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ORDINANCE NO. 20467

AN ORDINANCE introduced by Interim City Manager Richard U. Nienstedt, concerning adoption of the 2021 International Residential Code, amending and repealing several sections of Chapter 14.55 of the Topeka Municipal Code.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF TOPEKA, KANSAS:

Section 1. That section 14.55.010, International Residential Code, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

International Residential Code.

International Residential Code for One- and Two-Family Dwellings, ~~2009~~2021 Edition, hereinafter referred to as the "IRC," as published by the International Code Council, Chapters 1 through 10, ~~and~~ Appendix AF Radon Control Methods with the exclusion of Section AF104 Testing and Appendix AQ Tiny Houses in its entirety, are hereby adopted by reference and incorporated in this chapter except as amended in Article II of this chapter.

Section 2. That section 14.55.020, International Residential Code – One file in the Clerk's office, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

International Residential Code – On file in the Clerk's office.

At least one copy of the IRC as adopted in this chapter shall be on file with the City Clerk to be available for inspection by the public at all reasonable business hours. ~~The Police Department, Municipal Court, and all administrative departments of the~~Any City department charged with the duty of enforcement of this chapter shall be supplied, at the cost of the City, such number of copies of such code as may be deemed

expedient by the Director of ~~Public Works~~Planning and Development or his or her designee.

Section 3. That section 14.55.030, Adoption of rules and regulations, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Adoption of rules and regulations.

The Director of ~~Public Works~~Planning and Development or his or her designee shall have the authority to promulgate such rules and regulations as are necessary to carry out the purposes of the IRC. Reference may be made to the currently adopted building code for guidance and clarification.

Section 4. That section 14.55.050, Title, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Title~~Scope.

Section R101.~~1~~2, ~~Title~~Scope, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

~~These provisions shall be known as the Residential Code for One- and Two-family Dwellings of the City of Topeka, and shall be cited as such and will be referred to herein as "this code."~~

The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures not more than three stories above grade plane in height.

Exception: The following shall be permitted to be constructed in

accordance with this code where provided with an automatic sprinkler system complying with Section NFPA13D:

1. Owner-occupied lodging houses with five or fewer guestrooms.

2. A care facility with eight or fewer persons receiving custodial care within a dwelling unit.

3. A care facility with eight or fewer persons receiving medical care within a dwelling unit

4. A care facility for eight or fewer persons receiving care that are within a single-family dwelling.

Section 5. That section 14.55.120, Premises identification, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Premises identification.

Section R105.10, Premises identification, is hereby created by the addition of the following provisions:

The approved permit number and street address number shall be displayed and be plainly visible and legible from the public street or road fronting the property on which any new building is being constructed. Use or occupancy of the building may be denied for failure to display in accordance with this section.

Section 6. That section 14.55.170, Types of inspections, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Types of inspections.

Section R109.1, Types of inspections, including subsections, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

R109.1 Types of inspections. For onsite construction, from time to time the building official, upon notification from the permit holder or his agent, shall make or cause to be made any necessary inspections and shall either approve that portion of the construction as completed or shall notify the permit holder or his or her agent wherein the same fails to comply with this code. Construction or work for which a permit is required shall be subject to inspection by the building official, and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the building official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

R109.1.1 Footing and foundation inspections. Inspection of the foundation footings shall be made after poles or piers are set or trenches or basement areas are excavated, and any required forms erected and any required reinforcing steel is in place and supported prior to the placing of concrete. The foundation footing inspection shall include excavations for thickened slabs intended for the support of bearing walls, partitions, structural supports, or equipment and special requirements for wood foundations. The foundation wall inspection shall be made after the concrete forms are set and any required reinforcing steel is in place and supported.

R109.1.1.1 Wall bracing inspection. Inspection of the required braced wall lines and braced wall panels to verify compliance with applicable bracing requirements of sections R602.10 through R602.12 shall be made after the installation of wall sheathing and prior to installation of any housewrap or exterior wall covering. Required interior braced wall panels, including all required blocking and connections both above and below the panels shall also be in place. Required nailing/patterns for bracing shall be completed and ready for inspection. Rough-in of electrical, mechanical and plumbing systems shall not take place until approval of the wall bracing by the building official. The approved plans showing the location, methods used, minimum lengths, attachment specs, etc. shall be provided on the site for reference by the building official.

R109.1.2 Plumbing, mechanical, gas and electrical systems inspection. Rough inspection of plumbing, mechanical, gas and electrical systems shall be made prior to covering or concealment, before fixtures or appliances are set or installed, and prior to framing inspection.

Exception: Back-filling of ground-source heat pump loop systems tested in accordance with Section ~~M2105.1~~E505.0 Uniform Mechanical Code prior to inspection shall be permitted.

R109.1.3 Floodplain inspections. For construction in areas prone to flooding as established ~~by Table R301.2(1)~~on flood insurance rate map (FIRM) panels referenced on the associated FIRM Index dated September 29, 2011, as

amended, and any future revisions thereto, upon placement of the lowest floor, including basement, and prior to further vertical construction, the building official shall require submission of documentation, prepared and sealed by a registered design professional, of the elevation of the lowest floor, including basement, required in ~~Section R322~~TMC 17.30.190.

R109.1.4 Frame and masonry inspection. Inspection of framing and masonry constructions shall be made after the roof, masonry, all framing, firestopping, draftstopping and bracing are in place and after the plumbing, mechanical and electrical rough inspections are approved.

R109.1.5 Other inspections. In addition to the called inspections above, the building official may make or require any other inspections to ascertain compliance with this code and other laws enforced by the building official. Before issuing a permit, the building official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

R109.1.5.1 Fire-resistance-rated construction inspection. Where fire-resistance-rated construction is required between dwelling units or due to location on property, the building official shall require an inspection of such construction after all lathing and/or wallboard is in place, but before any plaster is applied, or before wallboard joints and fasteners are taped and finished.

R109.1.6 Final inspection. Final inspection shall be made after the permitted work is complete and prior to occupancy.

R109.1.7 Insulation inspection. Inspection of all placed insulation in walls,

floors, and ceiling assemblies in accordance with the International Energy Conservation Code, adopted at TMC Chapter 14.90, shall occur after an approved framing inspection.

Section 7. That section 14.55.180, Permit completion, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Permit completion.

Section R110, CERTIFICATE OF OCCUPANCY, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

PERMIT COMPLETION

R110.1 Use and occupancy.

(a) No building or structure shall be used or occupied until all applicable mechanical, plumbing, electrical and building “final inspections” have been completed and passed. It shall be the duty of the permit holder to request all required inspections and to complete the permit by passing the final inspection prior to occupancy or use of the building. No change in the existing occupancy classification of a building or structure or portion thereof shall be made until all required inspections and permits have been completed and approved by the building official. Completion of a permit shall not be construed as an approval of a violation of the provisions of this code or of other ordinances.

(b) Notwithstanding subsection (a) and absent a waiver pursuant to subsection (c), a final inspection shall not be completed and passed unless driveway approaches have been installed and sidewalks constructed along all adjoining rights-of-way of the subject lot or all lots or portions thereof joined to it or are the subject of a contract as

part of a benefit district created pursuant to K.S.A. 12-6a01 et seq. or Title 18 of the Topeka Municipal Code.

(c) The director of public works or designee may waive the requirement in subsection (b) if any of the following conditions applies:

(1) Plats approved prior to January 1, 2001, where more than 50% of the lots have been developed, but less than 50% of the completed homes on that block and side of the street have sidewalks in a subdivision.

(2) The sidewalk is the subject of a waiver granted in conjunction with approval of the subdivision plat.

(3) Unique circumstances exist where the public works director or designee determine that the subject sidewalk link would not be part of a viable sidewalk system in that community or conditions exist whereby construction of the sidewalk is impractical.

(4) The home is located on a corner lot or double-frontage lot and the sidewalk link along one of the lot's two frontages meets one of the waiver criteria in subsection (c).

(5) Weather conditions prevented installation of the driveway approaches or construction of the sidewalks. However, in such event, the property owner shall install driveway approaches and construct sidewalks within 90 days from the date of the final inspection.

R110.2 Change in use. Changes in the character or use of an existing structure shall not be made except as specified in ~~Sections 3406 and 3407 of the International Building Code~~Chapters 10 and 12 of the International Existing Building Code.

R110.3 Temporary occupancy. The building official is authorized to allow use and/or occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely. The building official may upon the request of the permit holder set a time period during which the temporary use and/or occupancy is valid. The conditions of temporary use and/or occupancy and specified time period shall be in writing. The permit holder is responsible for permit completion per R110.1.

R110.4 Revocation. The building official may, in writing, suspend or revoke use and/or occupancy allowed under the provisions of this code, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

Section 8. That section 14.55.210, Unlawful continuance, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Unlawful continuance~~Failure to comply.

Section R114.~~2~~4, ~~Unlawful continuance~~Failure to comply, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

It shall be unlawful for any person to continue to work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition. Failure to abide by this provision may result in penalties prescribed in TMC 1.10.070.

Section 9. That section 14.55.230, IRC Table R301.2(1), of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

IRC Table R301.2(1).

Table R301.2(1) is hereby deleted in its entirety and the following table shall be substituted therefor:

IRC TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load	Wind Design		Seismic Design Category[f]	Subject To Damage From			Winter Design Temp[e]	Ice Barrier Underlayment Required[h]	Flood Hazards[g]	Air Freezing Index[i]	Mean Annual Temp[j]
	Speed[d] (mph)	Topographic Effects[k]		Weathering[a]	Frost Line Depth[b]	Termite[c]					
20	~~90~~114	NO	~~B~~A	Severe	36"	Moderate to Heavy	4	NO	Oct 23, 1971, entry into National Flood Insurance Program. Current maps dated September 29, 2011, entitled "Flood Insurance Rate Map for Shawnee County KS"	1000	54.3

For SI: 1 pound per square foot = 0.0479 kN/m^2, 1 mile = 1.609km/h.

a Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.

b The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.

d The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on site-specific basis in accordance with Section R301.2.1.4.

e The outdoor design dry-bulb temperature shall be selected from the columns of 97 1/2-percent values for winter from Appendix D of the International Plumbing Code. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.

f The jurisdiction shall fill in this part of the table with the Seismic Design Category determined from Section R301.2.2.1.

g The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.

h In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."

i The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

j The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

k In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

Section 10. That section 14.55.240, Townhouses, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Townhouses.

~~Except for Sections R302.2.1, R302.2.2, R302.2.3 and R302.2.4,~~ Section R302.2, Townhouses, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exceptions:

1. A common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses where an automatic sprinkler system is installed in accordance with NFPA 13R or NFPA 13, if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common

wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with the currently adopted edition of the National Electrical Code. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

2. A common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with the currently adopted edition of the National Electrical Code. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

Section 11. That section 14.55.250, Structural independence, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Structural independence.

Section R302.2.~~4~~6, Structural independence, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Each individual townhouse shall be structurally independent.

Exceptions:

1. Foundations supporting exterior walls or common walls.

2. Structural roof and wall sheathing from each unit may fasten to the common wall framing.

3. Nonstructural wall and roof coverings.

4. Flashing at termination of roof covering over common wall.

5. Townhouses separated by a common 2-hour fire-resistance-rated wall, or 1-hour fire-resistance-rated wall when equipped with an automatic sprinkler system as provided in Section R302.2.

Section 12. That section 14.55.260, Two family dwellings, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Two-family dwellings.**~~

~~Except for Section R302.3.1, Section R302.3, Two-family dwellings, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~Dwelling units in two-family dwellings shall be separated from each other by wall and/or floor assemblies having not less than a 1-hour fire-resistance rating when tested in accordance with ASTM E 119 or UL 263. Fire-resistance-rated floor-ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.~~

~~Exceptions:~~

~~A fire-resistance rating of 1/2 hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.~~

Section 13. That section 14.55.270, Duct penetration, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Duct penetration.**~~

~~Section R302.5.2, Duct penetration, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved material and shall have no openings into the garage and shall be protected as required by Section R302.11(4).~~

Section 14. That section 14.55.290, Bathrooms, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Bathrooms.

Section R303.3, Bathrooms, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Bathrooms, water closet compartments and other similar rooms shall be provided with a mechanical ventilation system. The minimum ventilation rates shall be 50 cubic feet per minute (24 L/s) for intermittent ventilation or 20 cubic feet per minute (10 L/s) for continuous ventilation. ~~Ventilation air from the space shall be exhausted directly to the outside.~~ Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or circulated to another dwelling unit and shall be exhausted directly to the outdoors. Exhaust air from bathrooms, toilet rooms and kitchens shall not discharge into an attic, soffit, ridge vent, crawl space or other areas inside the building.

Section 15. That section 14.55.310, Opening location, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Opening location~~Exterior stairway illumination.

~~Section R303.4, Opening location, is hereby deleted in its entirety.~~

Section R303.8, Exterior stairway illumination, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Exterior stairways providing access to a basement from the outside grade level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway. Artificial light source location requirements for stairways shall comply with currently adopted edition to the National Electrical Code.

Section 16. That section 14.55.320, Outside opening protection, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Outside opening protection.**~~

~~Section R303.5, Outside opening protection, is hereby deleted in its entirety.~~

Section 17. That section 14.55.330, Stairway illumination, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Stairway illumination.**~~

~~Section R303.6, Stairway illumination, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~All interior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. For interior stairs the artificial light sources shall be capable of illuminating treads and landings to levels not less than 1 foot-candle (11 lux) measured at the center of treads and landings. Exterior stairways providing access to a basement from the outside grade level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway. Artificial light source location requirements for stairways shall comply with the currently adopted edition of the National Electrical Code.~~

~~Exception: An artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section.~~

Section 18. That section 14.55.340, Required glazed openings, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Required glazed openings.**~~

~~Section R303.7, Required glazed openings, including subsection, is hereby deleted in its entirety.~~

Section 19. That section 14.55.360, Emergency escape and rescue required, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~**Emergency escape and rescue required**~~**Private garage fire sprinkler design.**

~~Except for Sections R310.1.1, R310.1.2, R310.1.3 and R310.1.4, Section R310.1, Emergency escape and rescue required, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~All new basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue 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 emergency escape and rescue opening from the inside. Emergency escape and rescue~~

~~openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.~~

~~Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m2).~~

Section R309.5 Fire sprinklers, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Private garages protected by fire sprinklers where the garage wall has been designed based on Table R302.1(2), Note a. Sprinklers in garages shall be connected to an automatic sprinkler system. Garage sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a density of 0.05 gpm/ft2. Garage doors shall not be considered obstructions with respect to sprinkler placement.

Section 20. That section 14.55.370, Riser height, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Riser height.

Section R311.7.~~4~~5.1, Riser height, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

The maximum riser height shall be 7 3/4 inches (196 mm); the minimum riser height shall be not less than 4 inches (102 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

Section 21. That section 14.55.380, Continuity, of The Code of the City of

Topeka, Kansas, is hereby amended to read as follows:

Continuity.

Section R311.7.~~7.2~~8.4, Continuity, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail 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 1/2 inch (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.

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

3. Where walls are non-continuous, alternative non-continuous handrails may be approved by the building official on a case-by-case basis.

Section 22. That section 14.55.410, Carbon monoxide alarms, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Carbon monoxide alarms.**~~

~~Section R315, CARBON MONOXIDE ALARMS, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~CARBON MONOXIDE ALARMS~~

~~R315.1 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm, capable of detection and alarm, shall be installed outside of each~~

~~separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.~~

~~R315.2 Where required in existing dwellings. Where work requiring a permit occurs, or when one or more sleeping rooms are added or created in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.1.~~

~~Exception:~~

~~Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.~~

~~R315.3 Alarm requirements. Every carbon monoxide alarm shall bear the label of a nationally recognized standard testing laboratory, such as Underwriter's Laboratories, indicating that it is appropriate for its intended use. Carbon monoxide alarms shall be installed in accordance with this code and the manufacturer's installation instructions. Combination smoke and carbon monoxide alarms shall be permitted. If the alarm is a combination smoke and carbon monoxide alarm, it shall be located in accordance with the installation requirements for smoke alarms in regards to height, distance from inside corners, etc.~~

~~R315.4 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for~~

~~overcurrent protection. Where more than one hard-wired carbon monoxide alarm is required to be installed in a dwelling unit the alarms shall be interconnected so the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.~~

~~Exceptions:~~

~~1. Carbon monoxide alarms shall be permitted to be battery operated when installed in buildings without commercial power.~~

~~2. Interconnection and hard-wiring of carbon monoxide alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring and interconnection without the removal of interior finishes.~~

Section 23. That section 14.55.450, Foundations and stem walls, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Foundations and stemwalls~~Continuous footing.

~~Section R403.1.3.1, Foundations with stemwalls, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~Foundations with stem walls shall have installed a minimum of one No. 4 bar located in the top 12 inches of the wall and one No. 4 bar located 3 inches (76 mm) to 4 inches (102 mm) from the bottom of the footing. Horizontal bar spacing shall be 24 inches o.c. maximum. Vertical reinforcement shall be No. 4 bars spaced 24 inches o.c. maximum.~~

Section R403.1.2, Continuous footing in Seismic Design Categories D_0, D_1 and D_2, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Exterior walls of buildings shall be supported by continuous footings. Other footing materials or systems shall be designed in accordance with accepted engineering practice.

Section 24. That section 14.55.460, Slabs-on-ground with turned-down footings, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

~~Slabs-on-ground with turned-down footings~~Foundations and stem walls.

Section R403.1.3, Footing and stem wall reinforcing in Seismic Design Categories D_0, D_1 and D_2, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Foundations with stem walls shall have installed a minimum of one No. 4 bar located in the top 12 inches of the wall and one No. 4 bar located 3 inches (76 mm) to 4 inches (102 mm) from the bottom of the footing. Horizontal bar spacing shall be 24 inches o.c. maximum. Vertical reinforcement shall be No. 4 bars spaced 24 inches on center maximum.

R403.1.3.1, Concrete stem walls with concrete footings. Where a construction joint is created between a concrete footing and a concrete stem wall, not fewer than one No. 4 vertical bar shall be installed at not more than 2 feet (1219 mm) on center. The vertical bar shall have a standard hook and extend to the bottom of the footing and extend not less than 14 inches (357 mm)

into the stem wall. Not fewer than one No. 4 horizontal bar shall be installed within 12 inches (305 mm) of the top of the stem wall and one No. 4 horizontal bar shall be located 3 to 4 inches (76 mm to 102 mm) from the bottom of the footing. Horizontal bar spacing shall be 24 inches o.c. maximum. Vertical reinforcement shall be No. 4 bars spaced 24 inches on center maximum.

R403.1.3.2, Masonry stem walls with concrete footings. Where a masonry stem wall is supported on a concrete footing, not fewer than one No. 4 vertical bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to the bottom of the footing and shall have support and cover as specified in Section R403.1.3.5.3 and extend not less than 14 inches (357 mm) into the stem wall. Not fewer than two No. 4 horizontal bar shall be installed within 8 inches (204 mm) of the top of the wall and one No. 4 horizontal bar shall be located 3 to 4 inches (76 mm to 102 mm) from the bottom of the footing. Horizontal bar spacing shall be 48 inches o.c. maximum. Vertical reinforcement shall be No. 4 bars spaced 24 inches on center maximum. Reinforced cells and bond beams shall be solid grouted.

Section R403.1.3.~~2~~3, Slabs-on-ground with turned-down footings~~, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~.

Slabs-on-ground with turned-down footings cast monolithically shall have a minimum of one No. 4 bar at the top and the bottom of the footing. Vertical reinforcement shall be No. 4 bars spaced 24 inches o.c. maximum. Floating footings for detached garages and storage sheds shall have reinforcement

conforming to City of Topeka specifications.

Section 25. That section 14.55.470, Minimum depth, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Minimum depth.

Section R403.1.4, Minimum depth, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

All exterior footings shall be placed not less than 12 inches (305 mm) below undisturbed ground surface and at least 36 inches (~~305~~915 mm) below the final grade. Where applicable, the depth of footings shall also conform to Sections R403.1.4.1 through R403.1.4.2.

Exception: Floating footings for detached garages and storage sheds 24 feet x 24 feet and under when constructed per City of Topeka specifications.

Section 26. That section 14.55.490, Foundation elevation, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Foundation elevation.**~~

~~Section 403.1.7.3, Foundation elevation, is hereby deleted in its entirety.~~

Section 27. That section 14.55.500, Foundations on expansive soils, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Foundations on expansive soils.**~~

~~Section R403.1.8, Foundations on expansive soil, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~Foundation and floor slabs for buildings located on expansive soils shall be of engineered design.~~

~~Exception: Slab-on-ground and other foundation systems which have performed adequately in soil conditions similar to those encountered at the building site are permitted subject to the approval of the building official.~~

Section 28. That section 14.55.530, Foundation and retaining walls, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Foundation and retaining walls.

Section R404, FOUNDATION AND RETAINING WALLS, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

FOUNDATION WALLS

R404.1 Concrete foundation walls. Concrete foundation walls that support light-frame walls shall be designed and constructed in accordance with the provisions of this section.

R404.1.1 Walls eight feet in height. Foundation walls eight feet (8') or less in height shall be constructed using the following criteria:

1. Minimum width: Eight inches (8") supporting two (2) floors or less and ten inches (10") supporting three (3) floors.

2. Vertical reinforcing: Number four (#4) bars at twenty-four inches (24 in.) on center placed on the inner third (3rd) of the wall but not closer than one and one half inches (1-1/2") to the edge.

3. Horizontal reinforcing: Number four (#4) bars placed in the following manner:

First (1st) bar, three feet (3') above footing.

Second (2nd) bar, five feet (5') above footing.

Third (3rd) and fourth (4th) bars in the upper twelve inches (12") of the wall at least two inches (2") apart with three inches (3") of coverage.

R404.1.2 Walls nine feet in height. Foundation walls nine feet (9') in height shall be constructed per City of Topeka design specifications for nine foot walls. Two approved designs are on file at this time. Approved engineered sealed designs are also allowed.

R404.1.3 Walls exceeding nine feet in height. Engineered sealed designs are required for all foundation walls exceeding nine feet (9') in height.

R404.1.4 Consolidation of Concrete. Consolidation of concrete. Concrete shall be consolidated by suitable means during placement and shall be worked around embedded items and reinforcement and into corners of forms. Where stay-in-place forms are used, concrete shall be consolidated by internal vibration.

R404.1.5 Form Materials and form ties. Form materials and form ties. Forms shall be made of wood, steel, aluminum, plastic, a composite of cement and foam insulation, a composite of cement and wood chips, or other approved material suitable for supporting and containing concrete. Forms shall provide sufficient strength to contain concrete during the concrete placement operation.

Form ties shall be steel, solid plastic, foam plastic, a composite of cement and wood chips, a composite of cement and foam plastic, or other suitable material capable of resisting the forces created by fluid pressure of fresh concrete.

404.1.5.1 Stay-in-place forms. Stay-in-place concrete forms shall comply with this section.

1. Surface burning characteristics. The flame-spread index and

smoke-developed index of forming material, other than foam plastic, left exposed on the interior shall comply with Section 302. The surface burning characteristics of foam plastic used in insulating concrete forms shall comply with Section 316.3.

2. Interior covering. Stay-in-place forms constructed of rigid foam plastic shall be protected on the interior of the building as required by Section 316. Where gypsum board is used to protect the foam plastic, it shall be installed with a mechanical fastening system. Use of adhesives in addition to mechanical fasteners is permitted.

3. Exterior wall covering. Stay-in-place forms constructed of rigid foam plastics shall be protected from sunlight and physical damage by the application of an approved exterior wall covering complying with this code. Exterior surfaces of other stay-in-place forming systems shall be protected in accordance with this code.

4. Termite protection. In areas where the probability of termite infestation is “very heavy” as indicated by Table 301.2(1) or Figure 301.2(7), foam plastic insulation shall be permitted below grade on foundation walls in accordance with Section 318.4.

5. Flat ICF wall system forms shall conform to ASTM E2634.

R404.2 General requirements. The following requirements shall be met for all foundation walls:

1. Reinforcing bars to be bent continuous around corners.

2. Lapping of bars shall be a minimum of forty (40) bar diameters and wire tied.

3. Horizontal bars shall be wired in place prior to pouring of concrete.

4. Where unstable soil conditions exist an engineer shall design the footing and foundation based upon a soil report.

5. Concrete and masonry foundation walls shall extend above the finish grade adjacent to the foundation at all points a minimum of four inches (4") where masonry veneer is used and a minimum of eight inches (8") elsewhere.

R404.3 Wood sill plates. Wood sill plates shall be a minimum of 2-inch by 4-inch (51 mm by 102 mm) nominal lumber. Sill plate anchorage shall be in accordance with Sections R403.1.6 and R602.11.

Section 29. That section 14.55.540, Decks, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Decks.**~~

~~Except for Section R502.2.2.1, Section R502.2.2, Decks, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable. A structural ledger is required and shall be attached to the structure per R502.2.2.1 with verification by inspection. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting. For decks with cantilevered framing members, connections to exterior walls or other framing members, shall be designed and constructed to resist uplift resulting from the full live load specified in Table R301.5 acting on the cantilevered portion of the~~

~~deck.~~

Section 30. That section 14.55.550, Lateral restraint at supports, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Lateral restraint at supports.**~~

~~Except for Section R502.7.1, Section R502.7, Lateral restraint at supports, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~Joists shall be supported laterally at the ends by full-depth solid blocking not less than 2 inches (51 mm) nominal in thickness; or by attachment to a full-depth header, band or rim joist, or to an adjoining stud or shall be otherwise provided with lateral support to prevent rotation.~~

~~Exceptions:~~

~~1. Trusses, structural composite lumber, structural glued-laminated members and I-joists shall be supported laterally as required by the manufacturer's recommendations.~~

~~2. In Seismic Design Categories D0, D1 and D2, lateral restraint shall also be provided at each intermediate support.~~

~~3. Solid blocking may be omitted over interior supports when supporting only one floor level and the roof.~~

Section 31. That section 14.55.560, Truss design drawings, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Truss design drawings.**~~

~~Section R502.11.4, Truss design drawings, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~Truss design drawings shall be prepared in compliance with Section R502.11.1.~~

~~The building official may require truss design drawings to be submitted and approved prior to installation. Truss design drawings shall be provided with the shipment of trusses delivered to the job site and shall be made available to the building official at the job site for reference during inspections. Truss design drawings shall include, at a minimum, the information specified below:~~

~~1. Slope or depth, span and spacing.~~

~~2. Location of all joints.~~

~~3. Required bearing widths.~~

~~4. Design loads as applicable:~~

~~4.1. Top chord live load.~~

~~4.2. Top chord dead load.~~

~~4.3. Bottom chord live load.~~

~~4.4. Bottom chord dead load.~~

~~4.5. Concentrated loads and their points of application.~~

~~4.6. Controlling wind and earthquake loads.~~

~~5. Adjustments to lumber and joint connector design values for conditions of use.~~

~~6. Each reaction force and direction.~~

~~7. Joint connector type and description, e.g., size, thickness or gauge, and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface.~~

~~8. Lumber size, species and grade for each member.~~

~~9. Connection requirements for:~~

~~9.1. Truss-to-girder-truss;~~

~~9.2. Truss ply-to-ply; and~~

~~9.3. Field splices.~~

~~10. Calculated deflection ratio and/or maximum description for live and total load.~~

~~11. Maximum axial compression forces in the truss members to enable the building designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss drawing or on supplemental documents.~~

~~12. Required permanent truss member bracing location.~~

Section 32. That section 14.55.570, Vapor retarder, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Vapor retarder.**~~

~~Section R506.2.3, Vapor retarder, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~A vapor retarder is not mandatory, but when provided under concrete floor slabs, a 6 mil (0.006 inch; 152 mm) polyethylene or approved vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists.~~

Section 33. That section 14.55.590, Attic access, of The Code of the City of Topeka, Kansas, is hereby amended to read as follows:

Attic access.

Section R807.1, Attic access, is hereby deleted in its entirety and the following provisions shall be substituted therefor:

Buildings with combustible ceiling or roof construction shall have an attic access

opening to attic areas that exceed 30 square feet (2.8 m2) and have a vertical height of 30 inches (762 mm) or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall not be less than 22 inches by 24 inches (559 mm by 610 mm) and shall be located in a readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high. When the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See ~~Section M1305.1.3~~Uniform Mechanical Code for access requirements where mechanical equipment is located in attics.

Section 34. That section 14.55.610, Drip edge, of The Code of the City of Topeka, Kansas, is hereby repealed.

~~**Drip edge.**~~

~~Section R905.2.8.5, Drip edge, is hereby created by the addition of the following provisions:~~

~~Shingle roofs shall be provided with drip edge flashing at eaves and rakes. Eave and rake drip edges shall extend 3/8 inch minimum outside the fascia or a distance specified by the shingle manufacturer's installation instructions, whichever is greater. Drip edge flashing at eaves shall extend back on the roof a minimum of 2 inches and shall be installed under the underlayment. Drip edge flashing at rakes shall extend back on the roof a minimum of 1 1/2 inches and shall be installed over the underlayment. Drip edge flashing shall be mechanically fastened a maximum of 12 inches o.c.~~

Section 35. That section 14.55.640, Appendix F, of The Code of the City of

~~Topeka, Kansas, is hereby amended to read as follows:~~

Appendix ~~A~~F.

~~Appendix F, Radon Control Methods, is hereby deleted in its entirety and the following provisions shall be substituted therefor:~~

~~NEW CONSTRUCTION RADON CONTROL METHODS FOR THE CITY OF TOPEKA~~

~~SECTION AF101. SCOPE~~

~~AF101.1 General. This appendix contains requirements for new construction in jurisdictions where radon-resistant construction is required.~~

~~Inclusion of this appendix by jurisdictions shall be determined through the use of locally available data or determination of Zone 1 designation in Figure AF101.~~

~~SECTION AF102. DEFINITIONS~~

~~AF102.1 General. For the purpose of these requirements, the terms used shall be defined as follows:~~

~~SUB-SLAB DEPRESSURIZATION SYSTEM (Passive). A system designated to achieve lower sub-slab air pressure relative to indoor air pressure by use of a vent pipe routed through the conditioned space of a building and connecting the sub-slab area with outdoor air, thereby relying on the convective flow of air upward in the vent to draw air from beneath the slab.~~

~~SUB-SLAB DEPRESSURIZATION SYSTEM (Active). A system designed to achieve lower sub-slab air pressure relative to indoor air pressure by use of a fan-powered vent drawing air from beneath the slab.~~

~~DRAIN TILE LOOP. A continuous length of drain tile or perforated pipe extending around all or part of the internal or external perimeter of a basement or crawl space footing.~~

~~RADON GAS. A naturally occurring, chemically inert, radioactive gas that is not detectable by human senses. As a gas, it can move readily through particles of soil and rock and can accumulate under the slabs and foundations of homes where it can easily enter into living space through construction cracks and openings.~~

~~SOIL-GAS-RETARDER. A continuous membrane of 6-mil (0.15 mm) polyethylene or other equivalent material used to retard the flow of soil gases into a building.~~

~~SUB-MEMBRANE DEPRESSURIZATION SYSTEM. A system designed to achieve lower-sub-membrane air pressure relative to crawl space air pressure by use of a vent drawing air from beneath the soil-gas-retarder membrane.~~

~~SECTION AF103. REQUIREMENTS~~

~~AF103.1 General. The following construction techniques are intended to resist radon entry and prepare the building for post-construction radon mitigation, if necessary (see Figure AF102). These techniques are required in areas where designated by the jurisdiction.~~

~~AF103.2 Subfloor preparation. A layer of gas-permeable material shall be placed under all concrete slabs and other floor systems that directly contact the ground and are within the walls of the living spaces of the building, to facilitate future installation of a sub-slab depressurization system, if needed. The gas-permeable layer shall consist of one of the following:~~

~~1. A uniform layer of clean aggregate, a minimum of 4 inches (102 mm) thick. The aggregate shall consist of material that will pass through a 2-inch (51 mm) sieve and be retained by a 1/4-inch (6.4 mm) sieve.~~

~~2. A uniform layer of sand (native or fill), a minimum of 4 inches (102 mm) thick, overlain by a layer or strips of geotextile drainage matting designed to allow the lateral flow of soil gases.~~

~~3. A uniform layer of sand or native fill a minimum of 4 inches (102 mm) thick, with a minimum 2 inch (51 mm) diameter interior perimeter drain tile loop laid approximately 12 inches inside the internal perimeter of the foundation footing.~~

~~4. Other materials, systems or floor designs with demonstrated capability to permit depressurization across the entire sub-floor area.~~

~~AF103.3 Soil-gas-retarder. It is recommended, but not required, that a minimum 6-mil (0.15 mm) [or 3-mil (0.075 mm) cross-laminated] polyethylene or equivalent flexible sheeting material shall be placed on top of the gas-permeable layer prior to casting the slab or placing the floor assembly to serve as a soil-gas-retarder by bridging any cracks that develop in the slab or floor assembly and to prevent concrete from entering the void spaces in the aggregate base material. If utilized, the sheeting shall cover the entire floor area with separate sections of sheeting lapped at least 12 inches (305 mm). The sheeting shall fit closely around the pipe, wire or other penetrations of the material. All punctures or tears in the material shall be sealed or covered with additional sheeting.~~

~~AF103.4 ENTRY ROUTES. It is recommended, but not required, that potential radon entry routes be closed in accordance with Sections AF103.4.1 through~~

~~AF103.4.10. Notwithstanding the foregoing, the covering of sump pits as described in Section AF103.4.4 is required.~~

~~AF103.4.1 Floor openings. Openings around bathtubs, showers, water closets, pipes, wires or other objects that penetrate basement or slab on grade concrete slabs shall be filled with polyurethane caulk or equivalent sealant applied in accordance with the manufacturer's recommendations.~~

~~AF103.4.2 Concrete joints. All control joints, isolation joints, construction joints and any other joints in concrete slabs or between slabs or foundation walls shall be sealed with a caulk or sealant. Gaps and joints shall be cleared of loose material and filled with polyurethane caulk or other elastomeric sealant applied in accordance with the manufacturer's recommendations.~~

~~AF103.4.3 Condensate drains. Condensate drains shall be trapped or routed through nonperforated pipe to daylight.~~

~~AF103.4.4 Sumps. Sump pits open to soil or serving as the termination point for sub-slab or exterior drain tile loops shall be covered with a gasketed or otherwise sealed lid. Sumps used as the suction point in a sub-slab depressurization system shall have a lid designed to accommodate the vent pipe. Sumps used as a floor drain shall have a lid equipped with a trapped inlet.~~

~~AF103.4.5 Foundation walls. Hollow block masonry foundation walls shall be constructed with either a continuous course of solid masonry, one course of masonry grouted solid, or a solid concrete beam at or above finished ground surface to prevent passage of air from the interior of the wall into the living space. Where a brick veneer or other masonry ledge is installed, the course immediately~~

~~below that ledge shall be sealed. Joints, cracks or other openings around all penetrations of both exterior and interior surfaces of masonry block or wood foundation walls below the ground surface shall be filled with polyurethane caulk or equivalent sealant. Penetrations of concrete walls shall be filled.~~

~~AF103.4.6 Dampproofing. The exterior surfaces of portions of concrete and masonry block walls below the ground surface shall be dampproofed in accordance with Section R406 of this code.~~

~~AF103.4.7 Air-handling units. Air-handling units in crawl spaces shall be sealed to prevent air from being drawn into the unit.~~

~~Exception: Units with gasketed seams or units that are otherwise sealed by the manufacturer to prevent leakage.~~

~~AF103.4.8 Ducts. Ductwork passing through a crawl space or beneath a slab shall be of seamless material unless the air-handling system is designed to maintain continuous positive pressure within such ducting. Joints in such ductwork shall be sealed to prevent air leakage.~~

~~AF103.4.9 Crawl space floors. Openings around all penetrations through floors above crawl spaces shall be caulked or otherwise filled to prevent air leakage.~~

~~AF103.4.10 Crawl space access. Access doors and other openings or penetrations between basements and adjoining crawl spaces shall be closed, gasketed or otherwise filled to prevent air leakage.~~

~~AF103.5 Passive sub-membrane depressurization system. In buildings with crawl space foundations, the following components of a passive sub-membrane depressurization system shall be installed during construction.~~

~~Exception: Buildings in which an approved mechanical crawl space ventilation system or other equivalent system is installed.~~

~~AF103.5.1 Ventilation. Crawl spaces shall be provided with vents to the exterior of the building. The minimum net area of ventilation openings shall comply with Section R408.1 of this code.~~

~~AF103.5.2 Soil-gas-retarder. The soil in crawl spaces shall be covered with a continuous layer of minimum 6-mil (0.15 mm) polyethylene soil-gas-retarder. The ground cover shall be lapped a minimum of 12 inches (305 mm) at joints and shall extend to all foundation walls enclosing the crawl space area. It is recommended that acoustical sealant, butyl rubber, or butyl acrylic caulks be used to provide adhesion to the polyethylene sheeting. Polyurethane caulk will also provide some adhesion to the polyethylene sheeting. Seams between adjoining sheets of sheeting are usually sealed by applying a continuous bead of sealant between the sheeting in the 12-inch strip where the sheets overlap. Plastic should be secured to the wall at 6 to 12 inches above the crawlspace floor with a 1/2 inch wide bead of acoustical sealant or butyl caulk along the wall. For a more durable connection mechanical fasteners, such as strapping, should be considered, to hold the plastic to the wall.~~

~~AF103.5.3 Vent pipe. A plumbing tee (2 inch minimum diameter) or other approved connection shall be inserted horizontally beneath the sheeting and connected to a 3- or 4-inch diameter (76 mm or 102 mm) fitting with a vertical vent pipe installed through the sheeting. The vent pipe shall be extended up through the building floors, terminate at least 12 inches (305 mm) above the roof in a location at least 10 feet (3048 mm) away from any window or other opening into the conditioned spaces~~

~~of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) away from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) from any window or other adjoining or adjacent buildings.~~

~~AF103.6 Passive sub-slab depressurization system. In basement or slab-on-grade buildings, the following components of a passive sub-slab depressurization system shall be installed during construction.~~

~~AF103.6.1 Vent pipe. A minimum 3-inch-diameter (76 mm), ABS, PVC or equivalent gas-tight pipe shall be embedded vertically into a "T" fitting (2 inch minimum diameter) or equivalent method to be used to ensure that the pipe opening remains within the sub-slab permeable material. Alternatively, the 3-inch (76 mm) pipe shall be inserted directly into an interior perimeter drain tile loop or through a sealed sump cover where the sump is exposed to the sub-slab aggregate or connected to it through a drainage system.~~

~~The pipe shall be extended up through the building floors, terminate at least 12 inches (305 mm) above the surface of the roof in a location at least 10 feet (3048 mm) away from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3048 mm) from any window or other opening in adjoining or adjacent buildings.~~

~~AF103.6.2 Multiple vent pipes. In buildings where interior footings or other barriers separate the sub-slab aggregate or other gas-permeable material, each area shall be fitted with an individual vent pipe. Vent pipes shall connect to a single vent that~~

~~terminates above the roof or each individual vent pipe shall terminate separately above the roof.~~

~~AF103.7 Vent pipe drainage. All components of the radon vent pipe system shall be installed to provide positive drainage to the ground beneath the slab or soil-gas-retarder.~~

~~AF103.8 Vent pipe accessibility. Radon vent pipes shall be accessible for future fan installation through an attic or other area outside the habitable space.~~

~~Exception: The radon vent pipe need not be accessible in an attic space where an approved roof-top electrical supply is provided for future use.~~

~~AF103.9 Vent pipe identification. All exposed and visible interior radon vent pipes shall be identified with at least one label on each floor and in accessible attics. The label shall read: "Radon Reduction System."~~

~~AF103.10 Combination foundations. Combination basement/crawl space or slab-on-grade/crawl space foundations shall have separate radon vent pipes installed in each type of roof or shall be connected to a single vent that terminates above the roof.~~

~~AF103.11 Building depressurization. Joints in air ducts and plenums in unconditioned spaces shall meet the requirements of Section M1601. Thermal envelope air infiltration requirements shall comply with the energy conservation provisions in Chapter 11. Firestopping shall meet the requirements contained in Section R602.8.~~

~~AF103.12 Power source. To provide for future installation of an active sub-membrane or sub-slab depressurization system, an electrical circuit terminated in~~

~~an approved box shall be installed during construction in the attic or other anticipated locations of vent pipe fans.~~

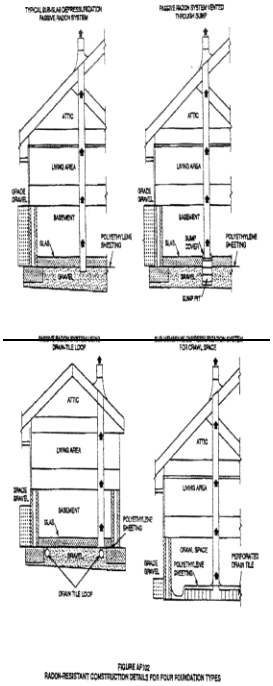

FIGURE AF102
RADON-RESISTANT CONSTRUCTION DETAILS FOR FOUR FOUNDATION TYPES

AF103.4.8, Ducts, is deleted in its entirety and the following provisions shall apply:

Ductwork passing through or beneath a slab shall be of seamless material unless the air-handling system is designed to maintain continuous positive pressure within such ducting Joints in such ductwork shall be sea led to prevent air leakage.

Ductwork located in crawl spaces shall have seams and joints sealed by closure systems in accordance with Uniform Mechanical Code.

AF103.11, Building depressurization, is deleted in its entirety and the following provisions shall apply:

Joints in air ducts and plenums in unconditioned spaces shall meet the

requirements of Uniform Mechanical Code. Thermal envelope air infiltration requirements shall comply with the energy conservation provisions in Chapter 11. Fireblocking shall meet the requirements contained in Section R302 .11.

Section 36. That original § 14.55.010, § 14.55.020, § 14.55.030, § 14.55.050, § 14.55.120, § 14.55.170, § 14.55.180, § 14.55.210, § 14.55.230, ,§ 14.55.240, § 14.55.250, § 14.55.290, § 14.55.310, § 14.55.360, § 14.55.370, § 14.55.380, § 14.55.450, § 14.55.460, § 14.55.470, § 14.55.530, § 14.55.590 and § 14.55.640 of The Code of the City of Topeka, Kansas, are hereby specifically repealed.

Section 37. This ordinance shall take effect ninety days after its publication in the official City newspaper.

Section 38. This ordinance shall supersede all ordinances, resolutions or rules, or portions thereof, which are in conflict with the provisions of this ordinance.

Section 39. Should any section, clause or phrase of this ordinance be declared invalid by a court of competent jurisdiction, the same shall not affect the validity of this ordinance as a whole, or any part thereof, other than the part so declared to be invalid.

PASSED AND APPROVED by the Governing Body on December 5, 2023.

CITY OF TOPEKA, KANSAS

_____

Michael A. Padilla, Mayor

ATTEST:

_____

Brenda Younger, City Clerk