RESOLUTION NO. 12451

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MESA, ARIZONA, DECLARING AS A PUBLIC RECORD THOSE CERTAIN PUBLICATIONS FILED WITH THE CITY CLERK AND KNOWN AS THE 2024 INTERNATIONAL RESIDENTIAL CODE AND ITS APPENDICES BB, BF, AND NE AND THAT CERTAIN DOCUMENT TITLED "AMENDMENTS TO THE 2024 INTERNATIONAL RESIDENTIAL CODE."

Be it resolved by the City Council of the City of Mesa, Arizona, as follows:

Section 1: The following publications, one paper copy and one electronic copy of which are on file with the City Clerk, are hereby declared a public record, and said copies are ordered to remain on file and available for public use and inspection at the Office of the City Clerk at 20 E. Main Street, Suite 150, Mesa, Arizona:

2024 International Residential Code and the following appendices to the 2024 International Residential Code:

Appendix BB – Tiny Houses
Appendix BF – Patio Covers
Appendix NE – Electric Vehicle Charging Infrastructure

Section 2: That certain document titled "Amendments to the 2024 International Residential Code," three paper copies of which are on file with the City Clerk, is hereby declared a public record, and said copies are ordered to remain on file and available for public use and inspection at the Office of the City Clerk at 20 E. Main Street, Suite 150, Mesa, Arizona.

Passed and adopted by the City Council of the City of Mesa, Arizona, this 1st day of December, 2025.

APPROVED:

Mayor

ATTEST:

City Clerk

CITY OF MESA CORPORATE SEAL MARICOPA COUNTY, AZ

AMENDMENTS TO THE 2024 INTERNATIONAL RESIDENTIAL CODE

4-3-2: AMENDMENTS TO THE 2024 INTERNATIONAL RESIDENTIAL CODE

The following sections of the 2024 International Residential Code, adopted by reference as set forth in Section 4-3-1, are amended as follows:

CHAPTER 1 ADMINISTRATION

R101.1 Title. These regulations shall be known as the *Mesa Residential Code*, hereinafter referred to as "this code."

A new **Section R101.1.1 Reference Changes** is added as follows:
R101.1.1 International Code References. Within the technical codes and the referenced codes and standards therein, specific references to the following International Codes shall be deemed and interpreted to mean the specific City of Mesa Codes as listed herein:

1. International Building Code (IBC) is redefined as Mesa Building Code (MBC)
2. International Fire Code (IFC) is redefined as Mesa Fire Code (MFC)
3. International Residential Code (IRC) is redefined as Mesa Residential Code (MRC)
4. International Mechanical Code (IMC) is redefined as Mesa Mechanical Code (MMC)
5. International Fuel Gas Code (IFGC) is redefined as Mesa Fuel Gas Code (MFGC)
6. International Existing Building Code (IEBC) is redefined as Mesa Existing Building Code (MEBC)
7. International Plumbing Code (IPC) is redefined as Mesa Plumbing Code (MPC)
8. International Swimming Pool and Spa Code (ISPSC) is redefined as Mesa Swimming Pool and Spa Code (MSPSC)
9. International Energy Conservation Code (IECC) is redefined as Mesa Energy Conservation Code (MECC).

Sections R101.4 through R114.4 are deleted in their entirety. Any reference to R101.4 through R114.4 shall comply with the Mesa Administrative Code (Mesa City Code, Title 4, Chapter 1).

CHAPTER 2 DEFINITIONS

R202 Definitions

FIRE SEPARATION DISTANCE. The shortest distance measured at a right angle from the face of the wall framing to one of the following:

1. To the closest interior lot line.

2. To the center line of a street, an alley or public way.

3. To an imaginary line between two buildings on the lot or townhouse units on the lot.

R-5 OCCUPANCIES. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with separate means of egress and their accessory structures.

CHAPTER 3 BUILDING PLANNING

A new **Section R301.1.6 Lot Corner Identification** is added as follows:
R301.1.6 Lot Corner Identification. In construction applications where legally surveyed lot corner identification markers are not readily verifiable or are missing, the building official, when deemed necessary, shall require lot boundary markers to be surveyed and permanently identified in accordance with State law at the owner's or applicant's expense. The survey shall be executed by a registrant licensed to do such work by the Arizona State Board of Technical Registration.

Table R301.2 Climatic and geographic design criteria

TABLE R301.2 CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA											
Ground Snow Load	Wind Speed (mph) (e, k, i)	Seismic Design Category (g)	Subject to Damage From				Winter Design Temp (f)	Ice Shield Underlayment Required (h)	Flood Hazard (h)	Air Freezing Index (j)	Mean Annual Temp (k)
			Weathering (a)	Frost line depth (b)	Termite (c)	Decay (d)					
0	105	B	Negligible	0	Moderate to Heavy	None to Slight	+32°F	N/A	See Maricopa County	0	+71.2 °F

Table R301.5 is partially amended as follows:

TABLE R301.5 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS (in pounds per square foot)		
USE	**UNIFORM LOAD (psf)**	**CONCENTRATED LOAD (lb)**
Habitable attics and attics served with fixed stairs	40	-
Sleeping rooms	40	-

R306.1 General. Buildings, structures, appliances, equipment and system installations located in flood hazard areas shall comply with all Maricopa County Planning and Development Department regulations. No reference to flood hazard requirements in this chapter, or the technical codes, shall be construed as allowing installations in violation of Maricopa County Planning and Development Department regulations. Where conflicts exist between the requirements of this chapter and the Maricopa County Planning and Development Department regulations, the Maricopa County Planning and Development regulations shall govern.

R309.1 Townhouse Automatic Sprinkler Systems. Other than where preempted by Arizona State Law, an automatic sprinkler system shall be installed in townhouses.

Exception:
An automatic sprinkler system shall not be required where additions or alterations are made to existing townhouses that do not have an automatic sprinkler system installed when not required in accordance with the Mesa Fire Code.

R309.2 is deleted in its entirety.

R310.6 Power Source. Smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial power source and, where 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.

Exceptions:
1. Smoke alarms shall be permitted to be battery operated where installed in buildings without commercial power.

2. Smoke alarms installed in accordance with Section R310.2.2 shall be permitted to be battery powered where alteration or repairs do not result in the removal of interior wall or ceiling finishes unless there is an attic or crawl space or basement available which could provide access for hardwiring of smoke alarms.

R311.6 Power Source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial power source and, where 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.

Exceptions:
1. Carbon monoxide alarms shall be permitted to be battery operated where installed in buildings without commercial power.

2. Carbon monoxide alarms installed in accordance with Section R311.2.2 shall be permitted to be battery powered where alteration or repairs do not result in the removal of interior wall or ceiling finishes unless there is an attic or crawl space or basement available which could provide access for hardwiring of smoke alarms.

A new **Section R322.4 No-Step Entrance** is added as follows:
R322.4 No-Step Entrance. At least one model home dwelling unit in every model home complex, as defined in the City of Mesa Zoning Ordinance, shall have a no-step entrance to serve as a demonstration of the builder's method of providing a no-step entry as an option for new home construction. Model dwellings selected to demonstrate this option, and all dwelling units providing this option, shall be served by a route of travel meeting the following requirements:

1. A continuous no-step path connecting each subdivision sales office or public way to an entrance of the unit.

2. A route of travel that consists of a firm stable, and slip-resistant surface with a minimum continuous width of 36 inches and a minimum clear height of 7 feet above the route.

3. The running slope of such route shall not exceed one to twelve (1:12).

4. A minimum 48 inches by 48 inches maneuvering space on the exterior side of the door constructed with less than 2 slope in any direction.

5. A minimum 32-inch clear-opening door with a threshold not exceeding ½-inch.

6. Identification by readily viewable signage.

A new **Section R322.5 Model Home Sales Office Restrooms** is added as follows:
R322.5 Model Home Sales Office Restrooms. If public restrooms are provided for residential development models, such restroom facilities shall be accessible and shall be provided by either of the following methods:

1. Converting one ground-floor model home restroom into an ADA-accessible unisex facility; or

2. Providing one ADA-accessible unisex portable toilet and hand-washing unit located on an accessible route. The accessible portable toilet facility shall be removed when the Sales Office is permanently closed.

A new **Section R333 Security Standard** is added as follows:
R333 Security Standard.

R333.1 Requirement. All main or front-entry doors of all dwelling units shall be arranged so that the occupant has a view of the area immediately outside the door without opening the door. Such view may be provided by a door viewer having a field of view of not less than 180 degrees or through windows.

A new **Section R334 Fire Department Access and Water Supply** is added as follows:
R334 Fire Department Access and Water Supply.

R334.1 General. Buildings and structures shall have fire department access in accordance with the Mesa Fire Code Section 503 and fire protection water supply in accordance with the Mesa Fire Code Section 507.

CHAPTER 4 FOUNDATIONS

Table R401.4.1(1) is partially amended to read as follows:

In lieu of a complete geotechnical evaluation, the presumptive load-bearing values in Table R401.4.1(1) and the soil classifications in Table R401.4.1(2) shall be assumed.

Table R401.4.1(1) PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATION MATERIALS[a]

Class of Material	Load-Bearing Pressure (Pounds per square foot)
Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM, SC, GM and GC)	1,500[b]

* For SI: 1 pound per square foot = 0.0479 kPa

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 systems which 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 from 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.

Exception:
Existing patio and carports, 400 square feet or less, that are enclosed and occupied as livable and/or non-livable areas are not required to provide a continuous exterior footing when the existing load bearing post and beam construction remains in place.

R403.1.4 Minimum Depth. Exterior footings shall be placed not less than 18 inches (457 mm) below the undisturbed ground surface. Where applicable, the depth of footings shall also conform to Section R403.1.4.1. Deck footings shall be in accordance with Section R507.3.

CHAPTER 10 CHIMNEYS AND FIREPLACES

A new **Section R1001.14 Fireplace Restrictions** is added as follows:
R1001.14 Fireplace Restrictions. Refer to the Mesa Mechanical Code Section 930 for additional restrictions on masonry fireplaces.

A new **Section R1004.6 Fireplace Restrictions** is added as follows:
R1004.6 Fireplace Restrictions. Refer to the Mesa Mechanical Code Section 930 for additional restrictions on masonry fireplaces.

CHAPTER 11 ENERGY EFFICIENCY

A new **Section N1101.4.1 RESNET Testing and Inspection Protocol** is added as follows:
N1101.4.1 RESNET Testing and Inspection Protocol. The Residential Energy Services Network (RESNET) Home Energy Rating System Standard (RESNET HERS) for third party testing and inspections shall be deemed to meet the requirements of sections N12102.5.1, N1102.5.1.2 and N1103.3.7 and shall meet the following conditions:

1. Third Party Testing and Inspections shall be completed by RESNET certified Raters or Rating Field Inspectors and shall be subject to RESNET Quality Assurance Field Review Provider.

2. Sampling in accordance with Chapter 6 of the RESNET HERS standards shall be performed by Raters or Rating Field Inspectors working under a RESNET Accredited Sampling Provider.

3. Third Party Testing is required for the following items:

   a. N1102.5.1 – Building Envelope – Thermal and Air Barrier Checklist

   b. N1102.5.1.2 – Testing – Air Leakage Rate

   c. N1103.3.7 – Sealing – Duct Tightness

   d. Any other testing and inspections required under this code.

4. Alternate testing and inspection programs and protocols shall be allowed when approved by the Building Code Official.

N1103.6.3 (R403.6.3) Testing. Mechanical ventilation systems shall be tested and verified to provide the minimum ventilation flow rates required by Section N1103.6, in accordance with ANSI/RESNET/ICC 380. Where required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official**.**

Exceptions:
1. Kitchen range hoods that are ducted to the outside with ducting having a diameter of 6 inches (152 mm) or larger, a length of 10 feet (3028 mm) or less, and not more than two 90-degree (1.57 rad) elbows or equivalent shall not require testing.

2. A third-party test shall not be required where the ventilation system has an integrated diagnostic tool used for airflow measurement, and a user interface that communicates the installed airflow rate.

3. Local exhaust systems.

Sections N1104.2 and N1104.3 are deleted in their entirety.

CHAPTER 24 FUEL GAS

G2404.7 (301.11) Flood Hazard. For structures located in flood hazard areas, the appliance, equipment and system installations regulated by this code shall be located at or above the elevation required by Section R306 for utilities and attendant equipment. Buildings, structures, appliances,

equipment and system installations located in flood hazard areas shall comply with the Maricopa County Planning and Development Regulations. No reference to flood hazard requirements in this Chapter or the technical codes shall be construed as allowing installations in violation of Maricopa County Planning and Development Regulations. Where conflicts exist between the requirements of this Chapter and the Maricopa County Planning and Development Regulations, the Maricopa County Planning and Development Regulations shall govern.

G2417.4.1 (406.4.1) Test Pressure. The test pressure to be used shall be not less than 10 pounds per square inch (68.9 kPa) gauge pressure, or where approved by the building official, the piping and valves may be tested at a pressure of at least 6 inches (152.4 mm) of mercury, measured with a manometer or slope gauge. For welded piping, and for piping carrying gas at pressures in excess of 14 inches (355.6 mm) water column pressure, the test pressure shall not be less than sixty 60 pounds per square inch (413.4 kPa). Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50% of the specified minimum yield strength of the pipe.

CHAPTER 26 GENERAL PLUMBING REQUIREMENTS

P2603.5.1 Sewer Depth. Building sewers that connect to private sewage disposal systems shall meet the requirements of the Maricopa County Environmental Services Department. Building sewers shall not be less than 12 inches (305 mm) below grade.

A new **Section P2603.6 Underground Nonmetallic Water Piping** is added as follows:
P2603.6 Underground Nonmetallic Water Piping. Underground nonmetallic water piping larger than 2 inches (50.8 mm) in diameter shall be installed with insulated copper tracer wire or other approved conductor located adjacent to the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall be not less than 14 AWG and the insulation type shall be suitable for direct burial.

CHAPTER 29 WATER SUPPLY AND DISTRIBUTION

P2903.2 Maximum Flow and Water Consumption. The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table P2903.2.

Exception:
Replacement of existing fixtures that do not require a permit.

TABLE P2903.2 MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND FITTINGS[b]

Plumbing fixture or fixture fitting	Maximum flow rate or quantity[b]
Lavatory faucet	1.5 gpm at 60 psi
Shower head[a]	2.0 gpm at 80 psi
Sink faucet	1.8 gpm at 60 psi

Water closet	1.28 gallons per flushing cycle [c,d]

*For SI: 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa

a. A hand-held shower spray shall be considered a shower head.

b. Consumption tolerances shall be determined from referenced standards.

c. For a dual-flush water closet, the full-flush volume shall not exceed 1.28 gallons.

d. A 1.6 gallon per flushing cycle is permitted where a water closet is connected to an existing building's sanitary drainage piping.

A new **Section P2910.4.1 Conflicts** is added as follows:
P2910.4.1 Conflicts. No reference to requirements for gray water recycling systems in this appendix or the technical codes shall be construed as allowing installations in violation of Arizona Department of Environmental Quality requirements. Where conflicts exist between the requirements of this appendix and the Arizona Department of Environmental Quality requirements, the Arizona Department of Environmental Quality requirements shall govern.

CHAPTER 30 SANITARY DRAINAGE

A new **Section P3001.4 Tracer Wire** is added as follows:
P3001.4 Tracer Wire. Underground nonmetallic sanitary drainage piping larger than 2 inches in diameter shall be installed with insulated copper tracer wire or other approved conductor located adjacent to the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall be not less than 14 AWG and the insulation type shall be suitable for direct burial.

CHAPTER 36 SERVICES

E3601.2 Number of Services. One- and two-family dwellings shall be supplied by only one service. Two-family dwelling units shall be supplied by a single service or two separate services. When more than one service is installed, a permanent plaque or directory shall be installed at each service-equipment location denoting the other service on the structure and the area served by each service.

CHAPTER 39 POWER AND LIGHTING DISTRIBUTION

E3901.4.2 Island and Peninsular Countertops and Work Surfaces. At least one receptacle shall be installed at each island and peninsular countertop space with a long dimension of 24 inches (610 mm) or greater and a short dimension of 12 inches (305 mm) or greater. A peninsular countertop is measured from the connected perpendicular wall.

E3901.4.3 Receptacle Outlet Location. Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in the exception to

Section E3901.4.1, or appliances occupying assigned spaces shall not be considered as these required outlets. Required receptacle outlets shall be located in one or more of the following:

1. On or above, but not more than 20 inches (508 mm) above, the countertop or work surface.

2. In a countertop using receptacle outlet assemblies listed for the use in countertops.

3. In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops.

Exception:
1. Receptacle outlets shall be permitted to be mounted not more than 12 inches (305 mm) below the countertop or work surface where the countertop or work surface extends 6 inches (152 mm) or less beyond its base cabinet support.

2. Receptacle outlets for the physically impaired.

E3901.9 Basements, Garages and Accessory Buildings. Not less than one receptacle outlet, in addition to any provided for specific equipment, shall be installed in each separate unfinished portion of a basement; in each vehicle bay at not less than 18 inches (457.2 mm) and not more than 5.5 feet (1,676 mm) above the floor in attached garages; in each vehicle bay at not less than 18 inches (457.2 mm) and not more than 5.5 feet (1,676 mm) above the floor in detached garages that are provided with electric power and in accessory buildings that are provided with electric power. Receptacles supplying only a permanently installed premises security system shall not be considered as meeting these requirements.

E3902.2 Garage and Accessory Building Receptacles. 125-volt through 250-volt receptacles installed in garages and grade-level portions of unfinished accessory buildings used for storage or work areas and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

Exception:
1. Ceiling mounted receptacles for garage door openers.

E3902.14 Outdoor Outlets. All outdoor outlets, including outlets installed in the following locations, and supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less, shall be provided with GFCI protection:

1. Garages that have floors located at or below grade level.

2. Accessory buildings.

3. Boathouses.

Exceptions:

1. GFCI protection shall not be required on lighting outlets other than those covered in Section 210.8(F) of NFPA 70.

2. GFCI protection shall not be required for receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment where such equipment is protected as required by NFPA 70.

3. GFCI protection shall not be required for listed HVAC equipment.

CHAPTER 44 REFERENCED STANDARDS

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers):

34 – 24	Designation and Safety Classification of Refrigerants

NFPA (National Fire Protection Association):

13 – 25	Installation of Sprinkler Systems
13D – 25	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
13R – 25	Installation of Sprinkler Systems in Low-Rise Residential Occupancies
72 – 25	National Fire Alarm and Signaling Code
211 – 25	Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances

APPENDIX AD ACCESSABILITY is added as follows:

The provisions of this appendix are not mandatory.

AD101 Purpose. Provide optional accessibility provisions for new one- and two-family dwellings or sleeping units.

AD102 Accessibility Design. Dwelling and sleeping units with accessibility provisions shall comply with Section AD102.

AD102.1 Entrance. At least one dwelling unit entrance shall be accessible and on an accessible route from the street or sidewalk, the dwelling unit's driveway, or the dwelling unit's garage or carport in compliance with ICC A117.1 Chapter 4. The required accessible entrance shall not be to a bedroom.

Exceptions:

1. Doors and gates in the accessible route and the one accessible entrance need only comply with ICC A117.1 Sections 404.2.1, 404.2.2, 404.2.3 and 404.2.4 as well as section AD102.4.

2. The clear width need not exceed 36 inches minimum.

3. Ramps need not be provided with handrails, maximum ramp rise, intermediate landings, and edge protection where the sides of the ramp have a maximum vertical drop of 1/2-inch within 10 inches horizontally.

AD102.2 Interior Circulation Path. An interior circulation path shall connect the accessible entrance, Section AD102.7 toilet room or bathroom, and one habitable space with an area of 70 square feet minimum. This Interior circulation path shall have a clear width of 36 inches minimum as measured between fixed or built-in elements. Exceptions in ICC A117.1 Section 1104.4.1 are permitted to be used.

AD102.3 Circulation Path Doors. User passage doors in the Section AD101.2 circulation path shall have a clear opening width of 32 inches minimum; measured on a swinging door between the face of the door open to 90 degrees and the door stop.

AD102.4 Door Hardware. Door hardware for user passage doors on the entire floor level that contain the accessible entrance shall have a shape easily operated with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. Operable parts of hardware shall be 34 inches minimum and 48 inches maximum above the floor.

Exceptions:
1. Locks used only for security and not used for normal operation.

2. Pocket doors.

3. Where the door serves as part of a required pool or spa barrier, the height of the hardware shall not apply.

AD102.5 Operable Parts. Lighting controls, electrical switches and receptacle outlets, user controls for thermostats, and user controls for security or intercom systems shall be placed 15 inches minimum and 48 inches maximum above the floor.

Exceptions:
1. Receptacle outlets serving a dedicated use.

2. Controls and switches that can be remotely operated.

3. Where manufacturer's installation instructions specify a required height.

4. Floor receptacle outlets.

5. Controls mounted on ceiling fans.

6. Controls mounted on appliances.

7. Controls mounted on smoke detectors and carbon monoxide detectors.

AD102.6 Toilet Room and Bathroom Wall Reinforcement. Toilet rooms and bathrooms on the floor level that contains the accessible entrance shall be provided with wall reinforcements for future grab bars where walls occur around toilets, showers, and bathtubs in compliance with ICC A117.1 Section 1104.11.1.

AD102.7 Toilet Room or Bathroom Contents and Floor Clearance. One bathroom on the floor level that contains the accessible entrance shall be provided with a bathtub or a shower and shall contain a lavatory and a water closet. This bathroom shall be provided with floor clearance space that complies with ICC A117.1 Section(s) 304 or 1104.11.2 and 1104.11.3.

Exceptions:

1. Where there are no spaces used for sleeping purposes on the level that contains the accessible entrance, the bathroom is not required to be provided with a bathtub or a shower.

2. A toilet room or bathroom is not required where a dwelling unit or sleeping unit contains less than 150 square feet of habitable space on the level that contains the accessible entrance.