ORDINANCE NO. 3746

An ordinance amending Chapter 6, Building and Building Regulations, Article III.5 International Residential Code (IRC); Section 6-36 Adopted; conflict with other regulations; Section 6-37 Amendments; Article IV, Electrical Code; Section 6-66, Adoption of National Code; amendments; repealing all ordinances to the contrary and declaring an emergency.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF BROKEN ARROW:

SECTION I. That Chapter 6, Building and Building Regulations, Article III.5 International Residential Code (IRC), Section 6-36 Adopted; conflict with other regulations, is hereby amended to read as follows:

(a) That a certain document, one copy of which is on file in the department of community development, being marked and designated as the 2018 International Residential Code as adopted and amended by the Oklahoma Uniform Building Code Commission, including Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix G, Appendix H, Appendix I, Appendix J, Appendix K, Appendix M, Appendix N, Appendix O, Appendix P, Appendix Q, Appendix R and Appendix S are hereby adopted as the One- and Two-Family Residential Dwelling Code of the city to the same extent as if set out herein at length, with the amendments prescribed in section 6-37.

(b) In the event of any conflict between any provision of the dwelling code adopted by this section and any other provisions of this Code, the latter provision shall control. In the event of any conflict between any provision of the dwelling code adopted by this section and any other building code adopted by reference or other fire or life safety codes adopted by reference within this Code, the latter provision shall control.

SECTION II. That Chapter 6, Building and Building Regulations, Article III.5 International Residential Code (IRC), Section 6-37 Amendments, is hereby amended to read as follows:

Sec. 6-37. Amendments.

The International Residential Code adopted in section 6-36 is hereby amended as set forth in the following paragraphs:

(a) *Subsection R101.1 Title.* Is amended by inserting "City of Broken Arrow, Oklahoma" in lieu of the phrase, "[name of jurisdiction]".

(b) *Subsection R105.2 Work exempt from permit*, is amended to state: Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

(1) Building:

a. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area is not greater than 200 square feet.
b. Fences not over 7 feet high except where located along an arterial street, collector street or highway.
c. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.
d. Water tanks supported directly on grade if the capacity is not greater than 5,000 gallons (18 925L) and the ratio of height to diameter or width is not greater than 2:1.
e. Sidewalks and driveways.
f. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
g. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
h. Swings and other playground equipment.
i. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches from the exterior wall and do not require additional support.
j. Decks not exceeding 200 square feet (18.58 m2) in area, that are not more than 30 inches (762 mm) above grade at any point, are not attached to a dwelling do not serve the exit door required by Section R311.4.

(2) Electrical:
a. Listed cord-and-plug connected temporary decorative lighting.
b. Reinstallation of attachment plug receptacles but not the outlets therefor.
c. Replacement of branch circuit overcurrent devices of the required capacity in the same location.
d. Electrical wiring, devices, appliances, apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.
e. Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

(3) Gas:
a. Portable heating, cooking or clothes drying appliances.
b. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
c. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

(4) Mechanical:
a. Portable heating appliance.
b. Portable ventilation equipment.
c. Portable cooling unit.
d. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.

e. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
f. Portable evaporative cooler.
g. Self-contained refrigeration system containing 10 pounds or less of refrigerant and actuated by motors of 1 horsepower or less.
h. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

(5) Plumbing:

a. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.
b. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

(b) Subsection R108.2 is amended by adding the following after the last sentence, "Permit fees shall be as set forth in the Manual of Fees adopted by the Broken Arrow City Council."

(c) *Section R109 Inspections* shall be amended by adding the following subsections:

(1) *R109.1.1.1 Survey submittal inspection.* The Chief Building Official may require a survey submittal when a structure foundation (edge of ditch) is found to be less than six inches (6") from any easements, street rights-of-way or required setback at the time of the foundation inspection. The submitted survey shall be prepared and signed by a registered professional engineer or land surveyor, registered in the State of Oklahoma, containing the location of the foundation, easements, street rights-of-way, required setbacks and property lines. The survey shall be submitted to the City of Broken Arrow for review and approval.

(2) *R109.1.1.2 Post tension cable and/or steel inspection.* Inspection of the post tension cables and/or steel shall be made after the backfill has been properly placed over any plumbing piping, mechanical ducts or electrical conduit that is installed under the slab.

(d) *Subsection R112.1 General,* is amended to state: All persons shall have the right to appeal the Building Official's decision to the City Council.

(e) *Subsection R113.4 Violation penalties* is amended to state: Any person, firm or corporation violating any of the provisions of this Code shall be guilty of a Class B offense. It shall be deemed a separate offense for each day or a portion thereof during which any violation of any of the provisions of this Code is committed, continued or permitted.

(f) *Table R301.2(1)* contains two tables entitled *Climatic and Geographic Design Criteria and Manual J Design Criteria,* these tables are amended to read as follows:

Table entitled Climatic and Geographic Design Criteria;

Ground Snow Load = 10 lbs. per square foot

Wind Design, Speed = 115

Wind Design, Topographic effects = No

Wind Design, Special wind region = No

Wind Design, Wind-borne debris zone = No

Seismic design category B

Subject to Damage from, Weathering = Moderate

Subject to Damage from, Frost line depth = Eighteen inches (18")

Subject to Damage from, Termite = Moderate to Heavy

Winter Design Temp = Thirteen Degrees Fahrenheit

Ice Barrier Underlayment Required = No

Air Freezing Index = One Thousand Five Hundred (1,500) or Less

Mean Annual Temp = Sixty and Three Tenths Degrees Fahrenheit

Table entitled Manual J Design Criteria;

Elevation = 676 ft.

Latitude = 36° North

Winter Heating = 17°

Summer cooling = 97°

Altitude correction factor = .96

Indoor design temperature = 75°

Design temperature cooling = 75°

Heating temperature difference = 53°

Cooling temperature difference = 22°

Wind velocity heating = 12 mph

Wind velocity cooling = 8 mph

Coincident wet bulb = 76

Daily range = Medium (M)

Winter humidity = 66%

Summer humidity = 66%

(g) Section R302 Fire-Resistant construction shall be amended by adding the following subsections:

(1) R302.1.1 Walls separating single family dwellings. Walls located on the property line separating two single family dwellings not classified as townhouses, shall be constructed in accordance with section R302.1.1.1 or R302.1.1.2.

(2) R302.1.1.1 Double walls. Each single family dwelling shall be separated by two 1-hour fire-resistance-rated wall assemblies tested in accordance with ASTM E119, UL 263 or Section 703.3 of the International Building Code. The walls shall be rated for fire exposure from both and shall extend to and be tight against exterior wall and shall extend from the foundation to the underside of the roof decking or sheathing. The roof decking or sheathing shall be of noncombustible materials or approved fire-retardant-treated wood for a distance of four feet (4') (1,219 mm) on each side of the fire rated wall assemblies, or one (1) layer of five-eighths inch (5/8") (15.9 mm) Type X gypsum board shall installed directly beneath the roof decking or sheathing for a distance of four feet (4') (1,219 mm) on each side of the fire rated wall assemblies. Any openings or penetrations in the roof shall not be located within 4 feet (1219 mm) of the fire rated wall assemblies.

(3) R302.1.1.2. Common Walls. Common walls separating two single family dwellings shall have a fire-resistance rating of not less than a two-hour fire-resistance rating when tested in accordance with ASTM E 119, UL 263 or Section 703.3 of the International Building Code. The common wall shared by the two single family dwellings shall be constructed without 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 wall and shall extend from the foundation to the underside of the roof decking or sheathing. The roof decking or sheathing shall be of noncombustible materials or approved fire-retardant-treated wood for a distance of four feet (4') (1,219 mm) on each side of the fire rated wall assembly, or two (2) layers of five-eighths inch (5/8") (15.9 mm) Type X gypsum board shall be installed directly beneath the roof decking or sheathing for a distance of four feet (4') (1,219 mm) on each side of the fire rated wall assembly. Any openings or penetrations in the roof shall not be located within 4 feet (1219 mm) of the fire rated wall assembly.

Electrical installations shall be in accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

Exception: A fire resistance rating of one (1) hour shall be permitted where each single family dwelling is equipped throughout with an automatic sprinkler system designed and installed in accordance with Section P2904 or NFPA 13D.

(h) *Subsection R302.3 Two-family dwellings* is amended to state: Dwelling units in two-family dwellings shall be separated from each other by a wall and/or ceiling and floor assemblies of not less than two-hour fire-resistance rating when tested in accordance with ASTM E 119, UL 263 or Section 703.3 of the International Building Code. Fire-resistance rated floors, ceilings 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. Roof decking or sheathing shall be of noncombustible materials or approved fire-retardant-treated wood for a distance of four feet (4') (1,219 mm) on each side of the fire rated wall assembly, or two (2) layers of five-eighths inch (5/8") (15.9 mm) Type X gypsum board shall be installed directly beneath the roof decking or sheathing for a distance of four feet (4') (1,219 mm) on each side of the fire rated wall assembly. Any openings or penetrations in the roof shall not be located within 4 feet (1219 mm) of the fire rated wall assembly. (1) *Exception:* A fire resistance rating of one (1) hour shall be permitted in buildings equipped throughout with an automatic sprinkler system designed and installed in accordance with Section P2904 or NFPA 13D.

(i) *Section R403.1 General*, is amended to read as follows: R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, crushed stone footings, wood foundations, or other approved structural system that shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined by the character of the soil. Footings shall be supported on undisturbed natural soils or engineered fill. Concrete footings shall be designed and constructed in accordance with the provisions of Section R403 or in accordance with ACI 332. Concrete footings shall meet the following requirements

1. Concrete footings shall have a minimum of two (2) No. 4 horizontal bars located within 3 to 4 inches (76 mm to 102 mm) of the top of the footing and two (2) No. 4 horizontal bar shall be located 3 to 4 inches (76 mm to 102 mm) from the bottom of the footing.
2. All construction joints created between concrete footings and concrete foundation walls (stem walls) or slabs-on-ground with turned-down footings, shall be tied together with number four (4) or larger vertical dowels installed at not more than 4 feet (1,219 mm) on center and at every corner. The vertical dowels shall have a minimum embedment of 12 inches (304 mm) into each footing and concrete foundation walls (stem walls) or slabs-on-ground with turned-down footings.

(j) *Subsection R404.1.6 Height above finished grade,* is amended to state: Concrete and masonry foundation walls and slabs-on-ground with turned-down footings, shall extend above the existing grade adjacent to the foundation at all points a minimum of twelve inches (12") and shall extend above the finished grade adjacent to the foundation at all points not less than 4 inches (102 mm) where masonry veneer is used and not less than 6 inches (152 mm) elsewhere.

(k) *Subsection R807.1 Attic access,* is amended to state: Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed thirty (30)

square feet and have a vertical height of thirty inches (30") 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 twenty-two inches (22") by thirty inches (30") when located in a wall, the opening shall be a minimum of twenty-two inches (22") wide by thirty inches (30") high. When the access is located in the ceiling, minimum unobstructed headroom in the attic space shall be thirty inches (30") at some point above the access measured vertically from the bottom of ceiling framing members. Where mechanical equipment is located in attics; the size of the rough framed opening shall comply with Section M1305.1.3. At least one attic access shall be accessible by a pull down ladder located in the hallway or other readily accessible location or through a side-hinged door with a minimum clear height of seventy-eight inches (78").

(l) *Section G2415* shall be amended by adding the following subsection:

(1) *Subsection G2415.2.1* shall be added to state: CSST installation requirements. CSST shall comply with the following installation requirements:

a. CSST shall not be located within the space between roof rafters unless protected from penetration in accordance with section G2415.7.

b. CSST shall not be allowed on the roof deck side of insulation installed between rafters.

c. CSST shall not enter the attic by passing through the top plate of an exterior wall.

d. CSST shall be installed with approved change in direction fittings per the manufactures instructions.

e. CSST shall not be installed by lying on the top side of ceiling Joist.

f. CSST installed in the attic shall be allowed only where it can be supported by manufactures recommended supports attaching it to the roof rafters.

g. CSST manifolds and regulators shall be installed within 36 inches of the attic access for service. The manifold and regulator installation shall be a minimum of 36 inches above a service platform meeting the requirements of section M1305.1.3. A light for service shall be provided in accordance with section M1305.1.3.1.

h. CSST shall be installed with a minimum of 6 inches' separation from HVAC ductwork, Electrical wiring, Communication wiring, Metal electrical fixture boxes and their supports, or any other material that may create a path to ground.

i. A minimum of 6 inches shall be maintained between the CSST and house wiring located within the same wall cavity.

j. CSST shall be bonded in accordance with section G2411.

k. CSST with damaged outer covering shall be replaced.

l. When a gas system containing CSST is repaired or when equipment supplied by such system is replaced the system shall be bonded in accordance with section G2411.

(m) *Subsection G2415.12 Minimum burial depth,* is amended to state: Underground piping systems shall be installed a minimum depth of eighteen inches (18") below grade, except as provided for in Section G2415.12.1.

(n) *Subsection G2420.5.1 Located within same room,* is amended to state: The shutoff valve shall be located in the same room as the appliance. The shutoff valve shall be within 6 feet of the appliance, and shall be installed upstream of the union, connector or quick disconnect device it serves. Such shutoff valves shall be provided with access; such access shall not be located within the firebox of a fireplace. Shutoff valves serving movable appliances, such as cooking appliances and clothes dryers, shall be considered to be provided with access where installed behind such appliances. Appliance shutoff valves located in the firebox of a fireplace shall be installed in accordance with the appliance manufacturer's instructions and shall have an additional appliance shutoff valve located outside of the firebox within 6 feet of the appliance.

(o) *Section P2602 Individual Water Supply and Sewage Disposal* shall be amended by adding the following subsection:

(1) *Subsection P2602.1.1 Public sewer.* Public sewer shall be considered available to a building when the building is located within three hundred feet (300') of the public sewer.

(p) *Section P2603 Structural and Piping Protection* shall be amended by adding the following subsection:

(1) *Subsection 2603.2.2. Piping in other locations.* Where piping is located within a framing member and is less than 1¼ inches (38 mm) from the framing member face to which wall, ceiling or floor membranes will be attached, the piping shall be protected by shield plates that cover the width and length of the piping. Where piping is located outside of a framing member and is located less than 1¼ inches (38 mm) from the nearest edge of the face of the framing member to which the membrane will be attached, the piping shall be protected by shield plates that cover the width and length of the piping. Such shield plates shall have a thickness of not less than 0.0575 inch (1.463 mm) (No. 16 Gage).

(q) *Subsection P2603.5.1 Sewer depth,* is amended to state: Building sewers that connect to private sewage disposal systems shall be a minimum of eighteen inches (18") below finished grade at the point of septic tank connection unless otherwise approved. Building sewers that connect to a public sewer shall be a minimum of eighteen inches (18") below finished grade.

(r) *Subsection P2902.5.3 Lawn irrigation systems,* is amended to state: The potable water supply to lawn irrigation systems shall be protected against backflow by a pressure-type vacuum breaker assembly or a reduced pressure principle backflow prevention assembly.

Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly.

(s) *Section P2906 Materials, Joints and Connections* shall be amended as follows:

(1) *Subsection Table P2906.4* shall be amended by deleting "copper alloy tubing (type M)"

(2) *Subsection P2906.5 Water-distribution pipe,* shall be amended by adding the following subsection:

(a) *Subsection P2906.5.1 Inaccessible water distribution piping.* Except when making repairs to water distribution piping within existing structures, inaccessible water distribution piping installed under concrete slabs shall be installed with no joints under the slab. Any material subject to corrosion shall be protected when used in corrosive soils.

(t) *Subsection P3002.2 Building sewer,* is amended to state: Building sewer pipe shall conform to one of the standards listed in Table P3002.2. When ABS or PVC pipe less than six inches (6") in diameter is used it shall be schedule 40. When PVC pipe eight inches (8") or larger is used it may be schedule 35. Lines less than eight inches (8") in diameter shall not exceed three hundred feet (300') in length. Forced main sewer piping shall conform to one of the standards for ABS plastic pipe, copper or copper-alloy tubing, PVC plastic pipe or pressure-rated pipe indicated in Table P3002.2.

(u) *Subsection P3005.2.2 Building sewers*, is amended to state: Building sewers smaller than eight inches (8″) shall have cleanouts located at intervals of not more than one hundred feet (100′). Building sewers eight inches (8″) and larger shall have a manhole located not more than two hundred feet (200′) from the junction of the building drain and building sewer and at intervals of not more than three hundred feet (300′). The interval length shall be measured from the cleanout or manhole opening, along the developed length of the piping to the next drainage fitting providing access for cleaning, a manhole or the end of the building sewer.

(v) *Subsection E3406.3 Minimum size of conductors,* is amended to state: The minimum size of conductors for feeders and branch circuits shall be 12 AWG copper. The minimum size of service conductors shall be as specified in Chapter 36. The minimum size of Class 2 remote control, signaling and power-limited circuit conductors shall be as specified in Chapter 43.

SECTION III. That Chapter 6, Building and Building Regulations, Article IV, Electrical Code, Section 6-66, Adoption of National Code; amendments, is hereby amended to read as follows:

Sec. 6-66. - Adoption of National Electrical Code; amendments.

(a) That certain document, one copy of which is on file in the office of the city clerk, being marked and designated as the National Electrical Code, 2020 Edition, as adopted and amended by the Oklahoma Uniform Building Code Commission, is hereby adopted as the Electrical Code for

the city. Where specific or more stringent standards are prescribed by this article, they shall prevail over the minimum standards set forth in the National Electrical Code.

(b) Unless the rules and regulations of this article disapprove a procedure for installation and use, conformity with the standards of Underwriters Laboratories, Inc., shall be prima facie evidence of conformity with approved standards for safety to persons and property.

(c) The electrical code adopted in paragraph (a) is hereby amended as set forth:

(1) Subsection 334.10 Uses Permitted shall be amended to state the following:

(A) Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following, except as prohibited in 334.12:

(1) One- and two-family dwellings and their attached or detached garages, and their storage buildings.

(2) Multi-family dwellings permitted to be of Types III, IV, and V construction.

(3) Cable trays in structures permitted to be Types III, IV, or V where the cables are identified for the use.

(4) Types I and II construction where installed within raceways permitted to be installed in Types I and II construction.

(B) Type NM. Type NM cable shall be permitted as follows:

(1) For both exposed and concealed work in normally dry locations except as prohibited in 334.10(3)

(2) To be installed or fished in air voids in masonry block or tile walls

(C) Type NMC. Type NMC cable shall be permitted as follows:

(1) For both exposed and concealed work in dry, moist, damp, or corrosive locations, except as prohibited by 334.10(3)

(2) In outside and inside walls of masonry block or tile

(3) In a shallow chase in masonry, concrete, or adobe protected against nails or screws by a steel plate at least 1⁄16 in. thick and covered with plaster, adobe, or similar finish

(D) Type NMS. Type NMS cable shall be permitted as follows:

(1) For both exposed and concealed work in normally dry locations except as prohibited by 334.10(3)

(2) To be installed or fished in air voids in masonry block or tile walls

(2) Subsection 334.12 Uses Not Permitted shall be amended to state the following:

(A) Types NM, NMC, and NMS. Types NM, NMC, and NMS cables shall not be permitted as follows:

(1) In any dwelling or structure not specifically permitted in 334.10

(2) Exposed in dropped or suspended ceilings in other than one- and two-family and multifamily dwellings

(3) As service-entrance cable

(4) In hotels, motels, commercial structures, office buildings, industrial buildings or similar uses. Any residential structure which is converted to a commercial,

office or industrial use must be remodeled at the time of this conversion so that all wiring contained in the structure complies with this code.

(5) In storage battery rooms

(6) In hoistways or on elevators or escalators

(7) Embedded in poured cement, concrete, or aggregate

(8) In hazardous (classified) locations, except where specifically permitted by other articles in this Code.

(B) Types NM and NMS. Types NM and NMS cables shall not be used under the following conditions or in the following locations:

(1) Where exposed to corrosive fumes or vapors

(2) Where embedded in masonry, concrete, adobe, fill, or plaster

(3) In a shallow chase in masonry, concrete, or adobe and covered with plaster, adobe, or similar finish

(4) In wet or damp locations

SECTION IV. Any ordinance or parts of ordinances found to be in conflict herewith are hereby repealed.

SECTION V. An emergency exists for the preservation of the public health, peace and safety, and therefore this ordinance shall become effective from and after the time of its passage and approval.

PASSED AND APPROVED and the emergency clause ruled upon separately this 20th day of September 2022.

/s/ Debra Wimpee
MAYOR

ATTEST:

/s/ Curtis Green
(Seal) CITY CLERK

APPROVED:

/s/ Danny Littlefield
ASSISTANT CITY ATTORNEY