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Transmitted via email (Teresa.l.payne@hud.gov)

September 19, 2022

Teresa Payne, Administrator, Manufactured Housing
U.S. Department of Housing and Urban Development
451 7th Street SW
Room 9168
Washington, DC 20410

RE: Federal Manufactured Housing Construction and Safety Standards

Dear Ms. Payne:

The American Society of Civil Engineers (ASCE) thanks the Department of Housing and Urban Development (HUD) for initiating their proposed rulemaking efforts to update the *Federal Manufactured Housing Construction and Safety Standards*, under 24 Title CFR Part 3280, and is pleased to provide the following recommendation. ASCE urges the HUD Secretary to direct the Manufactured Housing Consensus Committee (MHCC) to recommend all manufactured home construction and safety standards incorporate state of practice standards by reference, to prioritize human health, safety, and welfare. Requiring new manufactured housing to comply with the state of practice, as defined by the latest standards of practice, will result in equitable, sustainable, and resilient infrastructure. It will provide a positive impact on individuals through an improved standard of living and lower life-cycle costs. Furthermore, delivering sustainable and resilient infrastructure — especially homes — raises the value of assets and plays a critical role in social, racial, economic, and environmental justice.

Our recommendation aligns with the White House’s National Initiative to Advance Building Codes¹ and the Justice40 Initiative². The Biden Administration intends to use these initiatives to push recipients of federal funding to meet modernized building standards to the “greatest extent feasible,” and advance environmental justice and spur economic opportunity for disadvantaged communities. President Biden acknowledged through the Advance Building Code Initiative that modern, consensus-based codes – such as those developed by ASCE, the International Code Council (ICC), and other organizations that rely on expert input from scientists and engineers – provide sets of model standards for several aspects of building design, including energy efficiency, and improving resilience to various hazards such as wildfires, hurricanes, and floods. According to the National Oceanic and Atmospheric Administration (NOAA), there were 20 climate-related disaster events with losses exceeding \$1 billion each in the United States in 2021³. Communities that have

¹ <https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/01/fact-sheet-biden-harris-administration-launches-initiative-to-modernize-building-codes-improve-climate-resilience-and-reduce-energy-costs/>

² <https://www.whitehouse.gov/omb/briefing-room/2021/07/20/the-path-to-achieving-justice40/>

³ <https://www.ncei.noaa.gov/access/billions/>

implemented modern building codes are saving an estimated \$1.6 billion per year in avoided damage from major hazards, with projected cumulative savings of \$132 billion through 2040 – a figure that will exponentially increase with the adoption of state of practice codes and standards.

ASCE firmly believes HUD should follow White House leadership and ensure the most modern, up-to-date codes and standards are utilized in the construction of manufactured housing. The implementation of state of practice codes and standards is the most cost-effective method to ensure resilience, and to protect the public health, safety, and welfare.

Approximately 22-million people live in more than 8.5 million manufactured homes, which accounts for approximately 10 percent of the nation's housing stock. Those who live in manufactured housing have a median household income of under \$30,000 per year. The high cost of housing is a nationally recognized problem and manufactured homes provide much-needed housing, especially for historically underserved and economically disadvantaged community members. Nationally, there is a shortage of more than 7 million affordable homes for our nation's 10.8 million-plus extremely low-income families according to the National Low Incoming Housing Coalition⁴.

The individuals who live in manufactured homes are among those who can least-afford costly repairs and failures resulting from sub-standard construction and inadequacy to survive natural hazards. They cannot withstand the personal impact of cumulative infrastructure deficiencies. Given the current housing crisis coupled with the increase of severe weather patterns across the Country⁵, constructing new homes following outdated standards is not acceptable.

Design standards are developed through a consensus process. Agencies such as HUD are responsible for determining, amending, adopting, and implementing building codes. Codes and standards are continually refined and improved based on research, testing, and observations following natural disasters. It is paramount the *Federal Manufactured Housing Construction and Safety Standards* reference the most up-to-date editions of technical standards, including ASCE/SEI 7 *Minimum Design Loads for Buildings and Other Structures*.

MHCC currently recommends the 2005 edition of ASCE/SEI *Minimum Design Loads for Buildings and Other Structures* (ASCE/SEI 7-05) be referenced within the *Federal Manufactured Housing Construction and Safety Standards* to replace the 1988 edition (ANSI/ASCE 7-88) as currently referenced under 24 CFR 3280.4. While we applaud the update of a 30-year-old standard, the 2005 edition has been superseded by three editions since its publication and is now 17 years out of date. The 2022 edition (ASCE/SEI 7-22) is the most recent and, along with past editions, was developed following a consensus standards development process accredited by the American National Standards Institute (ANSI), superseding the 2016 and 2010 editions.

⁴ <https://nlihc.org/explore-issues/why-we-care/problem>

⁵ Rising global average temperature is associated with widespread changes in weather patterns. Scientific studies indicate that extreme weather events such as heat waves and large storms are likely to become more frequent or more intense with human-induced climate change. ([US Environmental Protection Agency, 2022](#))

ASCE Policy Statement 525⁶ supports adoption of current codes and standards. Additionally, the Biden Administration launched the National Initiative to Advance Building Codes in June 2022 to “boost resilience to the impacts of climate change, lower utility bills for homes and businesses, and prioritize underserved communities.” Critical to this initiative is the goal of helping state, local, tribal, and territorial governments adopt the latest and current building codes and standards. Other federal agencies recognize the importance of adopting current codes and standards such as the Federal Emergency Management Agency (FEMA) as stated in its March 2022 Building Code Strategy⁷.

ASCE/SEI 7 is an integral part of building codes in the United States and around the globe and is adopted by reference into the International Building Code, International Existing Building Code, International Residential Code, and (National Fire Protection Association) NFPA 5000 Building Construction and Safety Code. It provides the most up-to-date and coordinated loading provisions for general structural design. ASCE/SEI 7-22 — proposed for adoption into the 2024 edition of the I-Codes including the International Building Code — prescribes design loads for all hazards including dead, live, soil, flood, tsunami, snow, rain, atmospheric ice, seismic, wind, and structural fire, as well as how to evaluate load combinations. The 2022 edition coordinates with the most current structural material standards including those from American Concrete Institute (ACI), American Institute of Steel Construction (AISC), American Iron and Steel Institute (AISI), American Wood Council (AWC), and The Masonry Society (TMS).

The standards development process is designed to promote standards that reflect a fair and reasoned consensus among all interested participants, while preserving the public health, safety, and welfare. The collection of additional data and the expansion to the body of knowledge between 2016 and 2022 led to the many significant technical changes included within ASCE 7-22 *Minimum Design Loads for Buildings and Other Structures*. Updates to wind, snow, seismic, rain, ice, and flood hazards that reflect the current state of the practice and understanding of environmental hazards are required for all homes, including single- and multi-family construction, and those same practices should also extend to manufactured housing. To recommend the inclusion of a 17-year-old version of ASCE/SEI 7 within the *Federal Manufactured Housing Construction and Safety Standards* would mean that residents of manufactured housing do not enjoy the same protection of health, safety, and welfare as residents of every other home built within the United States. The ASCE/SEI 7-22 standard refined wind loads that directly address the current knowledge of the hazard, with wind speeds increasing in some areas of the country while other areas have decreased. Improvements along the hurricane coastline include impact from increased hurricane activity. And new understanding and development of snowfall and wind effects on drift has resulted in a consistently developed hazard across the entire continental United States, while simultaneously eliminating many of the special case study regions.

The nation’s infrastructure is the foundation on which our quality of life depends. Environmental justice is a key goal within the Biden Administration’s infrastructure plan and HUD is positioned to directly address historical injustices previously caused by poor infrastructure policy through its

⁶ <https://www.asce.org/advocacy/policy-statements/ps525---model-building-codes>

⁷ <https://www.fema.gov/emergency-managers/risk-management/building-science/building-codes-strategy>

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updates to the *Federal Manufactured Housing Construction and Safety Standards* and reference of state of practice standards.

ASCE and its members are committed to addressing the unique needs of diverse demographic, social, economic, and cultural groups when considering the impacts of our practice and the communities we serve. We are dedicated to working with regulators, architects, building owners, manufacturers, contractors, and stakeholders to develop and implement just, holistic solutions as well as collecting building performance data for use in validating and updating best practice publications and improving codes, standard, design, and construction practices.

We look forward to working with you to protect our most venerable communities who are too often disproportionately affected by poor infrastructure policy. Please do not hesitate to contact Lindsay O'Leary, Director of Technical Activities, at lolary@asce.org and 512.803.6358 if you have any questions about referencing state of practice standards as the rulemaking process advances.

Sincerely,



Dennis D. Truax, Ph.D., P.E., BCEE, D.WRE, F.ASCE
ASCE President 2022



Thomas W. Smith III, ENV SP, CAE, F.ASCE
Executive Director

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