

NC STATE Design

HOUSING | CULTURE, POLICY, PRODUCTION

School of Architecture | Pappas Real Estate Development Program

Professor Thomas Barrie FAIA | Fall 2025

Building Tomorrows NOAH's



NC STATE Design

Chloe Craig
Dinaisyah Harrison
Avery Tate

Contents

Cover	pg.1
Executive Summary and Research Question	pg.2
Opinion Article	pg.3
NOAHs Don't "Naturally Occur"	pgs.4-5
Preservation Alone Can't Fix Our Affordable Housing Shortage	pgs.6-7
Homeownership Gap Is Widening For Young Residents	pgs.8-9
Zoning Regulations Remain A Major Barrier	pgs.10-11
Raleigh's Next Generation of NOAHs	pgs.12-13
References	pgs.14-15



Building Tomorrows NOAH's For a Rapidly Growing Raleigh

Chloe Craig
Dinaisy Harrison
Avery Tate

Executive Summary

This campaign advocates for the creation of Naturally Occurring Affordable Housing (NOAH) in Raleigh, North Carolina, as a critical response to escalating housing costs, displacement, and the shrinking supply of affordable homes. Targeting both renters and first-time home buyers, the initiative seeks to encourage the creation of NOAH units, support equitable access to homeownership, while aligning with Raleigh’s growth in population and housing demand. The campaign’s scope spans the city’s rapidly developing neighborhoods, focusing on partnerships with organizations such as the Raleigh Housing Authority, Raleigh Area Land Trust, and Wake County Preservation Fund. By demonstrating that NOAHs are more cost-effective, sustainable, and socially stabilizing than larger new construction, this campaign argues that the addition of NOAH's strengthens workforce stability, prevents displacement, and upholds community character.

Research Question

How can Raleigh effectively build future Naturally Occurring Affordable Housing (NOAH) to sustain affordability for both renters and first-time home buyers amid rapid urban growth, rising market values, and redevelopment pressures?

Building Tomorrows NOAH's For a Rapidly Growing Raleigh

NOAHs are not natural, they are intentional. They are a reflection of the decisions we make now.

As Raleigh continues to grow, real progress will come from the production of diverse and attainable housing. By embracing a mix of home types that reflect the city’s evolving demographics, family sizes, and needs, we can ensure that Raleigh’s future remains within reach for generations to come. Discussion of NOAHs, Naturally Occurring Affordable Housing, is usually about the preservation of the existing aged housing stock found in the market, because traditionally, NOAHs exist as older homes, made affordable due to substandard conditions. While there are economic and environmental savings in preserving these units when compared to tear-down construction, preserving the limited existing NOAHs in Raleigh, amidst rapid loss of NOAH units city wide (Gallup and Gallup), simply does not match the pace of growth and development in the city.

For many young adults, the path from renting to owning a home feels impossible. The gap is widening with the average age of first time homeownership jumping from 35 to 38 in just one year (Aley). As the city grows in population, so does the demand for housing, and it’s not just for single family homes. Rental units typically offer smaller floor plans with access to amenities and shared resources, often located near highly trafficked areas and job hubs. With 50% of city residents being renters, there is an opportunity to apply the desired qualities found in rental units, and allow young professionals and young families to start building wealth the old fashioned way, through homeownership (“City Profile”). Specifically, smaller homes that will become the next generation of affordable homes without lacking in quality, with thoughtfully planned and community fostered developments, Raleigh can continue to grow without leaving people behind.

Raleigh’s impervious surface limits and zoning regulations are a key reason homes continue to grow larger and more expensive. The city’s Unified Development Ordinance allows impervious coverage (the combined area of buildings, driveways, patios, and other hard surfaces) of up to 65% in many residential districts, allowing builders to maximize both area and resale value. However, recent reforms, TC-5-20 and TC-20-21, have begun to loosen restrictions by permitting Missing Middle housing (duplexes, triplexes, and town homes) in more neighborhoods (City of Raleigh Planning Services). High land costs, infrastructure fees, and outdated neighborhood opposition often make smaller units less likely to be profitable.

To meet the city's affordable housing needs and demands, we have to think ahead. Raleigh needs to invest in creating the future NOAHs, housing that is designed to remain affordable and sustainable for years to come. Cottage Court housing types are clusters of smaller detached homes surrounding shared open space. Their compact floor plans and shared open space promote community oriented neighborhoods while using by-right zoning to increase the amount of units on a single lot. Zoning laws and policies continue to promote these missing middle housing opportunities for its residents. With continuously thoughtful planning and developers buying in on supporting environmental goals with this future housing model, we can help close the gap between renting and homeownership.

Creating future NOAHs involves thinking about what long term affordability should look like. It’s not about cutting costs, it is about making sizable changes to the housing market to support future generations. These affordable homes should reflect long term quality, accessibility, and sustainability. Homes that are designed to be adaptable, built to last efficiently, and manageable to maintain will hold their value and serve their community for decades to come.



NOAHs Don't "Naturally Occur"

Raleigh is growing at a pace that has reshaped its housing landscape faster than policy, planning, and affordability can keep up with. For many residents, especially renters and young adults trying to transition into homeownership, the city feels increasingly out of reach. Rising land values, redevelopment pressures, and the rapid disappearance of modest older homes have created an affordability crisis that cannot be explained by market forces alone. If our naturally occurring affordable housing is disappearing, what does Raleigh need to do next?

Through conversations with planners and housing advocates along with our research on similar developments and analysis of Raleigh's zoning and regulatory framework, it is clear that NOAHs are not "natural" at

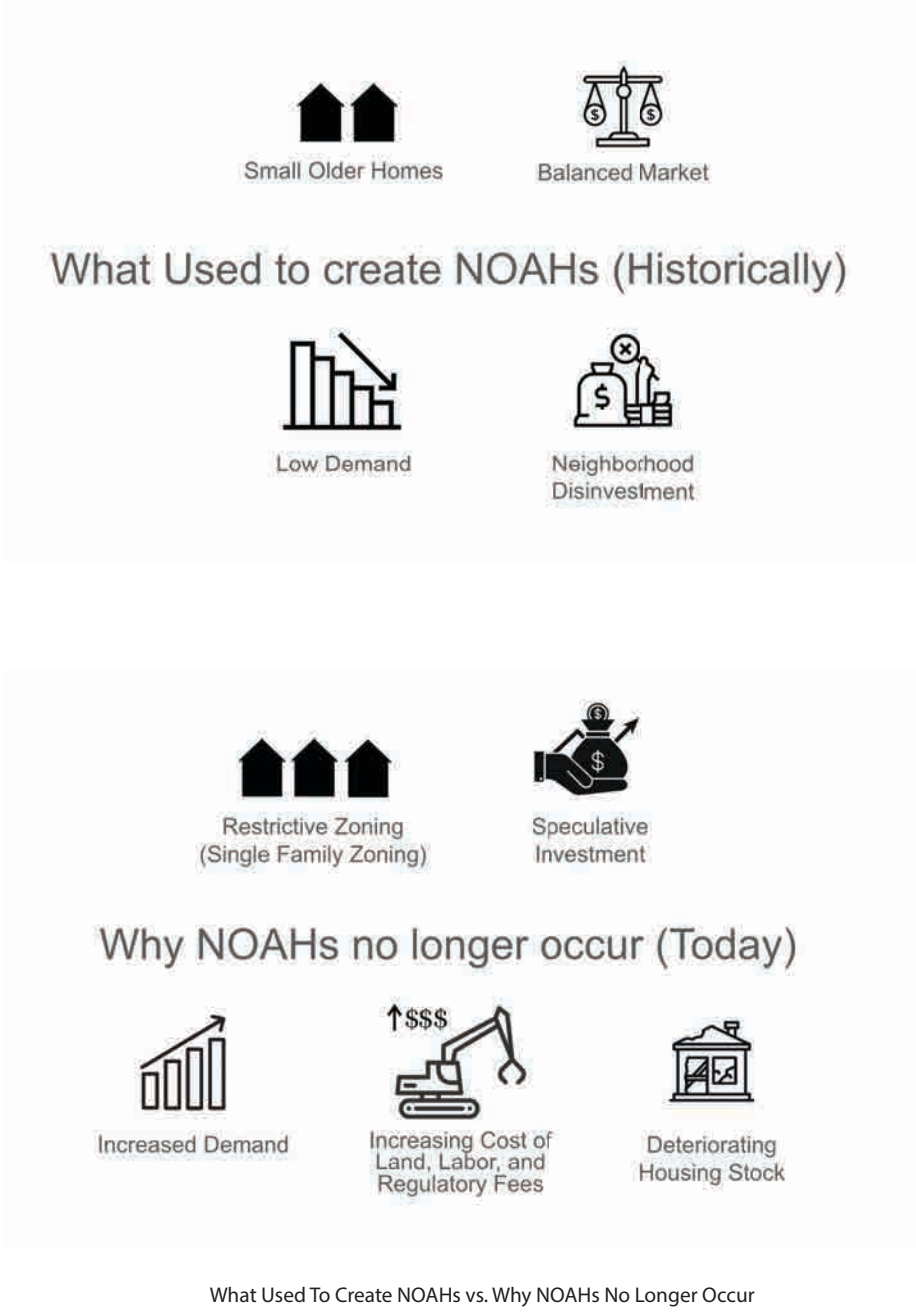
all. The affordability they once offered was the product of very specific historical conditions including aging homes, smaller lot sizes, modest construction methods, and slower urban growth. Today, these conditions no longer exist. Homes do not depreciate into affordability. Instead, they appreciate out of reach. The market no longer produces entry level homes on its own and the gap between renting and buying continues to widen.

We have learned that preservation remains an essential part of Raleigh's strategy, but it is no longer sufficient on its own. The supply of older, lower costing homes is shrinking faster than preservation efforts can capture them. Many of these units are either aging beyond repair or being replaced with larger, more expensive

construction. If the city wants to create a sustainable path to affordability, it must begin designing and producing our future NOAHs that the market will never naturally deliver on its own.

Our team summarizes the discoveries we have uncovered. The forces causing NOAHs to disappear, the policy conditions shaping Raleigh's housing environment,

and the design and development models that could create the next generation of accessible homes. Our goal is not just to understand the problem, but to identify what meaningful solutions could look like and the impacts it will have on the city. Raleigh needs to create affordability intentionally, rather than leaving it to chance.



Preservation Alone Can't Fix Our Affordable Housing Shortage

Preserving Raleigh's remaining NOAH stock is essential, but our research shows that preservation alone cannot keep up with the pace of population growth, redevelopment pressure, and the shrinking inventory of modestly priced homes. Raleigh loses NOAH units faster than policy or funding can protect them. "Since 2019, Raleigh has lost nearly 9,000 NOAH units, and experts estimate the city has a deficit of nearly 20,000 affordable apartments." (IndyWeek, 2022) As older homes are renovated, replaced, or redeveloped, they're affordability often disappears permanently.

The common argument for NOAH preservation is compelling from a cost and sustainability viewpoint. You can retrofit an existing home for far less money than building new and this significantly impacts the environment on a smaller scale than tearing home down for a new development. But Raleigh's supply of older modest homes is finite, and many of them are located in neighborhoods facing intense market pressure. The Wake County Preservation Fund, Raleigh Area Land Trust, and other partners play a critical role, but even with expanded support, their potential reach is limited by cost, land scarcity, and the sheer volume of homes being lost annually.

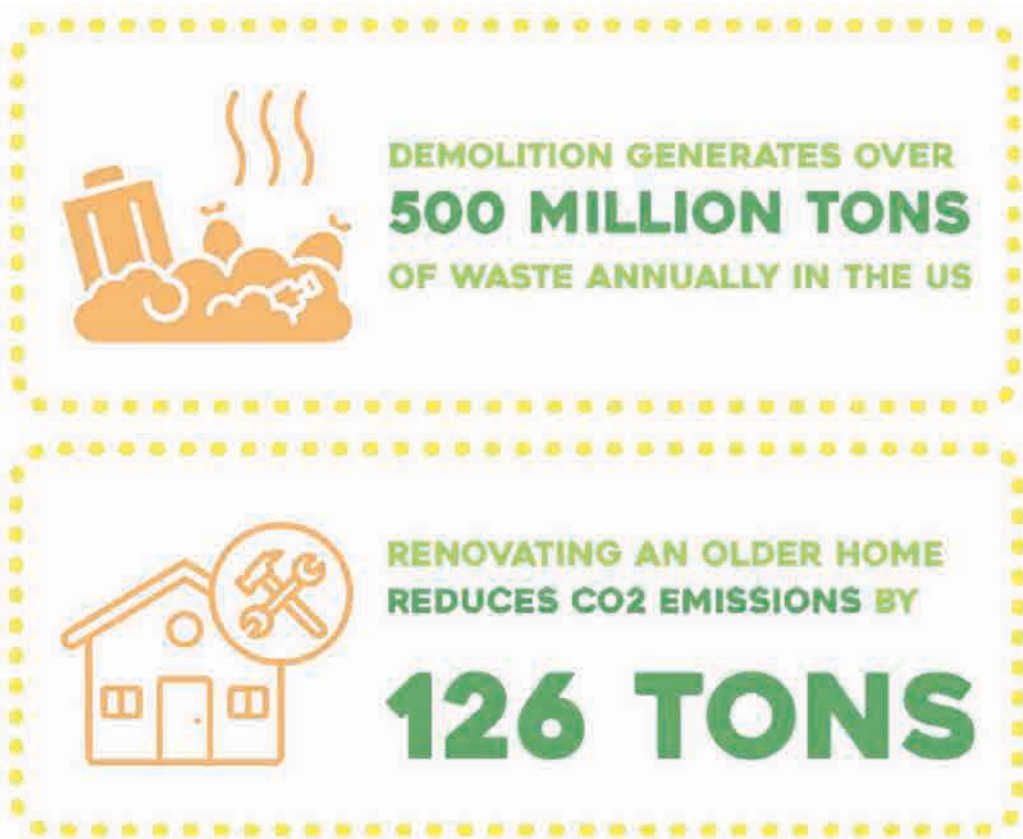
Many NOAH homes sit on valuable land where the zoning now allows significantly larger structures. This mismatch between small homes and high land value accelerates new development. Builders and Developers, understandably, choose to maximize allowable square footage, and homeowners capitalize on rising equity. In this environment, NOAH preservation becomes reactive rather than strategic.

Preservation efforts also tend to focus on single units rather than entire neighborhoods. Saving one home does little to counteract the redevelopment of blocks and the displacement of the neighborhoods people. Older homes that have deteriorated often require major reinvestments and upgrades to their HVAC, insulation, and original structure. Although

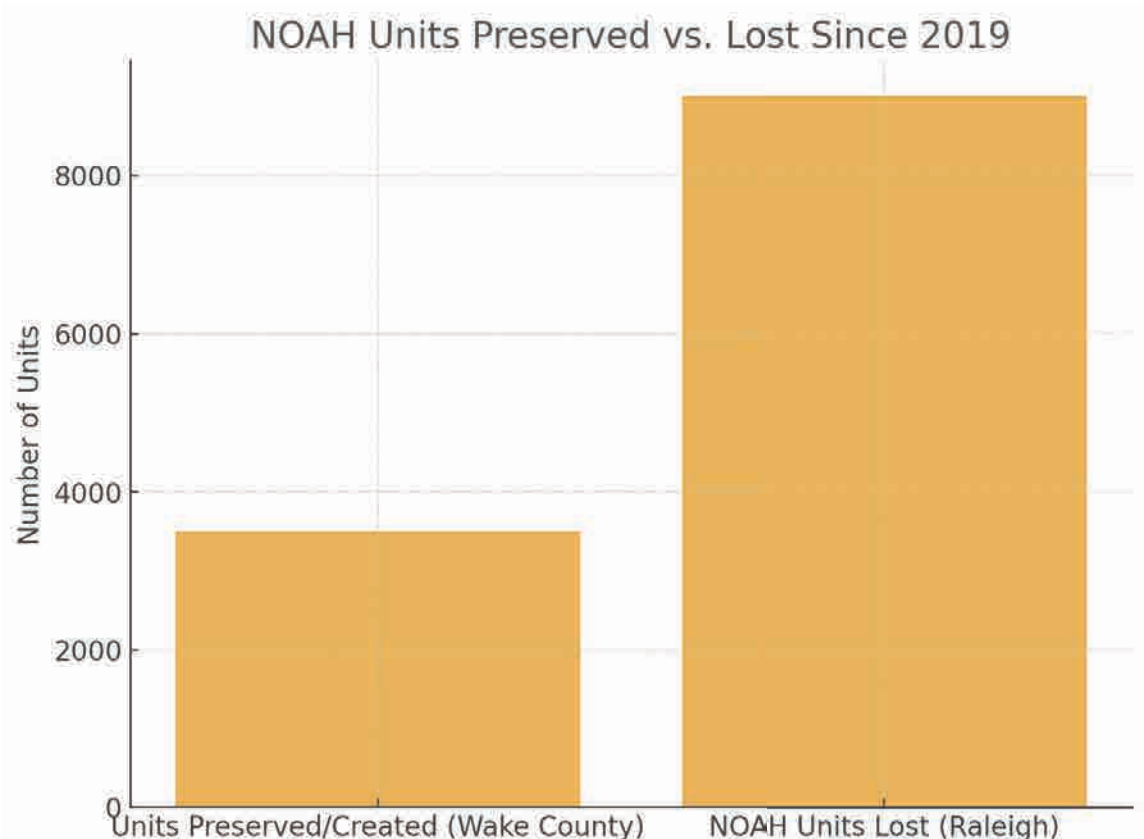
still cheaper than full reconstruction, even our strongest preservation programs can't overcome that battle.

To maintain affordability on a meaningful scale, Raleigh must pair preservation with production. This means designing the next wave of low cost, compact homes that can age into future affordability. It means shifting zoning and development incentives to allow more units per lot, not more square footage per unit. Preservation is only phase one of a broader affordability strategy.

The current stock cannot support the city's current and future needs, but producing new, intentionally affordable unit types can. Raleigh must create the housing that will become the next generation of NOAHs.



Sustainability Impact of Preserving and Building New (Restore Oregon, 2021)



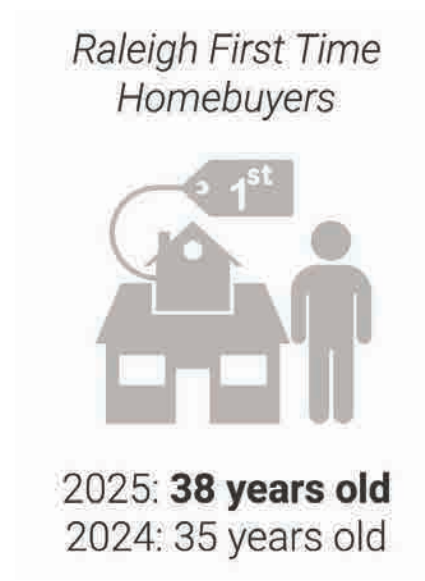
NOAH Units Preserved vs Lost Since 2019



Homeownership Gap Is Widening For Young Residents

For young adults in Raleigh, the transition from renting to homeownership is increasingly out of reach. Our research revealed that the average age of a first time home buyers has rose from 35 to 38, in just the past year. Incomes are not keeping pace with housing inflation, and starter homes, that were once a pillar of American housing stability, have virtually disappeared from the market.

Half of Raleigh's residents are renters, and many of them express a desire to buy a home eventually. But the supply of homes under \$300,000 has declined dramatically,



Raleigh's First Time Home Buyer Age

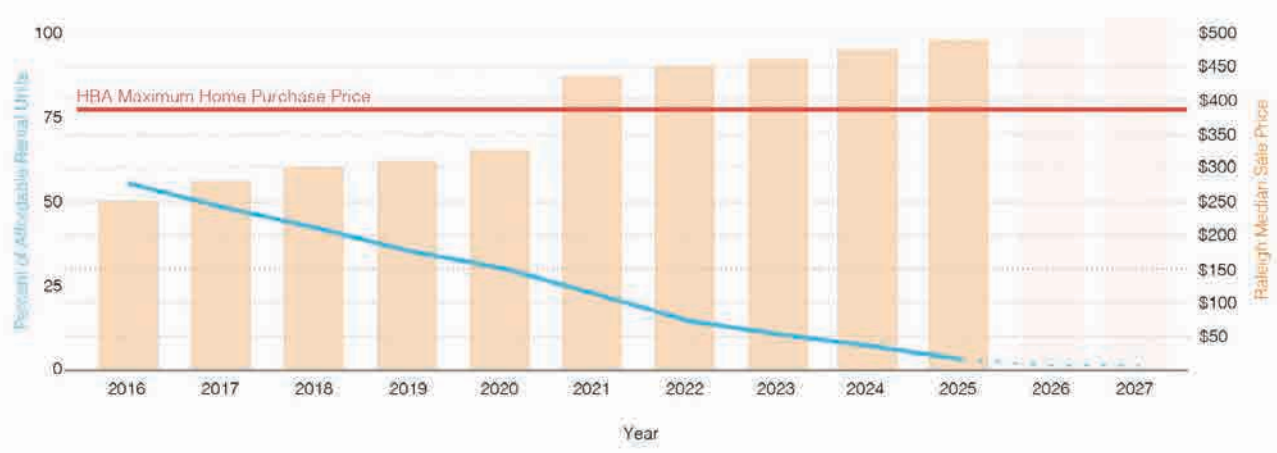
even as demand has surged. Homes that were once "starter homes" are now being renovated into luxury flips or replaced with larger constructions. Meanwhile, rental housing provides amenities and convenience but there is no potential for residents to build long term wealth.

Raleigh's younger workforce of nurses, teachers, service workers, and city employees, now have to compete for affordability with remote workers, investors, and higher-end buyers. All while rising mortgage rates continue to widen the gap further. This combination traps young renters in a cycle where saving for a down payment becomes increasingly difficult, and the window to enter the market narrows every year.

The transition from renting to ownership is critical because homeownership remains one of the most reliable pathways to wealth building in the U.S. Without intentional intervention, Raleigh risks creating a generation of permanent renters

disconnected from the long term economic stability that previous generations enjoyed. This points to a clear solution: Raleigh needs smaller, well designed, modestly priced homes that are attainable to young and first time buyers. These homes don't need to be large, they need to be accessible, energy efficient, durable, and built at a scale that aligns with moderate modern household sizes. Homes around 600–1,000 square feet can offer affordability without compromising quality.

Creating these new pathways to ownership requires systemic change. We need incentives for zoning to reducing minimum lot sizes and rethink our parking requirements. We also need support to encouraging cottage courts, continued missing middle forms, first time buyer programs, and promoting community land trust models. Young adults shouldn't be priced out of the city where they work and live. Raleigh's future depends on giving them an entry point that starts with producing housing designed for them.



Raleigh's 10 Year Housing Market



Zoning Regulations Remain A Major Barrier

Zoning regulations shape what can be built and in Raleigh, they often favor larger, more expensive homes over smaller, more attainable ones. We identified zoning as one of the most significant structural barriers preventing the creation of future NOAHs.

Raleigh’s impervious surface limits, minimum lot sizes, parking requirements, and single family zoning patterns all contribute to a market environment where large homes are more profitable than small ones. In many neighborhoods, by-right zoning allows one expensive single family home where multiple smaller homes could be built. This restricts density, inflates land cost per unit, and makes missing middle housing difficult or financially unfeasible.

While recent reforms such as TC-5-20 and TC-20-21 have expanded opportunities for duplexes, triplexes, and town homes, adoption has been slow. Many parcels

remain governed by restrictive overlays and neighborhood opposition often poses additional challenges. In practice, the system still incentives builders to maximize square footage rather than unit count.

From a developer's perspective, if land is expensive and zoning restricts density, larger units yield better returns. If zoning allowed multiple smaller homes on the same lot, builders could profit while delivering more attainable housing.

Reforming zoning isn’t simply about increasing density, it’s about enabling the types of homes that can become NOAHs over time. Policies that support compact unit footprints, shared open space, alternative subdivision patterns, reduced parking minimums, and more flexible site design can significantly lower development costs.

The city’s current regulatory environment makes the future NOAH model of small, high-quality homes clustered around shared amenities challenging to implement. Yet these are precisely the housing types Raleigh needs to meet demographic shifts, environmental goals, and affordability targets.

To create a more inclusive housing market, Raleigh must expand by-right missing middle zoning, reduce lot-size minimums, allow cottage courts across more districts, streamline approvals for small scale infill, and align zoning with environmental and affordability goals. Zoning is policy and policy can be changed. If Raleigh wants future NOAHs, it must enable the conditions for them to exist.



Raleigh's Next Generation of NOAHs

Smaller, well designed homes clustered in community focused developments offer one of the most effective models for future NOAH production. These homes are not “cheap housing” but instead are intentionally compact, energy-efficient, durable, and designed for long term affordability.

Cottage courts, pocket neighborhoods, and small lot single family homes are proven models that create naturally lower price points without sacrificing quality. Their smaller footprint reduces construction costs, and their shared open space improves community cohesion while maximizing land efficiency. These communities could exist within Raleigh's existing fabric, often fitting onto typical neighborhood lots. These homes can serve households who fall between renting and traditional homeownership because they offer residents affordability, community, and stability.

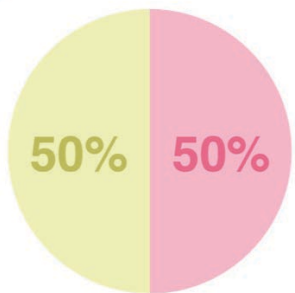
Housing should reflect household realities, not outdated assumptions. Most of Raleigh's affordable homeownership programs still prioritize larger unit sizes,

even though many buyers would prefer smaller, more manageable homes that offer both independence and community. Cottage Court homes could be delivered affordably by building efficient footprints (600–1,000 sq. ft.), using standardized and cost effective construction methods, sharing resources such as driveways and open space, designing with passive environmental strategies, and creating layouts that are adaptable over time.

Importantly, these homes create future NOAHs because they are financially accessible at the point of construction and remain affordable as they age. Unlike large new homes, they depreciate into affordability rather than appreciate beyond reach.

This housing model is already working in cities across the country and Raleigh has the tools, land, and the demand to implement it at scale. The solution is not to build cheaper homes. It is to build smarter, smaller, and more sustainable homes that can become the next generation of affordability for Raleigh.

Raleigh Homeowners vs. Renters



Raleigh Homeowner vs Renter and There Average Sizes



Cottage Court Housing Plan Strategy (Opticos, 2017)

References

Aley, Alex. "The Average Age of First-time Homebuyers Is Higher Than Ever." <https://www.kjct8.com>, 17 Apr. 2025, www.kjct8.com/2025/04/17/average-age-first-time-homebuyers-is-higher-than-ever.

"City Profile." Raleighnc.gov, raleighnc.gov/planning/services/city-profile.

Gallup, Jasmine, and Jasmine Gallup. "Wake County Commits \$47 Million to Preserve Affordable Housing." INDY Week, 11 Jan. 2023, indyweek.com/news/wake/raleigh-secures-millions-to-preserve-affordable-housing.

"Missing Middle Housing — RaleighForward." RaleighForward, raleighforward.org/missing-middle-housing. Nixon, Erin, and Erin Nixon. "Housing and Homelessness Myths Busted: Naturally Occurring Affordable Housing - Mecklenburg County - Housing & Homelessness Dashboard." Mecklenburg County - Housing & Homelessness Dashboard - Mecklenburg County - Housing & Homelessness Dashboard, 30 June 2021, mecklenburghousingdata.org/blog/housing-homelessness-myths-busted-naturally-occurring-affordable-housing.

"NOAH: The Preservation Compact." The Preservation Compact, 2 Dec. 2020, www.preservationcompact.org/innovation/noah/.

"Our History - Raleigh Housing Authority." Raleigh Housing Authority, 16 Apr. 2025, rhanc.gov/our-history.

"The Age Shift: Understanding the Rise in First-Time Homebuyer Ages in Raleigh." eXp Realty – TRI Blog, 29 Mar. 2025, tri.exprealty.com/blog/273332/The+Age+Shift%3A+Understanding+The+Rise+In+First-time+Homebuyer+Ages+In+Raleigh.

The Preservation Compact. "NOAH | the Preservation Compact." The Preservation Compact |, 2 Dec. 2020, www.preservationcompact.org/innovation/noah.

"Raleigh, NC Rental Market Trends | Average Rent in Raleigh." RentCafe, rentcafe.com/average-rent-market-trends/us/nc/raleigh/.

"First-Time Home Buyers Shrink to Historic Low of 24 % as Buyer Age Hits Record High." National Association of REALTORS®, nar.realtor/newsroom/first-time-home-buyers-shrink-to-historic-low-of-24-as-buyer-age-hits-record-high.

"Affordable Housing 101." City of Raleigh – Housing Services, raleighnc.gov/housing/services/affordable-rental-housing-renters/affordable-housing-101.

"Homebuyer Assistance." City of Raleigh – Housing Services, raleighnc.gov/housing/services/homebuyer-assistance.

"City Profile." City of Raleigh Planning Services, raleighnc.gov/planning/services/city-profile.

"Understanding the Carbon Cost of Demolition" Restore Oregon, 12 Apr. 2021, <https://restoreoregon.org/2021/04/12/understanding-the-carbon-cost-of-demolition/>

"Tax Abatements - Economic Development" City of Houston, https://www.houstontx.gov/ecodev/tax_abatements.html

"Housing and Community Development" City of Dallas, <https://dallascityhall.com/departments/housing-neighborhood-revitalization/Pages/Mixed-Income-Housing-Development.aspx>