AHCDTC-2

OKLAHOMA

# Uniform Building Code Commission
# Technical Code Review Committee

## Code Change Proposal Form

**NOTE:** This form and any attachments hereto are subject to the Oklahoma Open Records Act and may be disbursed, upon request, without further notice to the submitter.

**INSTRUCTIONS:**

1. Please type or print clearly.
2. Form must be signed. Any forms that are not signed or filled out completely, may not be considered.
3. Each requested change must be on a separate form.
4. If the space to show the proposed change or supporting information is not big enough to show the entire change, write the words "See Attached" in the space provided and submit the change on a separate page or document.

**Contact Information:**


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City, State and Zip Oklahoma City, OK, 73106

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Phone Number 405 370 0684


**Financial Impacts:**

***Please provide the following information:***

Who will be impacted by this change, (i.e. contractors, business or homeowners, specific trades, etc.)?

This code change would reduce the life-cycle cost of fire suppression in small multifamily projects and allow builders and developers of three- to twelve-unit housing to bid more competitively for infill lots in many urban neighborhoods. The primary beneficiaries would be small-scale developers, local builders, and ultimately renters and entry-level buyers, because lower per-unit development costs make it feasible to deliver more units on scarce, well-located land—putting downward pressure on rents and sale prices over time. Local governments and school districts would also benefit: small multifamily typically produces higher assessed value per acre than detached housing, supporting stronger property tax revenue per parcel without requiring new greenfield infrastructure. Finally, the change would affect the fire service and residents citywide by increasing the share of households living in sprinkler-protected buildings, improving life safety while enabling reinvestment in older, higher-risk apartment stock.

What is the financial impact of this change?

Increase cost ☐ Decrease costs ☑ Keep Costs the Same ☐

What is the expected amount of the increase or decrease? $7,500 per unit

If this change increases the cost of construction, will it exceed $1,000,000 over the course of five years?

Yes ☐ No ☑

Explain the method used to determine the economic impact. Please provide the sources used to determine the impact, in the explanation.

A cost comparison for NFPA 13R and 13D systems for a small fourplex in Oklahoma City is attached. This comparison looks at lifecycle costs and includes operational cost which are divided by a discount rate to achieve a net present value. These cost will vary depending on municipality and project size.

**Code Change Information:**

Which code needs to be revised? International Building Code

Which part of the code needs to be revised?

Section 310.4 (A) Table _____ Figure _____ Page _____

**Proposed Change:**

Show the proposed new, revised, or deleted text in Legislative format. Line through text to be deleted and underline text to be added or revised.

Residential Group R-3 occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

~~Buildings that do not contain more than two dwelling units~~

Buildings that do not contain more than 12 dwelling units or a Fire Area greater than 9,000 square feet

Care facilities that provide accommodations for five or fewer persons receiving care

Congregate living facilities (nontransient) with 16 or fewer occupants

Boarding houses (nontransient)

Convents

Dormitories

Emergency services living quarters

Fraternities and sororities

Monasteries

Congregate living facilities (transient) with 10 or fewer occupants

Boarding houses (transient)

Lodging houses with five or fewer guest rooms

Hotels (nontransient) with five or fewer guest rooms

Motels (nontransient) with five or fewer guest rooms

## Supporting Information:

Please provide justification for the proposed change and clarify if it impacts life safety.

Under Oklahoma's adoption of the 2018 International Residential Code (IRC), the sprinkler provisions for one- and two-family dwellings were removed from Chapter 3 and relocated to Appendix U, which is not mandatory unless explicitly adopted by local ordinance. As a result, most Oklahoma jurisdictions do not require fire sprinklers in single-family homes or duplexes. Those cities that have reinstated such requirements have done so only in limited, extreme circumstances—such as homes exceeding 12,000 square feet or located more than 400 feet from a fire hydrant.

By contrast, once a residential building contains three or more dwelling units, the regulatory burden changes dramatically. Builders are required not only to install fire suppression, but to do so in accordance with the same NFPA 13R standards used for a five-story apartment building with hundreds of units. These systems require continuous remote monitoring and multiple annual inspections. Based on recent contractor pricing for a typical new 3,000-square-foot fourplex, the total life-cycle cost of a small NFPA 13R system can approach $45,000 after including additional taps, alarm installation, and the net present value of monitoring and inspection costs over time.

This sharp regulatory cliff has predictable economic consequences. Because NFPA 13R systems are relatively expensive for small multifamily buildings, and because single-family homes are almost entirely exempt from sprinkler requirements, detached one- and two-family housing remains far more profitable for most builders. In Oklahoma, approximately 83% of new housing units are unsprinklered, detached single-family or duplex homes. In contrast, sprinklered three- and four-unit buildings account for only about 0.6% of housing starts. Nearly all remaining new housing construction occurs in large multifamily buildings, where the cost of NFPA 13R systems can be spread across many units.

This pattern is problematic from both a life-safety and affordability perspective. Modern multifamily housing has a fire death rate roughly one-sixth that of single-family homes and older multifamily buildings, and approximately one-quarter that of modern single-family housing alone. However, sites suitable for larger multifamily development are limited by zoning constraints, minimum lot-size requirements, and neighborhood opposition. On most infill lots, builders face a binary choice: build an unsprinklered single-family home, or absorb the substantial cost premium of sprinklering a small multifamily building. Given current economics, they overwhelmingly choose the former—at significant cost to housing affordability and public safety.

To address this imbalance, this proposal would allow three- to twelve-unit residential buildings to be classified as Group R-3 and permitted to use NFPA 13D fire sprinkler systems in lieu of NFPA 13R. NFPA 13D was explicitly developed to provide a cost-effective residential sprinkler option while maintaining a high level of life safety. These systems typically rely on simpler domestic water supplies, require lower hydraulic demand, and do not mandate the extensive monitoring and inspection regime associated with NFPA 13R.Allowing NFPA 13D systems for small multifamily buildings could reduce life-cycle fire suppression costs by an estimated $30,000 to $40,000 per project. This cost reduction would improve the feasibility of "missing middle" housing types—such as triplexes, fourplexes, and small apartment buildings—making them more competitive with unsprinklered single-family homes.

It is reasonable to conclude that a three- to twelve-unit building protected by an NFPA 13D system would provide substantially better life safety than the unsprinklered single-family homes that currently dominate new construction in Oklahoma. By lowering the regulatory barrier to these housing types, this amendment would result in more Oklahomans living in sprinklered buildings overall, with a corresponding reduction in fire-related injuries and fatalities. The amendment would also make it easier to replace or rehabilitate existing unsprinklered small apartment buildings, which pose a disproportionately high fire risk.

Finally, because very few small multifamily buildings are being constructed under current regulations, allowing a modest reduction in suppression standards for this category does not meaningfully reduce overall life safety. On the contrary, the state stands to make substantial gains in both affordability and fire safety by enabling these building types to capture a greater share of new housing construction relative to unsprinklered single-family homes and aging unsprinkled apartment stock.

Sources: Pew.org: "Modern-multifamily-buildings-provide-the-most-fire-protection;
nfpa.org "Comparing system goals for NFPA 13, 13R, and 13D"; US Census Data.

Signature: Sam Day Digitally signed by Sam Day Date: 2026.01.28 21:25:59 -06'00' Date: _____

**Send completed form to:**
Oklahoma Uniform Building Code Commission
2401 N.W. 23 St, Ste 82, Oklahoma City, OK 73107
Or email to: permitreporting@oubcc.ok.gov

# Fire Suppression Cost Comparison

## Cost Assumptions for Oklahoma City 2026

### Building Assumptions

| | |
|---|---|
| Total Square Footage | 3,000 |
| Number of Units | 4 |

| | NFPA 13R | | NFPA 13D | |
|---|---|---|---|---|
| **Fixed costs** | | | | |
| Additional Impact Fee for meter[1] | | | 670 | |
| Additional Tap Cost+ FDC | 10,500 | | | |
| **Total fixed costs** | | **$ 10,500** | | **$ 670** |
| **Marginal Costs (per foot)** | | | | |
| Fire alarm | 0.95 | | | |
| Fire sprinklers | 4 | | 2 | |
| | | **$ 14,850** | | **$ 6,000** |
| **Operational costs** | | | | |
| Additional meter base fee (2028)[2] | 60 | | 540 | |
| Annual monitoring cost | 420 | | | |
| Annual fire alarm inspection cost | 300 | | | |
| Annual sprinkler system inspection | 300 | | | |
| Five year sprinkler system inspection[3] | 160 | | | |
| **Net Present Value of Operation Cost** | | **$ 20,667** | | **$ 9,000** |
| Discount Rate for Operational Costs | 6.00% | | | |
| **Total Life Cycle Fire Suppression Cost** | | **$ 46,017** | | **$ 15,670** |
| **Per unit** | | **$11,504** | | **$3,918** |
| Per foot | | **$ 15.34** | | **$ 5.22** |

| | |
|---|---|
| **Savings Per Unit** | **$ 7,586.67** |
| **Savings Per Foot** | **$ 10.12** |

[1]. This assumes a upgrade from a 3/4" meter to a 1" meter to serve domestic and fire suppression, buildings larger than 4 units are likely to need 1.5" meter

[2]. An additional base fee likely will not apply for 5+ buildings

[3]. Inspection cost is divided over 5 years, may not be required if CPVC