MEMORANDUM

Housing Landscape Summary

Beaverton Housing Options Project (HOP)

DATE	February 12, 2019
TO	Rob Zoeller and Cassera Phipps, City of Beaverton
FROM	Matt Hastie and Jamin Kimmell, Angelo Planning Group
CC	File

The purpose of this memorandum is to describe the context and trends, within both the regional and national housing landscape, that have led the City of Beaverton to undertake the Housing Options Project (HOP). These trends underscore the need for the City to consider ways to facilitate development of a wider range of housing types than are currently present or being developed at projected needed levels in the community. This memorandum is organized into four sections:

1. **Background:** In this section, we describe the problems that result from of a lack of housing options and present and define potential solutions: "missing middle" housing types and accessory dwelling units.
2. **Market Context:** In this section, we describe the trends in demographics and preferences that are generating demand for a wider range of housing options and regional trends in housing development that attempt to supply that demand.
3. **Example Developments:** In this section, we review 11 projects that may be prototypical examples of each of the housing types under consideration.

1. BACKGROUND

What is the problem?

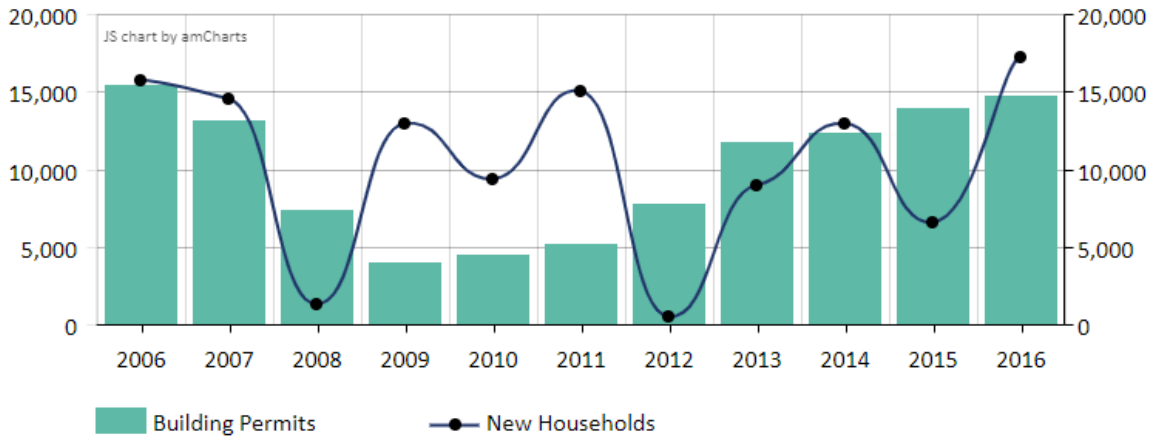
Through previous planning projects and other studies, the City of Beaverton has concluded that there is not a sufficient range of housing options available in the community, especially—but not exclusively—for households with lower or moderate incomes. Many households either cannot afford or do not desire to live in a detached, single-family home. Apartment units in large multifamily buildings help meet the needs of many of these households; however, there are limitations to this housing type that may constrain their development, including land availability, construction costs, household preferences, and concerns about neighborhood impacts. Given this context, there is an opportunity for the City to better meet stated goals and policies of the

Comprehensive Plan—and Oregon Statewide Planning Goal 10—to provide a variety of housing types that meet the needs and preferences of current and future residents.

An overall housing shortage is limiting housing options

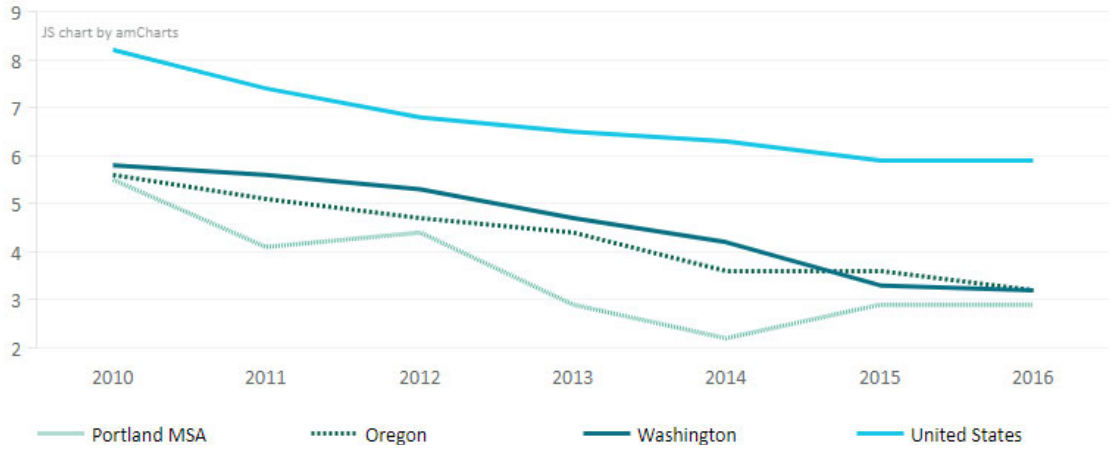
One issue driving a lack of housing options is that the growth in the overall supply of housing has not kept up with the growth in population or households. On the regional scale, housing unit production decreased dramatically during the recession, between 2008 and 2011, while new households in the region continued to grow (Figure 1). Housing production only recently begun to reach pre-recession levels, which more closely tracked with growth in new households. This has led to low vacancy rates for rental units (Figure 2) and a low inventory of for-sale housing in the region compared to national averages. Washington County has some of the lowest rental vacancy rates of all the counties in the region (Figure 3).

Figure 1. Permits for new residential housing units and new households, Portland MSA, 2006-2016



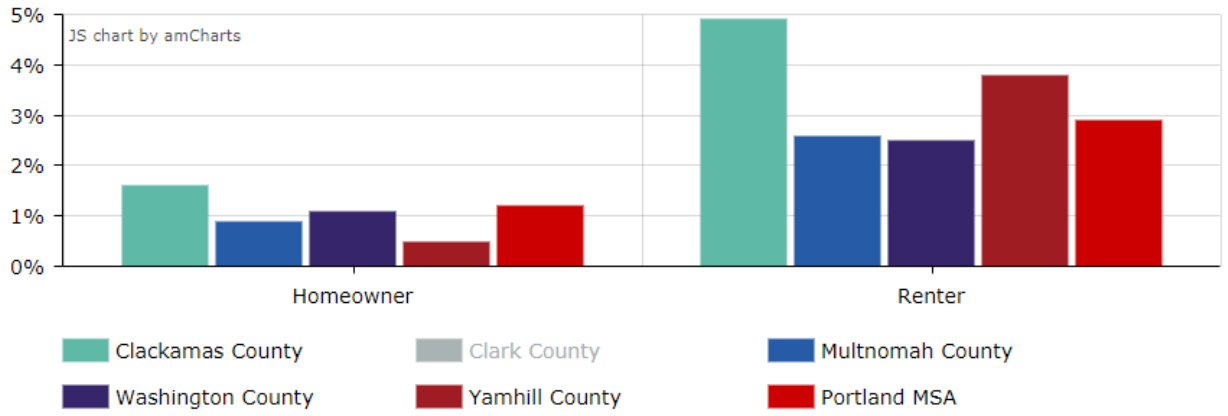
Source: Data compiled by Greater Portland Pulse Housing Data Hub from US Census, Building Permits Survey and American Community Survey Table S11101

Figure 2. Rental vacancy rate, Portland MSA, 2012-2016



Source: Data compiled by Greater Portland Pulse Housing Data Hub from US Census, American Community Survey Table DP04

Figure 3. Vacancy rate by tenure and county, Portland MSA, 2016



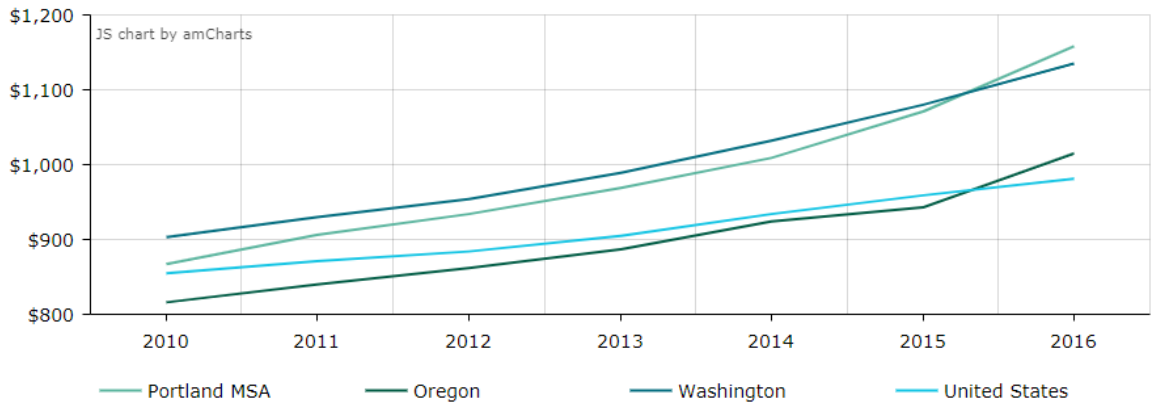
Source: Data compiled by Greater Portland Pulse Housing Data Hub from US Census, American Community Survey Table DP04

This shortage of new housing units has resulted in rising housing prices, including both rental rates and prices of for-sale units (Figure 4 and Figure 5). Meanwhile, wages and incomes have not kept up with rising housing costs. Thus, insufficient new housing production has resulted in an overall shortage of housing stock to choose from and has caused more of the housing stock to become unaffordable for many people, especially those with lower or moderate incomes.

Figure 4. Case-Shiller Home Price Index, Portland MSA, October 2007 – December 2017

Source: Data compiled by Greater Portland Pulse Housing Data Hub from Redfin, not adjusted for inflation

Figure 5. Median gross rent, Portland MSA, 2010-2016 one-year estimates



Source: Data compiled by Greater Portland Pulse Housing Data Hub from U.S. Census, American Community Survey, Table B25064, not adjusted for inflation

Larger apartment buildings only meet part of the need for more housing options

The number of housing units in larger multifamily buildings in the city has increased substantially in the last several years. From 2012 to 2016, there were 2,473 units permitted in multifamily buildings with at least 3 dwellings, accounting for over half of all new development in the city.[1] These units fulfill a critical need for more housing options outside of detached, single-family homes; however, there are some limitations to this form of housing:

- **Land availability**: The city's zoning map allows 3 to 5 story apartment buildings—in most commercial, multiple use, and medium and high-density residential zones, but not all standard and lower density residential zones. These areas, designated R5, R7 or R10, account for approximately 50 percent of the city's land area.
- **Lack of ownership options**: Large multifamily developments are less likely to offer opportunities to own individual units than detached single-family housing or townhomes. While some of these developments are built as condominiums, the great majority are designed and financed to be operated as rental properties (Figure 6). Financing and liability issues may be limiting condominium development.[2]
- **Household preferences**: Apartment units in larger multifamily developments do not meet the needs of all types of households. A small number of the new apartment units include three or more bedrooms, so larger families may not find these buildings to be an attractive or reasonable option. Some aging or elderly people that currently live in a detached, single-family home want to downsize but desire to continue to live in a house with a yard or other features of detached housing. For a variety of reasons, some people simply prefer to live in detached housing or in attached units in smaller buildings. Additionally, some people may

[1] Source: City of Beaverton Comprehensive Plan Update, Land Use Element Background Report
[2] For more discussion, see Adam Seidman, "In Search of the Missing Condos: An Analysis of the Condo Development Market in the Portland Area", *Center for Real Estate Quarterly Report*, vol. 10, no. 3. Summer 2016. Available at https://www.pdx.edu/sba/sites/www.pdx.edu.sba/files/01-Missing-Condos-Seidman.pdf

prefer to live in the same neighborhood but downsize from a detached house to a smaller apartment or townhome.

Figure 6. Housing Units Built, Portland MSA, 2002-2015

Source: Data compiled by Seidman (2016) from RMLS, CoStar

The Comprehensive Plan calls for the City to promote a diversity of housing options

Given these limitations, the city has identified the need to facilitate development of a wider range of housing types, which can help to satisfy unmet needs and broaden housing options. This goal is memorialized in the Housing Element and Land Use Element of the Comprehensive Plan, and specific policies direct the City to support a diversity of housing types:

> ***Goal 4.2.1: Provide a variety of housing types that meet the needs and preferences of residents***
>
> *Policies:*
>
> > *a) Ensure that sufficient land is appropriately zoned to meet a full range of housing needs, including an adequate amount of detached single-family housing to meet projected demand*
> >
> > *[…]*
> >
> > *c) Identify and research emerging housing types and regularly consider appropriate updates to the Development Code to allow for their development*
> >
> > *d) Incentivize the development of housing types that are needed but not currently being provided in adequate numbers by market forces, such as single level detached homes and larger multifamily rental units*
>
> ***Goal 3.2.1 Provide for thoughtful and strategic infill and redevelopment***
>
> *Policies:*

A. Provide a set of residential infill guidelines and standards that encourage compatible infill development, consistent with the following principles…

Goal 3.8.2 Low and Standard Density Neighborhoods: Provide residential neighborhoods that emphasize detached housing and integrate parks, schools, and other community institutions

Policies:

A. Allow and encourage a variety of housing types that respond to the scale and form of existing neighborhoods as a way to increase housing options within established neighborhoods while recognizing neighborhood character.

Goal 3.8.3 Medium and High Density Neighborhoods: Provide for a variety of housing types and higher residential densities in areas with more amenities and transit service

Policies:

A. Provide for a variety of housing types, with an emphasis on multifamily and attached single-family housing.

F. Allow for innovative housing types and designs that are consistent with the other policies for these neighborhoods to accommodate projected growth and meet the diverse housing needs of the community.

State law requires clear and objective standards for needed housing

In addition to the local market trends and Comprehensive Plan policies, changes in state law that went into effect in 2018 requires that cities provide "clear and objective" approval standards for needed housing. The definition of "needed housing" was recently amended to apply to a broader range of housing types.[3] For the purposes of this project, all housing on land in the city's residential zones would be classified as "needed housing" and, therefore, must be subject to clear and objective approval standards and procedures. Discretionary standards can be applied to needed housing as an alternative approval track, but a clear and objective track must be retained.

Additionally, cities with a population of over 2,500 must allow one accessory dwelling unit (ADU) with each detached single-family dwelling in all zones where detached single-family dwellings are permitted. The accessory dwelling unit must be subject to "reasonable regulations relating to siting or design".[4]

Taken together, these two changes in state law underscore the need for the city to evaluate the standards and procedures that apply to all housing types in residential zones to ensure they are "clear and objective" and, in the case of ADUs, are limited to "reasonable regulations relating to siting or design".

[3] See ORS 197.303
[4] See ORS 197.312(5)

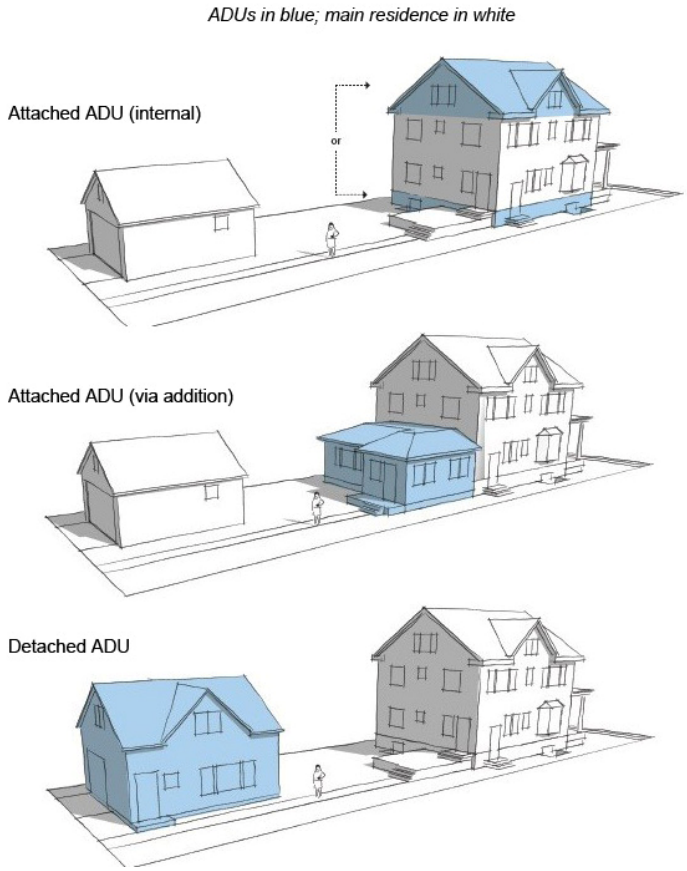
What are potential solutions?

There are several housing types that may meet the demand for a wider range of housing options in the community. For the purposes of this project, the housing types are separated into two categories: Accessory Dwelling Units (ADUs) and Missing Middle housing.

Accessory Dwelling Units

Accessory Dwelling Units (ADUs) are small, secondary dwelling units located on the same lot as a primary dwelling, which is usually a single-family detached house. ADUs were more widespread in the early 20th century and sometimes called “granny flats” or “mother-in-law apartments” because they often housed extended family members. Other terms used for ADUs are backyard cottages, carriage houses, or laneway houses. As illustrated in Figure 7, ADUs come in multiple forms: they may be a detached standalone structure (including a converted garage), an attached addition, or a converted internal space (such as an attic or basement). ADUs are smaller than the primary dwelling, either due to meeting a need for a smaller household or meeting a development code requirement, and are often located to be invisible or only partially visible from the street, so they can provide new housing options in single-family neighborhoods with little impact on the visual character of the neighborhood.

Figure 7. Types of ADUs

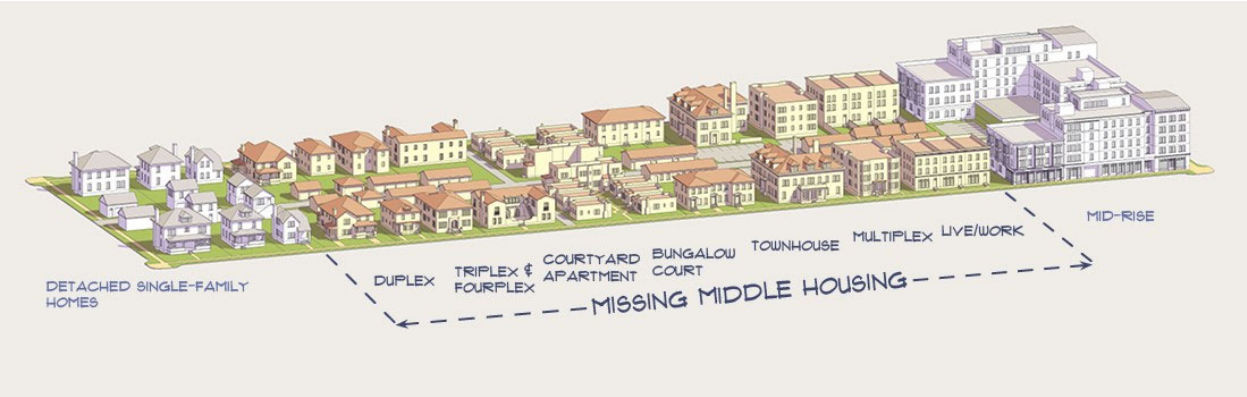


Source: City of St. Paul, MN

Missing Middle Housing

On a scale of density and building footprint, there is a set of housing types between detached, single-family homes and mid-rise multifamily or mixed-use buildings. These housing types have been termed "missing middle" housing (Missing Middle): they are less commonly found in many cities; however, demand for these housing types is growing and expected to increase over time.

Figure 8. Missing Middle housing conceptual graphic



Source: Opticos Design

There is not a precise definition for Missing Middle housing. The architect and urban designer that coined the term (Daniel Parolek of Opticos Design) has offered this definition:

> *Missing Middle is a range of multi-unit or clustered housing types compatible in scale with single-family homes that help meet the growing demand for walkable urban living.*

Missing Middle is perhaps better defined by the key characteristics of these housing types and by the suite of specific housing types that are generally included in the term. Missing Middle housing types share two key characteristics:

- **Multi-unit or clustered:** These housing types typically include multiple units on one lot or, as in the case of a "bungalow court" or "cottage cluster" they are detached units that are built in a relatively compact group or cluster. As a result, they are a higher density form of housing than conventional detached, single-family housing.
- **Similar in scale and form to single-family detached homes:** Compared to mid-rise multifamily buildings, these housing types can be more similar in scale and form to single-family detached neighborhoods. Additionally, these housing types may be less likely to cause negative impacts on neighbors in single-family homes, such as loss of sunlight or privacy from taller structures, increased traffic driven by higher density, or increased utilization of on-street parking.

There is no single list of housing types that are included in Missing Middle. For the purposes of this project, the term will be used to refer to the preliminary list of housing types identified in Table 1. Technical definitions of each of these housing types will be proposed in a later phase of this project.

Table 1. Missing Middle Housing Types, Preliminary List

Housing Type	Number of units	Other Terms and Variations
Duplex	2 attached units	Side-by-side duplex Stacked duplex
Triplex	3 attached units	--
Fourplex	4 attached units	Quadplex Four-pack
Multiplex	5-10 units	Courtyard apartments Garden apartments Six-pack
Townhouse	1 per lot, number of attached units varies	Rowhouse
Live/work housing	Varies, includes small commercial/office space	--
Cottage cluster	4-12 small detached units in a cluster	Bungalow court Pocket neighborhood Cottage housing

2. MARKET CONTEXT

Demand: Changes in Demographics and Preferences

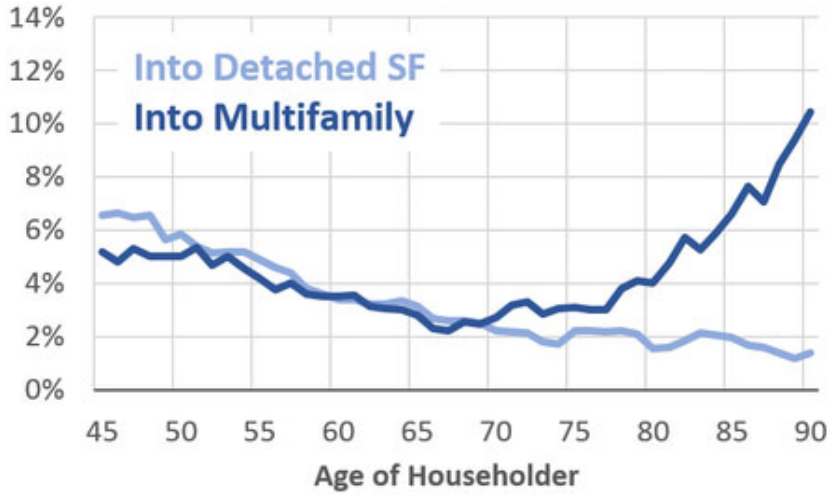
In addition to an overall housing shortage, several demographic changes and evolving household preferences are driving increasing demand for ADUs and Missing Middle housing. These trends point to several demographic groups or household types for which these housing types may meet their needs.

- **Aging population**. The baby boomer generation (born between 1946 and 1964) is the largest age cohort in the United States. This generation is roughly in their mid-50s to mid-70s today. Households in this age range are more likely to downsize into smaller housing units, and many move into multifamily buildings (Figure 9). As this generation ages, it will result in greater overall demand for smaller housing units in a variety of building types, including ADUs and Missing Middle housing. Additionally, an aging population will drive up demand for more accessible housing units, particularly single-level units.
- **Millennials are forming families and becoming first-time homebuyers.** The Millennial cohort (born between 1981 and 1996), are currently in their early-20s to mid-30s and are becoming more likely to start families and own homes as they age. As a result, homeownership rates are projected to grow over the next decade and outpace the growth

of rental households (**Error! Reference source not found.**). Missing Middle housing types—particularly cottage housing and townhomes—may be an attractive and affordable option for these first-time homebuyers because they can be smaller sized homes that are sold at a lower price point than many conventional single-family detached homes

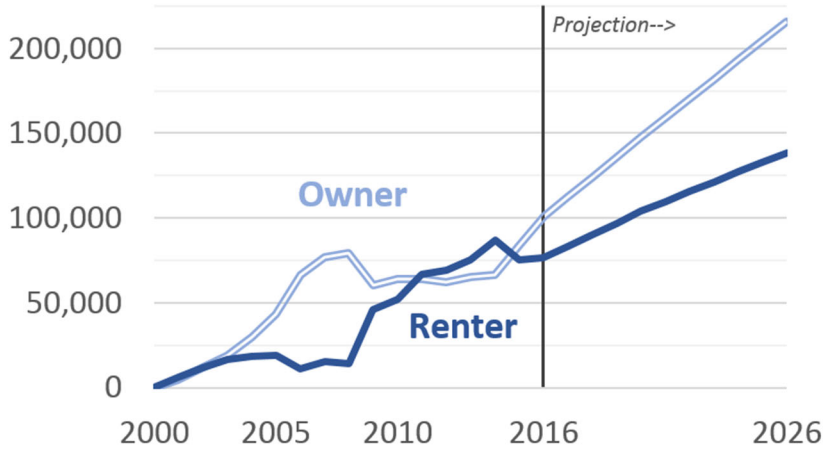
- **Growing demand for walkable neighborhoods.** Younger families and households are also more likely to desire to live in a walkable neighborhood. In a national survey from 2017, when asked to rate factors that are important in deciding where to live, Millennials and Generation X households were more like to rate having sidewalks and walking destinations as very important compared to older generations (Figure 11). Missing Middle housing types support walkability by increasing residential densities, which makes neighborhood commercial businesses more viable and brings more destinations within walking distance. If these housing types are located in walkable areas, they will likely be attractive housing options for these generations of households.

Figure 9. Moving rate by age and housing type, Oregon residents, 2016



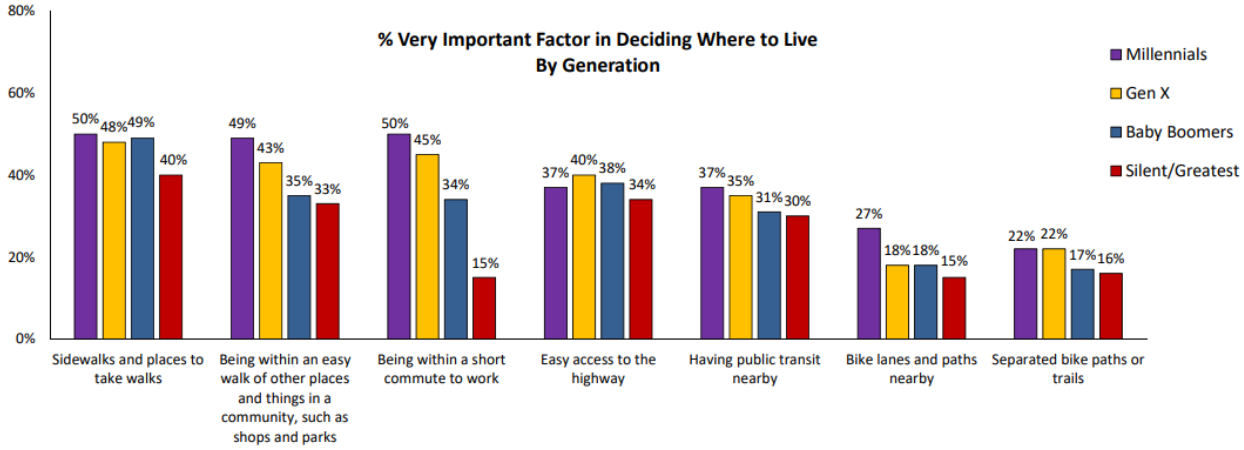
Note: Multifamily includes attached single-family
Source: Data compiled by Oregon Office of Economic Analysis from IPUMS-USA

Figure 10. New households by tenure, change since 2000, Portland MSA



Source: Data compiled by Oregon Office of Economic Analysis from US Census and Portland State PRC

Figure 11. Neighborhood preferences by generation, 2017



In addition to these trends in demographics and household preferences, ADUs and Missing Middle housing types can help to meet the needs of households with moderate and low incomes, who are likely to continue to face limited affordable housing options. As identified by the Metro Equitable Housing Initiative, tailored strategies are needed to meet the needs of these households:

- **Middle-income households (80-120% of MFI).** Missing Middle housing and ADUs can serve households at this income level because these smaller-format housing types are more likely to be affordable when newly built than larger, detached homes.
- **Low-income households (0-80% MFI)**: The private market can provide very little new housing to serve households at this income level. Low-income households are more likely to live in older housing stock that has "filtered down" to become more affordable. However, new development of Missing Middle housing and ADUs can serve this group by increasing the overall supply of housing and facilitating the filtering process, whereby older units are more likely to open up and these households will face less competition from higher income households for these units. Additionally, public subsidies targeted to Missing Middle

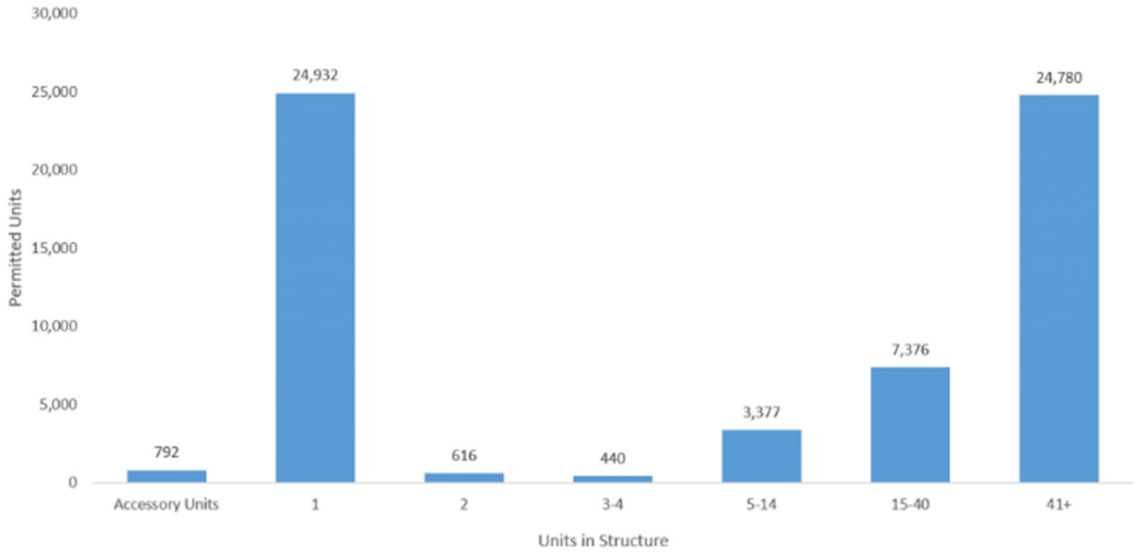
housing or ADUs in order to create regulated affordable housing could serve these households by creating affordable rental or homeownership opportunities.

Supply: Development Trends

Missing Middle housing types

The market has begun to respond to the demand for Missing Middle housing and ADUs in the region, yet these types of housing still make up a small share of both new permits and total housing stock. As illustrated in Figure 12. Residential Construction Mix, Multnomah, Washington, and Clackamas County, the great majority of new residential permits in Multnomah, Washington, and Clackamas County between 2010 and 2018 was either for single-family homes or multifamily buildings with 15 or more units. However, Missing Middle housing types[5] and ADUs accounted for approximately 8% of all new permitted units in this timeframe, indicating that these housing types are meeting the needs of a segment of the housing market.

Figure 12. Residential Construction Mix, Multnomah, Washington, and Clackamas County, 2010-2018



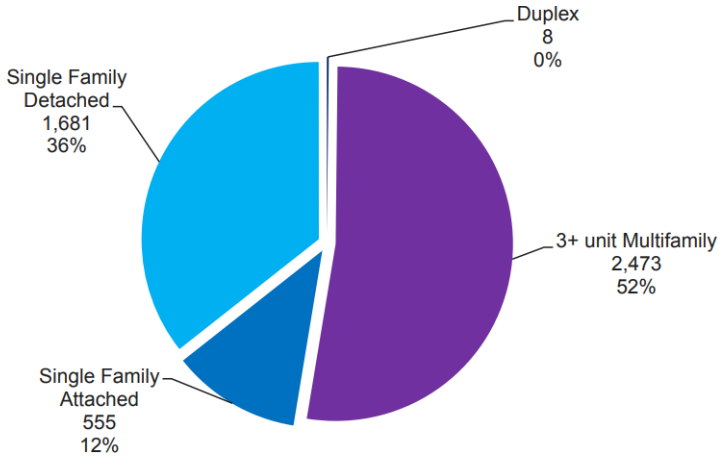
Source: Data from Construction Monitor, compiled by Institute of Portland Metropolitan Studies

Data for the City of Beaverton specifically indicate that Missing Middle housing types accounted for at least 12% of the new housing construction between 2012 and 2016, nearly all in the form of townhomes (Figure 13). Very few duplexes were permitted in that timeframe (8 total). A large share of the total units permitted in that time frame were in multifamily developments; however, the number of units in multifamily buildings that could be considered Missing Middle types is not available because the data groups all buildings with more than three units into one category. From 2000-2016, the number of townhome developments has gradually increased, while the number of

[5] This study limited Missing Middle housing types to structures with 2-14 units to align with the categories available from the data source, Construction Monitor. However, the definition of Missing Middle housing types may not be limited to 14 units.

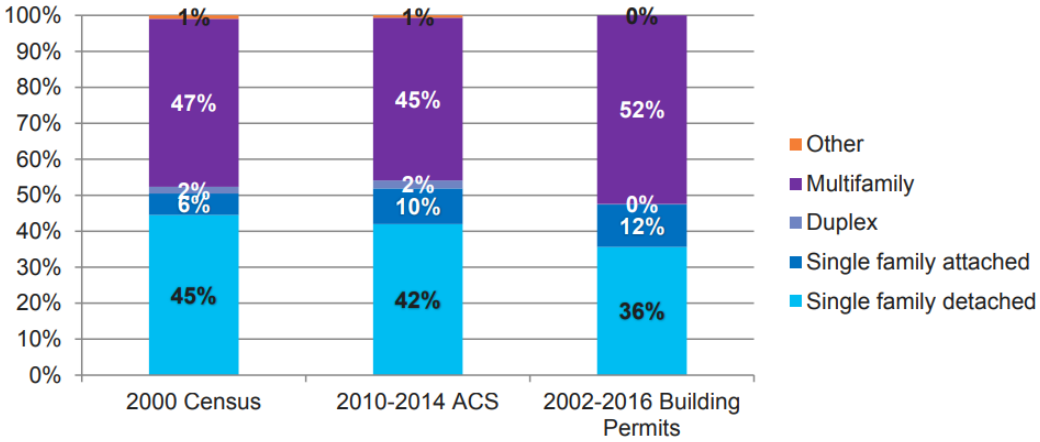
duplex developments is relatively stable as a very small part of overall housing development (Figure 14).

Figure 13. Residential Construction Mix, City of Beaverton, 2012-2016



Source: City of Beaverton Comprehensive Plan Update, Land Use Element Background Report

Figure 14. Trends in Residential Construction Mix, City of Beaverton, 2000-2016



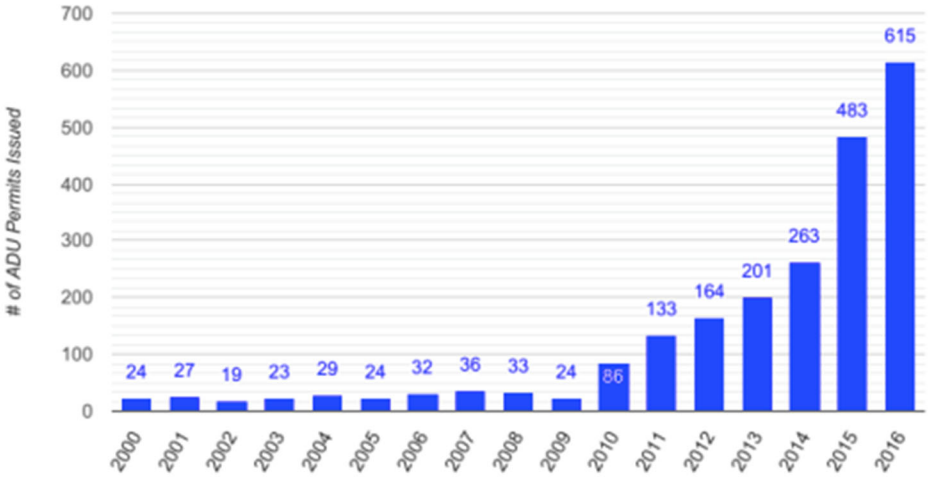
Source: City of Beaverton Comprehensive Plan Update, Land Use Element Background Report

Accessory Dwelling Units

Development of ADUs has increased substantially in the last several years in the City of Portland, and to a lesser degree in other cities in the region. From 2000 to 2009, the City of Portland issued between 19 and 36 permits for ADUs annually. In 2010, that number began to climb rapidly, rising to over 600 ADU permits issued in 2016 (Figure 15). By comparison, the suburbs of the west metro area have seen far fewer ADUs developed (Figure 16). The City of Beaverton reports 19 total land use applications for ADUs between 2000-2018, although only 14 were permitted and constructed, the third highest among cities in the metro region, excluding Portland.

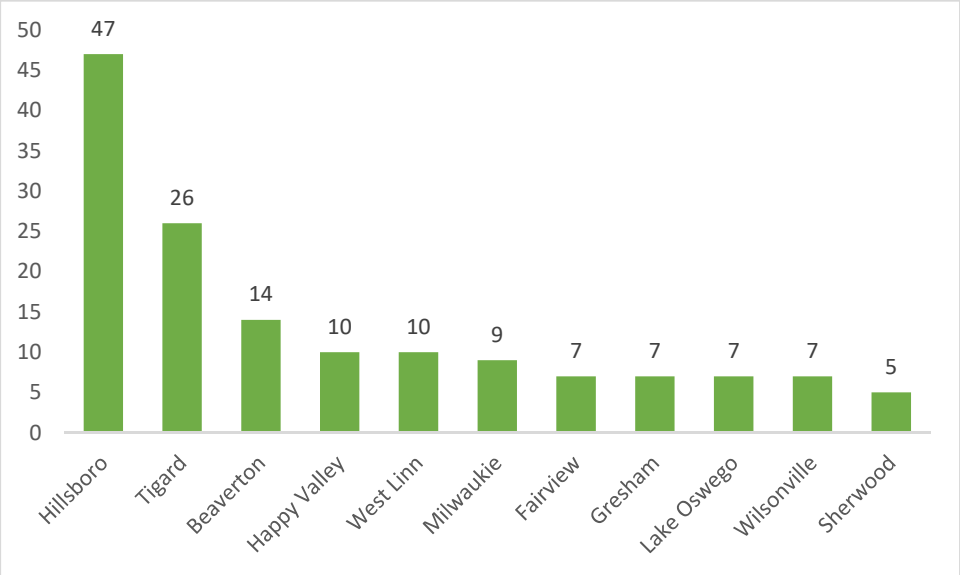
Several trends may be influencing the growth of ADUs in Portland, including a strong rental market, rising costs of for-sale homes, and the proliferation of online short-term rental platforms, such as AirBnB. However, Portland has supported ADU development by removing regulatory barriers, the most important of which may be exempting these units from System Development Charges.

Figure 15. Number of ADU Permits, City of Portland, 2000-2016



Source: AccessoryDwellings.org

Figure 16. Number of Total Permitted ADUs, Selected Jurisdictions, Portland MSA



Source: Metro Build Small Coalition, ADU Code Audit Report, September 2018

3. EXAMPLE DEVELOPMENTS

The following section of the memo provides summary information on 11 developments that are examples of Missing Middle housing types and ADUs. The example developments include:

- Project 1: Corner Duplex (Portland, OR)
- Project 2: Corner Duplex (Salem, OR)
- Project 3: Fourplex Condo (Portland, OR)
- Project 4: Ella Sea Townhomes (Forest Grove, OR)
- Project 5: Mason Street Townhomes (Portland, OR)
- Project 6: Sheridan Senior Estates (Mt. Angel, OR)
- Project 7: Danielson Grove (Kirkland, WA)
- Project 8: Attached ADU (Eugene, OR)
- Project 9: Detached ADU (Portland, OR)

These example developments and associated case study information were reviewed to identify key issues and opportunities for future development, identified in the following section.

Project 1: Corner Duplex (Portland)

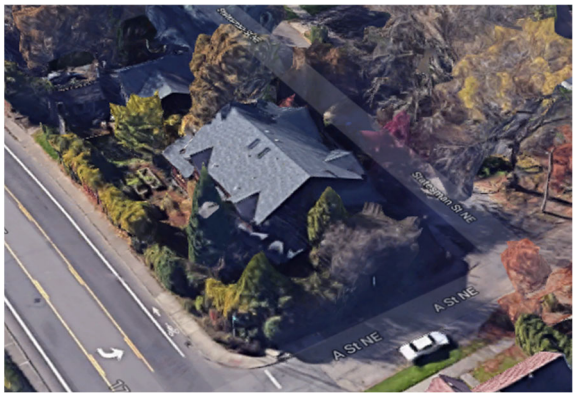
Developer:	Portland Community Reinvestment Initiative (PCRI)					**Housing Type(s):**	Duplex
Address:	5105 N Fessenden St, Portland, OR, 97203					**Year Built:**	2010
# of Units:	2	**Lot Size:**	5,000 sf	**Density:**	17.4 units/ac	**Off-Street Parking:**	None

Key Issues and Lessons Learned (if known):	• Ability to share land costs across two units enabled more affordable sale prices than if one unit was built one same lot • 3-bedroom, ~1,500 sf homes were attractive to first-time homebuyers • Allowance for density bonus for corner duplexes (double the standard maximum density for single-family development) was essential to project feasibility. • Specific design standards applied, such as location of main entrance and relative height of each dwelling, but none were overly difficult to meet.

Source: Courtesy of Portland Community Reinvestment Initiative, Images from Google, Eli Spevak and Madeline Kovacs, "Character-Compatible, Space-Efficient Housing Options for Single-Dwelling Neighborhoods", Oregon Transportation Growth Management Program/Department of Environmental Quality. Available at https://www.oregon.gov/lcd/UP/Documents/space-efficient-housing-full-report.pdf

Project 2: Corner Duplex (Salem)

Developer:	Mitch Bell (owner-occupant/developer)					**Housing Type(s):**	Duplex
Address:	--					**Year Built:**	2002
# of Units:	2	**Lot Size:**	8,700 sf	**Density:**	10 units/ac	**Off-Street Parking:**	2

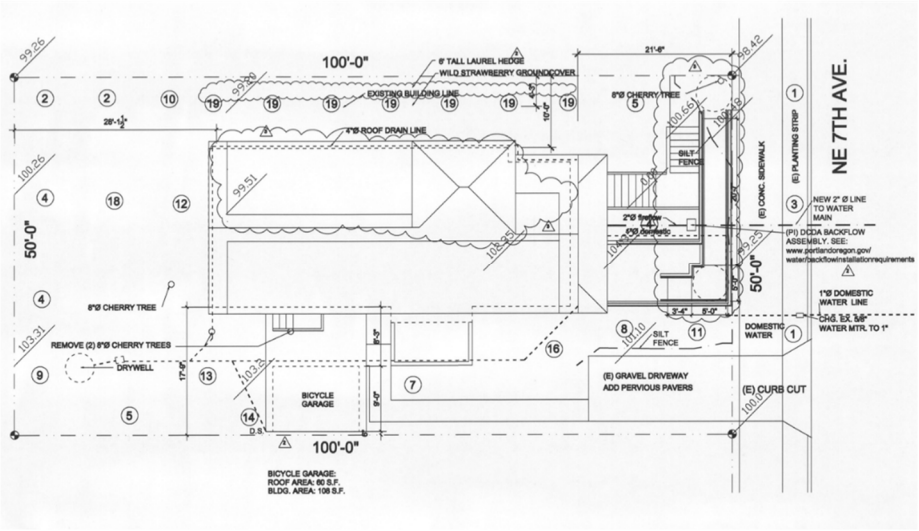


Key Issues and Lessons Learned (if known):	• Code requires duplex to be on a single lot (vs. attached townhomes), limiting the resale options for the owner • Requirement for two off-street parking spaces was difficult to accommodate on this size of lot, limited options for site plan. • Salem offers small density bonus for a duplex in this zone: 3,500 sf per unit vs. 4,000 sf per unit for single-family.

Source: Images from Google, information from Eli Spevak and Madeline Kovacs, "Character-Compatible, Space-Efficient Housing Options for Single-Dwelling Neighborhoods", Oregon Transportation Growth Management Program/Department of Environmental Quality. Available at https://www.oregon.gov/lcd/UP/Documents/space-efficient-housing-full-report.pdf

Project 3: Fourplex Condo (Portland)

Developer:	Woodsong Partners					**Housing Type(s):**	Fourplex
Address:	6817 NE 7th Ave, Portland, OR 97211					**Year Built:**	2018
# of Units:	4	**Lot Size:**	5,000 sf	**Density:**	34 units/ac	**Off-Street Parking:**	1 space

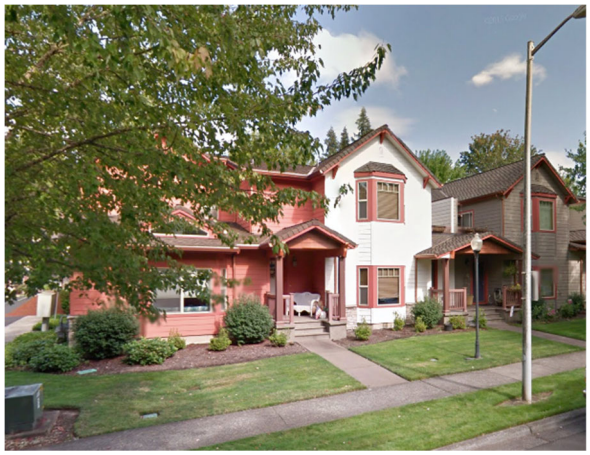


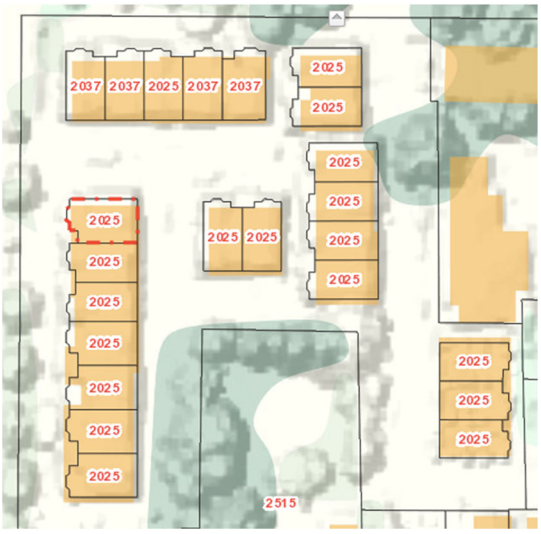
Key Issues and Lessons Learned (if known):	• Historic home was lifted, renovated, and divided into four condo units • Being able to divide total costs, including site acquisition, by four is key to being able to bring down the cost per unit to within a range that is acceptable to buyers who are in the market for a smaller unit. Being able to divide by only two or three results in a price that is too high for median-income households. • Location in a walkable, bikeable, transit-rich neighborhood was key selling point and allowed for outdoor areas to be used for green space rather than parking • SDCs were a significant cost and affected the overall quality of materials that could be used in the renovation budget.

Source: Woodsong Partners, Available at https://woodsongpartners.com/home/citizen-flats-condominium-fourplex-project/

Project 4: Ella Sea Townhomes (Forest Grove)

Developer:	Unknown					**Housing Type(s):**	Townhomes
Address:	2025 Elm Street Forest Grove, OR					**Year Built:**	2007
# of Units:	1/lot	**Lot Size:**	1,500 sf	**Density:**	29 units/ac	**Off-Street Parking:**	1/unit





Key Issues and Lessons Learned (if known):	• Alley-loaded parking allows for more appealing facades along street frontage • Generous front setback contributes to residential, lower density character • Articulation, detailing, and paint helps to break up the long elevations along rows of attached units • Some side elevations lack windows or articulation • Adjacent development is largely multifamily, some single-family across the street and in wider neighborhood

Source: Images from Google and Washington County Tax Assessor, information from UrbsWorks and Oregon Transportation Growth Management, "Housing Choices Guidebook". Available at https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf

Project 5: Mason Street Townhomes (Portland)

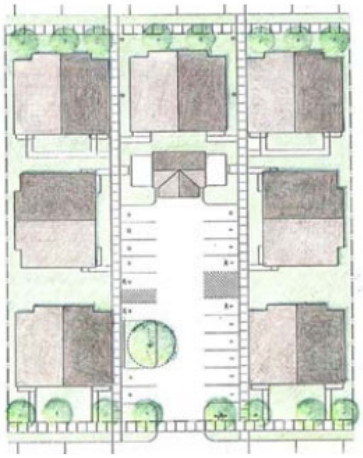
Developer:	Orange Splot LLC					**Housing Type(s):**	Townhomes
Address:	5900 NE Mason St. Portland, OR					**Year Built:**	2018
# of Units:	13	**Lot Size:**	24,400 sf	**Density:**	20 units/ac	**Off-Street Parking:**	5 spaces

Key Issues and Lessons Learned (if known):	• Units range from 1,000-1,600 sf, 2-4 bedrooms. Two units will be permanently affordable through a homeownership program with Proud Ground, a community land trust. • Emphasis on common amenities, includes both yard areas and a common house for events or guest suite. • Only 5 off-street parking spaces; focus was on common outdoor areas. On-street parking was available along the street frontage. • Good articulation and detailing, bold paint colors may not fit every neighborhood • Elevated entries to units create a transition from public to private in lieu of a wider front setback. Rear entries designed as zero-step entries to support accessibility.

Source: OrangeSplot, LLC and UrbsWorks and Oregon Transportation Growth Management, "Housing Choices Guidebook". Available at https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf

Project 6: Sheridan Senior Estates (Mt. Angel, OR)

Developer:	Marion County Housing Authority					**Housing Type(s):**	Multiplex
Address:	185 S. Sheridan St., Mount Angel, OR					**Year Built:**	Unknown
# of Units:	14	**Lot Size:**	35,000 sf	**Density:**	17 units/ac	**Off-Street Parking:**	20 spaces

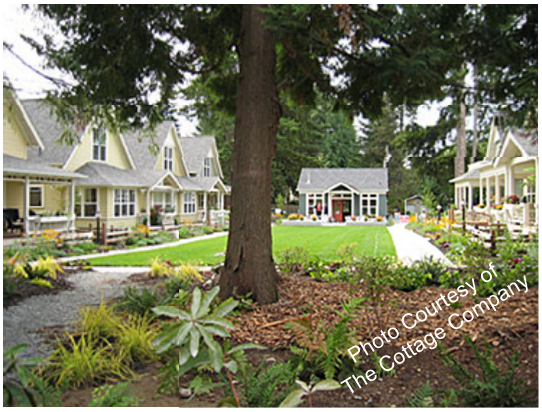


Key Issues and Lessons Learned (if known):	• Fourteen single-level two-bedroom units for seniors are arranged in a cluster of seven duplexes around a shared surface parking area. • Covered entries for each unit are on opposite corners, maximizing privacy for residents. • Surface parking area is partially screened by trees, yet still highly visible

Source: UrbsWorks and Oregon Transportation Growth Management, "Housing Choices Guidebook". Available at https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf

Project 7: Danielson Grove (Kirkland, WA)

Developer:	The Cottage Company					**Housing Type(s):**	Cottage Cluster
Address:	Not available					**Year Built:**	2005
# of Units:	16	**Lot Size:**	Approx. 1.4 acres	**Density:**	Approx. 12 units/ac	**Parking:**	20 spaces



Key Issues and Lessons Learned (if known):	• Unit sizes range from 651 to 1,500 square feet. • City of Kirkland adopted a pilot/demonstration code to allow for this housing type and has since adopted it as permanent regulations. The code regulates building size using a Floor Area Ratio standard and has no minimum lot size requirement. • Tree preservation requirements had a significant impact on the site plan. Compliance with the requirements added substantial costs in grading and soil removal in order to meet grades around existing trees.

Source: The Cottage Company. Available at http://www.cottagecompany.com.

Project 8: Attached ADU (Eugene)

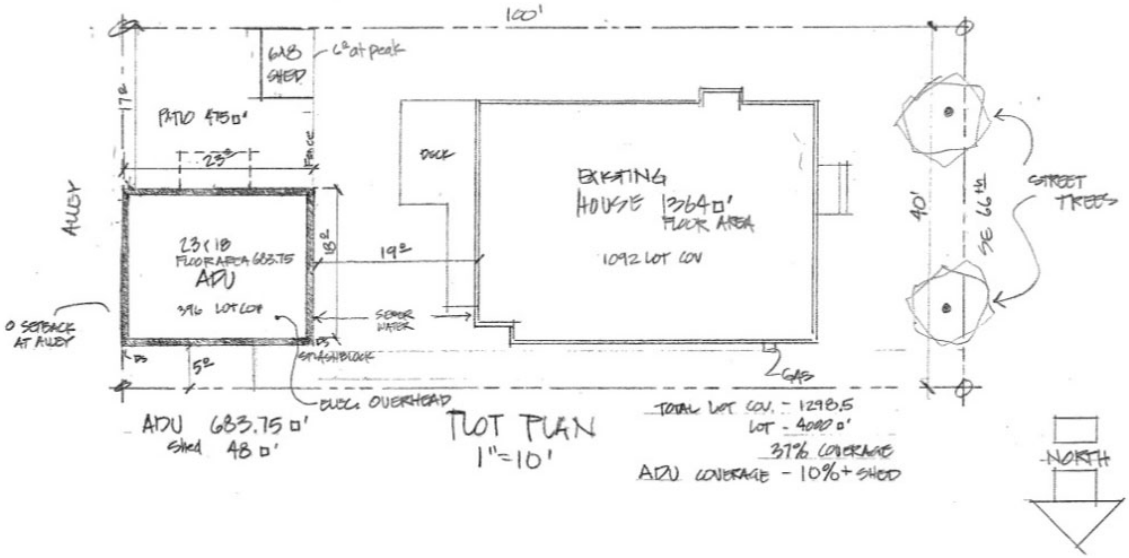
Developer:	Rainbow Valley Design and Construction					**Housing Type(s):**	ADU
Address:	Hawkins View, Eugene, OR					**Year Built:**	2007
# of Units:	1	**Lot Size:**	Unknown	**Density:**	N/A	**Off-Street Parking:**	1 (garage)

Key Issues and Lessons Learned (if known):	• 785 square foot attached ADU designed to match existing primary house • Access is in the rear, so ADU does not look like separate unit from the street • Designed to be accessible for occupant, an elderly relative, by ensuring ease of mobility in the floor plan, bedroom, and bathroom. • Code required one off-street parking space, could be accommodated in existing two-car garage

Source: Rainbow Valley Construction and Eli Spevak and Madeline Kovacs, "Character-Compatible, Space-Efficient Housing Options for Single-Dwelling Neighborhoods", Oregon Transportation Growth Management Program/Department of Environmental Quality. Available at https://www.oregon.gov/lcd/UP/Documents/space-efficient-housing-full-report.pdf

Project 9: Detached ADU (Portland)

Developer:	Rainbow Valley Design and Construction					**Housing Type(s):**	ADU
Address:	Foster-Powell, Portland, OR					**Year Built:**	2012
# of Units:	1	**Lot Size:**	Unknown	**Density:**	N/A	**Off-Street Parking:**	1 (alley access)



Key Issues and Lessons Learned (if known):	• 673 sf 2-story detached ADU along an alley. • Required a matching roof pitch and finish materials. Existing building materials were not preferred, so homeowner updated both existing home and ADU. • Dropping the dormer allowed the height of the building to be measured from the midpoint of the main roof pitch, allowing the building to be taller overall. • Services for the ADU were a major challenge, required a shared electric meter and the homeowner to manually check to decide tenant's share of electric bill.

Source: AccessoryDwellings.org, Rainbow Valley Construction