

How variations in design, site selection and regulations affect ADU programs

Stephanie Kennedy

A thesis submitted in partial
fulfillment for the degree of
Master of Urban Planning

University of Washington
2021

Committee:

Dr. Robert Mugerauer
Associate Professor Daniel Abramson

Program Authorized to Offer Degree:
Urban Design and Planning

© Copyright 2021
Stephanie Kennedy

University of Washington

Abstract

How variations in design, site selection and regulations affect ADU programs

Stephanie Kennedy

Chair of the Supervisory Committee:

Dr. Robert Mugerauer

Department of Urban Design and Planning

This thesis builds on the work of existing literature about subsidized accessory dwelling unit (ADU) programs. Using data recently collected from subsidized ADU programs around the country, this thesis presents an evaluation of how those programs are going, what has worked, what hasn't worked and why. This thesis also evaluates legislation that has been enacted in recent months and years and the impact that legislation has had on the success of both subsidized ADU programs and private, market rate ADUs. Although practical implications are described at length, this is not intended to be a manual for cities that intend to launch subsidized ADU programs. No two cities are exactly alike, and there's not likely one solution that will work for every one. Rather, this thesis aims to illuminate challenges that homeowners and cities have had so that planners can formulate their own subsidized ADU programs and ADU regulatory reform armed with lessons learned in the last few months and years.

Graphics not attributed to another source have been
produced by the author.

Acknowledgements

I'd like to thank the following people. Without their help, this thesis would not have been possible.

Dr. Bob Mugerauer, Professor at University of Washington in Seattle

Associate Professor Daniel Abramson, University of Washington in Seattle

Rex Holbein, Architect, Co-founder of The Block Project

Bernard Troyer, Architect at The Block Project

Steve Butler, Policy Manager - Planning Consultant, UW Professionals Council

Mark Trinidad, Acting Manager, Los Angeles County Development Authority

David Sanchez, Principal Planner, City of Pasadena, CA

Joyce Phillips, Principal Planner, City of Olympia, WA

Christy Nguyen, Associate Planner in Anaheim, CA

Table of Contents

3	Abstract
8	Foreword
9	Introduction
12	Definitions
19	Methodology and Limitations
22	History and Social Benefits of ADUs
27	Literature Review
37	Recent ADU Legislation
40	ADU Viewpoints
44	Design
54	Programs in Different Cities
58	Policy Recommendations for Subsidized and Market Rate ADU Programs
60	Next Steps
61	Conclusion
62	References
67	Appendix

"Decent, affordable housing should be a basic right for everybody in this country. The reason is simple: without stable shelter, everything else falls apart."

-Matthew Desmond, "Evicted: Poverty and Profit in the American City"

Foreword

I chose to study this topic because of the homelessness crisis that I witnessed on a daily basis while living in Los Angeles. I moved to Seattle and joined UW's Master of Urban Planning program to see if there was anything I could do differently as a landscape architect and future planner to alleviate this crisis. I gained an interest in ADUs when I moved to a house with a separate living unit. This house is in a neighborhood with a lot of multi-generational families. There are a lot of interesting ways that people have tried to maximize their living space, from do-it-yourself additions to tiny homes installed in driveways and yards. I began to wonder how many people have constructed their own ADUs throughout Seattle and what, if anything can the city do to help homeowners? I wondered if urban planners could help these homeowners and alleviate the housing crisis at the same time.

I'm grateful for everyone's contributions to this research, as this experience has given me an education about the complexities of designing, financing, building, permitting, and operating ADUS and viable ways to build my own affordable accessory dwelling units in the future.



Photo Credit: Stephanie Kennedy

Introduction

As the population shifts from rural to urban areas, many cities are experiencing drastic housing shortages, increases in housing costs and increases in housing density. The King County Point-in-Time Count found 11,751 people experiencing homelessness on one night in January (All Home 2021). According to Seattle Mayor Durkin's website, "Affordable housing development coupled with rising rents in the private market has not kept pace with the need" (City of Seattle 2021) The Seattle Office of Planning and Community Development (OPCD) reports that displacement is the "result of eviction, acquisition, rehabilitation, or demolition of property or the expiration of covenants on rent- or income-restricted housing. Economic displacement occurs when residents and businesses can no longer afford escalating rents or property taxes" (OPCD 2016) This has disproportionately affected minorities, seniors and other marginalized populations (OPCD 2016). Figure 1 shows a displacement risk study done by the city of Seattle for the 2035 Growth and Equity Analysis Summary (Seattle OPCD 2016). It's clear that a significant part of the city may soon be displaced.

In response to this crisis, many cities are relaxing restrictions on accessory dwelling units or ADUs as a means for gaining more housing and preventing displacement and homelessness. Some cities are even giving homeowners financial incentives to begin building ADUs on their property. This strategy reduces housing needs overall and helps citizens work together

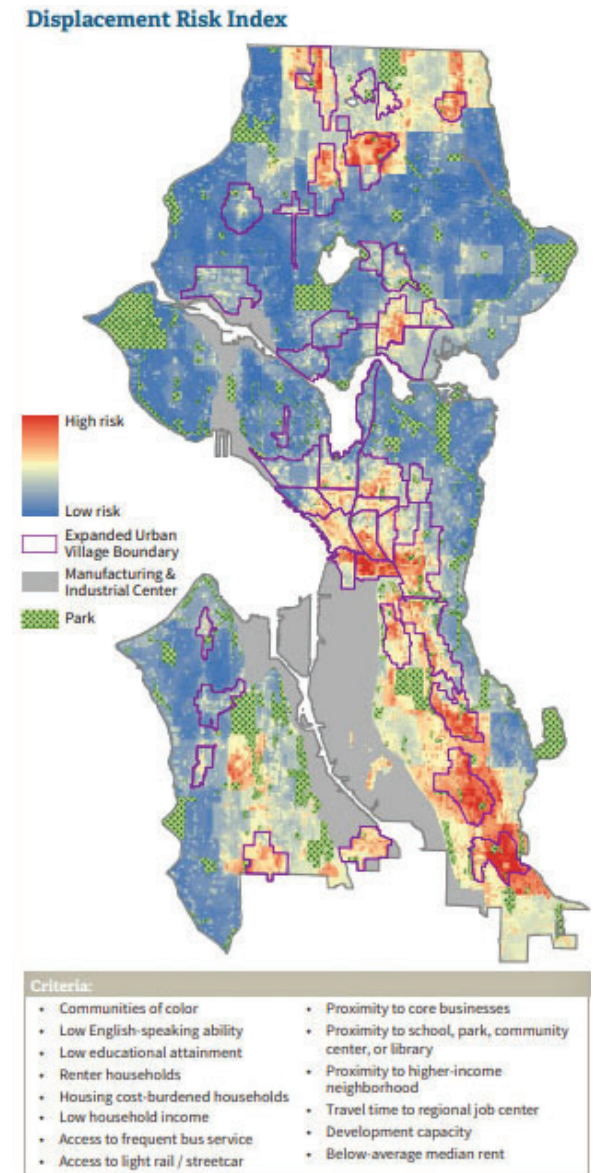


Figure 1 - Displacement Risk Index (Seattle OPCD 2016)

to manage citywide densification in a way that is equitable, especially for marginalized populations. The specific strategies that each city has used vary, and some have had more success than others.

There are many graduate theses supporting the use of ADUs to combat the housing crisis. My thesis goes a step further and delves into the nuanced differences between efforts made in various cities and states over the last 2-3 years. Using a literature review, and a qualitative analysis of case studies, and interviews, I will answer the question how and why does ADU site selection, ADU design and local regulation reforms affect the likelihood that these programs will result in the successful occupation of units?

This thesis begins with ADU definitions and practical information about the typical design process. Then I explain the methodology for reviewing existing ADU programs and the limitations of this study. Next there is a summary of the history and the social benefits of ADUs, followed by a current literature review. These sections are followed by a summary of recent ADU legislation, and opposing viewpoints. The next few sections discuss what we've learned about ADU design, site selection and management from existing subsidized ADU programs. Finally, the last few sections discuss the benefits of market rate ADU programs, policy recommendations and a list of areas that need more research.

By looking at what other cities have done to help the ADU design and ADU regulatory reform processes, we can determine which strategies worked best. We can determine how to help the maximum number of homeowners achieve ADU ownership and make a positive impact on the housing crisis.

"People are suffering and they don't have places to go to get support."

-Amanda, The BLOCK

Project Volunteer

(The BLOCK Project 2021)

"I really understood the connection we all have to people in our community and how we can impact their lives in positive ways if we just take a moment to see their situation. "

-The BLOCK Project Host

(The BLOCK Project 2021)

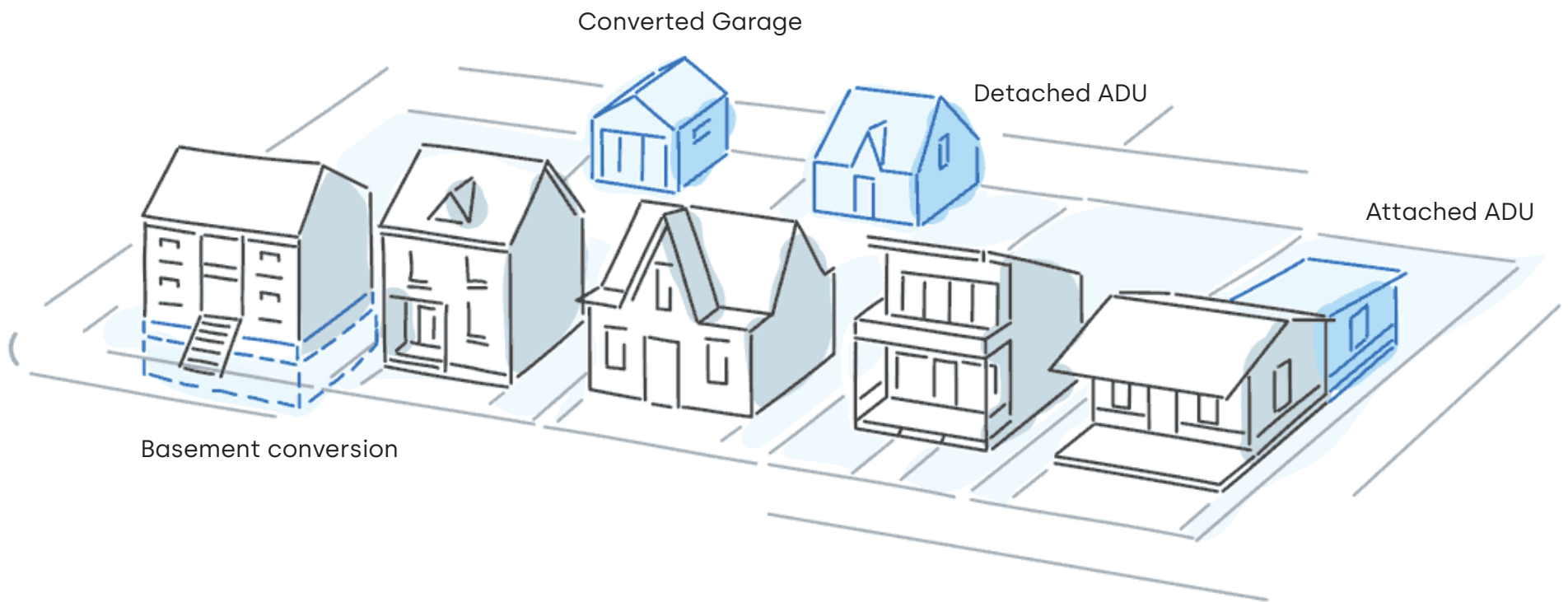


Figure 2 - ADU Typology (HUD 203k & FannieMae, 2021)

Definitions

ADUs can take many different forms and have many different implications for the homeowner and the city. The most common type of ADU is a single-family home that has been converted into multiple units. This could mean a converted garage, attic, or basement. It could also be an addition to the main house. This type of ADU is advantageous to the homeowner because there may be no need to install new utility connections, especially if the unit is for a friend or family member that will share utility costs with the homeowner. When a homeowner converts part of their home without adding more roof, there's also the added benefit of no net gain in storm water runoff. Converting part of a home to an ADU is challenging because all homes are unique with specific conditions and challenges. There is no standard process with predictable costs for homeowners to follow. Many homeowners who are unfamiliar with construction underestimate the costs. Another downside of this strategy for the city is that it is practically impossible to enforce permitting requirements, and homeowners often skip this step.

Converted walk-out basement ADUs are often the easiest option. In this scenario, there's no need to install a separate entry (See Figure 3). Furthermore, if there is a stairway connecting the two units, the homeowner can put a shared laundry room here to reduce costs. The walls of this laundry room can have locked doors leading to each unit for privacy. Basement units

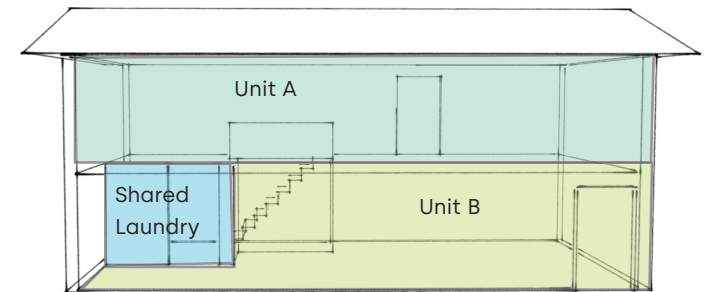


Figure 3 - Strategy for Shared amenities

are also challenging because many municipalities require each bedroom to have a window for emergency egress, and existing windows are often limited in basements. Also, most modern kitchens have vents over the stove. This vent has to daylight on the exterior of the house, and those vent location options are limited, since half of a walk-out basement is typically underground. Figure 4 illustrates this dilemma: the parts of the wall that are colored green are the only places to put egress windows and typically the best places for kitchen vents.

The Boston Planning and Development Agency, which allowed homeowners to have “independent” parts of their homes for renters in 2019 defined “independent” as “having “a full bathroom, a kitchen and at least two exits” (Lau 2019). Although this is city-specific, it’s also pretty standard as far as expectations of rental units go.

Many basements often have ducting running across the ceiling. This can be hidden with sheet rock, but then the ceiling may feel unusually low. There are solutions to this problem, but not many elegant ones. Cities can help homeowners foresee these problems by providing design guidance.

Some homeowners decide to convert their attic to a living space or create a living space over their garage. When an ADU is constructed on an upper level, a separate entrance is required. This means the homeowner will have to include stairs to the unit (See Figure 5). In this case, homeowners should consider tenants’ potential mobility issues and

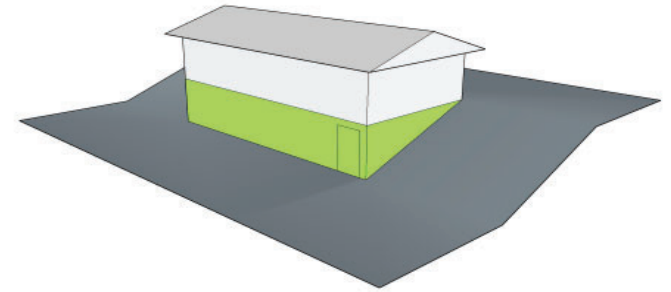


Figure 4 - Walk out Basement ADUs

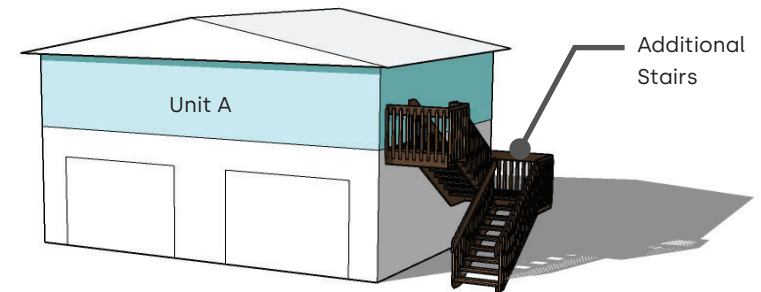


Figure 5 - Garage ADU

plan accordingly. Furthermore, many municipalities have height restrictions that make it impossible to have an ADU over a garage, so the homeowner should verify first.

Another type of ADU is a detached accessory dwelling unit or DADU. Custom designed DADUs are the most costly type of ADU, but also have the most potential to meet the homeowner and tenant's needs. Custom DADUs can also be designed to seamlessly integrate with the architectural character of the neighborhood. The recent popularity of ADUs has prompted many design-build firms to specialize in custom accessory dwelling units. Pictured below is a high-end unit from New Key Construction.

However, since these plans are custom designed, they must go through a permitting process which can cost tens of thousands of dollars. For many homeowners, this is a significant portion of their total budget. To mitigate this problem, cities like Lacey, WA have drawn up standard plans that homeowners can purchase for a fraction of the permit cost, and in fact bypass the structure permit altogether. The DADU must still pass a permitting process for the site.



Image 1 - Custom ADU designed by New Key Construction



Image 2 - Pre-designed ADU Plan provided by the City of Lacey, WA (Walsh 2020)

The simplest solution for ADU construction is a prefabricated unit. These units can be simple trailers or state of the art units that run on solar power and push the envelope for sustainable design. With a prefabricated unit, the homeowner would simply order the unit, the manufacturer would deliver it to their home and contractors would pour a foundation and connect the utilities. In some places, such as Thurston County, WA, a trailer on wheels doesn't count as an ADU, but rather is considered a recreational vehicle (City of Lacey, Department of Community Development 2020). This is true even if it's a tiny home and not a traditional recreational vehicle.



Image 3 - Recreational Vehicle (City of Lacey, Community Development 2020)



Image 4 - ADU (City of Lacey, Community Development 2020)

In the most extreme housing shortage circumstances, many cities have turned to tiny home villages, where the unit is little more than a shed where people can sleep and stay out of the elements. These types of units often face the most political opposition and the tenants are often the populations most vulnerable to homelessness. In Seattle, Tacoma and Olympia, the Low Income Housing Institute has built several tiny home villages, like the one shown in Image 5.



Image 5 - LIHI Tiny Home (Low Income Housing Institute 2021)

"There are over 3,000 unsheltered homeless in Seattle and nearly 6,000 in King County. We need 600 more tiny houses now to help reduce unsheltered homelessness."

-LIHI.org

All of these strategies are being used as part of a larger concept of smart growth. The Greenbelt Alliance, a non-profit based in San Francisco that focuses on community resilience, defines **smart growth** as “planned economic and community development that attempts to curb sprawl development and worsening environmental conditions. It aims to better serve the economic, environmental and social needs of the community” (Siegel 2021).

ADUs can play a role in smart growth by adding density without necessarily needing new infrastructure. More compact housing allows us to reduce greenhouse gas emissions. ADUs are particularly suitable for Seattle, where residents are almost never more than a quarter of a mile away from a bus stop or light rail station.

From a social point of view, having the homeowner and tenant living in close proximity, both may be able to help each other reach their financial goals and build community ties. Adult children can help their parents age in place and grandparents living in the “Granny suite” can help provide childcare for their grandkids. This type of multi-generational housing is quite common throughout the world.

“We cannot build our way to sustainability, we must conserve our way to it. ”

-Carl Elefante

Methodology and Limitations

After my initial literature review, I realized that there were a lot of recommendations that cities use accessory dwelling units to alleviate the housing crisis, but there wasn't a lot of information quantifying the progress. Furthermore, I learned about Seattle's The BLOCK Project and Los Angeles County's Second Dwelling Unit Pilot Program and will discuss those case studies more in detail later in this thesis. I hypothesized that these programs used different strategies concerning regulatory reform, designs and site selection processes with varying success. I also hypothesized that the differences between these programs (and other ADUs programs that did not offer subsidies) resulted in differing numbers of units available for occupation, which was a major factor in determining the program's success.

I began calling housing advocates like Rex Holbein, who founded The BLOCK Project, and Bernard Troyer, who manages The BLOCK Project now. I also spoke with Mark Trinidad, who was managing Los Angeles County's Second Dwelling Unit Pilot Program at the time and David Sanchez, who is a planner in the City of Pasadena. I also spoke with my professional council mentor, Steve Butler, who helped me find some contacts in other planning departments, like Joyce Phillips from the City of Olympia. These interviews illuminated the different approaches that each program takes in regard to ADU design, site selection and local regulations. These interviews also helped me realize which regulations were helping homeowners acquire

"I gave a little of my backyard and it opened a much bigger world."

-BLOCK Project Homeowner

ADUs and which were hindering the process. These interviews also helped inform the section on ADU viewpoints.

Initially, I measured success by the number of successfully occupied units over time. Using that metric, The BLOCK Project was averaging 3.3 successfully occupied units per year for a total of ten, but their goal was 20 units in 2 years. Los Angeles County's pilot program had one successfully occupied unit after three years, and their target was 5 units. Pasadena's pilot program hasn't been in existence long enough to provide any data, but their goal is to have 5-7 successfully occupied units in three years. The findings of this study are a list of factors that contributed to each program's success, based on these metrics.

As I learned more about ADUs that aren't involved in these programs, meaning the ADUs constructed and operated by homeowners for market rate rental profit or private use, I realized there was another important metric: the increase in ADU permits after regulatory reforms are passed. Privately owned and operated ADUs are often leased to tenants at below-market rates. These homes are dispersed throughout the community and often allow families to stay together, and those factors are often significant influences on tenants' mental wellbeing. Privately owned and operated ADUs have a significant potential to alleviate the housing crisis, perhaps to an even greater extent than ADUs funded by charity and leased for free to individuals experiencing homelessness.

"A lot of people want ADUs. Since the 2017 statewide legislation, we've received hundreds more ADU permit applications than we would have previously. In many neighborhoods, the main obstacle we have to approving these permits is NIMBYism. "

-California planner

The popularity of ADUs made me consider the relationship between the availability of multi-generational housing and housing affordability. Even though this thesis had originally intended to focus only on housing individual and households currently experiencing homelessness, I realized that family support and multi-generational housing may prevent people from becoming homeless in the first place. Advocating for multi-generational housing also supports an agenda that prioritizes social equity. Therefore, I began to see multi-generational housing as a proactive measure to reducing homelessness. Since the overarching goal of this thesis was to find ways to reduce homelessness through ADU regulatory reform, ADU design and ADU site selection, I decided to include legislature that enables homeowners to build ADUs for multi-generational homes as well as homeowners that were hosting individuals and households currently experiencing homelessness in ADUs in this research. This research focuses on ways to help both groups succeed.

Lastly, I reviewed the experiences of homeowners that had constructed ADUs on their own property and participated in subsidized ADU programs. From these experiences, I gained some practical knowledge of opportunities and challenges that arise. I also gained some insight into peoples' perception of ADUs and the ADU construction process. This knowledge may help planners understand the challenges that homeowners face when constructing and operating ADUs.

This research had several limitations. First, the COVID pandemic prevented me from conducting in-person interviews. It also prevented me from taking part in volunteer build sessions with The BLOCK Project. These build sessions would have given me hands on experience with ADU design. Second, the research period was restricted to two quarters. Programs like Pasadena's Second Dwelling Unit Pilot Program haven't had time to design, build and lease their ADUs, so it's not yet clear if the changes they made to the program based on lessons learned in LA County have been effective enough.

History and Social Benefits of ADUs

ADUs are not a new concept. In fact, in "The Geography of Nowhere", Kunstler talks about how women that moved west in the 1800s often rented out part of their homes to generate income during a time when discriminatory practices often prevented them from joining the workforce. As Seattle grew into a major economic hub, many low-income workers and minorities lived in small units in alleyways (Kunstler 1994). These alleyway units allowed people to live close to work for an affordable rental rate. As the city grew and it became apparent that alleys would be needed for fire truck access, these small units were demolished.

In the post-war era, when many veterans were returning home, the United States was faced with a housing shortage. Many recently discharged veterans had no employment and no place to live. Many Americans saw it as their patriotic duty to convert some part of their home into a living space for these veterans (Diaz 2019).

ADUs lost popularity during this period of suburban expansion in the 1940s and 1950s. As more and more immigrants began using ADUs to accommodate multi-generational families, some municipalities responded by criminalizing the practice (Diaz 2019). In the 1970s and 1980s, people began returning to urban areas and ADU interest grew (Diaz 2019).

Single-family zoning has regularly been used as a tool for segregation throughout history. Federally-backed lending practices explicitly discriminated against African American households (Mervosh 2018). Racial boundaries were drawn in a practice known as "redlining" (Paul 2020). Real estate agents could be blacklisted for selling a home in a



Image 6 - Source: Allume Architects

white neighborhood to a black family. These restrictions also often excluded people of Jewish descent and Asian Americans. Lenders could legally refuse to grant a loan, based on a person's ethnicity. This resulted in most single-family residential zones becoming predominantly white. Some people have claimed that by purchasing a home in a single-family zone, that they are entitled to live in a neighborhood where each house has literally only one family. Not a multi-generational family, and certainly not a family who has chosen to use their ADU to host an individual or family currently experiencing homelessness. In the 1975 case of the Village of Belle Terre v. Boraas, a homeowner tried to rent out a property in a single-family zone to three unrelated people. When the neighbors sued, the U.S. Supreme Court eventually ruled that the ordinance restricting tenants to a single family was constitutional (Haber 1975).

In 1964, Seattle activists tried to bring racial discrimination to an end. Proposition 1, the Open Housing Ordinance would have "banned racial discrimination in real estate sales and rentals" (Goodloe 2008). However, this legislation was soundly defeated by a vote of over 2 to 1. Racial discrimination in housing wasn't officially banned until four years later (Goodloe 2008). Although overt racial discrimination has been banned, criminalizing ADUs has often been seen as covertly racist. While multi-generational households are becoming more prevalent in the United States, they are significantly more likely to be non-white (*Pew Research Center* 2019). Therefore, minority households are more likely to be negatively impacted by the ADU restrictions that prevent adding space for relatives.

Throughout history, in addition to exclusionary zoning tactics that prevent ADUs, homeowners would agree to covenants that prohibited anyone from building additional structures on their property (Taylor 2010). At the time, people felt that this exclusionary tactic would preserve the value of their property and maintain their socioeconomic status. In order to accommodate social equity for multi-generational minority households, cities and states have begun to mandate homeowner rights to build ADUs. The section in this thesis on recent ADU legislation will discuss these changes in detail.

In Amanda Kolson Hurley's article about the missing middle housing options, she writes,

"It can be hard to visualize the missing middle precisely because it has been missing so long, left behind in the decades after World War II as single-family subdivisions ate up the land around U.S. cities. But the period between about 1870 and 1940 was the heyday of medium-scaled housing in American cities. In Chicago at the turn of the 20th century, two-flats (two-story houses with an apartment on each floor) multiplied; for that city's Eastern European immigrants, buying a two-flat and renting out half of it was a rung on the ladder of social mobility."

Today, many people choose to convert their homes for the same reasons. Some people want to provide affordable housing in their community. Some want to generate extra income so they can age in place. Others just prefer not to live alone. Although there are many benefits to having an ADU, throughout history, there has also been fierce political opposition to relaxing ADU regulations. By being aware of this history and what has been done to change discriminatory legislation, homeowners and social equity advocates can be aware of their own housing rights. Planners working to permit ADUs in cities where they are currently banned can build a case using these legal and historic precedents.



Image 7 - Missing Middle Housing (Photo credit: Susan Law Cain)

In recent years, social workers and mental health advocates have begun looking at the effectiveness of housing vulnerable populations in group homes like Seattle's Downtown Emergency Services Center or Union Gospel. In 2015, Vicky Stergiopoulos, MD, Stephen Hwang, MD, and Agnes Gozdik, PhD, conducted a randomized trial in four Canadian cities to determine the effects of scattered-site housing. They found that, "during the 24 months after randomization, the adjusted percentage of days stably housed was higher among the intervention (scattered housing) group than the usual care group (group homes)" (Stergiopoulos 2015). Although not every ADU site is appropriate for the individuals experiencing homelessness, scattered housing options are generally more likely to help these individuals recover and stay in stable housing.

The senior population is also taking advantage of ADUs. By constructing a "Granny Suite", adult children can give their parents a comfortable familiar environment in which to retire. AARP reported that "deaths from nursing homes, assisted living, adult care centers and other long-term care facilities together account for around 40 percent of U.S. coronavirus deaths" (Paulin 2020). By staying with family, more seniors may have been able to avoid infections as well as have the psychological benefits of being around family.

Furthermore, as the Baby Boomer generation begins to consider retirement, there may be shortages in available senior living units as well

"People experiencing homelessness are both passively and actively excluded from assimilating into formal urban culture."

-Hayden Gabriel Campbell
(Campbell 2019)

"The private market cannot provide adequate housing for poor and working people, the situation is permanent."

-Catherine Bauer, public housing advocate and urban planning educator, 1934

as funding. Economist Barbara A. Friedberg reported that 45% of Boomers have no retirement savings (Friedberg 2020). This is largely because of losses during the Great Recession and the coronavirus pandemic. Encouraging the adult children of seniors in this situation to partake in ADU programs may give the senior care industry much needed relief.

In addition to housing elderly relatives, many homeowners with ADUs report using the extra space for rental income that helped put their children through college. Other homeowners report using the space themselves while they renovated their main house (Hastings 2017).

Homeowners that host individuals or households currently experiencing homelessness provide a service that the private market cannot accommodate. For example, many recipients of Section 8 vouchers, which help tenants close the gap between what's available and what they can afford, are often unable to find landlords that accept them (Dominique 2019).

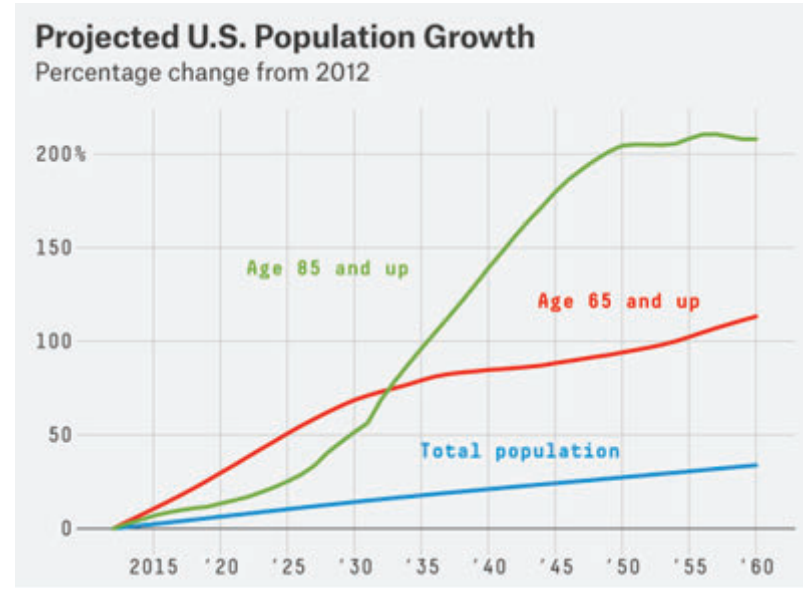


Figure 6 - Population Growth (U.S. Census Bureau)

“Affordable” means the household can pay rent and utilities with no more than 30% of its gross income. And “Low income people” are those whose gross household income is at or below 80% of the Area Median Income (AMI) as determined annually by HUD.”

-Ken Miller, Principal of DADU Homes (Doman 2020)

Literature Review

After getting an understanding of the history of ADUs, I began the literature review with some oft-cited books in the urban planning community: "The Backdoor Revolution" by Kol Peterson, "The Affordable City" by Shane Phillips and "Missing Middle Housing" by Daniel Parolek.

"Backdoor Revolution" is an all-encompassing guide to designing, building and financing ADUs. This is a must-read for anyone attempting to construct and operate their own ADU. Peterson describes the economic benefits of ADUs, including the use of existing infrastructure, the creation of housing near jobs, the creation of construction jobs, tax revenue for the city and wealth building potential for the homeowner. Peterson also lists the positive environmental impacts, which include reduced energy used for heating and cooling. ADU tenants also tend to use public transportation, which helps reduce greenhouse gas emissions. Finally, he discusses the social impacts, which include the obvious affordable housing, the option for seniors to downsize while aging in place, and accommodations for multi-generational families.

The bulk of "Backdoor Revolution" is about the actual process of financing, designing and constructing a permitted ADU. The author notes that the cost of constructing an ADU is roughly the same as purchasing

"In talking to more than two hundred ADU owners, I've never met anyone who had financial regrets about building their ADU. In fact, it is common for owners to express that it was the most financially life-enhancing move that they ever made."

-Kol Peterson, author and ADU expert

a Lamborghini, and because of that, most homeowners don't even try. However, with a home-equity line of credit or personal savings, Peterson calculates that the average homeowner can recover their investment in 6-7 years with a tenant. Furthermore, the cost of the addition can be added to the selling price of the home when the owners want to move. It is important for planners to consider the financial implications of an ADU project for homeowners. If it was not possible for homeowners to profit or at least break even from ADUs - at least the non-subsidized ones - this would not be a path worth pursuing.

"The Affordable City" is about planning principles that the author, Shane Phillips, feels should guide housing policies. One of the main principles in this book is the necessity of balancing "The 3 S's: Supply, Stability, and Subsidy" in affordable housing. The author asks the following questions: Will new supply lead to more displacement? Will tenant protections stop developments? Will rental assistance lead to higher rents, enriching landlords rather than improving affordability? The general principle is that if you answer no to these questions about your new affordable housing policy, then you have a policy worth pursuing.

Phillips specifically points out Seattle's Housing Affordability and Livability Agenda (Housing Affordability and Livability 2019) as a successful example of balancing these principles. HALA was devised by a coalition of

"Allow a year from initial planning to completion of building - and more if you're a do-it-yourselfer."

-Joe Robertson of Shelter Solutions LLC, (Peterson 2018)

"The more unaffordable your housing stock gets, the more challenging it is to fix."

-Shane Phillips, author, affordable housing advocate

renters, homeowners, developers, contractors and community-based organizations. Together, they compiled a list of housing strategies for Seattle. Phillips lists these HALA strategies in his book:

1. Promoting efficient and innovative development
2. Preservation, equity, and anti-displacement
3. Mandatory Housing Affordability
4. More resources for affordable housing
5. State legislature reforms

“Missing Middle Housing”, by Daniel Parolek, talks about the history of housing options in the United States and about why we need to bring back more housing options to alleviate the housing shortages. Parolek emphasizes that bigger buildings are not necessary for increased housing. Rather, it's often possible to partition existing houses into multiple units that are smaller and affordable.



Image 8 - Missing Middle Housing (Photo Credit: Imagenet)

"The Geography of Nowhere", by James Kunstler, is also standard reading for most urban planners. Although this book is mostly about what Kunstler sees as the degradation of community design in the post-war era and beyond, he also added a section about how ADUs used to be quite common. He notes that this type of housing used to help low-income families and minorities live close to urban jobs. This book helped inform the section on ADU history.

"Yes, in my backyard" is another comprehensive look at ADUs, the history of ADUs in the United States as well as reasons for their growing popularity (Dinh 2018). The authors note that Seattle's The BLOCK Project initially aimed to build 20 ADUs by 2019. "Yes, in my backyard" reports that Turner Construction donated materials and general contracting services for the first four BLOCK units, which helped get the program off the ground. "Yes, in my backyard" also talks about Portland's "A Place for You" (APFY), which is a similar housing program. APFY finds all types of housing - not just ADUs - for formerly homeless tenants. APFY also allows tenants with children, whereas the BLOCK project focuses on housing single adults. Despite multiple attempts, I was unable to make contact with anyone from APFY, and therefore excluded them from this analysis.

At the time when "Yes, in my backyard" was written, Los Angeles' Second Dwelling Pilot Program had yet to successfully build and lease any units. In the following years, this program ran into several roadblocks, which will be described in later sections.

"Yes, in my backyard" explains how Euclidean zoning has played a role in banning ADUs. This thesis describes how the term "Euclidean zoning" comes from the 1926 Supreme

court case, *Euclid v. Ambler*, which ruled that local governments have the right to segregate uses in zone, such as industrial, residential, commercial, etc. Municipalities are then allowed to divide zones into sub-classifications, such as multi-family and single family. Within those classifications, there lies “form-based zoning” which may preclude the particular type of ADU a homeowner is trying to build. Homeowners can avoid conflicts with zoning regulations by using the checklist provided in Figure 7.

Finally, “Yes, in my backyard” reported some strategies for gaining community support. These strategies included targeting your audience with a message that inspires citizens to support their community, crafting a digestible message, conveying how ADUs add value and choosing the best medium to get your points across. The most important thing is to make the message relatable and humanizing. It is important to emphasize that many of the reasons that cause people to become homeless are reasons that could have happened to anyone. This

ADU Project Zoning Checklist

- Google “your city” + zoning map.
 - Search for your address.
- Find your zoning code.
 - Google “your city” + zoning code.
 - Find your zone district.
- Find ADU Regulations for your zone district.
 - Using the code, find ADU regulations for your zone district.
- Does your zone district allow ADUs? If yes...
 - Contact a planner to discuss ADU permitting process. Contact info for the planning can be found with zoning code.
- If your zone district doesn’t allow for ADUs...
 - Contact a planner and experienced land use attorney to discuss your options.

Figure 7 - ADU Zoning Checklist (Dinh 2018)

thesis emphasizes the importance of framing homelessness as a community crisis, and not an externality. Although I understand the intention behind that last point, I believe using the term “homelessness crisis” is more precise and descriptive, and will be using it through this thesis.

“Bidding ADUs to Homelessness” by Hannah L. Diaz dives into four variations of subsidized ADU programs, some of which were based on Los Angeles’s Second Dwelling Unit Pilot Program’s lessons learned. At the time her thesis was written, it was too early to evaluate the outcomes of any of the programs she describes, but it still provides useful information about the subsidized ADU program origins. For example, funding is always the first hurdle (Diaz 2019). Los Angeles County passed Measure H, which was a 10-year quarter-cent sales tax that helped fund affordable housing programs (Diaz 2019). California State Bill 1069, which mandated that cities allow ADU development, was also a catalyst for the programs. Diaz reports that ADU permits went from 282 in 2015 to 5,429 in 2018.

Diaz also describes how the scattered nature of ADU development provides unnoticeable horizontal density, and therefore is more palatable to existing residents. I have not found this to be the case. It seems there is just as much NIMBY opposition to ADU development as any other change, although I do think that attitudes are shifting, especially in cities that are experiencing the most severe homelessness crises.

Other articles delved into political opposition, such as Rebecca Tan’s Washington Post article entitled, “Officials call it common-sense zoning change. These homeowners say it’s a ‘betrayal’” (Tan 2019). Tan reports that significant opposition from older, affluent neighborhoods in Reno, Nevada eventually caused legislators to abandon ADU regulatory reform in 2019.

David Alpert wrote a piece called, “Why the angst over accessory dwellings?”, as well a piece called, “Zoning update opponents keep spreading misinformation.” These articles, combined with feedback received from

interviews with planners, helped inform the section on overcoming political opposition.

"Community in Property: Lessons from Tiny Homes Villages" by Lisa T. Alexander is about tiny homes and property rights. Although this thesis does not cover tiny home villages, Alexander's paper made many interesting points about homelessness, such as the fact that 83% of homeless people are in fact not chronically homeless and do not suffer from conditions that would prevent them from finding permanent stable housing with a little short-term help (Alexander 2019). Students, for example, that graduate into economic recessions when work is sparse, face not being immediately eligible for market-rate housing. Low-cost ADUs help overcome these hurdles.

Alexander also notes that most of the tenants of ADUs are family members of the homeowner, which prompted further research on multi-generational housing. In the last 30 years, Seattle in particular has prioritized racial equity. Since multi-generational housing is common in other countries, criminalizing multi-generational housing has a disparate impact on minorities, and therefore should be addressed by the local government.

Cynthia Krass's thesis entitled, "Factors Associated with Accessory

"There's hope because there's a way now. The state really has created a path to legalization that was [previously] entirely impossible."

-LA planner, as quoted by Diaz in "Bidding ADeiU to Homelessness"

"Just because others flee crime-ridden and poverty-stricken areas doesn't mean Montgomery County has to be turned into a slum to accommodate them."

-Katherine C. Gugulis,
Montgomery County, MD
Council member

Dwelling Unit Density” found that there was a positive correlation between ADU density and neighborhoods that had alleys, a high number of multi-generational households and wealthy non-white households. By identifying the characteristics of neighborhoods with higher than average ADU density, she hoped to help planners target neighborhoods that may be receptive to ADU development, and then encourage those residents to take part in ADU programs (Krass 2013). It is interesting to note that her study areas did not include Rainier Valley or Burien. These neighborhoods have relatively high minority populations and residents are most at risk of displacement.

Krass noted how ADU legislature has differed across the country in the last few decades. California enacted the “Second Unit Law” which legalized ADUs as long as the homeowner had a conditional use permit (Krass 2013). However, Krass writes that this additional permit process was enough to dissuade homeowners from partaking in the process. In Washington, in 1995, the Growth Management Act mandated that all cities over 20,000 people allow ADUs. ADUs had to be attached, until new legislation that allowed DADUs in 2009.

In her 2014 thesis entitled, “Hidden Density”, Louisa Mae Galassini describes the case for ADUs. The title comes from the fact that most of the opposition to increased housing density comes from an American preference for single family homes. ADUs allow that added density to be hidden, hopefully face less opposition. Galassini also notes how this hidden increase in density would likely increase public transit ridership, which would result in better transit service in the neighborhood.

“Hidden Density” also discussed the possibility of revitalizing alleyways. Although alleys used to contain more low-income housing in urban areas they now typically serve as a place for loading docks and waste bins. What space is left is usually reserved for emergency vehicle access. Galassini notes, however, that “...Seattle has adopted the Clear Alleys Program which limits the time dumpsters can be in an alley. Pickup times are more frequent and

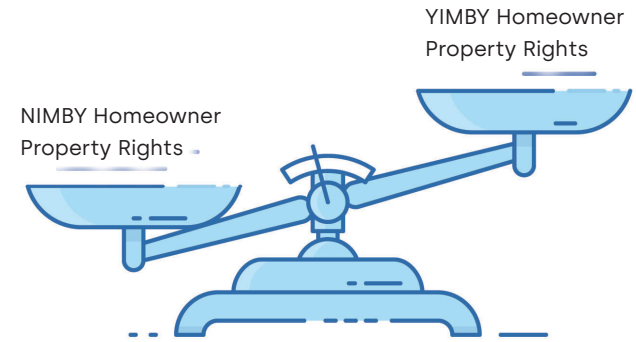


Figure 8 - The ADU regulatory debate

allow for greater flexibility of uses." Although clearing the space for other temporary use seems plausible, it seems unlikely that permanent residential structures would be allowed, as emergency access always takes priority.

Galassini also raised several concerns that were addressed last year by Mayor Durkin's ADU regulation reform, such as waiving the requirement for additional off-street parking. Those regulatory reforms will be discussed later in the section on current legislation.

In 2015, Gerald E. Buker wrote a thesis that may help pass ADU regulatory reform legislation. His main findings were that DADUs add property value, and that there are a lot of properties that are suitable for DADUs. Like Lisa Alexander, Buker also found that ADUs are usually built to house family members. Finally, he noted that "high upfront costs and complicated and lengthy permitting are the largest obstacles for homeowners." Buker's thesis focuses on DADUs, or cottages, whereas this thesis includes all types of ADUs. Buker's thesis was also written prior to significant legislation changes in Seattle. Nonetheless, his research supports the arguments that ADUs add value to the neighborhood and support multi-generational households.

In 2016, Jaimie Ross, the President and CEO of the Florida Housing Coalition, wrote about how AARP "engaged the American Planning Association to develop a model state act and local ordinance as a resource for meeting the affordable needs of elder Americans" and how "ADUs are particularly well suited for lower income elderly because in addition to increasing affordability, the elderly homeowner may obtain companionship and needed services from the tenants in the ADU." (Ross 2016) This article suggests that regulatory reform may be all that's needed to create affordable housing. Although regulatory reform is a necessary first step, homeowners often need financing assistance and design assistance as well.

In 2018, Darrel Ramsey-Musolf wrote about how California deemed ADUs to be suitable for low-income

households and allowed cities to count *potential* ADUs as low-income units, they did not actually require homeowners to rent these ADUs out, nor did they require homeowners to set the rent at levels that would be affordable for low-income households. Therefore, cities reported more low-income units than there actually were in existence (Ramsey-Musolf 2018). This lack of oversight had a negative effect on the availability of low-income housing overall.

In contrast, the Urban Land Institute released a report in 2017 stating that “the majority of new ADUs [in the study areas of Portland, Seattle and Vancouver] are leased for below-market rents” (Chapple et al, 2017). This report stated that regulatory barriers and upfront costs were among the biggest problems homeowners faced. Furthermore, some homeowners who were inexperienced with construction saw ADUs as a risky project (Chappie et al, 2017).

Although this literature review gives a general idea of the state of ADU regulatory reform and ADU practices, more research should be done to evaluate the ongoing efforts of existing programs, as this field is constantly evolving to serve the public better.

Recent ADU Legislation

As the homelessness crisis grew in Seattle and other major cities, officials realized they needed to use every tool at their disposal to solve this problem. In 2020, Mayor Jenny Durkin signed legislation that removed several key ADU restrictions (Lloyd 2019). First, it removed the requirement that ADUs must have dedicated parking spots (Lloyd 2019). Second, homeowners were no longer required to live on the premises (Lloyd 2019). Third, homeowners were allowed to have one unit attached to the main house and one detached unit on the property (Lloyd 2019). Although these reforms were incredibly helpful to homeowners seeking ADUs, critics still say the permitting process still needs reform. For example, some suggest that people who use pre-designed plans should be exempt from redundant unit design permit fees.

In 2017, the state of California mandated that all homeowners were allowed to build accessory dwelling units on their property, as long as the units adhered to local building codes (Cohen 2018). According to the Sightline Institute, permits for ADUs increased by a factor of 30 after this legislation went into effect (Durning 2018). Despite the skyrocketing statewide demand for ADUs, many opponents are still finding success in blocking ADUs in specific municipalities. For example, despite the fact that it's a homeowner's right to have an ADU in California, local planners have reported that building codes can mandate that the homeowner can only have an ADU if the lot meets minimum square footage requirements. So if local codes require 15,000 SF of land for an additional structure, and the vast majority of properties are less than 6,000 SF, then ADUs are effectively still banned.

In December of 2020, Thurston County, Washington adopted an ordinance to allow ADUs in "rural, unincorporated areas of Thurston County when all regulations and standards pertaining to ADUs can be met. ADUs

are also allowed in the Urban Growth Areas of Olympia, Lacey, Tumwater and Grand Mound" (Thurston County Community Planning 2020). Thurston County's work to reform ADU regulations and enable homeowners to move through the permitting process with fewer unnecessary hurdles provides other municipalities a guide which they can use to model their own reforms. The city of Lacey, which is in Thurston County, has made efforts to standardize ADU design, and those designs will be shown in a later section.

The other most important type of ADU legislation is the kind that provides funding. Most municipalities have some sort of subsidies for low-income housing. Several counties in Southern California have used these measures to directly help homeowners construct ADUs to house formerly homeless individuals. The LA County Homeless Initiative directed Measure H funds to the Housing Innovation Challenge, where people competed to find "game-changing creative and scalable permanent housing solutions", such as subsidized ADUs (Diaz 2019). In his book, "The Affordable City", Shane Phillips recommended getting housing advocacy financing measures like these on the ballots during presidential election cycles, as these cycles tend to see more diverse participation. Non-presidential election cycles tend to see participation mostly from older, more affluent demographics.

It is also important to support legislation that can fund case worker programs that connect homeless or vulnerable populations with resources that get them back to stable housing, like Los Angeles County's Coordinated Entry System, or CES (Diaz 2019). Later in this thesis is a section on the recommended homeowner selection process for ADUs that will house individuals or households currently experiencing homelessness. CES used a similar selection process to find homeowners for the subsidized ADU program.

Furthermore, cities should keep an eye on Minneapolis, a city that eliminated single family zoning in 2018. As described in the section on the history of ADUs, single-family zoning has been deliberately used as a tool for segregation (Mervosh 2018). Sarah Mervosh reports in her New York Times article that, "...young couples in apartments who cannot afford to scale up to \$400,000 houses, while elderly residents nearby are 'house rich and

cash poor' and have few options to downsize in their neighborhood." Mervosh also reports that at the time of writing the article, Seattle was set to rezone 6% of single-family neighborhoods to allow more diverse housing. By periodically reviewing how this legislature has affected housing in Minneapolis, other cities will be more able to determine if similar legislature would work for them.

Finally, the most recent ADU legislation to emerge from Seattle is SB5235, which was vetoed by Governor Inslee in May of 2021. Although this legislation purportedly sought to make ADU construction easier, according to housing advocates, it actually did the opposite by creating more hurdles for homeowners (Trumm 2021). Governor Inslee wrote, "I am concerned that the language may allow a local government to prevent the siting and development of accessory dwelling units in perpetuity with very little justification" (Trumm 2021).

ADU Viewpoints

Overcoming political opposition is a significant effort in the process for ADU reform. Some of the concerns voiced by opponents include parking shortages, traffic congestion, school overcrowding, abuse of short term rental agreements, degradation of neighborhood architectural character and property devaluation (Monkkonen 2021). Some housing advocates argue that ADU regulatory reform doesn't go far enough to provide affordable housing.

The claim that increased housing density will lead to parking shortages and traffic congestion is probably the strongest argument against ADU reform, however it's still unlikely that tenants that choose to live in a 150-400 square foot unit would be able to afford a car. In a city like Seattle, you're rarely ever more than a ten minute walk from a bus stop. Nonetheless, if a city were to subsidize ADU construction for vulnerable populations, as LA County did with the Second Dwelling Pilot Program, it would be prudent to ensure that these incentives are focused in areas with adequate public transportation. As cities become more dense, public transit ridership increases, and enjoys further investment.

Concerns about property devaluation and school overcrowding are also unfounded. As more and more millennials choose not to have families, fewer people are interested in buying large homes in the suburbs. Many would rather have a small space and extra income from an ADU. Homes with rentable units attached are actually gaining value, not losing it. Gerald Buker reported in his thesis that the average property value of all single family parcels in Seattle in 2015 was \$515,225. The average value of a parcel containing a DADU was \$570,150. With higher property values, the city has higher property tax revenue. Since property tax revenue is used to fund the education system, schools actually stand to gain from more ADUs.

Airbnb is a real problem for a lot of neighborhoods. Some residents in Colorado Springs have expressed concern that their neighbors' homes will be "turned into mini-Marriotts" (Swanson 2020). It's far more profitable to rent out a unit for \$100 per night on Airbnb than it is to have a long term contract for \$800-\$1000 per month. Cities quickly became aware of this and enacted regulations regarding short term rentals. Non-compliant homeowners can easily be found and fined, as they advertise their properties online. Although Airbnb is a threat to long term

renters, the solution is to enact short-term rental regulations, not ban rental units altogether.

Many homeowners complain that ADUs will have an adverse effect on the overall architectural character of the neighborhood. Many homeowners envision low-quality trailers popping up in every yard. Again, the answer is not to ban rental units, but to use existing architectural building codes to uphold architectural standards. Homeowners that have detached units could be required to use the same exterior treatments on the DADU as they have on their main house. Homeowners who have units integrated into the main house would not have to do anything differently to uphold the exterior aesthetic standard.

Lastly, many housing advocates are saying that ADU regulatory reform doesn't go far enough to relieve the housing crisis. ADU construction has stalled because despite statewide regulatory reform, many cities are still slowly the process at a local level with unnecessary lot size requirements, parking restrictions, conditional use permit requirements and more. Banking institutions historically haven't had adequate loan products to help homeowners with ADU construction (Chapple 2017). Furthermore, this is a paradigm shift, and paradigm shifts take time. As urban areas become more dense any American families become smaller, people are rediscovering the value of diverse housing options. (Parolek 2020) As we gain a better understanding of the local codes hindering ADU construction, and the loans tha finance them, and as housing paradigm shifts, it seems likely that ADU construction will gain speed.

Although there may not be many strong arguments against ADUs,

"You're changing the zoning on things that have been established for a long, long, time and I say that's a foul. They bought it with certain expectations... you really are betraying what people bought their houses for."

-Colorado Springs City
Councilman Andy Pico,
July 2020 (Swanson 2020)

sometimes the reality is that the NIMBY crowd simply does not want to live in a neighborhood with higher housing density. People that are accustomed to living on quarter-acre lots have the mistaken belief that urban infill is unnecessary. Some believe that their neighborhoods should be insulated from the population growth and densification that is affecting the rest of the city. However, reductions in farmland and dwindling wildlife habitats have made it necessary for the state to delineate urban growth boundaries. Since urban growth can't move outward, it must fill in existing neighborhoods.

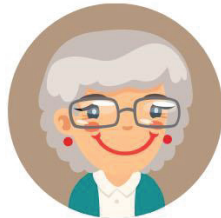
It's important to implore skeptics to regulate what they are actually concerned about - noise violations, short-term rental abuse, parking shortages, etc. - rather than boycotting new housing altogether. It's also important to emphasize the fact that although some states have mandated that local building codes allow ADUs, no one is *requiring* homeowners to have an ADU, and certainly no one is trying to *require* homeowners to host a low-income tenants. Although some opponents have expressed concern about ADUs encroaching on personal space, the decision to have an ADU in the first place is completely up to the homeowner. Regulatory reform is simply giving homeowners the freedom to choose to have an ADU should they ever want or need one. And again, it's also important to frame new housing as an added value that has the ability to help more members of the community - the community which we are all a part of - thrive.

"This so called ADU amendment is a blatant attempt to unilaterally undermine and completely change these long standing rules by way of a tricky legal maneuver. It's a violation of the public trust, simply put."

-Reno resident Bill Lindsey
(Damon 2018)



I'm not young anymore, sometimes I think it would be nice to have a tenant in an ADU that doesn't mind helping me move heavy boxes or mow the lawn once in a while.



I don't have children, but I want to make a positive impact on the next generation. I'd like to do that by offering an affordable unit to someone. I don't think regulations should deny me my ability to make a positive impact.



As a wounded war veteran, the low monthly cost of my ADU has really helped me focus on rehabilitation and physical therapy for my injuries.



We've lived here my whole life. When our father passed away, my mom raised us kids and managed this house on her own. Now it's our turn to take care of her, but she wants her own space in an ADU.



People should have the option to live in neighborhoods that only allow single family housing - statewide ADU mandates undermine the freedom to make this choice.



The previous owner of my home added a noncompliant basement unit and lived in it for years while renting out the upper level. I just want to do things right and bring it up to code. And maybe add some



I bought this house when ADUs were prohibited. That was an investment backed decision. I don't want ADUs to change the character of the neighborhood.



The United States is a melting pot. Many cultures view multi-generational living as normal and expected. It's un-American to enforce one culture over another.



I'm concerned that my neighbors won't properly vet their tenants and we'll wind up with criminals in our neighborhood.

Artwork by Voysla, comments based on conversations with people about ADU usage.

Design

Subsidized ADUs

Previously mentioned in this thesis are the different types of ADUs. ADUs can be pre-designed units, custom units, or prefabricated units. Each type of unit has had a different effect on the outcome of subsidized ADU programs. Pre-designed units help homeowners keep costs down, often by bypassing the design part of the permitting process. Custom units are the most difficult for homeowners to do well, but if the homeowner has architectural design experience or hires an architect, this option can help the ADU blend seamlessly into the neighborhood's architectural character. Prefabricated units are the easiest and most cost effective option.

Other considerations for ADU design involve prospective tenants: will the tenant be a single adult? Will the tenant have children? Does the tenant have mobility issues? If so, LA County recommended that the planner and homeowner should consider the following questions:

1. Is the path from the street to the front door **ADA compliant**?
2. Is there sufficient site **lighting**? Image 9 shows an example, although ADA compliance would require a ramp at the entrance.
3. Is the **homeowner willing** to make changes that ensure ADA compliance?



Image 9 - Path with sufficient lighting

Many municipalities stipulate how tall the unit can be, and this may affect units that are constructed above garages. One planner from Olympia described how they had raised the maximum height restrictions to accommodate ADUs above garages. Other municipalities have restrictions on building materials and light fixtures. Image 12 on page 47 shows a style guide provided by the City of Lacey, WA to help homeowners streamline the design process.

In addition to layout and materials, homeowners should consider the orientation of the ADU, the views, and exterior circulation and drainage. The BLOCK Project uses state-of-the-art sustainability principles for their pre-fabricated units, which has the added benefit of helping gain public support for the program. In Seattle, homeowners can get subsidies for rain gardens that can offset the excess stormwater created by an ADU roof and any impervious surfaces leading up to the unit. The average rebate for these rain gardens is around \$4,400 (Be RainWise 2021). Steps for determining eligibility and finding contractors can be found on the King County Be RainWise website.



Image 10 - ADU Interior (Credit: Aeesha Norm)



Image 11 - Residential Rain Garden in Seattle, WA (BeRainWise 2021)

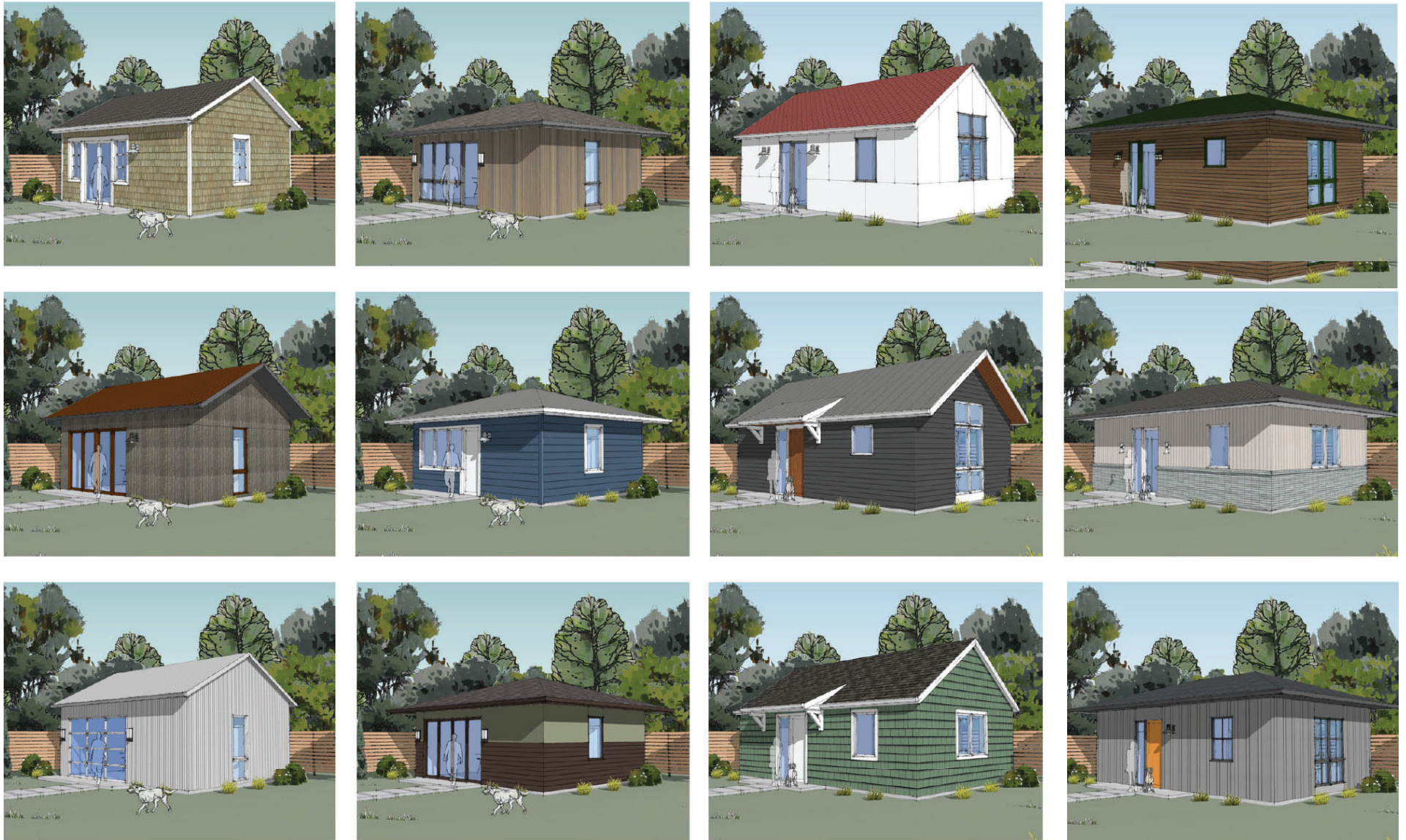


Image 12 - ADU Style Guide (Lacey, WA Department of Community Development)

ADU Site Selection

This section will review questions that planners should address or ask the homeowner before selecting a site for a subsidized ADU. This information has been provided by the Seattle BLOCK Project and LA County.

When selecting a site for a subsidized ADU program, the first hurdle is ensuring that all local building codes, such as setbacks and lot coverage requirements, are met. Los Angeles County SDUPP administrators recommended asking the homeowner the following questions:

1. In regard to your existing property, how do you plan for the family/individual to **access** the back house? Is the site safe for children and adults with special needs to access from the street (hills, busy street, no wheelchair access, etc.)?
2. Are there any **code violations** on your property that you are aware of (for example, unpermitted additions)?
3. Are there any **shared amenities** with the front house? (Laundry room, outdoor spaces, parking, etc.)
4. If the homeowner has plans, ask them to walk through the plan, including the **timeline and budget**. Inquire about the basis for the budget items.
5. Ask the homeowner if there are funds for **contingencies**.
6. Determine the homeowner's **profession** and employment status.
7. If the homeowner has no **construction experience** or architectural **design experience**, ask if they have experience working with contractors.

Subsidized ADU program managers should consider how an ADU or DADU might be used to revitalize and alleyway. In his thesis entitled, "little House on the Alley", Ryan Nels Jorgensen writes how alleyway ADUs can "promote socially engaging, economically viable, and environmentally responsible design" (Jorgensen 2013).

Second, consider the tenant. They will likely need access to public transit, especially if additional parking isn't required for an ADU. Some situations, such as the BLOCK Project verify community support before moving forward with a site, but more on that later. Los Angeles County gave homeowners a questionnaire similar to the one below:

1. What **amenities** exist in your neighborhood that would allow for a family or individual transitioning out of homelessness to be successful in their new housing?

2. **How far** are the following amenities from your home? Are transit options available? What is the neighborhood **walk score**?

- Library
- Park
- Grocery Store
- Medical Center
- Pharmacy
- School
- Post Office
- Community Center

Homeowner selection is also one of the most important decisions. Los Angeles County SDUPP administrators recommended considering the goals of a new subsidized ADU program and asking homeowners the following general questions:

1. How did you hear about the program and **why** are you interested?
2. How long have you lived in your home?
3. Do you **plan to sell** your home in the next ten years?
4. If you will be living on the property, who lives there with you? How does the **rest of your household** feel about the program?
5. If you do not live on the property, how do the **existing tenants** feel about the program (including construction that will be occurring behind their home and introduction of a new tenant on the property)?
6. What **level of interaction** do you anticipate having with the tenant? What are your concerns about participating in this program?
7. Would you be comfortable allowing photos of yourself and your ADU to be used in **media efforts** that publicize the pilot program?

"I wanted to be a part of the solution. I wanted to be able to say I did what I could. "

-The BLOCK Project
homeowner

ADU Operations and Management

Finally, consider rental property operations and management.

Los Angeles County SDUPP administrators recommended asking homeowners the following questions:

1. Do you have **experience** running a rental property?
2. Do you have a **plan to maintain** the unit? Does the city have a plan to help with maintenance?
3. Inform the homeowner of any necessary paperwork.
4. What's the **pet policy**?
5. What's the **smoking policy**?
6. If the tenant is being charged rent, and the unit becomes vacant, does the homeowner have a **plan for the loss of income**?
7. Has the homeowner calculated **insurance** and rental **income tax**?

Subsidized ADU programs should include caseworkers that pair homeowners with tenants and tenants with resources throughout their lease. For example, The BLOCK Project works with an existing nonprofit (Facing Homelessness) to provide these services. Any issues or disputes that arise during the tenants' lease period are addressed by a caseworker.

Would you recommend that cities compile a list of vetted plumbers, electricians, and other repair people for subsidized ADU homeowners to consult?

LA County Planner: "No, that would require an entire department to ensure that the vetted professionals are maintaining the standards. It would be cost prohibitive."

ADU Program Summary

The following chart gives a brief synopsis of various ADU programs in the United States. The following section will go over each program in detail.

NOTE: Pasadena's 2nd Dwelling Program was formed taking lessons learned from LA's 2nd Dwelling Unit Pilot Program.

Program	Intervention	Financial Incentives for Homeowner?	Free, Affordable or Market Rate Rent?	Completed /Permitted Units
The BLOCK Project	Pre-fabricated units funded with charity, case worker aid	No	Free	10 new units, 2 planned for 2021
Pasadena's Second Dwelling Unit Pilot Program	Architect Assigned to help homeowner	\$150k loan for new ADUs, \$75k loan for rehabilitating an unpermitted ADU	Section 8 tenants, affordable rent	TBD 5-7 homeowners selected in Nov. 2020
LA County's Second Dwelling Unit Pilot Program	Homeowner-designed units	\$75k loan for new ADUs, \$50k loan for rehabilitating an unpermitted ADU	Section 8 tenants, affordable rent	1 out of 5
Pasadena's Market Rate ADU Program	Regulatory reform	No	Market Rate	142 new permits since reform
Olympia WA's Market Rate ADU Program	Regulatory reform	No	Market Rate	100 new permits since reform

Figure 9 - Program Summary

Levels of Design Intervention

This diagram compares how much design intervention was involved in each subsidized ADU program. Research shows that the more guidance is given to homeowners, the more likely they were to succeed in providing an affordable ADU. The following sections look at individual programs and compare their success.

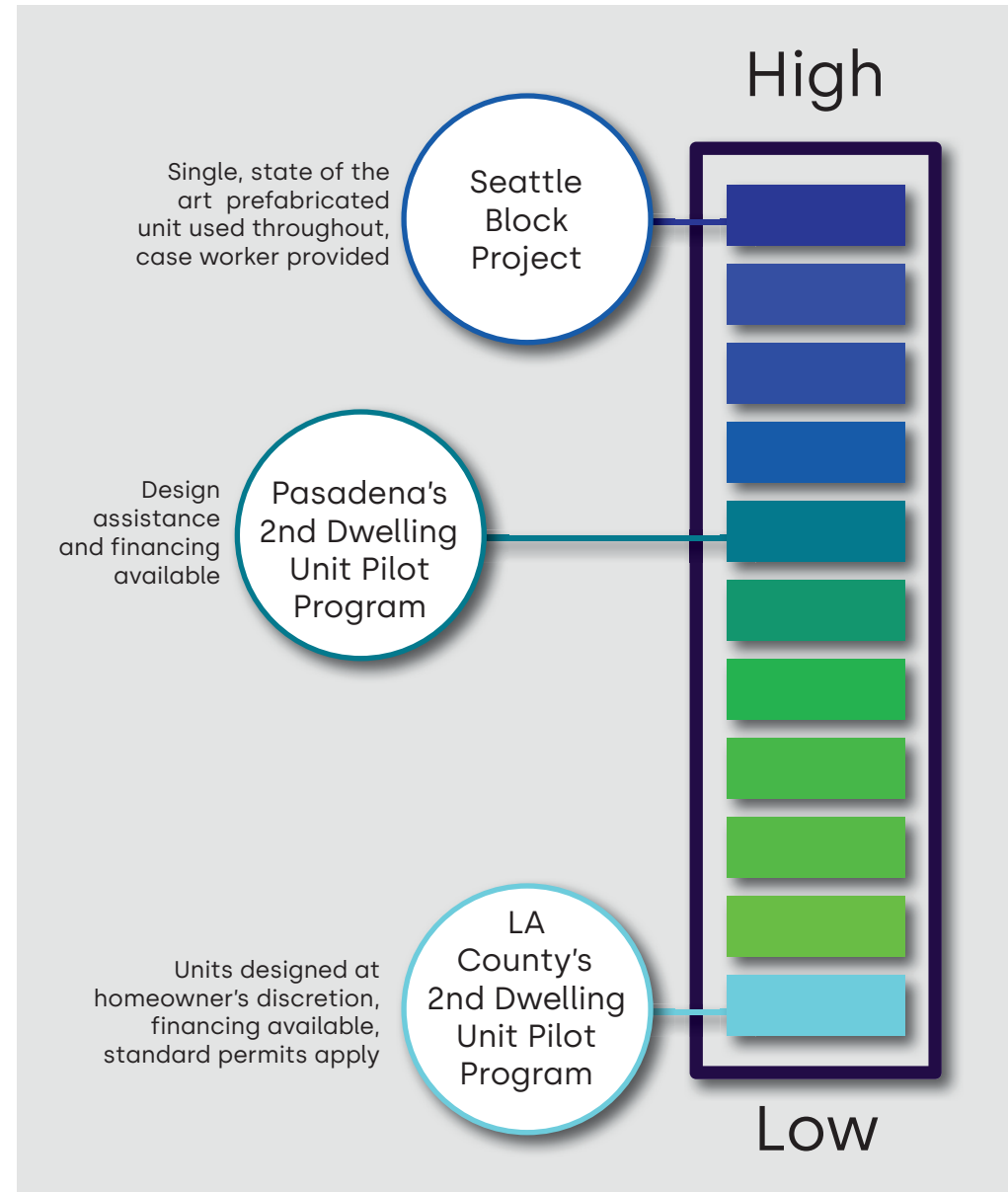


Figure 10 - Comparison of Design Intervention in each program

Programs in Different Cities

Seattle's The BLOCK Project

The Block Project was started in Seattle by Rex Holbein and the Seattle Block Project Architects. The idea was that if every block in Seattle had one no-cost ADU, there would be no homeless people in the entire city. This program sought out homeowners that were willing to host a prefabricated ADU on their property. This unit would house a tenant experiencing homelessness, at no cost to the tenant or the homeowner. The homeowner would not be compensated with rent, and according to Bernard Troyer, this helped ensure that homeowners were joining the program for the right reasons. The Block Project wanted to work with homeowners who truly wanted to improve the neighborhood. Every homeowner on the block had to consent to the installation of the ADU. The founders hoped that community consent would lead to the tenant finding a social network on the block. This democratic process, coupled with the high quality pre-fabricated units, aims to catalyze a paradigm shift that will increase public support for ADUs. This program's model focuses on a social mission to overcome ADU opposition by taking small steps, one at a time, and gaining public trust.

So far, The Block Project has successfully manufactured and installed 10 units. They are planning on installing 2 more units in 2021. So far, the existing units have been paid for by charity. However, there are also plans to manufacture these high-quality units, sell them at market rates and use the profits to fund the units that are housing individuals experiencing homelessness. Although 10 units in 3 years fell short of their goal of 20 units by 2019, it is actually a very effective start compared to other programs across the country. The shortfall can be attributed to the COVID-19 pandemic, since the volunteers had to stop building during this time. Furthermore, many initial applicants realized that their property did not meet minimum lot requirements and other local codes for ADUs. Despite these challenges, the BLOCK Project managed to achieve the most successfully occupied units out of the programs evaluated in this thesis.

LA County's Second Dwelling Unit Pilot Program

LA County's Second Dwelling Unit provided many good insights and lessons learned for future subsidized ADU programs. This program started out by requesting applications for subsidies for ADUs that would be rented out to households experiencing homelessness at below-market rates. Out of a pool of hundreds of homeowners, only about 40 owned property when an ADU could be constructed and comply with local building codes. Those 40 homeowners were given a questionnaire about their qualifications. Although there were many factors that led to the selection of the final five, during my interview I learned that the main qualifications were 1) construction or landlord experience, 2) a financial need for the subsidy and 3) an innovative design or implementation idea. Homeowners that built a new ADU were provided a \$75,000 loan with 1% interest in exchange for an agreement to rent the unit out to an individual or household experiencing homelessness. Homeowners that had an existing illegal ADU were given a \$50,000 loan with 1% interest to improve the ADU to meet building and safety codes, and also agreed to rent the units out to an individual or household experiencing homelessness at below market rates.

After 3 years, only one of five units was successfully occupied. This single successful unit hit a snag when the initial tenant moved out for personal reasons. The homeowner has recently rented the ADU to a new tenant for affordable rates. Three others are still under construction, about three years after the funds were disbursed.

Mark Trinidad of the Los Angeles County Development Authority considers this program a much needed step toward affordable ADU rentals, but also acknowledges that there were many lessons learned. One important lesson was that \$75,000 is usually not enough to build a detached unit, and many homeowners don't realize that. Design permits alone may in some cases exceed ten thousand dollars. In contrast, The BLOCK Project didn't have unexpected costs because their units are prefabricated modules and are funded by charity. There were no curveballs in the design and construction process, aside from the fact that some properties required extensive grading.

Pasadena's Second Dwelling Unit Pilot Program

This pilot program is aiming to help 5 to 7 households in Pasadena build ADUs to house individuals or households experiencing homelessness. Homeowners can take out a loan for new construction or to bring an existing unpermitted ADU up to code. The loan period is 3 years with a 1% simple interest rate. (Not compound interest) At the end of this period, homeowners can refinance or apply for up to two one-year extensions. If the loan still isn't refinanced after that period, then the loan is converted to a 30-year conventional loan at 1% plus prime rate (Fixed) (Pasadena Department of Housing 2020). Applicants for the new construction loan will be given priority first for being in Community Development Block Grant (CDBG) eligible census tracts, next priority goes to applicants if their existing home is valued below \$850k, then priority is given to homeowners who have occupied their homes for 5 years or more. From the remaining applicants, there will be a lottery to award the loans (Pasadena Department of Housing 2020).

For the unpermitted ADU rehabilitation loan, priority will be given to homeowners with open citations for unpermitted ADUs, then those located in a CDBG tract, then unpermitted ADUs that currently house a vulnerable occupant, which the City describes as a senior, severely disabled person or minor, and lastly the tie-breaker would be based on a visual inspection and determination of which structure has the most urgent need (Pasadena Department of Housing 2020). The City works with the successful applicants to prepare the loan. The homeowner then works with the City's architects to design the new construction or rehabilitation project.

Non-subsidized ADU programs

During the research phase of this thesis, I compared the ADU regulatory reform efforts in two states: California and Washington. Statewide mandates allowing homeowners to build ADUs have spurred ADU permit applications in both California and Washington. These ADUs have created thousands of homes. It would be interesting to see how many have been successfully and consistently occupied, and of those, how many were occupied at affordable rates versus market rates. Regardless, the simple fact that housing is being created is a step in the right direction

California has experienced an uptick in ADU permits since 2017, due to the aforementioned legislation mandating that cities allow ADUs on properties that comply with local codes. Andre Coleman, managing editor for Pasadena Now, reports that Pasadena has received 142 applications for ADUs since 2018. By contrast, Pasadena had received 5 applications for permits in the previous ten years. (Coleman 2020) Overall, the state has seen a 30-fold increase in ADU permit applications.

Olympia's Planning Department reports that there have been about 100 ADUs successfully permitted since they were legalized in 1995 (Block 2020). Brandon Block, writer for The Olympian, reports that many more have been constructed by illegally bypassing the permitting process. The Sightline Institute reports that "According to city data compiled by the Master Builders Association of King and Snohomish counties, by October of [2020], the city accepted 447 permit applications, surpassing the 317 permits in all of 2019" (Gabobe 2020). Due to Mayor Durkin's ADU regulatory reforms last summer, those numbers are likely to keep climbing in 2021.

Seattle relaxed ADU regulations last summer so that ADU homeowners were no longer required to provide off-street parking, nor were they required to live on the property. Properties could have one attached unit and one detached unit. These reforms helped, but there's more work to be done. Interviewees recommended that pre-designed plans be allowed to bypass the structural permitting process, as every permit after the first one would be redundant. They also recommended reviewing minimum lot size requirements and finding a balance.

Policy Recommendations for Subsidized and Market Rate ADU Programs

All ADU Programs:

Based on my research, regulatory reforms for all ADU campaigns should include the following. State-wide mandates allowing ADUs are of course, the first step. ADUs should be allowed as a by-right, not a conditional use. Remove off-street parking spot requirements for tenants. Remove restrictions that stipulate homeowners must live on-site. Adjust building height restrictions that would prevent homeowners from building a garage with an ADU above.

Market Rate ADU Programs:

Ensure that a step by step process for planning, design, permitting, construction, occupancy and maintenance is available to homeowners on the city's website. The more a city can do to facilitate this process, the better. Provide pre-designed plans and eliminate redundant permitting processes. The majority of homeowners will only have one ADU, and only one chance to learn how to design, build and operate an ADU successfully. It is better to eliminate the learning curve as much as possible by providing as much information as possible upfront.

Subsidized ADU Programs:

Subsidized ADU programs aim to house individuals or households that are currently experiencing homelessness. Determine if the primary goal of the program is to prevent homeowner displacement or to reduce homelessness. If the primary goal is to reduce homelessness, seek homeowners that do not need financial assistance by not allowing them to collect rental income for subsidized ADUs for formerly homeless people, and follow The BLOCK Project's model. If the primary goal of the program is to prevent homeowner displacement, refer to the section on site

selection and homeowner selection to determine which homeowner is most likely to succeed. Consider monitoring the progress of Pasadena's model and using that going forward. If the goal is to create housing any way possible, consider focusing on ADU regulatory reform. If the city is in a state that doesn't currently mandate that ADUs be allowed on all suitable properties, then passing that legislation is the first step. Next, look at the most occurring reasons for ADU permit rejection, such as height restrictions or lot coverage restrictions and see if relaxing these regulations makes sense for the area.

Know that in most cities, ADU acceptance will require a paradigm shift. The BLOCK Project's model used block consensus and high-quality ADUs to bolster community support. These modular homes eliminate many unknowns in the construction process. Homeowners often overestimate their ability to manage the construction and costs of an ADU. Homeowners may also encounter unforeseeable conflicts with the tenants. Subsidized ADU programs should ensure that subsidized ADU program participants are paired with case workers.

Pasadena's Second Dwelling Unit Pilot Program pairs homeowners with architects to avoid insurmountable design challenges and costs, but remains to be seen if this strategy is more successful. More research should be done to evaluate the effectiveness of this strategy.

Finally, future regulatory reform measures should be placed on ballots during presidential election years to ensure that the maximum number of citizens' voices are heard, and a maximum level of voter diversity is achieved.

"A passive choice is the expected behavior choice that a self-interested or apathetic person might reasonably make...It is in society's best interest to design systems where individual passive choices are the most regenerative for society's greater policy goals."

-Kol Peterson, author,
ADU expert

Next Steps

At the time when this thesis was written, only two programs that used ADUs as a means to house homeless individuals were in operation. Since then, subsidized ADU programs have taken off in many different cities in various forms. More research should be done to see how each has progressed.

- What were the lessons learned for each program?
- How have the ADU designs evolved over time?
- Have there been any innovative strategies in garnering public support?
- What kinds of nuanced regulation reforms have worked to quiet political opposition?
- What kinds of experiences have fueled political opposition?
- How have new regulatory reforms affected the process?
- Are there new financing options available?
- Has The BLOCK Project been able to fund the charitable units by selling market-rate pre-fabricated units?
- Has Pasadena's SDUPP achieved more success, using LA County's SDUPP lessons learned?
- How has Minneapolis evolved since banning single family zoning?

Conclusion

As the population continues to move toward urban areas, cities are naturally going to become more dense. This density drives up housing costs, which negatively affects the most vulnerable populations disproportionately. This thesis has illustrated how ADUs can be a tool to help homeowners at risk of displacement, tenants seeking affordable rent, and the community in general.

By identifying a main goal for an ADU program - primarily housing individuals experiencing homelessness, helping individuals experiencing homelessness *while* helping homeowners avoid displacement, or creating housing any way possible, planners can choose a model that is most likely to work to meet their needs. The BLOCK Project in Seattle sought primarily to house individuals experiencing homelessness, and managed to do so by taking small steps and gaining the public trust. LA County's Second Dwelling Unit Pilot Program sought to help homeowners and individuals experiencing homelessness at the same time, with financial incentives to construct ADUs. This program experienced some growing pains, but ultimately passed some valuable lessons learned on to Pasadena. Pasadena has started its own pilot program based on these lessons learned, the results of which remain to be seen.

As states begin to mandate ADUs as a homeowner by-right, many are seeing a significant uptick in ADU permits. Cities like Seattle have taken the next step to relax local regulations that continued to prevent homeowners from constructing ADUs, even after statewide reforms. In California, some cities are working to eliminate unnecessary or redundant permitting fees to help homeowners reach their ADU goals. These efforts serve as a model for other states hoping to speed the usage of ADUs.

The homelessness crisis did not appear overnight and it is not going to be solved overnight. ADUs cannot be the entire solution, but they can be a part of the solution. When homeowners are willing to use part of their property to better the community, cities need to be willing to support those efforts. The continued efforts for ADU regulatory reform, improved ADU design and improved ADU site selection will build stronger, healthier neighborhoods.

References

NOTE: All references to websites have been archived using the Internet Archive Wayback Machine, except those noted.

"Accessory Dwelling Unit (ADU)." Thurston County Community Planning. Thurston County, 2021. <https://web.archive.org/web/20210530184231/https://www.thurstoncountywa.gov/planning/Pages/comp-plan-adu.aspx>.

"Affordable Housing: Preventing Homelessness." City of Lacey Community Development, 2020. https://web.archive.org/web/20210609045159/http://www.ci.lacey.wa.us/Portals/0/docs/community_development/ADU/ADU%20Workshop%20ALL%20SLIDES.pdf.

Alexander, Lisa T. "Community in Property: Lessons from Tiny Homes Villages." *Minnesota Law Review*, vol. 104, no. 1, Nov. 2019, pp. 385–863. EBSCOhost, search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=140225562&site=ehost-live. (Not archived)

Alpert, David. "Why the Angst over Accessory Dwellings?" *Greater Greater Washington*, May 31, 2012. <https://web.archive.org/web/20210611011034/https://ggwash.org/view/27878/why-the-angst-over-accessory-dwellings>.

Alpert, David. "Zoning Update Opponents Keep Spreading Misinformation." *Greater Greater Washington*, May 8, 2012. <https://web.archive.org/web/20210611011226/https://ggwash.org/view/27650/zoning-update-opponents-keep-spreading-misinformation>

"Be RainWise." Be RainWise - King County, January 2021. <https://web.archive.org/web/20210611011420/https://kingcounty.gov/services/environment/wastewater/cso/rainwise.aspx>.

Block, Brandon. "Permitting Requirements Haven't Stopped ADUs in Olympia, They've Just Made Them Illegal." *The Olympian*. The Olympian, November 30, 2020. <https://www.theolympian.com/news/local/article247466830.html>. (Not archived)

Buker, Gerald E. "A Study of Backyard Cottage Policy in Seattle, Washington: Existing Conditions Study, Capacity Analysis, and Survey in Conjunction with Seattle's Department of Planning and Development." Research Works. University of Washington Digital Library, 2015. https://web.archive.org/web/20210611012120/https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/34200/Buker_washington_0250O_14814.pdf?sequence=1&isAllowed=y.

Campbell, Hayden. "Investigating an Asset Based Approach to Housing and Homelessness: A Phenomenological Case Study ." University of Washington Digital Library, 2019. https://web.archive.org/web/20210611194753/https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/44467/Campbell_washington_0250O_20416.pdf?sequence=1&isAllowed=y.

Chapple, Karen, Jake Wegmann, Farzad Mashhood, and Rebecca Coleman. "Jumpstarting the Market for Accessory Dwelling Units: Lessons Learned From Portland, Seattle and Vancouver." *Terner Center for Housing Innovation*, 2017. https://web.archive.org/web/20210611012255/https://ternercenter.berkeley.edu/wp-content/uploads/pdfs/Jumpstarting_the_Market_-_ULI.pdf.

- "Chapter 3: Demographics of Multi-Generational Households." Pew Research Center's Social & Demographic Trends Project. Pew Research Center, December 31, 2019. <https://www.pewresearch.org/social-trends/2011/10/03/chapter-3-demographics-of-ulti-generational-households/>. (Not archived)
- Cohen, Josh. "California ADU Applications Skyrocket After Regulatory Reform." Next City, January 2018. <https://web.archive.org/web/20210611012548/https://nextcity.org/daily/entry/california-adu-applications-skyrocket-after-regulatory-reform>.
- Coleman, Andre. "Applications for Granny Flats Soar." Pasadena Now, January 22, 2020. <https://web.archive.org/web/20210611012827/https://www.pasadenanow.com/main/applications-for-granny-flats-soar/>.
- Damon, Anjeanette. "Reno City Council Rejects 'Granny Flats' as a Means to Address Housing Crisis." Reno Gazette Journal. Reno Gazette-Journal, November 29, 2018. <https://www.rgj.com/story/news/2018/11/28/reno-council-rejects-granny-flats-way-address-housing-crisis/2144609002/>. (Not archived)
- Diaz, Hannah L. "Bidding AD(Le)U to Homelessness?" MIT Libraries. Massachusetts Institute of Technology, June 2019. <https://web.archive.org/web/20210611013422/https://dspace.mit.edu/bitstream/handle/1721.1/123952/1140388049-MIT.pdf?sequence=1&isAllowed=y>.
- Dinh, Tran; Brewster, David; Fullerton, Anna; Huckaby, Greg; Parks, Mamie; Rankin, Sara; Ruan, Nantiya; and Zweibel, Elie, "Yes, In My Backyard: Building ADUs to Address Homelessness" (2018). Homeless Rights Advocacy Project. 12. <https://web.archive.org/web/20210530191838/https://digitalcommons.law.seattleu.edu/hrap/12/>
- Doman, Don. "ADU Housing Solutions for Tacoma, Lakewood, and Puyallup – Pierce County." The Suburban Times, May 7, 2020. <https://web.archive.org/web/20210611013746/https://thesubtimes.com/2020/05/07/adu-housing-solutions-for-tacoma-lakewood-and-puyallup-pierce-county/>.
- Dominique, Kimberley. "Editorial: It's Already Hard to Get a Section 8 Voucher. It's Even Harder to Find a Landlord Willing to Take It." Los Angeles Times. Los Angeles Times, January 30, 2019. <https://web.archive.org/web/20210611013920/https://www.latimes.com/opinion/editorials/la-ed-section-8-discrimination-ban-20190130-story.html>.
- Durning, Alan, Greg Nickels, Sophia Katt, Benschon, Karen Quinn Fung, Angela, Rachael Healy, et al. "ADUs and Don'ts." Sightline Institute, October 25, 2018. <https://web.archive.org/web/20210611014437/https://www.sightline.org/2013/03/15/adus-and-donts/>.
- Gabobe, Nisma. "West Coast Cottage Reforms Lead to Explosive Rise in Permits." The Sightline Institute, December 2, 2020. <https://web.archive.org/web/20210611014604/https://www.sightline.org/2020/12/02/west-coast-cottage-reforms-lead-to-explosive-rise-in-permits/>.
- Galassini, Louisa Mae, and Griggs, Kimo. Hidden Density : a Proposal for Single-Family Infill Housing. University of Washington, 2014. <https://web.archive.org/web/20210611015800/http://web.archive.org/screenshot/https://digital.lib.washington.edu/researchworks/handle/1773/26554>

- Goodloe, Trevor. The 1964 Open Housing Election: How the Press Influenced the Campaign - Seattle Civil Rights and Labor History Project, 2008. https://web.archive.org/web/20210530193208/https://depts.washington.edu/civilr/CORE_housing_media.htm.
- Friedberg, Barbara A. "Are We in a Baby Boomer Retirement Crisis?" Investopedia. Investopedia, August 28, 2020. <https://web.archive.org/web/20210611020048/https://www.investopedia.com/articles/personal-finance/032216/are-we-baby-boomer-retirement-crisis.asp>.
- Haber, Michael A. "No Dogs, Cats or Voluntary Families Allowed - Village of Belle Terre v. Boraas." DePaul University Libraries. DePaul University, 1975. <https://web.archive.org/web/20210611020207/https://via.library.depaul.edu/cgi/viewcontent.cgi?article=2724&=&context=law-review>.
- Hastings, Patty. "Owners Find ADUs Can Be a Good Addition." The Columbian, June 25, 2017. https://web.archive.org/web/20210611020611if_/https://alliance-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=TN_cdi_proquest_newspapers_1914244226&=&=&=&=&context=PC&vid=UW&lang=en_US&search_scope=all&adaptor=primo_central_multiple_fe&tab=default_
- "Housing Affordability and Livability." Housing Affordability and Livability - HALA, 2019. <https://web.archive.org/web/20210605054841/http://www.seattle.gov/hala>.
- HUD 203k & FannieMae, 2021.
- Hurley, Amanda Kolson. "Will U.S. Cities Design Their Way Out of the Affordable Housing Crisis?" Next City, January 18, 2016. <https://web.archive.org/web/20210611021039/https://nextcity.org/features/view/cities-affordable-housing-design-solution-missing-middle>.
- Jorgensen, Ryan Nels. "Little House on the Alley: Seeking an Ethic of Development for DADUs in Seattle." Research Works Archive, 2013. <https://web.archive.org/web/20210531173821/https://digital.lib.washington.edu/researchworks/handle/1773/25247>.
- Krass, Cynthia, and Moudon, Anne Vernez. Factors Associated with Accessory Dwelling Unit Density. University of Washington, 2013. <https://web.archive.org/web/20210530195555/https://digital.lib.washington.edu/researchworks/handle/1773/23649>
- Kunstler, James Howard. The Geography of Nowhere: the Rise and Decline of America's Man-Made Landscape. New York, NY: Simon & Schuster, 1994.
- Lau, Joel. "BPDA Opens Door for Additional Dwelling Units." Gale Academic Onefile, April 16, 2019. <https://idp.u.washington.edu/idp/profile/SAML2/POST/SSO;jsessionid=2CFC856DAA7187801AE2B53B98402093.idp04?execution=e1s1>. (Not archived)
- Lloyd, Sarah Anne. "Measure to Reduce Barriers to Building ADUs in Seattle Gets Mayoral Boost." Curbed Seattle. Curbed Seattle, July 11, 2019. <https://web.archive.org/web/20210611021641/https://seattle.curbed.com/2019/7/11/20690758/seattle-adu-assistance-programs-law>.

Mervosh, Sarah. "Minneapolis, Tackling Housing Crisis and Inequity, Votes to End Single-Family Zoning." *The New York Times*. The New York Times, December 13, 2018. <https://web.archive.org/web/20210611021921/https://www.nytimes.com/2018/12/13/us/minneapolis-single-family-zoning.html>.

Monkkonen, Paavo, and Will Livesley-O'Neil. "Overcoming Opposition to New Housing." UCLA Lewis Center for Regional Policy Studies, January 11, 2021. <https://web.archive.org/web/20210611022128/https://www.lewis.ucla.edu/research/overcoming-opposition-to-new-housing/>.

Parolek, Daniel G., and Arthur C. Nelson. *Missing Middle Housing: Thinking Big and Building Small to Respond to Today's Housing Crisis*. Washington, DC: Island Press, 2020.

"Pasadena Second Unit ADU Program." Pasadena Department of Housing, 2020. <https://web.archive.org/web/20210611022335/https://www.cityofpasadena.net/housing/second-unit-adu-program/>.

"Pasadena Urged to Purge Poison Pills from ADU Reform Ordinance." Planetizen, January 30, 2017. <https://web.archive.org/web/20210611022615/https://www.planetizen.com/node/90933/pasadena-urged-purge-poison-pills-adu-reform-ordinance>.

Paul, Crystal. "Wing Luke's 'Excluded, Inside the Lines' Exhibit Takes on Redlining and Housing Discrimination in Seattle." *The Seattle Times*. The Seattle Times Company, February 13, 2020. <https://web.archive.org/web/20210611023154/https://www.seattletimes.com/entertainment/wing-lukes-excluded-inside-the-lines-exhibit-takes-on-redlining-and-housing-discrimination-in-seattle/>.

Paulin, Emily. "Is Assisted-Living Being Forgotten During COVID?" AARP, September 29, 2020. <https://web.archive.org/web/20210611023416/https://www.aarp.org/caregiving/health/info-2020/assisted-living-forgotten-during-covid.html>

Phillips, Shane. *The Affordable City: Strategies for Putting Housing within Reach (and Keeping It There)*. Washington, D.C.: Island Press, 2020.

Peterson, Kol. *Backdoor Revolution: the Definitive Guide to ADU Development*. Portland, OR: Accessory Dwelling Strategies, 2018.

Ramsey-Musolf, Darrel. "Accessory Dwelling Units as Low-Income Housing: California's Faustian Bargain." MDPI. Multidisciplinary Digital Publishing Institute, September 18, 2018. <https://web.archive.org/web/20210611024722/https://www.mdpi.com/2413-8851/2/3/89>.

Ross, Jaimie. "Accessory Dwelling Units: A Smart Growth Tool for Providing Affordable Housing." Florida Housing Coalition, August 2016. <https://web.archive.org/web/20210228085919/https://www.flhousing.org/wp-content/uploads/2016/10/Accessory-Dwelling-Units-A-smart-growth-tool-for-providing-affordable-housing.pdf>.

"Seattle 2035 Growth and Equity Analysis." Seattle Office of Planning and Community Development, May 2016. <https://web.archive.org/web/20210530202518/https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/SeattlesComprehensivePlan/FinalGrowthandEquityAnalysis.pdf>.

- "Seattle/King County Point-in-Time Count of Individuals Experiencing Homelessness." Count Us In. AllHome, 2021. https://web.archive.org/web/20210530202631/https://regionalhomelessnessystem.org/wp-content/uploads/2020/07/Count-Us-In-2020-Final_7.29.2020.pdf.
- Schulkin, Rachel. "Mayor Durkan Extends COVID-19 Relief Measures, Eviction Moratoriums, and Other COVID-19 Safety Restrictions." Office of the Mayor, March 15, 2021. <https://web.archive.org/web/20210611025916/https://durkan.seattle.gov/2021/03/mayor-durkan-extends-covid-19-relief-measures-eviction-moratoriums-and-other-covid-19-safety-restrictions/>.
- Siegel, Zoe. "What Is Smart Growth and How Does It Impact Climate." Greenbelt Alliance, May 10, 2021. <https://web.archive.org/web/20210611032050/https://www.greenbelt.org/blog/what-is-smart-growth/>
- Stergiopoulos, Vicky, Stephen Hwang, and Agnes Gozdik. "Housing Stability Among Homeless Adults With Mental Illness." JAMA. JAMA Network, March 3, 2015. <https://jamanetwork.com/journals/jama/article-abstract/2174029>. (Not archived)
- Swanson, Conrad. "Accessory Dwelling Units Should Be Attached with Owners Living on Site, Colorado Springs City Council Suggests." Colorado Springs Gazette, July 15, 2020. https://web.archive.org/web/20210611032641/https://gazette.com/news/accessory-dwelling-units-should-be-attached-with-owners-living-on/article_d8d3ac74-8bde-11e9-b1ab-c3865e2d34ed.html.
- Tan, Rebecca. "Officials Call It a Common-Sense Zoning Change. These Homeowners Say It's a 'Betrayal.'" The Washington Post. WP Company, July 22, 2019. https://web.archive.org/web/20210611032928/https://www.washingtonpost.com/local/md-politics/officials-say-its-a-common-sense-zoning-change-these-homeowners-say-its-a-betrayal/2019/07/22/5eb48724-a295-11e9-b732-41a79c2551bf_story.html.
- Taylor, Dorceta E. *The Environment and the People in American Cities, 1600-1900s: Disorder, Inequality, and Social Change*. Durham, NC: Duke University Press, 2010.
- The BLOCK Project, 2021. <https://www.the-block-project.org/>. (Not archived)
- "The Roots of the Crisis." *The Roots of the Crisis - Homelessness*. City of Seattle, 2021. <https://web.archive.org/web/20210611033300/https://www.seattle.gov/homelessness/the-roots-of-the-crisis>.
- "Tiny Houses." Low Income Housing Institute, April 15, 2021. <https://web.archive.org/web/20210611033415/https://lihi.org/tiny-houses/>
- Trumm, Doug. "Governor Partially Vetoes Backyard Cottage Bill at Request of Housing Advocates, AARP." *The Urbanist*, May 21, 2021. <https://web.archive.org/web/20210611033547/https://www.theurbanist.org/2021/05/20/governor-partially-vetoes-backyard-cottage-bill-at-request-of-housing-advocates-aarp/>.
- Walsh, Molly. "Lacey's ADU Program Will Streamline the Process for Residents to Build a Backyard Cottage." *ThurstonTalk*, January 6, 2020. <https://web.archive.org/web/20210611033723/https://www.thurstontalk.com/2020/01/06/laceys-adu-program-will-streamline-the-process-for-residents-to-build-a-backyard-cottage/>.

Appendix

- 9 Figure 1 - Displacement Risk Index (Seattle OPCD 2016)
- 11 Figure 2 - ADU Typology (HUD 203k & FannieMae, 2021)
- 12 Figure 3 - Strategy for Shared amenities
- 13 Figure 4 - Walk out Basement ADUs
- 13 Figure 5 - Garage ADU
- 14 Image 1 - Custom ADU designed by New Key Construction
- 15 Image 2 - Pre-designed ADU Plan provided by the City of Lacey, WA (Walsh 2020)
- 16 Image 3 - Recreational Vehicle (City of Lacey, Community Development 2020)
- 16 Image 4 - ADU (City of Lacey, Community Development 2020)
- 17 Image 5 - LIHI Tiny Home (*Low Income Housing Institute* 2021)
- 22 Image 6 - Source: Allume Architects
- 24 Image 7 - Missing Middle Housing (Photo credit: Susan Law Cain)
- 26 Figure 6 - Population Growth (U.S. Census Bureau)
- 29 Image 8 - Missing Middle Housing (Photo Credit: Imagenet)
- 31 Figure 7 - ADU Zoning Checklist (Dinh 2018)
- 34 Figure 8 - The ADU regulatory debate
- 44 Image 9 - Path with sufficient lighting
- 45 Image 10 - ADU Interior (Credit: Aeesha Norm)
- 46 Image 11 - Residential Rain Garden in Seattle, WA (BeRainWise 2021)
- 47 Image 12 - ADU Style Guide (Lacey, WA Department of Community Development)
- 52 Figure 9 - Program Summary
- 53 Figure 10 - Comparison of Design Intervention in each program