

**RESOLUTION R23-05-10 EHXIBIT**  
**CITY OF EL MIRAGE AMENDMENTS**  
**AMENDMENTS TO THE**  
**2018 INTERNATIONAL BUILDING CODE**

The following sections, paragraphs, and sentences of the *2018 International Building Code* are hereby amended as follows: Standard type (*including italics*) is text from the IBC. **CAPITALIZED** type is text inserted. ~~Lined through~~ type is deleted text from the IBC.

**APPENDICES C AND H ARE EXPRESSLY ADOPTED AND INCORPORATED HEREIN BY THIS REFERENCE**

**SECTION 101 GENERAL**

**101.1 Title.** These regulations shall be known as the *Building Code* [~~NAME OF JURISDICTION~~] of **CITY OF EL MIRAGE**, hereinafter referred to as “this code.”

**SECTION 105 PERMITS**

**105.2 Work exempt from permit.** 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:

**Building:**

1. One-story detached accessory structures ~~used as tool and storage sheds, playhouses and similar uses,~~ provided the floor area is not greater than 120 square feet (11 m<sup>2</sup>).
2. ~~Fences not over 7 feet (2134 mm) high.~~
3. Oil derricks.
4. ~~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 or impounding Class I, II or IIIA liquids.~~
5. Water tanks supported directly on grade if the capacity is not greater than 5,000 gallons (18 925 L) and the ratio of height to diameter or width is not greater than 2:1.
6. **PLATFORMS**, Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or story below and are not part of an accessible route.
7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
8. Temporary motion picture, television, and theater stage sets and scenery.
9. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 18 inches (610 mm) deep, are not greater than 5,000 gallons (18 925 L) and are installed entirely above ground.

10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
11. Swings and other playground equipment accessory to detached one- and two-family dwellings.
12. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
13. Non-fixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

## **SECTION 105 PERMITS**

**105.5 Expiration.** A PERMIT SHALL BE CONSIDERED EXPIRED IF MORE THAN 180 DAYS SHALL PASS BETWEEN APPROVALS OF INSPECTIONS LISTED IN SECTION 109. WHEN A PERMIT EXPIRES BY LIMITATIONS AND HAS BECOME NULL AND VOID, AND THE BUILDING OFFICIAL HAS NOT BEEN NOTIFIED IN WRITING BY THE PERMIT APPLICANT THAT NO WORK WAS DONE UNDER THE PERMIT, THE BUILDING OFFICIAL MAY FILE A "NOTICE OF NON-COMPLIANCE" WITH THE MARICOPA COUNTY RECORDER'S OFFICE FOR FAILURE TO OBTAIN THE REQUIRED INSPECTIONS. ~~Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced with 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The building official is authorized to grant, in writing, one or more extension of time, for periods not more 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.~~

**105.5.1 COMPLETING WORK AND FINAL INSPECTION.** EVERY PERMIT ISSUED BY THE BUILDING OFFICIAL SHALL EXPIRE 24 MONTHS AFTER THE DATE OF PERMIT ISSUANCE. IF THE BUILDING OR WORK AUTHORIZED BY SUCH PERMIT HAS NOT RECEIVED FINAL INSPECTION APPROVAL PRIOR TO THE PERMIT EXPIRATION DATE, ALL WORK SHALL STOP UNTIL A NEW PERMIT IS OBTAINED FOR THE VALUE OF THE WORK REMAINING UNFINISHED.

**EXCEPTION:** THE BUILDING OFFICIAL MAY APPROVE A PERIOD EXCEEDING 24 MONTHS FOR COMPLETION OF WORK WHEN THE PERMIT HOLDER CAN DEMONSTRATE THAT THE COMPLEXITY OR SIZE OF THE PROJECT MAKES COMPLETING THE PROJECT WITHIN 24 MONTHS UNREASONABLE. ANY REQUEST SHALL BE PRIOR TO THE EXPIRATION OF THE PERMIT.

## **SECTION 113 BOARD OF APPEALS**

**[A] 113.1 General.** APPEALS SHALL BE IN ACCORDANCE WITH SECTION 96.01 OF THE EL MIRAGE MUNICIPAL CODE. ~~In order to hear and decide appeals or orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeal shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.~~

**SUBSECTIONS 113.2 THROUGH 113.3 ARE DELETED IN THEIR ENTIRETY.**

**SECTION 1111 SIGNAGE**

**1111.1 Signs.** Required *accessible* elements shall be identified by the International Symbol of Accessibility at the following locations.

1. *Accessible* parking spaces required by Section 1106.1.

**A. ACCESSIBLE PARKING SPACES MAY ALSO BE IDENTIFIED BY THE USE OF THE ACCESSIBILITY ICON.**

**Exception:** Where the total number of parking spaces provided is four or less, identification of *accessible* parking is not required.

2. *Accessible* parking spaces required by Section 1106.2.

**Exception:** In Group I-1, R-2, R-3 and R-4 facilities, where parking spaces are assigned to specific *dwelling units* or *sleeping units*, identification of *accessible* parking spaces is not required.

3. *Accessible* passenger loading zones.
4. *Accessible* rooms where multiple single-user toilet or bathing rooms are clustered at a single location.
5. *Accessible* entrances where not all entrances accessible.
6. *Accessible* check-out aisles where not all aisles are accessible. The sign, where provided, shall be above the check-out aisle in the same location as the check-out aisle number or type of check-out identification.
7. Family or assisted-use toilet and bathing rooms.
8. *Accessible* dressing, fitting, and locker rooms where not all such rooms are *accessible*.
9. *Accessible* areas of refuge in accordance with Section 1009.9.
10. Exterior areas for assisted rescue in accordance with Section 1009.9.
11. In recreational facilities, lockers that are required to be accessible in accordance with Section 1109.9.

**1111.2 Directional signage.** Directional signage indicating the route to the nearest like *accessible* element shall be provided at the following locations. These directional signs shall include the International Symbol of Accessibility **OR THE ACCESSIBILITY ICON** and sign characters shall meet the visual character requirements in accordance with ICC A117.1.

1. Inaccessible building entrances.
2. Inaccessible public toilets and bathing facilities.
3. Elevators not serving an *accessible* route.
4. At each separate-sex toilet and bathing room indicating the location of the nearest family or assisted-use toilet or bathing room were provided in accordance with Section 1109.2.1

5. At *exits* and exit *stairways* serving a required *accessible* space, but not providing an *approved accessible means of egress*, signage shall be provided in accordance with Section 1009.10.

6. Where drinking fountains for persons using wheelchairs and drinking fountains for standing persons are not located adjacent to each other, directional signage shall be provided indicating the location of the other drinking fountains.

**SECTION 1203 TEMPERATURE CONTROL**

**1203.1 Equipment and systems. HABITABLE SPACES** Interior spaces intended for human occupancy shall be provided with active or passive space heating **AND SPACECOOLING** systems capable of maintaining a minimum indoor temperature **BETWEEN 70°F of 68°F (21.2°C) AND 90°F (32°C)** at a point 3 feet (914 mm) above the floor on the design heating day.

**Exception:** Space heating **AND COOLING** systems are not required for:

1. Interior spaces where the primary purpose of the space is not associated with human comfort.
2. Group F, H, S or U occupancy

**SECTION 1607 LIVE LOADS**

**TABLE 1607.1**

**MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, Lo, AND MINIMUM CONCENTRATED LIVE LOADS**

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs)
25 Residential		
One- and two- family dwellings		
Uninhabitable attics with storage	<del>20</del> <b>40</b>	
Habitable attics and sleeping areas	<del>20</del> <b>40</b>	
<b>(NO OTHER CHANGES IN ITEM #25)</b>		

**SECTION 1612 FLOOD LOADS**

**1612.3 Establishment of flood hazard areas.** To establish *flood hazard areas*, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for ~~[INSERT NAME OF JURISDICTION]~~ **MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS REVISED ON JULY 19, 2001,**" dated ~~[INSERT DATE OF~~

ISSUANCE] as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

## **SECTION 1704 SPECIAL INSPECTIONS AND TESTS, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION**

**1704.1 General.** Special inspections and tests, statements of special inspections, responsibilities of contractors, submittals to the *building official* and structural observations shall meet the applicable requirements of this section. **THE BUILDING OFFICIAL MAY ALSO REQUIRE OTHER SPECIAL INSPECTIONS NOT PRESCRIBED IN THIS SECTION AS NEEDED.**

## **SECTION 2106 SEISMIC DESIGN**

**2106.1 Seismic design requirements for masonry.** Masonry structures and components shall comply with the requirements in section 1.18 of TMS 402/ACI 530/ASCE 5 depending on the structure's *seismic design category*. **ALL NEW MASONRY ELEMENTS, REGARDLESS OF SEISMIC DESIGN CATEGORY, SHALL MEET THE FOLLOWING MINIMUM REINFORCEMENT REQUIREMENTS:**

- 1. CONNECTIONS TO COLUMNS SHALL COMPLY WITH SECTION 1.18.4.3.2.1 OF TMS 402/ACI 530/ASCE 5.2**
- 2. VERTICAL WALL REINFORCEMENT OF AT LEAST 0.20 SQUARE INCH (130 MM ) IN CROSS-SECTIONAL AREA SHALL BE PROVIDED CONTINUOUSLY FROM SUPPORT TO SUPPORT AT EACH CORNER, AT EACH SIDE OF EACH OPENING, AT THE ENDS OF WALLS AND AT MAXIMUM SPACING OF 4 FEET (1219 MM) APART HORIZONTALLY THROUGHOUT THE WALL.**
- 3. HORIZONTAL WALL REINFORCEMENT NOT LESS THAN 0.20 SQUARE INCH (130 MM ) IN CROSS-SECTIONAL AREA SHALL BE PROVIDED (1) AT THE BOTTOM AND TOP OF WALL OPENINGS AND EXTEND NOT LESS THAN 24 INCHES (610 MM) OR LESS THAN 40 BAR DIAMETERS PAST THE OPENING, (2) CONTINUOUSLY AT STRUCTURALLY CONNECTED ROOF AND FLOOR LEVELS AND AT THE TOP OF WALLS, (3) AT THE BOTTOM OF WALLS OR IN THE TOP OF FOUNDATIONS WHEN DOWELED IN WALLS, AND (4) AT MAXIMUM SPACING OF 10 FEET (3048 MM) UNLESS UNIFORMLY DISTRIBUTED JOINT REINFORCEMENT IS PROVIDED.**
- 4. WHERE ANCHOR BOLTS ARE USED TO CONNECT HORIZONTAL ELEMENTS TO THE TOPS OF COLUMNS, ANCHOR BOLTS SHALL BE PLACED WITHIN LATERAL TIES. LATERAL TIES SHALL ENCLOSE BOTH THE VERTICAL BARS IN THE COLUMN AND THE ANCHOR BOLTS. THERE SHALL BE A MINIMUM OF TWO NO. 4 (M #13) OR THREE NO. 3(M #10) IN THE TOP 5 INCHES (127 MM) OF THE COLUMN.**

## **SECTION 3109 SWIMMING POOLS, SPAS AND HOT TUBS**

**3109.1 General.** The design and construction of swimming pools, spas and hot tubs shall comply with the ~~International Swimming Pool and Spa Code~~ **MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT REQUIREMENTS.**

**AMENDMENTS TO THE  
2018 INTERNATIONAL RESIDENTIAL CODE**

**APPENDICES A, B, C, E, G, H, K, N, P, Q, R, S AND T ARE EXPRESSLY ADOPTED AND INCORPORATED HEREIN BY THIS REFERENCE**

**SECTION R101 GENERAL**

**R101.1 Title.** These provisions shall be known as the *Residential Code for One and Two-Family Dwellings* of ~~[NAME OF JURISDICTION]~~ **CITY OF EL MIRAGE**, and shall be cited as such and will be referred to herein as “this code.”

**SECTION R102 APPLICABILITY**

**R102.4 Referenced codes.** ~~THE OTHER CODES LISTED IN SECTIONS 102.4.1 THROUGH 102.4.2 AND REFERENCED ELSEWHERE IN THIS CODE SHALL BE CONSIDERED PART OF THE REQUIREMENTS OF THIS CODE TO THE PRESCRIBED EXTENT OF EACH SUCH REFERENCE AND AS ADOPTED AND AMENDED BY THE CITY OF EL MIRAGE. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2.~~

**SECTION R105 PERMITS**

**R105.2.4 FLAMMABLE LIQUIDS AND GASSES.** A PERMIT SHALL BE REQUIRED FOR THE INSTALLATION OF ANY CONTAINER OR PUMP FOR STORING AND HANDLING FLAMMABLE LIQUIDS AND GASES. ALL CONTAINERS AND EQUIPMENT FOR THE STORAGE AND HANDLING OF FLAMMABLE LIQUIDS OR GASES, OR BOTH, SHALL BE INSTALLED IN ACCORDANCE WITH THE 2018 INTERNATIONAL FIRE CODE. ALL TANKS MUST BE FILLED FROM VEHICLES PARKED ON PRIVATELY OWNED PROPERTY. NO PUMP SHALL BE LOCATED WITHIN A BUILDING.

**R105.2 Work exempt from permit.** Exemption 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.

**Building:**

1. ~~One-story detached accessory structures, provided the floor area is not greater than 200 square feet (18.58 m<sup>2</sup>).~~ **120 SQUARE FEET (11 M<sup>2</sup>).**
2. ~~Fences not over 7.6 feet (2134 mm) high.~~
3. ~~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.~~
4. Water tanks supported directly on grade if the capacity is not greater than 5,000 gallons (18 925 L) and the ratio of height to diameter or width is not greater than 2:1.
5. Sidewalks and driveways.

6. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
7. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 24 18 inches (610 mm) deep.
8. Swings and other playground equipment.
9. Window awnings supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
10. 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 and do not serve the exit door required by Section R311.4.

**105.5 Expiration.** ~~Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance or after commencement of work if more than 180 days pass between inspections. The building official is authorized to grant, in writing, one or more extension of time, for periods not more 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.~~ **A PERMIT SHALL BE CONSIDERED EXPIRED IF MORE THAN 180 DAYS SHALL PASS BETWEEN APPROVALS OF INSPECTIONS LISTED IN SECTION 109. WHEN A PERMIT EXPIRES BY LIMITATIONS AND HAS BECOME NULL AND VOID, AND THE BUILDING OFFICIAL HAS NOT BEEN NOTIFIED IN WRITING BY THE PERMIT APPLICANT THAT NO WORK WAS DONE UNDER THE PERMIT, THE BUILDING OFFICIAL MAY FILE A “NOTICE OF NON-COMPLIANCE” WITH THE MARICOPA COUNTY RECORDER’S OFFICE FOR FAILURE TO OBTAIN THE REQUIRED INSPECTIONS.**

**105.5.1 COMPLETING WORK AND FINAL INSPECTION. EVERY PERMIT ISSUED BY THE BUILDING OFFICIAL SHALL EXPIRE 24 MONTHS AFTER THE DATE OF PERMIT ISSUANCE. IF THE BUILDING OR WORK AUTHORIZED BY SUCH PERMIT HAS NOT RECEIVED FINAL INSPECTION APPROVAL PRIOR TO THE PERMIT EXPIRATION DATE, ALL WORK SHALL STOP UNTIL A NEW PERMIT IS OBTAINED FOR THE VALUE OF THE WORK REMAINING UNFINISHED.**

**EXCEPTION: THE BUILDING OFFICIAL MAY APPROVE A PERIOD EXCEEDING 24 MONTHS FOR COMPLETION OF WORK WHEN THE PERMIT HOLDER CAN DEMONSTRATE THAT THE COMPLEXITY OR SIZE OF THE PROJECT MAKES COMPLETING THE PROJECT WITHIN 24 MONTHS UNREASONABLE. ANY REQUEST SHALL BE PRIOR TO THE EXPIRATION OF THE PERMIT.**

## **SECTION R108 FEES**

**R108.2 Schedule of permit fees.** On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the **CURRENTLY ADOPTED FEE SCHEDULE FOR THE CITY OF EL MIRAGE** ~~applicable governing authority~~.

## **SECTION R112 BOARD OF APPEALS**

**R112.1 General. APPEALS SHALL BE IN ACCORDANCE WITH SECTION 96.01 OF THE EL MIRAGE MUNICIPAL CODE.** ~~In order to hear and decide appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this~~

~~code, there shall be and is hereby created a board of appeals. The Building Official shall be an ex-officio member of said board but shall have no vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *Building Official*.~~

**SUBSECTIONS R112.2 THROUGH 112.4 ARE DELETED IN THEIR ENTIRETY.**

**SECTION R301 DESIGN CRITERIA**

**R301.2 Climatic and geographic design criteria.** Buildings shall be constructed in accordance with the provisions of this code as limited by the provisions of this section. Additional criteria shall be established by the local *jurisdiction* and set forth in Table R301.2(1).

**TABLE R301.2(1)**

**(DUE TO SPACE LIMITATIONS THE TABLE COULD NOT BE REPRODUCED; ONLY THE VALUES ARE LISTED)**

**GROUND SNOW LOAD: 0**

**WIND SPEED (MPH): 115 EXPOSURE B (UNLESS OTHERWISE DESIGNATED BY THE BUILDING OFFICIAL)**

**TOPOGRAPHIC EFFECTS: NO**

**SPECIAL WIND REGION: NO**

**WINDBORNE DEBRIS ZONE: NO**

**SEISMIC DESIGN CATEGORY: B**

**WEATHERING: NEGLIGIBLE**

**FROST LINE DEPTH: 0"**

**TERMITE: MODERATE TO HEAVY**

**DECAY: NONE TO SLIGHT**

**WINTER DESIGN TEMPERATURE: NONE TO SLIGHT**

**ICE SHIELD UNDERLAYMENT REQUIRED: NO**

**FLOOD HAZARDS: MCFCD REQUIREMENTS**

**AIR FREEZING INDEX: N/A**

**MEAN ANNUAL TEMPERATURE: 72.3°F**

**R301.2.4 Floodplain Construction.** Buildings and structures constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in accordance with Section R322. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24 **THE REGULATIONS OF THE MARICOPA COUNTY FLOOD CONTROL DISTRICT.**

**R301.5 Live Load.** The minimum uniformly distributed live load shall be as provided in Table R301.5.

**TABLE R 301.5**

**MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS**

**(in pounds per square foot)**

USE	LIVE LOAD
Uninhabitable attics with storage	<del>20</del> <b>40</b>
Habitable attics and sleeping areas	<del>20</del> <b>40</b>
Sleeping Rooms	<del>20</del> <b>40</b>

**(NO OTHER CHANGES TO TABLE)**

**SECTION R303 LIGHT, VENTILATION AND HEATING**

**R303.10 Required heating AND COOLING.** Where the winter design temperature in Table R301.2(1) is below 60°F (16°C) every *dwelling unit* shall be provided with heating **AND COOLING FACILITIES** capable of maintaining a minimum room temperature ~~of not less than~~ **BETWEEN 68-70°F (20-21°C) AND 90°F (32.2°C)** at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters **OR PORTABLE SPACE COOLERS** shall not be used to achieve compliance with this section.

**SECTION R309 GARAGES AND CARPORTS**

**R309.5 Fire Sprinklers. DELETE THIS SUBSECTION IN ITS ENTIRETY.**

**SECTION R310 EMERGENCY ESCAPE AND RESCUE OPENINGS**

**R310.4 Bars, grilles, covers and screens.** Where bars, grilles, covers, screens or similar devices are placed over emergency escape and rescue openings, area wells, or window wells, the minimum net clear opening size shall comply with Sections R310.2.1 through R310.2.3 and such devices shall be releasable or removable from the inside without the use of a key, tool, special knowledge or force greater than that required for the normal operation of the escape and rescue opening. **THE DWELLING SHALL BE EQUIPPED WITH SMOKE ALARMS INSTALLED IN ACCORDANCE WITH SECTION R314.**

**SECTION R313 AUTOMATIC FIRE SPRINKLER SYSTEMS**

**DELETE THIS SECTION IN ITS ENTIRETY.**

**SECTION R322 FLOOD-RESISTANT CONSTRUCTION**

**R322.1 General.** Buildings and structures constructed in whole or in part in flood hazard areas (including A or V Zones) ~~as established in Table R301.2(1), and substantial improvement and repair of substantial damage of buildings and structures in hazard areas,~~ shall be designed and constructed in accordance with this section **THE REGULATIONS OF THE MARICOPA COUNTY FLOOD CONTROL DISTRICT.** Buildings and structures that are located in more than one flood hazard area shall ~~comply with the provisions associated with the most restrictive flood~~

hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

## **SECTION R328 FIREPLACE RESTRICTIONS**

**RESTRICTIONS SHALL BE PURSUANT TO MARICOPA COUNTY AIR QUALITY DEPARTMENT REQUIREMENTS.**

## **SECTION R403 FOOTINGS**

**R403.1.1 Minimum size.** Minimum sizes for concrete and masonry footings shall be set forth in Table R403.1 and Figure R403.1(1). The footing width, W, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be at least 6 inches (152 mm) in thickness, T. Footing projections, P, shall be at least 2 inches (51 mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for wood foundations shall be in accordance with the details set forth in Section R403.2 and Figures R403.1.(2) and R403.1(3).

**EXCEPTION: FOR ENCLOSURE OF EXISTING CARPORT AND PATIO COVERS, NON-BEARING WOOD FRAMED EXTERIOR WALLS WITHIN THE PROJECTION OF THE EXISTING ROOF MAY BE SUPPORTED ON AN EXISTING, UNCRACKED CONCRETE SLAB. THE MINIMUM SLAB THICKNESS SHALL BE 3.5 INCHES AND THE CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF R317 FOR PROTECTION AGAINST DECAY.**

## **SECTION R502 WOOD FLOOR FRAMING**

**R502.3.1 Sleeping areas and attic joists.** Table R502.3.1(1 2) shall be used to determine the maximum allowable span of floor joists that support sleeping areas and attics that are accessed by means of a fixed stairway in accordance with Section R311.7 provided that the design live load does not exceed ~~30~~ **40** pounds per square foot (~~1.44~~**1.92** kPa). The allowable span of ceiling joists that support attics used for limited storage or no storage shall be determined in accordance with Section R802.4.

## **SECTION N1101 GENERAL**

**N1101.1 Scope.** This chapter regulates the energy efficiency for the design and construction of buildings regulated by this code. **GROUP R-2 WHEN DEFINED AS A RESIDENTIAL BUILDING BY SECTION R202, SHALL HAVE THE OPTION OF COMPLYING UNDER THE COMMERCIAL PROVISIONS OF THE CODE, REGARDLESS OF HEIGHT. ONCE DEFINED AS SUCH ON THE SUBMITTAL DOCUMENTS, ALL COMPONENTS OF THE COMMERCIAL PROVISIONS SHALL BE FOLLOWED.**

**N1103.3 Ducts.** Ducts and air handlers shall be in accordance with Sections N1103.2.1 through N1103.2.3.

**N1103.3.1 Insulation (Prescriptive).** Supply ducts in attics shall be insulated to a minimum of R-8. Ducts in floor trusses shall be insulated to a minimum of R-6. ~~Supply and return ducts in attics shall be insulated to an R-value of not less than R-8 for ducts 3 inches (76 mm) in diameter and larger and not less than R-6 for ducts smaller than 3 inches (76 mm) in diameter. Supply and return ducts in other portions of the building shall be insulated to not~~

~~less than R-6 for ducts 3 inches (76 mm) in diameter and to not less than R-4.2 for ducts smaller than 3 inches (76.2 mm) in diameter.~~

**Exceptions:** Ducts or portions thereof located completely inside the building thermal envelope.

- 1. DUCTS OR PORTIONS THEREOF LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE.**
- 2. SUPPLY DUCTS MAY BE INSULATED TO A MINIMUM OF R-6 WHEN ONE OR MORE OF THE FOLLOWING CONDITIONS ARE MET;**
  - 2.1 MINIMUM SEER RATING OF SPACE HEATING/COOLING SYSTEM IS INCREASED TO 15.**
  - 2.2 MAXIMUM U-FACTOR IS DECREASED TO 0.35 AND MAXIMUM SHGC IS DECREASED TO 0.22 FOR ALL FENESTRATION PRODUCTS.**
  - 2.3 RESIDENTIAL BUILDINGS THAT MEET THE REQUIREMENTS OF SECTIONS R102.1.1 OR R405.**
  - 2.4 RESIDENTIAL BUILDINGS WITH ATTIC RADIANT BARRIERS IN ACCORDANCE WITH ASTM C1313, INSTALLED IN ACCORDANCE WITH ASTM C1743.**

## **SECTION N1103 (R403) SYSTEMS**

~~N1103.10.3 Covers~~ **VARIABLE SPEED POOL PUMPS.** ~~Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover or other approved vapor-retardant means.~~ **MOTORS WITH A TOTAL HORSEPOWER OF ONE OR MORE FOR POOLS AND IN-GROUND PERMANENTLY INSTALLED SPAS SHALL HAVE THE CAPABILITY OF OPERATING AT TWO OR MORE SPEEDS WITH A LOW SPEED HAVING A ROTATION RATE THAT IS NO MORE THAN ONE-HALF OF THE MOTOR'S MAXIMUM ROTATION RATE AND SHALL BE OPERATED WITH A PUMP CONTROL WITH THE CAPABILITY OF OPERATING THE PUMP AT TWO OR MORE SPEEDS. RESIDENTIAL POOL PUMP MOTOR CONTROLS THAT ARE SOLD FOR USE WITH A TWO OR MORE SPEED MOTOR SHALL HAVE A DEFAULT CIRCULATION SPEED SETTING NO MORE THAN ONE-HALF OF THE MOTOR'S MAXIMUM ROTATION RATE. ANY HIGH SPEED OVERRIDE CAPABILITY SHALL BE FOR A TEMPORARY PERIOD NOT TO EXCEED ONE TWENTY-FOUR HOUR CYCLE WITHOUT RESETTING TO THE DEFAULT SETTING.**

~~Exception: Where more than 75 percent of the energy for heating, computed over an operation season of not less than three months, is from a heat pump or an on-site renewable energy system, covers or other vapor-retardant means shall not be required.~~

## **SECTION P2904 DWELLING UNIT FIRE SPRINKLER SYSTEMS**

**DELETE SECTION IN ITS ENTIRETY.**

## **SECTION E3908 GROUNDING**

**E3908.8 Types of equipment grounding conductors.** The equipment grounding conductor run with or enclosing the circuit conductors shall be one or more or a combination of

**OPTIONS ONE THROUGH EIGHT IN E3908.8 WITH THE FOLLOWING MODIFICATION TO OPTION FOUR:**

- 4. Electrical metallic tubing WITH AN ADDITIONAL EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH TABLE E3908.12.**

**Appendix E**

**Local Amendment**

**DELETE THIS APPENDIX IN ITS ENTIRETY AND REPLACE AS FOLLOWS:**

**MANUFACTURED HOUSING USED AS DWELLINGS SHALL CONFORM TO THE ARIZONA DEPARTMENT OF HOUSING'S MANUFACTURED HOUSING & BUILDING DIVISION REGULATIONS.**

**Appendix I**

**Local Amendment**

**DELETE THIS APPENDIX IN ITS ENTIRETY AND REPLACE AS FOLLOWS:**

**PRIVATE SEWAGE DISPOSAL SYSTEMS SHALL CONFORM TO THE ARIZONA DEPARTMENT OF HOUSING'S MANUFACTURED HOUSING & BUILDING DIVISION REGULATIONS.**

**Appendix K**

**SOUND TRANSMISSION**

**SECTION AK102 AIRBORNE SOUND**

**AK102.2. SOUND ATTENUATION - GENERAL. CONSTRUCTION OUTSIDE THE AREAS DESIGNATED AS HAVING A DAY NIGHT AVERAGE SOUND LEVEL 65 DECIBELS OR HIGHER AS DETERMINED BY THE USE OF THE 1988 NOISE CONTOUR LINES DEVELOPED BY THE MARICOPA COUNTY ASSOCIATION OF GOVERNMENTS (MAG) SHALL BE DEEMED TO HAVE ACHIEVED THE INTERIOR NOISE LEVEL OF 45 DECIBELS SPECIFIED IN ARS 28-8482 WHEN THE RESIDENCES ARE CONSTRUCTED USING ONE OF THE FOLLOWING METHODS:**

**1. PRESCRIPTIVE METHOD:**

**1.1 EXTERIOR WALL PENETRATIONS BY PIPE DUCTS OR CONDUITS SHALL BE SEALED.**

**1.2 MAIL BOXES SHALL NOT BE USED THROUGH THE DOOR OR WALL.**

**1.3 WINDOWS SHALL HAVE 2 PANES OF GLASS AND A SOUND TRANSMISSION RATING OF STC-22. ALL OPERABLE WINDOWS SHALL BE WEATHER STRIPPED AND AIR TIGHT IN ACCORDANCE WITH ASTM E283-04 STANDARD. PERIMETER WINDOW FRAMES SHALL BE SEALED.**

**1.4 ALL EXTERIOR SIDE HINGE DOORS SHALL BE SOLID CORE WOOD OR INSULATED HOLLOW METAL, AT LEAST 1", INCHES THICK AND FULLY WEATHER STRIPPED. ALL EXTERIOR DOORS OTHER THAN SIDE HINGE DOORS SHALL BE SOLID WOOD, FOAM FILLED FIBERGLASS OR METAL CONSTRUCTION.**

**1.5 FIREPLACES SHALL BE PROVIDED WITH WELL-FITTING DAMPERS.**

**1.6 EXTERIOR WALLS SHALL ACHIEVE A MINIMUM OVERALL THERMAL RESISTANCE RATING OF 18. (EXTERIOR WALLS SHALL BE AT LEAST FOUR INCHES IN NOMINAL THICKNESS AND SHALL BE FINISHED ON THE OUTSIDE WITH BLOCK, SIDING, SHEATHING, OR STUCCO ON ONE INCH STYROFOAM. A MINIMUM OF R-13 FIBERGLASS OR CELLULOSE INSULATION SHALL BE INSTALLED CONTINUOUSLY THROUGHOUT THE CAVITY SPACE WITHIN THE WALL.)**

**1.7 ALL ROOF SPACES SHALL ACHIEVE A MINIMUM OVERALL THERMAL RESISTANCE RATING OF 30.**

**2. PERFORMANCE METHOD:**

**A CERTIFIED STATEMENT BY A LICENSED ARCHITECT OR ENGINEER CERTIFYING THAT THE RESIDENCE ACHIEVES THE REQUIREMENT OF A MAXIMUM INTERIOR NOISE LEVEL OF 45 DECIBELS. THE CERTIFIED STATEMENT SHALL INCLUDE TESTING AND ANALYSIS DOCUMENTATION SUPPORTING THE STATEMENT.**

**AK102.2.1 SOUND ATTENUATION WITHIN THE 65 DECIBEL CONTOUR. CONSTRUCTION INSIDE THE AREAS DESIGNATED AS HAVING A DAY-NIGHT AVERAGE SOUND LEVEL 65 DECIBELS AS DETERMINED BY THE USE OF THE 1988 NOISE CONTOUR LINES DEVELOPED BY THE MARICOPA COUNTY ASSOCIATION OF GOVERNMENTS SHALL BE DEEMED TO HAVE ACHIEVED THE INTERIOR NOISE LEVEL OF 45 DECIBELS SPECIFIED IN ARS 28-8482 WHEN THE RESIDENCES ARE CONSTRUCTED USING ONE OF THE FOLLOWING METHODS:**

**1. PRESCRIPTIVE METHOD:**

**BUILDING SYSTEMS AND COMPONENTS THAT COMPLY WITH THE MARICOPA COUNTY ASSOCIATION OF GOVERNMENTS 2013 BUILDING CODE AMENDMENTS AND STANDARDS MANUAL, SECTION 1229, APPENDIX A.**

**2. PERFORMANCE METHOD:**

**A CERTIFIED STATEMENT BY A LICENSED ARCHITECT OR ENGINEER CERTIFYING THAT THE RESIDENCE ACHIEVES THE REQUIREMENT OF A MAXIMUM INTERIOR NOISE LEVEL OF 45 DECIBELS. THE CERTIFIED STATEMENT SHALL INCLUDE TESTING AND ANALYSIS DOCUMENTATION SUPPORTING THE STATEMENT.**

**AMENDMENTS TO THE  
ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES  
ICC/ANSI 117.1-2009**

**SECTION 502 PARKING SPACES**

**502.7 Identification.** Where accessible parking spaces are required to be identified by signs, the signs shall include the International Symbol of Accessibility complying with Section 703.6.3.1 **OR THE ACCESSIBILITY ICON COMPLYING WITH SECTION 703.6.3.2.** Signs identifying van parking spaces shall contain the designation "van accessible." Such signs shall be 60 inches (1525 mm) minimum above the floor of the parking space, measured to the bottom of the sign.

**SECTION 703 SIGNS**

**703.6.3.1 International Symbol of Accessibility.** The International Symbol of Accessibility shall comply with Figure 703.6.3.1.



**FIG. 703.6.3.1 INTERNATIONAL SYMBOL OF ACCESSIBILITY**

**703.6.3.2 Accessibility Icon.** The Accessibility Icon shall comply with Figure 703.6.3.2.



**FIG. 703.6.3.2 ACCESSIBILITY ICON**

**AMENDMENTS TO THE  
2018 INTERNATIONAL MECHANICAL CODE**

**SECTION 109 MEANS OF APPEAL**

~~[A] 109.1 Application for appeal~~ **GENERAL. APPEALS SHALL BE IN ACCORDANCE WITH SECTION 96.01 OF WITH THE EL MIRAGE MUNICIPAL CODE.** A person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply; or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.

~~[A] 109.1.1 Limitation of authority. The board of appeals shall not have authority relative to interpretation of the administration of this code nor shall such board be empowered to waive requirements of this code.~~

**SUBSECTIONS 109.2 THROUGH 109.7 ARE DELETED IN THEIR ENTIRETY.**

**SECTION 307 CONDENSATE DISPOSAL**

**307.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. **NONMETALLIC PIPING SHALL NOT BE INSTALLED IN EXPOSED LOCATIONS.** All components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the International Plumbing Code relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

**SECTION 309 TEMPERATURE CONTROL**

~~[B] 309.1 Space heating systems~~ **HEATING AND COOLING SYSTEMS.** Interior **HABITABLE** spaces intended for human occupancy shall be provided with active or passive space-heating **AND SPACE-COOLING** systems capable of maintaining a **MINIMUM** indoor temperature ~~S of not less than~~ **BETWEEN 68 70 °F (20 21 °C) AND 90 °F (32 °C)** at a point 3 feet (914 mm) above the floor on the design heating day. The installation of portable space heaters **OR COOLERS** shall not be used to achieve compliance with this section.

**SECTION 403 MECHANICAL VENTILATION**

**403.3.1.5 Balancing.** The ventilation air distribution system shall be provided with means to adjust the system to achieve at least the minimum ventilation airflow rate as required by Sections 403.3 and 403.4. Ventilation systems shall be balanced Sections 403.3 and 403.4. by an approved method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by this code. **A FINAL REPORT SHALL BE PROVIDED TO THE ENGINEER OF RECORD AND THE MECHANICAL INSPECTOR.**

**EXCEPTION: RESIDENTIAL OCCUPANCIES SHALL BE EXEMPT FROM THIS PROVISION.**

## **SECTION 407 AMBULATORY CARE FACILITIES AND GROUP I-2 OCCUPANCIES**

**407.1 General.** Mechanical ventilation for ambulatory care facilities and Group I-2 occupancies shall be designed and installed in accordance with this code and ASHRAE 170.

**407.1.1 MECHANICAL SYSTEMS DESIGNED AND INSTALLED IN ACCORDANCE WITH IMC 407.1 AND ASHRAE 170-2017 SHALL BE VERIFIED BY A QUALIFIED THIRD PARTY SPECIAL INSPECTOR. THE SPECIAL INSPECTOR/TESTING AGENCY SHALL BE AN INDEPENDENT THIRD PARTY INDIVIDUAL OR FIRM AND SHALL NOT BE THE INSTALLING CONTRACTOR. A REPORT SHALL BE GENERATED BY THE THIRD PARTY INDIVIDUAL OR FIRM SHOWING COMPLIANCE. SPECIAL INSPECTIONS SHALL BE AS SPECIFIED IN CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE AS AMENDED.**

## **SECTION 408 MARIJUANA RELATED OCCUPANCIES**

**408.1 GENERAL. ANY BUILDING USED TO CULTIVATE, PRODUCE, INFUSE OR DISPENSE MARIJUANA SHALL BE DESIGNED SUCH THAT THERE SHALL BE NO EMISSION OF DUST, FUMES, VAPORS, OR ODORS INTO THE ENVIRONMENT FROM THE PREMISE. A VENTILATION SYSTEM SHALL BE DESIGNED TO PREVENT THE DISTRIBUTION OF ODORS TO OTHER OCCUPIED PARTS OF THE BUILDING OR ADJACENT PROPERTIES. DESIGN OF THE ODOR CONTROL SYSTEM SHALL BE BASED ON ACCEPTED ENGINEERING PRACTICES. ALL EQUIPMENT AND FILTER MEDIA SHALL BE LISTED AND LABELED FOR THE APPLICATION. EXHAUST SYSTEMS USED IN ODOR CONTROL SYSTEMS SHALL MEET THE REQUIREMENTS OF SECTION 501.**

**408.1.1 EXHAUST OUTLETS. THE TERMINATION POINT FOR EXHAUST OUTLETS SHALL BE IN ACCORDANCE WITH SECTION 501.3. EXHAUST FROM CULTIVATION AND PRODUCTION FACILITIES SHALL BE IN ACCORDANCE WITH SECTION 501.3.1(2) AND FOR DISPENSARIES IN ACCORDANCE WITH SECTION 501.3.1(3).**

## **SECTION 502 REQUIRED SYSTEMS**

**502.14 Motor vehicle operation.** In areas where motor vehicles operate, mechanical ventilation shall be provided in accordance with Section 403. Additionally, areas in which stationary motor vehicles are operated shall be provided with a *source capture system* that connects directly to the motor vehicle exhaust systems. ~~Such system shall be engineered by a registered design professional or shall be factor-built equipment designed and sized for the purpose.~~ **MAKEUP AIR FOR THE REQUIRED EXHAUST SYSTEMS IN AREAS WHERE MOTOR VEHICLES OPERATE SHALL BE PROVIDED THROUGH PERMANENT UNOBSTRUCTED OPENINGS TO THE OUTDOORS, SUCH AS LOUVERS AND GRILLS. MECHANICAL EQUIPMENT AND LOUVERS USED FOR MAKEUP AIR PURPOSES SHALL BE ELECTRICALLY INTERLOCKED WITH THE EXHAUST SYSTEM.**

### **Exceptions:**

1. This section shall not apply where the motor vehicles being operated or repaired are electrically powered.

2. This section shall not apply to one- and two-family dwellings.
3. This section shall not apply to motor vehicle service areas where engines are operated inside the building only for the duration necessary to move the motor vehicles in and out of the building.

**502.21 STORAGE AND USE OF LIQUID CARBON DIOXIDE SYSTEMS - MUST CONFORM TO THE 2018 IFC REQUIREMENTS.**

**SECTION 928 EVAPORATIVE COOLING EQUIPMENT**

**928.1 General.** Evaporative cooling equipment shall:

1. Be installed in accordance with the manufacturer's instructions.
2. Be installed on level platforms in accordance with Section 304.10. **AN EVAPORATIVE COOLER SUPPORTED BY THE BUILDING STRUCTURE SHALL BE INSTALLED ON A SUBSTANTIAL LEVEL BASE AND SHALL BE SECURED DIRECTLY OR INDIRECTLY TO THE BUILDING STRUCTURE BY SUITABLE MEANS TO PREVENT DISPLACEMENT OF THE COOLER. MODIFICATIONS MADE TO THE SUPPORTING FRAMEWORK OF BUILDINGS AS A RESULT OF THE INSTALLATION SHALL BE MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE AS AMENDED.**
3. Have openings in exterior walls or roofs flashed in accordance with the International Building Code as amended.
4. Be provided with potable water backflow protection in accordance with Section 608 of the International Building Code.
5. Have air intake opening locations in accordance with Section 401.4.
6. **A PERMANENT RELIEF OPENING OR OTHER ENGINEERED DESIGN SUFFICIENT TO ASSURE POSITIVE AIRFLOW SHALL BALANCE INTAKE AIR.**
7. **OUTSIDE AIR SHALL BE PROVIDED AS SPECIFIED IN SECTION 403.2.**
8. **AIR DUCTS AND DAMPERS, WHICH ARE A PORTION OF AN EVAPORATIVE COOLING SYSTEM, SHALL COMPLY WITH CHAPTER 6.**
9. **OVERFLOW DRAINS SHALL BE PROVIDED THAT DISCHARGE TO AN APPROVED DISPOSAL LOCATION.**

**SECTION 930 WOODSTOVE/FIREPLACE INSTALLATION**

**DEFINITIONS. FOR PURPOSES OF THIS SECTION, THE FOLLOWING WORDS AND TERMS SHALL HAVE THE MEANING ASCRIBED THERETO:**

**FIREPLACE: A BUILT-IN-PLACE MASONRY HEARTH AND FIRE CHAMBER OR A FACTORY-BUILT APPLIANCE, DESIGNED TO BURN SOLID FUEL OR TO ACCOMMODATE GAS OR ELECTRIC LOG INSERT OR SIMILAR DEVICE, AND WHICH IS INTENDED FOR OCCASIONAL RECREATIONAL OR AESTHETIC USE, NOT FOR COOKING, HEATING, OR INDUSTRIAL PROCESSES.**

**SOLID FUEL: INCLUDES, BUT IS NOT LIMITED TO, WOOD, COAL, OR OTHER NON-GASEOUS OR NON-LIQUID FUELS, INCLUDING THOSE FUELS DEFINED BY THE MARICOPA COUNTY AIR POLLUTION CONTROL OFFICER AS "INAPPROPRIATE FUEL" TO BURN IN RESIDENTIAL WOOD BURNING DEVICES.**

**WOODSTOVE: A SOLID-FUEL BURNING HEATING APPLIANCE INCLUDING A PELLET STOVE, WHICH IS EITHER FREESTANDING OR DESIGNED TO BE INSERTED INTO A FIREPLACE.**

**930.2 GENERAL. IN ACCORDANCE WITH MARICOPA COUNTY REGULATIONS, ON OR AFTER DECEMBER 31, 1998, NO**

**PERSON, FIRM OR CORPORATION SHALL CONSTRUCT OR INSTALL A FIREPLACE OR A WOOD STOVE, AND THE BUILDING OFFICIAL SHALL NOT APPROVE OR ISSUE A PERMIT TO CONSTRUCT OR INSTALL A FIREPLACE OR A WOOD STOVE, UNLESS THE FIREPLACE OR WOOD STOVE COMPLIES WITH ONE OF THE FOLLOWING:**

- 1. A FIREPLACE WHICH HAS A PERMANENTLY INSTALLED GAS OR ELECTRIC LOG INSERT;**
- 2. A FIREPLACE, WOOD STOVE OR OTHER SOLID FUEL BURNING APPLIANCE WHICH HAS BEEN CERTIFIED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AS CONFORMING TO 40 CODE OF FEDERAL REGULATIONS PART 60, SUBPART AAA;**
- 3. A FIREPLACE, WOODSTOVE OR OTHER SOLID FUEL BURNING APPLIANCE THAT HAS BEEN TESTED AND LISTED BY A NATIONALLY RECOGNIZED TESTING AGENCY TO MEET PERFORMANCE STANDARDS EQUIVALENT TO THOSE ADOPTED BY 40 CODE OF FEDERAL REGULATIONS PART 60, SUBPART AAA;**
- 4. A FIREPLACE, WOOD STOVE OR OTHER SOLID FUEL BURNING APPLIANCE WHICH HAS BEEN DETERMINED BY THE MARICOPA COUNTY AIR POLLUTION CONTROL OFFICER TO MEET PERFORMANCE STANDARDS EQUIVALENT TO THOSE ADOPTED BY 40 CODE OF FEDERAL REGULATIONS PART 60, SUBPART AAA, AS IN EFFECT ON JULY 1, 1990.**
- 5. A FIREPLACE WHICH HAS A PERMANENTLY INSTALLED WOOD STOVE INSERT WHICH COMPLIES WITH SUBPARAGRAPH 2, 3, OR 4 ABOVE.**

**EXCEPTIONS: THE FOLLOWING INSTALLATIONS ARE NOT REGULATED AND ARE NOT PROHIBITED BY THIS SECTION:**

- 1. FURNACES, BOILERS, INCINERATORS, KILNS, AND OTHER SIMILAR SPACE HEATING OR INDUSTRIAL PROCESS EQUIPMENT.**
- 2. COOK STOVES, BARBECUE GRILLS, AND SIMILAR APPLIANCES DESIGNED PRIMARILY FOR COOKING.**
- 3. FIRE PITS, BARBECUE GRILLS, AND OTHER OUTDOOR FIREPLACES.**

**AMENDMENTS TO THE  
2018 INTERNATIONAL PLUMBING CODE**

**APPENDICES B, C and E ARE EXPRESSLY ADOPTED AND INCORPORATED HEREIN BY THIS REFERENCE.**

**SECTION 109 MEANS OF APPEAL**

**[A] 109.1 Application for appeal GENERAL. APPEALS SHALL BE IN ACCORDANCE WITH THE EL MIRAGE MUNICIPAL CODE.** ~~Any person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply; or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.~~

**SUBSECTIONS 109.2 THROUGH 109.7 ARE DELETED IN THEIR ENTIRETY.**

**SECTION 202 GENERAL DEFINITIONS**

**GREASE INTERCEPTOR**

**Gravity.** Plumbing appurtenances of not less than 500 gallons (1893 L) capacity that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Separation is accomplished by gravity during a retention time of not less than 30 minutes **APPROVED BY THE AUTHORITY HAVING JURISDICTION.**

**GREASE REMOVAL DEVICE, AUTOMATIC (GRD).** A plumbing appurtenance that is installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Such a device operates on a time-or event-controlled basis and has the ability to remove free-floating fats, oils and grease automatically without intervention from the use except for maintenance. **THESE DEVICES MUST BE ABLE TO PERFORM AS A GRAVITY INTERCEPTOR IF MECHANICAL OR ELECTRICAL POWER IS LOST AND PROVIDE CONTINUOUS SEPARATION.**

**SECTION 410 DRINKING FOUNTAINS**

**410.2 Small occupancies.** Drinking fountains shall not be required for an occupant load of 50 or fewer.

**410.4 Substitution.** Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other occupancies, where drinking fountains are required, **WATER COOLERS OR BOTTLED** water dispensers shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains. **IN OTHER OCCUPANCIES, WHERE DRINKING FOUNTAINS ARE REQUIRED, BOTTLED WATER DISPENSERS OR WATER COOLERS SHALL BE PERMITTED TO BE SUBSTITUTED.**

## **SECTION 1003 INTERCEPTORS AND SEPARATORS**

**1003.2 Approval.** The size, type, and location of each interceptor and of each separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of this section based on the anticipated conditions of use **AND PURSUANT TO THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.** Wastes that do not require treatment or separation shall not be discharged into any interceptor or separator.

## **SECTION 1106 SIZE OF CONDUCTORS, LEADERS AND STORM DRAINS**

**1106.1 General.** The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on the 100 year hourly rainfall rate indicated in Figure 1106.1 or on other rainfall rates determined from approved local weather data **AN HOURLY RAINFALL RATE OF THREE (3) INCHES PER HOUR.**

## **AMENDMENTS TO THE 2018 INTERNATIONAL FUEL GAS CODE**

### **SECTION 109 MEANS OF APPEAL**

**[A] 109.1 Application for appeal GENERAL. APPEALS SHALL BE IN ACCORDANCE WITH THE EL MIRAGE MUNICIPAL CODE.** ~~A person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply; or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.~~

**SUBSECTIONS 109.2 THROUGH 109.7 ARE DELETED IN THEIR ENTIRETY.**

### **SECTION 404 (IFGC) PIPING SYSTEM INSTALLATION**

**404.12 Minimum burial depth.** Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade, ~~except as provided for in Section 404.12.1 for metal piping and 18 inches (457mm) for plastic piping.~~

## **AMENDMENTS TO THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE**

### **SECTION C101 SCOPE AND GENERAL REQUIREMENTS(COMMERCIAL)**

**C101.2 Scope.** This code applies to commercial buildings and the building sites and associated systems and equipment. **GROUP R-2 WHEN DEFINED AS A COMMERCIAL BUILDING BY SECTION C202, SHALL HAVE THE OPTION OF COMPLYING UNDER THE**

**RESIDENTIAL PROVISIONS OF THE CODE, REGARDLESS OF HEIGHT. ONCE DEFINED AS SUCH ON THE SUBMITTAL DOCUMENTS, ALL COMPONENTS OF THE RESIDENTIAL PROVISIONS SHALL BE FOLLOWED.**

#### **SECTION C109 BOARD OF APPEALS**

**C109.1 General. APPEALS SHALL BE IN ACCORDANCE WITH THE EL MIRAGE MUNICIPAL CODE.** ~~In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The Code Official shall be an ex officio member of said board but shall have no vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the Code Official.~~

**SUBSECTIONS 109.2 THROUGH 109.3 ARE DELETED IN THEIR ENTIRETY.**

#### **SECTION C401 GENERAL**

**C401.2 Application.** Commercial buildings shall comply with one of the following:

1. The requirements of ANSI/ASHRAE/IESNA 90.1.
2. The requirements of Sections C402 through C405 and C408. In addition, commercial buildings shall comply with Section C406 and tenant spaces shall comply with Section C406.1.1.
3. The requirements of Sections C402.5, C403.2, C403.3 through C403.3.2, C403.4 through C403.4.2.3, C403.5.5, C403.7, C403.8.1 through C403.8.4, C403.10.1 through C403.10.3, C403.11, C403.12, C404, C405, and C407 and C408. The building energy cost shall be equal to or less than 85 percent of the standard reference design building.

**4. COMPLIANCE WITH THE PROVISIONS OF SECTION C408 ARE OPTIONAL.**

#### **SECTION R101 SCOPE AND GENERAL REQUIREMENTS**

**R101.2 Scope.** This code applies to *residential buildings* and the *building sites* and associated systems and equipment. **GROUP R-2 WHEN DEFINED AS A RESIDENTIAL BUILDING BY SECTION R202, SHALL HAVE THE OPTION OF COMPLYING UNDER THE COMMERCIAL PROVISIONS OF THE CODE, REGARDLESS OF HEIGHT. ONCE DEFINED AS SUCH ON THE SUBMITTAL DOCUMENTS, ALL COMPONENTS OF THE COMMERCIAL PROVISIONS SHALL BE FOLLOWED.**

#### **SECTION R109 BOARD OF APPEALS**

**R109.1 General. APPEALS SHALL BE IN ACCORDANCE WITH SECTION 96.01 OF THE EL MIRAGE MUNICIPAL CODE.** ~~In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The Code Official shall be an ex officio member of said board but shall have no vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The~~

~~board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the Code Official.~~

**SUBSECTIONS 109.2 THROUGH 109.3 ARE DELETED IN THEIR ENTIRETY**

**SECTION R403 SYSTEMS**

**R403.3 Ducts.** Ducts and air handlers shall be in accordance with Sections R403.3.1 through R403.3.7.

**R403.3.1 Insulation (Prescriptive). SUPPLY DUCTS IN ATTICS SHALL BE INSULATED TO A MINIMUM OF R-8. DUCTS IN FLOOR TRUSSES SHALL BE INSULATED TO A MINIMUM OF R-6.** ~~Supply and return ducts in attics shall be insulated to an R-value of not less than R-8 for ducts 3 inches (76 mm) in diameter and larger and not less than R-6 for ducts smaller than 3 inches (76 mm) in diameter. Supply and return ducts in other portions of the building shall be insulated to not less than R-6 for ducts 3 inches (76 mm) in diameter and not less than R-4.2 for ducts smaller than 3 inches (76 mm) in diameter.~~

**Exceptions:** Ducts or portions thereof located completely inside the *building thermal envelope*.

- 1. DUCTS OR PORTIONS THEREOF LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE.**
- 2. SUPPLY DUCTS MAY BE INSULATED TO A MINIMUM OF R-6 WHEN ONE OR MORE OF THE FOLLOWING CONDITIONS ARE MET;**
  - 2.1 MINIMUM SEER RATING OF SPACE HEATING/COOLING SYSTEM IS INCREASED TO 15.**
  - 2.2 MAXIMUM U-FACTOR IS DECREASED TO 0.35 AND MAXIMUM SHGC IS DECREASED TO 0.22 FOR ALL FENESTRATION PRODUCTS.**
  - 2.3 WALL CAVITY INSULATION MINIMUM R-VALUE IS INCREASED TO R-19.**
  - 2.4 RESIDENTIAL BUILDINGS THAT MEET THE REQUIREMENTS OF SECTIONS R102.1.1 OR R405.**

**Section R403.10.3 ~~Covers~~ VARIABLE SPEED POOL PUMPS.**

~~Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover or other approved vapor-retardant means.~~

~~Exception: Where more than 75 percent of the energy for heating, computed over an operation season of not less than three calendar months, is from a heat pump or an on-site renewable energy system, covers or other vapor-retardant means shall not be required.~~

**MOTORS WITH A TOTAL HORSEPOWER OF ONE OR MORE FOR POOLS AND IN-GROUND PERMANENTLY INSTALLED SPAS SHALL HAVE THE CAPABILITY OF OPERATING AT TWO OR MORE SPEEDS WITH A LOW SPEED HAVING A ROTATION**

**RATE THAT IS NO MORE THAN ONE-HALF OF THE MOTOR'S MAXIMUM ROTATION RATE AND SHALL BE OPERATED WITH A PUMP CONTROL WITH THE CAPABILITY OF OPERATING THE PUMP AT TWO OR MORE SPEEDS. RESIDENTIAL POOL PUMP MOTOR CONTROLS THAT ARE SOLD FOR USE WITH A TWO OR MORE SPEED MOTOR SHALL HAVE A DEFAULT CIRCULATION SPEED SETTING NO MORE THAN ONE-HALF OF THE MOTOR'S MAXIMUM ROTATION RATE. ANY HIGH SPEED OVERRIDE CAPABILITY SHALL BE FOR A TEMPORARY PERIOD NOT TO EXCEED ONE TWENTY-FOUR HOUR CYCLE WITHOUT RESETTING TO THE DEFAULT SETTING.**

**AMENDMENTS TO THE  
2018 INTERNATIONAL EXISTING BUILDING CODE**

**SECTION 112 BOARD OF APPEALS**

**[A] 112.1 General. APPEALS SHALL BE IN ACCORDANCE WITH SECTION 96.01 OF THE EL MIRAGE MUNICIPAL CODE.** ~~In order to hear and decide appeals of orders, decisions, or determinations made by the Code Official relative to the application and interpretation of this Code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.~~

**SUBSECTIONS 112.2 THROUGH 112.3 ARE DELETED IN THEIR ENTIRETY**

**AMENDMENTS TO THE  
2018 INTERNATIONAL GREEN CONSTRUCTION CODE**

**SECTION 101 GENERAL**

**101 General. THE USE OF THIS CODE IS OPTIONAL, UNLESS SPECIFICALLY REQUIRED THROUGH ORDINANCE BY THE CITY OF EL MIRAGE.** This code is an overlay document to be used in conjunction with the other codes and standards adopted by the jurisdiction. This code is not intended to be used as a standalone construction regulation document and permits are not to be issued under this code. This code is not intended to abridge or supersede safety, health or environmental requirements under other applicable codes or ordinances.

**AMENDMENTS TO THE  
2018 INTERNATIONAL PROPERTY MAINTENANCE CODE**

**101.1 Title.** These regulations shall be known as the International Property Maintenance Code of ~~[NAME OF JURISDICTION]~~ **THE CITY OF EL MIRAGE** hereinafter referred to as “this code.”

**SECTION 111 MEANS OF APPEAL**

**THE APPEAL PROCESS SHALL BE AS OUTLINED IN SECTION 96.01 OF THE EL MIRAGE MUNICIPAL CODE.**

**THE REMAINDER OF THIS SECTION IS DELETED IN ITS ENTIRETY.**

**SECTION 303 SWIMMING POOLS, SPAS AND HOT TUBS**

**303.2 Enclosures.**

**THIS SUBSECTION IS DELETED IN ITS ENTIRETY.**

**AMENDMENTS TO THE  
2017 NATIONAL ELECTRICAL CODE**

**Article 250 – Grounding and Bonding**

**250.118 Types of Equipment Grounding Conductors.**

Each equipment grounding conductor run with or enclosing the circuit conductors shall be one or more or a combination of the following:

- (1) A copper, aluminum, or copper-clad aluminum conductor. This conductor shall be solid or stranded; insulated, covered, or bare; and in the form of a wire or a busbar of any shape.
- (2) Rigid metal conduit.
- (3) Intermediate metal conduit.
- (4) Electrical metallic tubing **WITH AN ADDITIONAL EQUIPMENT GROUNDING CONDUCTOR.**
- (5) Listed flexible metal conduit meeting all the following conditions:
  - a. The conduit is terminated in listed fittings.
  - b. The circuit conductors contained in the conduit are protected by overcurrent devices rated at 20 amperes or less.
  - c. The combined length of flexible metal conduit and flexible metallic tubing and liquid tight flexible metal conduit in the same ground-fault current path does not exceed 1.8 m (6 ft).

d. If used to connect equipment where flexibility is necessary to minimize the transmission of vibration from equipment or to provide flexibility for equipment that requires movement after installation, an equipment grounding conductor shall be installed.

(6) Listed liquid tight flexible metal conduit meeting all the following conditions:

a. The conduit is terminated in listed fittings.

b. For metric designators 12 through 16 (trade sizes 3/8 through 1/2), the circuit conductors contained in the conduit are protected by overcurrent devices rated at 20 amperes or less.

c. For metric designators 21 through 35 (trade sizes 3/4 through 1-1/4), the circuit conductors contained in the conduit are protected by overcurrent devices rated not more than 60 amperes and there is no flexible metal conduit, flexible metallic tubing, or liquid tight flexible metal conduit in trade sizes metric designators 12 through 16 (trade sizes 3/8 through 1/2) in the ground-fault current path.

d. The combined length of flexible metal conduit and flexible metallic tubing and liquid tight flexible metal conduit in the same ground-fault current path does not exceed 1.8 m (6 ft).

e. If used to connect equipment where flexibility is necessary to minimize the transmission of vibration from equipment or to provide flexibility for equipment that requires movement after installation, an equipment grounding conductor shall be installed.

(7) Flexible metallic tubing where the tubing is terminated in listed fittings and meeting the following conditions:

a. The circuit conductors contained in the tubing are protected by overcurrent devices rated 20 amperes or less.

b. The combined length of flexible metal conduit and flexible metallic tubing and liquid tight flexible metal conduit in the same ground-fault current path does not exceed 1.8 m (6 ft).

(8) Armor of Type AC cable as provided in 320.108.

(9) The copper sheath of mineral-insulated, metal-sheathed cable.

(10) Type MC cable that provides an effective ground-fault current path in accordance with one or more of the following:

a. It contains an insulated or uninsulated equipment grounding conductor in compliance with 250.118(1)

b. The combined metallic sheath and uninsulated equipment grounding/bonding conductor of interlocked metal tape-type MC cable that is listed and identified as an equipment grounding conductor

c. The metallic sheath or the combined metallic sheath and equipment grounding conductors of the smooth or corrugated tube-type MC cable that is listed and identified as an equipment grounding conductor

(11) Cable trays as permitted in 392.10 and 392.60.

(12) Cable bus framework as permitted in 370.3.

(13) Other listed electrically continuous metal raceways and listed auxiliary gutters.

(14) Surface metal raceways listed for grounding.