

An aerial photograph of a city grid, likely Miami, with a red rectangular overlay box in the center. The grid is composed of white lines on a dark background. The red box contains white text and the FIU logo.

Policy Brief

What About Safe and Decent Housing That Is Affordable?

FIU

**Jorge M. Pérez
Metropolitan Center**

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The connection between health and the dwelling of the population is one of the most important that exists.

--Florence Nightingale

What About Safe and Decent Housing that is Affordable?

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It has long been established that safe, decent, and affordable housing is a basic human necessity. Access to quality, affordable housing helps create a stable environment for families and children to grow and prosper. Without a durable home to withstand the elements, families are also vulnerable to natural disasters such as hurricanes, flooding, fires, and earthquakes. All indications are that the effects of natural and man-made disasters will worsen in coming years as hurricanes intensify and sea levels continue to rise. With hurricanes becoming more frequent and damaging, the health and safety of large populations living in older, unsafe housing structures has become an urgent policy issue.

A healthy and sustainable community ensures the availability of safe, decent, and affordable housing for its residents. This is especially important for lower income owners, including the elderly, who do not have the financial means to make the necessary structural improvements and renters who cannot afford safe and decent housing. Hurricane Andrew in 1992 highlighted the vulnerability of Florida's building standards at that time. The Category 5 hurricane damaged or destroyed more than 125,000 homes and left an estimated 250,000 people homeless in South Miami-Dade County. The destruction was born from a mix of 165 mph winds, outdated building codes, shoddy construction, and poor inspection practices.

While the Florida Building Code (FBC) has corrected past deficiencies and significantly strengthened new housing construction standards to meet the wind velocities of major hurricanes, many older housing structures in Miami-Dade County and South Florida remain highly vulnerable. Current research by the Jorge M. Pérez Metropolitan Center found an estimated 258,124 residential structures in Miami-Dade County built pre-FBC highly vulnerable to the potential damages of a major hurricane. These structures contain an estimated 815,721 residents. Significantly, the concentrations of older, unsafe housing structures in Miami-Dade County are found in less affluent communities that are already experiencing the health and economic impacts of the COVID-19 pandemic.

Due to the scope and scale of Miami-Dade County's unsafe housing issue, the research recommends a proportional policy response. The County and municipalities will need to determine the location of unsafe structures and identify potential sources for long-term funding assistance. A proposed vulnerability and capacity assessment (VCA) should be the first step. Other policy recommendations include categorizing residential structures according to wind and flood vulnerability; determining whether the existing housing inventory is adequate to house the displaced; planning for temporary housing needs, local policies for assisting residents with post-disaster repairs and rebuilding, local policies for the replenishment of a more resilient and sustainable affordable housing supply; and establishing a local "dedicated housing assistance fund" to help prevent and mitigate the impacts of major hurricanes.

Cordially,

Dr. Ned Murray, AICP, Associate Director

Overview

The affordable housing issue in Miami-Dade and South Florida has been well documented in several recent studies authored by the Jorge M. Pérez Florida International University (FIU) Metropolitan Center. The pre-COVID Affordable Housing Needs Assessments for the Tri-counties documented excessive housing distress, especially for low- and very low-income renters. Lower-income renters comprise the vast majority of service workers in the industry sectors most impacted by the pandemic, including Accommodation and Food Services, Retail and Healthcare and Social Assistance. There is now a growing realization it will remain a COVID economy well into the future, and a high percentage of the jobs that have been lost may have disappeared for good. A recent University of Chicago study estimated 42 percent of COVID-19 induced layoffs will result in permanent job loss. In another study, the St. Louis Federal Reserve Bank identified "high risk" occupations for job loss, including Accommodation and Food Services and Retail. According to the study, high-risk occupations comprise 48 percent of occupations or 1.3 million jobs in the Miami MSA economy. It is difficult to envision South Florida recovering a significant percentage of these jobs over the next several years.

The provision of "safe, decent, and affordable housing" is an important responsibility of local governments. While the definition of "affordable housing has been generally defined as households paying no more than 30 percent of monthly

income on housing costs, there are broader metrics with respect to what is “safe and decent” housing. To a large degree, the measure of housing quality and building performance is left up to the state, individual jurisdictions, and building owners. There is also some tension between housing quality and housing affordability. An exclusive focus on reducing costs will not address longer-term housing needs and can exacerbate other deficiencies such as a safe and healthy living environment and a housing unit that is resilient and cost-effective. “One key principle of affordable housing is we do not achieve short-term affordability by building low-quality homes (Shelterforce, 2015).”

When we think of affordable housing standards, the discussion typically defers to the definition of the Department of Housing and Urban Development (HUD), whose mission is to provide quality, affordable homes for all. The affordable housing HUD insures and funds must be decent, safe, sanitary, and in good repair. In addition to inspections, a housing agency or local government may conduct, HUD’s Real Estate Assessment Center (REAC) assesses the physical condition of many HUD-insured and subsidized properties through contracted inspections. When inspections identify conditions that could cause a risk to the health and safety of residents, HUD requires property owners and public housing authorities to fix deficiencies that caused the risks. However, there are reported instances where HUD was either not aware of the risks to the health or safety of residents or failed to take timely action to mitigate risks.

Generally, the term, “decent, safe, and sanitary dwellings” applied by HUD and state and local governments means a dwelling which:

- (1) Meets applicable federal state and local housing and occupancy codes; including but not limited to the Uniform Building Code, National Electrical Code, ICBO Plumbing Code, the Uniform Mechanical Code, HUD Minimum Property Standards, and HUD Mobile Home Construction and Safety Standards (24 CFR part 4080;
- (2) Is structurally sound, clean, weathertight and in good repair and has adequate living space and number of rooms;
- (3) Has an adequate and safe electrical wiring system for lighting and other electrical services economically feasible;
- (4) Meets the requirements of the HUD lead-based paint regulations (24 CFR part 42) the Lead-Based Paint Poisoning Prevention Act (42 USC 4831 et seq.);
- (5) In the case of a physically handicapped person, is free of any architectural barriers. To the extent that standards prescribed by the American National Standards Institute, Inc., in publication ANSI A117.1-1961 (R 1971), are pertinent, this provision will be considered met if it meets those standards;
- (6) Has heating as required by climatic conditions;
- (7) Has habitable sleeping area that is adequately ventilated and sufficient to accommodate the occupants;
- (8) Has a separate well-lighted and ventilated bathroom, affording privacy to the user, that contains a sink and bathtub or shower stall, properly connected to hot and cold

water, and a flush toilet, all in good working order and properly connected to a sewage drainage system; and

(9) In the case of new construction or modular housing, complies with the energy performance standards for new buildings set forth by the US Department of Energy.

State Building Codes

State building codes set the standards for the design and construction of buildings. The main purpose of building codes is to protect the public from the health and safety risks posed by improperly constructed buildings. Building codes provide minimal standards for building features such as structural integrity (the supporting structure), mechanical integrity (including sanitation, water supply, light, and ventilation), means of egress, fire prevention, and control, and energy conservation. Housing codes set minimum standards for housing conditions that all rental housing, new or existing, must meet to protect the health of residents. Some jurisdictions refer to them as property maintenance or sanitation codes, but their functions are the same.

Hurricane Andrew in 1992 highlighted the vulnerability of Florida's building standards at that time. The Category 5 hurricane damaged or destroyed more than 125,000 homes and left an estimated 250,000 people homeless in South Miami-Dade County. The destruction was born from a mix of 165 mph winds, outdated building codes, shoddy construction, and poor inspection practices. By the time it was over, the City of Homestead had been nearly wiped off the map; neighborhoods vanished, and shopping malls and condominiums were sheared to their foundations. Homestead Air Force Base, which employed more than 8,000 people and the core of the local middle class, was torn apart. The blow to the tax base was a major hindrance to the rebuilding effort. Hurricane Andrew also broke all records at that time for insurance losses and was the direct cause of Florida's worst insurance crisis in history.

Before Hurricane Andrew slammed into South Miami-Dade, resulting in the costliest natural disaster for insured losses in global history at that time, Miami-Dade and Broward Counties had outdated building codes that lacked enforcement. Thousands of the homes hit by the hurricane and other structures simply did not stand up to the storm as well as they should have, and the effects quickly rippled out from South Florida to the rest of the state. The South Florida Building Code (Miami-Dade and Broward Counties) was the toughest in the state and among the toughest in the nation. As evidence, a 2005 University of Florida study found differences in damage between older and newer homes, comparing 200 randomly selected homes that were in the path of the highest wind zones generated by the hurricanes. The study concluded that homes built prior to 1994 fared worse than those built after that year.

The economic impacts of Hurricane Andrew mandated a single, statewide building code that featured tougher standards to ensure structures would withstand major hurricane-level winds. The Florida Building Code (FBC) was enacted by the Florida Legislature in 1998 and became effective on March 1, 2002. The FBC applies to "...the construction, erection, alteration, modification, repair, equipment, use and occupancy, location,

maintenance, removal and demolition of every public and private building, structure," [101.4.2 FBC]. The FBC has since been amended over the years. The latest version is the 2014 Florida Building Code (5th Edition), which went into effect on June 15, 2015. However, after nearly three decades, Andrew's legacy is still the measuring standard. The Florida Building Code enacted in 2002 was first tested during the 2004 and 2005 hurricanes and is still being adjusted and researched today. The code's purpose is to protect lives, help reduce property losses in a storm, and provide a guide for insurance companies to determine rates. However, after the devastating impacts of Hurricanes Irma in 2017 and Michael in 2018, the FBC still comes under scrutiny.

As a result of Hurricane Andrew, one of the first standards Florida adopted was the wind provisions from the American Society of Civil Engineers' standards, which encompasses the national standard for wind requirements. The ASCE-7 code, which the International Code Council relies on for minimum design loads for buildings and structures, is used by all states prone to hurricanes to evaluate and design buildings in the insurance industry. One of the most important additions to the code was the requirement of missile-impact resisting glass, which can withstand high-velocity impact from wind-borne debris during a hurricane. Another immediate change to building codes after Hurricane Andrew was the elimination of construction of "stick" frame houses in South Florida. Most of the houses built in South Florida since Andrew are cinder block masonry construction reinforced with concrete pillars, hurricane-strapped roof trusses, and codes requirements for adhesives and types of roofing.

Miami-Dade County's Structural Vulnerability

The Florida Building Code applies to all new construction and major repairs, such as walls and roofs. All pre-existing housing structures are essentially grandfathered from enforcement other than for "substantial damage or "substantial improvement." According to the Florida Building Code, Existing Buildings Section 202 Definitions – "substantial improvement" includes "any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started."

Bringing a pre-code housing structure up to the current Florida Building Code Standards is both essential and costly. According to research conducted by the Jorge M. Pérez FIU Metropolitan Center, the estimated cost of upgrading a pre-FBC housing structure to adhere to FBC Standards (hurricane-strapped roof trusses, impact windows and doors, etc.) would be \$50,000-\$60,000. This does not include other structural and sanitary code repairs and violations such as systems (electrical, plumbing, HVAC) replacements, lead paint removal, and infestation treatment, which combined would cost an estimated \$40,000-\$50,000. And, here lies the problem for Miami-Dade County and South Florida. The research found most of these pre-FBC structures are concentrated in the less affluent communities of Miami-Dade County, where few financial resources are available to homeowners and renters have no recourse. These are also Miami-Dade communities experiencing the highest levels of COVID-19 related distress, including infections from the coronavirus, job loss, and threat of eviction and foreclosure.

Research and Methodology

The research topic and methodology are part of the Jorge M. Pérez FIU Metropolitan Center's on-going research on the economic and community impacts of the COVID19-pandemic. The current research provides the application of the Center's Community Distress Index (CDI), which determines populations at risk at the block group and neighborhood levels. The CDI ranks each sub-geography on 18 data indicators, grouping them into four related status determinations – socioeconomics, household composition and disabilities, race and language, and housing and transportation.

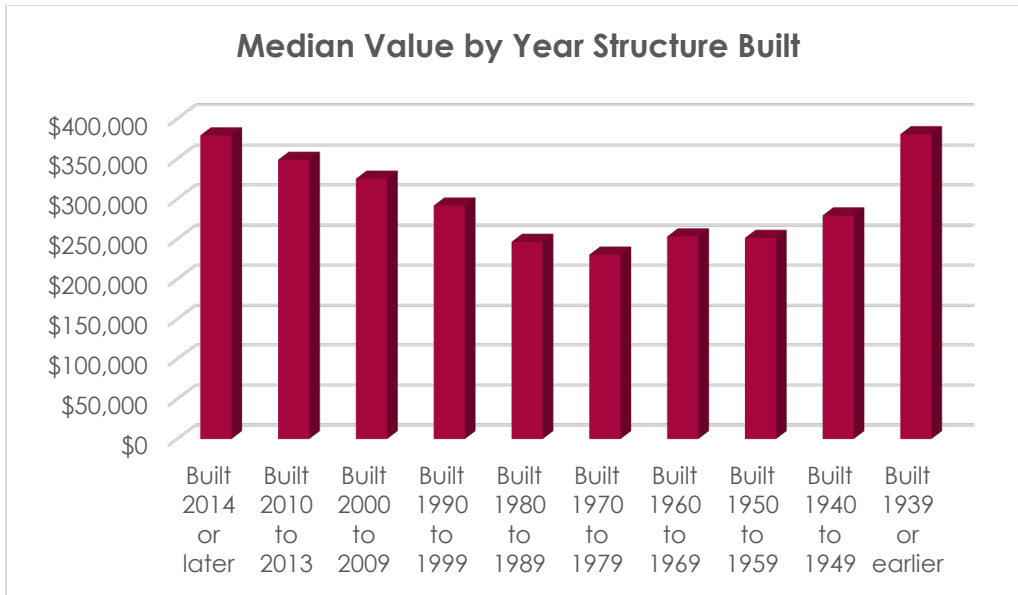
In preparing the research, the study authors used both the Miami-Dade County Property Appraiser records and the 2018 US *American Community Survey*. The most comprehensive source of detailed structural information is the County's Property Appraiser database. Each county gathers residential and commercial property data for tax purposes. This research utilized three main components of the assessor's database: land-use, property values (land, building, market, and assessed), age of a structure, and property improvements.

The first step in the research was to delineate Miami-Dade County's housing supply by approximate age and value. The US Census, *American Community Survey* provides data on the age and median value of residential structures. In Miami-Dade County, there are an estimated 714,144 housing units (70.2 percent) built prior to 1990. All these units were constructed prior to Hurricane Andrew, the South Florida Building Code, and Florida Building Code (FBC). The median value of Miami-Dade County's residential structures decreases by age. The median values of structures built prior to 1990 show a lesser value than the current median housing value of \$268,200. The decrease bottoms out (86 percent of current median value) in the decade 1970-1979.

Table 1.1: Miami-Dade County Median Value by Year Structure Built, 2018

Year Built	Total Housing Units	1,016,653	Median Housing Value	\$268,200
Built 2014 or later	16,896	2%	\$379,400	141%
Built 2010 to 2013	18,250	2%	\$349,000	130%
Built 2000 to 2009	139,427	14%	\$325,400	121%
Built 1990 to 1999	127,936	13%	\$291,900	109%
Built 1980 to 1989	149,652	15%	\$246,700	92%
Built 1970 to 1979	190,474	19%	\$230,700	86%
Built 1960 to 1969	138,071	14%	\$253,400	94%
Built 1950 to 1959	142,155	14%	\$251,600	94%
Built 1940 to 1949	55,474	5%	\$279,600	104%
Built 1939 or earlier	38,318	4%	\$380,900	142%

Source: US Census 5-year Estimates, 2018



The next step in the research process was to examine Miami-Dade County's Property Appraiser data to determine the age of the structure and median values by location. From the Miami-Dade County Property Appraiser's 920,849 unique property folio numbers, all residential land-used properties were extracted and differentiated into four housing types: single-family, condos and townhouses, multi-family, and mobile homes. For each housing type, the median market and assessed value per property and building were calculated. To differ multi-family housing types, calculations of median values for multi-family housing were performed on a per-unit basis since the values for properties with more units would be higher than properties with a smaller number of units. The analysis focused on all housing units built prior to 1990. A pre-1990 timeframe was used as the South Florida Building Code in which Miami-Dade and Broward Counties adopted "High Velocity Hurricane Zone" building code standards immediately after Hurricane Andrew predated the 2002 Florida Building Code.

To examine the extent of potential vulnerability, residential properties were differentiated and summarized in three categories:

1. Develop an inventory and determine the location of all housing structures and units built prior to the South Florida Building Code, noting a historical record of improvements;
2. Identify and locate properties and number of units built prior to 1990 that are less than 100% of the County's median values (building, market, and assessed);
3. Identify and locate properties and number of units built prior to 1990 that are less than 80% of the County's median values (building, market, and assessed); and
4. Identify and locate properties and number of units built prior to 1990 that are less than 50% of the County's median values (building, market, and assessed).

After inventorying and locating the total number of pre-1990 built properties and units by value, the total population contained in these housing structures was estimated utilizing

average household size by tenure. Average household size ratios in Miami-Dade County are provided by the US Census *American Community Survey*.

Based on this assessment, the research found an estimated 86,519 residential structures built pre-1990 and valued less than 50 percent of the median value of structures by submarket. These properties are considered the most vulnerable to the potential damages of a major hurricane. These structures contain an estimated population of 270,365 residents. A second calculation was made for pre-1990 built residential structures valued less than 80 percent of the median value of structures by submarket. This larger capture percentage rate found a total of 258,824 structures vulnerable to a major hurricane with a potentially impacted population of 815,721 Miami-Dade County residents.

Table 1.2: Pre-1990 Housing Structures w/ Building Values less than 50% of Median Market Value

Housing Type	Number of Units Less than 50% Median Value			Housing Type	Population Estimates
	Building	Market	Assessed		Building
Single-Family	24,251	14,417	44,344	Single-Family	79,058
Condos &Townhomes	32,984	17,673	32,984	Condos &Townhomes	107,528
Multi-Family	29,218	28,010	26,160	Multi-Family	83,563
Mobile Homes	66	24	10	Mobile Homes	215
Total Units	86,519	60,124	103,498	Total Population	270,365

Source: Miami-Dade County Property Appraiser; calculations and tables by Jorge M. Pérez FIU Metropolitan Center.

Table 1.3: Pre-1990 Housing Structures w/ Building Values less than 80% of Median Market Value

Housing Type	Number of Units Less than 80% Median Value			Housing Type	Population Estimates
	Building	Market	Assessed		Building
Single-Family	113,071	90,356	117,214	Single-Family	368,611
Condos &Townhomes	75,641	73,404	75,641	Condos &Townhomes	246,590
Multi-Family	70,007	98,685	82,672	Multi-Family	200,220
Mobile Homes	105	71	85	Mobile Homes	300
Total Units	258,824	262,516	275,612	Total Population	815,721

Source: Miami-Dade County Property Appraiser; calculations and tables by Jorge M. Pérez FIU Metropolitan Center.

Policy Implications

The affordable housing crisis in Miami-Dade and South Florida has been well documented through a series of landmark studies and plans authored by the Jorge M. Pérez FIU Metropolitan Center over the past 15 years. The high levels of housing distress, especially for renters, have been exacerbated by the COVID-19 pandemic, which has left nearly 200,000 South Florida workers without a steady income to pay their monthly rent.

The age and unsafe conditions of a vast number of housing units have insidiously compounded affordable housing distress. Hurricanes, tropical storms, and other climate-related threats have had devastating impacts on communities. All indications are that the effects of natural and man-made disasters will worsen in the coming years as hurricanes intensify, and sea levels continue to rise. With hurricanes becoming more frequent and damaging, the health and safety of the older, existing housing supply has become an urgent policy issue.

A healthy and sustainable community ensures the availability of safe, decent, and affordable housing. Safe and decent housing supports the health of its occupants and provides shelter from the elements, especially during and after disasters. This is especially important for lower-income populations who do not have the financial wherewithal to control for these necessities. The potential loss of thousands of relatively affordable, yet unsafe housing units, coupled with the existing unmet demand for affordable housing, would create a major capacity problem. After a major hurricane, families, and individuals frequently require short- and sometimes long-term temporary housing. Following Hurricane Katrina, more than 400,000 individuals were displaced from their homes in New Orleans. The dearth of housing options for lower-income residents following Hurricane Katrina resulted in many residents not returning to New Orleans. This is an untenable situation as most families and individuals prefer to stay in their original communities, next to their schools, jobs, and neighbors. If adequate housing is not made available, residents will leave the community, temporarily or permanently, further disrupting social networks and degrade the community and its economy. Communities with a limited housing supply of safe, decent, and affordable housing are at particular risk.

While there is a compelling argument that the only feasible long-term strategy to make coastal cities resilient is to rethink them entirely, the emergency nature of Miami-Dade and South Florida's existing unsafe housing conditions requires an immediate response. Given the scope and scale of Miami-Dade County's unsafe housing challenge, there is an urgent need to create forward-looking prevention and mitigation policies and strategies to address the issue head-on.

Where to begin?

The scope and scale of Miami-Dade County's unsafe housing issue will require a proportional policy response. To begin, the County and municipalities will need to determine the location of unsafe structures and identify potential sources for long-term funding assistance. Policy deliberations should include the following items:

- A vulnerability and capacity assessment (VCA) to determine the extent to which the existing housing inventory can withstand the damaging effects of a major hurricane. A VCA would identify the location, age, and condition of potentially vulnerable housing structures;
- Categorize residential structures according to wind and flood vulnerability;
- Determine whether the existing housing inventory is adequate to house the displaced, if new temporary units needed, and where displaced populations would be relocated nearby with an adequate housing supply;
- Plan for temporary housing needs, assisting residents with post-disaster repairs and rebuilding, and policies that could result in the replenishment of a more resilient and sustainable affordable housing supply;
- Establish a “dedicated housing assistance fund” to help prevent and mitigate the impacts of a major hurricane;
- Consider a range of grants and low-cost loans for the renovation and potential replacement of highly vulnerable owner-occupied and absentee-owned properties; and
- Make changes to the permitting process and housing rehabilitation codes to remove any regulatory obstacles to these upgrades.

Significantly, the concentrations of older, unsafe housing structures in Miami-Dade County are found in less affluent communities that are already experiencing the health and economic impacts of the COVID-19 pandemic (see map). The highest concentrations of unsafe housing were found in Model City, Homestead, Little Haiti, and Liberty City. The concentrations follow the “spine of distress” which was first delineated in the 2016 *Miami-Dade County Prosperity Initiatives Study*. The study found concentrations of economic and housing distress along a spine that extended south from Miami Gardens to Florida City along the I-95 and US 1 Corridors. Policies and programs designed to address unsafe housing conditions should focus on these communities while being sensitive to the existing COVID plight of families and households.

Miami-Dade County Housing Structure Vulnerability

Legend

Pre-1990 Housing Structures
w/ Building Values less than
50% of Median Market Value

- Single-Family
- Multi-Family
- Condos & Townhomes
- Mobile Homes

