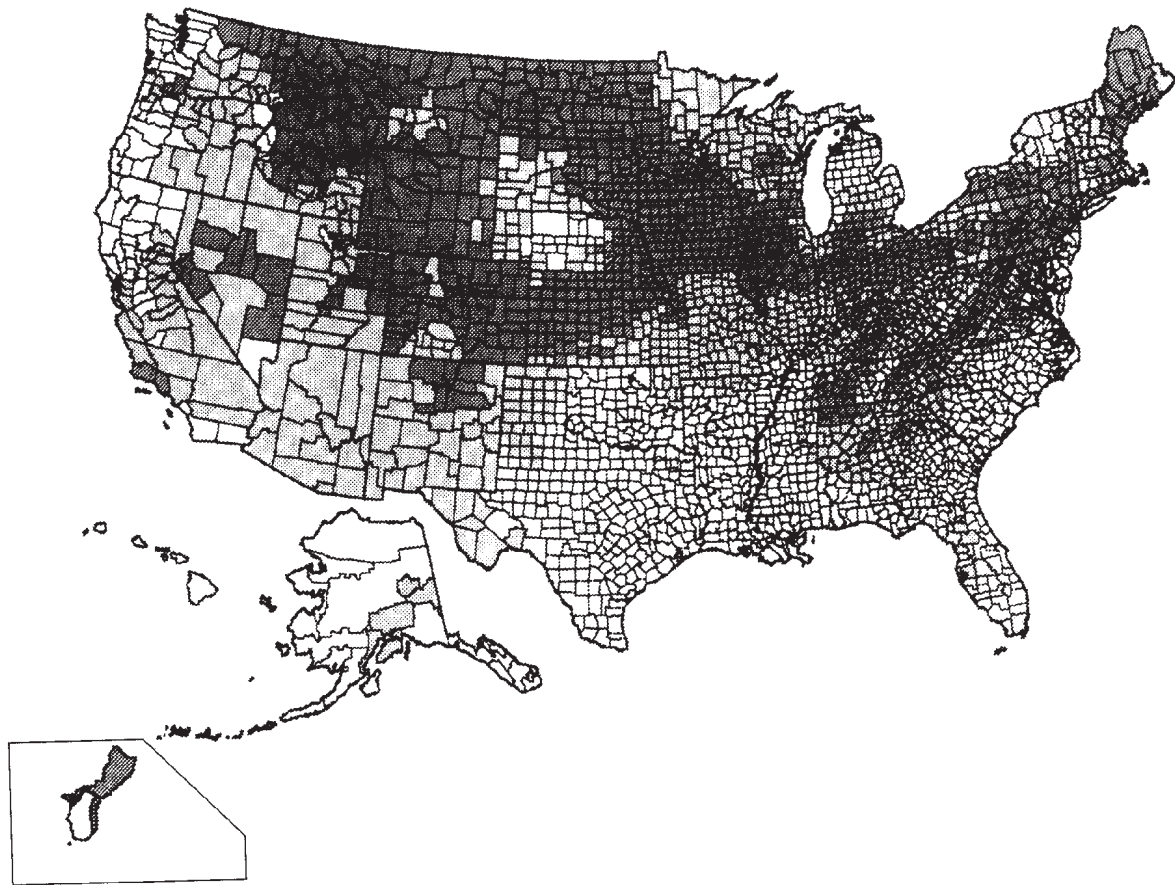


**APPENDIX F**  
**RADON CONTROL METHODS**  
**Reserved**

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LEGEND

- ZONE 1 HIGH POTENTIAL (GREATER THAN 4 pCi/L<sup>a</sup>)
- ZONE 2 MODERATE POTENTIAL (FROM 2 TO 4 pCi/L)
- ZONE 3 LOW POTENTIAL (LESS THAN 2 pCi/L)

a. pCi/L standard for picocuries per liter of radon gas. EPA recommends that all homes that measure 4 pCi/L and greater be mitigated. The United States Environmental Protection Agency and the United States Geological Survey have evaluated the radon potential in the United States and have developed a map of radon zones designed to assist building officials in deciding whether radon-resistant features are applicable in new construction. The map assigns each of the 3,141 counties in the United States to one of three zones based on radon potential. Each zone designation reflects the average short-term radon measurement that can be expected to be measured in a building without the implementation of radon control methods. The radon zone designation of highest priority is Zone 1. Table 1 of this appendix lists the Zone 1 counties illustrated on the map. More detailed information can be obtained from state-specific booklets (EPA-402-R-93-021 through 070) available through State Radon Offices or from U.S. EPA Regional Offices.

**FIGURE AF101  
EPA MAP OF RADON ZONES**

TABLE AF101(1)  
HIGH RADON POTENTIAL (ZONE 1) COUNTIES<sup>a</sup>

<b>ALABAMA</b>	<b>CONNECTICUT</b>	Morgan	Wabash	Thomas	Cass	Washington
Calhoun	Fairfield	Moultrie	Warren	Trego	Hillsdale	Watsonwan
Clay	Middlesex	Ogle	Washington	Wallace	Jackson	Wilkin
Cleburne	New Haven	Peoria	Wayne	Washington	Kalamazoo	Winona
Colbert	New London	Piatt	Wells	Wichita	Lenawee	Wright
Coosa		Pike	White	Wyandotte	St. Joseph	Yellow Medicine
Franklin	<b>GEORGIA</b>	Putnam	Whitley		Washtenaw	
Jackson	Cobb	Rock Island		<b>KENTUCKY</b>		<b>MISSOURI</b>
Lauderdale	De Kalb	Sangamon	<b>IOWA</b>	Adair	<b>MINNESOTA</b>	Andrew
Lawrence	Fulton	Schuyler	All Counties	Allen	Becker	Atchison
Limestone	Gwinnett	Scott		Barren	Big Stone	Buchanan
Madison		Stark	<b>KANSAS</b>	Bourbon	Blue Earth	Cass
Morgan	<b>IDAHO</b>	Stephenson	Atchison	Boyle	Brown	Clay
Talladega	Benewah	Tazewell	Barton	Bullitt	Carver	Clinton
<b>CALIFORNIA</b>	Blaine	Vermilion	Brown	Casey	Chippewa	Holt
Santa Barbara	Boise	Warren	Cheyenne	Clark	Clay	Iron
Ventura	Bonner	Whiteside	Clay	Cumberland	Cottonwood	Jackson
<b>COLORADO</b>	Boundary	Winnebago	Cloud	Fayette	Dakota	Nodaway
Adams	Butte	Woodford	Decatur	Franklin	Dodge	Platte
Arapahoe	Camas		Dickinson	Green	Douglas	
Baca	Clark	<b>INDIANA</b>	Douglas	Harrison	Faribault	<b>MONTANA</b>
Bent	Clearwater	Adams	Ellis	Hart	Fillmore	Beaverhead
Boulder	Custer	Allen	Ellsworth	Jefferson	Freeborn	Big Horn
Chaffee	Elmore	Bartholomew	Finney	Jessamine	Goodhue	Blaine
Cheyenne	Fremont	Benton	Ford	Lincoln	Grant	Broadwater
Clear Creek	Gooding	Blackford	Geary	Marion	Hennepin	Carbon
Crowley	Idaho	Boone	Gove	Mercer	Houston	Carter
Custer	Kootenai	Carroll	Graham	Metcalfe	Hubbard	Cascade
Delta	Latah	Cass	Grant	Monroe	Jackson	Chouteau
Denver	Lemhi	Clark	Gray	Nelson	Kanabec	Custer
Dolores	Shoshone	Clinton	Greeley	Pendleton	Kandiyohi	Daniels
Douglas	Valley	De Kalb	Hamilton	Pulaski	Kittson	Dawson
El Paso		Decatur	Haskell	Robertson	Lac Qui Parle	Deer Lodge
Elbert	<b>ILLINOIS</b>	Delaware	Hodgeman	Russell	Le Sueur	Fallon
Fremont	Adams	Elkhart	Jackson	Scott	Lincoln	Fergus
Garfield	Boone	Fayette	Jewell	Taylor	Lyon	Flathead
Gilpin	Brown	Fountain	Johnson	Warren	Mahnomen	Gallatin
Grand	Bureau	Fulton	Kearny	Woodford	Marshall	Garfield
Gunnison	Calhoun	Grant	Kingman		Martin	Glacier
Huerfano	Carroll	Hamilton	Kiowa	<b>MAINE</b>	McLeod	Granite
Jackson	Cass	Hancock	Lane	Androscoggin	Meeker	Hill
Jefferson	Champaign	Harrison	Leavenworth	Aroostook	Mower	Jefferson
Kiowa	Coles	Hendricks	Lincoln	Cumberland	Murray	Judith Basin
Kit Carson	De Kalb	Henry	Logan	Franklin	Nicollet	Lake
Lake	De Witt	Howard	Marion	Hancock	Nobles	Lewis and Clark
Larimer	Douglas	Huntington	Marshall	Kennebec	Norman	Liberty
Las Animas	Edgar	Jay	McPherson	Lincoln	Olmsted	Lincoln
Lincoln	Ford	Jennings	Meade	Oxford	Otter Tail	Madison
Logan	Fulton	Johnson	Mitchell	Penobscot	Pennington	McCone
Mesa	Greene	Kosciusko	Nemaha	Piscataquis	Pipestone	Meagher
Moffat	Grundey	Lagrange	Ness	Somerset	Polk	Mineral
Montezuma	Hancock	Lawrence	Norton	York	Pope	Missoula
Montrose	Henderson	Madison	Osborne		Ramsey	Park
Morgan	Henry	Marion	Ottawa	<b>MARYLAND</b>	Red Lake	Phillips
Otero	Iroquois	Marshall	Pawnee	Baltimore	Redwood	Pondera
Ouray	Jersey	Miami	Phillips	Calvert	Renville	Powder River
Park	Jo Daviess	Monroe	Pottawatomie	Carroll	Rice	Powell
Phillips	Kane	Montgomery	Pratt	Frederick	Rock	Prairie
Pitkin	Kendall	Noble	Rawlins	Harford	Roseau	Ravalli
Prowers	Knox	Orange	Republic	Howard	Scott	Richland
Pueblo	La Salle	Putnam	Rice	Montgomery	Sherburne	Roosevelt
Rio Blanco	Lee	Randolph	Riley	Washington	Sibley	Rosebud
San Miguel	Livingston	Rush	Rooks		Stearns	Sanders
Summit	Logan	Scott	Rush	<b>MASS.</b>	Steele	Sheridan
Teller	Macon	Shelby	Russell	Essex	Stevens	Silver Bow
Washington	Marshall	Steuben	Saline	Middlesex	Swift	Stillwater
Weld	Mason	St. Joseph	Scott	Worcester	Todd	Teton
Yuma	McDonough	Tippecanoe	Sheridan		Traverse	Toole
	McLean	Tipton	Sherman	<b>MICHIGAN</b>	Wabasha	Valley
	Menard	Union	Smith	Branch	Wadena	Wibaux
	Mercer	Vermillion	Stanton	Calhoun	Waseca	

a. EPA recommends that this county listing be supplemented with other available State and local data to further understand the radon potential of Zone 1 area.

(continued)

TABLE AF101(1)—continued  
HIGH RADON POTENTIAL (ZONE 1) COUNTIES<sup>a</sup>

Yellowstone National Park	Carroll	Allen	Columbia	Lyman	Appomattox	Grant
<b>NEBRASKA</b>	<b>NEW JERSEY</b>	Ashland	Cumberland	Marshall	Augusta	Greenbrier
Adams	Hunterdon	Auglaize	Dauphin	McCook	Bath	Hampshire
Boone	Mercer	Belmont	Delaware	McPherson	Bland	Hancock
Boyd	Monmouth	Butler	Franklin	Miner	Botetourt	Hardy
Burt	Morris	Carroll	Fulton	Minnehaha	Bristol	Jefferson
Butler	Somerset	Champaign	Huntingdon	Moody	Brunswick	Marshall
Cass	Sussex	Clark	Indiana	Perkins	Buckingham	Mercer
Cedar	Warren	Clinton	Juniata	Potter	Buena Vista	Mineral
Clay	<b>NEW MEXICO</b>	Columbiana	Lackawanna	Roberts	Campbell	Monongalia
Colfax	Bernalillo	Coshocton	Lancaster	Sanborn	Chesterfield	Monroe
Cuming	Colfax	Crawford	Lebanon	Spink	Clarke	Morgan
Dakota	Mora	Darke	Lehigh	Stanley	Clifton Forge	Ohio
Dixon	Rio Arriba	Delaware	Luzerne	Sully	Covington	Pendleton
Dodge	San Miguel	Fairfield	Lycoming	Turner	Craig	Pocahontas
Douglas	Santa Fe	Fayette	Monroe	Union	Cumberland	Preston
Fillmore	Taos	Franklin	Montgomery	Walworth	Danville	Summers
Franklin	<b>NEW YORK</b>	Greene	Montour	Yankton	Dinwiddie	Wetzel
Frontier	Albany	Guernsey	Northampton	<b>TENNESSEE</b>	Fairfax	<b>WISCONSIN</b>
Furnas	Allegany	Hancock	Northumberland	Anderson	Falls Church	Buffalo
Gage	Broome	Hardin	Perry	Bedford	Fluvanna	Crawford
Gosper	Cattaraugus	Harrison	Schuylkill	Blount	Frederick	Dane
Greeley	Cayuga	Holmes	Snyder	Bradley	Fredericksburg	Dodge
Hamilton	Chautauqua	Huron	Sullivan	Claiborne	Giles	Door
Harlan	Chemung	Jefferson	Susquehanna	Davidson	Goochland	Fond du Lac
Hayes	Chenango	Knox	Tioga	Henry	Harrisonburg	Grant
Hitchcock	Columbia	Licking	Union	Grainger	Highland	Green
Hurston	Cortland	Logan	Venango	Greene	Lee	Green Lake
Jefferson	Delaware	Madison	Westmoreland	Hamblen	Lexington	Iowa
Johnson	Dutchess	Marion	Wyoming	Hancock	Louisa	Jefferson
Kearney	Erie	Mercer	York	Hawkins	Martinsville	Lafayette
Knox	Genesee	Miami	<b>RHODE ISLAND</b>	Hickman	Montgomery	Langlade
Lancaster	Greene	Montgomery	Kent	Humphreys	Nottoway	Marathon
Madison	Livingston	Morrow	Washington	Jackson	Orange	Menominee
Nance	Madison	Muskingum	<b>S. CAROLINA</b>	Jefferson	Page	Pepin
Nemaha	Onondaga	Perry	Greenville	Knox	Patrick	Pierce
Nuckolls	Ontario	Pickaway	<b>S. DAKOTA</b>	Lawrence	Pittsylvania	Portage
Otoe	Orange	Pike	Aurora	Lewis	Powhatan	Richland
Pawnee	Otsego	Preble	Beadle	Lincoln	Pulaski	Rock
Phelps	Putnam	Richland	Ross	Loudon	Radford	Shawano
Pierce	Rensselaer	Ross	Seneca	Marshall	Roanoke	St. Croix
Platte	Schoharie	Shelby	Shelby	Maury	Rockbridge	Vernon
Polk	Schuyler	Stark	Bon Homme	McMinn	Rockingham	Walworth
Red Willow	Seneca	Summit	Brookings	Meigs	Russell	Washington
Richardson	Steuben	Tuscarawas	Brown	Monroe	Salem	Waukesha
Saline	Sullivan	Union	Brule	Moore	Scott	Waupaca
Sarpy	Tioga	Van Wert	Buffalo	Perry	Shenandoah	Wood
Saunders	Tompkins	Warren	Campbell	Roane	Smyth	<b>WYOMING</b>
Seward	Ulster	Wayne	Charles Mix	Rutherford	Spotsylvania	Albany
Stanton	Washington	Wyandot	Clark	Smith	Stafford	Big Horn
Thayer	Wyoming	<b>PENNSYLVANIA</b>	Clay	Sullivan	Staunton	Campbell
Washington	Yates	Adams	Codington	Trousdale	Tazewell	Carbon
Wayne	<b>N. CAROLINA</b>	Allegheny	Corson	Union	Warren	Converse
Webster	Alleghany	Armstrong	Davison	Washington	Washington	Crook
York	Buncombe	Beaver	Day	Wayne	Waynesboro	Fremont
<b>NEVADA</b>	Cherokee	Bedford	Deuel	Williamson	Winchester	Goshen
Carson City	Henderson	Edmunds	Douglas	Wilson	Wythe	Hot Springs
Douglas	Mitchell	Faulk	Edmunds	<b>UTAH</b>	<b>WASHINGTON</b>	Johnson
Eureka	Rockingham	Grant	Faulk	Carbon	Clark	Laramie
Lander	Transylvania	Hamlin	Blair	Duchesne	Ferry	Lincoln
Lincoln	Watauga	Hand	Bradford	Grand	Okanagan	Natrona
Lyon	<b>N. DAKOTA</b>	Butler	Bucks	Piute	Pend Oreille	Niobrara
Mineral	All Counties	Cameron	Butler	Sanpete	Skamania	Park
Pershing	<b>OHIO</b>	Carbon	Camron	Sevier	Spokane	Sheridan
White Pine	Adams	Centre	Carbon	Uintah	Stevens	Sublette
<b>NEW HAMPSHIRE</b>		Chester	Clearfield	<b>VIRGINIA</b>	<b>W. VIRGINIA</b>	Sweetwater
		Clarion	Clinton	Alleghany	Berkeley	Teton
		Clearfield		Amelia	Brooke	Uinta
		Clinton				Washakie

a. EPA recommends that this county listing be supplemented with other available State and local data to further understand the radon potential of Zone 1 area.

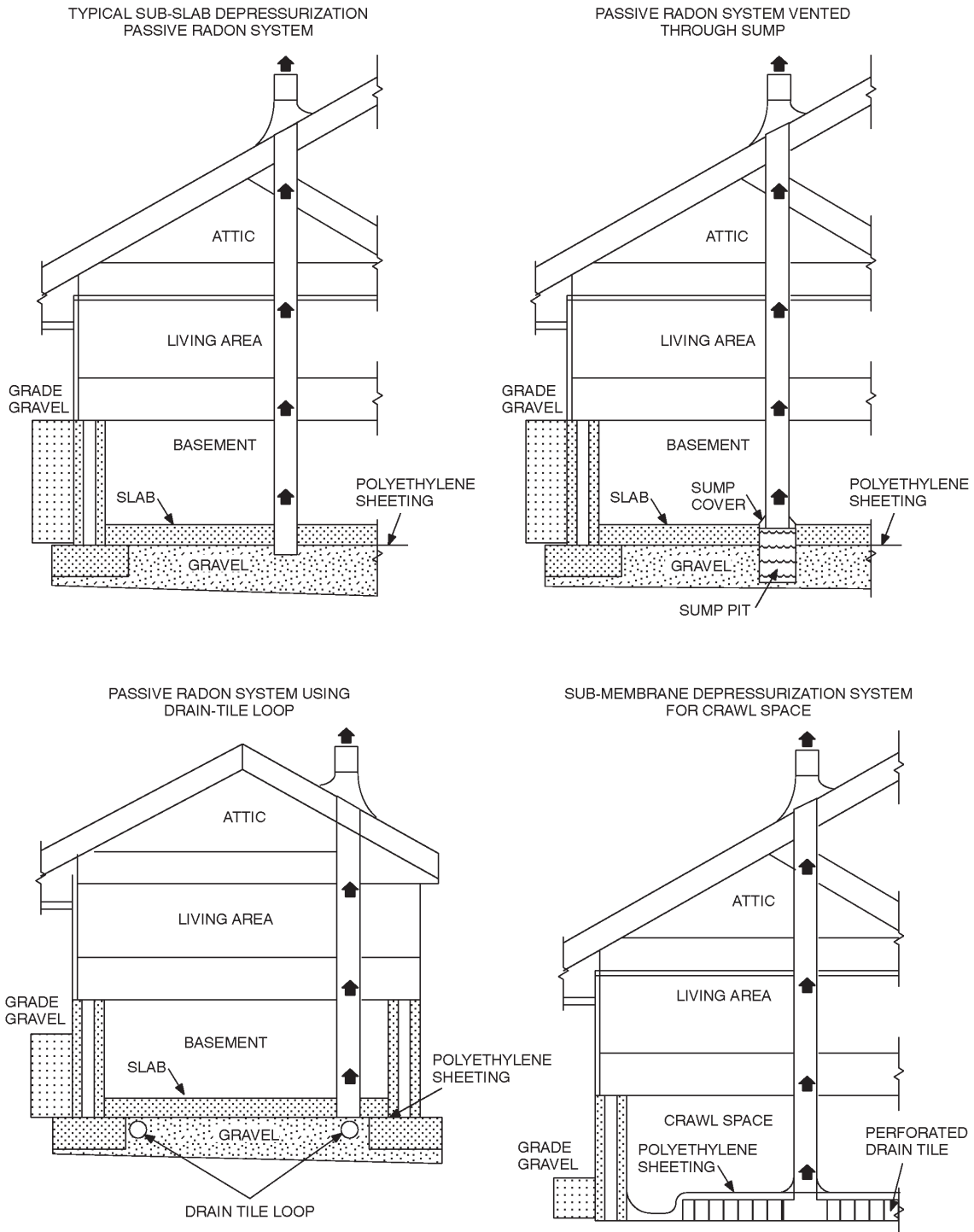


FIGURE AF102  
RADON-RESISTANT CONSTRUCTION DETAILS FOR FOUR FOUNDATION TYPES