June 6, 2023

Regulations Division
Office of General Counsel
Department of Housing and Urban Development
451 7th Street SW, Room 10276
Washington, DC 20410–0500

Via regulations.gov

Re: Comments of the International Code Council on the Department of Housing and Urban Development's (HUD) proposed rule to revise HUD's Regulations and Implement the Federal Flood Risk Management Standard (FFRMS); Docket No. FR–6272–P–01

The International Code Council (ICC) is a nonprofit organization of roughly 600 employees, driven by the engagement of its more than 63,000 members, that is dedicated to helping communities and the building industry provide safe, resilient, and sustainable construction through the development and use of model codes (I-Codes) and standards used in design, construction, and compliance processes. Most U.S. states and communities, federal agencies, and many global markets choose the International Codes (I-Codes) to set the standards for regulating construction and major renovations, plumbing and sanitation, fire prevention, and energy conservation in the built environment.

The International Code Council is dedicated to providing the building industry with the tools necessary to realize safe, sustainable, and resilient buildings and communities. This includes achieving flood resilience through the effective adoption and implementation of modern building codes and standards to provide building safety in response to increasing flood risk.

The Code Council's comments regarding the Department of Housing and Urban Development's (HUD) proposed rule to revise their regulations through the implementation of the proposed Federal Flood Risk Management Standard (FFRMS) are captured below.

The International Code Council strongly encourages HUD to require the latest edition of the International Residential Code (IRC) and International Building Code (IBC) to ensure the FFRMS incorporates the most stringent flood provisions for federally assisted construction in flood zones. Doing so will ensure an enhanced level of resilience for both structures and communities in the face of growing flood risk across the nation. The savings and resilient benefits associated with incorporating the flood provisions captured in latest edition of the IRC and IBC during the development and implementation of the FFRMS are outlined in detail throughout these comments.

Federal agencies adopt I-Codes and Standards because they are national "voluntary consensus standards" under Office of Management and Budget (OMB) Circular A-119 and the National Technology Transfer Advancement Act (NTTAA), meaning they are developed in an open forum—with a balance of interests represented and due process—that, ultimately, ensures a consensus outcome. All I-Codes are updated every three years. The NTTAA, supplemented by OMB Circular A-119, directs federal agencies to use voluntary consensus standards wherever possible in their procurement and regulatory activities in lieu of expending public resources developing government unique standards. The OMB Circular

"directs agencies to use standards developed or adopted by voluntary consensus standards bodies rather than government-unique standards, except where inconsistent with applicable law or otherwise impractical."

In recent years, the federal government has increasingly moved towards ensuring federally assisted infrastructure adheres to modern construction standards. Such an approach was advanced during the prior Administration within the federal government's National Mitigation Investment Strategy—developed by the Mitigation Federal Leadership Group of which HUD is a member—and continued by the current Administration through the National Initiative to Advance Building Codes (NIABC). The NIABC's goal is "to ensure that building activities receiving federal funding or financing will meet or exceed the latest building codes." In the NAIBC, HUD specifically committed to require "increased resilience" through prior Community Development Block Grant-Disaster Recovery (CDBG-DR) allocations and, more broadly, "resilient construction in HUD-assisted housing wherever feasible." HUD recently proposed updating its energy efficiency requirements to the latest edition of the International Energy Conservation Code in alignment with the NIABC.[1]

HUD's CDBG-DR Program has included green construction requirements and flood mitigation measures that go above current codes/standards in certain instances.[2] Although, the flood mitigation provisions do not capture other important flood provisions for coastal areas that are captured within current codes, like prohibitions on slab on fill and perimeter wall/crawl space foundation types and requirements for vented breakaway walls. And, despite the federal government investing billions of dollars in infrastructure annually and requires current codes and standards for its own portfolio, the Federal Emergency Management Agency (FEMA) is the only federal entity that currently requires that federally assisted projects adhere to up-to-date building codes and standards. FEMA has done so to "increase the resilience of communities after a disaster," "protect lives and property," and to "reduc[e] the need for future Federal disaster recovery funding and other assistance."[3]

Modern model building codes are among the most effective and systemic measures to reduce the risk to buildings and their occupants from natural and manmade hazards, including flood risk. The IRC and IBC, per FEMA, provided more than $27 billion in cumulative mitigation benefits against flood, hurricane wind, and earthquake hazards from 2000 to 2016.[4] These benefits could have been doubled if all post-2000 construction adhered to the I-Codes. FEMA projects that if all future construction adhered to current codes, the nation would avoid more than $600 billion in cumulative losses from floods and other hazards by 2060.[5]

The National Institute of Building Sciences (NIBS) estimates that building to modern building codes saves $11 for every $1 invested through earthquake, flood, and wind mitigation benefits, while retrofitting structures to current codes' flood mitigation requirements can provide $6 in mitigation benefits for

[1] Federal Register Notice, FR-6271-N-01.
[2] HUD, Allocations for Community Development Block Grant Disaster Recovery and Implementation of the CDBG-DR Consolidated Waivers and Alternative Requirements Notice, 88 Fed. Reg. 3,198 (Jan. 2023).
[3] FEMA, Recovery Interim Policy FP-104-009-11, Version 2.1 (Dec. 2019).
[4] FEMA, *Protecting Communities and Saving Money: The Case for Adopting Building Codes* (Nov. 2020).
[5] FEMA, *Protecting Communities and Saving Money: The Case for Adopting Building Codes* (Nov. 2020).

every $1 invested.[6] These benefits represent avoided casualties, property damage, business interruptions, first responder and annual homeownership costs, and are enjoyed by all building stakeholders—from governments, developers, titleholders, and lenders, to tenants and communities. Better built buildings minimize repair and displacement costs and economic impacts following disasters[7] and reduce the risk of loss.[8]

FEMA's Hurricane Harvey after action report determined that the I-Codes' freeboard requirements reduced average claim payments by 90%.[9] And FEMA's *Building Codes Save* study of 2020 found that the I-Codes' freeboard requirements could avoid nearly $177 billion in flood losses by 2060.[10] Numerous additional provisions within the I-Codes provide flood mitigation benefits and should also be considered in the FFRMS. Within the 2021 IBC edition alone, FEMA has noted improvements concerning dry floodproofing, engineered openings, and secondary overflow drains. FEMA's Community Rating System (CRS) program credits several I-Code flood mitigation measures including, for example, where communities ensure fill is compacted and protected from erosion and scour, consistent with the IRC and IBC requirements, and where communities enforce the IBC and IRC's positive drainage provisions.[11]

For flood resistant design—including establishing elevations of lowest floors, flood-resistant materials, equipment and floodproofing—the IBC through its integration of American Society of Civil Engineers Flood Resistant Design and Construction Standard (ASCE 24-14) requires essential (or Risk Category IV) facilities'[12] lowest floor elevation be the higher of base flood elevation plus freeboard specified in ASCE 24-14, the design flood elevation, or the 500-year flood elevation. ASCE 24-14 includes additional delineations by risk category.

All forms of mitigation produce benefits, including the effective implementation and enforcement of modern building codes. Properties experiencing repetitive losses should be rebuilt consistent with modern standards that mitigate flood risk. Strong code enforcement—which includes adequate staffing, personnel certification that demonstrates an understanding of the codes being enforced, and continuing education on code updates, improvements in building science, and best practices—ensures codes' theoretical public safety and resilience benefits are realized in the field. These benefits have been quantified in several instances. For example, strong code enforcement can help to reduce losses from catastrophic weather by 15 to 25 percent.[13]

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[6] NIBS, *Natural Hazard Mitigation Saves: 2019 Report* (Dec. 2019).
[7] *Id.*
[8] *Id. See also* ASFPM's Comments in Response to FR-6187-N-01, White House Council on Eliminating Barriers to Affordable Housing Request for Information (Docket HUD-2019-0092).
[9] Federal Emergency Management Agency, *Hurricane Harvey in Texas: Building Performance Observations, Recommendations, and Technical Guidance,* Mitigation Assessment Team Report *(Feb. 2019).*
[10] Federal Emergency Management Agency, *Building Codes Save: A Nationwide Study. Losses Avoided as a Result of Adopting Hazard-Resistant Building Codes* (Nov. 2020).
[11] Federal Emergency Management Agency, *National Flood Insurance Program Community Rating System Coordinator's Manual* (2017).
[12] E.g., hospitals, fire and police stations, emergency response facilities, disaster shelters, power stations, and water supply facilities.
[13] Czajkowski, J. et. al., *Demonstrating the Intensive Benefit to the Local Implementation of a Statewide Building Code*, Risk Management and Insurance Review (2017).

Importantly, codes provide these benefits without appreciable implications for housing affordability—in fact, no peer-reviewed research has found otherwise. According to the Association of State Floodplain Managers (ASFPM), the insurance savings from meeting current codes' flood mitigation requirements can reduce homeowners' net monthly mortgage and flood insurance costs by at least five-percent.[14] The principal investigator for the NIBS report found that improvements to model building codes' resilience over the nearly 30-year period studied only increased a home's purchase price by around half a percentage point in earthquake country or in an area affected by riverine flood.[15]

Absent minimum flood provisions established within the FFRMS modeled after modern resilient building codes, infrastructure will be built to outdated and insufficient flood standards in many parts of the country. Per FEMA, roughly 68 percent of communities facing flood risk have not adopted modern building codes to help mitigate flood hazards.[16] And, in recent years, 30-percent of new construction has taken place in communities with either no codes or codes that have not been updated in decades. Given the heterogeneity in the adoption of codes and standards across our country, HUD's FFRMS should be modeled after the latest codes to ensure its investments in many parts of the country will provide ample flood resilience to posed risk of vulnerable buildings. In most cases, HUD's FFRMS requirements will supersede the flood mitigation requirements contained in jurisdiction's building codes and thus HUD has an opportunity to lead by example to promote enhanced resilience in the face of growing flood risk.

HUD requiring resilient codes would align its disaster recovery and mitigation construction standards with FEMA's BRIC and Public Assistance Programs. Practitioners have been successfully implementing these requirements for the better part of a decade. Implementing enhanced construction standards, specifically the flood provisions captured in modern building codes, consistently across like programs would help the federal government reduce complexity and increase programmatic efficiency, while at the same time easing implementation and strengthening practices for contractors, architects, and engineers in the field.

Implementing enhanced construction standards consistently across like programs would help the federal government reduce complexity and increase programmatic efficiency, while at the same time easing implementation and strengthening practices for government program staff as well as contractors, architects, and engineers in the field.

The I-Codes are the most widely adopted codes in the United States, noting that the IBC is adopted or in use in 50 states and the IRC in 49. Given the breadth of their use and acceptance and demonstrated hazard mitigation benefits, we strongly encourage HUD to adopt the flood provisions of the 2021 I-Codes. To provide flexibility for practitioners in the field, and in recognition that some states or localities where HUD work is to occur may have adopted alternative or homegrown codes, HUD could consider utilizing language consistent with FEMA's approach in PA, which provides that alternative codes or standards can be used so long as the applicant demonstrates that the adopted codes are "equivalent or

[14] ASFPM's Comments in Response to FR-6187-N-01, White House Council on Eliminating Barriers to Affordable Housing Request for Information (Docket HUD-2019-0092).
[15] Porter, K., *Resilience-related building-code changes don't affect affordability*, SPA Risk LLC Working Paper Series 2019-01 (2019).
[16] FEMA, Resistant Code Adoption Statistics, Nationwide Building Code Adoption Tracking (Jan. 2023).

more stringent," or where use of the delineated codes is "technically infeasible."[17] With this flexibility, the 2021 I-Codes can address all possible considerations without HUD creating an unnecessarily lengthy, and potentially conflicting, list of code and standards requirements that could lead to confusion or, worse, a lack of compliance in the field.

Ensuring the FFRMS is consistent with modern codes and flood standards will protect the people who use and occupy these structures as well as the federal government's own investment; is consistent with White House, HUD, and FEMA policy; follows the federal government's requirements for its own buildings; and enjoys widespread support from across the political spectrum.

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Thank you for the opportunity to provide comments. If you have any questions concerning these recommendations, please do not hesitate to contact us.

Sincerely,

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[17] FEMA, Recovery Interim Policy FP-104-009-11, Version 2.1 (Dec. 2019).