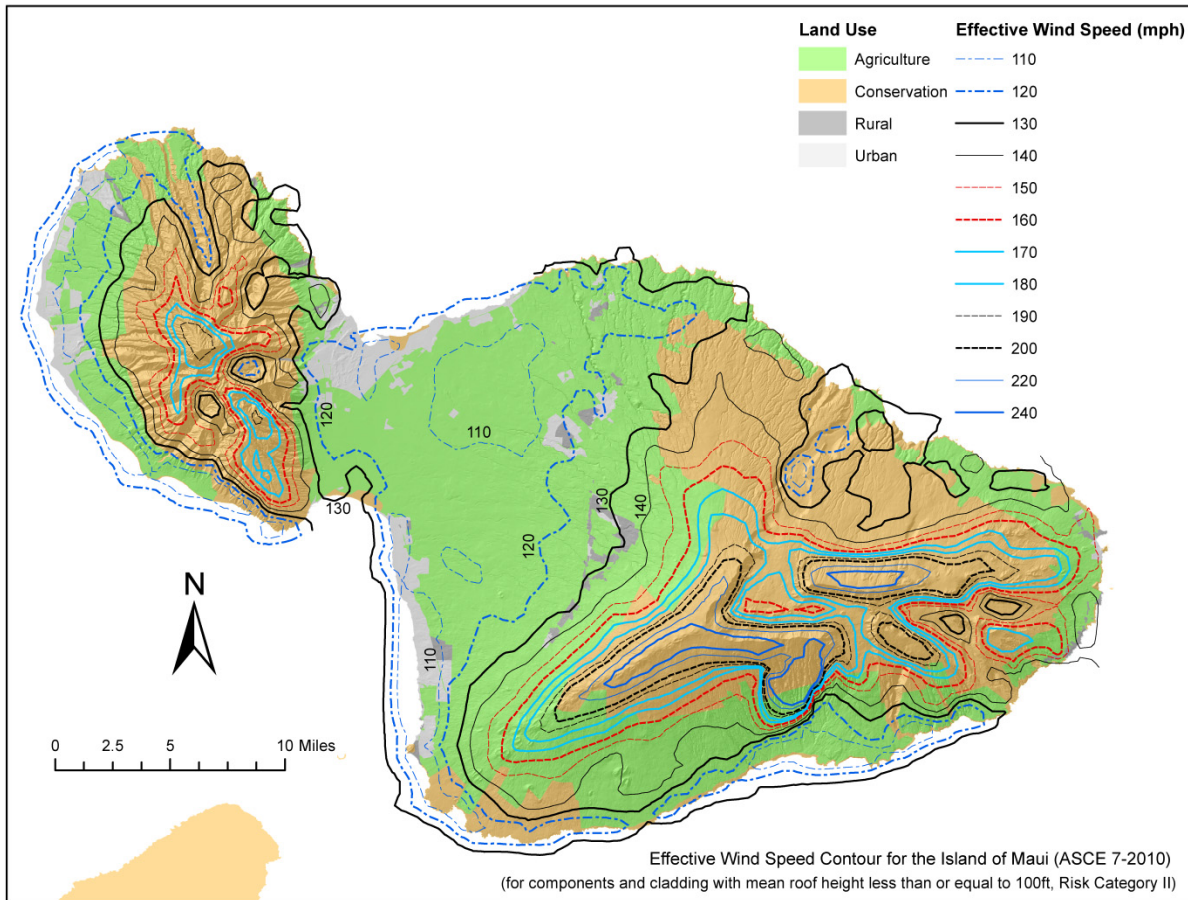
Figures R301.2(8)(a) through R301.2(8)(f) are added to read as follows:

"

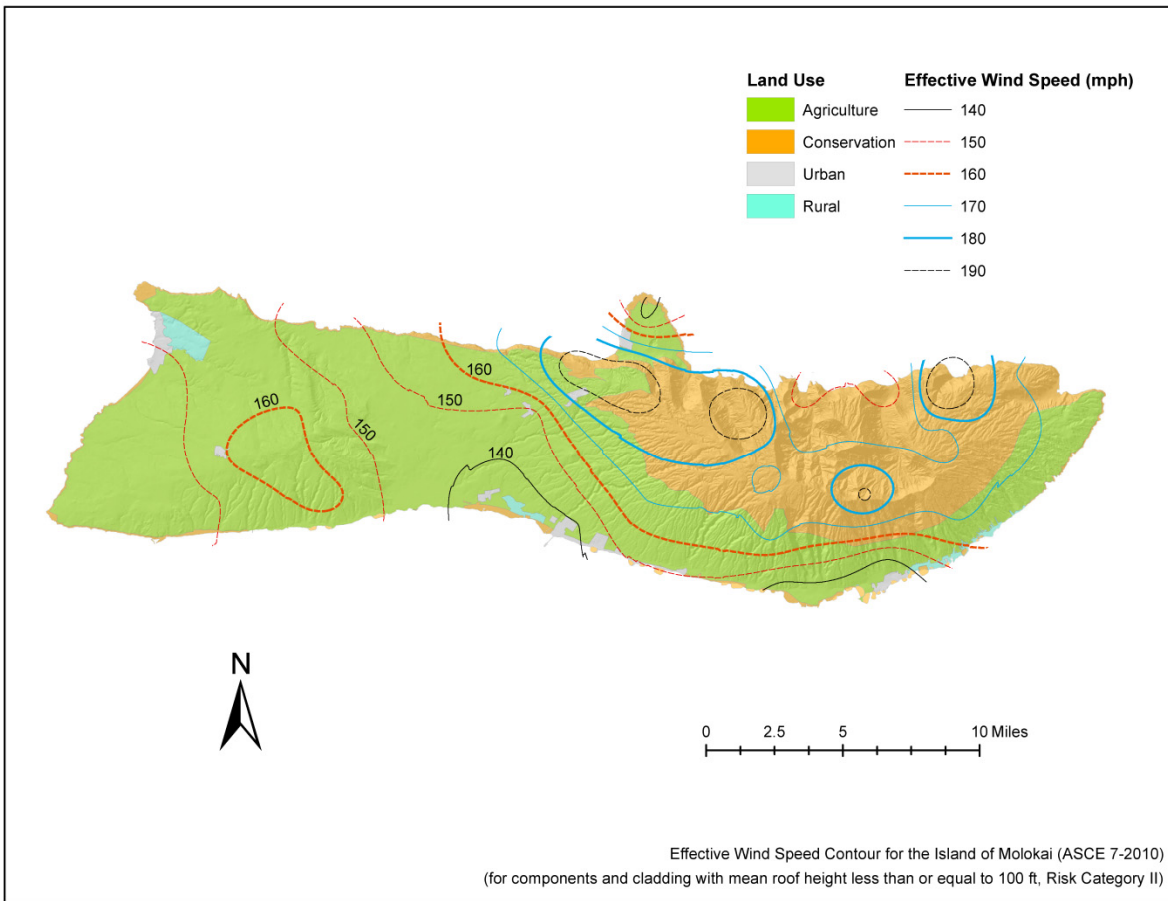


**Figure R301.2(8)(a) County of Hawaii Effective Ultimate Wind Speed,  $V_{eff-ult}$ , for Components and Cladding for Risk Category II Buildings less than 100 feet Tall**

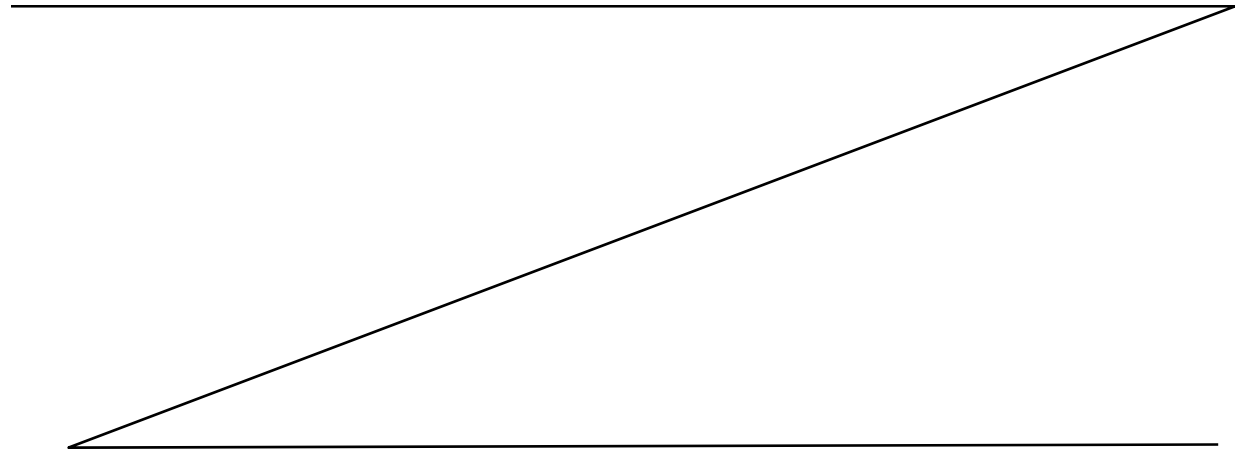


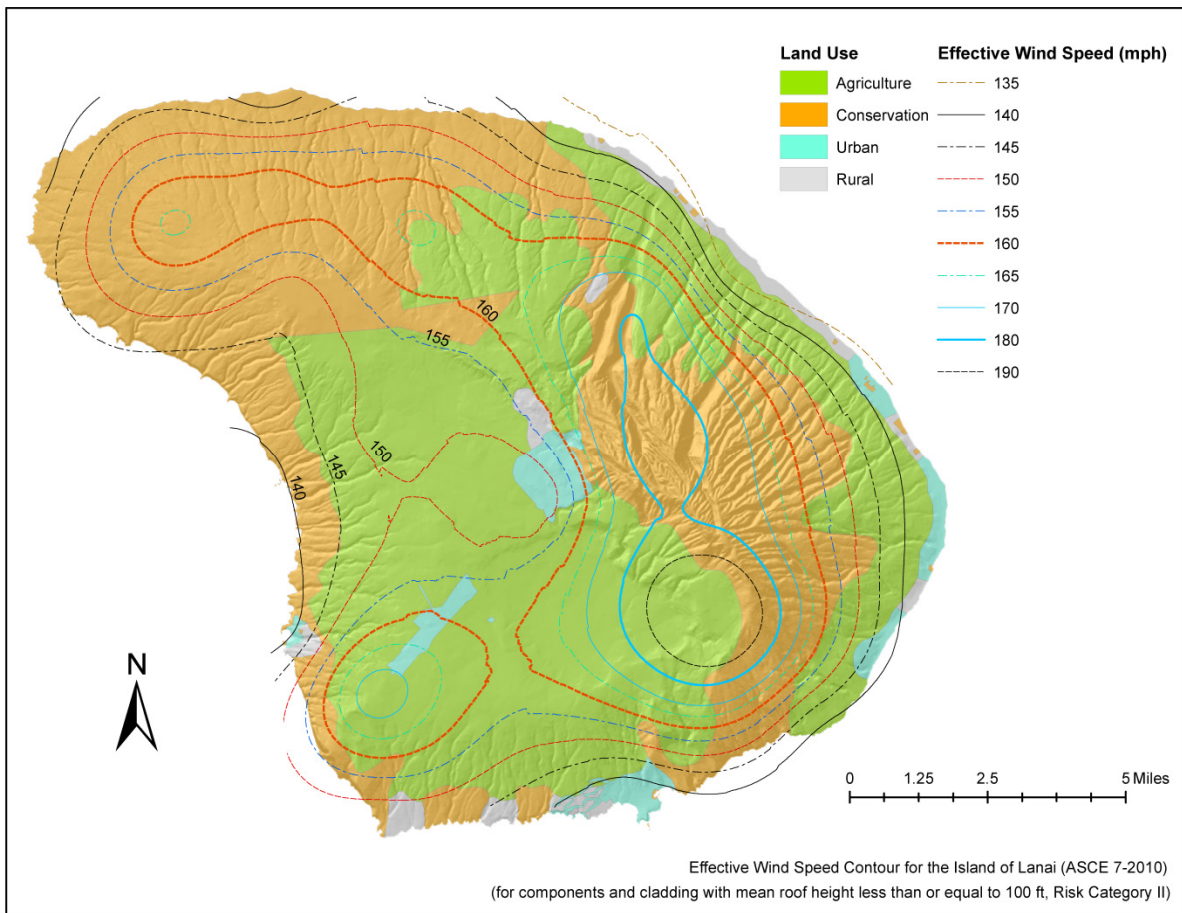


**Figure R301.2(8)(b) County of Maui, Island of Maui Effective Ultimate Wind Speed,  $V_{eff-ult}$ , for Components and Cladding for Risk Category II Buildings less than 100 feet Tall**

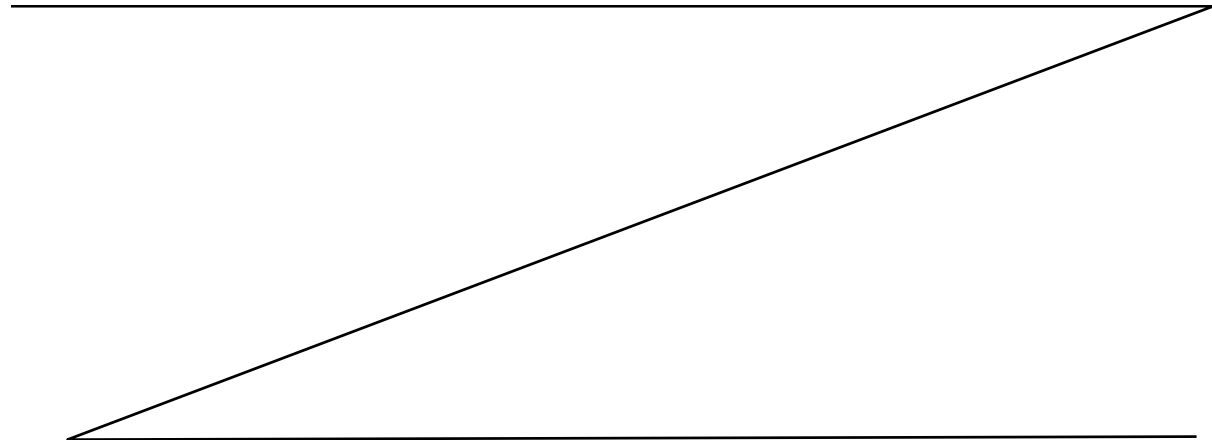


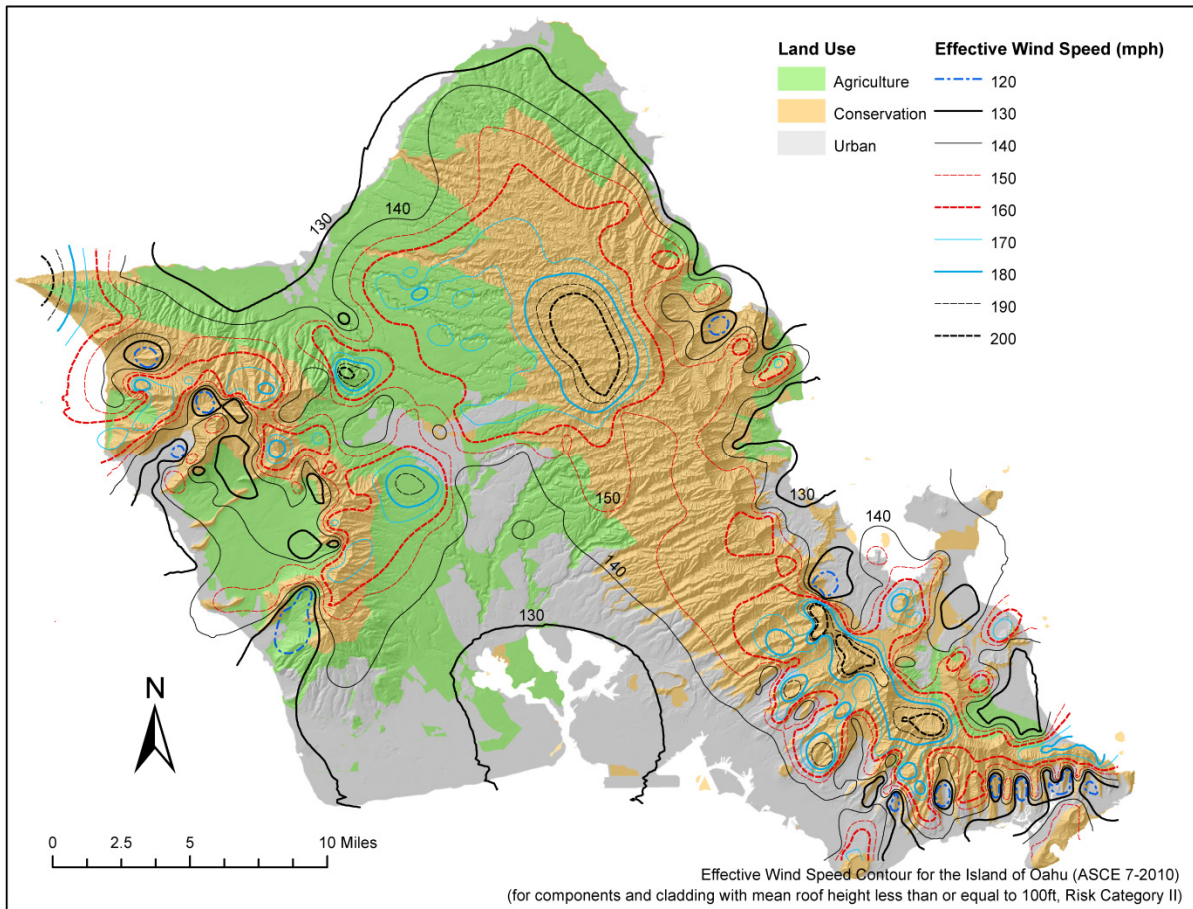
**Figure R301.2(8)(c) County of Maui, Island of Molokai Effective Ultimate Wind Speed,  $V_{eff-ult}$ , for Components and Cladding for Risk Category II Buildings less than 100 feet Tall**



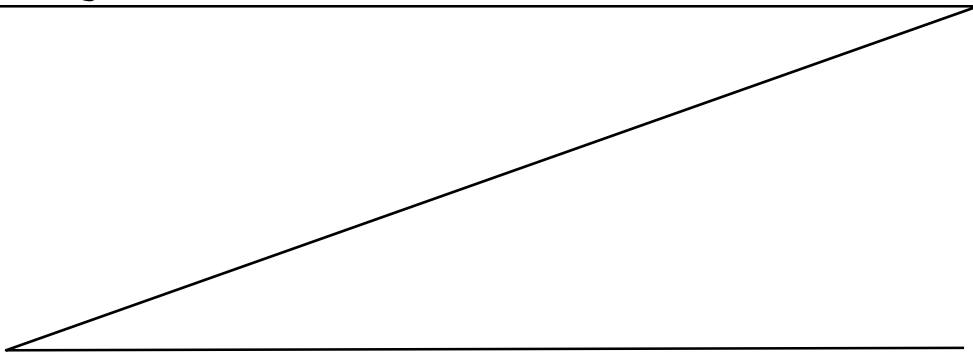


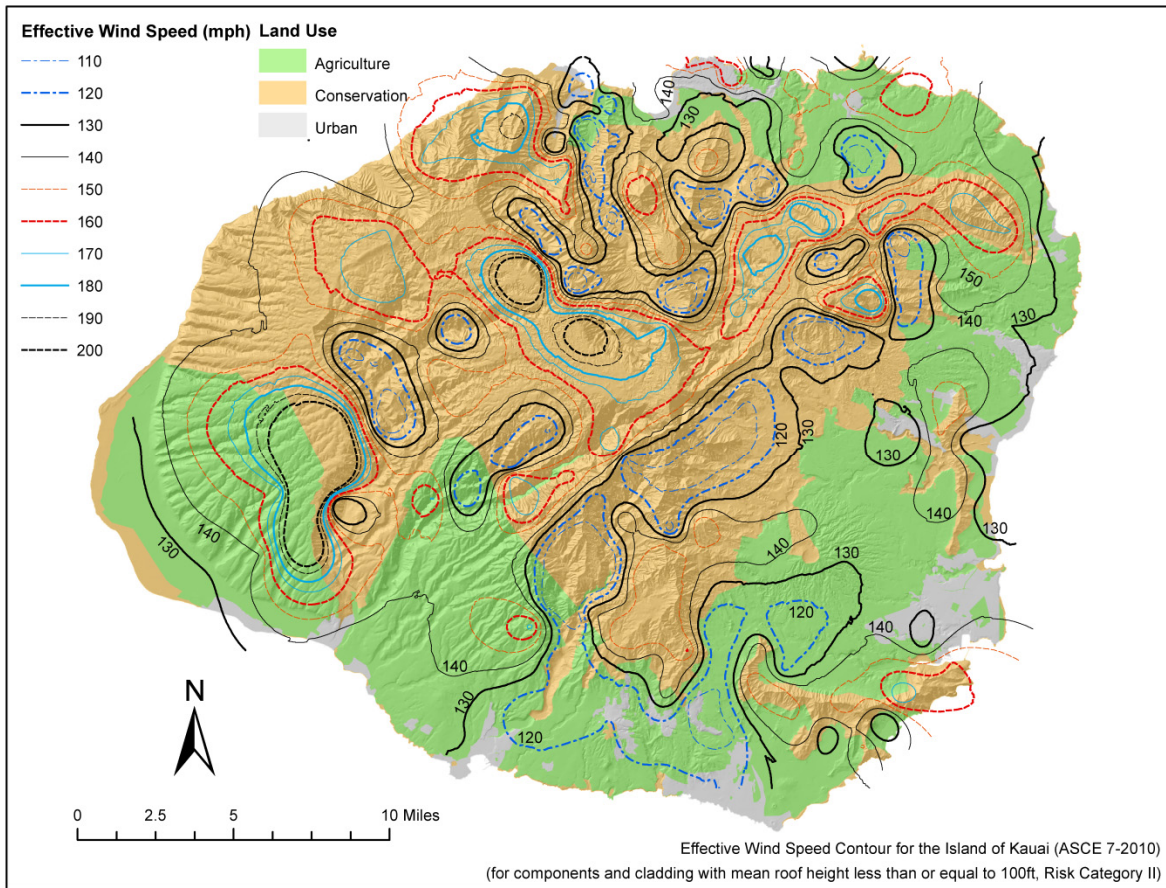
**Figure R301.2(8)(d) County of Maui, Island of Lanai Effective Ultimate Wind Speed,  $V_{eff-ult}$ , for Components and Cladding for Risk Category II Buildings less than 100 feet Tall**



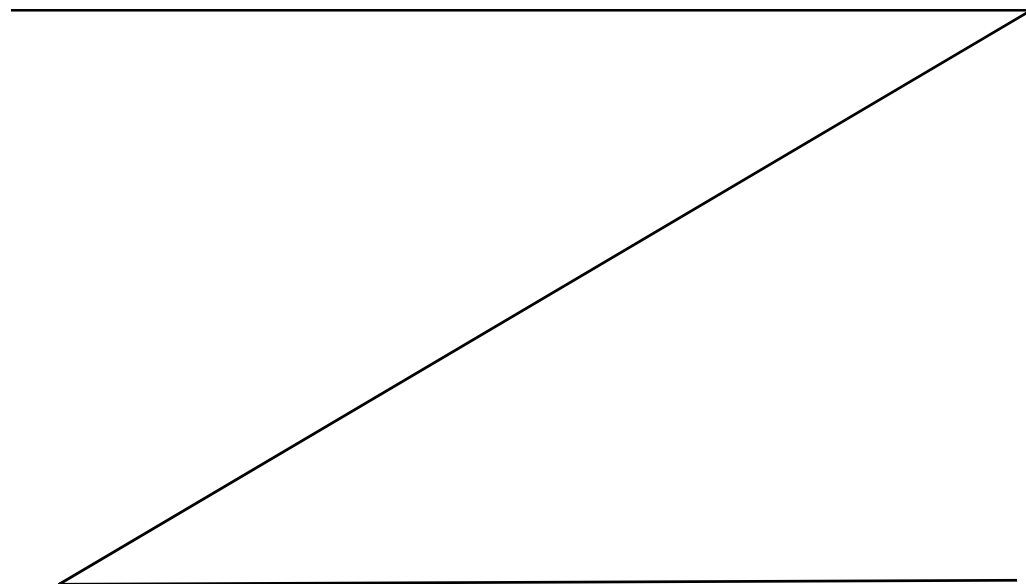


**Figure R301.2(8)(e) City and County of Honolulu Effective Ultimate Wind Speed,  $V_{eff-ult}$ , for Components and Cladding for Risk Category II Buildings less than 100 feet Tall**





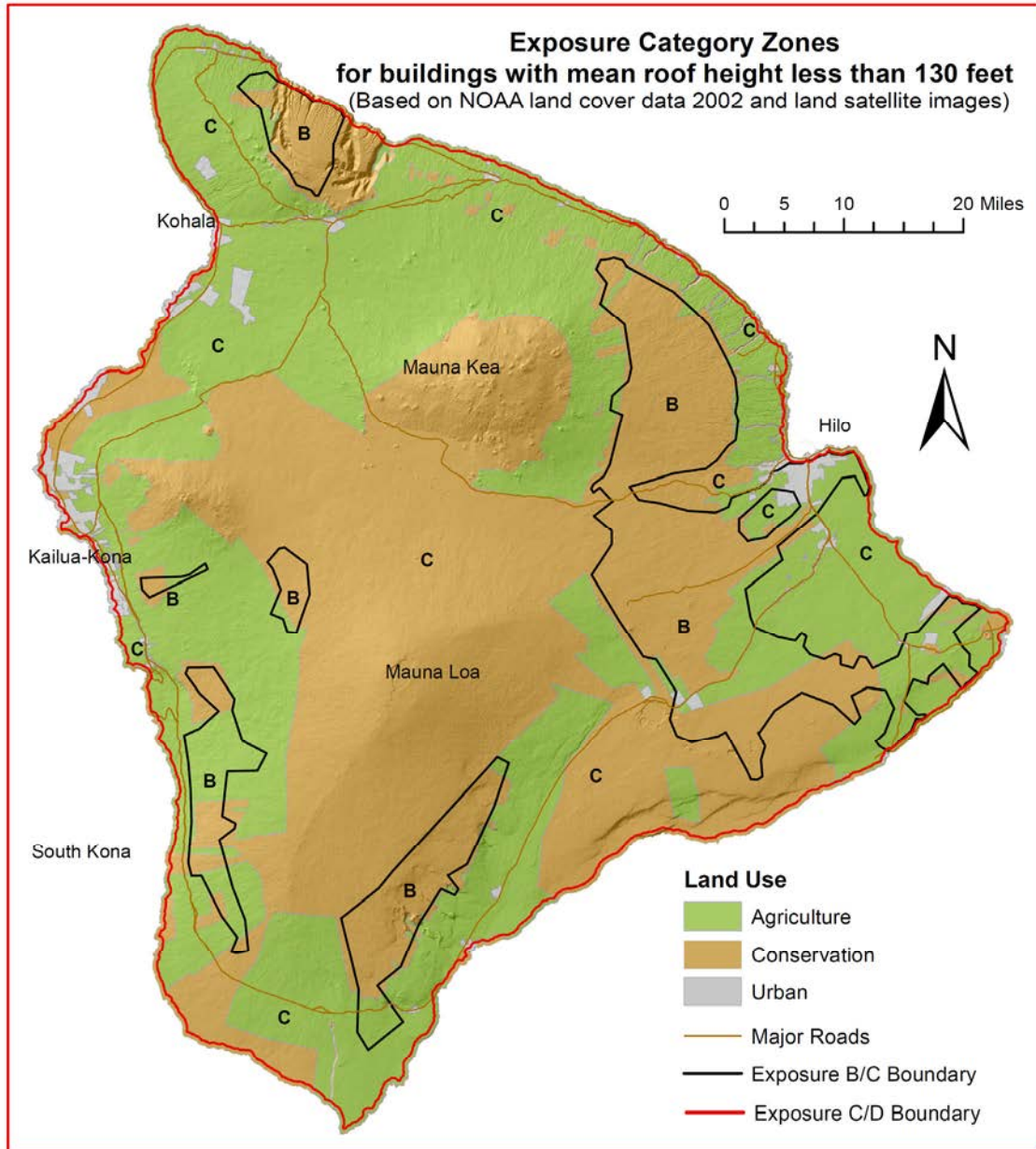
**Figure R301.2(8)(f) County of Kauai Effective Ultimate Wind Speed,  $V_{eff-ult}$ , for Components and Cladding for Risk Category II Buildings less than 100 feet Tall"**



**(16) R301.2.1.4 Exposure Category.**

Exposure Category Section R301.2.1.3 is amended to read as follows:

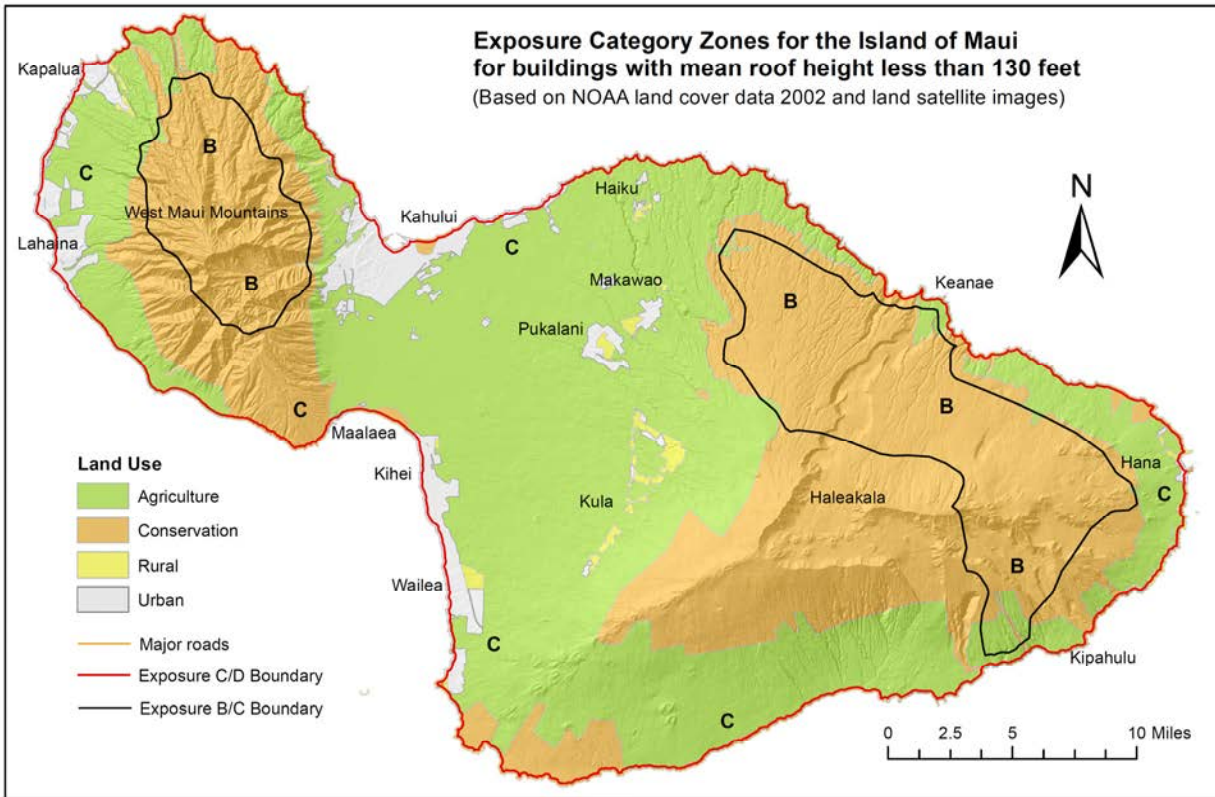
**"R301.2.1.4 Exposure Category.** The exposure category shall be determined from Figures R301.2(9)(a) through R301.2(9)(e) or using the provisions of ASCE 7-10.



**Notes:**

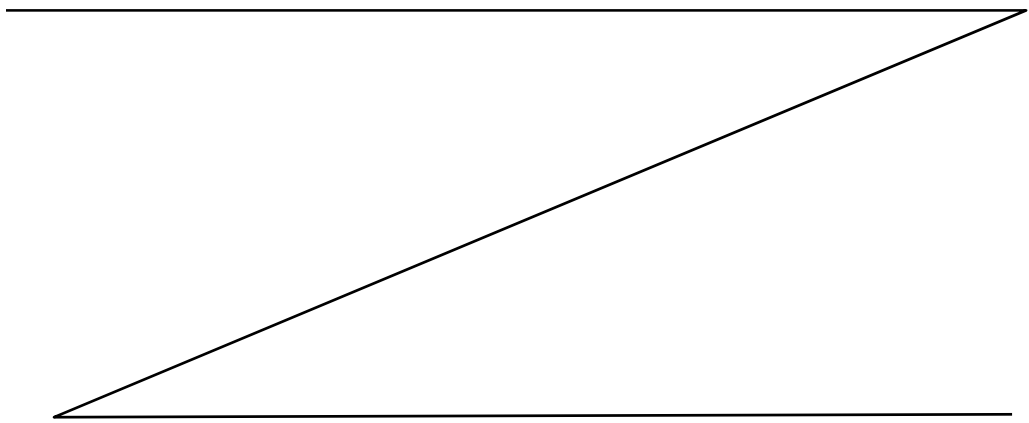
1. Intermediate exposures, between categories B and C and between C and D, are permitted when substantiated per ASCE 7 recognized methodology.
2. Sites located within the C (coastal) zone shall be permitted to be evaluated for exposure category B for the wind directions where an adjacent B zone exists in the applicable upwind sector.
3. Sites located within 600 feet from the coastline shall be exposure category D for onshore wind directions.
4. For buildings whose height is equal to or greater than 130 ft, exposure category shall be determined per Section 1609.4.1.
5. For buildings whose mean roof height is less than or equal to 30 ft, exposure category shall be permitted to be evaluated per Section 1609.4.

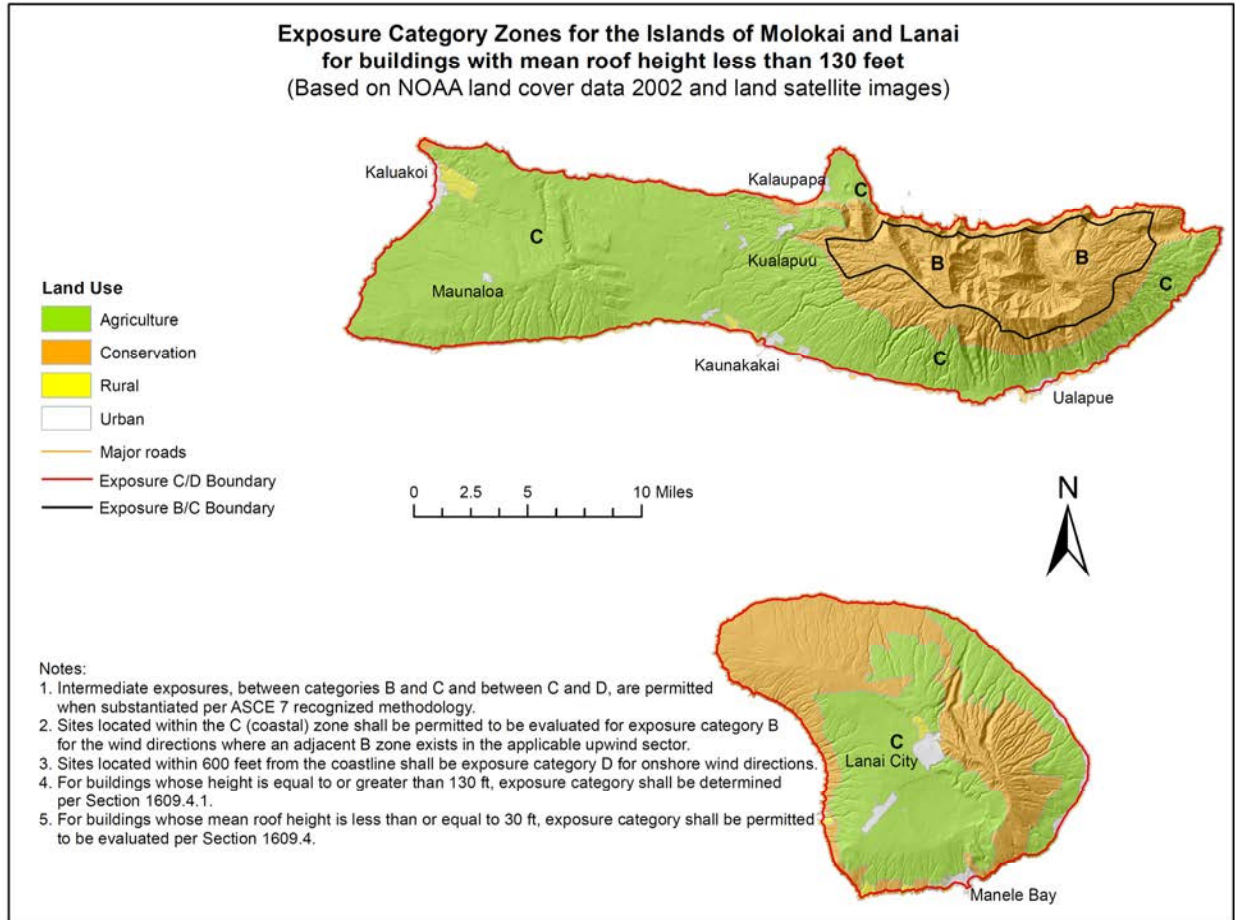
**Figure R301.2(9)(a) Exposure Category Zones for Hawaii County**



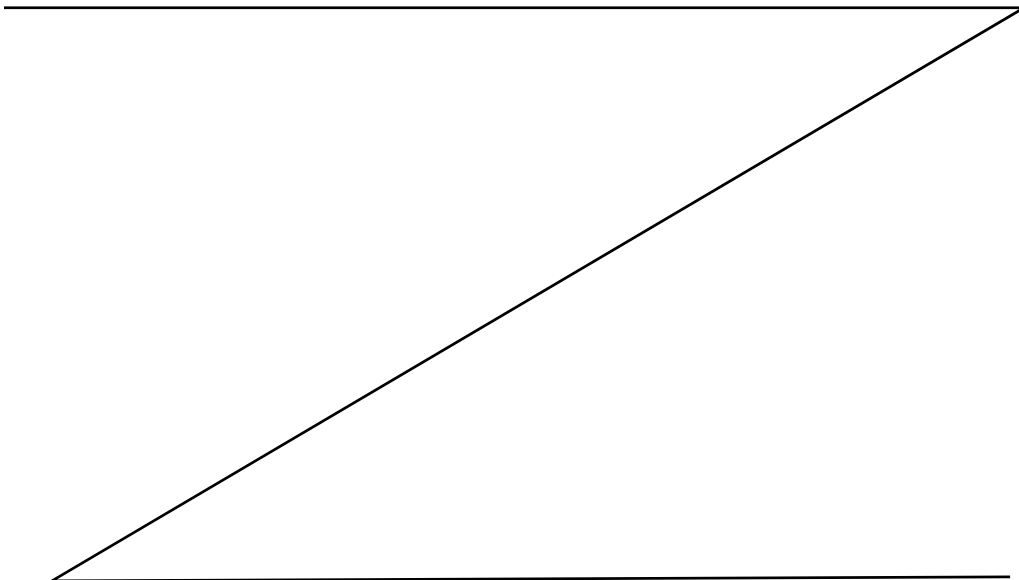
- Notes:
1. Intermediate exposures, between categories B and C and between C and D, are permitted when substantiated per ASCE 7 recognized methodology.
  2. Sites located within the C (coastal) zone shall be permitted to be evaluated for exposure category B for the wind directions where an adjacent B zone exists in the applicable upwind sector.
  3. Sites located within 600 feet from the coastline shall be exposure category D for onshore wind directions.
  4. For buildings whose height is equal to or greater than 130 ft, exposure category shall be determined per Section 1609.4.1.
  5. For buildings whose mean roof height is less than or equal to 30 ft, exposure category shall be permitted to be evaluated per Section 1609.4.

**Figure R301.2(9)(b) Exposure Category Zones for Island of Maui, Maui County**

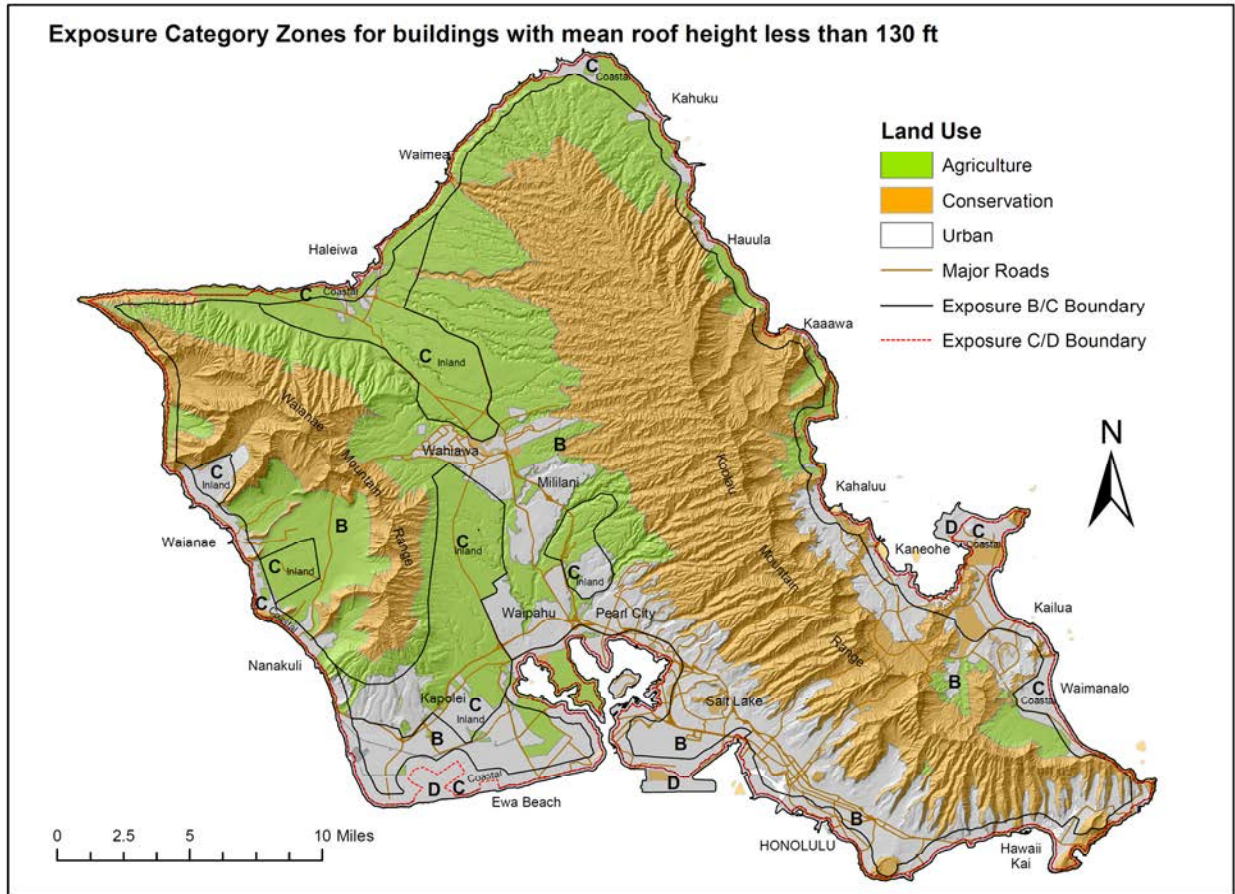




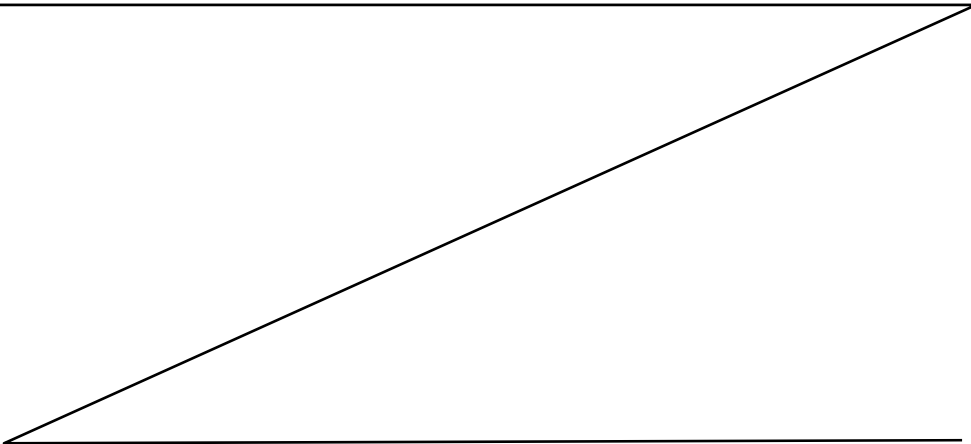
**Figure R301.2(9)(c) Exposure Category Zones for Islands of Molokai and Lanai, Maui County**

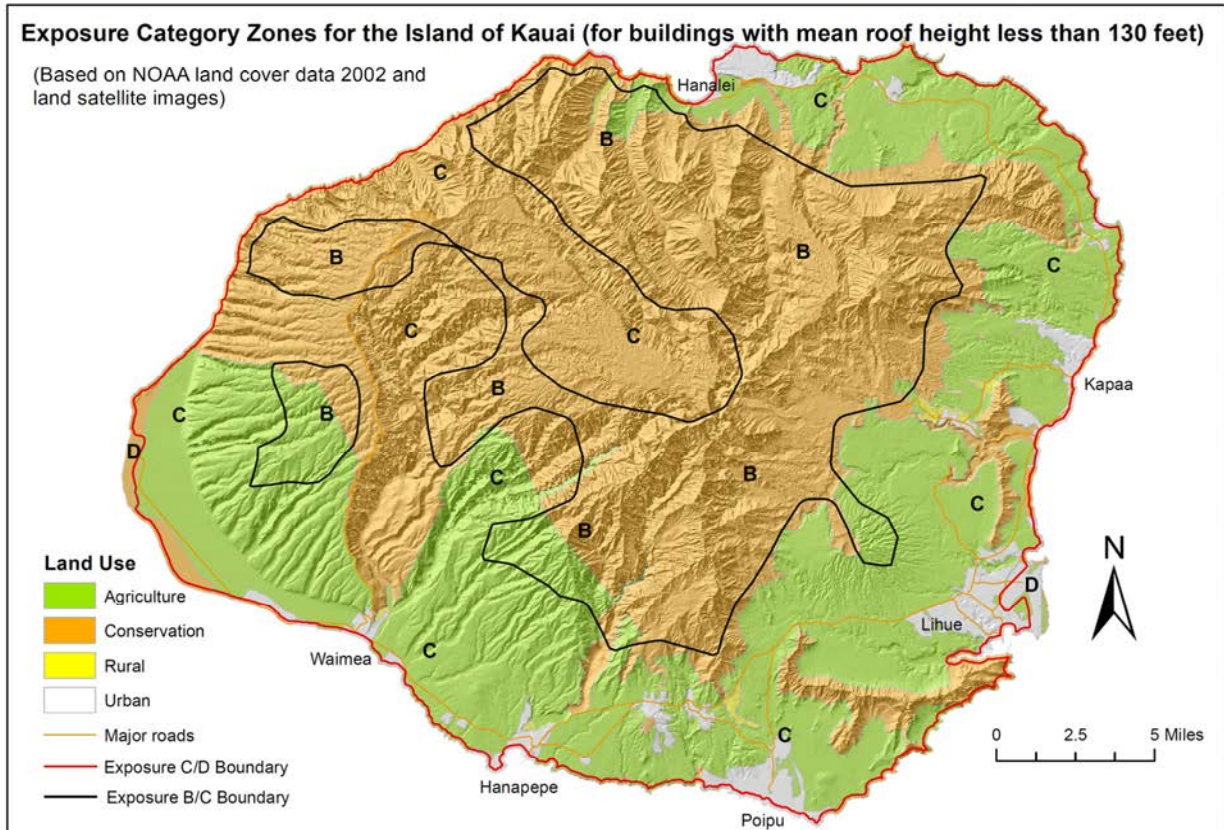




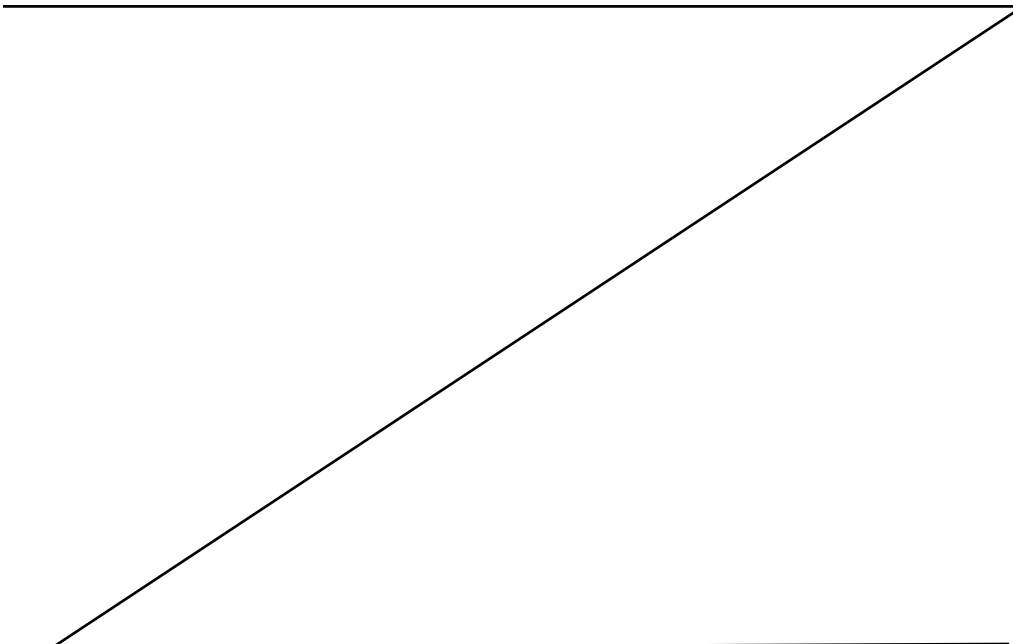


**Figure R301.2(9)(d) Exposure Category Zones for the City and County of Honolulu**





**Figure R301.2(9)(e) Exposure Category Zones for Kauai County"**



**(17) R301.2.1.5 Topographic wind effects.**

Section R301.2.1.5 Topographic wind effects shall be amended to read,

“R301.2.1.5 Topographic wind effects. Topographic wind speed effects shall be considered in the design of the building. Buildings designed using the effective ultimate wind speed as determined from Figures R301.2(8)(a) through R301.2(8)(f) and wind exposure categories determined in accordance with section R301.2.1.4 shall be deemed to comply with this section.”

**(18) R301.2.1.5.1 Simplified topographic wind speed-up method**

Section R301.2.1.5.1 Simplified topographic wind speed-up method shall be deleted in its entirety.

**(19) Figures R301.2.1.5.1(1) and R301.2.1.5.1(2) and Table R301.2.1.5.1**

Figures R301.2.1.5.1(1) and R301.2.1.5.1(2) and Table R301.2.1.5.1 shall be deleted in their entirety.

**(20) R301.2.2.1 Determination of seismic design category.**

Section R301.2.2.1 Determination of seismic design category shall be amended to read:

“R301.2.2.1 Determination of seismic design category. Buildings shall be assigned a seismic design category in accordance with **Table R301.2(4) or** Figure R301.2(2).”

**Table R301.2(4) Seismic Design Category by Location-Site Class D**

Location	Seismic Design Category
Kauai	B
Oahu, Molokai & Lanai	D <sub>0</sub>
Maui	D <sub>1</sub>
Hawaii: North and South Kohala , Hamakua, & North Hilo Districts	D <sub>2</sub>
All other Hawaii County Districts	E

Exception: Seismic Design Category may be determined using Figure R301.2(2).”

**(21) R301.2.2.1.1 Alternate determination of seismic design category**

Section R301.2.2.1.1 shall be deleted in its entirety.

**(22) R301.2.2.2.5 Irregular buildings.**

Section R301.2.2.2.5 is amended to read as follows:

“The seismic provisions of this code shall not be used for irregular structures located in Seismic Design Categories C, D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub>. Irregular portions of structures shall be designed in accordance with accepted engineering practice to the extent the irregular features

affect the performance of the remaining structural system. Where the forces associated with the irregularity are resisted by a structural system designed in accordance with accepted engineering practice, design of the remainder of the building shall be permitted using the provisions of this code. A building or portion of a building shall be considered to be irregular where one or more of the following conditions occur:

1. Where exterior shear wall lines or *braced wall panels* are not in one plane vertically from the foundation to the uppermost *story* in which they are required **[see Figure R301.2.2.2.5(1)]**.

**Exception:** For wood light-frame construction, floors with cantilevers or setbacks not exceeding four times the nominal depth of the wood floor joists **[see Figure R301.2.2.2.5(2)]** are permitted to support *braced wall panels* that are out of plane with *braced wall panels* below provided that:

1. Floor joists are nominal 2 inches by 10 inches (51 mm by 254 mm) or larger and spaced not more than 16 inches (406 mm) on center.
  2. The ratio of the back span to the cantilever is not less than 2 to 1.
  3. Floor joists at ends of *braced wall panels* are doubled.
  4. For wood-frame construction, a continuous rim joist is connected to ends of cantilever joists. When spliced, the rim joists shall be spliced using a galvanized metal tie not less than 0.058 inch (1.5 mm) (16 gage) and 1<sup>1</sup>/<sub>2</sub> inches (38 mm) wide fastened with six 16d nails on each side of the splice or a block of the same size as the rim joist of sufficient length to fit securely between the joist space at which the splice occurs fastened with eight 16d nails on each side of the splice; and
  5. Gravity loads carried at the end of cantilevered joists are limited to uniform wall and roof loads and the reactions from headers having a span of 8 feet (2438 mm) or less.
2. Where a section of floor or roof is not laterally supported by shear walls or *braced wall lines* on all edges **[see Figure R301.2.2.2.5(3)]**.

**Exception:** Portions of floors that do not support shear walls or *braced wall panels* above, or roofs, shall be permitted to extend not more than 6 feet (1829 mm) beyond a shear wall or *braced wall line* **[see Figure R301.2.2.2.5(4)]**.

3. Where the end of a *braced wall panel* occurs over an opening in the wall below and ends at a horizontal distance greater than 1 foot (305 mm) from the edge of the opening. This provision is applicable to shear walls and *braced wall panels* offset in plane and to *braced wall panels* offset out of plane as permitted by the exception to Item 1 **[see Figure R301.2.2.2.5(5)]**.

**Exception:** For wood light-frame wall construction, one end of a *braced wall panel* shall be permitted to extend more than 1 foot (305 mm) over an opening not more than 8 feet (2438 mm)

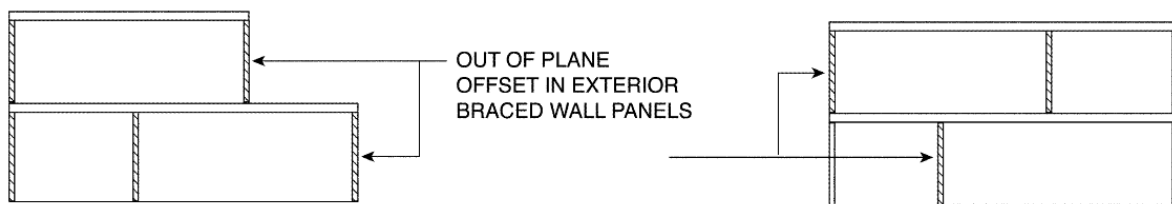
in width in the wall below provided that the opening includes a header in accordance with the following:

1. The building width, loading condition and framing member species limitations of Table R602.7(1) shall apply; and
  2. Not less than one 2 × 12 or two 2 × 10 for an opening not more than 4 feet (1219 mm) wide; or
  3. Not less than two 2 × 12 or three 2 × 10 for an opening not more than 6 feet (1829 mm) in width; or
  4. Not less than three 2 × 12 or four 2 × 10 for an opening not more than 8 feet (2438 mm) in width; and
  5. The entire length of the *braced wall panel* does not occur over an opening in the wall below.
4. Where an opening in a floor or roof exceeds the lesser of 12 feet (3658 mm) or 50 percent of the least floor or roof dimension **[see Figure R301.2.2.2.5(6)]**.
  5. Where portions of a floor level are vertically offset **[see Figure R301.2.2.2.5(7)]**.

**Exceptions:**

1. Framing supported directly by continuous foundations at the perimeter of the building.
  2. For wood light-frame construction, floors shall be permitted to be vertically offset when the floor framing is lapped or tied together as required by Section R502.6.1.
6. Where shear walls and *braced wall lines* do not occur in two perpendicular directions **[see Figure R301.2.2.2.5(7)]**.
  7. Where stories above *grade plane* partially or completely braced by wood wall framing in accordance with Section R602 or cold-formed steel wall framing in accordance with Section R603 include masonry or concrete construction. Where this irregularity applies, the entire *story* shall be designed in accordance with accepted engineering practice.

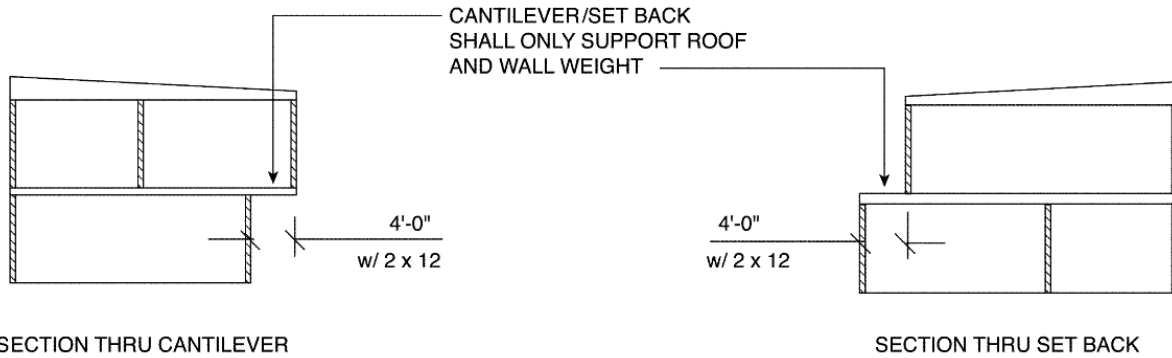
**Exception:** Fireplaces, chimneys and masonry veneer as permitted by this code.



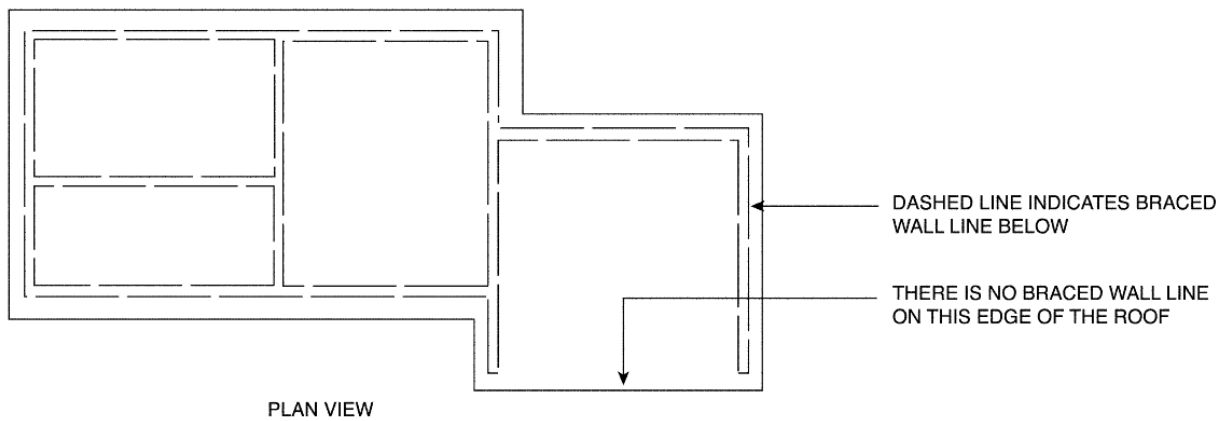
SECTION VIEW

SECTION VIEW

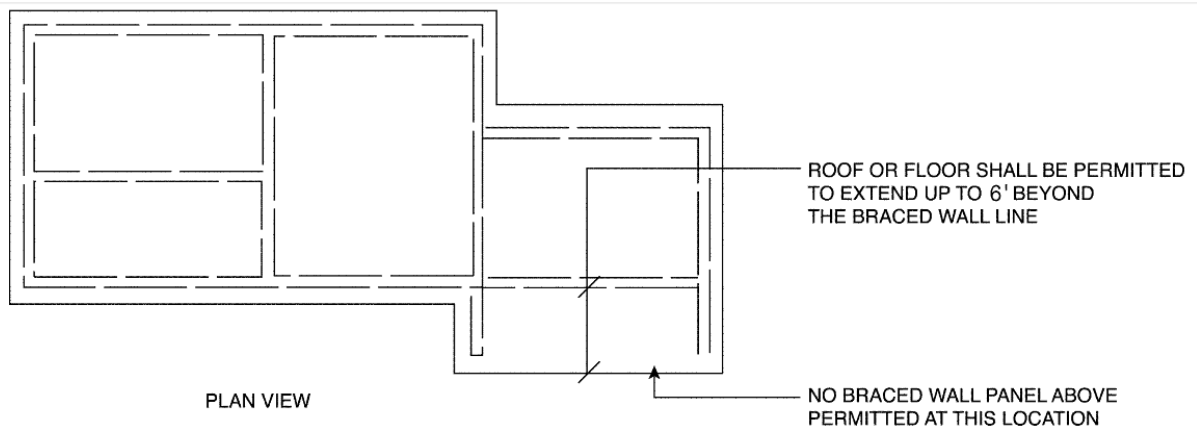
**Figure R301.2.2.2.5(1) BRACED WALL PANELS OUT OF PLANE**



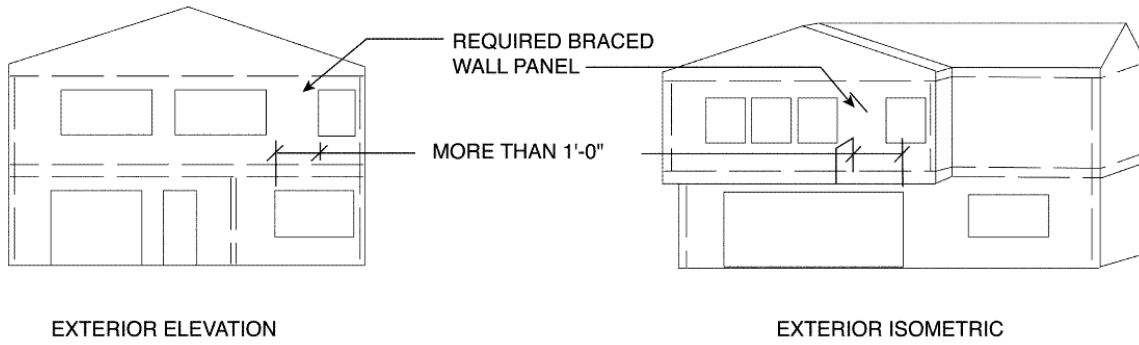
**Figure R301.2.2.2.5(2) BRACED WALL PANELS SUPPORTED BY CANTILEVER OR SETBACK**



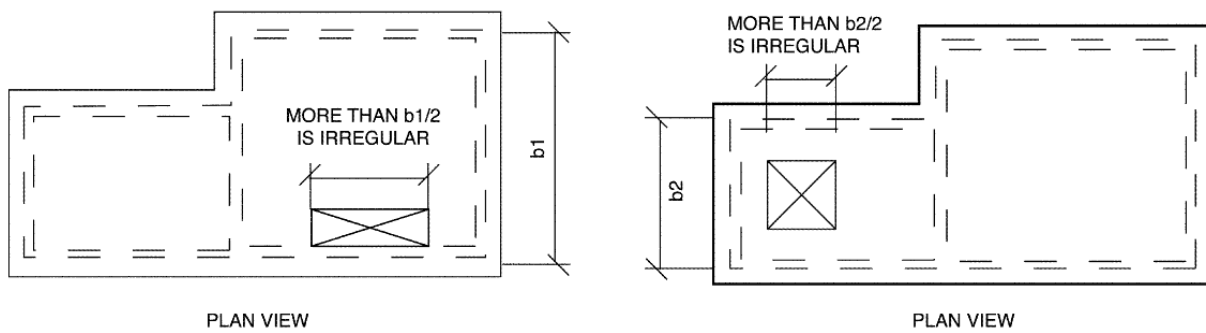
**Figure R301.2.2.2.5(3) FLOOR OR ROOF NOT SUPPORTED ON ALL EDGES**



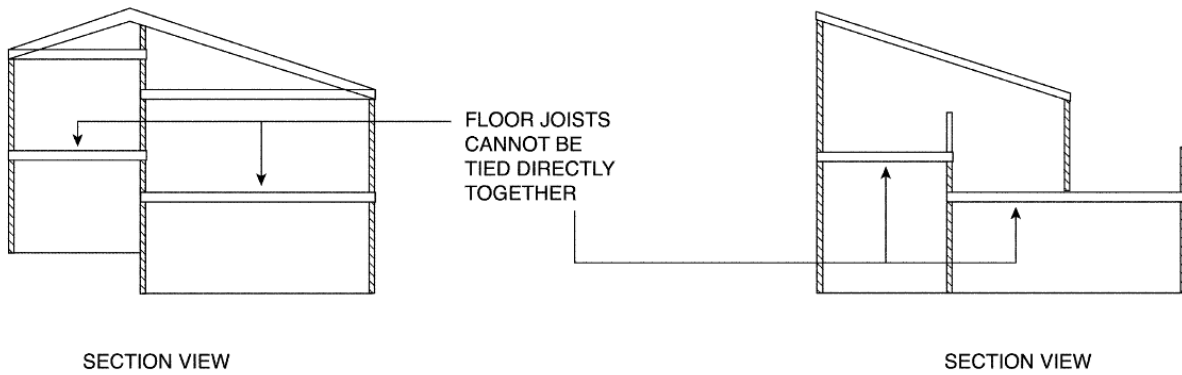
**Figure R301.2.2.2.5(4) ROOF OR FLOOR EXTENSION BEYOND BRACED WALL LINE**



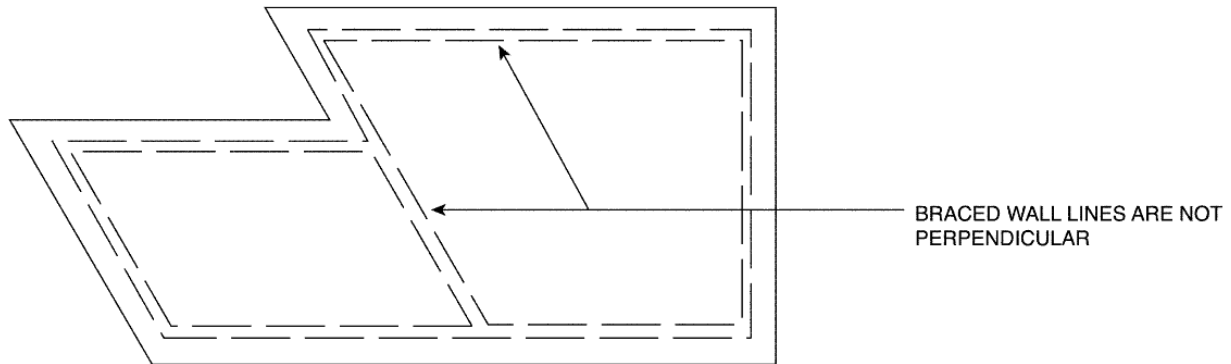
**Figure R301.2.2.2.5(5) BRACED WALL PANEL EXTENSION OVER OPENING**



**Figure R301.2.2.2.5(6) OPENING LIMITATIONS FOR FLOOR AND ROOF DIAPHRAGMS**



**Figure R301.2.2.2.5(7) PORTIONS OF FLOOR LEVEL OFFSET VERTICALLY**



PLAN VIEW

**Figure R301.2.2.2.5(8) BRACED WALL LINES NOT PERPENDICULAR****(23) R301.2.2.4 Seismic Design Category E**

Section R301.2.2.4 shall be amended to read as follows:

"Buildings located in Seismic Design Category E shall be designed in accordance with the State Building Code, except when the seismic design category is reclassified to a lower seismic design category in accordance with section R301.2.2.1. Components of buildings not required to be designed to resist seismic loads shall be constructed in accordance with the provisions of this code. Buildings located in Seismic Design Category E that conform to the following additional restrictions are permitted to be constructed in accordance with the provisions for Seismic Design Category D<sub>2</sub> of this code:

1. All exterior shear wall lines or braced wall panels are in one plane vertically from the foundation to the uppermost story.
2. Floors shall not cantilever past the exterior walls.
3. The building is within all of the requirements of Section R301.2.2.2.5 for being considered as regular."

**(24) R313.2 Automatic Fire Sprinkler Systems.**

Section R313.2 is deleted in its entirety.

**(25) R317.1 Protection Against Decay and Termites.**

Section R317.1 is amended to read as follows:

"R317.1 The first paragraph of Section R317.1 shall be amended by deleting the words "naturally durable wood or".

**(26) R318.1 Subterranean termite control methods**

R318.1 is amended to read:

"R318.1 Subterranean termite control methods. Methods of protection shall be one of items 1, 2 or 3 and one of items 4 or 5.

1. Chemical termiticide, as provided in Section R318.2
2. Termite baiting system installed and maintained according to the label.
3. Physical barriers, as provided in Section R318.3 and used in locations as specified in Section R317.1



4. Pressure-preservative-treated wood in accordance with Section R317.1
5. Cold-formed steel framing in accordance with Sections R505.2.1 and R603.2.1.

**(27) R318.4 Foam plastic protection**

R318.4 Foam plastic protection is amended by deleting the words "In areas where the probability of termite infestation is "very heavy" as indicated in Figure R301.2(6)," and by deleting Exceptions 1 and 2.

**(28) R318.5 Water Splash.**

Section R318.5 is added to read as follows,  
**"R318.5 Water Splash.** Where wood-frame walls and partitions are covered on the interior with plaster, tile or similar materials and are subject to water splash, the framing shall be protected with approved waterproof paper."

**(29) Section R318.6 Pipe and Other Penetrations.**

Section R318.6 is added to read as follows,  
**"R318.6 Pipe and Other Penetrations.** Insulations around plumbing pipes shall not pass through ground floor slabs. Openings around pipes or similar penetrations in a concrete or masonry slab, which is in direct contact with earth, shall be filled with non-shrink grout, or other approved physical barrier."

**(30) R401.5 Post or pier foundations.**

Section R401.5 Post or pier foundations shall be added to read:  
**"Raised floor systems supported by post or pier foundations shall be designed in accordance with accepted engineering practice and the State Building Code."**

**(31) R406.1 Foundation Waterproofing.**

Section R406.1 is deleted in its entirety.

**(32) R406.2 Concrete and masonry foundation waterproofing**

**R406.2** Concrete and masonry foundation waterproofing is amended by deleting the words "~~In areas where a high water table or other severe soil-water conditions are known to exist~~", "~~3. Six mil (0.15 mm) polyvinyl chloride.~~" and "~~4. Six mil (0.15 mm) polyethylene.~~"

**(33) R406.3 Dampproofing for wood foundations**

**R406.3 Dampproofing for wood foundations** is amended to read as follows:  
**"R406.3 Waterproofing for wood foundations.** Wood foundations enclosing habitable or usable spaces located below grade shall be waterproofed in accordance with Section R406.2.

**(34) R406.3.2 Below-grade moisture barrier**

**R406.3.2 Below-grade moisture barrier is amended to read:**  
**"R406.3.2 Below-grade waterproofing.** One of the waterproofing systems listed in R406.2 shall be applied over the below-grade portion of exterior foundation walls prior to backfilling. The top edge of the

waterproofing shall be bonded to the sheathing to form a seal. Film areas at grade level shall be protected from mechanical damage and exposure by a pressure preservative treated lumber or plywood strip attached to the wall several inches above finish grade level and extending approximately 9 inches (229 mm) below grade, The joint between the strip and the wall shall be caulked full length prior to fastening the strip to the wall. Other coverings appropriate to the architectural treatment may also be used. The waterproofing shall extend down to the bottom of the wood footing plate but shall not overlap or extend into the gravel or crushed stone footing."

**(35) R406.4 Precast concrete system dampproofing**

Section R406.4 Precast concrete system dampproofing is deleted in its entirety.

**(36) R602.10.9 Braced wall panel support**

Section R602.10.9 Braced wall panel support shall be amended to read: "R602.10.9 Braced wall panel support. Braced wall panel support shall be provided as follows:

1. Cantilevered floor joists complying with Section R502.3.3 shall be permitted to support braced wall panels
2. ~~Elevated~~ Raised floor system post or pier foundations supporting braced wall panels shall be designed in accordance with accepted engineering practice and the State Building Code.
3. Masonry stem walls with a length of 48 inches (1219 mm) or less supporting braced wall panels shall be reinforced in accordance with Figure R602.10.9. Masonry stem walls with a length greater than 48 inches (1219 mm) supporting braced wall panels shall be constructed in accordance with Section R403.1 Methods ABW and PFH shall not be permitted to attach to masonry stem walls.
4. Concrete stem walls with a length of 48 inches (1219 mm) or less, greater than 12 inches (305 mm) tall and less than 6 inches (152 mm) thick shall have reinforcement sized and located in accordance with Figure R602.10.9."

**(37) Energy Efficiency.**

Chapter 11 Energy Efficiency is deleted in its entirety if the authority having jurisdiction has adopted the IECC.

**(38) Mechanical Administration.**

Chapter 12 is deleted in its entirety.

**(39) Chapter 13 General Mechanical System Requirements.**

Chapter 13 is deleted in its entirety.

**(40) Heating and Cooling Equipment and Appliances.**

Chapter 14 is deleted in its entirety.

**(41) Exhaust Systems.**

Chapter 15 is deleted in its entirety.

- (42) **Duct Systems.**  
Chapter 16 is deleted in its entirety.
- (43) **Combustion Air.**  
Chapter 17 is deleted in its entirety.
- (44) **Special Appliances, Equipment and Systems.**  
Chapter 19 is deleted in its entirety.
- (45) **Boilers and Water Heaters.**  
Chapter 20 is deleted in its entirety.
- (46) **Hydronic Piping.**  
Chapter 21 is deleted in its entirety.
- (47) **Special Piping and Storage Systems.**  
Chapter 22 is deleted in its entirety.
- (48) **Fuel Gas.**  
Chapter 24 is deleted in its entirety.
- (49) **Plumbing Administration.**  
Chapter 25 is deleted in its entirety.
- (50) **General Plumbing Requirements.**  
Chapter 26 is deleted in its entirety.
- (51) **Plumbing Fixtures.**  
Chapter 27 is deleted in its entirety.
- (52) **Water Heaters.**  
Chapter 28 is deleted in its entirety.
- (53) **Water Supply and Distribution.**  
Chapter 29 is deleted in its entirety.
- (54) **Sanitary Drainage.**  
Chapter 30 is deleted in its entirety.
- (55) **Vents.**  
Chapter 31 is deleted in its entirety. (
- (56) **Traps.**  
Chapter 32 is deleted in its entirety.
- (57) **Storm Drainage.**  
Chapter 33 is deleted in its entirety.
- (58) **Electrical Requirements.**  
Chapters 34 thru 41 are deleted in their entirety.

**(59) Swimming Pools.**

Chapter 42 is deleted in its entirety.