

HOUSING AMERICA: Exploring Ethics in Architecture

Housing sits at the crux of numerous economic, social, political, and environmental concerns in the United States and its history is more racist and classist than any other building type. Housing America is an ongoing series of studios that uses housing as a vehicle to consider how architects are to operate ethically in contemporary society.

As a core method, instructors openly share their own work as designers, researchers, and citizen architects both as a way of unearthing the tacit knowledge embedded in their practice and as a catalyst for the work of the studios.

Each studio also connects students to specialists and stakeholders - architects and allied professionals working in the area of housing, policy makers, housing advocates, social impact developers, members of underhoused populations, etc - to amplify both the questions and the outcomes.

Offered across a broad range of undergraduate and graduate studios, often including technical comprehensive design studios, the format is flexible but rigorous. The ethical issues surrounding housing in the US are always framed broadly with readings in urban history, sociology, and political science; presentations by historians; and visits with longtime residents of the neighborhoods in which we are working.

Then, within the overarching topic of housing with its many challenging concerns, each semester takes up a different focus for special attention. These have included the economics of affordable and workforce housing, the changing inhabitation of center cities after COVID, the difficulties posed by single-family zoning and historic overlays, the campus housing crisis, missing middle housing legislation, re-densification of the urban core, and repurposing and adding to historic buildings. In more advanced studios, additional technical topics of special interest, such as mass timber construction and district stormwater management, have also been addressed.

Such complex considerations create a learning environment wherein the vital question arises - how do architects understand what is the *right* thing to do?

TABLE OF CONTENTS

A LENS FOR ARCHITECTURAL ETHICS	02
TOOLKIT OF HOUSING RESOURCES	03
OUR PRACTICE/ YOUR PRACTICE	04
PARTNERSHIPS AND CONNECTIONS	05
HOUSING AMERICA SERIES TO DATE	06
HOUSING AMERICA STUDIOS	07-19
IMPACT AND REFLECTION	20

How do architects understand what is the **right** thing to do?

submission

2026 AIA/ACSA Housing Design Education Award

A LENS FOR ARCHITECTURAL ETHICS

The ethical concerns surrounding housing in the US are many, offering a fertile ground in which to explore how architects ought to operate within society. While each *Housing America* studio has a particular focus, other issues are not muted. Rather, the studios endeavor to lay out the larger issues as a framework and invite students to engage them as they are able in addition to the studio's primary goals. Regardless, the students' experience is richer for having considered the breadth of housing's ethical entanglements which are especially prominent at the present moment. A few ethical questions that the topic of housing brings to the fore are:

Access and Attainment

- To what extent is a society obligated to assure that its citizens are able to access and attain housing?
- How do we address racial disparities in housing attainment that are the clear results of decades systemic de jure segregation?
- What should our stance be with respect to the use of housing as a vehicle for compiling and transferring personal wealth?

“

The U.S. housing market is in crisis, driven by a fundamental imbalance between supply and demand [creating] cascading economic and social challenges”

- US Chamber of Commerce, March 2025

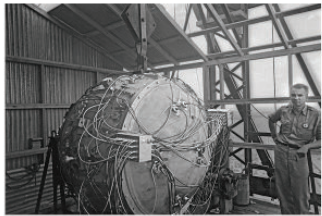
Location and Connectivity

- How do we locate housing so that it does not become a fuel for sprawl development?
- Are all members of a society entitled to a well-connected and serviced neighborhood?
- How do we address environmental harms (heat island, harmful particulates, contamination) that have unjustly accrued to particular neighborhoods and populations?

Form and Function

- Are there family types that do not find options to meet their needs in the current housing stock?
- Might housing design play a role in addressing the increasing social disconnect in American society?
- Can a nexus of housing and transit catalyze equitable change in fragile neighborhoods?

America Needs a Manhattan Project for Housing



The Harris/Waltz campaign is out with more housing policy proposals, this on the heels of the then Biden/Harris proposals earlier this year. And just like most sequels, Part Deux is almost always worse than Part One. Except for Terminator 2, of course.

First and foremost, I absolutely love and give immense credit to a presidential candidate who attempts to tackle housing in America. Five+ housing proposals in as many months from the sitting Administration is noteworthy. Housing is not a crisis, it's worse, it's a chronic disease: a lingering condition that is getting worse over time. Peripheral treatments have been proposed and helpful therapies exist, but there is no cure in sight. We are short 4.4 million homes, and this number continues to grow.

Andreas Mueller's recent Substack article on the need for a massive federal response to the housing crisis is used to situate local issues in national discussions.



Flier on a university bulletin board in 2023 during the Housing America IV: Campus Housing studio.



Current writings like Affordable Housing for AIA Architect by Wanda Lau, August 9, 2024 are shared to engage students in discourse.

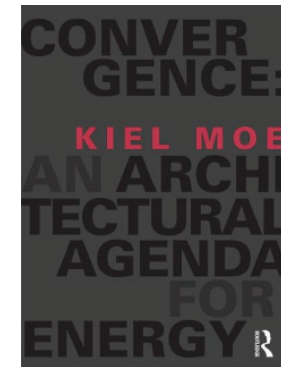
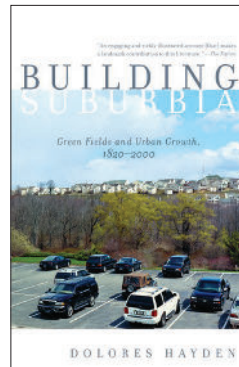
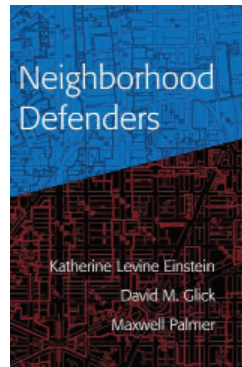
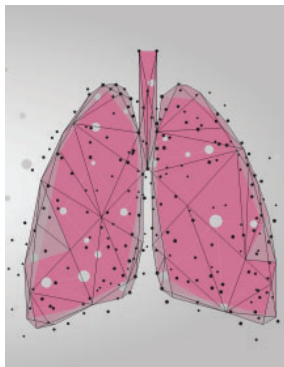
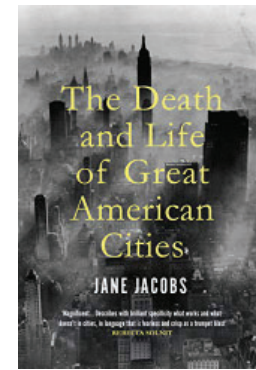
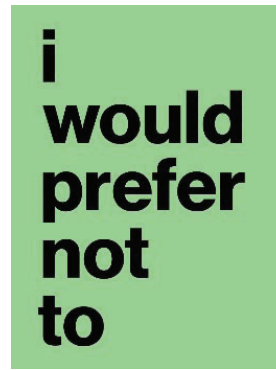
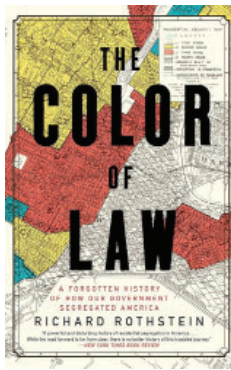
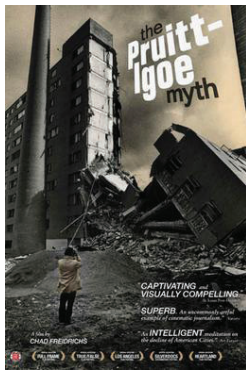


Housing America studio walking tour of recent local housing developments, during which we discuss construction methods, the economics of housing, and what new developments are (or are not) contributing urbanistically.

A TOOLKIT OF HOUSING AND PRACTICE RESOURCES

Over the years, the HA studio directors have developed (and continue to develop) a set of resources that are effective for introducing the overarching concerns of the studio. These include long and short form print, recorded guest lectures, films and documentaries, architectural case studies, podcasts, and website resources. A small sample of resources commonly used includes:

Additionally, the studio directors continually archive the best work examples from each HA studio. This archive is growing into a robust trove of research methods, case studies, diagramming strategies, and approaches to housing design that informs the work of current and future HA studios.



Podcasts, books, and movie titles appearing from left to right: The Pruitt-Igoe Myth” (film); Freidrichs, 2012. *The Color of Law: A Forgotten History of How Our Government Segregated America*; Rothstein, 2017. *The State of Housing Design*, Joint Center for Housing Studies of Harvard University, 2023. *i would prefer not to*, Podcast Series; Miljaki. (Multiple podcasts by this author assigned.) Strong Towns (website, podcast, and books). *The Death and Life of Great American Cities*; Jacobs, 1961. Redlining Makes Us Sick: How the Legacy of Redlining Contributes to Poor Health Conditions Today (data visualization website); Alexander and Falzon. “Neighborhood Defenders: Participatory Politics and America’s Housing Crisis”; *Political Science Quarterly*; Einstein, Glick, and Palmer, 2020. (article used when we need a brief overview of the above book). *Building Suburbia: Green Fields and Urban Growth, 1820-2000*; Hayden, 2004. *Modern Architecture and Climate: Design before Air Conditioning*, Barber, 2020. Multiple readings by this author assigned. “Get Back” (film series); Jackson, 2021. (On the nature of collaboration and the use of deep disciplinary knowledge applied to novel challenges.) *Convergence: An Architectural Agenda for Energy*; Moe, 2013. (Multiple readings by this author assigned.)

OUR PRACTICE / YOUR PRACTICE

Housing America studio directors' statement:

We are both active practitioners and PhD candidates in practice-based research; looking into our practice as a subject of research. As such, we have come to appreciate the value of surfacing the tacit knowledge embedded in our work - as designers, as researchers, and as housing advocates.

Housing America studios begin by visiting some of our urban infill housing projects (some self-initiated and some for clients, often meeting with clients and builders), presenting some of our work on the boards, reading a selection of our writings, and discussing our ethical agenda as practicing architects. It is vitally important to us that we are as open as possible with our students about the work we do as practitioners, in the broadest sense of the word. It benefits both us and them.

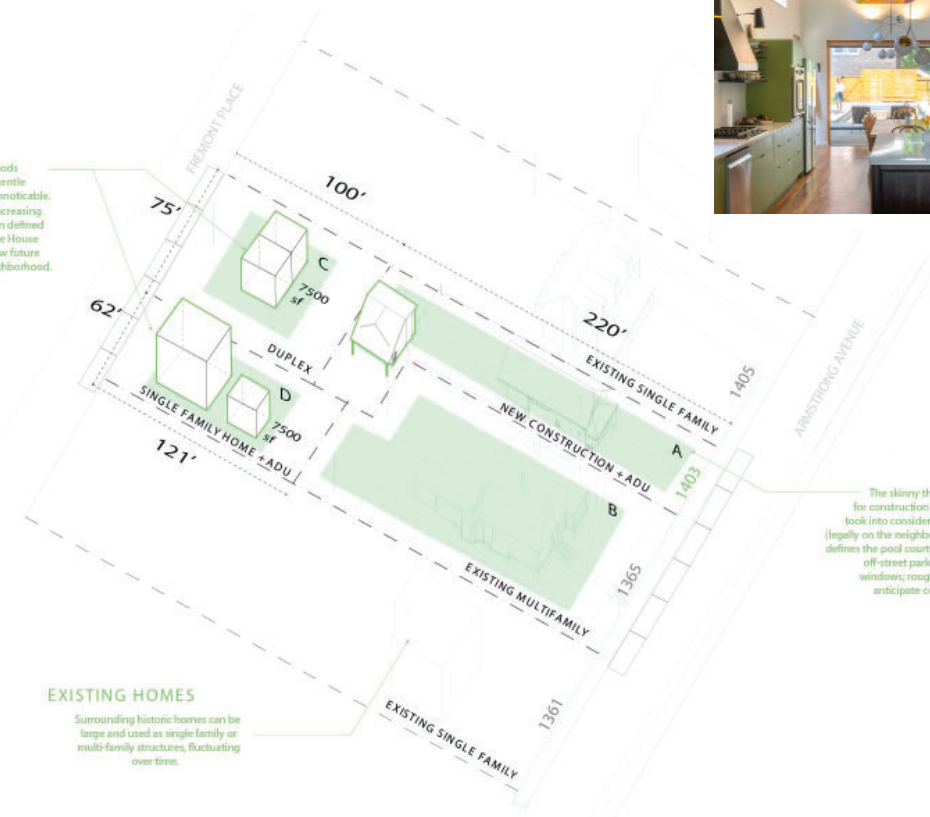
This sharing of our intentions, struggles, and successes has become a core characteristic of the *Housing America* series and serves many purposes. It models one way of negotiating challenging ethical considerations, assures students that such negotiations are always ongoing, and establishes a sense of trust and openness around discussing such issues.

Transparency with respect to our work catalyzes the students' work and sets expectations for the ethical dimensions of the studio. We have found that this unguarded openness about how we operate in the world as architects spurs meaningful dialog between us and our students both within but also often well beyond the particular context of any one of the *Housing America* studios. We frame initial "Our Practice / Your Practice" exercises that students discuss and deepen while developing design proposals.

Guest practitioners share a conversation (virtual or in-person) about their practices and how the work demonstrates their values and contributions. Students conclude the semester with reflective writing that situates their design proposals within emerging and future personal and professional agendas.

GENTLE DENSITY

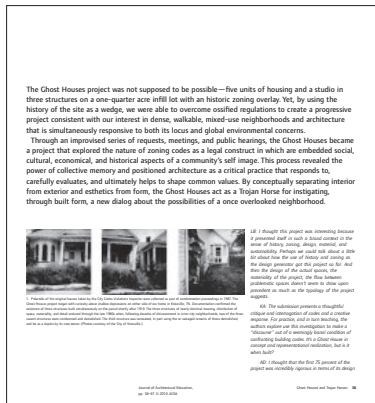
On land in historic neighborhoods zoned for single-family houses, gentle density development is often unnoticeable. Historic structures remain, while increasing needed housing units. This diagram defined site strategies during design of the House with Five Porches that would allow future opportunities to create a pocket neighborhood.



EXISTING HOMES

Surrounding historic homes can be large and used as single family or multi-family structures, fluctuating over time.

The skinny through-lot was unchanged for construction of the project. The site design took into consideration the 19th c. carriage house (legally on the neighboring lot). At this time, the structure defines the pool courtyard of the new house and required off-street parking. Yet, existing doors and windows; rough-ins for plumbing/electrical anticipate converting it to an ADU.



Students read and discuss publications we write to situate our built work. "Ghost Houses and Trojan Horses" (above) is a publication (*JAE 64:1*) we authored about a 5-unit infill housing project we designed, developed, live and work in. Recognized as an AIA National Small Project Award winner, the project 'walks the talk' for our practice.

Student tour select projects each semester. An H.A. - V tour of "House with Five Porches" (AIA design award) with clients demonstrated "Gentle Density" principles in a development plan for a compact, accessible new home, a carriage house renovation, an existing 5-unit house they own, and future subdivided lots.

THE HOUSING AMERICA SERIES TO DATE

(HA I was prior to the time range of consideration for this award)

Term	Students	ARC	Focus
Spring 2022 - Housing America II	22 graduate students	ARC 572 / ARC 560 (two sections)	center cities post COVID, high density, directly connecting to transit, retrofitting suburban typologies, mass timber construction, public mixed-use amenities, who gets to participate in the city?
Fall 2022 - Housing America III	14 third-year undergraduate students	ARC 373	historic neighborhoods in urban conditions, the appropriateness of single-family zoning in urban conditions, neighborhood-linked environmental justice, the social values embedded in zoning codes
Spring 2023 - Housing America IV	17 graduate students	ARC 572 / ARC 560	student housing, public investment in higher education, the relationship between campus and city, housing that serves diverse student populations, district stormwater management strategies
Fall 2023 - Housing America V	14 fourth-year undergraduate students	ARC 471	missing middle housing, participating in public process, the public values embedded in amending the zoning code, working directly with city officials, small lot development in walkable and bikable neighborhoods
Spring 2024 - Housing America VI	17 graduate students	ARC 572	adding to a historically significant building, redensifying the center city, connecting to transit, confronting gentrification, housing with supportive services for mixed-income residents, mass timber construction
Spring 2025 - Housing America VII	14 fourth-year undergraduate students	ARC 471	point access block (single stair) typology, legislative process, small lot development without conglomeration, confronting gentrification, ownership models that allow for broader inclusion
Fall 2025 - Housing America VIII	1 graduate/11 undergraduate students	ARC 496 / ARC 585	reconciling public benefit and market opportunities, catalytic projects in formerly marginal districts, developing density to support public amenities, confronting gentrification, who benefits from public investment?
	12 graduate students	ARC 571	

THE ETHICAL OVERLAY OF HOUSING AMERICA

PROFESSIONAL CURRICULUM & NAAB METRICS

Absent a dedicated housing studio or seminar in our curriculum, the concerns of the *Housing America* series are applied as an overlay to a variety of courses to frame architectural ethics across the curriculum. The underlying courses most often have numerous professional, environmental, and technical concerns embedded in them, including multiple NAAB metrics. These foundational issues are not muted. This is a purposeful tension. Rather, the ethical overlay of *Housing America* places them within a broader context where architects must not simply possess but must also continually decide how to properly deploy such disciplinary knowledge and skills. We view this as a type of “complete integration” where what is often seen as merely pragmatic knowledge is projected through an ethical dimension. The following have served as *Housing America* courses:

- ARC 373 - Design V: Applied Research Studio**
Understanding the design process through integrated design research.
NAAB: A primary course for SV4, PC2, PC 5. Demonstrates SV1, PC6, SC3.
- ARC 471 - Design VII: Integrations Studio**
Active integration of cultural considerations, programmatic possibilities, and technical exploration.
NAAB: A primary course for SV2, PC3, PC6, SC1, SC5, SC6. Demonstrates SV1, SV5, PC2, SC3.
- ARC 496 - Design IX: Provocations Studio**
Thematic studio requiring research, critical examination and design speculation of critical positions.
NAAB: A primary course for SV1. Demonstrates SV4, PC2, PC5.
- ARC 560 - Seminar in Design Integration (linked with 572)**
Design development of technical aspects of structures, environmental controls, and construction.
NAAB: A primary course for SV2, PC3, SC1, SC3, SC4, SC5, SC6. Demonstrates PC6.
- ARC 571 - Design IV: Architecture and Urbanism**
Architectural design and urban complexity, social and cultural interactions, public and civic space.
NAAB: A primary course for PC2, PC7. Demonstrates SV1, SV4, SC4.
- ARC 572 - Design Integration Studio (linked with 560)**
Active integration of cultural considerations, programmatic possibility, and technical explorations.
NAAB: A primary course for SV2, PC3, PC6, SC1, SC5, SC6. Demonstrates SV1, SV5, PC2, SC1.
- ARC 583 - Advanced Architectural Design: Urbanism Studio**
Research, critical examination and design speculation of critical positions involving urbanism.
NAAB: A primary course for SV1. Demonstrates SV4, PC2, PC5.
- ARC 585 - Design VI: Advanced Studio, Conservation and Stewardship**
Research and design speculation addressing the conservation and stewardship of cultural artifacts.
NAAB: A primary course for SV1, SV5, PC6. Demonstrates SV2, SV4, PC2, PC3, PC5.

NAAB Shared Values
SV1 Design
SV2 Environmental Stewardship and Professional Responsibility
SV4 Knowledge and Innovation
SV5 Leadership, Collaboration, and Community Engagement

NAAB Program Criteria
PC1 Career Paths
PC2 Design
PC3 Ecological Knowledge and Resp.
PC5 Research and Innovation
PC6 Leadership and Collaboration

NAAB Student Criteria
SC1 Health, Safety, and Welfare in the Built Env.
SC3 Regulatory Context
SC4 Technical Knowledge
SC5 Design Synthesis
SC6 Building Integration

Midtown Atlanta has densified tremendously over the last decades. Yet, the area's mass transit (MARTA) stations, while architecturally interesting, are of low, nearly suburban, density. The Arts Center Station in particular is surrounded by open land owned by the transit authority and is but a single story above grade. Adjacent to the Richard Meier and Renzo Piano-designed High Museum of Art and the Woodruff Arts Center, this station sits among high rise residential and office towers. Like the public housing site of *Housing America I*, it is an obvious candidate for higher density housing - under public ownership and underutilized. (This was an ACSA Timber in the City Competition brief, adjusted for the interests of Housing America.)

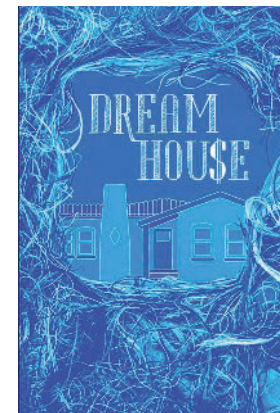
In addition to this land use opportunity, *Housing America II* unfolded at a complex socio-economic juncture for US center cities. In the post-COVID era, many center cities were seeing their office-centric real estate economy falter as Americans questioned where and how they wanted to work. Simultaneously, many were looking for urban neighborhoods that offered more opportunities for social connection, cultural enrichment, and recreation. The studio took this as an opportunity to question the typical single-use typologies that are prevalent in urban Atlanta while leveraging connections both to transit and existing cultural institutions. The studio broadly considered architects' appropriate role in defining such post-COVID center cities.

The studio also offered a first opportunity to use the new mass timber construction types in the 2021 IBC in a complex that maximized the allowable zoning density of 10.2 FAR (which generated 2.9 million square feet of program), the highest density of any Housing America studio to date. The ability to provide such dense high rise housing with a material that is much more carbon-benign than steel or concrete was a central challenge of the studio. With such large projects and against the backdrop of the changing post-COVID landscape, creative programming of amenities that support a gracious urban life became critical to each project.



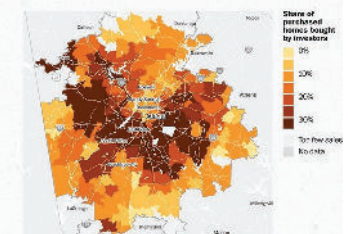
[name redacted], FAIA, Partner, [firm redacted], led a virtual discussion of mass timber design and construction and presented the Kendeda Building, a Living Building Challenge certified project. Students then traveled to Atlanta for a guided tour of the Kendeda. Cultural site tours included the Woodruff Arts Center (Meier, Piano) & Coca Cola Theater (Trahan Assoc.) where students attended "Dream Hou\$e," a play addressing the personal and cultural cost of gentrification in a changing neighborhood.

Housing America studios structure immersive and holistic student experiences



Atlanta

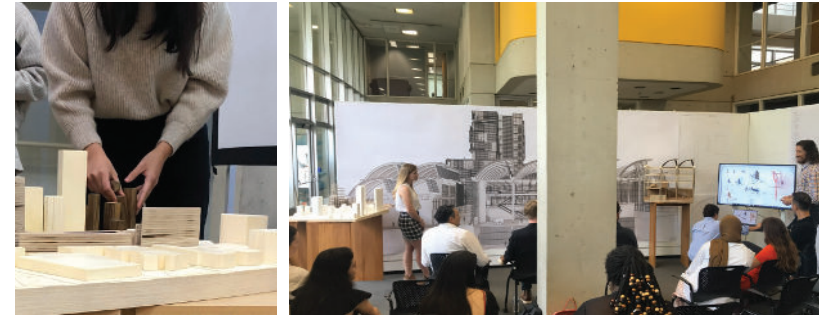
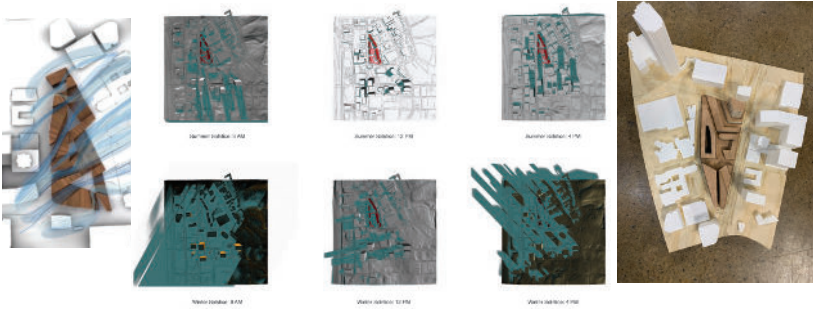
25 percent of homes purchased in this area last year were bought by investors — more than the typical metro. That's higher than its 2015 rate of 12 percent.



Students traveled via MARTA, the 9th largest transit system in the US, to travel between the 1982 MARTA station, the studio's project site, and field trip destinations. Sleeping in the iconic 1985 brutalist 47-story atrium hotel by architect/developer John Portman, they experienced and discussed, in situ, decades of suburban expansion and historical and contemporary struggles over space in Midtown Atlanta amidst issues of real estate speculation, neighborhood gentrification, office vacancy, etc. An architect-led tour of [Atlanta firm] introduced students to the firm's work on tall towers and mass timber, and in-person participation on interim studio reviews by [firm name] architects.

Selected student process on zoning, density, development, transit issues: Floor Area Ratio [FAR], daylight/solar/wind studies informed urban design, phasing and programming. Design of a selected area of focus for detailed development followed.

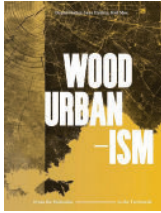
Experience and immersion through iterative physical models from massing to detail in parallel with technical and experiential 8' tall drawings. Phase II review (below left) Final review (below right)



URBAN DESIGN ISSUES, DRAWINGS, MODELS

ARCHITECTURAL ISSUES, DRAWINGS, MODELS

ASSEMBLY & DETAIL ISSUES, DRAWINGS, MODELS



01.24 - 26
My Practice: Your Practice:
Creativity, Collaboration +
Technical / Tacit Knowledge

02.02 Living Building Challenge +
Timber/[name], FAIA, [firm] (virtual)

02.18 Review
Phase I

Urban Housing Readings,
Lectures, Case Studies

Timber Readings,
Case Studies

03.04 Consulting by P.E. on life
safety, passive/active systems

Passive/Active Systems
Readings, Case Studies

Design
Synthesis

02.05 -06 Atlanta field trip, cultural tours,
TVS firm visit and timber case study
presentation

02.11 Timber Housing / [name], FAIA, [firm]
(virtual + reading)

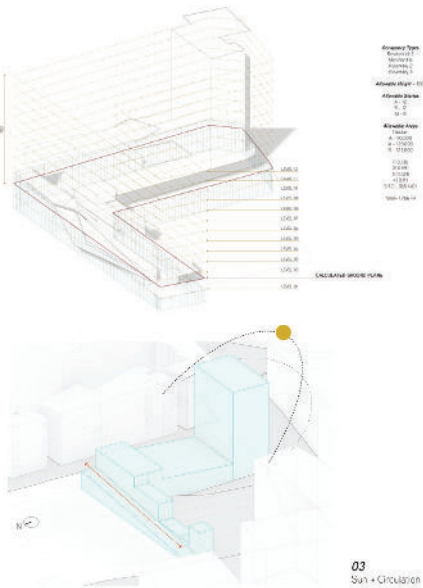
02.18 Architects from [firm] and [firm]
practicing in Atlanta with focus on urban
design and timber join in-person interim

03.11 Review
Phase III

04.11 Review
Phase IV

05.05 Review
Phase V

Indicates phases
of work, typically
five phases



Building layouts consider site topography, the metro station, and "right to light" as the first of a phased development of this site.

Density, phasing, a transit center and community connections were explored in multi- and mixed-use 12-20 story buildings. Urban livability via space and program to foster diverse public, collective, family, and individual inhabitation and dwelling.

Offered the first time to a less advanced (third-year undergraduate) student cohort, *Housing America III* modulated expectations while maintaining a high level of rigor in addressing concerns surrounding the provision of housing in the US. Within the curriculum, this particular studio course challenges students to spend the first half of the semester performing research to frame a set of concerns within a broader intellectual agenda established by the faculty instructor. They then spend the second half of the semester designing a project in response to the framework they have established.

The location for this exploration was Fourth and Gill, one of Knoxville's historic streetcar neighborhoods. The class considered the operative role single-family zoning and the neighborhood's historical overlay have played in protecting the area as a cultural artifact while also questioning the appropriateness of these mechanisms going forward in the face of the pressing need for more attainable housing within robust walkable and bikeable networks. This was accomplished through readings, discussions, neighborhood tours, and the review of archival materials such as Sanborn maps.

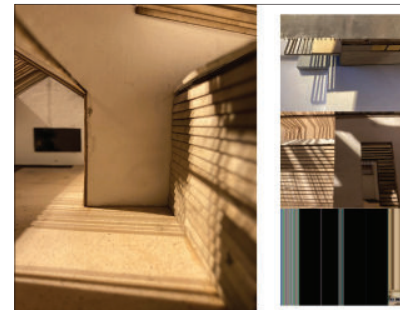
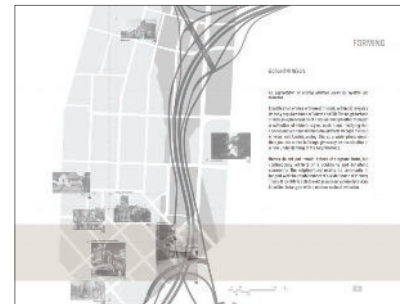
A parallel concern was the impact that the interstate highway system has had on the neighborhood. Like many urban neighborhoods that saw disinvestment during the 1950s and 1960s, Fourth and Gill was targeted through eminent domain for the insertion of I-40. This unfortunate legacy has severe implications into the present. Any strategy for densifying the neighborhood will likely have to address this unfortunate condition.

The salient questions that arose in students' research were many. When we preserve a neighborhood, which characteristics are we exactly preserving and why? How does one weigh the significance of cultural artifacts that are privately owned (but to some extent publicly enjoyed) against broader societal and environmental concerns? What has been lost in Fourth and Gill and might it be regained? What should be legal to build in this neighborhood that isn't? Each of these small studies clearly has broader implications for housing in American cities and several of the students in this class have continued to pursue interests they developed in this course in their future studios.

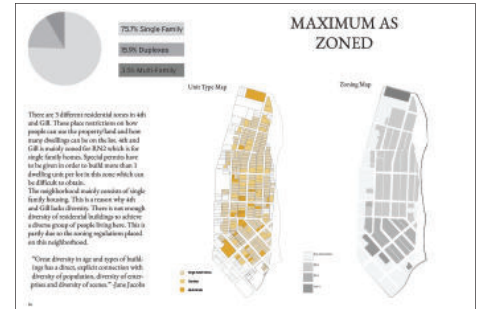
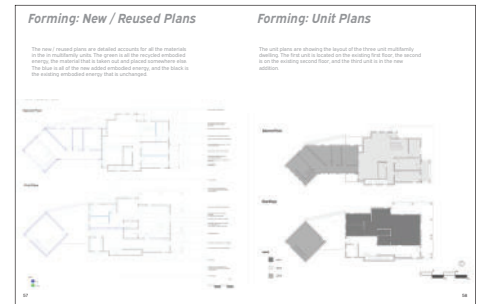
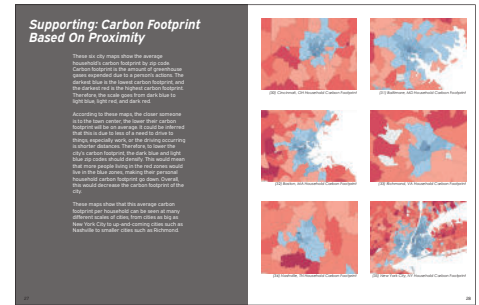


While the neighborhoods that bore the brunt of urban highway construction were in most cases economically disadvantaged, often they were the sites of viable communities. However, as with any complex urban community, they relied on... 'gentle infrastructures' for their ability to function properly."

- [name redacted, HA studio co-director], "The Highway and the American City", 2010

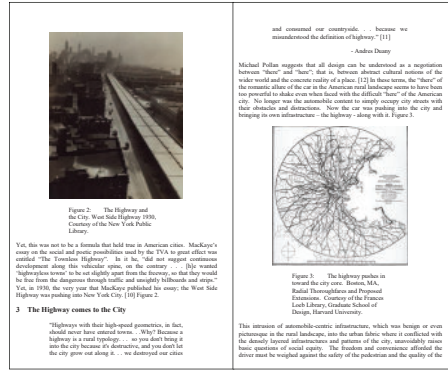


MY PRACTICE, YOUR PRACTICE: During *Housing America III* [Name], FAIA, partner, [firm] describes his practice to students and the design of his net zero carbon infill house, an AIA COTE Top Ten Green project.



DESIGN RESEARCH: Selected spreads from student booklets created during the research-intensive first half of the studio. Creating these documents helped students establish their ethical agendas for the design portion of the semester.

OUR PRACTICE: Among other readings, students read publications concerning the history and impact of highways on cities written by [name redacted, HA studio co-director] to establish agendas and situate projects.



STUDENT DESIGN PROPOSAL: Using the interstate embankment at the edge of the neighborhood to introduce significant new density. (below and right)

Tours of infill housing & missing middle [firm] projects

Directed walking tours of former streetcar neighborhoods

Directed readings

Case Studies

FRAMING

LOCATING

REFERENCING

SUPPORTING



FORMING

Indicates phases of work



STUDENT DESIGN PROPOSAL: Retrofitting historic houses with complex, changable furniture activates new units in historic shells.

My Practice: [name], FAIA, [firm], urban infill & net-zero, in-person guest

Final Review of Research, Strategies, & Design Proposals

Housing America IV turned an eye to our own backyard - the [university name redacted] campus and the wider campus housing crisis in the US. As housing becomes less attainable in many cities, this inevitably begins to put additional pressure on private housing around campuses both in the form of increased market rate rents and increased competition from non-student renters. Meanwhile, universities faced with declining public investment and reacting to the coming demographic cliff are often hesitant or unable to build new housing on campus. This double pressurization of the housing markets around universities is not only a source of great stress for students but also a significant contributor to the seemingly ever-rising cost of a college education. Students feel this acutely.

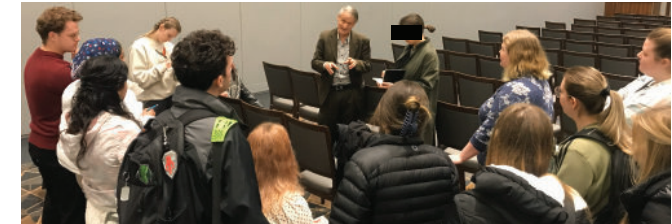
The studio first analyzed the private housing that is being built near the campus. Using “5 over 2” podium construction and maximized zoning envelopes and bed counts, these developments undoubtedly achieve stabilized proformas for their investors and inarguably provide additional housing where it is sorely needed. Yet, students found them unsatisfying and inadequate, which raises the sticky question as to whether, even with a need as pressing as the provision of housing, any solution that addresses the core problem is automatically ethical in the broadest sense?

The studio used a group of proximate on-campus sites with conditions that include those that had never been developed, a recently built dormitory, and sites with existing housing slated to be demolished in the university's master plan. Each team was charged with programming and designing student housing for their site that served a certain student population and considered its relationships to the campus as a whole. Teams with sites that contained existing buildings had to decide whether to renovate, add to, or remove and replace those, with all of the attendant environmental concerns that surround such decisions. Each team's site plan was required to provide district storm water management strategies that support [university's] National Pollutant Discharge Elimination System (NPDES). Twin emphases on flows of water and flows of movement strengthened interconnectivity of campus space and life through cooperative design of precincts.

“

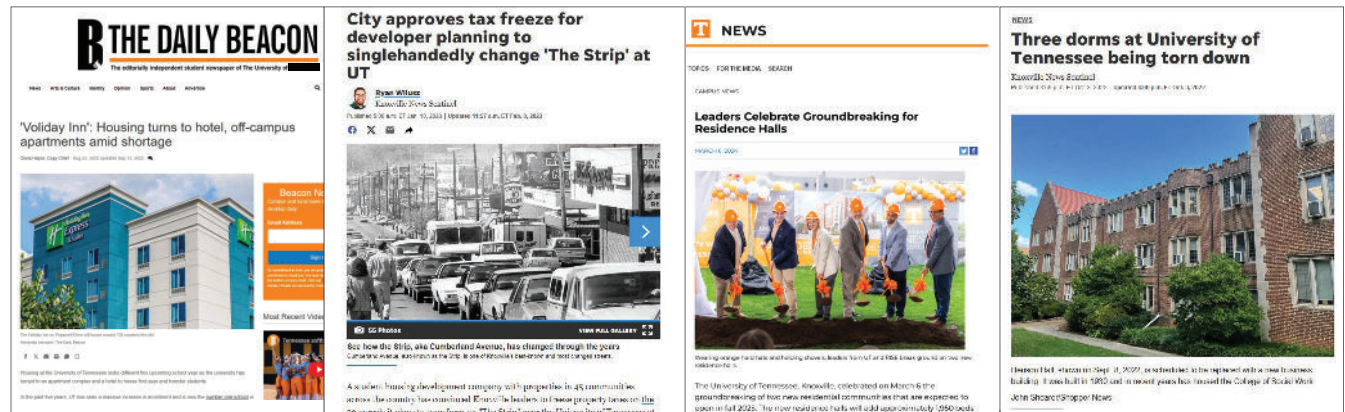
When you go through the process of updating a master plan...what you are really doing when you look at the whole physicality of this place...is imagining our future...and buildings are just buildings that are driven by the answer to the question ‘who do we want to be? who are we trying to be? And I think a great plan for a new or continuing development of our physical presence is very closely tied to the strategic vision for the campus which we all have been working on as well.’

- Chancellor [name redacted],
Campus Master Plan Town Hall



The studio attended the Campus Master Plan Town Hall. After public presentation of the university's new master plan, Chancellor [Name] and Campus Architect, [Name], AIA talked with students (above).

Local newscasts, current press, university student newspapers, and official communications were collected, discussed, and situated within national context and broad history of housing issues.



In the late spring of 2023 we were contacted by planning officials from the City of Knoxville asking if we would run studios in parallel with the effort to pass zoning reform legislation that would permit “missing middle” housing by right in many of the city’s urban neighborhoods. Missing middle housing represents housing typologies that fall in between the single family home and the large apartment development; roughly 2- to 20-unit developments. These typologies were once common in American cities but have largely been excluded by modern zoning. Our studios would test the proposed changes while providing examples of the types of housing that would be made possible in support of the public discourse.

A comprehensive integrations studio studio focused on the development of a derelict lot that was of particular interest to the city as a catalytic opportunity for an otherwise fragile neighborhood that is home to a dynamic and much loved elementary school. Teams proposed their own methods of subdividing the lot to maximize the possible number of housing units while considering the site plan as a whole, connections to the surrounding neighborhood, and provision of public amenities.

The research studio considered the proposed zoning changes more systemically, with student teams examining the circumstances of and implications for various first-ring neighborhoods broadly. Work was compiled into a shared research document. This urban scale consideration then informed architectural scale interventions, with each student proposing a project that addressed housing and community needs particular to neighborhoods studied.

The two studios shared information with each other and city officials throughout the semester. The city provided bus passes to each studio to situate land use and parking implications in proposals informed by direct experience. As zoning changes were nearing a final vote, the studios worked with a local urban advocacy group, [name redacted], to stage a public exhibition of the work during First Friday (a monthly arts exhibition event). The exhibit was covered in the local press and the student work was referred to multiple times by commissioners and in public comment during zoning commission hearings. The zoning changes were adopted and the city is already seeing positive impacts.



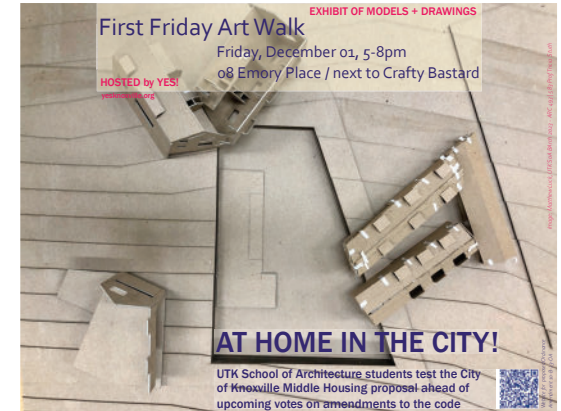
Students attended city-hosted community open houses in two neighborhoods, talking with residents learning about and providing input on the Middle Housing zoning change.



Mobility lessons folded in with tours to learn about housing and land-use through direct experience of infrastructure to support alternatives to single occupancy vehicle transit.



Studios attended the School of Public Policy and Public Affairs town hall - “Public Square: Land Use Policy, the Missing Middle, and Knoxville’s Housing Challenge.” Presenters addressed academics, government, and the



Flier for the First Friday event.

knox news.



An open house for the exhibition of University of Tennessee students’ research showcasing the design concept for the mayor’s proposed Missing Middle Housing ordinance changes was held in Knoxville, Friday, Dec. 1, 2023.

Hannah Mattix/News Sentinel

The studio co-hosted an exhibit with a local non-profit that advocates for infill housing in transit-connected and walkable neighborhoods. To engage the public, emphasis was placed on models and drawings that communicate to non-architects. Extensive news coverage and attendance by city council members, government staff, local design professionals, small developers, and neighborhood residents raised local awareness.



URBAN DESIGN: Two teams of students worked together on a site framework for a missing middle housing pilot project with a focus on district mixed use and transit connections.
PHYSICAL MODELS: Representation considered communication with non-architects. Model sizes, scales, and issues in response were accompanied by diagrams and drawings.

[Name], Deputy Policy Officer from the City of Knoxville discussing site models and designs at a “Lessons Learned” session that followed final reviews and exhibit but preceded her presentation at the commission for vote by council members.



08.28 Tour project sites & projects with ‘My Practice/Your Practice’ exercises & readings

09.18 Present research to commissioner & city staff

10.05.23 City Planning Commission Mtg

12.01.23 Co-host YES! First Friday Exhibit “At Home in the City”

01.23 City Council passed Middle Housing zoning ordinances with mayor, council members, and public comments referencing studio

09.12.23 Attend School of Public Policy panel “Land Use Policy, the Missing Middle, and Knoxville’s Housing Challenge”

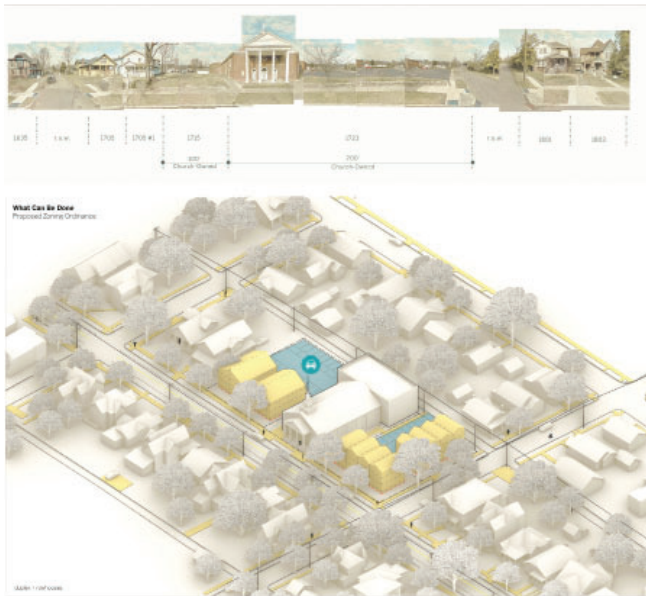
09.21 Attend Old North community open house
 09.25 Attend Parkridge community open house

10.11.23 Review w/ realtors, local developers, architects

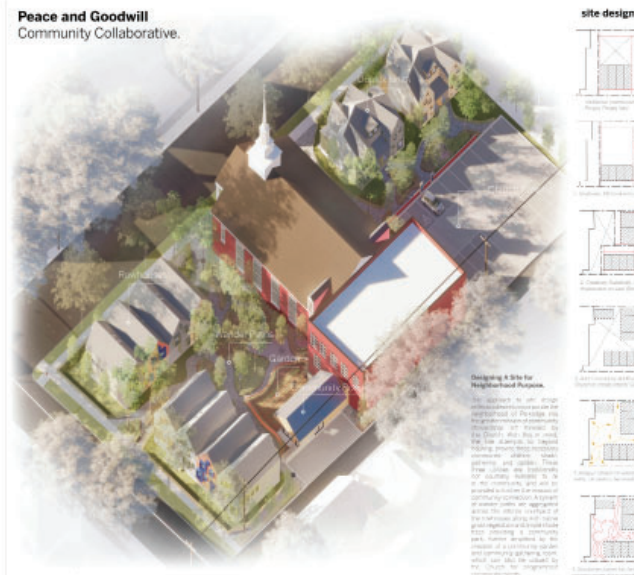
10.25.23 Tour Middle Housing w/ arch/developers, contractor & residents

12.06.23 Share “Lessons Learned” with city staff, local developers, and professionals.

12.14.23 Vote by City Planning Commission on Middle Housing Ordinances - passed!!!



PHASE I: “Snapshot design research” of four neighborhoods’ physical and social fabric through on-the-ground experience and analysis of spatial patterns, transit infrastructure, underused structures and vacant lots. Emphasis on awareness of biases when reading barriers, opportunities, and “character.”



PHASE II: “Scenarios” of where and how to work and who to work with “to make things, and to make things happen” centered on “middle-making” where agency and equity through crowd-sourced, non-profit, for-profit, cooperative, government, & hybrid financial paths were considered for sites and inhabitants.



PHASE III: Application of zoning ordinances to proposed lots framed adoption of or challenge to middle housing types and spatial design of sites, landscape, and interior to challenge norms of dwelling in light of urban, financial, and construction agendas and design proposals. “Lessons Learned” offered feedback to the city.

Built in 1891, the five-story Caswell Harris Building (which soon became the Watauga Hotel) stood at a bustling intersection in a growing Knoxville. The nearby train station was found to be insufficient almost as soon as it opened and was immediately enlarged. Crowds flowed in, out, and around. It housed a storied local restaurant that persisted for nearly 100 years. Yet, by the time the interstate passed just feet away severing downtown from the historic neighborhoods to the north and, soon after, the building suffered a damaging fire, its context had changed so drastically that there seemed no reasonable argument for refurbishing the building and the top three stories were unceremoniously removed. (Like *Housing America II*, this was a Timber in the City Competition adjusted to our needs.)

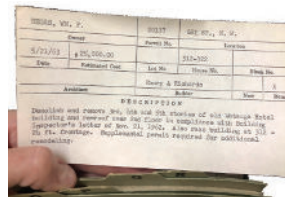
What remains of the building stands in a context of concentrated services for the unhoused that is utterly transforming yet again. The past decades have seen a resurgence of downtown. A new seven-story residential condominium takes up most of the rest of the block, the nearby neighborhoods have experienced significant reinvestment, and a \$100+ million multi-use stadium is being built just blocks away.

Housing America VI imagined a new future for the building in light of these changes. Pairing foundations that were designed for compressive load bearing masonry with much lighter contemporary mass timber structural technology, the building's future was found in its past. This allowed for opportunistic additions that maximize housing density on the site while avoiding the significant expense of new foundations.

Likewise, the building's position between the railroad and the interstate and along what is now one of the main pedestrian/bicycle routes from downtown to the northern urban neighborhoods was seen as a cue for how students might consider the site's broader conditions relative to the current and future city fabric. As with any historic structure, sussing out cultural significance and developing an appropriate response to existing fabric were issues that wove through every consideration.



Historian-led urban district walking tour, field study & archival research on layered site & building history, & presentation by non-profit tenant engaged in housing informed collages.



Team-set design agendas included a full range of issues for designing housing - from carbon and EUI analyses to speculation about the return of rail to the Depot District.

Demolition permit (1963) for the top three floors of the original building (1891) coincided with highway expansion in the area.

Large-scale section models, readings, and case studies explored materials, enclosure, and operability to lower operating energy and embodied carbon through adaptive reuse.

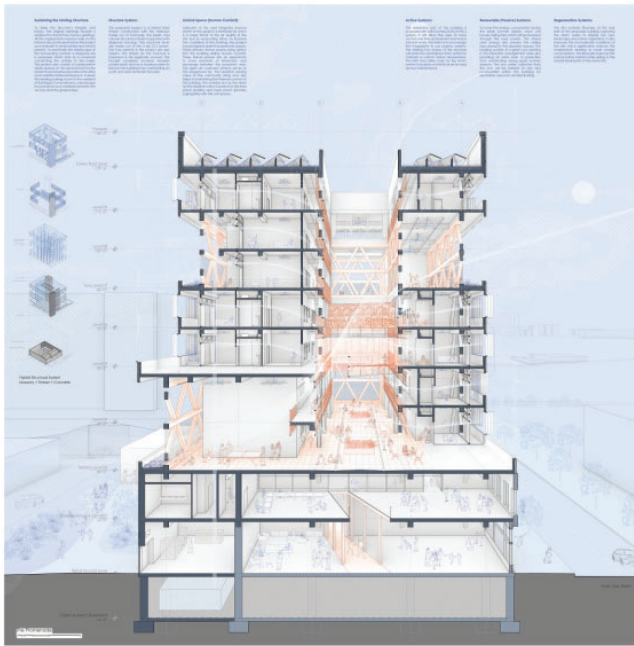
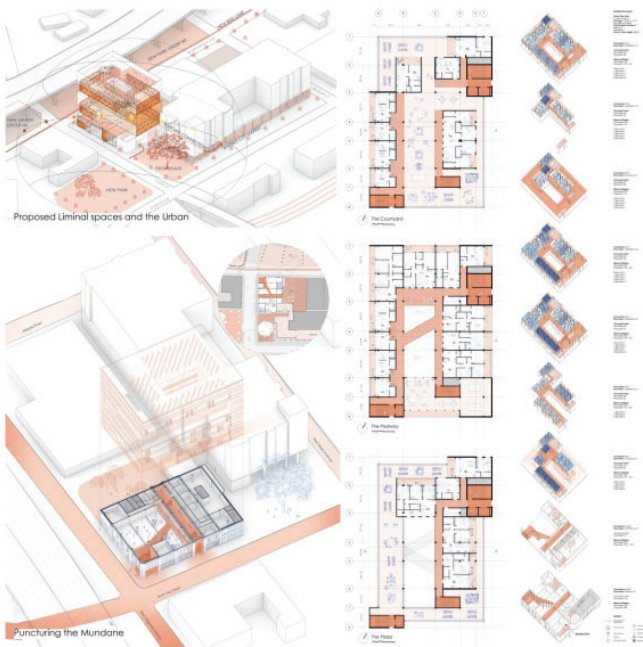




The Rego Building today originally was a building of speculative investment to serve a certain type of downtown office, however, the building today houses an educational institute, a pro office, and a boutique which later got transformed into a hotel when the current building and street team began connecting to Knoxville from the outside.

With the rich history of immigrants and development of transportation, the city of Knoxville brought commerce, culture and people. Commerce with transportation, the connectivity of people with the city's downtown area and its business development, later through a marketing and promotional effort through building it again that cherishes the advantages of its location and the surrounding context, the Rego building being situated at a corner site in the context to improve the existing conditions of the district.

To articulate the surrounding context, the regional area provide an opportunity to re-define the street which intersects the site and the project in the present, the project will be the first to be formed between the street and the project, an architectural effort through building it again that cherishes the advantages of its location and the surrounding context, the Rego building being situated at a corner site in the context to improve the existing conditions of the district.



Student Design Award, Third Place, 2023 ACSA Timber in the City Competition

01.24 MY PRACTICE
Assigned readings on historic preservation theory authored by HA studio co-directors

02.05 PHASE I REVIEW
Activating Historic Preservation Theory

02.12 HOUSING TOOLKIT
"History of Housing in the US" recorded lecture, [name];
"State of Housing Design 2023" excerpt; "Unlocking livable, resilient, decarbonized housing with Point Access Blocks," Larch Lab

02.21 REGENERATIVE
"Wood Urbanism: From the Molecular to the Territorial"
"Empire, State & Building"
"After Comfort" & Modern Architecture and Climate"

04.15 Phase IV REVIEW
Design synthesis and integration - systems and details presented to building technology course instructor

05.22 COMPETITION
Entries Submitted

01.29 FIELD RESEARCH DAY:
Lunch at Ukrainian Deli/tenant
Urban walk of Depot District with local historian to share social, immigrant and transit history
Presentation by housing non-profit tenant/owner
Meeting with archivist at East Tennessee History Center

02.19 Phase II REVIEW
Programming housing, Inhabitation & comfort

03.18 & 03.20 Phase III REVIEWS, Program & Time; Form & Space; Urban community presented to housing design architects and structural engineer for consult

04.17 FIELD STUDY
Tour focused on reflected ceiling plan and systems integration in built work by [local firm]

05.02 Phase V REVIEW
Design synthesis and integration including small business owner/tenant

05.06 REFLECTIONS

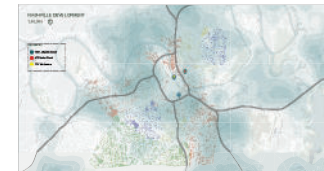
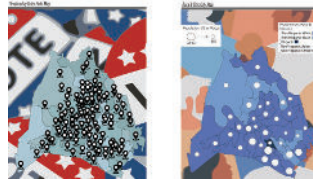
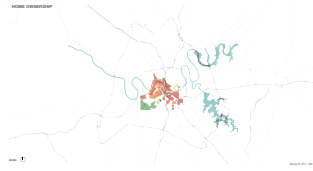
“ I really started to understand the issues surrounding Nashville’s housing crisis and started to relate them to my [own family history]” - student reflection

Point access (single stair) codes allow for a single egress stair to be used in multifamily construction with up to four dwelling units per story up to six stories high. Long an option in much of Europe and Asia, this type is either not allowed or relatively new in much of the US. Due to their small size and high efficiency, point access blocks are promising for mid rise urban infill housing on small lots. This often maintains the grain of development in historic city centers and opens the door for smaller, socially-conscious developers.

In 2024, Tennessee became one of the first states to adopt point access block (single stair) legislation. As members of the AIA Tennessee Attainable Housing Task Force, the Housing America studio directors were involved in state-wide educational efforts for architects, policy makers, and code officials. These efforts included a webinar with 110 attendees and a panel discussion at the 2024 AIA Tennessee Conference on Architecture.

By early 2025, though the legislation had been passed on a state level, though as “opt-in” legislation it still needed to be adopted by local municipalities. In an effort to provide proof of concept examples to encourage adoption, Housing America VII worked with architects and urban activists in each of the state’s four largest cities (Memphis, Nashville, Knoxville, and Chattanooga) to identify sites that not only were appropriate for point access blocks but also had the potential to address adjacent issues in the cities. These fell into four types: 1) irregular and small “left over” parcels that have resisted development, 2) development on land adjacent to institutions such as churches or cultural centers that have a social agenda in the city but find themselves land rich but cash poor, 3) public housing sites with undeveloped land and tenuous connections to the surrounding fabric, and 4) the out parcels of large, historic homes.

Studio proposals were shared with academic, professional, public, and government audiences, raising awareness of and knowledge about the legislation and housing type. An evening exhibit as part of a city-wide art walk attracted the mayor, city council candidates, city staff, professionals and the general public. Subsequent to this studio, the HA studio directors have been asked to advise AIA Philadelphia on shaping their point access legislation adoption efforts, serve alongside nationally prominent housing architects to jury a local AIA single-stair design competition, and join a panel on the topic at the ULI Spring Meeting.



FOUR CITIES: To understand unique context-specific spatial, social, and mobility issues, we collaborated with practices and community development groups from the four cities to select sites and critique our process.



HOUSING ATTAINABILITY: to appreciate the challenges associated with housing attainment, students developed a cast of characters with a broad range of economic power.



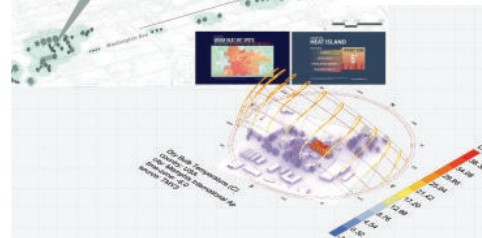
EMMA: For each of these prospective homebuyers, they then searched for available homes within the character's price range without becoming cost burdened.



EMMA'S NEIGHBORHOOD: Each character's prospective neighborhood was then analyzed, considering issues like school quality, proximity to potential employment, services, amenities, and environmental burdens.



MICROCLIMATE ANALYSIS: As part of being good neighbors, students worked to understand their impacts on microclimate

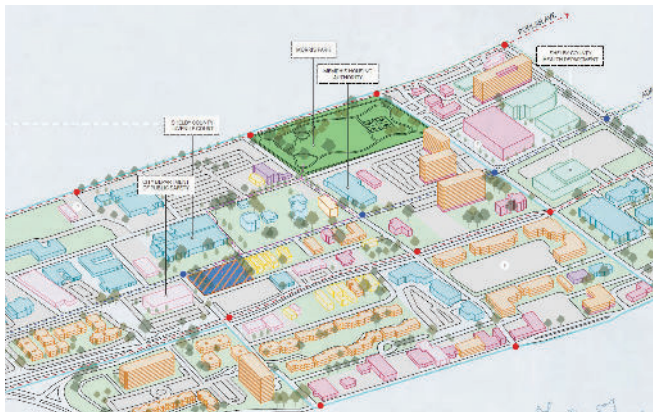


SITE TYPE 01: the out parcels of large, historic homes. Phase IV and V: Design Synthesis Memphis Student Project #02

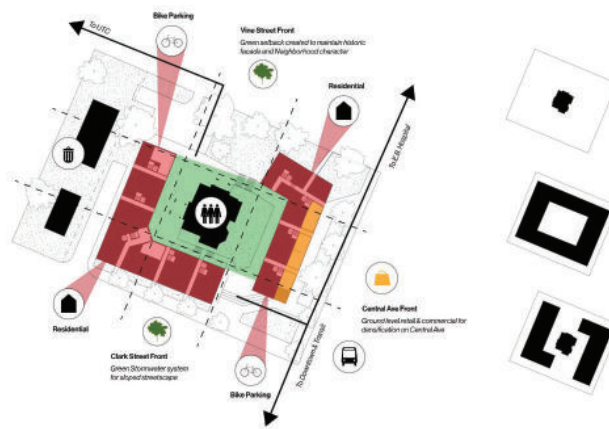


PUBLIC EXHIBIT: Members of the public examine a Memphis Project 02 as a student explains her model and proposal for sensitively introducing density in a historic mansion site with cultural programs.





SITE TYPE 02: Public housing sites with undeveloped land and tenuous connections to the surrounding fabric. Phase I-II Memphis Student Project 01.



SITE TYPE 03: Development on land adjacent to institutions (churches, cultural centers,...) that have a social agenda in the city and are "land rich, cash poor." Phase III Chattanooga Student Project 01.



SITE TYPE 01: Irregular and small "left over" parcels that have resisted development. Phase I-II Nashville Student Project 01.

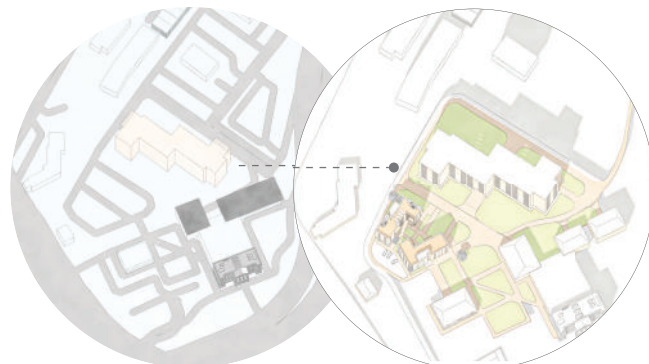
PHASE I-II

01.22 Tour sites & projects with 'My Practice/Your Practice' exercises & readings

02.24 Virtual presentations and "work sessions" with each city session "staffed" by

02.03 Joint "Positioning" team presentations on each city, neighborhood & housing context

developers, architects, and community design center members local to each city.



KNOXVILLE PROJECT 01: Before/after site design of (2) point-access blocks, public spaces & paths near 8-story public housing (above).

03.31.25 Review & "work session" with practitioners from engineering & architecture on structures and codes.

03.24.25 Review of schematic passive design strategies with consulting faculty member

04.14.25 Model making kick-off

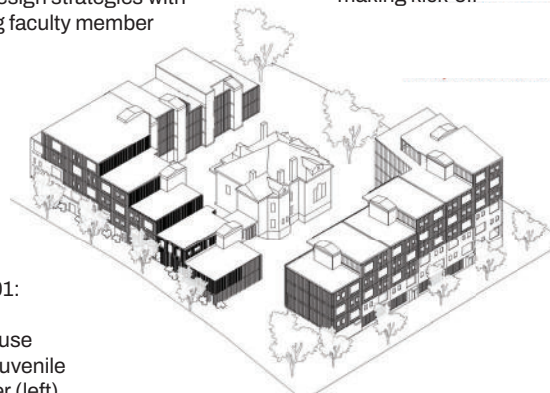
PHASE III

03.24.25 Review of schematic passive design strategies with consulting faculty member

MEMPHIS PROJECT 01: Co-housing common house adjacent to juvenile justice center (left).

CHATTANOOGA PROJECT 01: (8) point-access blocks frame Jewish cultural center with shared program and landscape (above axon)

NASHVILLE PROJECT 01: comprehensive development of material, structural, environmental, and construction systems (right, far right).



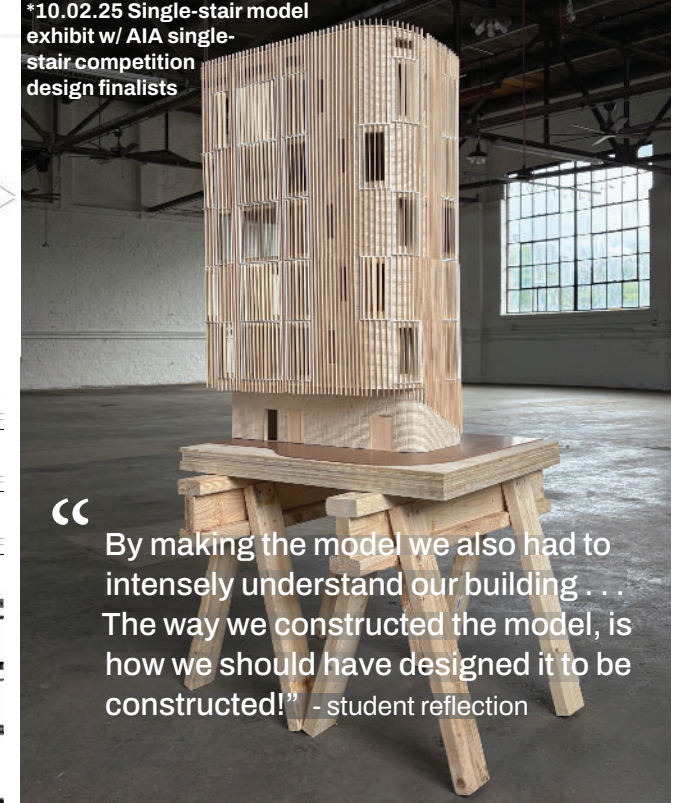
PHASE IV-V

05.01.25 Academic design review

05.02.25 Co-host YES! First Friday exhibit "At Home in the City" with AIA ADU competition designs

*08.20.25 Single-stair model exhibit w/ local design center's community input session

*10.02.25 Single-stair model exhibit w/ AIA single-stair competition design finalists



“ By making the model we also had to intensely understand our building . . . The way we constructed the model, is how we should have designed it to be constructed!” - student reflection

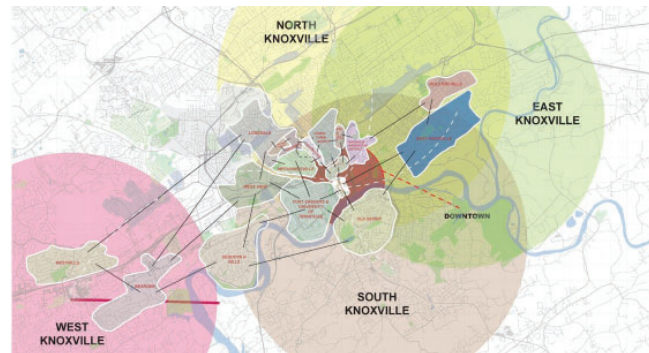
HOUSING AMERICA VIII and IX: Marginal/Emerging Districts

(in progress) Fall 2025/Spring 2026
 advanced undergraduate/graduate studio ARC 496
 graduate urban design studio ARC 571

The [name redacted] Community Design Center is one of the oldest non-profit design centers in the United States. They approached the Housing America studio directors seeking to form a partnership to examine two key sites in the first ring neighborhoods north of downtown Knoxville and advocate for their preservation. The sites are owned by the county, who is the beneficiary and client in this “community collaborative”. Each site is ~ eight acres in size and each includes an ordinary yet significant existing building likely to be threatened by future development if/when the land is sold. Each site also sits at a “pressure point” where sensitive development could make key connections between fragile neighborhoods and re-knit urban fabric torn by car infrastructure. HA VIII and IX studios will inform a professional design charette and a county RFP for the development of the sites and buildings.

This partnership is the first HA study to unfold over two semesters. This fall, two HA studios are conducting an in depth analysis of the catalytic urban design and public space potentials of the two sites within a designated 1.15 square mile study area. Studios are forming and critically questioning tools of engagement through traditional and exploratory events, media, and intentions. A process for looking closely and working intimately is uncovering value in what already exists in the physical and the social infrastructure. The collaborative will not only make its own proposals but also create a framework for synergizing recent and adjacent initiatives led by local government, community advocates, small businesses, and professional organizations. The fall studio findings will frame a professional design community charette to run parallel to the spring studios with overlapping engagement events.

In the spring, another pair of HA studios working at a comprehensive building scale (integrations studios) will make architectural proposals for adaptively repurposing the existing buildings and underutilized lots of the publicly-owned catalytic sites. Circular principles will inform repair and care for old and new constructions in architecture and landscapes. Building on the urban research and reconnection fall studio proposals, our aim is to demonstrate methods and designs that arise “out of” rather than “impose upon” tangible places, that account for those who dwell(ed) in the margins, and that instigate new ideas, density, and diversity. Ethical questions arise around the affordability mix of housing, the handling of cultural artifacts, and the environmental imperative of managing embodied carbon.



FALL 2025: In addition to a series of prompted urban explorations of twelve assigned “test plots” within the study area, students documented a flagship historic building on each site creating as-built drawings and detailed digital models. Proposals will advocate for a circular approach to urban development framed by analysis of spatial, social, and ecological systems. These “urban provocations” will underpin spring studios undertaking architectural reuse and housing.



SPRING 2026: Studios will propose adaptive reuse of A) a former Sears department store (1947-1974) and the first ‘free parking lot’ in the city, now mostly a repository for county storage needs, and B) a former automotive garage, now used for school maintenance staff. Proposals will demonstrate how they might anchor the east and west edges of the urban design study area and catalyze future private development and public space opportunities while providing a variety



TEST PLOT 06: Mosaic of public green spaces. Central Park as provocation for reclaiming rights of way.

TEST PLOT 04: A once vibrant district of mills and workers’ housing. Creek flood plain as generative.

TEST PLOT 03: Housing for commercial street enmeshed in neighborhoods, cross connections.

TEST PLOT 05: Neighborhood fragment cut off by interstate. Managing car infrastructure.

IMPACT AND REFLECTION

“

[student]

Our deep engagement with practice-based research has taught us the benefits of reflection as a tool for surfacing and consolidating disciplinary knowledge. Accordingly, we use a reflective exercise at the end of each semester to assess learning outcomes and assist students in framing the ethical and technical understandings they have gained.

We also often spontaneously hear from our collaborators and partners about the ways in which the work of the studios has inspired them, changed their thinking, and even influenced public debate.

Addressing the complex issues underlying housing equity does not always neatly coincide with housing design - particularly in the work of students. Yet, we find that the empathy and dedication generated by the broad introduction to and continual reconsideration of these issues spurs students to produce work of heart and ambition. They each move forward in their educations having developed a nascent stance toward an architect's social responsibilities.

“[M]y brain continues to be very full as I continue to sort out for myself the varying opinions held within the housing discourse given the complexities of negotiation between the numerous perspectives of those concerned, and what seems to be contradictions between theory and reality due to human, economic, and political elements.”

“[W]hat was most impactful and challenging were the complexities and range of contexts brought to light that extend beyond architecture. . . The studio highlighted the importance and value of critical and informed examination of these outside forces when designing and helped me to imagine how that might be exercised in practice.”

“I did really enjoy the technical aspect of the studio but what I unexpectedly found valuable was the comprehensive aspect of the course that not only focused on design and building construction, but also considered the social and economic implications of our proposal.”

“Addressing [public housing] in the studio was a mind opening experience.”

“What impacted me the most was the great experience I had working with both of my professors . . . I felt like they partnered with my team as colleagues . . . I grew as a designer and teammate because of the quick iterative thinking that occurred in our desk crits . . . I am thankful for the generous time they poured into my team's project and I will practice the design process differently . . . based on the positive experiences I gleaned from this semester's studio.”

”

[external]

“We began working with the University of Tennessee College of Architecture and Design back in the summer. I want to thank professors Tricia Stuth and Ted Shelton and their students for their collaboration with our team. The students attended public meetings like this one, workshops and open house events, they looked at our zoning proposal, applied the proposed changes to specific properties, and created architectural models. It has been a great collaboration providing students with a snapshot of the behind-the-scenes work that goes into this type of zoning change and it has provided our team with valuable insights into our proposal.” [excerpt from city planning meeting transcript on day of vote]

“[name, Deputy Policy Officer] was floored by the incredible work your students presented. I'm not surprised. The discussions shared earlier in the process indicated thoughtful approaches and open minds. Thank you for engaging the students in this work and our community.” [email from City Planning Commissioner]

“[a student's undergrad thesis] project was presented. While it doesn't identify the Missing Middle Studio, I can see the influence that the studio and your moral imperative to challenge urban norms had on it.” [email from Assoc. Dean for Research]

“Thanks for the opportunity today to sit in and add to the discussion for your students [H.A.-V] studio projects. I seem to always walk away having learned something myself too.” [email from AIA Chapter President, Architect]

