North Central Texas Council of Governments

Integrating Transportation and Stormwater Infrastructure

Advancing Flood-Resistant Building Standards in North Central Texas White Paper

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Advancing Flood-Resistant Building Standards in North Central Texas: The Case for Regional Coordination and Higher Codes

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Background

Flooding is the most frequent and costly natural hazard affecting North Central Texas. As development accelerates and impervious surfaces increase, surface water runoff intensifies, heightening localized flood risks across the region. Despite this growing threat, the adoption of modern, flood-resistant building codes remains inconsistent and varies widely between jurisdictions.

This paper examines the current landscape of flood-resistant building code implementation in Texas, highlighting the challenges posed by uneven adoption of codes at the municipal level. It clarifies what constitutes higher-standard flood-resistant code, particularly the advances embodied in the American Society of Civil Engineers (ASCE) 24-24 standard, and outlines the benefits and economic returns associated with proactive code adoption.

Additionally, insights from the North Central Texas Council of Governments Regional Flood Task Force inform the discussion, revealing key barriers to adoption and the crucial role of regional collaboration in promoting consistent, forward-thinking standards. By exploring both technical and policy considerations, this paper aims to demonstrate how stronger, more unified flood codes can reduce vulnerability, enhance resilience, and protect communities across North Central Texas.

Inconsistent Code Adoption in Texas and Its Risks for North Central Communities

According to FEMA's 2024 Building Code Adoption Tracking Fact Sheet for Region 6, Texas has made only moderate progress in adopting modern, flood-resistant building codes. Many jurisdictions across the state still use the outdated 2012 International Building Code (IBC) as the minimum standard. This stems from House Bill 738, passed in 2021, which formally established the 2012 IBC and International Residential Code (IRC) as the baseline codes for all Texas cities,

effective January 1, 2022. While this legislation created a statewide default, it also reaffirmed that cities retain broad authority to amend, modify, or even remove code provisions to suit local concerns, regardless of whether those changes are less stringent than the original code. Additionally, cities must hold a public hearing before adopting any amendments to the IBC or IRC (TML, 2021).

Enforcement of these codes occurs primarily at the local level, and Texas law does not mandate that cities enforce building codes unless they choose to do so. In fact, cities lacking resources may adopt codes but delete provisions requiring permits or inspections, effectively placing the burden of compliance on builders. This decentralized approach results in significant variation in code adoption and enforcement across the state.

In North Central Texas, this lack of uniformity increases vulnerability to flood-related damages. Many rural or less-resourced counties have either not adopted updated floodplain ordinances or have only recently done so. In contrast, urban centers like Dallas and Fort Worth are more likely to have adopted current IBC versions and integrated flood mitigation strategies into local planning efforts. The gap between these jurisdictions creates unequal levels of protection and recovery capacity.

By promoting more consistent adoption of up-to-date flood-resistant codes, especially in underserved and high-risk areas, North Central Texas can improve regional resilience, reduce future recovery costs, and better protect residents from the impacts of flooding.

Understanding Higher Standard Codes

The 2024 International Building Code (IBC), which some larger jurisdictions have already adopted and some smaller ones are beginning to adopt as the baseline for construction requirements, currently references an older flood-resistant design standard, ASCE 24-14, because the newest ASCE 24-24 standard had not yet been published when the latest IBC edition was released. This means the IBC does not yet include the most recent advances in flood protection, and communities must explicitly adopt or reference ASCE 24-24 in their local codes for those updated standards to be enforceable.

ASCE 24-24 introduces 29 key updates to enhance flood resilience. These include expanded flood zone coverage, risk-based elevation requirements tailored to different building uses. Critical facilities, like hospitals, must follow stricter protections than typical residential buildings. The standard also updates guidance on floodproofing systems and the durability of materials used in flood-prone environments.

According to Structure Magazine, ASCE 24-24 has been submitted for consideration in the 2027 IBC. If adopted, these enhanced flood-resistant requirements will be integrated into a widely used regulatory framework, helping communities adopt stronger flood protections more consistently.

To further illustrate these differences, a comparison table is included at the end of this paper highlighting several key updates from ASCE 24-14 to ASCE 24-24.

Economic Case for Higher Standards: Insights from FEMA's Building Codes Save Study

Beyond improving safety and resilience, adopting higher flood-resistant building standards makes strong economic sense. FEMA's Building Codes Save study found that buildings constructed to modern hazard-resistant codes avoided approximately $484 million in annual flood-related losses nationwide. Over a 20-year period, jurisdictions with these codes are projected to prevent $32 billion in damages. If all U.S. communities adopted modern codes, cumulative losses could be reduced by as much as $132 billion by 2040.

The financial investment required to implement these standards is relatively modest. FEMA estimates that hazard-resistant provisions add only 1 to 2 percent to total construction costs. For example, adding flood-resistant features to a $300,000 home may increase costs by about $4,500 but could prevent up to $48,000 in damages over the building's lifetime. These figures demonstrate a compelling return on investment, highlighting the value of proactive code adoption for both property owners and communities.

Regional Coordination and the Case for Higher Flood Standards

The North Central Texas Council of Governments Regional Flood Task Force has been actively exploring the challenges and opportunities related to adopting higher flood protection standards across the region. A key insight from their feedback is that municipalities are more inclined to adopt enhanced codes when neighboring cities have already done so. In other words, communities tend to follow established examples rather than developing new standards independently.

This tendency creates an opportunity for regional collaboration. By developing model ordinances based on higher-standard codes already in use within the region, municipalities can streamline adoption and reduce the perceived risks of implementation. Sharing successful frameworks encourages consistency and strengthens overall regional resilience.

The upcoming 2027 IBC update, which may incorporate ASCE 24-24, would help further support regional acceptance and standardization of higher flood protection measures.

Conclusion

Implementing higher flood-resistant building standards is essential for enhancing community resilience and reducing flood-related losses across North Central Texas. When feasible, adopting higher standards such as those from the ASCE 24-24 allows jurisdictions to better prepare for increasing flood risks while tailoring solutions to their unique needs.

Regional collaboration plays a critical role in advancing these standards. Building on existing examples and encouraging shared frameworks can ease adoption and promote consistency across communities.

Strong leadership and cooperation among municipalities will be vital to making these advanced flood standards the norm, ultimately safeguarding lives, property, and local economies for years to come.

Comparison: ASCE 24-14 vs. ASCE 24-24

Category	ASCE 24-14	ASCE 24-24
Flood Hazard Area Coverage	Focused on 100-year floodplain (SFHA).	Expands to 500-, 750-, and 1000-year flood levels.
Elevation Requirements	General elevation standards.	Risk-based, tied to Flood Design Class.
Climate Change Considerations	Not required.	Required in coastal floodplain calculations.
Dry Floodproofing Standards	No standardized testing.	Requires ANSI/FM 2510 testing and maintenance plans.
Material Guidance	Basic requirements.	Adds ASTM standards and salt-environment guidance.
Alignment with NFIP & ASCE 7-22	Meets/exceeds NFIP; aligned with ASCE 7-10/16.	Exceeds NFIP; aligned with ASCE 7-22 Supplement 2.
Flood Warning Systems	Not addressed.	Required for high-risk structures.

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