



Building & Fire Code Update

John Sheffer

Deputy Director/Building Official

Shawn Alexander

Battalion Chief/Fire Marshal





Building & Fire Code Update

- International Code Council (**ICC**) publishes building and fire codes every 3 years
- These codes regulate all new construction and remodels
- Adopted in every state and most cities throughout the U.S.
- Mesa would be going from 2018 edition to 2024 edition (latest edition)





The ICC “Family” of Codes



Building



Existing Building



Residential



Fire



Mechanical



Electrical



Plumbing



Fuel/Gas



Energy



Pool



Update from 2018 to 2024 Codes

Code Edition Change Only

- Last update: February 2019
- No additional new permits
- No new permit fees

Benefits

- Most current codes available
- Address new technologies (i.e. Battery Energy Storage Systems)
- Increase City's Insurance Services Office Score
 - Potential insurance savings
- Consistency with other local cities



Local Adoption of 2024 Codes

ADOPTED

Avondale
Buckeye
Chandler
Phoenix
Tucson

IN PROCESS

Flagstaff
State (Fire Code)
Surprise



Local (Mesa) Amendments

Staff is proposing certain local (Mesa) amendments to the ICC codes

Examples:

- Fire department connections (specific to Mesa equipment)
- Reduced requirements for restrooms in small businesses

Local amendments are based on the following:

- Alignment with other local cities
- Recommendations from the development community
- Benefits to small businesses
- Mesa's Fire Department operations



Local (Mesa) Amendments

Mesa amendments that benefit small businesses:

- Separate Male & Female Restrooms: Not required for 25 occupants or less
- Drinking Fountains: Not required for 50 occupants or less
- Service Sinks: Not required for 100 occupants or less

ICC codes exempt these items for businesses with 15 occupants or less



Local (Mesa) Amendments

Water Conservation

- Sinks and Faucets: 2.2 gpm to 1.8 gpm
- Shower Heads: 2.5 gpm to 2.0 gpm
- Toilets: 1.6 gallons per flush to 1.28 gallons per flush

Public Input

- Measure setbacks from face of wall framing (not exterior)
- Guidelines for accessibility in houses (ADA)



Update from 2018 to 2024 Codes

Energy efficiency increase estimated at 7%

Return on Investment (ROI)

- Construction Cost: \$2,400 to \$3,100 (Based on 2,400 sqft two-story)
- Estimated Savings: \$446/yr
- ROI: Approx. 3-4 years

Sources: National Home Builders Association & International Code Council



2018 → 2024 Fire Code Changes

Significant Changes Related for Life Safety

- Revised Fire Sprinklers: No Longer Required in Restrooms at Parks & Golf Courses
- Revised Fire Fighter Air Replenishment Systems: No Longer Required for Mid-Rise
- New Carbon Monoxide Detection: Required if CO Producing Device Present
- New 3-D CAD Modeling: Required for Fire Department Operations



2018 → 2024 Fire Code Changes

New Requirements for Battery Energy Storage Systems (BESS)

- Latest edition of NFPA 855 Standard for the Installation of Stationary Energy Storage Systems (2023)
- Requirements for certain BESS to pass UL9540 or UL9540A testing
- 20-ft fire access road for every 300 linear ft of batteries
- 26-ft fire access road on one side of batteries if > 150 linear ft (26-ft width is for aerial fire suppression operations)



Public Outreach

Public Meetings

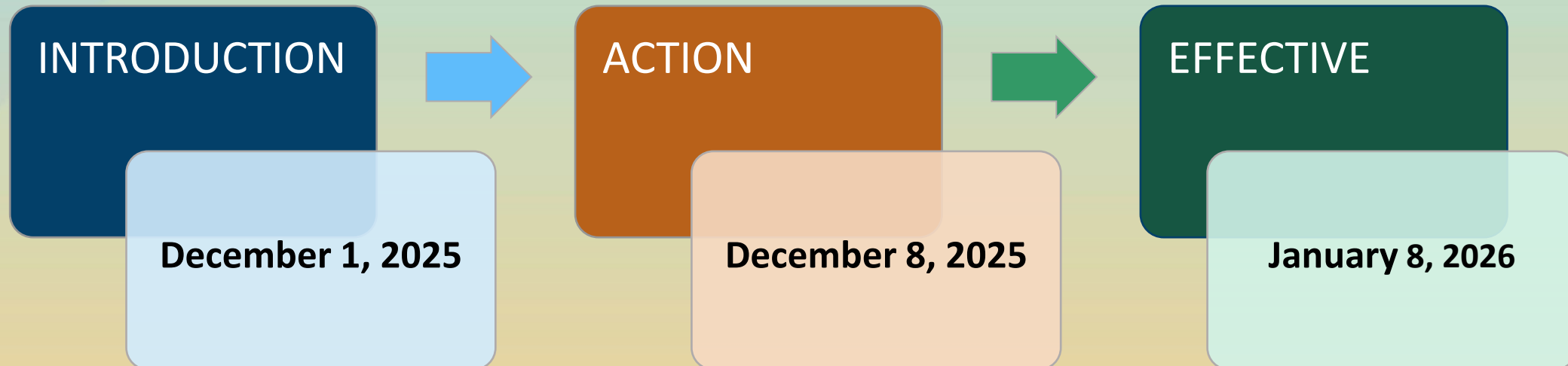
- Development Advisory Forum #1: May 1, 2025
- Development Advisory Forum #2: September 16, 2025
- Public Meeting: October 2, 2025

Coordination with Stakeholders

- Home Builders Association of Central Arizona (HBACA)
- Local Architects and Builders
- Salt River Project (SRP)
- Southwest Energy Efficiency Project (SWEEP)



Tentative Timeline





Recommendation: Adoption with local amendments



Questions?



Adoption Process (Backup Slide)

Effective Date:

January 8, 2026

Early Use of 2024 Codes:

Code modification (no fee)

Single-Family Standard
Plans:

Update affected sheets only - full plans not required (6-month window)

Projects Mid-Design:

90-day window after effective date

Subdivisions:

Each lot reviewed individually - Code edition will depend on submittal date