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**TITLE 675 FIRE PREVENTION AND BUILDING
SAFETY COMMISSION**

LSA Document #03-71(F)

DIGEST

Amends 675 IAC 14-4.2, the Indiana Residential Code. Amends 675 IAC 17-1.6, the Indiana Electrical Code. Amends 675 IAC 19-3-4 of the Indiana Energy Conservation Code, which applies to detached one and two family dwellings (Class 2 structures) and townhouses. Repeals 675 IAC 14-4.2-89.7, 675 IAC 14-4.2-89.10, and 675 IAC 14-4.2-89.11. Effective 30 days after filing with the secretary of state.

675 IAC 14-4.2-1	675 IAC 14-4.2-73.5
675 IAC 14-4.2-2	675 IAC 14-4.2-77.6
675 IAC 14-4.2-3	675 IAC 14-4.2-77.7
675 IAC 14-4.2-6	675 IAC 14-4.2-81.2
675 IAC 14-4.2-7	675 IAC 14-4.2-81.3
675 IAC 14-4.2-9	675 IAC 14-4.2-81.7
675 IAC 14-4.2-13.5	675 IAC 14-4.2-82
675 IAC 14-4.2-15.5	675 IAC 14-4.2-83
675 IAC 14-4.2-19.5	675 IAC 14-4.2-89.2
675 IAC 14-4.2-20.5	675 IAC 14-4.2-89.6
675 IAC 14-4.2-21	675 IAC 14-4.2-89.7
675 IAC 14-4.2-22	675 IAC 14-4.2-89.8
675 IAC 14-4.2-26.5	675 IAC 14-4.2-89.9
675 IAC 14-4.2-27.5	675 IAC 14-4.2-89.10
675 IAC 14-4.2-29	675 IAC 14-4.2-89.11
675 IAC 14-4.2-31	675 IAC 14-4.2-95
675 IAC 14-4.2-34	675 IAC 14-4.2-96.2
675 IAC 14-4.2-37.5	675 IAC 14-4.2-97.5
675 IAC 14-4.2-45.3	675 IAC 14-4.2-97.9
675 IAC 14-4.2-46.8	675 IAC 14-4.2-107
675 IAC 14-4.2-49.1	675 IAC 14-4.2-112.5
675 IAC 14-4.2-49.3	675 IAC 14-4.2-117
675 IAC 14-4.2-52	675 IAC 14-4.2-171.5
675 IAC 14-4.2-53	675 IAC 14-4.2-174.5
675 IAC 14-4.2-53.7	675 IAC 14-4.2-177.5
675 IAC 14-4.2-61	675 IAC 14-4.2-189
675 IAC 14-4.2-63	675 IAC 14-4.2-189.2
675 IAC 14-4.2-69.5	675 IAC 14-4.2-191.4
675 IAC 14-4.2-69.6	675 IAC 17-1.6-16
675 IAC 14-4.2-71	675 IAC 19-3-4

SECTION 1. 675 IAC 14-4.2-1 IS AMENDED TO READ AS FOLLOWS:

Rule 4.2. Indiana Residential Code

675 IAC 14-4.2-1 Adoption by reference; title; availability; purpose

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 1. (a) That certain document being titled the International Residential Code for One and Two Family Dwellings published by the International Code Council, 5203 Leesburg Pike, Suite 708, Falls Church, Virginia 22041-3401, is hereby adopted by reference as if fully set out in this rule save and except those revisions made in this rule.

(b) This rule shall be known as the Indiana Residential Code, 2001 edition, and shall be published, except incorporated documents, by the fire and building services department for general distribution and use under that title. Wherever the term “this code” is used throughout this rule, it shall mean the Indiana Residential Code, 2001 edition.

(c) This rule is available ~~from~~ **for reference and review at** the Fire and Building Services Department, Indiana Government Center-South, 402 West Washington Street, Room E221, **W246**, Indianapolis, Indiana 46204.

(d) The purpose of this code is to provide minimum requirements for safety and to safeguard property, ~~and public safety, and general welfare through affordability~~, by regulating and controlling the design, construction, installation, and quality of materials of residential structures as regulated by this code. (*Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-1; filed May 23, 2001, 4:02 p.m.: 24 IR 3032; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2253*)

SECTION 2. 675 IAC 14-4.2-2 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-2 Chapter 1; administration

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 4-21.5; IC 4-22-7-7; IC 22-12-1-16; IC 22-12-1-17; IC 22-12-7; IC 22-13-2-7; IC 22-13-5; IC 22-14; IC 22-15; IC 25-4; IC 25-31; IC 36-7

Sec. 2. Delete Chapter 1 and substitute as follows: (a) SECTION R101 Application is added to read as follows: SECTION R101 APPLICATION

The provisions of this code apply to the construction, prefabrication, alteration, addition, and remodel of detached one (1) or two (2) family dwellings and one (1) family townhouses not more than three (3) stories in height and their accessory structures.

This code does not apply to manufactured homes as defined in SECTION R202, SECTION AE201, and IC 22-12-1-16 except as addressed in APPENDIX E.

This code does not apply to mobile structures as defined in IC 22-12-1-17.

Townhouses are classified as Class 1 structures and detached one (1) and two (2) family dwellings and their accessory structures are classified as Class 2 structures.

Provisions in the appendices are not enforceable unless specifically adopted.

The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

EXCEPTION: Where ~~the enforcement of a code provision would violate the conditions of the listing of the equipment, or appliance, or certification of engineered products by a registered architect registered under IC 25-4 or a professional engineer registered under IC 25-31, the conditions of the listing, and manufacturer’s instructions, or professional certification by a registered architect or professional engineer shall apply.~~

(b) SECTION R102 is added to read as follows: SECTION R102 APPEALS AND INTERPRETATIONS

Appeals from orders issued by the Fire Prevention and Building Safety Commission or the state building commissioner are governed by IC 4-21.5 and IC 22-12-7. Appeals from orders by a local unit of government are governed by IC 22-13-2-7 and local ordinance. Upon the written request of an interested person, the office of the state building commissioner may issue a written interpretation of a building law. The written interpretation as issued under IC 22-13-5 binds the interested person and the county or municipality with whom the interested person has the dispute until overruled under IC 4-21.5. **A written interpretation of a building law binds all counties and municipalities if the office of the state building commissioner publishes the written interpretation of the building law in the Indiana Register under IC 4-22-7-7(b).**

(c) SECTION R103 is added to read as follows: SECTION R103 PLANS

Plans shall be submitted for Class 1 structures as required by the General Administrative Rules (675 IAC 12-6) and for Class 2 structures as required by local ordinance.

(d) SECTION R104 is added to read as follows: SECTION R104 EXISTING CONSTRUCTION
For existing construction, see the General Administrative Rules (675 IAC 12-4) and local ordinance.

(e) SECTION R105 is added to read as follows: SECTION R105 ADDITIONS AND ALTERATIONS
Additions and alterations to any structure shall conform to that required for a new structure without requiring the existing structure to comply with all the requirements of this code. Additions or alterations shall not cause an existing structure to become unsafe.

(f) SECTION R106 is added to read as follows: SECTION R106 ALTERNATIVE MATERIALS, METHODS, AND EQUIPMENT

SECTION R106.1 ALTERNATE MATERIALS, METHODS, AND EQUIPMENT

The provisions of this code are not intended to limit the appropriate use of materials, appliances, equipment, or methods of design or construction not specifically prescribed by this code provided the building official determines that the proposed alternate materials, appliances, equipment, or methods of design or construction are at least equivalent of that prescribed in this code in suitability, quality, strength, effectiveness, fire resistance, durability, dimensional stability, safety, and sanitation. For Class 1 structures, alternate materials, methods, equipment, and design shall be as required by the General Administrative Rules (675 IAC 12-6-11). Compliance with specific provisions of the Indiana Building Code (675 IAC 13) or the Indiana Plumbing Code (675 IAC 16) in lieu of the requirements of this code shall be permitted as an alternate.

SECTION R106.2 EVIDENCE

The building official may require that evidence or proof be submitted to substantiate any claims that may be made regarding the proposed alternate.

SECTION R106.3 TESTS

Determination of equivalence shall be based on design or test methods or other such standards. The building official may accept as supporting data to assist in this determination duly authenticated reports from the Building Officials and Code Administrators International, Inc., Southern Building Code Congress International, Inc., International Conference of Building Officials, the International Code Council, Inc., or their successors, or acceptance documents from the U. S. Department of Housing and Urban Development, **the certification of a registered architect registered under IC 25-4 or a professional engineer registered under IC 25-31**, or the General Administrative Rules (675 IAC 12).

(g) SECTION R107 is added to read as follows: SECTION R107 WORKMANSHIP
General Workmanship. All construction methods shall be accepted practices to ensure livable and safe housing and shall demonstrate acceptable workmanship. (*Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-2; filed May 23, 2001, 4:02 p.m.: 24 IR 3033; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2253*)

SECTION 3. 675 IAC 14-4.2-3 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-3 Section R202; definitions

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 3. Change SECTION R202 Definitions as follows: (a) Change in the definition of ACCESSORY STRUCTURE to read as follows: In one and two family dwellings and for the purpose of APPENDIX E, structures not more than three (3) stories high with separate means of egress, and the use of which is incidental to that of the main building and which is located on the same lot.

(b) Change the definition of ALTERATION by deleting “other than repair”.

(c) Change APPROVED to read as follows: APPROVED means, as to materials, equipment, and types of construction, acceptance by the building official by one (1) of the following methods:

- (1) investigation or tests conducted by recognized authorities; or
- (2) investigation or tests conducted by technical or scientific organizations; or
- (3) accepted principles.**

The investigation, tests, or principles shall establish that the materials, equipment, and types of construction are safe for their intended purpose.

(d) Change the definition of BUILDING, EXISTING to read as follows: BUILDING, EXISTING. Existing building is a building

or structure erected prior to the adoption of this code.

(e) Change the definition of BUILDING OFFICIAL to read as follows: BUILDING OFFICIAL, as used in this code, shall be the local official or officials as designated in local ordinance, except it shall be the state building commissioner for Industrialized Building Systems under 675 IAC 15 and IC 22-15 and for plan review for townhouses under 675 IAC 12 and IC 22-15.

(f) Delete the definition of CONSTRUCTION DOCUMENTS and substitute to read as follows: CONSTRUCTION DOCUMENTS. For construction documents see the General Administrative Rules (675 IAC 12) for Class 1 structures and local ordinance for Class 2 structures.

(g) Delete EMERGENCY ESCAPE AND RESCUE OPENING and substitute to read as follows: EMERGENCY ESCAPE OPENING. An operable window, door, or similar device that provides for a means of escape in the event of an emergency.

(h) Delete from the definition of ESSENTIALLY NONTOXIC TRANSFER FLUIDS the following: “; and FDA-approved boiler water additions for steam boilers”.

(i) Change the definition of EXISTING INSTALLATIONS to read as follows: Any system regulated by this code that was legally installed prior to the effective date of this code.

(j) Add **the definition of FAMILY** after the definition of FACTORY-BUILT CHIMNEY ~~the definition of FAMILY~~ to read as follows: FAMILY means an individual or two (2) or more persons related by blood or marriage and/or a group of not more than ten (10) persons (excluding servants) who need not be related by blood or marriage living together in a dwelling unit.

(k) Add, in the definition of FOAM PLASTIC INSULATION, “of” between the words “consisting” and “open”.

(l) Add the definition of FOUNDATION WALL after FOAM PLASTIC INSULATION to read as follows: FOUNDATION WALL means the supporting element(s) that extend from the top of the footing to the bottom of the sill plate.

~~(m)~~ **(m)** Delete, in the definition of HEATING DEGREE DAY (HDD), “acceptable to the code” and substitute “approved by the building”.

~~(n)~~ **(n)** Add the following definitions after INSULATING SHEATHING:

INTERNATIONAL BUILDING CODE means the Indiana Building Code (675 IAC 13).

ICC ELECTRICAL CODE means the Indiana Electrical Code (675 IAC 17).

INTERNATIONAL FIRE CODE means the Indiana Fire Code (675 IAC 22).

INTERNATIONAL FUEL GAS CODE means the Indiana ~~Mechanical Fuel Gas Code (675 IAC 18):~~ **(675 IAC 25).**

INTERNATIONAL MECHANICAL CODE means the Indiana Mechanical Code (675 IAC 18).

INTERNATIONAL PLUMBING CODE means the Indiana Plumbing Code (675 IAC 16).

~~(o)~~ **(o)** Delete the definition of LABELED and substitute to read as follows: LABELED. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization engaged in product evaluation that maintains periodic inspection or production of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

~~(p)~~ **(p)** Delete the definition of LISTED AND LISTING and substitute to read as follows: LISTED AND LISTING. Equipment or materials included in a list published by an organization engaged in product evaluation that maintains periodic inspection of production of listed equipment or materials and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.

~~(q)~~ **(q)** Add the definition of NATIONAL ELECTRICAL CODE after MULTIPLE STATION SMOKE ALARM to read as follows: NATIONAL ELECTRICAL CODE means the Indiana Electrical Code (675 IAC 17).

~~(r)~~ **(r)** Add the definition of NFPA 70 after NATURAL DRAFT SYSTEM to read as follows: NFPA 70 means the Indiana

Electrical Code (675 IAC 17).

(~~tr~~) (s) Delete the definition of PERMIT.

(~~st~~) (t) Delete in the definition of PLUMBING, “, repairs, maintenance”.

(~~tt~~) (u) Delete in the definition of PLUMBING APPURTENANCE “, maintenance, servicing, economy”.

(~~tt~~) (v) Delete the definition of POTABLE WATER and substitute to read as follows: POTABLE WATER. Water that at the point of use is acceptable for human consumption under drinking water standards adopted by the Water Pollution Control Board at 327 IAC 8.

(~~vt~~) (w) Delete the definition of REGISTERED DESIGN PROFESSIONAL.

(~~wt~~) (x) Add the definition of RECESSED LIGHT after RECEPTOR to read as follows: RECESSED LIGHT means a light fixture that by design penetrates the thermal boundary of the building.

(~~xt~~) (y) Delete the definition of ROOF REPAIR.

(~~yt~~) (z) Add the definition of SLAB-ON-GRADE FLOOR INSULATION after SKYLIGHT AND SLOPED GLAZING to read as follows: SLAB-ON-GRADE FLOOR INSULATION means insulation around the perimeter of the floor slab or its supporting foundation.

(aa) Add the definition of SMOKE ALARM after SLOPE to read as follows: SMOKE ALARM an alarm device that is responsive to smoke.

(bb) Add the definition of TACTILE NOTIFICATION APPLIANCE after SWEEP to read as follows: TACTILE NOTIFICATION APPLIANCE a notification appliance that alerts by sense of touch or vibration.

(~~zt~~) (cc) Add to the definition of TOWNHOUSE, between “units” and “in”, “separated by property lines”. (*Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-3; filed May 23, 2001, 4:02 p.m.: 24 IR 3034; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2254*)

SECTION 4. 675 IAC 14-4.2-6 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-6 Table R301.2(1); climatic and geographical design criteria

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 6. Delete TABLE R301.2(1) and corresponding footnotes and substitute to read as follows:

TABLE R301.2(1)

No.	County	Wind Speed ¹ (MPH)	Seismic Zone ²	Ground Snow (PSF)	Foundation ³	Winter Design Temp	Decay	Termite	Weathering ⁴
01	Adams	90	B	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
02	Allen	90	B	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
03	Bartholomew	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
04	Benton	90	B	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
05	Blackford	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe

06	Boone	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
07	Brown	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
08	Carroll	90	B	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
09	Cass	90	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
10	Clark	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
11	Clay	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
12	Clinton	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
13	Crawford	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
14	Daviess	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
15	Dearborn	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
16	Decatur	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
17	Dekalb	90	B	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
18	Delaware	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
19	Dubois	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
20	Elkhart	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
21	Fayette	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
22	Floyd	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
23	Fountain	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
24	Franklin	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
25	Fulton	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
26	Gibson	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
27	Grant	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
28	Greene	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
29	Hamilton	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
30	Hancock	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe

31	Harrison	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
32	Hendricks	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
33	Henry	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
34	Howard	90	A	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
35	Huntington	90	B	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
36	Jackson	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
37	Jasper	90	B	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
38	Jay	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
39	Jefferson	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
40	Jennings	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
41	Johnson	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
42	Knox	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
43	Kosciusko	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
44	LaGrange	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
45	Lake	90	B	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
46	LaPorte	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
47	Lawrence	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
48	Madison	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
49	Marion	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
50	Marshall	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
51	Martin	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
52	Miami	90	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
53	Monroe	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
54	Montgomery	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
55	Morgan	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe

56	Newton	90	B	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
57	Noble	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
58	Ohio	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
59	Orange	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
60	Owen	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
61	Parke	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
62	Perry	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
63	Pike	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
64	Porter	90	B	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
65	Posey	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
66	Pulaski	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
67	Putnam	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
68	Randolph	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
69	Ripley	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
70	Rush	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
71	St. Joseph	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
72	Scott	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
73	Shelby	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
74	Spencer	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
75	Starke	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
76	Steuben	90	A	30	36	1°	Slight to Moderate	Moderate to Heavy	Severe
77	Sullivan	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
78	Switzerland	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
79	Tippecanoe	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
80	Tipton	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe

81	Union	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
82	Vanderburgh	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
83	Vermillion	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
84	Vigo	90	C	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
85	Wabash	90	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
86	Warren	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
87	Warrick	90	C ₁	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
88	Washington	90	B	20	24	9°	Slight to Moderate	Moderate to Heavy	Severe
89	Wayne	90	B	20	30	2°	Slight to Moderate	Moderate to Heavy	Severe
90	Wells	90	B	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
91	White	90	B	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe
92	Whitley	90	A	20	36	1°	Slight to Moderate	Moderate to Heavy	Severe

¹Wind exposure category shall be determined on a site-specific basis in accordance with SECTION R301.2.1.4.

²See SECTION R301.2.2.

³Foundation is minimum foundation depth to bottom of footing from the top of the finished grade above the footing in inches.

⁴The grade of masonry units shall be determined from ASTM C34, C55, C62, C73, C90, C129, C216, or C652.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-6; filed May 23, 2001, 4:02 p.m.: 24 IR 3035; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2256)

SECTION 5. 675 IAC 14-4.2-7 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-7 Figures R301.2(1), R301.2(2), R301.2(3), R301.2(4), R301.2(5), R301.2(6), and R301.2(7)

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 7. Delete Figures R301.2(1), R301.2(2), R301.2(3), R301.2(4), R301.2(5), R301.2(6), ~~and~~ R301.2(7), **and R301.2(8)**. (Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-7; filed May 23, 2001, 4:02 p.m.: 24 IR 3037; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2260)

SECTION 6. 675 IAC 14-4.2-9 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-9 Section R301.2.2; seismic provisions

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 9. Change SECTION R301.2.2 to read as follows: The seismic provisions of this code shall apply to buildings constructed in Seismic Design Categories C, ~~and~~ C₁, **D₁, and D₂** as determined in accordance with this section.

EXCEPTION: Detached one and two family dwellings located in Seismic Design ~~Category~~ **Categories** C and C₁ are exempt from the seismic requirements of this code except such dwellings in Category C₁ shall comply with the provisions of SECTIONS ~~R301.2.2.5 and R606.11.2~~ **R403.1.2, R403.1.4, R404.1.1, R404.1.2, R606.11, R606.11.2, R607.1.2, R1003.3, R1003.4,**

~~M2005.5, and FIGURE 606.10(2); R606.10(2).~~ Townhouses in ~~Category~~ **Seismic Design Categories C and C₁** are not exempt from the seismic provisions ~~that apply to Categories C and C₁ of this code.~~

EXCEPTION: Townhouses and other buildings are exempt from the requirements of SECTION R301.2.2.7.

The weight limitations of ~~SECTION R301.2.2.2~~ **R301.2.2.4** shall apply to buildings in all Seismic Design Categories regulated by this code. ~~Buildings in Seismic Design Category C, townhouses, shall be constructed in accordance with the additional requirements of SECTIONS R301.2.2.3 and R301.2.2.4. Buildings in Category C₁ are exempt from the provisions of SECTIONS R301.2.2.3, R301.2.2.4, and R301.2.2.7 but shall comply with the provisions of SECTION R301.2.2.5: (Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-9; filed May 23, 2001, 4:02 p.m.: 24 IR 3038; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2260)~~

SECTION 7. 675 IAC 14-4.2-13.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-13.5 Section R301.2.2.3; anchored stone and masonry veneer in seismic design Categories C and C₁

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 13.5. Make the following changes to SECTION R301.2.2.3: Add “and C₁” after “Category C” in three (3) places. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-13.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2260)*

SECTION 8. 675 IAC 14-4.2-15.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-15.5 Section R301.4; live load

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 15.5. Add a subsection to SECTION R301.4 to read as follows: R301.4.1 Live Load Reduction.

1. Tributary floor area. A structural member which supports a tributary floor area of greater than two hundred (200) square feet on a given story is permitted to be designed using a reduced uniform floor live load for each qualifying story in accordance with the following formula:

$$L = L_0 \left[0.25 + \frac{10.6}{\sqrt{A_t}} \right] \geq 0.75 \text{ for } A_t > 200 \text{ ft}^2$$

Where: A_t is the tributary area of floor surface in square feet supported by the structural member and L_0 is the floor live load from TABLE R301.4.

2. Multiple stories. When floor, roof, and attic live loads from multiple story levels are applied to a structural member, the live loads may be factored as follows:

$$L = L_1 + 0.7(L_2 + L_3 + \dots)$$

Where: L_1 is the live load from TABLES R301.4 and R301.5 producing the maximum individual load effect, and L_2 , L_3 , and so forth are live loads from other sources or stories in accordance with TABLES R301.4 and R301.5. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-15.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2260)*

SECTION 9. 675 IAC 14-4.2-19.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-19.5 Section R303.4; stairway illumination

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 19.5. In the first paragraph, delete everything after the first sentence and substitute to read as follows: Interior stairways shall be provided with an artificial light source capable of illuminating treads and landings to levels not less than one (1) foot-candle (eleven (11) lux) measured in the center of treads and landings. Exterior stairways shall be provided with an artificial light source capable of illuminating the top landing to a level not less than one (1) foot-candle (eleven (11) lux). Exterior stairways providing access to a basement from the outside grade shall be provided with an artificial light source

capable of illuminating the bottom landing to a level not less than one (1) foot-candle (eleven (11) lux). *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-19.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2260)*

SECTION 10. 675 IAC 14-4.2-20.5 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-20.5 Section R308.4; hazardous locations

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 20.5. ~~Delete Exception number 9~~ **Make the following change to SECTION R308.4: Change Exception 5 to read as follows:**

5. Glazing in SECTION 308.4, item 6, when a protective bar is installed on the accessible sides of the glazing thirty-four (34) inches (eight hundred sixty-four (864) millimeters) to thirty-eight (38) inches (nine hundred sixty-five (965) millimeters) above the floor. The bar shall be capable of withstanding a horizontal load of fifty (50) pounds (twenty-two and sixty-eight hundredths (22.68) kilograms) per linear foot without contacting the glass and be a minimum of one and one-half (1½) inches (thirty-eight (38) millimeters) in height.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-20.5; filed May 23, 2001, 4:02 p.m.: 24 IR 3039; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2261)

SECTION 11. 675 IAC 14-4.2-21 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-21 Section R309; garages and carports

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 21. Change the title and text of SECTION R309 as follows: (a) Change the title of SECTION R309 to read as follows: GARAGES, CARPORTS, OR ACCESSORY STRUCTURES.

(b) Change the text of SECTION R309.2 to read as follows: The garage shall be separated from the residence and its attic area by a smoke separation of not less than one-half (½) inch (thirteen (13) millimeters) gypsum board applied to the garage side of the framing.

~~(b)~~ **(c)** Change the second paragraph of SECTIONS R309.3 and R309.4 to read as follows: The area of floor used for parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to an approved drain or toward the main vehicle entry doorway.

~~(c)~~ **(d)** Delete the title and text of SECTION R309.5, Flood hazard areas, and substitute to read as follows: R309.5 Detached garages, carports, or accessory structures. R309.5.1 Separation. Detached garages, carports, or accessory structures shall provide not less than six (6) feet of open space between same and the residence, except that such space may be roofed in compliance with Chapters 8 and 9 of this code. Detached garages, carports, or accessory structures separated from the residence by less than six (6) feet of open space shall be considered the same as attached and shall comply with this code. In no case shall garages, carports, or accessory structures be attached to the dwelling when the footings of the structure to be attached are above the frost line and the adjacent footings of the dwelling are at or below the frost line unless approved by the building official.

R309.5.2 Requirements. Detached garages, detached carports, or accessory structures shall be constructed to applicable sections of this code unless otherwise noted in TABLE R309. Any habitable rooms(s) located within a detached garage, detached carport, or accessory structure shall meet all applicable sections of this code and shall be provided with an exit door as specified in SECTION R311.1.

~~(d)~~ **(e)** Add TABLE R309 at the end of SECTION R309 to read as follows:

TABLE R309

DETACHED GARAGES, DETACHED CARPORTS, OR ACCESSORY STRUCTURES

CONSTRUCTION REQUIREMENTS	Portable 120 Square Feet Maximum	Monolithic ¹ Footings 721 Square Feet Maximum	Structures with Conventional Foundation
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Footings and Foundations	No Requirements	8" W × 18" D ² or 12" W × 12" D ²	Indiana One and Two Family Dwelling Residential Code
Floors	No Requirements	Indiana One and Two Family Dwelling Residential Code	
Exterior Walls	No Requirements		
Girders and Headers	No Requirements		
Roof Systems	No Requirements		
Electrical Power Limits	One 15 Amp. Circuit		
Water Supply/Sanitation	Not Allowed	1	
Permanent Heat	Not Allowed	1	
Maximum Number of Stories	1	1 ³	

NOTES:

¹In structures utilizing monolithic floor systems, the water and sanitation systems and permanent heating facilities may be installed when approved flexible connections are provided.

²6 × 6 - W2.9 × W2.9 welded wire fabric or equivalent is required when monolithic slab footing system is used.

³One (1) story unless otherwise approved by the building official.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-21; filed May 23, 2001, 4:02 p.m.: 24 IR 3040; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2261)

SECTION 12. 675 IAC 14-4.2-22 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-22 Section R310; emergency escape and rescue openings

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 22. (a) Change SECTION R310 as follows: (a) Change the title to read as follows: EMERGENCY ESCAPE OPENINGS.

(b) Change the title and text of SECTION R310.1 to read as follows: R310.1. Emergency escape required. Every sleeping room shall have at least one (1) openable emergency escape window or exterior door opening for emergency escape. Where openings are provided as a means of escape, they shall have a sill height of not more than forty-four (44) inches (one thousand one hundred eighteen (1,118) millimeters) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with SECTION R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the window or door opening from the inside. Escape window openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with SECTION R310.2.

(c) Change SECTION R310.1.1 to read as follows: R310.1.1 Minimum opening area. All emergency escape openings shall have a minimum net clear opening of five and seven-tenths (5.7) square feet (five hundred thirty-thousandths (0.530) m²).

EXCEPTION: Grade floor openings shall have a minimum net clear opening of five (5) square feet (four hundred sixty-five thousandths (0.465) m²).

(d) Change SECTION R310.1.2 as follows: Minimum opening height. The minimum net clear ~~opening~~ **opening** height shall be **twenty-two (22) inches (559 millimeters)**. ~~(640 mm)~~.

(e) Change SECTION R310.1.4 to read as follows: R310.1.4 Operational constraints. Emergency escape openings shall be operational from the inside of the room without the use of key(s) or tool(s).

(f) Change the first sentence of SECTION R310.2 to read as follows: R310.2 Window wells. Window wells required for emergency escape shall have horizontal dimensions that allow the door or window of the emergency escape opening to be fully opened.

(g) Delete, in SECTION R310.2.1, "below the adjacent ground level".

(h) Delete, in two (2) places in SECTION R310.4, "and rescue".

(i) Add SECTION R310.5 to read as follows: R310.5 Sleeping room replacement window alterations. When replacing existing sleeping room windows, at least one (1) of the replacement windows **within that sleeping room** shall comply with SECTION R310.5. Replacement windows that do not meet the current emergency escape requirements of SECTION R310, without structural alterations to the dwelling, may be installed as long as they meet the following requirements.

1. Replacement window installation shall not reduce the existing net clear opening by more than six (6) inches horizontally and six (6) inches vertically, except that awning replacement windows shall not reduce the existing net clear opening by more than three (3) inches vertically.
2. In no case shall the replacement window net clear opening height be less than twenty-two (22) inches (five hundred fifty-nine (559) millimeters) and the net clear opening width be less than twenty (20) inches (five hundred eight (508) millimeters).
3. Double hung or sliding replacement windows shall have both sashes removable without the use of a key or tool. Single hung installations are not allowed by this section.
4. Casement and awning replacement windows may obtain the required net clear opening with the use of egress hardware.
5. If the replacement window cannot meet the minimum requirements listed in subdivisions 1, 2, 3, and 4, the existing window shall be replaced with a like window without reducing the existing net clear opening.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-22; filed May 23, 2001, 4:02 p.m.: 24 IR 3040; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2262)

SECTION 13. 675 IAC 14-4.2-26.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-26.5 Section R314.8; under-stair protection

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 26.5. Change the text of R314.8 to read as follows: Enclosed accessible space under stairs, with a door or access panel, shall have walls, under-stair surface, and any soffits protected on the enclosed side with one-half (½) inch (thirteen (13) millimeter) gypsum board.

EXCEPTION: Any under-stair space with one (1) or more open sides.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-26.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2263)

SECTION 14. 675 IAC 14-4.2-27.5 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-27.5 Section R315.1; handrails

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 27.5. Amend SECTION R315.1 to read as follows: R315.1 Handrails. Handrails having minimum and maximum heights of **thirty-four (34) inches and thirty-eight (38) inches (eight hundred sixty-four (864) mm and nine hundred sixty-five (965) mm; millimeters)**, respectively, measured vertically from the nosing of the treads, shall be provided on at least one **(1)** side of stairways. All required handrails shall serve each tread the full length of the ~~interior~~ stairs with three **(3)** or more risers ~~and exterior stairs with two or more risers~~ from a point directly above the top riser of a flight to a point directly above the lowest riser of the flight. Ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than ~~1-5 one and one-half (1½) inches (33 mm) (thirty-eight (38) millimeters)~~ between the wall and handrail.

EXCEPTIONS: 1. Handrails shall be permitted to be interrupted by a newel post at a turn or by a landing.

2. The use of a volute, turnout, or starting easing shall be allowed over the lowest tread.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-27.5; filed May 23, 2001, 4:02 p.m.: 24 IR 3042; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2263)

SECTION 15. 675 IAC 14-4.2-29 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-29 Section R316.1; guards required

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 29. Add in the first sentence of Change SECTION R316.1 as follows: (a) In the first sentence, add “, decks” between

“balconies” and “or”.

(b) Add a sentence at the end of the section to read as follows: **Guards that are installed on porches, balconies, decks, or raised floor surfaces that are thirty (30) inches (seven hundred sixty-two (762) millimeters) or less above the floor or grade do not have to meet the requirements of Section 316.** (*Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-29; filed May 23, 2001, 4:02 p.m.: 24 IR 3042; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2263*)

SECTION 16. 675 IAC 14-4.2-31 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-31 Section R317; smoke alarm

Authority: IC 22-13-2-2; IC 22-13-2-13; IC 22-11-18

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 31. ~~Change~~ **Delete the text of SECTION R317.1.† R317 and substitute to read as follows:** (a) ~~Delete “; repairs” in the title.~~

(b) ~~Delete “; repairs” in the first paragraph.~~

(c) ~~Delete “or repairs” in EXCEPTION 1.~~

(d) ~~Change EXCEPTION 2 to read as follows: Repairs are exempt from the requirements of this section.~~

R317.1 Labeling. Each smoke alarm shall be listed.

R317.2 Required smoke alarm locations. At least one (1) smoke alarm shall be installed in each of the following locations:

- (a) In the living area remote from the kitchen and cooking appliances. Smoke alarms located within twenty (20) feet (six and one-tenth (6.1) meters) horizontally of a cooking appliance must incorporate a temporary silencing feature or be photoelectric type.
- (b) In each room designed for sleeping.
- (c) On the ceiling of the upper level near the top or above each stairway, other than a basement stairway, in any multistory dwelling. The alarm shall be located so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction.
- (d) On the basement ceiling near the stairway.

R317.2.1 Alterations and additions. When interior alterations or additions requiring a permit occur, or when one (1) or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be provided with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.

EXCEPTIONS: 1. Smoke alarms in existing areas shall not be required to meet the requirements of R317.5 where the alterations do not result in the removal of the interior wall or ceiling finishes exposing the structure unless there is an attic, crawlspace, or basement available which could provide access for hard wiring and interconnection without the removal of interior finishes.

2. Repairs are exempt from the requirements of the section.

R317.3 Prohibited smoke alarm locations. A smoke alarm required under this section shall not be placed:

1. within three (3) feet (nine hundred fourteen (914) millimeters) horizontally from any grille moving conditioned air within the living space; or
2. in any location or environment that is prohibited by the terms of the listing.

R317.4 Mounting requirements. Smoke alarms required by SECTION R317.2 shall be mounted in accordance with their listing, instructions, and the requirements of this section.

R317.4.1 Flat Ceilings. In rooms with flat, peaked sloping or single slope ceilings with a slope of less than 1.5/12, smoke alarms shall be mounted either:

1. on the ceiling at least four (4) inches (one hundred two (102) millimeters) from each wall; or
2. on a wall with the top of the alarm not less than four (4) inches (one hundred two (102) millimeters) below the ceiling

and not farther from the ceiling than twelve (12) inches (three hundred five (305) millimeters) or the distance from the ceiling specified in the smoke alarm manufacturer's listing and instructions, whichever is less.

R317.4.2 Peaked Sloping Ceilings. In rooms with peaked sloping ceilings with a slope of 1.5/12 or greater, smoke alarms shall be:

1. mounted on the ceiling or wall within three (3) feet (nine hundred fourteen (914) millimeters), measured horizontally, from the peak of the ceiling;
2. at least four (4) inches (one hundred two (102) millimeters), measured vertically, below the peak of the ceiling; and
3. at least four (4) inches (one hundred two (102) millimeters) from any projecting structural element.

R317.4.3 Single Slope Ceilings. In rooms with single slope ceilings with a slope of 1.5/12 or greater, smoke alarms shall be:

1. mounted on the ceiling or wall within three (3) feet (nine hundred fourteen (914) millimeters), measured horizontally, of the high point of the ceiling; and
2. not closer than four (4) inches (one hundred two (102) millimeters) from any adjoining wall surfaces or any projecting structural element.

R 317.4.4 Visible and tactile notification appliances. In addition to the smoke alarms required pursuant to this section, listed visible and tactile notification appliances, when installed, shall meet the following:

R317.4.4.1 Candela Rating-Sleeping Room. A visible notification appliance, when installed in a room designed for sleeping, shall have a minimum rating of one hundred seventy-seven (177) candela, except that when the visible notification appliance is wall-mounted or suspended more than twenty-four (24) inches (six hundred ten (610) millimeters) below the ceiling, a minimum rating of one hundred ten (110) candela is permitted.

R317.4.4.2 Candela Rating-Non-Sleeping Room. A visible notification appliance, when installed in an area other than a room designed for sleeping, shall have a minimum rating of fifteen (15) candela.

R317.5 Connection to Power Source. Each smoke alarm shall be powered from:

1. the electrical system of the home as the primary power source and a battery as a secondary power source; or
2. a battery rated for a ten (10) year life, provided the smoke alarm is listed for use with a ten (10) year battery.

EXCEPTION: Visible and tactile notification appliances are required to operate from the primary power source, but are not required to operate from a secondary power source.

R317.5.1 Circuitry. Each smoke alarm whose primary power source is the home electrical system shall be mounted on an electrical outlet box and be connected by a permanent wiring method to a general branch circuit. The same branch circuit may serve more than one (1) smoke alarm. The branch circuit for the alarm shall not include any switches between the branch circuit overcurrent protective device and the alarm and shall not be protected by a ground-fault circuit-interrupter.

R317.5.2 Interconnection. When more than one (1) smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one (1) alarm will activate all of the alarms in the individual unit. (*Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-31; filed May 23, 2001, 4:02 p.m.: 24 IR 3042; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2263*)

SECTION 17. 675 IAC 14-4.2-34 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-34 Section R323.1; location required

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 34. Make the following changes to SECTION R323.1: (a) In the first sentence delete "Figure R301.2(7)" and substitute "TABLE R301.2(1)".

(a) (b) Change SECTION 323.1, item 2 to read as follows: All sills or plates that rest on concrete or masonry exterior walls and are less than six (6) inches (**one hundred fifty-two (152) millimeters**) from exposed ground or masonry veneer ledge where the

wood sill is less than four (4) inches (**one hundred two (102) millimeters**) above exposed ground.

(c) Change item 3 to read as follows: Sills and sleepers on a concrete slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier or not required by item 2 above.

(b) (d) Add an exception to SECTION R323.1, item 7 to read as follows: 7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below grade except where an approved vapor retarder is applied between the wall and the furring strips or framing members.

EXCEPTION: Exterior walls below grade complying with SECTION R406.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-34; filed May 23, 2001, 4:02 p.m.: 24 IR 3043; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2264)

SECTION 18. 675 IAC 14-4.2-37.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-37.5 Section R324.1; subterranean termite control

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 37.5. Delete “favorable to termite damage” and substitute “subject to very heavy termite damage”. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-37.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2265)*

SECTION 19. 675 IAC 14-4.2-45.3 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-45.3 Section R403.1.1; minimum size

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 45.3. In SECTION R403.1.1, delete the fifth sentence and substitute to read as follows: The minimum size of footings supporting piers and columns shall be in accordance with TABLE R403.2. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-45.3; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2265)*

SECTION 20. 675 IAC 14-4.2-46.8 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-46.8 Section R403.1.6; foundation anchorage

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 46.8. Make the following change to SECTION R403.1.6: Change the fourth sentence of the second paragraph to read as follows: Bolts shall be at least one-half (½) inch (thirteen (13) millimeters) in diameter and shall extend a minimum of seven (7) inches (one hundred seventy-eight (178) millimeters) into the core or cell of masonry units or concrete. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-46.8; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2265)*

SECTION 21. 675 IAC 14-4.2-49.1 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-49.1 Section R403.1.8.1; expansive soils classifications

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 49.1. Change SECTION R403.1.8.1(4) by deleting “UBC Standard 18-1” and substitute “The Indiana Building Code (675 IAC 13)”. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-49.1; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2265)*

SECTION 22. 675 IAC 14-4.2-49.3 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-49.3 Table R403.2; size of footings supporting piers and columns

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 49.3. Add TABLE R403.2 to read as follows:

TABLE R403.2

SIZE OF FOOTINGS SUPPORTING PIERS AND COLUMNS

Spacing of Girder "S" ¹	Type of Loading ²			Column Size Required ³		Size of Plain Concrete Footing Required ³
	A	B	C	Steel	Wood	
10'	5'-6"	---	---	3" Steel Pipe ⁴	4" x 4"	2' x 2' x 8"
15'	4'-0"	---	---			
20'	---	---	---			
10'	8'-6"	5'-0"	---			
15'	6'-0"	4'-0"	---			
20'	4'-6"	---	---			
10'	12'-0"	9'-0"	8'-0"		6" x 6"	4' x 4' x 16" ⁵
15'	10'-0"	8'-0"	7'-0"			
20'	8'-0"	7'-0"	6'-0"		8" x 8"	4'3" x 4'3" x 17" ⁵
10'	16'-0"	12'-6"	11'-0"			
15'	13'-6"	10'-6"	10'-0"			
20'	12'-0"	9'-6"	8'-0"			
10'	20'-0"	16'-0"	13'-6"			
15'	17'-0"	13'-6"	11'-6"			
20'	15'-0"	12'-0"	10'-0"			

¹The spacing "S" is the tributary load in the girder. It is found by adding the unsupported spans of the floor joists on each side which are supported by the girder and dividing by two (2).

²Figures under type of loading columns are the allowable girder spans.

Type A loading is for a girder supporting one (1) floor and ceiling.

Type B loading is for a girder supporting two (2) floors and one (1) ceiling.

Type C loading is for a girder supporting three (3) floors and one (1) ceiling.

³Required size of column is based on girder support from two (2) sides. Size of footing is based on allowable soil pressure of two thousand (2,000) pounds per square foot.

⁴Standard weight.

⁵Footing thickness is based on the use of plain concrete with an ultimate compressive strength of not less than two thousand (2,000) pounds per square inch at twenty-eight (28) days. If approved, the footing thickness may be reduced based on an engineered design utilizing higher strength concrete and/or reinforcement.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-49.3; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2265)

SECTION 23. 675 IAC 14-4.2-52 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-52 Section R404.1.1; masonry foundation walls

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 52. Delete SECTION R404.1.1 and substitute to read as follows: Concrete masonry and clay foundation walls shall be constructed as set forth in TABLES R404.1.1(1), R404.1.1(2), R404.1.1(3), and R404.1.1(4); however, TABLE R404.1.1(1) ~~can~~ **may** only be used in Seismic Category C₁ when the unbalanced fill is four (4) feet or less and TABLES R404.1.1(2), R404.1.1(3), and R404.1.1(4) shall be used when the unbalanced fill exceeds four (4) feet in Category C₁. These tables shall also comply with the provisions of this section and the applicable provisions of SECTIONS R606, R607, and R608. Rubble stone masonry foundation walls shall be constructed in accordance with SECTIONS R404.1.8 and R606.2.2. Rubble stone masonry walls shall not be used in Seismic Design Category C₁. Foundations constructed in Seismic Design Category C₁ shall be exempt from the seismic requirements of SECTION R606.

EXCEPTION: In Seismic Design Category C₁, foundation walls not supporting masonry veneer may be in accordance

with TABLE R404.1.1(1).

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-52; filed May 23, 2001, 4:02 p.m.: 24 IR 3045; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2266)

SECTION 24. 675 IAC 14-4.2-53 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-53 Section R404.1.2; concrete foundation walls

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 53. Delete SECTION R404.1.2 and substitute to read as follows: Concrete foundation walls shall be constructed as set forth in TABLES R404.1.1(1), R404.1.1(2), R404.1.1(3), and R404.1.1(4) and shall also comply with the provisions of this section and the applicable provisions of SECTION R402.2. In Seismic Design Category C₁, TABLE R404.1.1(1) can be used only when the height of the unbalanced fill is four (4) feet or less.

EXCEPTION: In Seismic Design Category C₁, foundation walls not supporting masonry veneer may be in accordance with TABLE R404.1.1(1).

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-53; filed May 23, 2001, 4:02 p.m.: 24 IR 3046; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2266)

SECTION 25. 675 IAC 14-4.2-53.7 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-53.7 Section R404.1.5; foundation wall thickness based on walls supported

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 53.7. Delete the text of section R404.1.5 and substitute to read: **The thickness of concrete and masonry walls shall not be less than the thickness of the wall supported.**

EXCEPTION: A foundation wall of at least eight (8) inches (two hundred three (203) millimeters) thickness shall be permitted:

1. Under brick veneered frame walls.

2. Under ten (10) inch (two hundred fifty-four (254) millimeter) wide cavity walls where the total height of the walls supported, including gables, is not more than twenty (20) feet (six thousand ninety-six (6,096) millimeters), provided the requirements of SECTIONS R404.1.1 and R404.1.2 are met.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-53.7; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2266)

SECTION 26. 675 IAC 14-4.2-61 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-61 Section R408.2; openings for under-floor ventilation

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 61. **Make the following changes to SECTION R408.2:** (a) Change Exception 1 in SECTION R408.2 to read as follows: Ventilation openings to the outdoors are not required if ventilation openings to the interior are provided.

(b) **Amend Exception 5 as follows: delete “Section N1102.1.7” and substitute “Chapter 11 of this code”.** *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-61; filed May 23, 2001, 4:02 p.m.: 24 IR 3046; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2267)*

SECTION 27. 675 IAC 14-4.2-63 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-63 Section R408.6; flood resistance

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 63. Delete the title and text of SECTION R408.6 and substitute to read as follows: **Sump pit.** All nonhabitable underfloor spaces shall be graded so as to direct any water accumulation to a central collection point. A sump pit shall be installed at that point so that, in the event of excess water accumulation, the installation of a sump pump can be readily accomplished. The sump pit shall be a minimum of eighteen (18) inches (four hundred fifty-seven (457) millimeters) in diameter or equivalent and a minimum of twenty-four (24) inches (six hundred ten (610) millimeters) below the bottom of the crawl space grade. Where a porous layer of gravel, crushed stone, or coarse sand is used in the crawl space, openings shall be made in the sump to allow drainage of that layer. **Under-floor drainage.** In other than Group I soils, under-floor spaces shall be drained to prevent water accumulation by one (1) of the following methods:

1. The under-floor space shall be graded at a slope of not less than one (1) inch (twenty-five (25) millimeters) for each ten (10) feet (three thousand forty-eight (3,048) millimeters) to a gravity discharge or a sump pit having a minimum size of eighteen (18) inches (four hundred fifty-seven (457) millimeters) in diameter by twenty-four (24) inches (six hundred ten (610) millimeters) deep installed below the lowest point of the slope so that, in the event of excess water accumulation, a sump pump can be readily installed.
2. The under-floor space shall be graded at a slope of not less than one-half (½) inch (thirteen (13) millimeters) for each ten (10) feet (three thousand forty-eight (3,048) millimeters) to a gravity discharge or a sump pit having a minimum size of eighteen (18) inches (four hundred fifty-seven (457) millimeters) in diameter by twenty-four (24) inches (six hundred ten (610) millimeters) deep installed below the lowest point of the slope and not less than three (3) inches (seventy-six (76) millimeters) of granular material shall be placed between the ground surface and the vapor retarder so that, in the event of excess water accumulation, a sump pump can be readily installed.
3. The under floor-space shall comply with the requirements of SECTION R405.1.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-63; filed May 23, 2001, 4:02 p.m.: 24 IR 3047; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2267)

SECTION 28. 675 IAC 14-4.2-69.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-69.5 Section R502.8.1; sawn lumber

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 69.5. Add an exception to SECTION R502.8.1 to read as follows: **EXCEPTION:** In 2 × 8 and larger solid lumber joists, holes up to fifty percent (50%) of the actual joist depth may be drilled at the center of the joist depth in the second and fifth sixths of the joist span. When the joist spans ninety percent (90%) or less of its maximum allowed span per TABLE R502.3.1(1) or R502.3.1(2), such holes may also be located in the center third of the joist span. Such hole shall be no closer than six (6) inches (one hundred fifty-two (152) millimeters) from any other hole. Except for end notches, no notches may be in the same half of the span as a hole allowed by this exception. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-69.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2267)*

SECTION 29. 675 IAC 14-4.2-69.6 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-69.6 Figure R502.8; cutting, notching, and drilling

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 69.6. Delete FIGURE R502.8 and insert FIGURE R502.8:

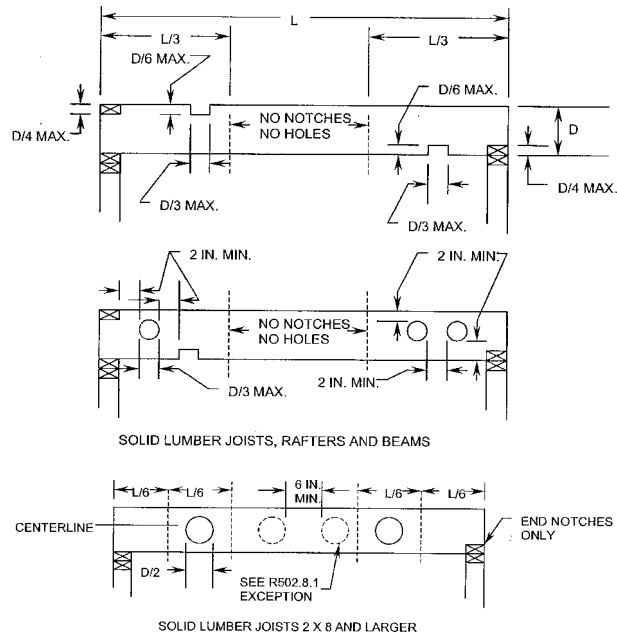


FIGURE R502.8
CUTTING, NOTCHING AND DRILLING

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-69.6; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2267)

SECTION 30. 675 IAC 14-4.2-71 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-71 Section R502.11.3; alterations to trusses

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 25-4; IC 25-31; IC 36-7

Sec. 71. Change the first sentence of SECTION R502.11.3 to read as follows: Truss members and components shall not be cut, notched, spliced, or otherwise altered in any way without the ~~approval~~ **acceptance** of the ~~building official~~ **change by an architect registered under IC 25-4 or a professional engineer registered under IC 25-31.** *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-71; filed May 23, 2001, 4:02 p.m.: 24 IR 3048; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2268)*

SECTION 31. 675 IAC 14-4.2-73.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-73.5 Table R602.3(1); fastener schedule for structural members

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 73.5. In Description of Building Elements of TABLE R602.3(1), change “Double top plates, minimum forty-eight (48) inch offset of end joints, face nail in lapped area” to read: Double top plates, minimum twenty-four (24) inch (six hundred ten (610) millimeters) offset of end joints, face nail in lapped area. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-73.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2268)*

SECTION 32. 675 IAC 14-4.2-77.6 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-77.6 Section R602.7; headers

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 77.6. Amend SECTION R602.7, Headers by adding a section to read as follows: SECTION R602.7.3, Location.

Headers less than two (2) inches (fifty-one (51) millimeters) in width that span more than eight (8) feet (two thousand four hundred thirty-eight (2,438) millimeters) or headers less than four (4) inches (one hundred two (102) millimeters) in width that span more than sixteen (16) feet (four thousand eight hundred seventy-seven (4,877) millimeters) shall be located at the top of the wall immediately below the top plate.

EXCEPTION: When a minimum of three-eighths ($\frac{3}{8}$) inch (ten (10) millimeter) structural wood sheathing is applied from the bottom of the header to the top of the wall and all joints on structural members are fastened in accordance with TABLE R602.3(1) or TABLE R602.3(2).

(Fire Prevention and Building safety Commission; 675 IAC 14-4.2-77.6; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2268)

SECTION 33. 675 IAC 14-4.2-77.7 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-77.7 Section R602.8.1; materials

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 77.7. Change the second sentence of SECTION R602.8.1 to read as follows: Faced batts or blankets of mineral wool or glass fiber or other approved materials installed in such a manner as to be securely retained in place shall be permitted as an acceptable fire block. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-77.7; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2268)*

SECTION 34. 675 IAC 14-4.2-81.2 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-81.2 Section R606.2; thickness of masonry

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 81.2. Add a second sentence to read as follows: The nominal thickness of foundation walls shall conform to the requirements of SECTION R404. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-81.2; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2268)*

SECTION 35. 675 IAC 14-4.2-81.3 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-81.3 Section R606.2.1; minimum thickness

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15

Sec. 81.3. Delete the last sentence of SECTION R606.2.1 and substitute to read as follows: The minimum thickness of masonry foundation walls shall comply with SECTION R404. Masonry walls, except masonry foundation walls, shall be laterally supported in either the horizontal or vertical direction at intervals as required by SECTION R606.8. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-81.3; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2269)*

SECTION 36. 675 IAC 14-4.2-81.7 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-81.7 Section R606.10; anchorage

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15

Sec. 81.7. Add an exception to SECTION R606.10 to read as follows: **EXCEPTION:** Masonry foundation walls in Seismic Design Category C₁ are exempt from the requirements of Figure R606.10(3) and shall comply with the requirements of SECTION R404. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-81.7; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2269)*

SECTION 37. 675 IAC 14-4.2-82 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-82 Section R606.11; seismic requirements

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 82. **Make the following changes to SECTION R606.11:**

1. Add, at the end of the first sentence, of ~~SECTION R606.11~~ “C₁” between “C” and “D₁”.
2. Add an exception to read as follows: **EXCEPTION: Masonry foundation walls in Seismic Design Category C and C₁ are exempt from the requirements of Figure R606.10(3) and shall comply with SECTION R404.**

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-82; filed May 23, 2001, 4:02 p.m.: 24 IR 3050; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2269)

SECTION 38. 675 IAC 14-4.2-83 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-83 Section R606.11.2; seismic design Category C

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 83. **(a)** Change the title and text of SECTION R606.11.2 to read as follows: Seismic Design Category C and C₁. Structures located in Seismic Design Category C and C₁ shall comply with the requirements of this section.

(b) Add an exception to read as follows: EXCEPTION: Masonry foundation walls in Seismic Design Category C and C₁ are exempt from the requirements of Figure R606.10(3) and shall comply with SECTION R404. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-83; filed May 23, 2001, 4:02 p.m.: 24 IR 3050; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2269)*

SECTION 39. 675 IAC 14-4.2-89.2 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-89.2 Table R703.4; weather-resistant siding attachment and minimum thickness

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 89.2. Change TABLE R703.4 as follows:

1. In the column titled “Sheathing paper required”, change “NO” to “YES” at all three (3) places for Horizontal Aluminum; change the “No” to “Yes” for Vinyl Siding and change (13) to (m) for Brick Veneer, Concrete Masonry veneer.
2. Change footnote m to read as follows: For masonry veneer, a weather-resistant sheathing paper is not required over water-repellent sheathing materials applied according to manufacturer’s instructions and a three-fourths (¾) inch (nineteen (19) millimeter) air space is provided. When the three-fourths (¾) inch (nineteen (19) millimeter) space is filled with mortar, a weather-resistant sheathing paper is required over the sheathing.
3. In the column titled “Sheathing paper required”, add a footnote designation “s” at all three (3) places for Horizontal Aluminum and for Vinyl Siding.
4. Add a new footnote “s” to read as follows: For horizontal aluminum and vinyl siding, a weather-resistant sheathing paper is not required over water-repellent sheathing materials applied according to the manufacturer’s instruction.

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-89.2; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2269)

SECTION 40. 675 IAC 14-4.2-89.6 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-89.6 Section R703.7.4.3; mortar or grout filled

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 89.6. Amend Figure R703.7 by modifying the flashing detail to show the horizontal flashing between the veneer and the top of the top course of the foundation wall and delete the horizontal flashing between the sill plate and the top course of the foundation wall. **SECTION R703.7.4.3 by deleting “1 inch (25.4 mm)” and inserting “three-fourths (¾) inch (nineteen (19) millimeters)”.** *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-89.6; filed May 23, 2001, 4:02 p.m.: 24 IR 3051; filed Feb 23,*

2004, 8:34 a.m.: 27 IR 2269)

SECTION 41. 675 IAC 14-4.2-89.8 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-89.8 Section R703.7.6; weepholes

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 89.8. ~~Add an exception to the end Delete the title and text of~~ SECTION R703.7.6 to read as follows: **EXCEPTION:** Where type S mortar is used throughout the masonry veneer construction, Figure R703.7A may be used: **and substitute as follows: R703.7.6 Drained cavity. The three-fourths ($\frac{3}{4}$) inch (nineteen (19) millimeters) air cavity shall be drained to the exterior of the structure at intervals of not more than thirty-three (33) inches (eight hundred thirty-eight (838) millimeters) on center. Each drain shall be not less than three-sixteenths ($\frac{3}{16}$) inch (four and eight-tenths (4.8) millimeters) in diameter, located immediately above the flashing.** (Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-89.8; filed May 23, 2001, 4:02 p.m.: 24 IR 3052; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2270)

SECTION 42. 675 IAC 14-4.2-89.9 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-89.9 Sections R703.7.2.1; support by a steel angle; R703.7.2.2; support by roof construction; and R703.7.4.2; air space

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 89.9. (a) Delete SECTION R703.7.2.1.

(b) Delete SECTION R703.7.2.2.

(c) Change the text of SECTION R703.7.4.2 to read as follows: **The veneer shall be separated from the sheathing by an air space of not less than three-fourths ($\frac{3}{4}$) inch (nineteen (19) millimeters) but not more than four and one-half ($4\frac{1}{2}$) inches (one hundred fourteen (114) millimeters). The weather-resistant sheathing paper as required by SECTION R703.2 is not required over water-repellent sheathing materials installed according to manufacturer's instructions.** (Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-89.9; filed May 23, 2001, 4:02 p.m.: 24 IR 3052; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2270)

SECTION 43. 675 IAC 14-4.2-95 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-95 Section R802.10.4; alterations to trusses

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 25-4; IC 25-31; IC 36-7

Sec. 95. Change the first sentence of SECTION R802.10.4 to read as follows: **Truss members shall not be cut, notched, drilled, spliced, or otherwise altered in any way unless without the acceptance of an architect registered under IC 25-4 or a professional engineer registered under IC 25-31, the manufacturer of the truss members, or approved by the building official.** (Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-95; filed May 23, 2001, 4:02 p.m.: 24 IR 3052; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2270)

SECTION 44. 675 IAC 14-4.2-96.2 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-96.2 TABLE R802.11

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 96.2. In footnote (d), delete “Figure R301.2(4)” and substitute “TABLE R301.2(1)”. (Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-96.2; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2270)

SECTION 45. 675 IAC 14-4.2-97.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-97.5 Section R806.1; ventilation required

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 97.5. Add an exception to Section R806.1 to read as follows: **EXCEPTION:** Mechanical ventilation is permitted provided the following conditions are met:

- 1. The installation complies with manufacturers' instructions.**
- 2. A humidistat is included with the installation.**
- 3. An ammeter or equivalent device is installed in a readily visible location.**

(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-97.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2270)

SECTION 46. 675 IAC 14-4.2-97.9 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-97.9 Section R808.1; combustible insulation

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 97.9. In SECTION R808.1, delete "Section N1101.3" and substitute "Chapter 11 of this code". *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-97.9; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2270)*

SECTION 47. 675 IAC 14-4.2-107 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-107 Chapter 11; energy efficiency

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 107. Delete the text of Chapter 11 in its entirety and substitute the following: ~~See the Indiana Energy Conservation Code, 675 IAC 14-4.2-107.~~ **SECTION N1101; GENERAL**

N1101.1 Scope. This chapter sets forth energy-efficiency requirements for the design and construction of buildings regulated by this code.

EXCEPTION: Provided that they are separated by building envelope assemblies from the remainder of the building, portions of the building that do not enclose conditioned space shall be from the building envelope provisions but shall comply with the provisions for building mechanical and service water systems.

N1101.2 Compliance. Compliance with this chapter shall be demonstrated by meeting the requirements of the applicable sections and tables of SECTIONS N1101, N1102, N1104, and N1105 of this chapter. Compliance with SECTION N1103 or N1106 is an alternative to compliance with SECTION N1102. Where applicable, provisions are based on the climate zone where the building is located as set forth in FIGURE 11-1 below.



FIGURE 11-1

N1101.2.1 Eligible buildings. Compliance for detached one (1) and two (2) family dwellings and for townhouses shall be demonstrated by meeting the requirements of subsection N1101.2.

N1101.3 Materials and equipment. Materials and equipment shall be identified as complying with the provisions of this chapter. Materials and equipment shall be listed and labeled for their intended use and shall be installed in accordance with the manufacturer's installation instructions.

N1101.3.1 Insulation. The thermal resistance (R-value) shall be indicated on all insulation and the insulation installed such that the R-value can be verified during inspection, or evidence of compliance of the installed R-value shall be provided at the job site by the insulation installer.

N1101.3.2 Fenestration. The U-factor of fenestration shall be determined in accordance with NFRC 100 by an accredited, independent laboratory and labeled and certified by the manufacturer. The solar heat gain coefficient (SHGC) of fenestration shall be determined in accordance with NFRC 200 by an accredited, independent laboratory and labeled and certified by the manufacturer.

N1101.3.2.1 Default fenestration performance. When a manufacturer has not determined a fenestration product's U-factor in accordance with NFRC 100, compliance shall be determined by assigning such products a default U-factor from TABLES 11-1 and 11-2. When a manufacturer has not determined a fenestration product's SHGC in accordance with NFRC 200, compliance shall be determined by assigning such products a default SHGC from TABLE 11-3.

TABLE 11-1
U-FACTOR DEFAULT TABLE FOR WINDOWS, GLAZED DOORS, AND SKYLIGHTS

FRAME MATERIAL AND PRODUCT TYPE ^a	SINGLE GLAZED	DOUBLE GLAZED
Metal without thermal break		
Operable (including sliding and swinging glass doors)	1.27	0.87
Fixed	1.13	0.69
Garden window	2.60	1.81

Curtain wall	1.22	0.79
Skylight	1.98	1.31
Site-assembled sloped/overhead glazing	1.36	0.82
Metal with thermal break		
Operable (including sliding and swinging glass doors)	1.08	0.65
Fixed	1.07	0.63
Curtain wall	1.11	0.68
Skylight	1.89	1.11
Site-assembled sloped/overhead glazing	1.25	0.70
Reinforced vinyl/metal clad wood		
Operable (including sliding and swinging glass doors)	0.90	0.57
Fixed	0.98	0.56
Skylight	1.75	1.05
Wood/vinyl/fiberglass		
Operable (including sliding and swinging glass doors)	0.89	0.55
Fixed	0.98	0.56
Garden window	2.31	1.61
Skylight	1.47	0.84

^aGlass block assemblies with mortar but without reinforcing or framing shall have a U-factor of 0.60.

TABLE 11-2
U-FACTOR DEFAULT TABLE FOR NONGLAZED DOORS

DOOR TYPE	WITH FOAM CORE	WITHOUT FOAM CORE
Steel doors (1.75 inches thick)	0.35	0.60
	WITHOUT STORM DOOR	WITH STORM DOOR
Wood doors (1.75 inches thick)		
Panel with 0.438-inch panels	0.54	0.36
Hollow core flush	0.46	0.32
Panel with 1.125-inch panels	0.39	0.28
Solid core flush	0.40	0.26

For SI: 1 inch = 25.4 mm.

TABLE 11-3
SHGC DEFAULT TABLE FOR FENESTRATION

PRODUCT DESCRIPTION	SINGLE GLAZED				DOUBLE GLAZED			
	Clear	Bronze	Green	Gray	Clear + Clear	Bronze + Clear	Green + Clear	Gray + Clear
Metal frames								
Operable	0.75	0.64	0.62	0.61	0.66	0.55	0.53	0.52
Fixed	0.78	0.67	0.65	0.64	0.68	0.57	0.55	0.54
Nonmetal frames								
Operable	0.63	0.54	0.53	0.52	0.55	0.46	0.45	0.44
Fixed	0.75	0.64	0.62	0.61	0.66	0.54	0.53	0.52

N1101.3.2.2 Air leakage. The air leakage of prefabricated fenestration shall be determined by the manufacturer. Alternatively, the fenestration shall be installed in accordance with the maximum allowable rates in TABLE 11-4.

EXCEPTION: Site-constructed windows and doors sealed in accordance with SECTION N1101.3.2.2.1.

TABLE 11-4
ALLOWABLE AIR FILTRATION RATES^a

WINDOWS (cfm per square foot of window area)	DOORS (cfm per square foot of door area)	
0.3 ^{b, c}	Sliders 0.3	Swinging 0.5

For SI: 1 cfm/ft² = 0.00508 m³/ (s·m²).

^aWhen tested in accordance with ASTM E283.

^bSee AAMA/WDMA 101/I.S. 2.

^cSee ASTM D4099.

N1101.3.2.2.1 Caulking and sealants. Exterior joints, seams, or penetrations in the building envelope that are sources of air leakage shall be sealed with caulking materials, closed with gasketing systems, taped, or covered with moisture vapor-permeable house-wrap. Sealing materials spanning joints between dissimilar construction materials shall allow for differential expansion and contraction of the construction materials. This includes sealing around tubs and showers, at the attic and crawlspace panels, at recessed lights, and around all plumbing and electrical penetrations. These are openings located in the building envelope between conditioned space and unconditioned space or between the conditioned space and the outside.

SECTION N1102 COMPLIANCE BY PRESCRIPTIVE SPECIFICATIONS ON INDIVIDUAL COMPONENTS

N1102.1 Thermal performance criteria. The minimum required insulation R-value or maximum required U-factor for each element in the building thermal envelope (fenestration, roof/ceiling, opaque wall, floor, slab edge, crawlspace wall, and basement wall) shall be in accordance with criteria in TABLE 11-5.

TABLE 11-5
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENTS^a
78% AFUE or 6.8 HSPF and 10 SEER

REGION See Figure 11-1	GLAZING U-VALUE	SKYLIGHT U-VALUE ^b	CEILING R-VALUE	WALL R-VALUE ^{cc}	FLOOR R-VALUE ^d	BASEMENT WALL R-VALUE	SLAB PERIMETER R-VALUE/DEPTH	CRAWLSPACE WALL R-VALUE ^f
North	.35	0.60	30	15 plus 1	25	13 / 7 ft.	10 / 4 ft.	7 / 3.2 ft.
Central	.45	0.60	30	13 plus 1	25	10 / 7 ft.	10 / 4 ft.	10 / 2.7 ft.
South	.45	0.60	30	13 plus 1	19	7 / 7 ft.	7 / 3 ft.	7 / 2.7 ft.
								80% AFUE
Ohio River	.45	0.60	30	13	19	7 / 4 ft.	3.5 / 2 ft.	3 / 2.2 ft.

^aR-values are minimums. U-factors and SHGC are maximums. R-19 insulation shall be permitted to be compressed except as noted. The glazing U-factors are for windows only. The default U-factors for doors are in TABLES 11-1 and 11-2. The maximum door U-values to be allowed with this table are as follows: main exit, 0.54; other exit doors, 0.34; sliding glass doors, French doors, and atrium doors, 0.55.

^bSkylights are glazed fenestration less than 60 degrees from horizontal.

^cCavity insulation plus sheathing (wood frame walls only). Steel frame walls require the installation of an exterior insulated sheathing in accordance with SECTION N1102.1.12.

^dOr insulation sufficient to fill the cavity, R-19 minimum.

^eBox or rim joist cavity spaces must be insulated R-22 minimum, entire exterior perimeter.

^fThe insulation shall be installed from the top of the slab to the required depth, horizontally or vertically, or a combination of both, until the required depth is achieved.

N1102.1.1 Exterior walls. The minimum required R-value in TABLES 11-5 shall be met by the sum of the R-values of the insulation materials installed in framing cavities and/or sheathing applied and not by framing, drywall, or exterior siding materials. Insulation separated from the conditioned space by a vented space shall not be counted towards the required R-value.

N1102.1.1.1 Mass walls. For purposes of this section, the following definitions apply: Mass walls with exterior insulation position are those that have the entire effective mass layer interior to an insulation layer. Mass walls with integral insulation

position are those that have either insulation and mass materials well mixed as in wood (logs) or substantially equal amounts of mass material on the interior and exterior of insulation as in concrete masonry units with insulated cores or masonry cavity walls. Mass walls with interior insulation position are those that have the mass material located exterior to the insulating material.

Mass walls shall be permitted to meet the mass wall criteria in TABLE 11-6 based on the insulation position and the climate zone where the building is located. Other mass walls shall meet the frame wall criteria for the building type and the climate zone where the building is located based on the sum of interior and exterior insulation.

Mass walls not meeting either of the above descriptions for exterior or integral positions shall meet the requirements for other mass walls in TABLE 11-6. The R-value for a solid concrete wall with a thickness of four (4) inches (one hundred two (102) millimeters) or greater is R-1.1. R-values for other assemblies are permitted to be based on hot box tests.

**TABLE 11-6
MASS WALL PRESCRIPTIVE BUILDING ENVELOPE REQUIREMENTS**

Building Location		Mass Wall Assembly R-Value (hr ft ² °F)/Btu	
Zone	HDD	Exterior or Integral Insulation	Other Mass Walls
Northern	6,300	R-13	R-15.2
Central	5,700	R-13	R-15.2
South	5,000	R-8	R-15.2
Ohio River	4,300	R-8	R-15.2

For SI: 1(hr ft²°F)/Btu = 0.176 m² K/W

N1102.1.1.2. Steel-frame walls. When steel framing construction is used, insulated sheathing with an R-5 value shall be installed in addition to the minimum required R-value for frame walls determined in accordance with TABLE 11-5.

N1102.1.2 Ceilings. The required “Ceiling R-value” in TABLE 11-5 assumes standard truss or rafter construction and shall apply to all roof/ceiling portions of the building thermal envelope including cathedral ceilings. R-30 shall be permitted to be compressed over the top plate to obtain the required rafter air spaces. R-30 shall be permitted to be used over the top plate where R-38 is required. R-38 shall be permitted over the top plate where R-49 is required.

N1102.1.3 Opaque doors. Opaque doors separating conditioned and unconditioned space shall have a maximum U-factor of thirty-five hundredths (0.35). One (1) opaque door shall be permitted to be exempt from this U-factor requirement.

N1102.1.4 Floors. The required R-value in TABLE 11-5 shall apply to all floors, except any individual floor assembly with over twenty-five percent (25%) of its conditioned floor area exposed directly to outside air shall meet the R-value requirement in TABLE 11-5 for ceilings.

N1102.1.5 Basement walls. When insulating basement walls, the required R-values shall be applied from the top of the basement wall to the depth required by TABLE 11-5.

N1102.1.6 Slab-on-grade floors. For slabs with a top edge eight (8) inches (two hundred three (203) millimeters) or less above or twelve (12) inches (three hundred five (305) millimeters) or less below finished grade, the required R-value in TABLE 11-5 shall be applied to the outside of the foundation or the inside of the foundation wall. The insulation shall extend downward from the top of the slab, or downward to the bottom of the slab and then horizontally in either direction, for the minimum distance listed in TABLE 11-5.

When installed between the exterior wall and the edge of the interior slab, the top edge of the insulation shall be permitted to be cut at a forty-five (45) degree (seventy-nine hundredths (0.79) radians) angle away from the exterior wall. Insulation extending horizontally away from the building shall be protected as set forth by SECTION R403.3.1.

R-2 shall be added to the values in TABLE 11-5 where uninsulated hot water pipes, air distribution ducts, or electric heating

cables are installed within or under the slab.

N1102.1.7 Crawlspace walls. Where the floor above the crawlspace is uninsulated, and the crawlspace is not vented to outside air, insulation shall be installed on crawlspace walls as required in TABLE 11-5. The insulation shall be applied inside of the crawlspace wall, downward from the sill plate to the distance required by TABLE 11-5. The exposed earth in all crawlspace foundations shall be covered with a continuous six (6) mil vapor retarder having a maximum permeance rating of one (1.0) perm (5.74525×10^{-11} kg/(Pa·s·m²)).

N1102.1.8 Masonry veneer. For exterior foundation insulation, that horizontal portion of the foundation that supports a masonry veneer shall not be required to be insulated.

N1102.1.9 Protection. Exposed insulating materials applied to the exterior of foundation walls shall be protected from damage or deterioration. The protection shall extend at least six (6) inches (one hundred fifty-two (152) millimeters) below finished grade level.

N1102.2 Fenestration exemption. Up to one percent (1%) of the total glazing area shall be exempt from U-factor requirements.

SECTION N1103 COMPLIANCE BY TOTAL BUILDING ENVELOPE PERFORMANCE

N1103.1 Compliance with this section is an alternative to compliance with SECTION N1102.

N1103.2 Compliance by total building envelope performance. The building envelope design of a proposed building shall be permitted to deviate from the U_o-factors, U-factors, or R-values specified in TABLE 11-7, provided the total thermal transmission heat gain or loss for the proposed building envelope does not exceed the total heat gain or loss resulting from the proposed building's conformance to the values specified in TABLE 11-7. For basement and crawlspace walls that are part of the building envelope, the U-factor of the proposed foundation shall be adjusted by the R-value of the adjacent soil where the corresponding U-factor in TABLE 11-7 is similarly adjusted. Heat gain or loss calculations for slab edge and basement or crawlspace wall foundations shall be determined using approved methods.

TABLE 11-7^{a,b,c}
EQUIVALENT U-FACTORS

REGION	GLAZING	SKY-LIGHT	CEILING	WALL	MASS WALL	FLOOR	BASEMENT	SLAB PERIMETER	CRAWLS PACE
North	0.45	0.60	0.035	0.064	0.077	0.037	0.055 80%	0.684 80% + 0.35 glazing	0.076 80%
Central	0.45	0.60	0.035	0.074	0.077	0.042	0.064	0.684	0.100
South	0.45	0.60	0.035	0.074	0.125	0.045	0.078	0.727	0.109
Ohio River	0.45	0.60	0.035	0.077	0.125	0.047	0.093	0.825	0.196

^aNonfenestration U-factors shall be obtained from this table, measurement, calculation, or an approved source.

^bFor 78% AFUE furnaces or 6.8 HSPF and 10 SEER except where otherwise noted.

^cThe maximum door U-values to be allowed with this table are as follows: main exit, 0.54; other exit doors, 0.34; sliding glass doors, French doors, and atrium doors, 0.55.

SECTION N1104 MECHANICAL SYSTEMS

N1104.1 Heating and air conditioning appliance and equipment performance. Performance of equipment listed in TABLE 11-8 is covered by preemptive federal law. Appliances and equipment not listed in TABLE 11-8 shall be approved. Data furnished by the equipment supplier, or certified under a nationally recognized certification procedure, shall be used to satisfy these requirements. All such equipment shall be installed in accordance with the manufacturer's instructions.

TABLE 11-8
MINIMUM EQUIPMENT PERFORMANCE

EQUIPMENT CATEGORY	SUBCATEGORY ^c	REFERENCED STANDARD	MINIMUM PERFORMANCE
Air-cooled heat pumps heating mode < 65,000 Btu/h cooling capacity	Split systems		6.8 HSPF ^{a, b}
		ARI 210/240	
	Single package		6.6 HSPF ^{a, b}
Gas-fired or oil-fired furnace < 225,000 Btu/h		DOE 10 CFR Part 430, Subpart B, APPENDIX N	AFUE 78% ^b Et 80% ^c
Gas-fired or oil-fired steam and hot water boilers < 300,000 Btu/h		DOE 10 CFR Part 430, Subpart B, APPENDIX N	AFUE 78% ^{b, d}
Air-cooled air conditioners and heat pumps cooling mode < 65,000 Btu/h cooling capacity	Split systems		10.0 SEER ^b
		ARI 210/240	
	Single package		9.7 SEER ^b

For SI: 1 Btu/h = 0.2931 W.

^aFor multicapacity equipment, the minimum performance shall apply to each capacity step provided. Multicapacity refers to manufacturer-published ratings for more than one (1) capacity mode allowed by the product's controls.

^bThis is used to be consistent with the National Appliance Energy Conservation Act (NAECA) of 1987 (Public Law 100-12).

^cThese requirements apply to combination units not covered by NAECA (three-phase power or cooling capacity sixty-five thousand (65,000) Btu/h).

^dExcept for gas-fired steam boilers, for which the minimum AFUE shall be seventy-five percent (75%).

^eSeasonal rating.

N1104.2 Controls. At least one (1) thermostat shall be provided for each separate heating, cooling, or combination heating and cooling system. Heat pumps shall have controls that prevent supplementary electric resistance heater operation when the heating load can be met by the heat pump alone. Supplementary heater operation shall be permitted during outdoor coil defrost cycles not exceeding fifteen (15) minutes.

N1104.3 Duct insulation. All portions of the air distribution system that serve the permanent heating, ventilating, and air conditioning systems shall be installed in accordance with SECTION M1601 and be insulated to an installed R-4.2 when system components are located within the building but outside of conditioned space and R-8 when located outside of the building. When located within a building envelope assembly, at least R-8 shall be applied between the duct and that portion of the assembly furthest from conditioned space.

EXCEPTION: Exhaust air ducts and portions of the air distribution system within appliances or equipment.

N1104.4 Duct sealing. All ducts shall be sealed in accordance with SECTION M1601.3.1.

N1104.5 Piping insulation. All mechanical system piping that serves the permanent heating, ventilating, and air conditioning systems shall be insulated in accordance with TABLE 11-9.

EXCEPTION: Piping installed within appliances and equipment or piping serving fluids between 55°F (13°C) and 120°F (49°C).

TABLE 11-9
MINIMUM HVAC PIPING
INSULATION THICKNESSES^a

	FLUID TEMPERATURE RANGE (°F)	INSULATION THICKNESS (inches) ^b
HEATING SYSTEMS		
Low pressure/temperature	201–250	1.5
Low temperature	120–200	1.0
Steam condensate (for feed water)	Any	1.5
COOLING SYSTEMS		
Chilled water, refrigerant, or brine	40–55	0.75
	Below 40	1.25

For SI: 1 inch = 25.4 mm, °C = (°F - 32) / 1.8.

^aThe pipe insulation thicknesses specified in this table are based on insulation R-values ranging from R-4 to R-4.6 per inch of thickness. For materials with an R-value greater than R-4.6, the insulation thickness specified in this table may be reduced as follows:

$$\text{New Minimum Thickness} = \frac{4.6 \times \text{Table Thickness}}{\text{Actual R-value}}$$

For materials with an R-value less than R-4, the minimum insulation thickness shall be increased as follows:

$$\text{New Minimum Thickness} = \frac{4.0 \times \text{Table Thickness}}{\text{Actual R-value}}$$

^bFor piping exposed to outdoor air, increase thickness by 0.5 inch.

SECTION N1105 SERVICE WATER HEATING

N1105.1 Water heating appliance and equipment performance. Performance of equipment listed in TABLE 11-10 is covered by preemptive federal law. Appliances and equipment not listed in TABLE 11-10 shall be approved.

TABLE 11-10

REQUIRED PERFORMANCE OF DOMESTIC HOT WATER HEATING EQUIPMENT SUBJECT TO MINIMUM FEDERAL STANDARDS

CATEGORY	MAXIMUM INPUT RATING	MINIMUM EFFICIENCY
Electric; storage or instantaneous	12 kW	$0.93 - 0.00132 \times V^a$
Gas; storage	75,000 Btu/h	$0.62 - 0.0019 \times V^a$
Gas; instantaneous	200,000 Btu/h	$0.62 - 0.0019 \times V^a$
Oil; storage	105,000 Btu/h	$0.59 - 0.0019 \times V^a$
Oil; instantaneous	210,000 Btu/h	$0.59 - 0.0019 \times V^a$

For SI: 1Btu/h = 0.2931 W, 1 gallon = 3.785 L.

^aV is the rated storage volume in gallons as specified by the manufacturer.

N1106 ALTERNATE DESIGN

N1106.1 Chapter 4, Residential Building Design by Systems Analysis and Design of Buildings Utilizing Renewable Energy Sources, of the International Energy Conservation Code 2000, except as amended in subsection N1106.2, is an alternative to compliance with SECTIONS N1102 AND N1103.

N1106.2 (a) Change subsection 402.1 to read as follows: Compliance with this chapter will require an analysis of the annual energy usage, completed during the building design phase, and hereinafter called the “annual energy analysis”.

(b) Delete the exception from subsection 402.1 without substitution.

(c) Delete “Chapter 5” from subsection 402.1.1 and substitute “TABLE 11-5, TABLE 11-7, or TABLE 11-11” Delete all exceptions in subsection 402.1.1.

(d) Delete TABLES 402.1.1(1) and 402.1.1(2) including their footnotes.

(e) In subsection 402.1.3.1.4, delete “Table 102.5.2(3)” and substitute “TABLE 11-3”.

(f) In subsection 402.1.3.6, delete “Type A-1 Residential building” and substitute “1 or 2 family dwelling” and delete “Type A-2 Residential building” and substitute “townhouse”.

(g) Add the following to the last sentence of subsection 402.1.3.10: “See subsection R303.1 for ventilation requirements for 1 and 2 family dwellings or townhouses.”.

(h) In subsection 402.1.3.11, delete “Table 502.2” and substitute “TABLE 11-5”.

(i) In subsection 402.4.1, delete “as required in Chapter 3” and substitute “as follows:” and the following table:

TABLE 11-11

THERMAL DESIGN PARAMETERS EXTERNAL DESIGN CONDITIONS

	Northern	Central	South	Ohio River
WINTER Design Dry-Bulb °F	1°	2°	9°	9°
SUMMER Design Wet-Bulb °F	73°	74°	75°	75°
SUMMER Design Dry-Bulb °F	89°	90°	93°	93°
DEGREE DAYS HEATING	6,300	5,700	5,000	4,300

(j) In subsection 402.5, delete “Chapter 4” and substitute “this chapter”.

(k) In subsection 403.1.1.1, delete “Section 502.1.4.1” and substitute “TABLE 11-4”. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-107; filed May 23, 2001, 4:02 p.m.: 24 IR 3054; errata filed Jun 12, 2001, 2:18 p.m.: 24 IR 3070; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2271)*

SECTION 48. 675 IAC 14-4.2-112.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-112.5 Section M1411.3.1; auxiliary and secondary drain systems

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 112.5. In the first sentence of SECTION R1411.3.1, delete “damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping” and substitute “installed above the finished ceiling”. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-112.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2277)*

SECTION 49. 675 IAC 14-4.2-117 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-117 Section M2005.5; anchorage of water heaters in seismic design Category C₁

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 117. Add SECTION M2005.5 to the end of SECTION M2005 to read as follows: M2005.5 Anchorage of Water Heaters in Seismic Design Category C₁. In Seismic Design Category C₁, all **gas** water heaters shall be anchored or fastened to resist horizontal displacement due to earthquake motion as provided in SECTION M1307.2. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-117; filed May 23, 2001, 4:02 p.m.: 24 IR 3055; errata filed Jun 12, 2001, 2:18 p.m.: 24 IR 3070; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2277)*

SECTION 50. 675 IAC 14-4.2-171.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-171.5 Section P2801.5; required pan

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 171.5. In SECTION P2801.5, delete “in locations where leakage of the tanks or connections will cause damage” and substitute “above a finished ceiling”. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-171.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2277)*

SECTION 51. 675 IAC 14-4.2-174.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-174.5 Section P2903.5; water hammer

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 174.5. Change SECTION P2903.5 to read as follows: Water Hammer. The flow velocity through the water distribution system shall be controlled to reduce the possibility of water hammer. Water hammer arrestors, when installed, shall be installed in accordance with manufacturer's installation instructions and shall conform to ASSE/ANSI 1010. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-174.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2277)*

SECTION 52. 675 IAC 14-4.2-177.5 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-177.5 Section P3103.1; roof extension

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 177.5. Change SECTION P3103.1 to read as follows: All open pipes which extend through a roof shall be terminated at least twelve (12) inches (three hundred five (305) millimeters) above the highest point where the vent passes through the roof except that where a roof is to be used for any purpose other than weather protection, the vent extension shall terminate no less than seven (7) feet (two thousand one hundred thirty-four (2,134) millimeters) above the roof. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-177.5; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2277)*

SECTION 53. 675 IAC 14-4.2-189 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-189 Section E3509.7; metal gas piping bonding

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 189. Delete from Before the period at the end of SECTION E3509.7, “and bonded to the grounding electrode system”; add: “at an accessible point in accordance with SECTION E3509.8”. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-189; filed May 23, 2001, 4:02 p.m.: 24 IR 3063; errata filed Jun 12, 2001, 2:18 p.m.: 24 IR 3070; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2277)*

SECTION 54. 675 IAC 14-4.2-189.2 IS ADDED TO READ AS FOLLOWS:

675 IAC 14-4.2-189.2 Section E3509.8; bonding other metal piping

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 189.2. Change the third sentence of SECTION E3509.8 to read as follows: “A piping system shall be considered as bonded where connected to the equipment grounding conductor for the circuit capable of energizing such piping if connected using a fixed wiring method.”. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-189.2; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2277)*

SECTION 55. 675 IAC 14-4.2-191.4 IS AMENDED TO READ AS FOLLOWS:

675 IAC 14-4.2-191.4 Section E3801.11; HVAC outlet; Section E3802; ground-fault and arc-fault circuit-interrupter protection

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 191.4. (a) In the first sentence of SECTION E3801.11, delete “located in attics and crawl spaces” without substitution.

(b) Add SECTION E3802.7.1 after SECTION E3802.7 to read: Boathouses. All 125-volt, single-phase, ~~15-~~ 15-ampere or 20-ampere receptacles installed in boathouses shall have ground-fault circuit-interrupter protection for personnel. *(Fire Prevention and Building Safety Commission; 675 IAC 14-4.2-191.4; filed Aug 14, 2002, 4:20 p.m.: 26 IR 13; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2278)*

SECTION 56. 675 IAC 17-1.6-16 IS AMENDED TO READ AS FOLLOWS:

675 IAC 17-1.6-16 Section 250.104; bonding of piping and exposed structural steel

Authority: IC 22-13-2-2; IC 22-13-2-13

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7

Sec. 16. In (a) Amend the first ~~third~~ sentence of SECTION 250.104(B) delete “including gas piping,” and insert “other than gas piping,” to read: **The equipment grounding conductor for the circuit that may energize the piping shall be permitted to serve as the bonding means if connected using a fixed wiring method.**

(b) At the end of SECTION 250.104(B), add a sentence to read as follows: All aboveground metal gas piping upstream from the equipment shutoff valve shall be electrically continuous. *(Fire Prevention and Building Safety Commission; 675 IAC 17-1.6-16; filed Aug 14, 2002, 4:20 p.m.: 26 IR 18; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2278)*

SECTION 57. 675 IAC 19-3-4 IS AMENDED TO READ AS FOLLOWS:

675 IAC 19-3-4 Section 101.3; scope

Authority: IC 22-13-2-2; IC 22-13-4-1

Affected: IC 22-12; IC 22-13; IC 22-14; IC 22-15; IC 36-7-2-9

Sec. 4. Change the ~~last sentence~~ **second paragraph** in SECTION 101.3 to read as follows: **Buildings Class 1 structures, except townhouses,** shall be designed to comply with the requirements of one **(1)** of the following: Chapter 4, Chapter 5, or Chapter 6. **675 IAC 19 is not applicable to Class 2 structures and townhouses. Class 2 structures and townhouses shall be designed to comply with 675 IAC 14, the Indiana Residential Code.** *(Fire Prevention and Building Safety Commission; 675 IAC 19-3-4; filed Dec 1, 1992, 5:00 p.m.: 16 IR 1126; readopted filed Sep 11, 2001, 2:49 p.m.: 25 IR 530; filed Feb 23, 2004, 8:34 a.m.: 27 IR 2278)*

SECTION 58. THE FOLLOWING ARE REPEALED: 675 IAC 14-4.2-89.7; 675 IAC 14-4.2-89.10; 675 IAC 14-4.2-89.11.

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