

## CHAPTER 3 [CE]

# GENERAL REQUIREMENTS

### SECTION C301 CLIMATE ZONES

**C301.1 General.** Climate zones from Figure C301.1 or Table C301.1 shall be used in determining the applicable requirements from Chapter 4. Locations not in Table C301.1 (outside the United States) shall be assigned a climate zone based on Section C301.3.

**C301.2 Warm humid counties.** Warm humid counties are identified in Table C301.1 by an asterisk.

**C301.3 International climate zones.** The climate zone for any location outside the United States shall be determined by applying Table C301.3(1) and then Table C301.3(2).

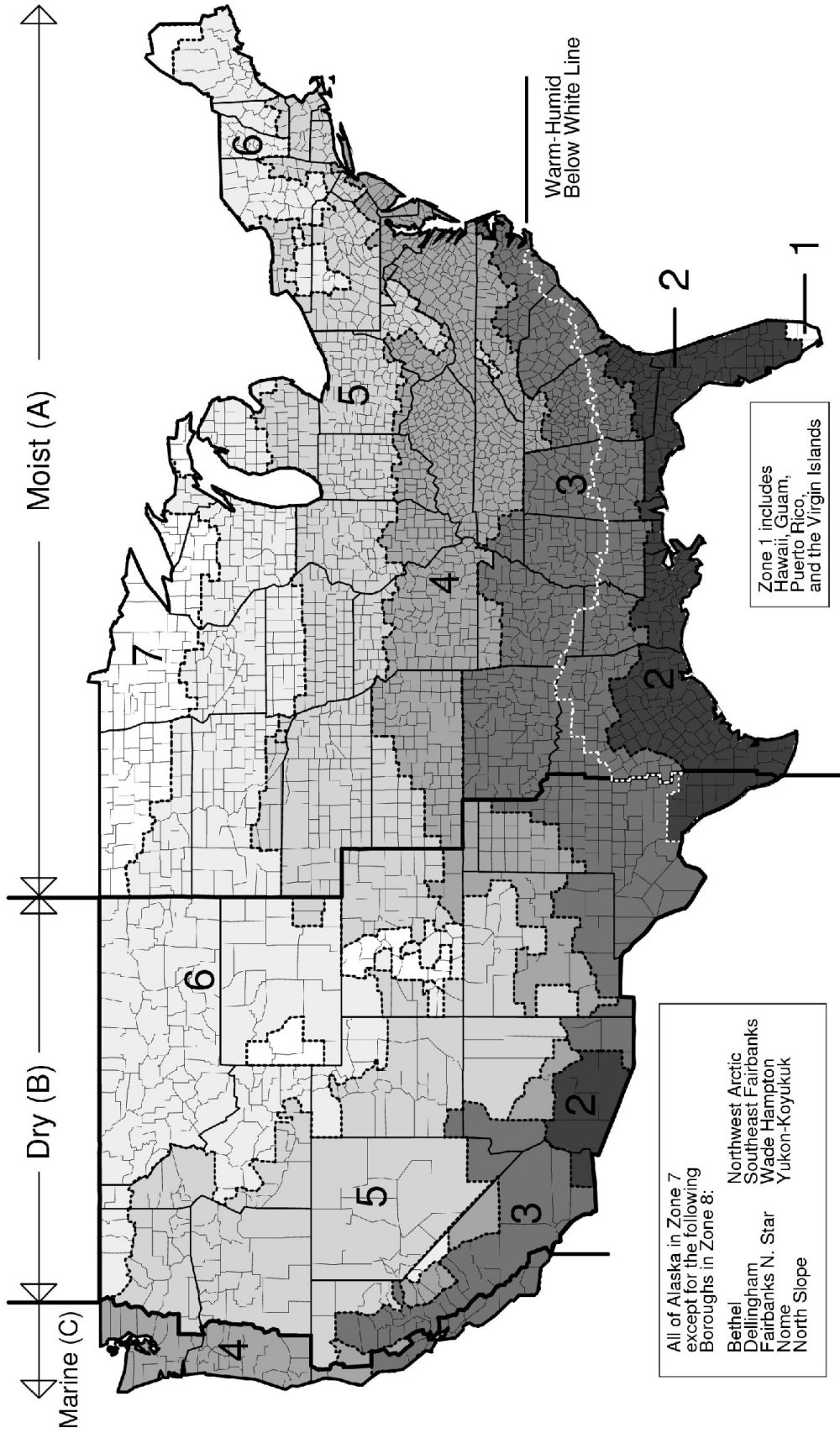


FIGURE C301.1  
CLIMATE ZONES

TABLE C301.1  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY

Key: A – Moist, B – Dry, C – Marine. Absence of moisture designation indicates moisture regime is irrelevant. Asterisk (\*) indicates a warm-humid location.

### US STATES

<b>ALABAMA</b>	3A Lee	7 Kodiak Island	3A Calhoun	3A Monroe
3A Autauga*	3A Limestone	7 Lake and Peninsula	4A Carroll	3A Montgomery
2A Baldwin*	3A Lowndes*	7 Matanuska-Susitna	3A Chicot	3A Nevada
3A Barbour*	3A Macon*	8 Nome	3A Clark	4A Newton
3A Bibb	3A Madison	8 North Slope	3A Clay	3A Ouachita
3A Blount	3A Marengo*	8 Northwest Arctic	3A Cleburne	3A Perry
3A Bullock*	3A Marion	7 Prince of Wales	3A Cleveland	3A Phillips
3A Butler*	3A Marshall	Outer Ketchikan	3A Columbia*	3A Pike
3A Calhoun	2A Mobile*	7 Sitka	3A Conway	3A Poinsett
3A Chambers	3A Monroe*	7 Skagway-Hoonah- Angoon	3A Craighead	3A Polk
3A Cherokee	3A Montgomery*	8 Southeast Fairbanks	3A Crawford	3A Pope
3A Chilton	3A Morgan	7 Valdez-Cordova	3A Crittenden	3A Prairie
3A Choctaw*	3A Perry*	8 Wade Hampton	3A Cross	3A Pulaski
3A Clarke*	3A Pickens	7 Wrangell-Petersburg	3A Dallas	3A Randolph
3A Clay	3A Pike*	7 Yakutat	3A Desha	3A Saline
3A Cleburne	3A Randolph	8 Yukon-Koyukuk	3A Drew	3A Scott
3A Coffee*	3A Russell*	<b>ARIZONA</b>	3A Faulkner	4A Searcy
3A Colbert	3A Shelby	5B Apache	3A Franklin	3A Sebastian
3A Conecuh*	3A St. Clair	3B Cochise	4A Fulton	3A Sevier*
3A Coosa	3A Sumter	5B Coconino	3A Garland	3A Sharp
3A Covington*	3A Talladega	4B Gila	3A Grant	3A St. Francis
3A Crenshaw*	3A Tallapoosa	3B Graham	3A Greene	4A Stone
3A Cullman	3A Tuscaloosa	3B Greenlee	3A Hempstead*	3A Union*
3A Dale*	3A Walker	2B La Paz	3A Hot Spring	3A Van Buren
3A Dallas*	3A Washington*	2B Maricopa	3A Howard	4A Washington
3A DeKalb	3A Wilcox*	3B Mohave	3A Independence	3A White
3A Elmore*	3A Winston	5B Navajo	4A Izard	3A Woodruff
3A Escambia*	<b>ALASKA</b>	2B Pima	3A Jackson	3A Yell
3A Etowah	7 Aleutians East	2B Pinal	3A Jefferson	<b>CALIFORNIA</b>
3A Fayette	7 Aleutians West	3B Santa Cruz	3A Johnson	3C Alameda
3A Franklin	7 Anchorage	4B Yavapai	3A Lafayette*	6B Alpine
3A Geneva*	8 Bethel	2B Yuma	3A Lawrence	4B Amador
3A Greene	7 Bristol Bay	<b>ARKANSAS</b>	3A Lee	3B Butte
3A Hale	7 Denali	3A Arkansas	3A Lincoln	4B Calaveras
3A Henry*	8 Dillingham	3A Ashley	3A Little River*	3B Colusa
3A Houston*	8 Fairbanks North Star	4A Baxter	3A Logan	3B Contra Costa
3A Jackson	7 Haines	4A Benton	3A Lonoke	4C Del Norte
3A Jefferson	7 Juneau	4A Boone	4A Madison	4B El Dorado
3A Lamar	7 Kenai Peninsula	3A Bradley	3A Marion	3B Fresno
3A Lauderdale	7 Ketchikan Gateway		3A Miller*	3B Glenn
3A Lawrence			3A Mississippi	

(continued)

**GENERAL REQUIREMENTS**

**TABLE C301.1—continued  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

4C Humboldt	3B Yuba	5B Morgan	2A Escambia*	2A Taylor*
2B Imperial	<b>COLORADO</b>	4B Otero	2A Flagler*	2A Union*
4B Inyo	5B Adams	6B Ouray	2A Franklin*	2A Volusia*
3B Kern	6B Alamosa	7 Park	2A Gadsden*	2A Wakulla*
3B Kings	5B Arapahoe	5B Phillips	2A Gilchrist*	2A Walton*
4B Lake	6B Archuleta	7 Pitkin	2A Glades*	2A Washington*
5B Lassen	4B Baca	5B Prowers	2A Gulf*	<b>GEORGIA</b>
3B Los Angeles	5B Bent	5B Pueblo	2A Hamilton*	2A Appling*
3B Madera	5B Boulder	6B Rio Blanco	2A Hardee*	2A Atkinson*
3C Marin	6B Chaffee	7 Rio Grande	2A Hendry*	2A Bacon*
4B Mariposa	5B Cheyenne	7 Routt	2A Hernando*	2A Baker*
3C Mendocino	7 Clear Creek	6B Saguache	2A Highlands*	2A Baldwin
3B Merced	6B Conejos	7 San Juan	2A Hillsborough*	4A Banks
5B Modoc	6B Costilla	6B San Miguel	2A Holmes*	3A Barrow
6B Mono	5B Crowley	5B Sedgwick	2A Indian River*	3A Bartow
3C Monterey	6B Custer	7 Summit	2A Jackson*	3A Ben Hill*
3C Napa	5B Delta	5B Teller	2A Jefferson*	2A Berrien*
5B Nevada	5B Denver	5B Washington	2A Lafayette*	3A Bibb
3B Orange	6B Dolores	5B Weld	2A Lake*	3A Bleckley*
3B Placer	5B Douglas	5B Yuma	2A Lee*	2A Brantley*
5B Plumas	6B Eagle	<b>CONNECTICUT</b>	2A Leon*	2A Brooks*
3B Riverside	5B Elbert	5A (all)	2A Levy*	2A Bryan*
3B Sacramento	5B El Paso	<b>DELAWARE</b>	2A Liberty*	3A Bulloch*
3C San Benito	5B Fremont	4A (all)	2A Madison*	3A Burke
3B San Bernardino	5B Garfield	<b>DISTRICT OF</b>	2A Manatee*	3A Butts
3B San Diego	5B Gilpin	<b>COLUMBIA</b>	2A Marion*	3A Calhoun*
3C San Francisco	7 Grand	4A (all)	2A Martin*	2A Camden*
3B San Joaquin	7 Gunnison	<b>FLORIDA</b>	1A Miami-Dade*	3A Candler*
3C San Luis Obispo	7 Hinsdale	2A Alachua*	1A Monroe*	3A Carroll
3C San Mateo	5B Huerfano	2A Baker*	2A Nassau*	4A Catoosa
3C Santa Barbara	7 Jackson	2A Bay*	2A Okaloosa*	2A Charlton*
3C Santa Clara	5B Jefferson	2A Bradford*	2A Okeechobee*	2A Chatham*
3C Santa Cruz	5B Kiowa	2A Brevard*	2A Orange*	3A Chattahoochee*
3B Shasta	5B Kit Carson	2A Broward*	2A Osceola*	4A Chattooga
5B Sierra	7 Lake	2A Calhoun*	2A Palm Beach*	3A Cherokee
5B Siskiyou	5B La Plata	2A Charlotte*	2A Pasco*	3A Clarke
3B Solano	5B Larimer	2A Citrus*	2A Pinellas*	3A Clay*
3C Sonoma	4B Las Animas	2A Clay*	2A Polk*	3A Clayton
3B Stanislaus	5B Lincoln	2A Collier*	2A Putnam*	2A Clinch*
3B Sutter	5B Logan	2A Columbia*	2A Santa Rosa*	3A Cobb
3B Tehama	5B Mesa	2A DeSoto*	2A Sarasota*	3A Coffee*
4B Trinity	7 Mineral	2A Dixie*	2A Seminole*	2A Colquitt*
3B Tulare	6B Moffat	2A Duval*	2A St. Johns*	3A Columbia
4B Tuolumne	5B Montezuma		2A St. Lucie*	2A Cook*
3C Ventura	5B Montrose		2A Sumter*	3A Coweta
3B Yolo			2A Suwannee*	

(continued)

**TABLE C301.1—continued**  
**CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID**  
**DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

3A Crawford	2A Lanier*	3A Taylor*	5B Cassia	4A Crawford
3A Crisp*	3A Laurens*	3A Telfair*	6B Clark	5A Cumberland
4A Dade	3A Lee*	3A Terrell*	5B Clearwater	5A DeKalb
4A Dawson	2A Liberty*	2A Thomas*	6B Custer	5A De Witt
2A Decatur*	3A Lincoln	3A Tift*	5B Elmore	5A Douglas
3A DeKalb	2A Long*	2A Toombs*	6B Franklin	5A DuPage
3A Dodge*	2A Lowndes*	4A Towns	6B Fremont	5A Edgar
3A Dooly*	4A Lumpkin	3A Treutlen*	5B Gem	4A Edwards
3A Dougherty*	3A Macon*	3A Troup	5B Gooding	4A Effingham
3A Douglas	3A Madison	3A Turner*	5B Idaho	4A Fayette
3A Early*	3A Marion*	3A Twiggs*	6B Jefferson	5A Ford
2A Echols*	3A McDuffie	4A Union	5B Jerome	4A Franklin
2A Effingham*	2A McIntosh*	3A Upson	5B Kootenai	5A Fulton
3A Elbert	3A Meriwether	4A Walker	5B Latah	4A Gallatin
3A Emanuel*	2A Miller*	3A Walton	6B Lemhi	5A Greene
2A Evans*	2A Mitchell*	2A Ware*	5B Lewis	5A Grundy
4A Fannin	3A Monroe	3A Warren	5B Lincoln	4A Hamilton
3A Fayette	3A Montgomery*	3A Washington	6B Madison	5A Hancock
4A Floyd	3A Morgan	2A Wayne*	5B Minidoka	4A Hardin
3A Forsyth	4A Murray	3A Webster*	5B Nez Perce	5A Henderson
4A Franklin	3A Muscogee	3A Wheeler*	6B Oneida	5A Henry
3A Fulton	3A Newton	4A White	5B Owyhee	5A Iroquois
4A Gilmer	3A Oconee	4A Whitfield	5B Payette	4A Jackson
3A Glascock	3A Oglethorpe	3A Wilcox*	5B Power	4A Jasper
2A Glynn*	3A Paulding	3A Wilkes	5B Shoshone	4A Jefferson
4A Gordon	3A Peach*	3A Wilkinson	6B Teton	5A Jersey
2A Grady*	4A Pickens	3A Worth*	5B Twin Falls	5A Jo Daviess
3A Greene	2A Pierce*		6B Valley	4A Johnson
3A Gwinnett	3A Pike	<b>HAWAII</b>	5B Washington	5A Kane
4A Habersham	3A Polk	1A (all)*		5A Kankakee
4A Hall	3A Pulaski*	<b>IDAHO</b>	<b>ILLINOIS</b>	5A Kendall
3A Hancock	3A Putnam	5B Ada	5A Adams	5A Knox
3A Haralson	3A Quitman*	6B Adams	4A Alexander	5A Lake
3A Harris	4A Rabun	6B Bannock	4A Bond	5A La Salle
3A Hart	3A Randolph*	6B Bear Lake	5A Boone	4A Lawrence
3A Heard	3A Richmond	5B Benewah	5A Brown	5A Lee
3A Henry	3A Rockdale	6B Bingham	5A Bureau	5A Livingston
3A Houston*	3A Schley*	6B Blaine	5A Calhoun	5A Logan
3A Irwin*	3A Screven*	6B Boise	5A Carroll	5A Macon
3A Jackson	2A Seminole*	6B Bonner	5A Cass	4A Macoupin
3A Jasper	3A Spalding	6B Bonneville	5A Champaign	4A Madison
2A Jeff Davis*	4A Stephens	6B Boundary	4A Christian	4A Marion
3A Jefferson	3A Stewart*	6B Butte	5A Clark	5A Marshall
3A Jenkins*	3A Sumter*	6B Camas	4A Clay	5A Mason
3A Johnson*	3A Talbot	5B Canyon	4A Clinton	4A Massac
3A Jones	3A Taliaferro	6B Caribou	5A Coles	5A McDonough
3A Lamar	2A Tattnall*		5A Cook	5A McHenry

(continued)

**GENERAL REQUIREMENTS**

**TABLE C301.1—continued  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

5A McLean	5A Boone	5A Miami	5A Appanoose	5A Jasper
5A Menard	4A Brown	4A Monroe	5A Audubon	5A Jefferson
5A Mercer	5A Carroll	5A Montgomery	5A Benton	5A Johnson
4A Monroe	5A Cass	5A Morgan	6A Black Hawk	5A Jones
4A Montgomery	4A Clark	5A Newton	5A Boone	5A Keokuk
5A Morgan	5A Clay	5A Noble	6A Bremer	6A Kossuth
5A Moultrie	5A Clinton	4A Ohio	6A Buchanan	5A Lee
5A Ogle	4A Crawford	4A Orange	6A Buena Vista	5A Linn
5A Peoria	4A Daviess	5A Owen	6A Butler	5A Louisa
4A Perry	4A Dearborn	5A Parke	6A Calhoun	5A Lucas
5A Piatt	5A Decatur	4A Perry	5A Carroll	6A Lyon
5A Pike	5A De Kalb	4A Pike	5A Cass	5A Madison
4A Pope	5A Delaware	5A Porter	5A Cedar	5A Mahaska
4A Pulaski	4A Dubois	4A Posey	6A Cerro Gordo	5A Marion
5A Putnam	5A Elkhart	5A Pulaski	6A Cherokee	5A Marshall
4A Randolph	5A Fayette	5A Putnam	6A Chickasaw	5A Mills
4A Richland	4A Floyd	5A Randolph	5A Clarke	6A Mitchell
5A Rock Island	5A Fountain	4A Ripley	6A Clay	5A Monona
4A Saline	5A Franklin	5A Rush	6A Clayton	5A Monroe
5A Sangamon	5A Fulton	4A Scott	5A Clinton	5A Montgomery
5A Schuyler	4A Gibson	5A Shelby	5A Crawford	5A Muscatine
5A Scott	5A Grant	4A Spencer	5A Dallas	6A O'Brien
4A Shelby	4A Greene	5A Starke	5A Davis	6A Osceola
5A Stark	5A Hamilton	5A Steuben	5A Decatur	5A Page
4A St. Clair	5A Hancock	5A St. Joseph	6A Delaware	6A Palo Alto
5A Stephenson	4A Harrison	4A Sullivan	5A Des Moines	6A Plymouth
5A Tazewell	5A Hendricks	4A Switzerland	6A Dickinson	6A Pocahontas
4A Union	5A Henry	5A Tippecanoe	5A Dubuque	5A Polk
5A Vermilion	5A Howard	5A Tipton	6A Emmet	5A Pottawattamie
4A Wabash	5A Huntington	5A Union	6A Fayette	5A Poweshiek
5A Warren	4A Jackson	4A Vanderburgh	6A Floyd	5A Ringgold
4A Washington	5A Jasper	5A Vermillion	6A Franklin	6A Sac
4A Wayne	5A Jay	5A Vigo	5A Fremont	5A Scott
4A White	4A Jefferson	5A Wabash	5A Greene	5A Shelby
5A Whiteside	4A Jennings	5A Warren	6A Grundy	6A Sioux
5A Will	5A Johnson	4A Warrick	5A Guthrie	5A Story
4A Williamson	4A Knox	4A Washington	6A Hamilton	5A Tama
5A Winnebago	5A Kosciusko	5A Wayne	6A Hancock	5A Taylor
5A Woodford	5A Lagrange	5A Wells	6A Hardin	5A Union
<b>INDIANA</b>	5A Lake	5A White	5A Harrison	5A Van Buren
5A Adams	5A La Porte	5A Whitley	5A Henry	5A Wapello
5A Allen	4A Lawrence	<b>IOWA</b>	6A Howard	5A Warren
5A Bartholomew	5A Madison	5A Adair	6A Humboldt	5A Washington
5A Benton	5A Marion	5A Adams	6A Ida	5A Wayne
5A Blackford	5A Marshall	6A Allamakee	5A Iowa	6A Webster
	4A Martin		5A Jackson	6A Winnebago

(continued)

TABLE C301.1—continued  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY

6A Winneshiek	4A Haskell	4A Sedgwick	2A Iberville*	6A Cumberland
5A Woodbury	4A Hodgeman	4A Seward	3A Jackson*	6A Franklin
6A Worth	4A Jackson	4A Shawnee	2A Jefferson*	6A Hancock
6A Wright	4A Jefferson	5A Sheridan	2A Jefferson Davis*	6A Kennebec
<b>KANSAS</b>	5A Jewell	5A Sherman	2A Lafayette*	6A Knox
4A Allen	4A Johnson	5A Smith	2A Lafourche*	6A Lincoln
4A Anderson	4A Kearny	4A Stafford	3A La Salle*	6A Oxford
4A Atchison	4A Kingman	4A Stanton	3A Lincoln*	6A Penobscot
4A Barber	4A Kiowa	4A Stevens	2A Livingston*	6A Piscataquis
4A Barton	4A Labette	4A Sumner	3A Madison*	6A Sagadahoc
4A Bourbon	5A Lane	5A Thomas	3A Morehouse	6A Somerset
4A Brown	4A Leavenworth	5A Trego	3A Natchitoches*	6A Waldo
4A Butler	4A Lincoln	4A Wabaunsee	2A Orleans*	6A Washington
4A Chase	4A Linn	5A Wallace	3A Ouachita*	6A York
4A Chautauqua	5A Logan	4A Washington	2A Plaquemines*	<b>MARYLAND</b>
4A Cherokee	4A Lyon	5A Wichita	2A Pointe Coupee*	4A Allegany
5A Cheyenne	4A Marion	4A Wilson	2A Rapides*	4A Anne Arundel
4A Clark	4A Marshall	4A Woodson	3A Red River*	4A Baltimore
4A Clay	4A McPherson	4A Wyandotte	3A Richland*	4A Baltimore (city)
5A Cloud	4A Meade	<b>KENTUCKY</b>	3A Sabine*	4A Calvert
4A Coffey	4A Miami	4A (all)	2A St. Bernard*	4A Calverton
4A Comanche	5A Mitchell	<b>LOUISIANA</b>	2A St. Charles*	4A Caroline
4A Cowley	4A Montgomery	2A Acadia*	2A St. Helena*	4A Carroll
4A Crawford	4A Morris	2A Allen*	2A St. James*	4A Cecil
5A Decatur	4A Morton	2A Ascension*	2A St. John the Baptist*	4A Charles
4A Dickinson	4A Nemaha	2A Assumption*	2A St. Landry*	4A Dorchester
4A Doniphan	4A Neosho	2A Avoyelles*	2A St. Martin*	4A Frederick
4A Douglas	5A Ness	2A Beauregard*	2A St. Mary*	5A Garrett
4A Edwards	5A Norton	3A Bienville*	2A St. Tammany*	4A Harford
4A Elk	4A Osage	3A Bossier*	2A Tangipahoa*	4A Howard
5A Ellis	5A Osborne	3A Caddo*	3A Tensas*	4A Kent
4A Ellsworth	4A Ottawa	2A Calcasieu*	2A Terrebonne*	4A Montgomery
4A Finney	4A Pawnee	3A Caldwell*	3A Union*	4A Prince George's
4A Ford	5A Phillips	2A Cameron*	2A Vermilion*	4A Queen Anne's
4A Franklin	4A Pottawatomie	3A Catahoula*	3A Vernon*	4A Somerset
4A Geary	4A Pratt	3A Claiborne*	2A Washington*	4A St. Mary's
5A Gove	5A Rawlins	3A Concordia*	3A Webster*	4A Talbot
5A Graham	4A Reno	3A De Soto*	2A West Baton Rouge*	4A Washington
4A Grant	4A Rice	2A East Baton Rouge*	3A West Carroll	4A Wicomico
4A Gray	4A Riley	3A East Carroll	2A West Feliciana*	4A Worcester
5A Greeley	5A Rooks	2A East Feliciana*	3A Winn*	<b>MASSACHUSETTS</b>
4A Greenwood	4A Rush	2A Evangeline*	<b>MAINE</b>	5A (all)
5A Hamilton	4A Russell	3A Franklin*	6A Androscoggin	<b>MICHIGAN</b>
4A Harper	4A Saline	3A Grant*	7 Aroostook	6A Alcona
4A Harvey	5A Scott	2A Iberia*		6A Alger

(continued)

GENERAL REQUIREMENTS

TABLE C301.1—continued  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY

5A Allegan	7 Mackinac	6A Carver	7 Otter Tail	3A Clarke
6A Alpena	5A Macomb	7 Cass	7 Pennington	3A Clay
6A Antrim	6A Manistee	6A Chippewa	7 Pine	3A Coahoma
6A Arenac	6A Marquette	6A Chisago	6A Pipestone	3A Copiah*
7 Baraga	6A Mason	7 Clay	7 Polk	3A Covington*
5A Barry	6A Mecosta	7 Clearwater	6A Pope	3A DeSoto
5A Bay	6A Menominee	7 Cook	6A Ramsey	3A Forrest*
6A Benzie	5A Midland	6A Cottonwood	7 Red Lake	3A Franklin*
5A Berrien	6A Missaukee	7 Crow Wing	6A Redwood	3A George*
5A Branch	5A Monroe	6A Dakota	6A Renville	3A Greene*
5A Calhoun	5A Montcalm	6A Dodge	6A Rice	3A Grenada
5A Cass	6A Montmorency	6A Douglas	6A Rock	2A Hancock*
6A Charlevoix	5A Muskegon	6A Faribault	7 Roseau	2A Harrison*
6A Cheboygan	6A Newaygo	6A Fillmore	6A Scott	3A Hinds*
7 Chippewa	5A Oakland	6A Freeborn	6A Sherburne	3A Holmes
6A Clare	6A Oceana	6A Goodhue	6A Sibley	3A Humphreys
5A Clinton	6A Ogemaw	7 Grant	6A Stearns	3A Issaquena
6A Crawford	7 Ontonagon	6A Hennepin	6A Steele	3A Itawamba
6A Delta	6A Osceola	6A Houston	6A Stevens	2A Jackson*
6A Dickinson	6A Oscoda	7 Hubbard	7 St. Louis	3A Jasper
5A Eaton	6A Otsego	6A Isanti	6A Swift	3A Jefferson*
6A Emmet	5A Ottawa	7 Itasca	6A Todd	3A Jefferson Davis*
5A Genesee	6A Presque Isle	6A Jackson	6A Traverse	3A Jones*
6A Gladwin	6A Roscommon	7 Kanabec	6A Wabasha	3A Kemper
7 Gogebic	5A Saginaw	6A Kandiyohi	7 Wadena	3A Lafayette
6A Grand Traverse	6A Sanilac	7 Kittson	6A Waseca	3A Lamar*
5A Gratiot	7 Schoolcraft	7 Koochiching	6A Washington	3A Lauderdale
5A Hillsdale	5A Shiawassee	6A Lac qui Parle	6A Watonwan	3A Lawrence*
7 Houghton	5A St. Clair	7 Lake	7 Wilkin	3A Leake
6A Huron	5A St. Joseph	7 Lake of the Woods	6A Winona	3A Lee
5A Ingham	5A Tuscola	6A Le Sueur	6A Wright	3A Leflore
5A Ionia	5A Van Buren	6A Lincoln	6A Yellow	3A Lincoln*
6A Iosco	5A Washtenaw	6A Lyon	Medicine	3A Lowndes
7 Iron	5A Wayne	7 Mahanomen	<b>MISSISSIPPI</b>	3A Madison
6A Isabella	6A Wexford	7 Marshall	3A Adams*	3A Marion*
5A Jackson	<b>MINNESOTA</b>	6A Martin	3A Alcorn	3A Marshall
5A Kalamazoo	7 Aitkin	6A McLeod	3A Amite*	3A Monroe
6A Kalkaska	6A Anoka	6A Meeker	3A Attala	3A Montgomery
5A Kent	7 Becker	7 Mille Lacs	3A Benton	3A Neshoba
7 Keweenaw	7 Beltrami	6A Morrison	3A Bolivar	3A Newton
6A Lake	6A Benton	6A Mower	3A Calhoun	3A Noxubee
5A Lapeer	6A Big Stone	6A Murray	3A Carroll	3A Oktibbeha
6A Leelanau	6A Blue Earth	6A Nicollet	3A Chickasaw	3A Panola
5A Lenawee	6A Brown	6A Nobles	3A Choctaw	2A Pearl River*
5A Livingston	7 Carlton	7 Norman	3A Claiborne*	3A Perry*
7 Luce		6A Olmsted		3A Pike*

(continued)



**TABLE C301.1—continued**  
**CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID**  
**DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

3A Pontotoc	5A Chariton	4A Mississippi	4A Webster	4A Cumberland
3A Prentiss	4A Christian	4A Moniteau	5A Worth	4A Essex
3A Quitman	5A Clark	4A Monroe	4A Wright	4A Gloucester
3A Rankin*	4A Clay	4A Montgomery	<b>MONTANA</b>	4A Hudson
3A Scott	5A Clinton	4A Morgan	6B (all)	5A Hunterdon
3A Sharkey	4A Cole	4A New Madrid	<b>NEBRASKA</b>	5A Mercer
3A Simpson*	4A Cooper	4A Newton	5A (all)	4A Middlesex
3A Smith*	4A Crawford	5A Nodaway	<b>NEVADA</b>	4A Monmouth
2A Stone*	4A Dade	4A Oregon	5B Carson City (city)	5A Morris
3A Sunflower	4A Dallas	4A Osage	5B Churchill	4A Ocean
3A Tallahatchie	5A Daviess	4A Ozark	3B Clark	5A Passaic
3A Tate	5A DeKalb	4A Pemiscot	5B Douglas	4A Salem
3A Tippah	4A Dent	4A Perry	5B Elko	5A Somerset
3A Tishomingo	4A Douglas	4A Pettis	5B Esmeralda	5A Sussex
3A Tunica	4A Dunklin	4A Phelps	5B Eureka	4A Union
3A Union	4A Franklin	5A Pike	5B Humboldt	5A Warren
3A Walthall*	4A Gasconade	4A Platte	5B Lander	<b>NEW MEXICO</b>
3A Warren*	5A Gentry	4A Polk	5B Lincoln	4B Bernalillo
3A Washington	4A Greene	4A Pulaski	5B Lyon	5B Catron
3A Wayne*	5A Grundy	5A Putnam	5B Mineral	3B Chaves
3A Webster	5A Harrison	5A Ralls	5B Nye	4B Cibola
3A Wilkinson*	4A Henry	4A Randolph	5B Pershing	5B Colfax
3A Winston	4A Hickory	4A Ray	5B Storey	4B Curry
3A Yalobusha	5A Holt	4A Reynolds	5B Washoe	4B DeBaca
3A Yazoo	4A Howard	4A Ripley	5B White Pine	3B Dona Ana
<b>MISSOURI</b>	4A Howell	4A Saline	<b>NEW</b>	3B Eddy
5A Adair	4A Iron	5A Schuyler	<b>HAMPSHIRE</b>	4B Grant
5A Andrew	4A Jackson	5A Scotland	6A Belknap	4B Guadalupe
5A Atchison	4A Jasper	4A Scott	6A Carroll	5B Harding
4A Audrain	4A Jefferson	4A Shannon	5A Cheshire	3B Hidalgo
4A Barry	4A Johnson	5A Shelby	6A Coos	3B Lea
4A Barton	5A Knox	4A St. Charles	6A Grafton	4B Lincoln
4A Bates	4A Laclede	4A St. Clair	5A Hillsborough	5B Los Alamos
4A Benton	4A Lafayette	4A Ste. Genevieve	6A Merrimack	3B Luna
4A Bollinger	4A Lawrence	4A St. Francois	5A Rockingham	5B McKinley
4A Boone	5A Lewis	4A St. Louis	5A Strafford	5B Mora
5A Buchanan	4A Lincoln	4A St. Louis (city)	6A Sullivan	3B Otero
4A Butler	5A Linn	4A Stoddard	4A Atlantic	4B Quay
5A Caldwell	5A Livingston	4A Stone	5A Bergen	5B Rio Arriba
4A Callaway	5A Macon	5A Sullivan	4A Burlington	4B Roosevelt
4A Camden	4A Madison	4A Taney	4A Camden	5B Sandoval
4A Cape Girardeau	4A Maries	4A Texas	4A Cape May	5B San Juan
4A Carroll	5A Marion	4A Vernon		5B San Miguel
4A Carter	4A McDonald	4A Warren		5B Santa Fe
4A Cass	5A Mercer	4A Washington		4B Sierra
4A Cedar	4A Miller	4A Wayne		4B Socorro

(continued)

GENERAL REQUIREMENTS

TABLE C301.1—continued  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY

5B Taos	4A Queens	4A Clay	4A Orange	7 Divide
5B Torrance	5A Rensselaer	4A Cleveland	3A Pamlico	6A Dunn
4B Union	4A Richmond	3A Columbus*	3A Pasquotank	7 Eddy
4B Valencia	5A Rockland	3A Craven	3A Pender*	6A Emmons
<b>NEW YORK</b>	5A Saratoga	3A Cumberland	3A Perquimans	7 Foster
5A Albany	5A Schenectady	3A Currituck	4A Person	6A Golden Valley
6A Allegany	6A Schoharie	3A Dare	3A Pitt	7 Grand Forks
4A Bronx	6A Schuyler	3A Davidson	4A Polk	6A Grant
6A Broome	5A Seneca	4A Davie	3A Randolph	7 Griggs
6A Cattaraugus	6A Steuben	3A Duplin	3A Richmond	6A Hettinger
5A Cayuga	6A St. Lawrence	4A Durham	3A Robeson	7 Kidder
5A Chautauqua	4A Suffolk	3A Edgecombe	4A Rockingham	6A LaMoure
5A Chemung	6A Sullivan	4A Forsyth	3A Rowan	6A Logan
6A Chenango	5A Tioga	4A Franklin	4A Rutherford	7 McHenry
6A Clinton	6A Tompkins	3A Gaston	3A Sampson	6A McIntosh
5A Columbia	6A Ulster	4A Gates	3A Scotland	6A McKenzie
5A Cortland	6A Warren	4A Graham	3A Stanly	7 McLean
6A Delaware	5A Washington	4A Granville	4A Stokes	6A Mercer
5A Dutchess	5A Wayne	3A Greene	4A Surry	6A Morton
5A Erie	4A Westchester	4A Guilford	4A Swain	7 Mountrail
6A Essex	6A Wyoming	4A Halifax	4A Transylvania	7 Nelson
6A Franklin	5A Yates	4A Harnett	3A Tyrrell	6A Oliver
6A Fulton	<b>NORTH</b>	4A Haywood	3A Union	7 Pembina
5A Genesee	<b>CAROLINA</b>	4A Henderson	4A Vance	7 Pierce
5A Greene	4A Alamance	4A Hertford	4A Wake	7 Ramsey
6A Hamilton	4A Alexander	3A Hoke	4A Warren	6A Ransom
6A Herkimer	5A Alleghany	3A Hyde	3A Washington	7 Renville
6A Jefferson	3A Anson	4A Iredell	5A Watauga	6A Richland
4A Kings	5A Ashe	4A Jackson	3A Wayne	7 Rolette
6A Lewis	5A Avery	3A Johnston	4A Wilkes	6A Sargent
5A Livingston	3A Beaufort	3A Jones	3A Wilson	7 Sheridan
6A Madison	4A Bertie	4A Lee	4A Yadkin	6A Sioux
5A Monroe	3A Bladen	3A Lenoir	5A Yancey	6A Slope
6A Montgomery	3A Brunswick*	4A Lincoln	<b>NORTH DAKOTA</b>	6A Stark
4A Nassau	4A Buncombe	4A Macon	6A Adams	7 Steele
4A New York	4A Burke	4A Madison	7 Barnes	7 Stutsman
5A Niagara	3A Cabarrus	3A Martin	7 Benson	7 Towner
6A Oneida	4A Caldwell	4A McDowell	6A Billings	7 Traill
5A Onondaga	3A Camden	3A Mecklenburg	7 Bottineau	7 Walsh
5A Ontario	3A Carteret*	5A Mitchell	6A Bowman	7 Ward
5A Orange	4A Caswell	3A Montgomery	7 Burke	7 Wells
5A Orleans	4A Catawba	3A Moore	6A Burleigh	7 Williams
5A Oswego	4A Chatham	4A Nash	7 Cass	<b>OHIO</b>
6A Otsego	4A Cherokee	3A New Hanover*	7 Cavalier	4A Adams
5A Putnam	3A Chowan	4A Northampton	6A Dickey	5A Allen
		3A Onslow*		

(continued)

**TABLE C301.1—continued**  
**CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID**  
**DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

5A Ashland	5A Mahoning	3A Bryan	3A Okfuskee	4C Linn
5A Ashtabula	5A Marion	3A Caddo	3A Oklahoma	5B Malheur
5A Athens	5A Medina	3A Canadian	3A Okmulgee	4C Marion
5A Auglaize	5A Meigs	3A Carter	3A Osage	5B Morrow
5A Belmont	5A Mercer	3A Cherokee	3A Ottawa	4C Multnomah
4A Brown	5A Miami	3A Choctaw	3A Pawnee	4C Polk
5A Butler	5A Monroe	4B Cimarron	3A Payne	5B Sherman
5A Carroll	5A Montgomery	3A Cleveland	3A Pittsburg	4C Tillamook
5A Champaign	5A Morgan	3A Coal	3A Pontotoc	5B Umatilla
5A Clark	5A Morrow	3A Comanche	3A Pottawatomie	5B Union
4A Clermont	5A Muskingum	3A Cotton	3A Pushmataha	5B Wallowa
5A Clinton	5A Noble	3A Craig	3A Roger Mills	5B Wasco
5A Columbiana	5A Ottawa	3A Creek	3A Rogers	4C Washington
5A Coshocton	5A Paulding	3A Custer	3A Seminole	5B Wheeler
5A Crawford	5A Perry	3A Delaware	3A Sequoyah	4C Yamhill
5A Cuyahoga	5A Pickaway	3A Dewey	3A Stephens	
5A Darke	4A Pike	3A Ellis	4B Texas	<b>PENNSYLVANIA</b>
5A Defiance	5A Portage	3A Garfield	3A Tillman	5A Adams
5A Delaware	5A Preble	3A Garvin	3A Tulsa	5A Allegheny
5A Erie	5A Putnam	3A Grady	3A Wagoner	5A Armstrong
5A Fairfield	5A Richland	3A Grant	3A Washington	5A Beaver
5A Fayette	5A Ross	3A Greer	3A Washita	5A Bedford
5A Franklin	5A Sandusky	3A Harmon	3A Woods	5A Berks
5A Fulton	4A Scioto	3A Harper	3A Woodward	5A Blair
4A Gallia	5A Seneca	3A Haskell		5A Bradford
5A Geauga	5A Shelby	3A Hughes	<b>OREGON</b>	4A Bucks
5A Greene	5A Stark	3A Jackson	5B Baker	5A Butler
5A Guernsey	5A Summit	3A Jefferson	4C Benton	5A Cambria
4A Hamilton	5A Trumbull	3A Johnston	4C Clackamas	6A Cameron
5A Hancock	5A Tuscarawas	3A Kay	4C Clatsop	5A Carbon
5A Hardin	5A Union	3A Kingfisher	4C Columbia	5A Centre
5A Harrison	5A Van Wert	3A Kiowa	4C Coos	4A Chester
5A Henry	5A Vinton	3A Latimer	5B Crook	5A Clarion
5A Highland	5A Warren	3A Le Flore	4C Curry	6A Clearfield
5A Hocking	4A Washington	3A Lincoln	5B Deschutes	5A Clinton
5A Holmes	5A Wayne	3A Logan	4C Douglas	5A Columbia
5A Huron	5A Williams	3A Love	5B Gilliam	5A Crawford
5A Jackson	5A Wood	3A Major	5B Grant	5A Cumberland
5A Jefferson	5A Wyandot	3A Marshall	5B Harney	5A Dauphin
5A Knox		3A Mayes	5B Hood River	4A Delaware
5A Lake	<b>OKLAHOMA</b>	3A McClain	4C Jackson	6A Elk
4A Lawrence	3A Adair	3A McCurtain	5B Jefferson	5A Erie
5A Licking	3A Alfalfa	3A McIntosh	4C Josephine	5A Fayette
5A Logan	3A Atoka	3A Murray	5B Klamath	5A Forest
5A Lorain	4B Beaver	3A Muskogee	5B Lake	5A Franklin
5A Lucas	3A Beckham	3A Noble	4C Lane	5A Fulton
5A Madison	3A Blaine	3A Nowata	4C Lincoln	5A Greene

(continued)

**GENERAL REQUIREMENTS**

**TABLE C301.1—continued  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

5A Huntingdon	3A Bamberg*	5A Bennett	6A Minnehaha	4A Gibson
5A Indiana	3A Barnwell*	5A Bon Homme	6A Moody	4A Giles
5A Jefferson	3A Beaufort*	6A Brookings	6A Pennington	4A Grainger
5A Juniata	3A Berkeley*	6A Brown	6A Perkins	4A Greene
5A Lackawanna	3A Calhoun	6A Brule	6A Potter	4A Grundy
5A Lancaster	3A Charleston*	6A Buffalo	6A Roberts	4A Hamblen
5A Lawrence	3A Cherokee	6A Butte	6A Sanborn	4A Hamilton
5A Lebanon	3A Chester	6A Campbell	6A Shannon	4A Hancock
5A Lehigh	3A Chesterfield	5A Charles Mix	6A Spink	3A Hardeman
5A Luzerne	3A Clarendon	6A Clark	6A Stanley	3A Hardin
5A Lycoming	3A Colleton*	5A Clay	6A Sully	4A Hawkins
6A McKean	3A Darlington	6A Codrington	5A Todd	3A Haywood
5A Mercer	3A Dillon	6A Corson	5A Tripp	3A Henderson
5A Mifflin	3A Dorchester*	6A Custer	6A Turner	4A Henry
5A Monroe	3A Edgefield	6A Davison	5A Union	4A Hickman
4A Montgomery	3A Fairfield	6A Day	6A Walworth	4A Houston
5A Montour	3A Florence	6A Deuel	5A Yankton	4A Humphreys
5A Northampton	3A Georgetown*	6A Dewey	6A Ziebach	4A Jackson
5A Northumberland	3A Greenville	5A Douglas	<b>TENNESSEE</b>	4A Jefferson
5A Perry	3A Greenwood	6A Edmunds	4A Anderson	4A Johnson
4A Philadelphia	3A Hampton*	6A Fall River	4A Bedford	4A Knox
5A Pike	3A Horry*	6A Faulk	4A Benton	3A Lake
6A Potter	3A Jasper*	6A Grant	4A Bledsoe	3A Lauderdale
5A Schuylkill	3A Kershaw	5A Gregory	4A Blount	4A Lawrence
5A Snyder	3A Lancaster	6A Haakon	4A Bradley	4A Lewis
5A Somerset	3A Laurens	6A Hamlin	4A Campbell	4A Lincoln
5A Sullivan	3A Lee	6A Hand	4A Cannon	4A Loudon
6A Susquehanna	3A Lexington	6A Hanson	4A Carroll	4A Macon
6A Tioga	3A Marion	6A Harding	4A Carter	3A Madison
5A Union	3A Marlboro	6A Hughes	4A Cheatham	4A Marion
5A Venango	3A McCormick	5A Hutchinson	3A Chester	4A Marshall
5A Warren	3A Newberry	6A Hyde	4A Claiborne	4A Maury
5A Washington	3A Oconee	5A Jackson	4A Clay	4A McMinn
6A Wayne	3A Orangeburg	6A Jerauld	4A Cocke	3A McNairy
5A Westmoreland	3A Pickens	6A Jones	4A Coffee	4A Meigs
5A Wyoming	3A Richland	6A Kingsbury	3A Crockett	4A Monroe
4A York	3A Saluda	6A Lake	4A Cumberland	4A Montgomery
<b>RHODE ISLAND</b>	3A Spartanburg	6A Lawrence	4A Davidson	4A Moore
5A (all)	3A Sumter	6A Lincoln	4A Decatur	4A Morgan
<b>SOUTH</b>	3A Union	6A Lyman	4A DeKalb	4A Obion
<b>CAROLINA</b>	3A Williamsburg	6A Marshall	4A Dickson	4A Overton
3A Abbeville	3A York	6A McCook	3A Dyer	4A Perry
3A Aiken	<b>SOUTH DAKOTA</b>	6A McPherson	3A Fayette	4A Pickett
3A Allendale*	6A Aurora	6A Meade	4A Fentress	4A Polk
3A Anderson	6A Beadle	5A Mellette	4A Franklin	4A Putnam
		6A Miner		4A Rhea

(continued)

TABLE C301.1—continued  
 CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
 DESIGNATIONS BY STATE, COUNTY AND TERRITORY

4A Roane	3B Brewster	3B Ector	3B Howard	3B McCulloch
4A Robertson	4B Briscoe	2B Edwards*	3B Hudspeth	2A McLennan*
4A Rutherford	2A Brooks*	3A Ellis*	3A Hunt*	2A McMullen*
4A Scott	3A Brown*	3B El Paso	4B Hutchinson	2B Medina*
4A Sequatchie	2A Burleson*	3A Erath*	3B Irion	3B Menard
4A Sevier	3A Burnet*	2A Falls*	3A Jack	3B Midland
3A Shelby	2A Caldwell*	3A Fannin	2A Jackson*	2A Milam*
4A Smith	2A Calhoun*	2A Fayette*	2A Jasper*	3A Mills*
4A Stewart	3B Callahan	3B Fisher	3B Jeff Davis	3B Mitchell
4A Sullivan	2A Cameron*	4B Floyd	2A Jefferson*	3A Montague
4A Sumner	3A Camp*	3B Foard	2A Jim Hogg*	2A Montgomery*
3A Tipton	4B Carson	2A Fort Bend*	2A Jim Wells*	4B Moore
4A Trousdale	3A Cass*	3A Franklin*	3A Johnson*	3A Morris*
4A Unicoi	4B Castro	2A Freestone*	3B Jones	3B Motley
4A Union	2A Chambers*	2B Frio*	2A Karnes*	3A Nacogdoches*
4A Van Buren	2A Cherokee*	3B Gaines	3A Kaufman*	3A Navarro*
4A Warren	3B Childress	2A Galveston*	3A Kendall*	2A Newton*
4A Washington	3A Clay	3B Garza	2A Kenedy*	3B Nolan
4A Wayne	4B Cochran	3A Gillespie*	3B Kent	2A Nueces*
4A Weakley	3B Coke	3B Glasscock	3B Kerr	4B Ochiltree
4A White	3B Coleman	2A Goliad*	3B Kimble	4B Oldham
4A Williamson	3A Collin*	2A Gonzales*	3B King	2A Orange*
4A Wilson	3B Collingsworth	4B Gray	2B Kinney*	3A Palo Pinto*
<b>TEXAS</b>	2A Colorado*	3A Grayson	2A Kleberg*	3A Panola*
2A Anderson*	2A Comal*	3A Gregg*	3B Knox	3A Parker*
3B Andrews	3A Comanche*	2A Grimes*	3A Lamar*	4B Parmer
2A Angelina*	3B Concho	2A Guadalupe*	4B Lamb	3B Pecos
2A Aransas*	3A Cooke	4B Hale	3A Lampasas*	2A Polk*
3A Archer	2A Coryell*	3B Hall	2B La Salle*	4B Potter
4B Armstrong	3B Cottle	3A Hamilton*	2A Lavaca*	3B Presidio
2A Atascosa*	3B Crane	4B Hansford	2A Lee*	3A Rains*
2A Austin*	3B Crockett	3B Hardeman	2A Leon*	4B Randall
4B Bailey	3B Crosby	2A Hardin*	2A Liberty*	3B Reagan
2B Bandera*	3B Culberson	2A Harris*	2A Limestone*	2B Real*
2A Bastrop*	4B Dallam	3A Harrison*	4B Lipscomb	3A Red River*
3B Baylor	3A Dallas*	4B Hartley	2A Live Oak*	3B Reeves
2A Bee*	3B Dawson	3B Haskell	3A Llano*	2A Refugio*
2A Bell*	4B Deaf Smith	2A Hays*	3B Loving	4B Roberts
2A Bexar*	3A Delta	3B Hemphill	3B Lubbock	2A Robertson*
3A Blanco*	3A Denton*	3A Henderson*	3B Lynn	3A Rockwall*
3B Borden	2A DeWitt*	2A Hidalgo*	2A Madison*	3B Runnels
2A Bosque*	3B Dickens	2A Hill*	3A Marion*	3A Rusk*
3A Bowie*	2B Dimmit*	4B Hockley	3B Martin	3A Sabine*
2A Brazoria*	4B Donley	3A Hood*	3B Mason	3A San Augustine*
2A Brazos*	2A Duval*	3A Hopkins*	2A Matagorda*	2A San Jacinto*
	3A Eastland	2A Houston*	2B Maverick*	2A San Patricio*

(continued)

**GENERAL REQUIREMENTS**

**TABLE C301.1—continued  
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID  
DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

3A San Saba*	3A Young	4C Clark	4A Gilmer	<b>WISCONSIN</b>	
3B Schleicher	2B Zapata*	5B Columbia	5A Grant		
3B Scurry	2B Zavala*	4C Cowlitz	5A Greenbrier		
3B Shackelford	<b>UTAH</b>	5B Douglas	5A Hampshire		
3A Shelby*		5B Beaver	6B Ferry		5A Hancock
4B Sherman		6B Box Elder	5B Franklin		5A Hardy
3A Smith*		6B Cache	5B Garfield		5A Harrison
3A Somervell*		6B Cache	5B Grant		4A Jackson
2A Starr*		6B Carbon	4C Grays Harbor		4A Jefferson
3A Stephens		6B Daggett	4C Island		4A Kanawha
3B Sterling		5B Davis	4C Jefferson		5A Lewis
3B Stonewall		6B Duchesne	4C King		4A Lincoln
3B Sutton		5B Emery	4C Kitsap		4A Logan
4B Swisher	5B Garfield	5B Kittitas	5A Marion		
3A Tarrant*	5B Grand	5B Klickitat	5A Marshall		
3B Taylor	5B Iron	4C Lewis	4A Mason		
3B Terrell	5B Juab	5B Lincoln	4A McDowell		
3B Terry	5B Kane	4C Mason	4A Mercer		
3B Throckmorton	5B Millard	6B Okanogan	5A Mineral		
3A Titus*	6B Morgan	4C Pacific	4A Mingo		
3B Tom Green	5B Piute	6B Pend Oreille	5A Monongalia		
2A Travis*	6B Rich	4C Pierce	4A Monroe		
2A Trinity*	5B Salt Lake	4C San Juan	4A Morgan		
2A Tyler*	5B San Juan	4C Skagit	5A Nicholas		
3A Upshur*	5B Sanpete	5B Skamania	5A Ohio		
3B Upton	5B Sevier	4C Snohomish	5A Pendleton		
2B Uvalde*	6B Summit	5B Spokane	4A Pleasants		
2B Val Verde*	5B Tooele	6B Stevens	5A Pocahontas		
3A Van Zandt*	6B Uintah	4C Thurston	5A Preston		
2A Victoria*	5B Utah	4C Wahkiakum	4A Putnam		
2A Walker*	6B Wasatch	5B Walla Walla	5A Raleigh		
2A Waller*	3B Washington	4C Whatcom	5A Randolph		
3B Ward	5B Wayne	5B Whitman	4A Ritchie		
2A Washington*	5B Weber	5B Yakima	4A Roane		
2B Webb*	<b>VERMONT</b>	<b>WEST VIRGINIA</b>	5A Summers		
2A Wharton*			6A (all)		5A Taylor
3B Wheeler	<b>VIRGINIA</b>		5A Barbour		5A Tucker
3A Wichita			4A Berkeley		4A Tyler
3B Wilbarger			4A Boone		5A Upshur
2A Willacy*			4A Braxton		4A Wayne
2A Williamson*			5A Brooke		5A Webster
2A Wilson*			4A Cabell		5A Wetzel
3B Winkler			4A Calhoun		4A Wirt
3A Wise			4A Clay		4A Wood
3A Wood*		5A Doddridge	4A Wyoming		
4B Yoakum		4C Clallam	5A Fayette		

(continued)

**TABLE C301.1—continued**  
**CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID**  
**DESIGNATIONS BY STATE, COUNTY AND TERRITORY**

6A Ozaukee	7 Taylor	6B Big Horn	6B Sheridan	<b>NORTHERN MARIANA ISLANDS</b>
6A Pepin	6A Trempealeau	6B Campbell	7 Sublette	
6A Pierce	6A Vernon	6B Carbon	6B Sweetwater	1A (all)*
6A Polk	7 Vilas	6B Converse	7 Teton	<b>PUERTO RICO</b>
6A Portage	6A Walworth	6B Crook	6B Uinta	
7 Price	7 Washburn	6B Fremont	6B Washakie	1A (all)*
6A Racine	6A Washington	5B Goshen	6B Weston	<b>VIRGIN ISLANDS</b>
6A Richland	6A Waukesha	6B Hot Springs	<b>US TERRITORIES</b>	
6A Rock	6A Waupaca	6B Johnson	<b>AMERICAN</b>	1A (all)*
6A Rusk	6A Waushara	6B Laramie	<b>SAMOA</b>	
6A Sauk	6A Winnebago	7 Lincoln	1A (all)*	
7 Sawyer	6A Wood	6B Natrona	<b>GUAM</b>	
6A Shawano	<b>WYOMING</b>	6B Niobrara	1A (all)*	
6A Sheboygan	6B Albany	6B Park		
6A St. Croix		5B Platte		

**TABLE C301.3(1)**  
**INTERNATIONAL CLIMATE ZONE DEFINITIONS**

MAJOR CLIMATE TYPE DEFINITIONS
<p>Marine (C) Definition—Locations meeting all four criteria:</p> <ol style="list-style-type: none"> <li>1. Mean temperature of coldest month between -3°C (27°F) and 18°C (65°F).</li> <li>2. Warmest month mean &lt; 22°C (72°F).</li> <li>3. At least four months with mean temperatures over 10°C (50°F).</li> <li>4. Dry season in summer. The month with the heaviest precipitation in the cold season has at least three times as much precipitation as the month with the least precipitation in the rest of the year. The cold season is October through March in the Northern Hemisphere and April through September in the Southern Hemisphere.</li> </ol>
<p>Dry (B) Definition—Locations meeting the following criteria:</p> <p>Not marine and <math>P_{in} &lt; 0.44 \times (TF - 19.5)</math>    <math>[P_{cm} &lt; 2.0 \times (TC + 7)</math> in SI units]</p> <p>where:</p> <p><math>P_{in}</math> = Annual precipitation in inches (cm)</p> <p><math>T</math> = Annual mean temperature in °F (°C)</p>
<p>Moist (A) Definition—Locations that are not marine and not dry.</p>
<p>Warm-humid Definition—Moist (A) locations where either of the following wet-bulb temperature conditions shall occur during the warmest six consecutive months of the year:</p> <ol style="list-style-type: none"> <li>1. 67°F (19.4°C) or higher for 3,000 or more hours; or</li> <li>2. 73°F (22.8°C) or higher for 1,500 or more hours.</li> </ol>

For SI: °C = [(°F)-32]/1.8, 1 inch = 2.54 cm.

GENERAL REQUIREMENTS

TABLE C301.3(2)  
INTERNATIONAL CLIMATE ZONE DEFINITIONS

ZONE NUMBER	THERMAL CRITERIA	
	IP Units	SI Units
1	9000 < CDD50°F	5000 < CDD10°C
2	6300 < CDD50°F ≤ 9000	3500 < CDD10°C ≤ 5000
3A and 3B	4500 < CDD50°F ≤ 6300 AND HDD65°F ≤ 5400	2500 < CDD10°C ≤ 3500 AND HDD18°C ≤ 3000
4A and 4B	CDD50°F ≤ 4500 AND HDD65°F ≤ 5400	CDD10°C ≤ 2500 AND HDD18°C ≤ 3000
3C	HDD65°F ≤ 3600	HDD18°C ≤ 2000
4C	3600 < HDD65°F ≤ 5400	2000 < HDD18°C ≤ 3000
5	5400 < HDD65°F ≤ 7200	3000 < HDD18°C ≤ 4000
6	7200 < HDD65°F ≤ 9000	4000 < HDD18°C ≤ 5000
7	9000 < HDD65°F ≤ 12600	5000 < HDD18°C ≤ 7000
8	12600 < HDD65°F	7000 < HDD18°C

For SI: °C = [(°F)-32]/1.8.

SECTION C302  
DESIGN CONDITIONS

**C302.1 Interior design conditions.** The interior design temperatures used for heating and cooling load calculations shall be a maximum of 72°F (22°C) for heating and minimum of 75°F (24°C) for cooling.

SECTION C303  
MATERIALS, SYSTEMS AND EQUIPMENT

**C303.1 Identification.** Materials, systems and equipment shall be identified in a manner that will allow a determination of compliance with the applicable provisions of this code.

**C303.1.1 Building thermal envelope insulation.** An *R*-value identification mark shall be applied by the manufacturer to each piece of *building thermal envelope* insulation 12 inches (305 mm) or greater in width. Alternately, the insulation installers shall provide a certification listing the type, manufacturer and *R*-value of insulation installed in each element of the *building thermal envelope*. For blown or sprayed insulation (fiberglass and cellulose), the initial installed thickness, settled thickness, settled *R*-value, installed density, coverage area and number of bags installed shall be *listed* on the certification. For sprayed polyurethane foam (SPF) insulation, the installed thickness of the areas covered and *R*-value of installed thickness shall be *listed* on the certification. The insulation installer shall sign, date and post the certification in a conspicuous location on the job site.

**C303.1.1.1 Blown or sprayed roof/ceiling insulation.** The thickness of blown-in or sprayed roof/ceiling insulation (fiberglass or cellulose) shall be written in inches (mm) on markers that are installed at least one for every 300 square feet (28 m<sup>2</sup>) throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers a minimum of 1 inch (25 mm) in height. Each marker shall face the attic access opening. Spray polyurethane foam thickness and installed *R*-value shall

be *listed* on certification provided by the insulation installer.

**C303.1.2 Insulation mark installation.** Insulating materials shall be installed such that the manufacturer's *R*-value mark is readily observable upon inspection.

**C303.1.3 Fenestration product rating.** *U*-factors of fenestration products (windows, doors and skylights) shall be determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled *U*-factor shall be assigned a default *U*-factor from Table C303.1.3(1) or C303.1.3(2). The solar heat gain coefficient (SHGC) and *visible transmittance* (VT) of glazed fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled SHGC or VT shall be assigned a default SHGC or VT from Table C303.1.3(3).

TABLE C303.1.3(1)  
DEFAULT GLAZED FENESTRATION U-FACTOR

FRAME TYPE	SINGLE PANE	DOUBLE PANE	SKYLIGHT	
			Single	Double
Metal	1.20	0.80	2.00	1.30
Metal with Thermal Break	1.10	0.65	1.90	1.10
Nonmetal or Metal Clad	0.95	0.55	1.75	1.05
Glazed Block	0.60			

TABLE C303.1.3(2)  
DEFAULT DOOR U-FACTORS

DOOR TYPE	U-FACTOR
Uninsulated Metal	1.20
Insulated Metal	0.60
Wood	0.50
Insulated, nonmetal edge, max 45% glazing, any glazing double pane	0.35



**TABLE C303.1.3(3)**  
**DEFAULT GLAZED FENESTRATION SHGC AND VT**

	SINGLE GLAZED		DOUBLE GLAZED		GLAZED BLOCK
	Clear	Tinted	Clear	Tinted	
SHGC	0.8	0.7	0.7	0.6	0.6
VT	0.6	0.3	0.6	0.3	0.6

**C303.1.4 Insulation product rating.** The thermal resistance ( $R$ -value) of insulation shall be determined in accordance with the U.S. Federal Trade Commission  $R$ -value rule (CFR Title 16, Part 460) in units of  $h \times ft^2 \times ^\circ F/Btu$  at a mean temperature of  $75^\circ F$  ( $24^\circ C$ ).

**C303.2 Installation.** All materials, systems and equipment shall be installed in accordance with the manufacturer's installation instructions and the *International Building Code*.

**C303.2.1 Protection of exposed foundation insulation.** Insulation applied to the exterior of basement walls, crawl-space walls and the perimeter of slab-on-grade floors shall have a rigid, opaque and weather-resistant protective covering to prevent the degradation of the insulation's thermal performance. The protective covering shall cover the exposed exterior insulation and extend a minimum of 6 inches (153 mm) below grade.

**C303.3 Maintenance information.** Maintenance instructions shall be furnished for equipment and systems that require preventive maintenance. Required regular maintenance actions shall be clearly stated and incorporated on a readily accessible label. The label shall include the title or publication number for the operation and maintenance manual for that particular model and type of product.

