
House Bill 2001 Implementation Economic Analysis and Market Research Background, Initial Findings, and Potential Strategies

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Prepared for: Washington County

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Table of Contents

EXECUTIVE SUMMARY	I
BACKGROUND.....	I
ABOUT THE ANALYSIS.....	I
KEY FINDINGS	II
STRATEGIES FOR CONSIDERATION	VI
NEXT STEPS.....	VII
INTRODUCTION	1
BACKGROUND ON HB 2001	1
PROCESS	1
REQUIREMENTS.....	2
APPROACH TO ANALYSIS	2
WHAT THE ANALYSIS DOES (AND DOES NOT) TELL US	2
WHICH AREAS ARE INCLUDED?	3
WHAT TYPES OF HOUSING ARE INCLUDED?	9
WHAT IS THE BASIS FOR THE FINANCIAL ASSUMPTIONS?	9
WHAT DO WE MEAN BY FINANCIALLY FEASIBLE?	9
FINDINGS	11
OVERALL OBSERVATIONS	11
AREA-SPECIFIC OBSERVATIONS	14
FEASIBILITY RESULTS: CHARTS AND MAPS	18
OTHER FACTORS THAT IMPACT MIDDLE HOUSING DEVELOPMENT	27
PROPERTY OWNER INTEREST	27
DEVELOPER EXPERIENCE	27
TENURE	28
HOUSING TYPE PREFERENCES	29
PHYSICAL CONSTRAINTS.....	30
SITE-SPECIFIC REGULATORY CONSTRAINTS	31
SITE-SPECIFIC AMENITIES AND UNDESIRABLE LOCATIONS.....	31
EQUITY AND INFRASTRUCTURE CONSIDERATIONS	32
EQUITY CONSIDERATIONS.....	32
INFRASTRUCTURE CONSIDERATIONS	39
STRATEGIES	39
REGULATORY OPTIONS	39
FINANCIAL INCENTIVES	42
NEXT STEPS	43
APPENDIX A: DOCUMENTATION OF ASSUMPTIONS	45
APPENDIX B: PROTOTYPE ASSUMPTIONS	47
APPENDIX C: RESULTS DETAILS	51

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Executive Summary

Background

Oregon House Bill 2001 (HB 2001, passed in 2019) requires Washington County and other jurisdictions to allow middle housing – duplexes, triplexes, fourplexes, cottage clusters, and townhomes – in all residential districts that allow single-family detached housing, without restrictions that would create “unreasonable” cost or delay for middle housing development. Washington County intends to develop plan/policy and development code revisions that implement HB 2001 and offer equitable opportunities for middle housing while ensuring that planning for related infrastructure keeps pace. The County contracted with ECONorthwest to inform implementation of HB 2001, including:

- Identifying factors that affect the likelihood that middle housing development may develop (in particular, whether it is financially feasible to develop).
- Evaluating where in unincorporated Washington County middle housing may be more and less economically feasible to develop, to inform subsequent planning.
- Assessing likely impacts of potential County actions on middle housing feasibility, to inform policy decisions.

About the Analysis

ECONorthwest’s analysis tests whether, where, and to what extent middle housing development might be financially feasible if the County implements regulations consistent with “minimum compliance” with HB 2001.

- **The analysis focuses on parts of the urban unincorporated area (UUA) designated for primarily single-family detached dwellings**, as this is where HB 2001 will result in the biggest changes to regulations. It is intended to identify where regulatory changes are most likely to result in new middle housing development that could not have otherwise occurred; it does not provide a comprehensive assessment of all places where middle housing is potentially viable.
- **The analysis does not predict whether or when individual properties will be developed with middle housing.** It estimates how many of the properties within the UUA may be feasible for middle housing development based on site size, current market conditions in that area, and the anticipated costs of middle housing development. Only a small share of properties where development is financially feasible may be available for development in a given year.
- **The analysis uses typical current costs and rents/sales prices for a given area.** It does not capture all potential circumstances, such as above-average costs for challenging slope or soil conditions, below-average costs due to financial or labor contributions from friends/family, or above-average sales prices due to views. It also does not project how

market conditions, development costs, and financing conditions may change over time, and how that would affect the results.

- The analysis is focused on potential development on vacant land and redevelopment on developed properties (replacement of an existing structure with middle housing). **It does not evaluate the potential to convert existing homes to middle housing or to build on undeveloped portions of a lot while retaining the existing home**, as these require much more site-specific assessments. As a result, it may underestimate development potential in some cases.
- The analysis accounts for differences between land use designations and for stream corridor protections, but it does not address every site-specific physical and regulatory constraint and may overestimate development potential in some cases.

Key Findings

Overall Financial Feasibility Results

Redevelopment potential is mostly limited to larger lots.

- Redevelopment is likely not financially feasible on the vast majority of developed lots—especially those under 7,000 square feet—even if middle housing is technically allowed. The average home in a developed subdivision is very unlikely to redevelop with middle housing or new single-family detached housing anywhere in the UUA.
- Vacant lots and large lots with lower-value homes, manufactured homes, or accessory structures are more likely to be financially feasible for middle housing development. For many of these properties, single-family infill development is already financially feasible. While middle housing development may offer greater financial returns in some cases, other factors will continue to favor single-family detached development.

Middle housing is feasible throughout the UUA, but on a small fraction of parcels.

- Overall, less than 3 percent of the parcels included in this analysis are likely to be financially feasible for middle housing (re)development under current financial conditions (roughly 1,500 total parcels). However, if all these parcels were to develop fully with middle housing, they could add capacity for over 20,000 new housing units. This is highly unlikely, but it illustrates that there is substantial development potential for middle housing even on a small share of properties.

New middle housing is more likely to be developed as ownership housing (especially townhomes and condominium units that look like townhomes) than rental housing.

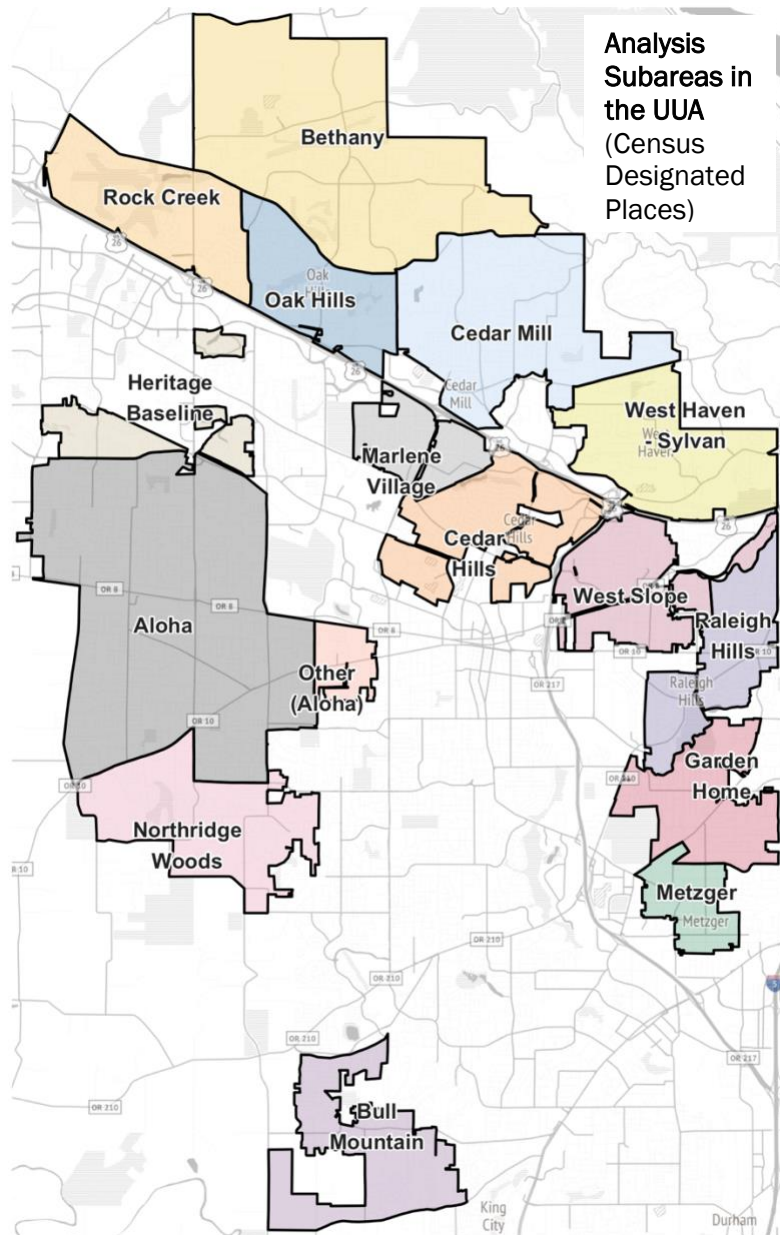
- While rental housing development is financially feasible in some instances, for-sale housing generates greater financial returns in most cases. A shortage of local investors interested in buying new small-scale rental properties may also be a limiting factor. The most financially feasible form of duplexes, triplexes, and fourplexes is generally side-by-

side units that look similar to townhomes but are not on their own lots (sold as condominiums).

- Townhomes tend to be most financially feasible among the middle housing types. They can be sold “fee simple,” which typically allows for somewhat higher sales prices than condominium units and offers less legal risk for builders. In addition, on larger sites, it is often easier to build more townhouse units than to develop multiple plexes.

Area-Specific Feasibility Observations

- The subareas on the northern edge of the UUA (**Bethany, Cedar Mill, and West Haven-Sylvan**) have strong potential for both new townhomes and new single-family homes, with many vacant and very large lots and demand for ownership housing. While the market for single-family homes is very strong in these areas, townhomes at lower sales prices (under \$400,000) are roughly equally feasible as high-end single-family housing (estimated to sell for close to \$700,000) due to higher density.
- In the north central part of the UUA (**Rock Creek, Oak Hills, Cedar Hills, and Marlene Village** subareas), there is very limited development potential (less than 1 percent of lots in most of these subareas) because the areas are almost entirely developed with single-family subdivisions with lots under 10,000 square feet and the price of new middle housing is not high enough to make redevelopment financially feasible in most situations.



- The central subareas (**Aloha, Other/Aloha, and Heritage Baseline** subareas) contain many parcels with potential for middle housing development, but they represent only 1 to 3 percent of the parcels in these areas that were included in the analysis. Heritage Baseline includes a relatively large number of manufactured homes (some on individual lots and others in manufactured home parks) that could be financially feasible for redevelopment. Washington County’s Office of Community Development and Department of Land Use and Transportation are collaborating on an inventory and analysis of existing manufactured housing parks. The second stage of their work will identify strategies for preservation because manufactured housing parks provide a unique unsubsidized affordable housing option that is hard to replace.
- On the eastern side of the county (**Raleigh Hills and West Slope** subareas), there are some larger lots, but just 2 to 3 percent of the lots in the analysis were identified as economically feasible for middle housing development. The mix of feasible middle housing types is similar to the county overall.
- In the southeast (**Garden Home and Metzger** subareas), 3 to 4 percent of lots included in the analysis were identified as having potential for middle housing development, and a range of middle housing types are feasible (though townhomes are still most feasible most of the time). These areas have strong demand for moderately priced for-sale homes and a relatively strong rental market, with many lots between 15,000 square feet and an acre, some of which could be feasible for redevelopment.
- In the southwest (**Northridge Woods and Bull Mountain** subareas), 3 to 4 percent of lots included in the analysis were identified as having potential for middle housing development, with potential for townhomes on a number of the very large lots that remain in portions of these areas (though there are many reasons why such development may not occur despite being identified as financially feasible).

Other Considerations

Financial feasibility is an important factor in estimating the potential for middle housing development. However, there are also a range of other factors that affect how much and what types of middle housing are likely to be built. These include:

- **Property owner preference:** Redevelopment of developed properties typically happens when a property is sold to a new owner. Even for infill (without demolition of the existing home) or conversion of homes to middle housing, which are outside the scope of this analysis, major changes are more likely upon sale of the property to a new owner who may buy it with the new development potential in mind. As a result, the pace of middle housing development within existing neighborhoods will be gradual, even where financial feasibility is strong.
- **Developer experience:** Developers, investors, homebuilders, lenders, and others involved in the development process will need to gain comfort with housing types that have seen little recent development in Washington County (triplexes, fourplexes, and

cottage clusters in particular). This will likely slow production of these housing types in the near term.

- **Housing type preferences:** Roughly 80 percent of Metro-area residents prefer single-family detached housing.¹ To the extent that people have other alternatives within their desired price range (e.g., older or smaller detached homes, detached homes in lower-cost areas, etc.), this could reduce demand for middle housing. However, some people choose attached homes because they are more affordable, and some prefer new homes over older ones or are looking for certain home sizes or features that are not common in older homes. Housing preferences can also shift over time, which could expand demand for middle housing over the longer term.

Equity Considerations

Overall, implementing HB 2001 supports equity by **making existing neighborhoods less exclusionary** and restrictive of smaller and attached housing types that tend to be lower cost—one of the key issues that HB 2001 was intended to address. In addition, allowing more housing to be built in desirable locations **helps keep existing housing more affordable over time**, rather than allowing supply shortages to drive up prices. In addition, **middle housing tends to be less expensive than larger detached homes**: the estimated price range for new middle housing in Washington County is between \$220,000 and \$460,000, depending on housing type, unit size, and location, while new single-family detached homes are likely to sell for between \$390,000 and \$700,000 (or more).

Another important equity consideration is displacement risk, primarily for renters in existing single-family homes that could be redeveloped. Displacement risk evaluation centers around renter households because—even after recent changes to state law providing greater protection for renters—renters are still much more vulnerable to changing market conditions and are subject to the decisions of the property owner about redevelopment, remodels, rent increases, etc. An analysis of assessor’s data for properties that are feasible for redevelopment with middle housing (excluding those that would be feasible to redevelop with additional single-family homes today) found **less than 100 properties in the UUA where renters might be at risk of displacement due to redevelopment that would be newly financially feasible with implementation of HB 2001**. Nearly a third of these are located in the Heritage Baseline subarea discussed above, which has many manufactured homes; the next largest concentration is in Aloha, though only a fraction of a percent of the parcels there are rental homes that are potentially newly at risk. In both areas, existing demographics suggest residents are already vulnerable to housing market changes.

Infrastructure Considerations

County staff sought input from Clean Water Services (CWS) and Tualatin Valley Water District (TVWD) regarding infrastructure considerations associated with the development potential

¹ Oregon Metro, Residential Preference Study 2014.

<https://www.oregonmetro.gov/sites/default/files/2014/09/02/ResidentialPreferenceStudy-FullReport.pdf>

identified in this analysis. TVWD did not express any concerns. CWS indicated interest in exploring potential stormwater and sanitary sewer infrastructure needs in North Bethany depending on the extent of middle housing that might occur on areas that have not yet developed and possible stormwater infrastructure issues in Aloha due to existing challenges with topography and soils. County staff is continuing to coordinate with staff from CWS regarding these concerns.

Strategies for Consideration

Existing policies limit middle housing potential, and many need to change. The County is required to update regulations to allow middle housing types in districts that allow single-family detached housing and to update density, lot size, and other standards to comply with HB 2001. Other policies may need to change as well:

- **Existing restrictions on land division in the R-5 land use district preclude townhomes on lots under 14,000 square feet.** Retaining these regulations may be difficult to justify under state regulations; however, the overwhelming majority of these lots would not be financially feasible to redevelop with townhomes in any case.
- **The County must treat single-family detached homes and duplexes equally with regard to requiring frontage improvements** for compliance with HB 2001, but it could choose to add this requirement for single-family detached housing or to waive it for duplexes. The County can require other middle housing types to demonstrate that there is sufficient infrastructure (water, sewer, stormwater, and emergency access), and it can require reasonable and proportionate mitigation of localized infrastructure constraints. However, it is not clear whether frontage improvement requirements can be applied to middle housing types other than duplexes if those requirements do not apply to single-family detached housing. The cost of frontage improvements particularly impacts development on corner lots, where there is more frontage to improve, and impacts duplexes more than other middle housing types because the costs are borne by just two units.

There are several additional ways the County can use regulations as policy levers to influence outcomes within the context of HB 2001 implementation, depending on the intended policy direction or outcomes. The list below provides a starting point for discussion. The County may choose to consider additional regulatory options as part of the code writing process, depending on policy goals, provided that the regulations do not create unreasonable cost or delay.

- **Add basic design requirements to address common design concerns.** Adopting a few clear and objective standards that align with the state's Model Code for middle housing can prevent design issues that could generate opposition to middle housing without imposing unreasonable costs on development.
- **Refine existing parking reductions to encourage affordable and transit-supportive middle housing development.** Small adjustments to existing parking reductions for regulated affordable housing and areas with high-quality transit service (rules related to

rounding, which matter more for just a few units) would allow middle housing to benefit from the reductions.

- **Allow a density bonus in certain districts to make rental housing and affordable middle housing more financially feasible.** Allowing regulated affordable housing and/or developments where all units are under a certain size to build triplexes and fourplexes on smaller lots and/or up to a sixplex on lots that would otherwise allow a fourplex could help these potentially less-costly types of development compete with larger, higher-cost ownership housing.
- If the County advances **strategies to protect residents of manufactured housing parks** (through a separate process, as noted above), that will address much of the displacement risk that could be associated with implementing HB 2001.

The County is also required to consider some financial strategies to increase affordability of middle housing as part of compliance with HB 2001. We recommend the County consider the following options in greater detail as part of a broader evaluation of measures to support housing affordability generally.

- Offer additional **property tax exemptions**² for affordable and/or rental middle housing development.
- Offer **TDT waivers or reductions** for regulated affordable middle housing development, and/or change TDT rate structures to incentivize smaller middle housing units (e.g., by scaling fees based on unit size relative to a typical single-family detached home).
- Implement a **construction excise tax (CET)** to generate funding for affordable housing, including affordable middle housing. A CET is a tax imposed on new development and expansions as a percentage of the permit value. It can be applied to commercial and industrial development and/or to residential development (affordable housing and certain public and institutional uses are exempt). Funds are used primarily for local housing programs.

Additional discussion of the rationale and trade-offs associated with these strategies is included on page 32 of the memorandum.

Next Steps

ECONorthwest and staff are seeking feedback on the results of this analysis and direction from the Board of County Commissioners regarding strategies that should be explored further and what additional information is needed to support broader public outreach and preliminary recommendations related to HB 2001.

² Rental property affordable to households earning 60 percent MFI and under may currently be eligible for property tax exemption through the existing program administered by the Department of Housing Services: <https://www.co.washington.or.us/Housing/HousingDevelopment/property-tax-exemption.cfm>

Introduction

Oregon House Bill 2001 (HB 2001, passed in 2019) requires Washington County and other jurisdictions to allow middle housing—duplexes, triplexes, fourplexes, cottage clusters, and townhomes—in all residential districts that allow single-family detached housing, without restrictions that would create “unreasonable” cost or delay for middle housing development. (See page 2 for details.)

Washington County intends to develop plan/policy and development code revisions that implement HB 2001 and offer equitable opportunities for middle housing while ensuring that planning for related infrastructure keeps pace. To this end, Washington County was awarded a Technical Assistance Grant³ from the Department of Land Conservation and Development (DLCDC) to support the *Washington County HB 2001 Code Assistance: Economic Analysis and Market Research* project. The purpose of the *Economic Analysis and Market Research* is to inform Washington County’s implementation of HB 2001, including:

- Identifying factors that affect the likelihood that middle housing development may develop (in particular, whether it is financially feasible to develop).
- Evaluating where in unincorporated Washington County middle housing may be more and less economically feasible to develop, to inform subsequent infrastructure planning.
- Assessing likely impacts of potential County actions on middle housing feasibility, to inform policy decisions.

This memorandum provides a synopsis of relevant background on HB 2001 and the implementing administrative rules; summarizes the analysis done to date, including the findings of that analysis; and identifies potential strategies the County could consider in implementing regulations and policy to comply with HB 2001.

Background on HB 2001

Process

The DLCDC worked with stakeholders across Oregon—including local governments, developers, and housing advocates—developing administrative rules to guide HB 2001 implementation. The County participated in the rulemaking process. Middle Housing Oregon Administrative Rules (OAR 660-046) were approved by the Land Conservation and Development Commission (LCDC) and became effective December 31, 2020⁴. These spell out specific definitions and interpretations of the requirements in the law. LCDC also adopted a model code by reference.

³ Grant No. TA-21-246 executed July 31, 2020. This project is funded by Oregon general fund dollars through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

⁴ <https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=5988>

Washington County (along with other jurisdictions in Metro) must either update its codes and regulations to comply with HB 2001 by June 30, 2022, or apply the Model Code adopted by the state directly to submitted middle housing applications unless and until the jurisdiction adopts regulations that comply with HB 2001.

Requirements

HB 2001 requires that medium and large cities (which includes nearly all jurisdictions within the Metro boundary, including the County) allow duplexes on all residential lots that allow a detached single-family dwelling and allow triplexes, quadplexes, townhomes, and cottage clusters “in residential areas” that allow detached single-family dwellings. These jurisdictions “may regulate siting and design of middle housing ... provided that the regulations do not, individually or cumulatively, discourage the development of all middle housing types permitted in the area through unreasonable cost or delay.”

The rules generally provide that middle housing be allowed at densities higher than those currently allowed for single-family detached housing, and they cannot be subject to design requirements or other regulations that are more stringent than those applied to single-family detached housing in the same district.

While jurisdictions have some options regarding siting and design standards, **the “base case” for this analysis reflects “minimum compliance” with the rules** (being only as permissive as required under the limitations on siting and design standards in OAR 660-046). A few of the most relevant requirements for “minimum compliance” are summarized below.

- Allow a duplex on any lot that allows a single-family detached house.
- If minimum lot sizes are established, allow triplexes on lots 5,000 square feet or greater, fourplexes on lots 7,000 square feet or greater, and cottage clusters on lots 7,000 square feet or greater.
- Allow townhomes at four times the density for single-family detached housing, or 25 units per acre (whichever is less).
- Require no more than one parking space per unit for all middle housing types.

Approach to Analysis

What the analysis does (and does not) tell us

The analysis does not predict whether or when individual properties will be developed with middle housing; it estimates how many of the properties within the urban unincorporated area may have potential for market-driven middle housing development under HB 2001. This determination is based on:

- 1) whether properties are large enough to meet minimum lot sizes for middle housing (based on minimum compliance), and

- 2) whether middle housing development (or redevelopment) would likely be financially feasible if the property came up for sale at its estimated market value.

It does not indicate a timeline in which those properties with middle housing development potential might be developed, as this is based on decisions by individual property owners. It also does not specifically address the potential for existing homeowners to modify their property to convert it to middle housing, as this requires a more site-specific determination.

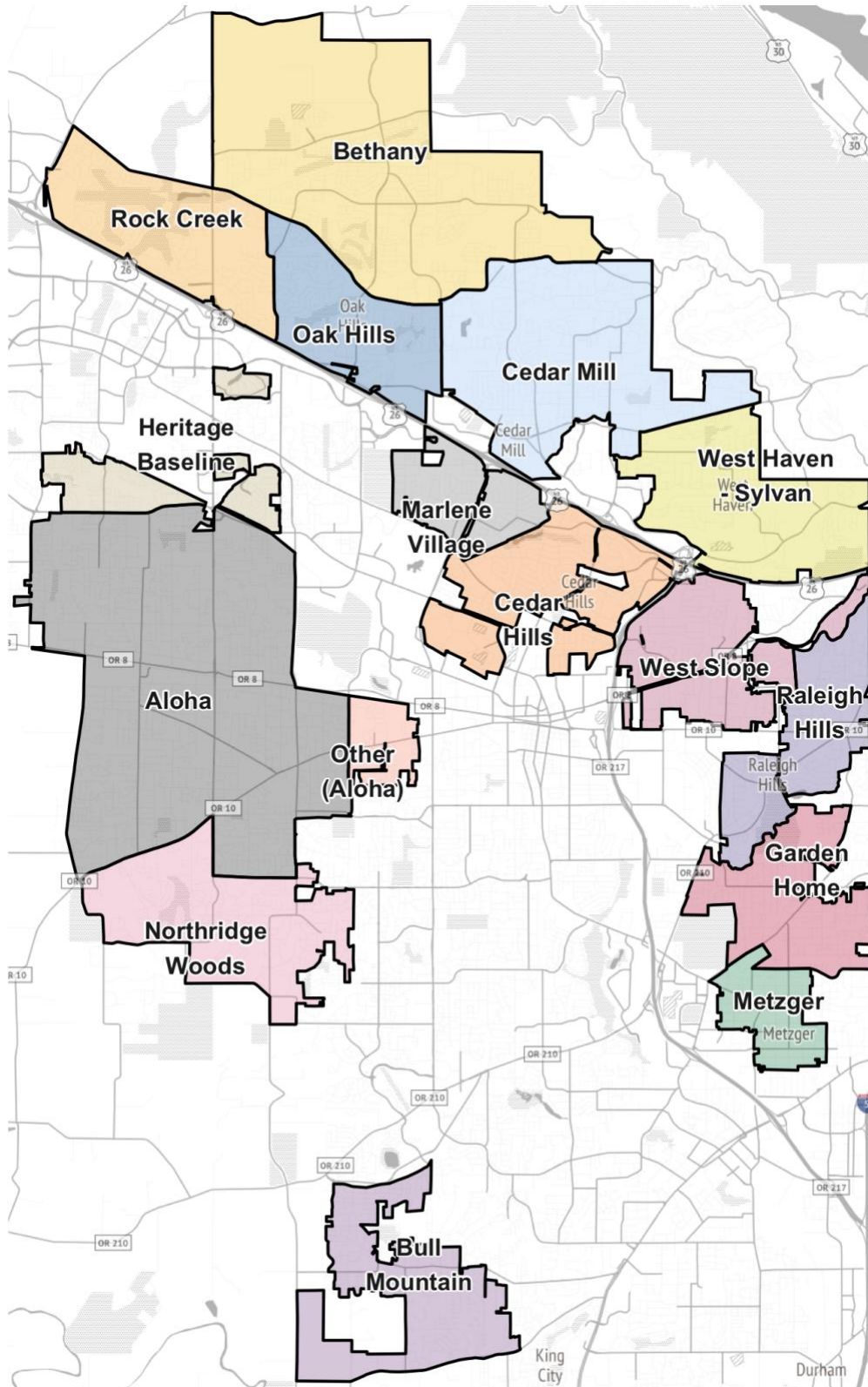
The analysis is based on current market conditions and development costs in Washington County. Over time, the relationship between costs and market prices/rents may shift, making development more or less financially feasible. This model does not attempt to evaluate the impact of future significant changes in market demand, costs of development, availability of financing, or relevant laws. Thus, the results of this analysis are most reliable in the near term.

The “base case,” as noted above, reflects aligning with the standards identified in the rules for minimum compliance and keeping other existing policies and regulations that are not clearly prohibited by OAR 660-046 in place. This provides a point of comparison to understand the likely impact of potential County strategies on the economic feasibility of middle housing development.

Which areas are included?

This analysis is limited to the County’s urban unincorporated area. For purposes of this analysis, we use census designated places (with a few adjustments to capture all relevant areas) as the geography for evaluating variations in anticipated rents and sales prices for new middle housing. Census designated places were chosen because they capture the urban unincorporated area and demographic and market data are available for these geographies. See Exhibit 1 for a map of the subareas used for this analysis. They largely align with the County’s community plan areas, as shown in Exhibit 2. These subareas are also used to summarize the results.

Exhibit 1: Census Designated Places/Subareas within the Urban Unincorporated Area



Source: ECONorthwest

Exhibit 2: Census Designated Places/Subareas for Analysis and Community Plan Geography

Census Designated Place	Community Plan area
Bethany	Bethany Community Plan
Oak Hills	Sunset West Community Plan
Rock Creek	Sunset West Community Plan
Heritage Baseline*	Sunset West Community Plan
Cedar Mill	Cedar Hills-Cedar Mill Community Plan
West Haven/Sylvan	Cedar Hills-Cedar Mill Community Plan
Cedar Hills	Cedar Hills-Cedar Mill Community Plan
Marlene Village*	Cedar Hills-Cedar Mill Community Plan**
West Slope	Cedar Hills-Cedar Mill Community Plan/Raleigh Hills-Garden Home Community Plan
Raleigh Hills	Raleigh Hills-Garden Home Community Plan
Garden Home-Whitford	Raleigh Hills-Garden Home Community Plan**
Metzger	Metzger-Progress Community Plan
Aloha	Aloha, Reedville, Cooper Mountain Community Plan**
Other (Aloha)*	Aloha, Reedville, Cooper Mountain Community Plan
Northridge Woods*	Aloha, Reedville, Cooper Mountain Community Plan
Bull Mountain	Bull Mountain Community Plan

* These are subareas of the urban unincorporated area that did not fall within a census designated place where a specific subarea was created to capture them.

** A small portion of the census designated place extends into other plan areas; the plan area listed encompasses the majority of the census designated place.

Within these areas, the following properties were included:

- **Areas designated primarily for single-family housing, where the bill will have most impact:** The analysis focused on a subset of the county’s land use districts that are subject to HB 2001, where middle housing types are either not allowed under current regulations or are allowed at a density lower than what would be allowed under the provisions of the bill.⁵ The residential districts excluded from the analysis are those that *currently allow* middle housing with density and parking standards that already meet (or nearly meet) minimum compliance standards.⁶ While minor changes may be needed in these districts to address other requirements of the bill, the impact is likely to be more subtle, and quantifying it would require a more in-depth analysis. See Exhibit 3 on page 8 for a map of the areas, districts, and parcels included.
- **Properties without known development restrictions:**
 - Both vacant and developed properties were included in the analysis. The analysis assumes demolition of any existing structures is required for development. This analysis does not address the ability to add units to the property while retaining an existing structure, as that is heavily dependent on the site-specific layout of the existing lot and structures.
 - The analysis excluded land committed to public facilities, most tax-exempt properties, and goal-protected and unbuildable lands that are in a separate tract.
 - The analysis excluded land developed as condominiums because of the difficulty of further developing or redeveloping areas owned in common by a condominium association.⁷
 - The best available data was used to exclude areas that are protected under the County’s Significant Natural Resource Area regulations.⁸ However, mapping of the resource areas is generalized and offers only an approximation of the areas that will be protected from development. In addition, there are varying levels of protection for different types of resources; those that are largely developable under County regulations were not excluded from the analysis, though in practice they will limit the development potential of affected sites to some degree.
 - Areas with steep slopes were not excluded from the analysis because development is generally not prohibited on sloped land, though it is more challenging.

⁵ The R-5, R-6, R-6 NB, R-9, R-9 NB, R-15, and R-15 NB districts were included in this analysis.

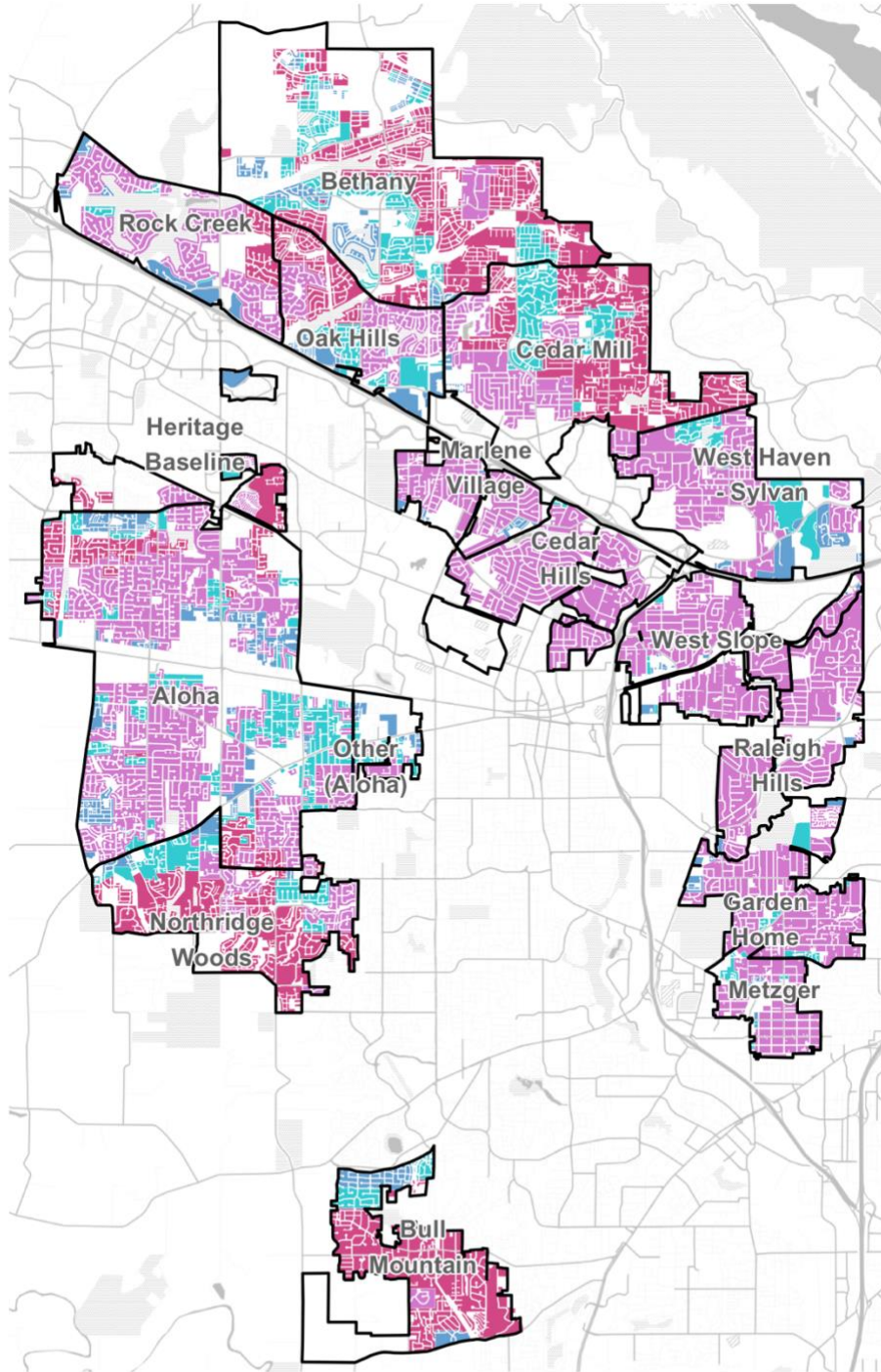
⁶ The R24, R25+, R24 NB, R25+ NB, and NMU districts were excluded from this analysis.

⁷ This generally requires a two-thirds vote by the condo owners in support of the change, but the specifics depend on the Condominium Association’s bylaws.

⁸ The analysis excludes Class I Riparian areas identified in Metro’s Title 13 inventory as well as FEMA floodways. These best approximate the areas where development is prohibited under Clean Water Services (CWS) regulations for stream corridors, and that would therefore be limited as well under the County’s natural resource regulations. However, the analysis does assume that one single-family home or duplex is possible on any lot that meets the minimum lot size, consistent with County and CWS regulations.

- Existing private contracts, covenants, and restrictions (CC&Rs) were not considered, as the County does not have documentation of where CC&Rs may restrict development of middle housing. However, in practice, many subdivisions were established with CC&Rs, and many of these restrict building anything other than a single detached home with typical accessory structures. While new CC&Rs with such restrictions are prohibited under state law, the County has no authority to overrule (or to enforce) such provisions in existing CC&Rs.
- Areas in North Bethany that are planned for future parks were excluded from the analysis. In addition, staff identified areas in North Bethany with pending subdivisions that are not yet final and a few areas where subdivisions have not yet been proposed. These areas were excluded from the analysis for a variety of reasons.
 - The County is separately considering how to regulate middle housing in undeveloped portions of North Bethany since there are provisions allowing jurisdictions to restrict middle housing on initial build-out of master planned areas if desired, though it is not yet clear if those provisions will apply to North Bethany.
 - Large areas with approved subdivisions that have not yet platted were excluded because they are unlikely to make substantial changes to incorporate middle housing at this stage; including them would likely overstate middle housing potential.
 - Areas without submitted subdivision plans were excluded from this analysis, but may be evaluated separately to provide a more nuanced understanding of what mix of housing types is likely for these areas if the County does not restrict middle housing there.

Exhibit 3: Parcels and Land Use Districts Included in Analysis



Land Use Designation

- | | |
|--|--|
|  R-5 |  R-6 & R-6 NB |
|  R-9 & R-9 NB |  R-15 & R-15 NB |

Source: ECONorthwest

What types of housing are included?

HB 2001 and the implementing rules define middle housing to include duplexes, triplexes, quadplexes, townhomes, and cottage clusters. The analysis includes all of these housing types and also includes single-family detached housing for comparison. It does not address accessory dwelling units (ADUs), as these are already permitted in the land use districts affected by HB 2001. This analysis tests several example “prototypes” for each of these housing types to understand how differences in unit size, configuration (e.g., side-by-side vs. stacked), and finish level/market segment (e.g., high-end vs. entry-level) affect financial feasibility.

The prototypes were informed by recently built housing development around Washington County (including within cities in Washington County that have allowed middle housing for some time). The density and parking assumptions align with the basic standards required for minimum compliance with HB 2001, as described on page 2, and there are variations that respond to differences in minimum lot sizes in different districts.

A list of prototypes included in the analysis and their defining characteristics is provided in Appendix B.

What is the basis for the financial assumptions?

As noted above, the analysis is based on current local market conditions and development costs; it does not project future trends in costs or rents/sales prices.

- Construction and development cost assumptions are based on input from experienced middle housing developers and the Homebuilders Association of Metro Portland (HBA). Construction costs vary with unit size and finish quality.
- The analysis accounts for all existing development fees (e.g., transportation development tax, system development charges, construction excise tax, permit fees) and other “soft costs” (e.g., design, legal, and financing costs).
- Assumes all development pays for frontage improvements on existing lots, unless there have been recent transportation improvements.⁹ More detail regarding the assumptions underlying this analysis is provided in Appendix A.
- For development on larger lots with little frontage, the model assumes that a development can create new rights-of-way as part of land division if doing so results in more units fitting on the site and accounts for the cost of the new road.

What do we mean by financially feasible?

Our analysis uses a pro forma analysis to determine residual land value (RLV) as the measure of financial feasibility. RLV is a measure of what a developer is able to pay for land, given

⁹ Currently, the County does not require frontage improvements for detached single-family dwellings that are not subject to a subdivision or partition. In order to comply with HB 2001, Washington County may need to consider changing this requirement.

expected construction, operating costs, and revenue. In other words, it is the budget that developers have remaining for land after all other development constraints have been accounted for. It can be used for both for-sale and rental housing, accounting for the different financial requirements for each. If the RLV of developing a property exceeds the existing property value, the development may be financially feasible on that property.

The analysis evaluates feasibility for each prototype individually on each lot, then consolidates results by housing type (e.g., the results for duplexes reflect the best-performing duplex prototype on a given lot) and summarizes by subarea.

In many cases, multiple types of development are both allowed and financially feasible in a given area. The analysis determines which prototype is most financially feasible relative to the others based on which has the highest RLV. In reality, the outcome is likely to be a mix of multiple viable types of development, but that mix will tend toward types that are more financially feasible, easier to finance and build (based on legal risks and availability of financing or investors), and in greater demand from renters/homebuyers.

In addition, just because development is financially feasible does not mean it will occur. A variety of conditions must be in place for financial feasibility to translate to actual development, including:

- The property owner decides to make the property available for sale and is willing to accept the currently estimated market value¹⁰ for the property.
- There is a developer with interest and ability to develop middle housing who is able to acquire the property for the estimated market value.
- The developer is operating as a for-profit business with standard financing mechanisms, financial return requirements, construction costs, and risk tolerance.¹¹
- There is sufficient demand from buyers/renters to “absorb” the housing as it is developed (this will tend to limit the amount of housing built at any given time).

Other factors that impact middle housing development potential are discussed in greater depth on page 27.

¹⁰ Market value is estimated based on the tax assessor’s database. This is an imperfect but broadly available and relatively consistently applied estimate of property value, though it is less reliable than it could be because it is not directly the basis for assessing property taxes due to constitutional limits on taxation in Oregon.

¹¹ There are also nonprofit developers and affordable housing providers interested in building middle housing, including Habitat for Humanity, Hacienda CDC, and others. These parties face different financial requirements to make development possible and generally depend on public funding to close the gap between costs and the revenue generated by renting or selling the property to the low or moderate-income households they serve. While the specifics of their developments are different, properties that are financially feasible to develop with market-rate, for-profit middle housing may also be more likely to offer potential for affordable middle housing.

Findings

This section summarizes the results of the financial feasibility analysis. The charts on pages 18 through 21 and maps on pages 22 through 26 show how middle housing financial feasibility varies across the different subareas of the UUA. Detailed data tables are provided in Appendix C.

Overall Observations

Middle housing is feasible throughout the UUA, but on a small fraction of parcels.

- Overall, less than 3 percent of the parcels included in this analysis are likely to be financially feasible for middle housing (re)development under current financial conditions. Across different subareas, the percentage of parcels estimated to have feasible middle housing development ranges from less than 1 percent to just over 7 percent. (See Exhibit 5 on page 19.)
- If all parcels identified as having feasible middle housing development were to develop to their maximum capacity, it could translate to over 20,000 new housing units. (See Exhibit 6 on page 20.) This is highly unlikely, but illustrates that there is substantial development potential for middle housing even on a small share of properties.

Redevelopment potential is mostly limited to larger lots.

- Redevelopment is not financially feasible on the vast majority of developed lots, even if middle housing is allowed. The average home in a developed subdivision is generally not financially feasible to redevelop with middle housing or new single-family detached housing.
- There are almost no developed parcels under 7,000 square feet where middle housing redevelopment is financially feasible. The exception is that some properties with manufactured homes on individual lots do appear to be financially feasible for redevelopment. (See Exhibit 7 on page 21.)
- Vacant lots and larger lots with lower-value homes or accessory structures are more likely to be financially feasible for middle housing development. Many, but not all, of these properties are also financially feasible for single-family infill development. (See Exhibit 7 on page 21.) Where both are feasible, in some cases middle housing can afford to pay more for land, but there may be other reasons why single-family detached housing would be built instead (see discussion beginning on page 27).
- In the R-5 land use district, current regulations require parcels to be at least 14,000 square feet in order to do a land division. If this restriction stays in place, parcels in R-5 below this size will have fewer options to build middle housing: Plexes and cottage clusters are the only middle housing types that would be permitted on these lots without a land division. However, the overwhelming majority of these lots do not appear to be financially feasible to redevelop with townhomes in any case. While there are a handful of lots in areas like Aloha and Metzger that would be financially feasible to

redevelop with townhomes if this restriction were removed, close to half of these are also feasible for redevelopment with other middle housing types that do not require land division. While not evaluated as part of this analysis, there may be potential for conversion of existing units or adding additional units while retaining the existing restriction on dividing lots under 14,000 square feet.

Ownership housing (especially townhomes and condominium units that look like townhomes) is more likely than rentals for new middle housing development.

- While rental housing development is financially feasible in some instances, in most cases, for-sale housing generates greater financial returns and is generally the most likely development type depending on demand and economic conditions.
 - The most financially feasible form of duplexes, triplexes, and fourplexes is generally side-by-side units that look similar to townhomes but are not on their own lots and are sold as condominiums (see additional discussion of the impact of tenure/form of ownership on page 28).
 - In higher-density districts where duplexes would be allowed on very small lots (e.g., 2,000–2,500 square feet), smaller rental units come closer to competing with larger single-family homes and townhomes, but generally they cannot afford to spend as much for land.
- Townhomes tend to be the most financially feasible among the middle housing types across most subareas in Washington County.
 - Townhome developments can often afford slightly higher site acquisition costs than plexes, even if the same number and size of units are possible, because buyers generally can (and will) pay more for a townhome than a comparable condominium unit due to the condo association fees required for a condominium (see discussion on page 28) but the development costs are similar.
 - Townhomes scale more readily to larger sites (e.g., over 15,000 square feet) because they already require land division. Building multiple fourplexes on a large site would require a land division since multiple plex buildings on a single lot would be considered multifamily development, not middle housing. Then, to sell the units individually, condominiums would need to be created.¹² The combination of land division and condominium creation adds time, cost, and complexity. For middle housing rental plexes, the additional cost and delay of land division would exacerbate financial feasibility challenges.
 - There are relatively few small vacant lots (e.g., under 10,000 square feet) where a single fourplex might be able to compete with townhomes. The smaller vacant lots that do exist are largely platted for single-family development and are likely to be developed prior to the passage of any updated regulations.

¹² There is legislation pending at the state level that could change this by requiring jurisdictions to allow a streamlined land division process for middle housing in lieu of condominium creation.

- Because townhomes tend to be most feasible on the largest lots, the number of units that is potentially financially feasible is even higher for townhomes than the number of parcels. However, the analysis likely overestimates the number of financially feasible townhomes on these larger lots in several ways:
 - Very large sites may instead develop with a mix of housing types or with larger developments or institutional uses (e.g., assisted living, religious institutions).
 - Some larger sites might have more development constraints than the analysis reflects, including upland habitat and/or steep slopes.
 - There is at least one very large site in the West Haven-Sylvan area that appears to be financially feasible for townhome development but is already approved for an assisted living/memory care facility (part of Touchmark in the West Hills). Other large vacant parcels may have development in the pipeline as well.
- Cottage clusters are financially feasible in some situations, but generally less so than the other middle housing types.
 - With detached units, cottage clusters either need to have smaller units or lower densities than townhomes or plexes on the same size lot in order to provide space between the units.
 - Assuming that cottage cluster units would need to be sold as condominiums, they will likely sell for slightly less than a comparable unit with fee simple ownership because of condo association fees (see discussion on page 28).
- Fourplexes tend to be more financially feasible than triplexes or duplexes with similar size units because land costs and other fixed costs (e.g., frontage improvements and site preparation) can be spread across more units. However, if Washington County opts to allow fourplexes only on larger lots, this will limit the number of sites available for fourplex development.

Frontage improvements can be a challenge to development feasibility.

- Having more existing street frontage makes fee simple development (e.g., townhomes—see discussion on page 28) easier without needing to create new streets. However, if that frontage requires improvements, it can add substantial cost.
- The cost of frontage improvements particularly impacts development on corner lots, where there is more frontage to improve.
- For plexes, since the extra frontage is not essential (assuming they can be arranged side-by-side lengthwise on the lot), the cost of the frontage improvements for corner lots is not offset by being able to fit more units on the site.

Area-Specific Observations

Variations in middle housing feasibility across subareas are driven by a mix of market conditions and the existing development patterns, especially the number of large and vacant lots.

Northern Edge: Bethany, Cedar Mill, and West Haven-Sylvan

- **Estimated Middle Housing Development Potential:** There is strong potential for both townhomes and single-family development—in many cases, both housing types are feasible. In the West Haven-Sylvan subarea, single-family detached development is more financially feasible than townhomes in many cases. Roughly 3 to 7 percent of parcels are estimated to be feasible for middle housing development. With many large lots identified as potentially feasible, these areas account for much of the market-feasible capacity for middle housing in the UUA.
- **Existing Development Pattern:** These subareas have many developed subdivisions but also have a relatively high proportion of large vacant and underdeveloped lots with further development potential (including Bonny Slope).
- **Market:** These areas have a very strong ownership market where high-end housing can command high sales prices. In this situation, allowing middle housing offers opportunities to build a lower-cost housing type (compared to new high-end single-family detached housing) without sacrificing financial feasibility. For example, at 25 units per acre, townhomes selling for roughly \$370,000 each can compete with high-end single-family homes on 5,500-square-foot lots selling for roughly \$680,000 in terms of financial feasibility.
- **Other Considerations:**
 - Many of the properties with development potential in these areas are large enough that they may develop with a mix of housing types and sizes through a larger subdivision. The analysis likely overestimates the amount of middle housing that would result from development of these properties as a result.
 - While some of the large parcels appear to be redevelopable, the analysis most likely underestimates the potential for infill development on flag lots in these areas, given the number of large, deep lots with existing homes that are too valuable to make redevelopment feasible.
 - Existing homes with particularly desirable locations may be remodeled rather than redeveloped, given the strong demand for high-end homes in these areas.

North Central: Rock Creek, Oak Hills, Cedar Hills, and Marlene Village

- **Estimated Middle Housing Development Potential:** Very limited. These areas have the lowest percentage of parcels likely to be feasible for middle housing development (mostly less than 1 percent—Marlene Village is slightly over 1 percent).

- **Existing Development Pattern:** These subareas are almost entirely developed with suburban subdivisions where most lots are under 10,000 square feet and are developed with single-family homes. While such properties are eligible for middle housing development, redevelopment is unlikely.
- **Market:** Existing home prices are fairly average for the UUA, and expected pricing of new middle housing is not high enough to support redevelopment of existing homes.
- **Other Considerations:**
 - Infill and conversion are generally unlikely for homes in a subdivision where most houses occupy most of the frontage of their lot and most homes are in good condition.
 - Restrictive CC&Rs may also be more prevalent in these areas, given the age of the subdivisions, though data is not readily available to confirm this.

Central: Aloha, Other/Aloha, and Heritage Baseline

- **Estimated Middle Housing Development Potential:** One to three percent of lots included are estimated to have potential for middle housing development.
 - Aloha has the greatest number of parcels where middle housing development is financially feasible of any subarea, but this is due mostly to the size of the subarea and the number of affected parcels. As a share of the number of affected parcels, Aloha is near the middle of the subareas for financially feasible middle housing development.
 - The Heritage Baseline subarea shows a relatively high percentage of parcels that could be feasible for middle housing development (over 5 percent). Redevelopment may be possible for portions of a manufactured home park and some of the individual lots with manufactured and mobile homes on them in this subarea. The individual lots are small enough that they would allow for a duplex but not other types of middle housing, resulting in duplexes being the most common potentially feasible housing type in that area.
- **Existing Development Pattern:**
 - Aloha has a mix of subdivisions with a range of lot sizes and some remaining larger lots.
 - The Heritage Baseline subarea includes a large manufactured home park and an adjacent area with manufactured homes on individual smaller lots (under 5,000 square feet). Many of the individual lots in this area are owned by the owner of the adjacent manufactured home park.
- **Market:** These areas have strong demand for lower-cost and moderately priced for-sale homes and a relatively strong rental market. Existing home values are lower than in

other parts of the UUA. The property values for manufactured homes in the Heritage Baseline subarea are particularly low.¹³

▪ **Other Considerations:**

- Aloha appears to have some parcels that are financially feasible for plexes; however, most of these are vacant lots that are already platted for single-family homes and will likely be developed prior to adoption of new regulations.
- Redevelopment of properties with manufactured homes could cause displacement of existing residents, who largely do not own the land, even if they own their unit. Discussions with manufactured home park operators (outside this project) indicate that most operators value the low-risk revenue stream from the manufactured home park and are not interested in redeveloping the properties. However, if the park were to be sold, a new buyer may see other opportunities, including redevelopment potential. Washington County's Office of Community Development and Department of Land Use and Transportation are collaborating on an inventory and analysis of existing manufactured housing parks. The second stage of the project will identify strategies for preservation because manufactured housing parks provide a unique unsubsidized affordable housing option that is hard to replace.

East: Raleigh Hills and West Slope

- **Estimated Middle Housing Development Potential:** Two to three percent of lots included in the analysis were identified as having potential for middle housing development. The mix of feasible middle housing types is similar to the county overall.
- **Existing Development Pattern:** Most of the parcels in both subareas are at least 7,000 square feet, with many lots between 15,000 square feet and an acre. Most of the areas are suburban subdivisions with large lots, but there are some older plats as well.
- **Market:** These areas have moderate to high existing home prices compared to the rest of the UUA. There has been little recent development in either area.
- **Other Considerations:** The analysis most likely underestimates the potential for infill development on flag lots or other options that would retain the existing home, given the size of the lots and the value of the existing homes in these areas.

Southeast: Garden Home and Metzger

- **Estimated Middle Housing Development Potential:** Three to four percent of lots included in the analysis were identified as having potential for middle housing development. Townhomes were the most commonly feasible type, but fourplexes and cottage clusters were feasible on a higher share of parcels in these areas than in most

¹³ Property values in this area may be underestimated to some extent because mobile homes that are not permanently affixed to the site are taxed differently than other housing and their full value often does not appear in the simplified data from the assessor at the tax lot level.

other parts of the UUA. (Cottage clusters were still generally less feasible than other housing types on a given parcel.)

- **Existing Development Pattern:** Most of the parcels in both subareas are at least 7,000 square feet, with many lots between 15,000 square feet and an acre. While there are some modern subdivisions, there are a relatively high number of lots that appear to date to an older era.
- **Market:** These areas have strong demand for moderately priced for-sale homes and a relatively strong rental market. Existing home values are fairly average for the UUA, with Garden Home somewhat higher than Metzger. Prices for newer townhomes and small-lot detached housing in and around these areas have been higher than in many parts of the UUA.
- **Other Considerations:** These areas have seen many small infill subdivisions and flag lot developments. The analysis most likely underestimates the potential for infill development in these areas, given these trends.

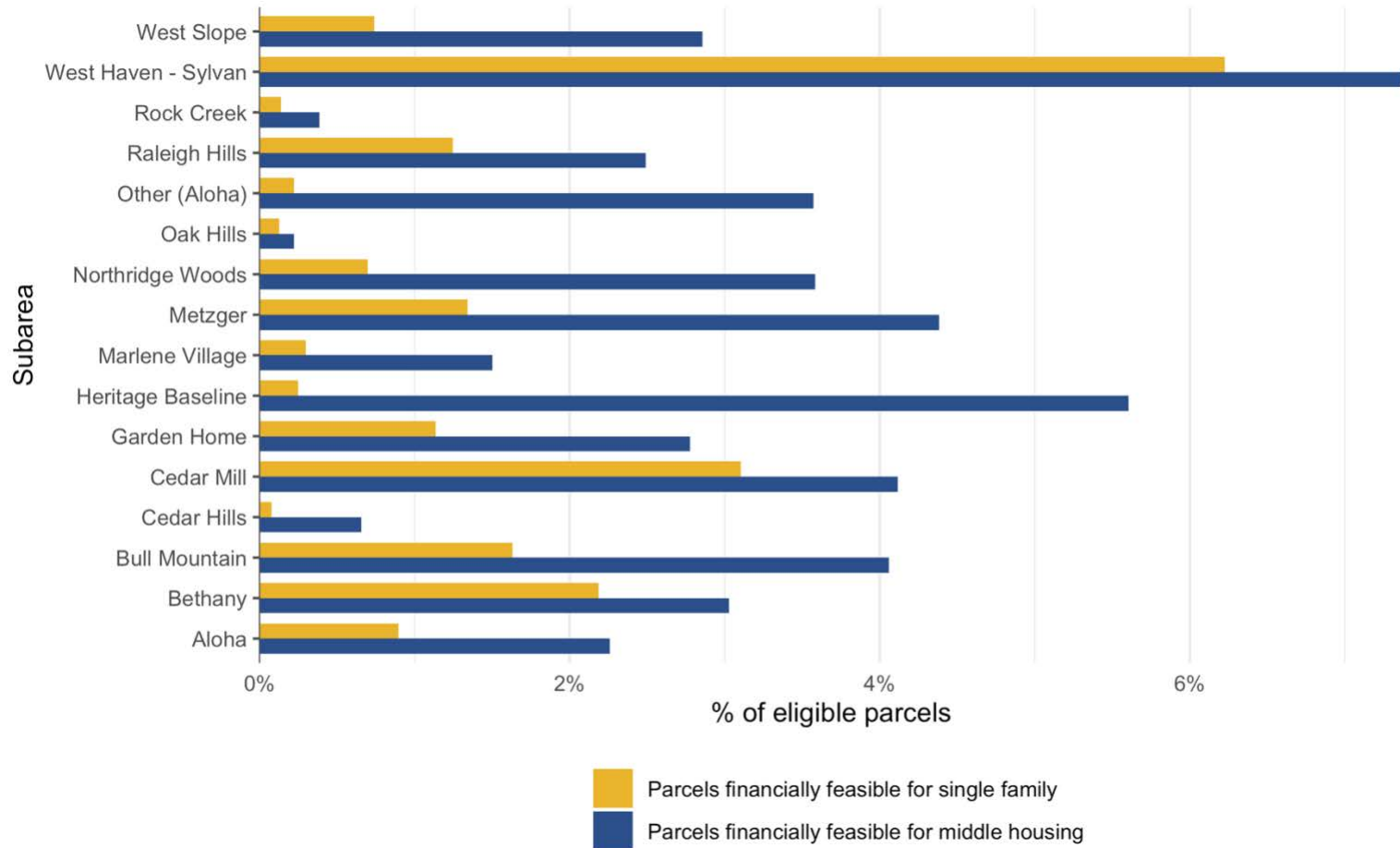
Southwest: Northridge Woods and Bull Mountain

- **Estimated Middle Housing Development Potential:** Three to four percent of lots included in the analysis were identified as having potential for middle housing development, with strong potential for townhomes. A smaller share (less than 2 percent) were identified as having potential for single-family development or redevelopment.
- **Existing Development Pattern:** These subareas have a mix of developed subdivisions and some remaining very large lots with development potential.
- **Market:** The ownership market is strong in these areas overall, though prices are not quite as high as in the Northern Edge subareas. Existing home values are relatively high, but with some on very large lots, the value per square foot of land is relatively low.
- **Other Considerations:**
 - In these areas, there appears to be potential for townhome development, though many of the lots with development potential currently have relatively high-value homes on them. While the analysis shows that it is financially feasible to redevelop some of these lots, other options such as infill on flag lots that retain the existing structures may be more likely.
 - In addition, slopes are a consideration in these areas, which could increase development costs and create premiums for lots with views. This would tend to make high-end single-family housing more likely on sites with steeper slopes and views.

Feasibility Results: Charts and Maps

Exhibit 4 shows the estimated percentage of “eligible” parcels included in the analysis with financially feasible single-family and middle housing (re)development in each subarea. Overall, a little under 3 percent of all “eligible” parcels were identified as being financially feasible for middle housing development under current market conditions.

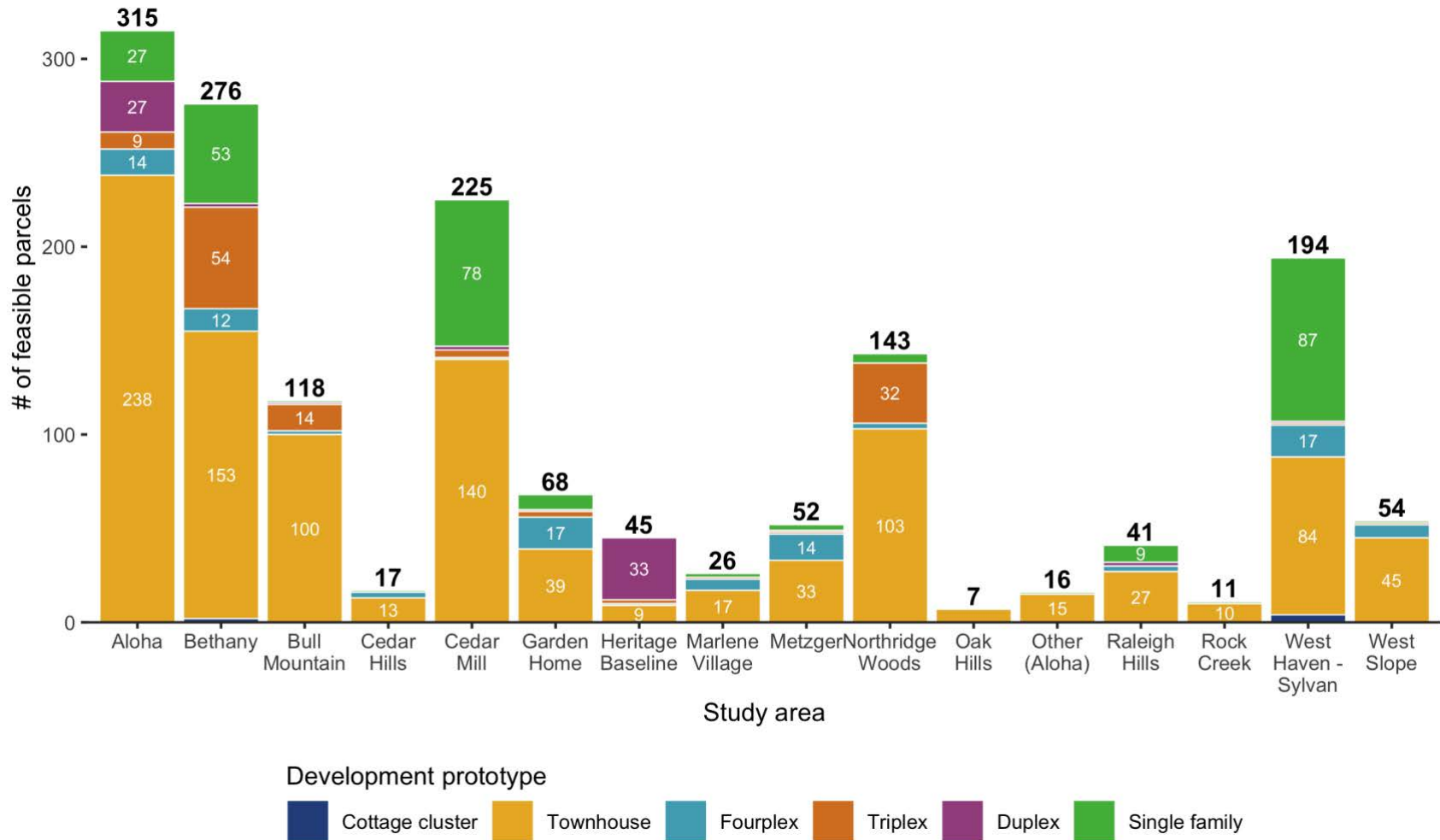
Exhibit 4: Percentage of Eligible Parcels with Financially Feasible Single-Family and Middle Housing Development by Subarea



Source: ECONorthwest

Exhibit 5, below, shows the cumulative total number of feasible parcels for middle housing and single-family by subarea based on which housing type is most financially feasible. The total number is indicated in black font above each bar.

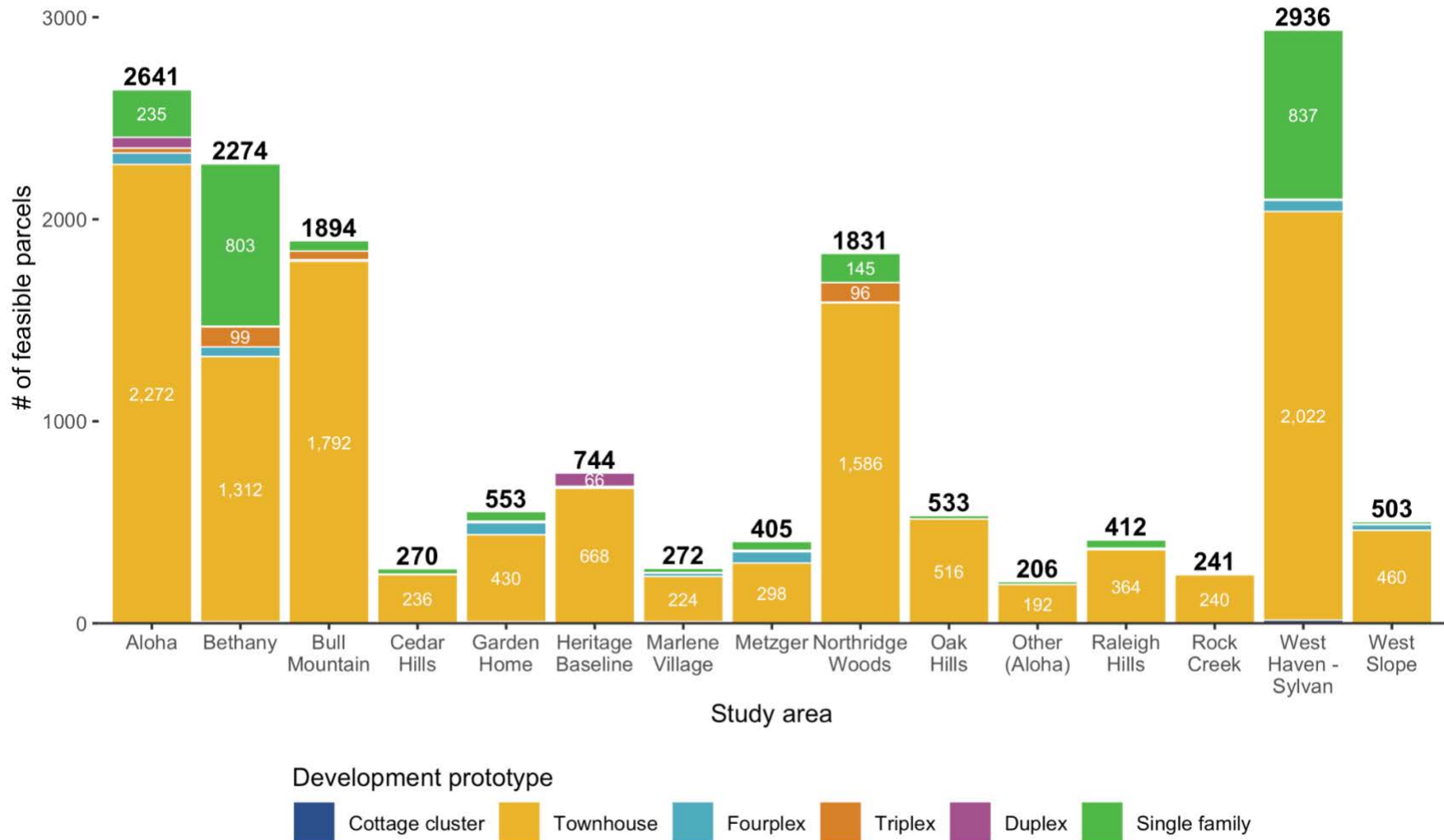
Exhibit 5: Estimated Number of Parcels with Financially Feasible (Re)Development by Subarea and Most Financially Feasible Housing Type



Source: ECONorthwest

Exhibit 6 shows the cumulative total number of units that are financially feasible by housing type and subarea, assuming each parcel where development is feasible is developed to its maximum potential with the most feasible housing type.

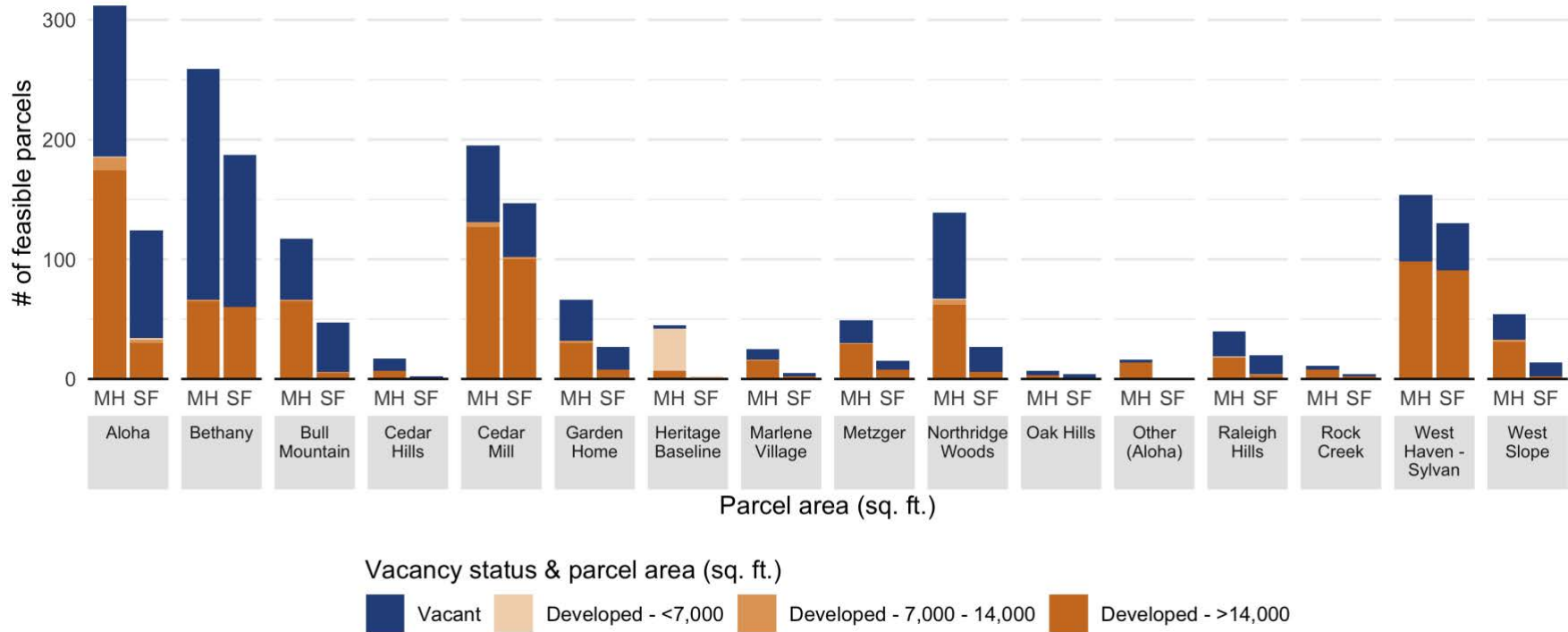
Exhibit 6: Estimated Number of Financially Feasible Units by Housing Type and Subarea



Source: ECONorthwest

Exhibit 7, below, shows the number of feasible parcels for middle housing and single-family by subarea broken out by the current development status of the property (vacant vs. developed) and the size of the parcel (for developed parcels only).

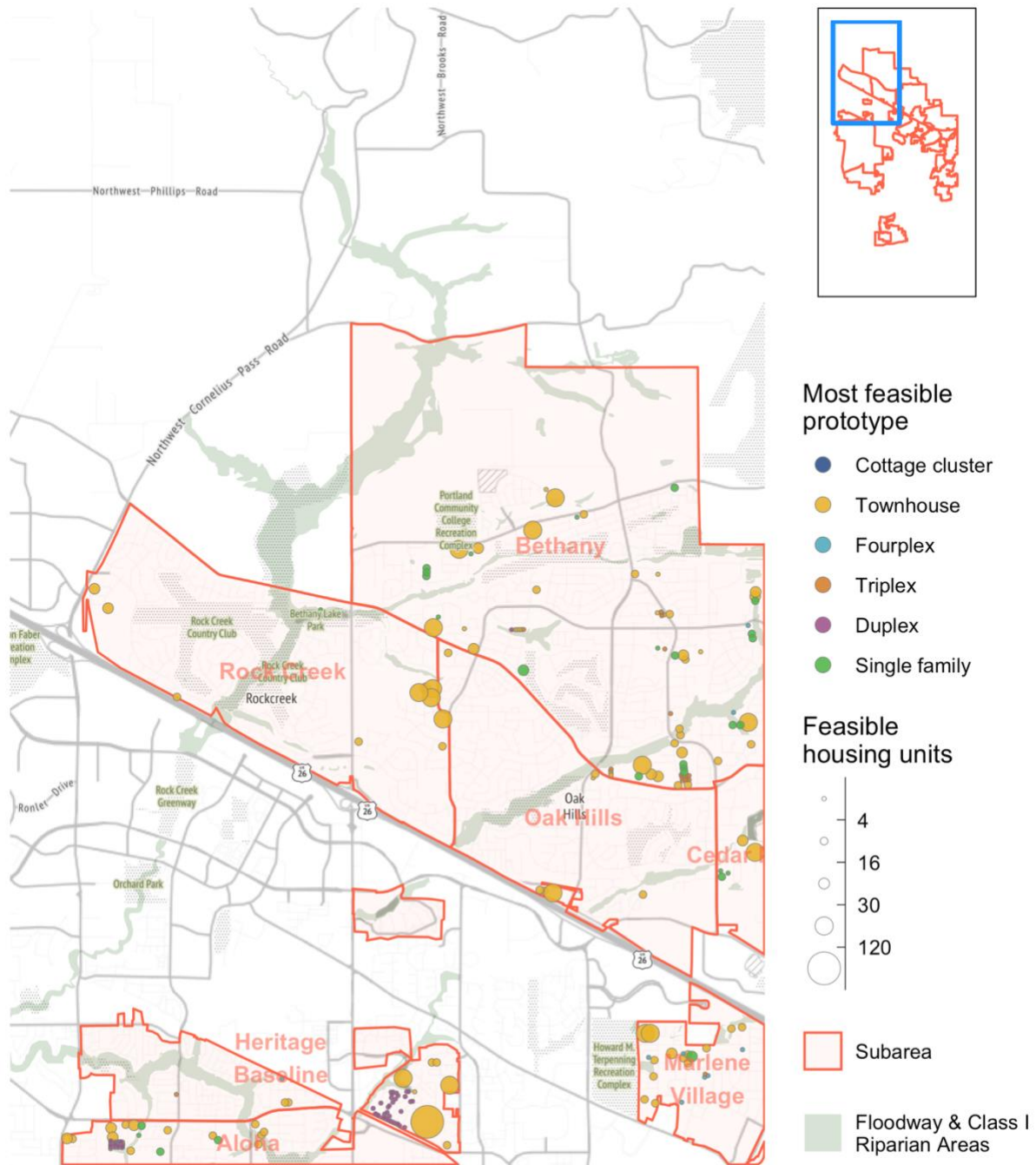
Exhibit 7: Estimated Number of Parcels with Financially Feasible (Re)Development by Housing Type, Development Status, Parcel Size, and Subarea



Source: ECONorthwest

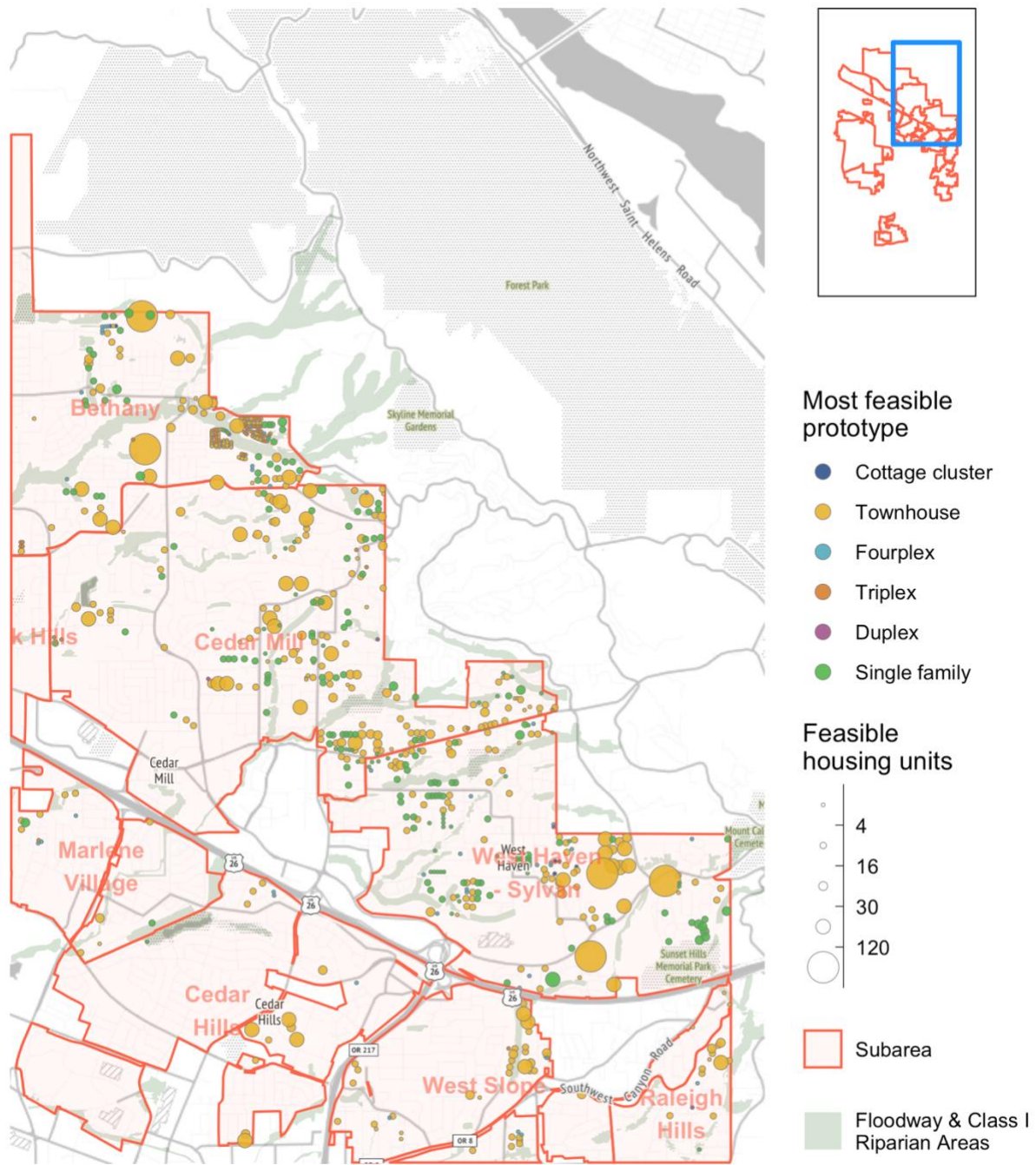
Exhibit 8 through Exhibit 12 show the approximate locations of parcels identified as having financially feasible development (one dot for each parcel with financially feasible development). Dot color indicates the housing type that is most financially feasible, and dot size indicates the approximate number of units calculated to fit on the site for that housing type.

Exhibit 8: Approximate Locations of Financially Feasible Housing Development (NW)



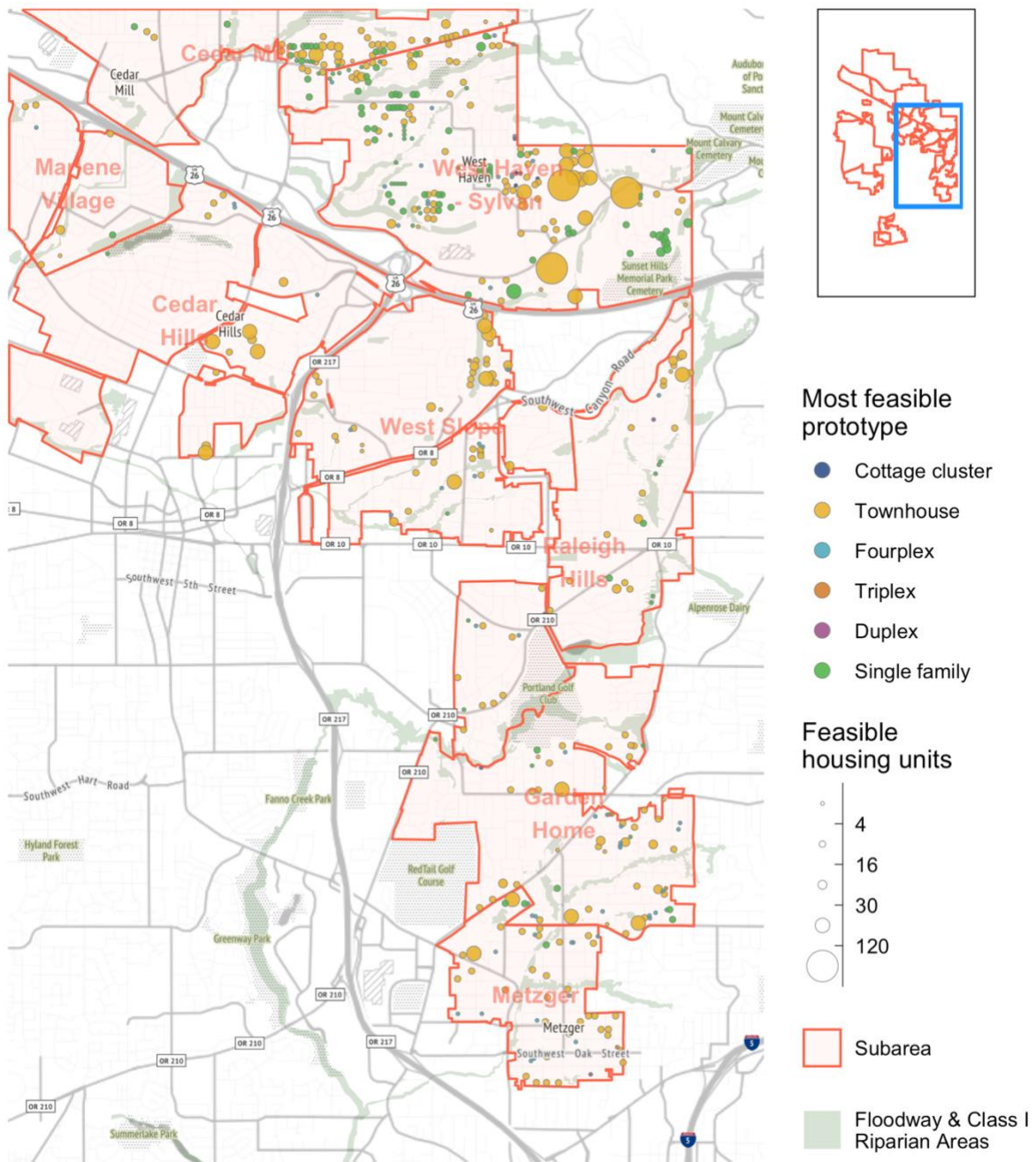
Source: ECONorthwest

Exhibit 9: Approximate Locations of Financially Feasible Housing Development (NE)



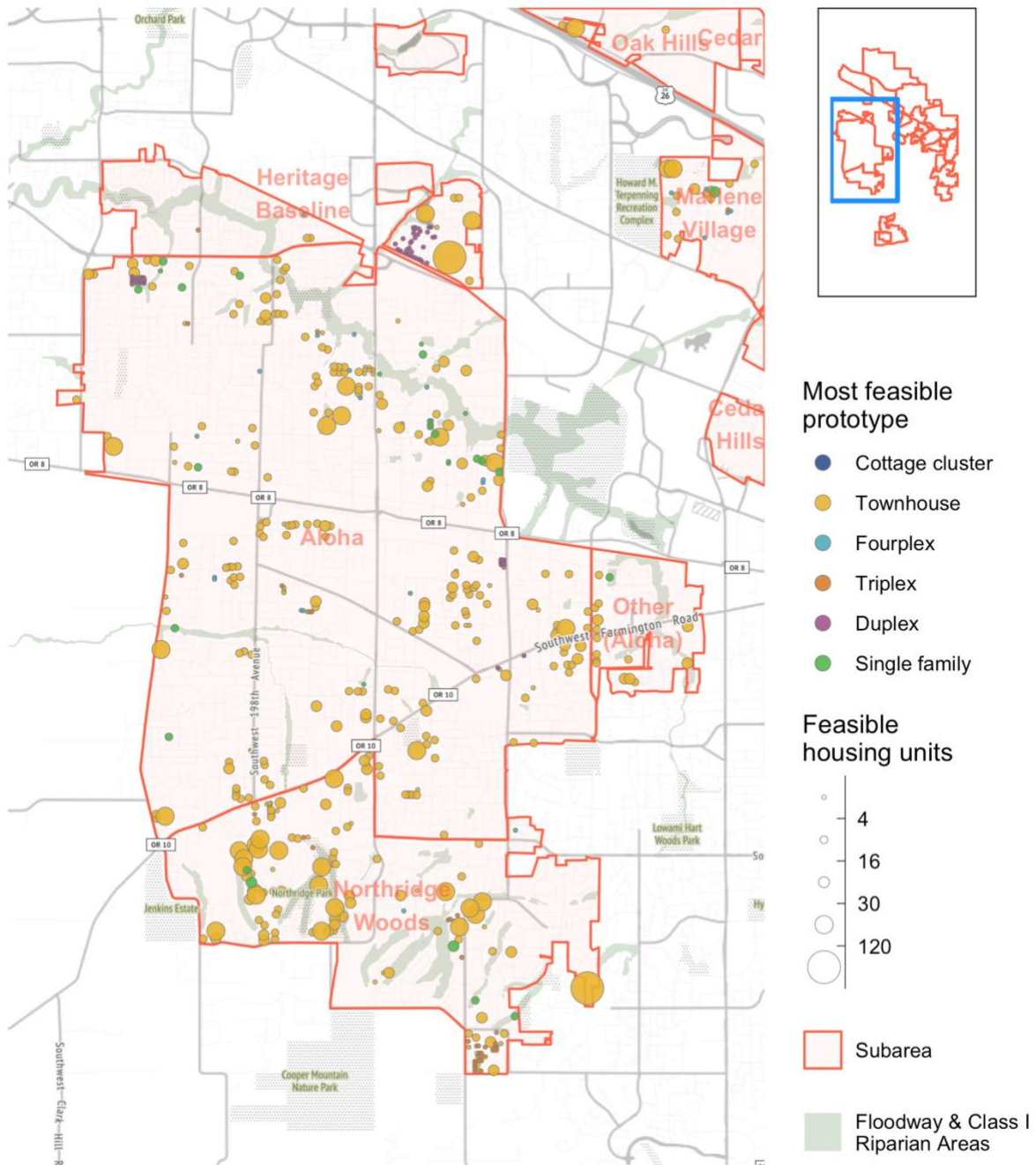
Source: ECONorthwest

Exhibit 10: Approximate Locations of Financially Feasible Housing Development (SE)



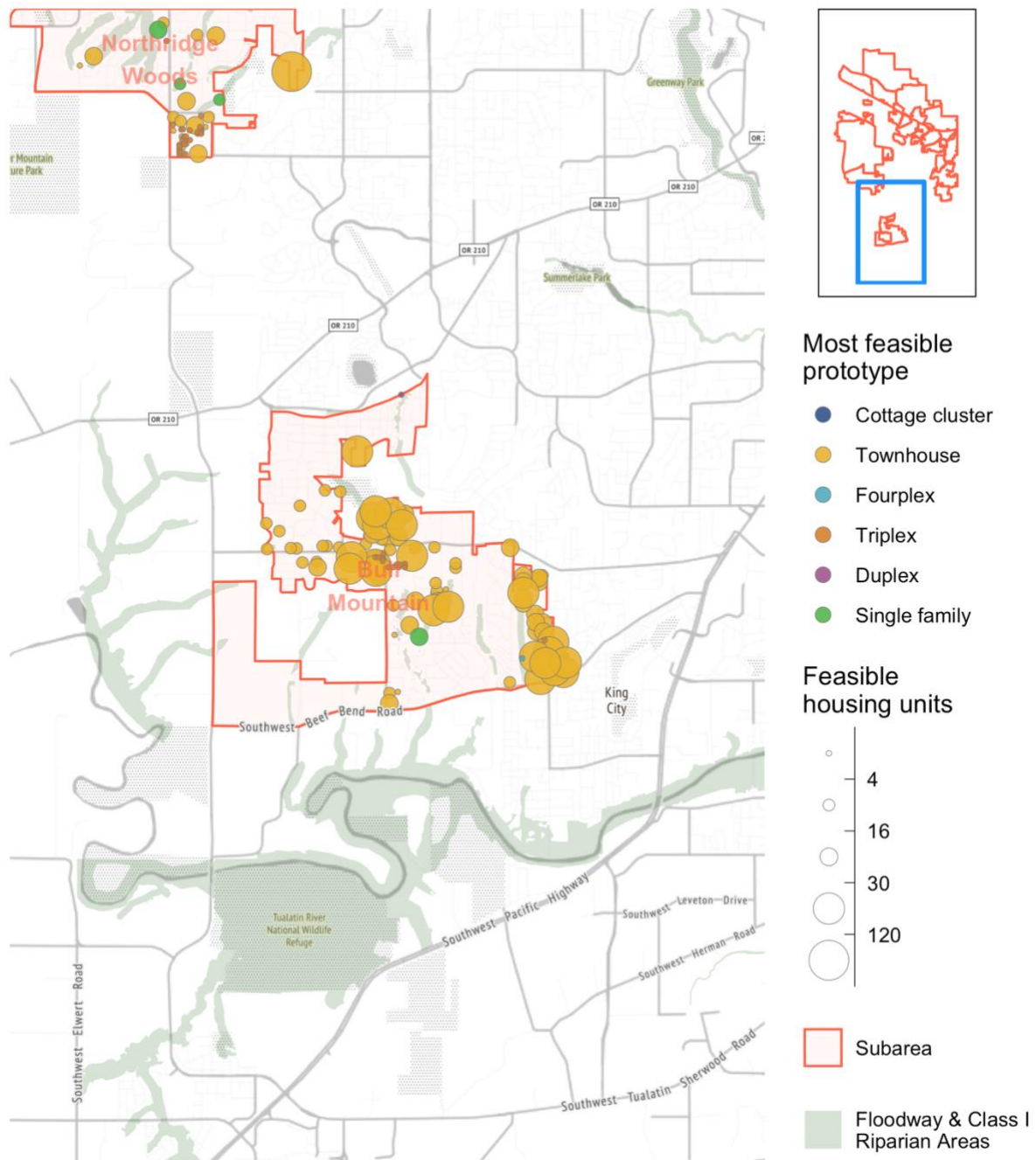
Source: ECONorthwest

Exhibit 11: Approximate Locations of Financially Feasible Housing Development (Central)



Source: ECONorthwest

Exhibit 12: Approximate Locations of Financially Feasible Housing Development (SW)



Source: ECONorthwest

Other Factors that Impact Middle Housing Development

Financial feasibility is an important factor in estimating the potential for middle housing development. However, there are also a range of other factors that affect how much and what types of middle housing are likely to be built. Some of the most important additional factors are described below, including how they might impact the results of this analysis.

Property Owner Interest

While some property owners may have interest in adding units to their properties as a way to generate additional income, a relatively small proportion tend to actually take the steps needed to build new units or undertake a major remodel to convert existing space. As one example, the City of Portland has allowed nearly all single-family detached houses to add an accessory dwelling unit (ADU) since 1997¹⁴ and has waived system development charges for ADUs for many years. By early 2020, roughly 3,000 ADUs had been built,¹⁵ compared to over 160,000 single-family detached homes in the city¹⁶—less than 2 percent of the single-family detached housing stock has added an ADU over the course of more than twenty years.

Normally, major changes happen when a property is sold to a new owner who may buy it with the intention of increasing the number of units. Since a relatively small fraction of existing homes are sold each year,¹⁷ and only a fraction of the single-family homes that come to market will be bought by someone looking to add units to the property, the development of middle housing across subareas in Washington County will be incremental.

Implications for Middle Housing: The pace of middle housing development within existing neighborhoods will be gradual, even where financial feasibility is strong.

Developer Experience

Middle housing is relatively new as a focus of land use planning efforts, but it is not a new housing type. Middle housing has been built at various times over the past decades, often integrated into neighborhoods with mostly single-family detached houses. Some middle housing types, such as townhomes, have been developed throughout Washington County (within cities and in some unincorporated areas) in higher-density districts. Others, such as cottage clusters, have seen limited development around the region, in part due to complex and

¹⁴ Build Small Coalition, “Accessory dwelling unit (ADU) zoning code audit report,” September 2018. Available online at https://www.oregonmetro.gov/sites/default/files/2018/10/01/Build_Small_Coalition_2018_ADU_code_audit_report_final.pdf

¹⁵ Kol Peterson, “Incremental Updates for ADUs for 2020,” Accessory Dwellings website, <https://accessorydwellings.org/2020/01/08/2020updates/>

¹⁶ 2019 American Community Survey

¹⁷ In Washington County overall, out of 135,770 owner-occupied housing units (all housing types) according to the 2019 ACS, there were approximately 10,714 sales of existing homes (built prior to 2019) in the past twelve months (including single-family detached, townhomes, and condominiums) according to Zillow. This translates to less than 8% percent of homes sold in the course of a year.

restrictive regulations.¹⁸ Duplexes, triplexes, and fourplexes were built in many parts of the region in past decades, but few have been built recently, in part due to limitations on how broadly they are allowed. Duplexes on corner lots have been allowed more commonly in many jurisdictions, and there are recent examples in several places, including the city of Portland.

Implications for Middle Housing development: In the near term, production of housing types that have seen little recent development (triplexes, fourplexes, and cottage clusters in particular) is likely to be slow, as developers, investors, homebuilders, lenders, and others involved in the development process gain comfort with these housing types.

Tenure

Middle housing can be owner-occupied or rental housing, or a combination of the two (e.g., where the owner lives in one unit and rents another). Ownership can also take several forms, including fee simple and condominium ownership. While HB 2001 and most development codes do not address tenure, it is an important factor in the business model for developing middle housing because it affects how it is financed, when developers can recoup their investment, and the legal risks/complexities associated with development. Considerations related to tenure and form of ownership can influence middle housing development outcomes as follows:

Tenure/Form of Ownership	What it means	Why it matters	Implications for Middle Housing Development
Fee Simple Ownership	The owner owns the house and the land. Generally requires each unit to be on its own lot and have frontage on a street. ¹⁹ Can include common areas maintained by homeowners' associations (HOAs) or cross-access easements that enable adjacent properties to share driveways.	Tends to be the simplest form of ownership for the builder and the buyer and is common for single-family detached housing and townhomes, so buyers and homebuilders are generally comfortable with it. However, land division can be a time-consuming process. HOAs and easements increase complexity somewhat for developers and can add costs for buyers (HOA dues)—fee simple ownership that requires this additional complexity may or may not be preferred to condominium ownership.	Townhouses are, by definition, on their own lots, and therefore will generally have fee simple ownership, which tends to make them more appealing to both builders and buyers. In addition, because they must go through a land division in any case, they are more likely to be built on larger sites (rather than doing both a subdivision and creating condominiums for plexes). Because plexes are, by definition, on a single lot, they cannot be built with fee simple ownership. If they are built for ownership, it would be condominium ownership, which is less
Condominium Ownership	The owner generally owns the space within their walls (and sometimes the exterior, particularly for detached	Due to construction defect liability law in Oregon, which allows condominium associations to hold developers liable for issues with the building (e.g., water intrusion) for up to 10	

¹⁸ Within urban unincorporated Washington County, for example, cottage clusters are not allowed outside of North Bethany, and in North Bethany they require a planned development.

¹⁹ Whether and in what circumstances new lots can be created without frontage is determined by local land division standards, not by state law.

Tenure/Form of Ownership	What it means	Why it matters	Implications for Middle Housing Development
	condominiums). The land (and often the exterior structure) is owned and maintained by a condominium association.	<p>years, and which has been the source of many lawsuits, many homebuilders avoid condominium ownership.²⁰ However, condominium creation can be faster than land division in many cases.</p> <p>For homebuyers, condominiums can offer a lower purchase price than fee simple ownership because they do not fully include the land cost, but typically have higher ongoing costs for condominium association dues.</p>	<p>appealing for some builders and buyers, but may be appealing to other builders for its relatively faster processing time.</p> <p>Cottage clusters may or may not be on individual lots, depending on the choices the County makes in allowing this housing type. However, even if they are on individual lots, they tend to require HOAs and cross-access easements, which limits the benefits of fee simple ownership.</p>
Rental	Units are leased to tenants other than the owner (though the owner may, in some cases, live in one of the units).	Relatively few development companies are set up to build units that they retain ownership of and rent. Many rely on the proceeds from selling the units they have built to fund their next project. There are also relatively few investors who build new investment properties themselves. Rental housing development typically requires a partnership between a developer who has the expertise to take a property through the development process and an investor who buys the property as an investment once it is complete and occupied.	While larger apartment buildings are often owned by institutional investors, small apartments and plexes are more likely to be owned by local real estate investors or even (mostly for two and three-unit buildings) by an individual who lives in one unit and rents out the other(s). Finding local investors who are interested in partnering on new middle housing rental development may be a challenge, particularly in the near term.

Housing Type Preferences

Our analysis accounts for differences in pricing between single-family detached and middle housing. However, what this approach does not reflect is the depth of demand for a given type of housing at a given price point. We can estimate that units of a similar size and type have sold for the estimated price, and we can (based on housing needs analysis) estimate the need for housing at that affordability level. However, for market-rate housing, it is important to understand how housing preferences affect demand for particular housing types and sizes.

²⁰ There is some movement on potential legislative changes that could apply to middle housing condominiums at the moment, but it is unclear what changes, if any, may be adopted.

Based on a study conducted by Metro in 2014²¹, Portland Metro residents overwhelmingly (80 percent of respondents) prefer single-family *detached* housing over any other housing type. About 7 to 9 percent of residents in the region preferred single-family *attached* housing, while Washington County residents (11 percent) had a higher preference for this housing type. Similarly, when looking at demographics, about 12 percent of households age 55 and older prefer single-family *attached* housing. Low and moderate-income households also prefer *attached* single-family housing at similar rates as older households age 55 and older. This perhaps indicates demand for ownership housing that is more accessible from an affordability perspective and for rental housing that is different in type than multifamily apartments. In the study, between 10 to 14 percent of residents who lived in multifamily housing preferred to live in attached single-family housing.

Implications for Middle Housing: To the extent that people have other alternatives within their desired price range (e.g., older or smaller detached homes, detached homes in lower-cost areas, etc.), the general preference for detached homes could make it harder to sell or lease new middle housing and dampen prospects for further development. However, people’s preferences do not always match up with the housing they can afford; people sometimes choose attached housing because it offers many of the features they want or need at a lower cost than detached housing. In addition, some buyers and renters prefer new housing over older housing stock, even if it is not their preferred housing type, or they are looking for a certain home size or features that are not common in older homes. Housing preferences can also shift over time, which could expand demand for middle housing over the longer term.

Physical Constraints

This analysis accounts for the impact of site size and broad market conditions on middle housing financial feasibility, but it does not address all of the factors that can influence potential on an individual site.

- Beyond site size, the parcel shape can substantially affect how efficiently new development will lay out on the site and the number of units that can fit.
- Steep slopes can limit the number of units that will fit on a site and can increase the costs of development (e.g., due to more complex foundations, need for more in-depth structural and geotechnical analysis, and retaining walls).

Implications for Middle Housing: Middle housing can work on sloped sites, but very steep slopes may limit the number of dwelling units that a site can accommodate, which can reduce the likelihood of development being financially feasible due to the cost of land, site work, design, and other (relatively) fixed costs being spread across fewer units. In addition, if a given site has higher costs due to steep slopes, that will also decrease financial feasibility of development.

²¹ Oregon Metro, Residential Preference Study 2014.

<https://www.oregonmetro.gov/sites/default/files/2014/09/02/ResidentialPreferenceStudy-FullReport.pdf>

Site-Specific Regulatory Constraints

While we have taken land use designations into consideration, there are several site-specific requirements that are not fully reflected in this analysis, including:

- Access management/driveway spacing standards for major roads, which may preclude certain types or forms of middle housing (e.g., townhomes with individual driveways to the street) or may require that more of the site be dedicated to shared driveways/internal circulation, limiting the number of units that will fit.
- Natural features that require protection can limit the amount of possible development, even if density transfers are allowed, if it is not possible to build the housing at a higher density given building code requirements. They can also create challenges for efficient layout depending on where they are located on the site.
- Properties that abut a different land use district typically require additional setbacks on the abutting side. These additional setbacks may limit the number of units that can fit on a site.

Implications for Middle Housing: As noted above, factors that limit the number of units that can fit on the site can reduce financial feasibility.

Site-Specific Amenities and Undesirable Locations

While our analysis accounts for differences in market conditions at a subarea level, there are a number of site-specific location factors that can influence the desirability (and hence pricing) of housing, including:

- Proximity/accessibility to parks, schools, transit, or other amenities
- Views
- Presence of mature street trees
- Exposure to busy streets, highways, and certain noisy or undesirable businesses

Implications for Middle Housing: These qualities affect the desirability of development and the pricing of homes and land in the area. These site-specific factors can make development more feasible on some properties and less feasible on others than the “typical” case we have modeled.

Equity and Infrastructure Considerations

Equity Considerations

Overall Equity Impacts

Less Exclusionary Neighborhoods: Increasing opportunities for a range of housing types in predominately single-family neighborhoods generally supports equity by making existing neighborhoods less exclusionary. This is the issue that HB 2001 was intended to address—large swaths of many communities (including Washington County’s UUA) have historically allowed single-family detached dwellings exclusively (or almost exclusively), while prohibiting or heavily restricting smaller and attached housing types that tend to be lower cost.²² Restrictive development regulations in Washington County date back to at least the 1959 zoning code.²³

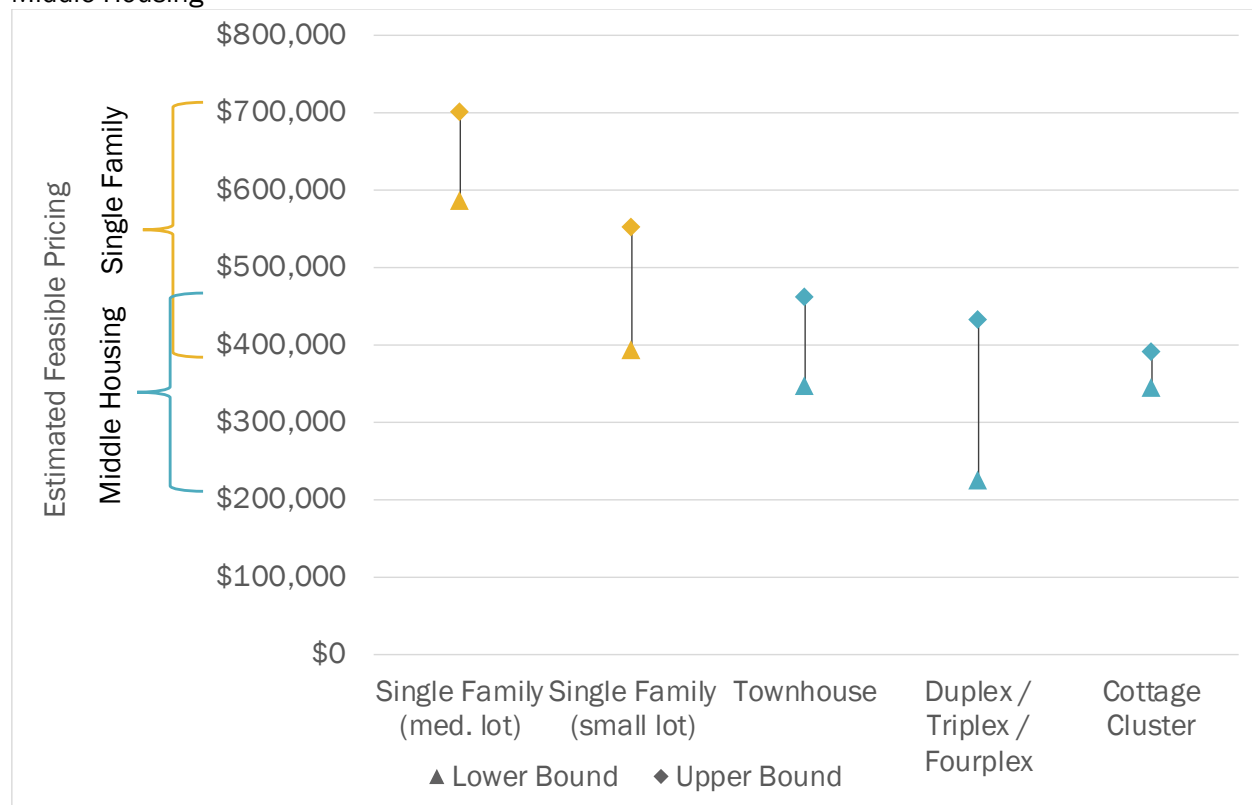
Supply Impacts on Price Escalation: In desirable locations with limited opportunities to build more housing, the price of existing homes can increase substantially over time as demand outpaces supply. This competition leads to increasing housing costs, pricing many households out of the housing market altogether. A shortage of available, modestly priced housing can threaten to displace longtime residents as more affluent households pay a premium for homes that would traditionally be occupied by lower-income families. By allowing more housing to be built in these areas, such as middle housing, it increases the supply of available housing and helps keep existing housing more affordable.

Lower-Cost Housing Options: Middle housing development can also help increase the supply of housing that is more affordable than a standard single-family home. Middle housing units are generally smaller in size, making them less expensive to build than larger detached homes. Middle housing on smaller lots may also allow for lower land costs compared to the current stock of detached single-family homes. This is illustrated in Exhibit 13, which shows the estimated range of economically feasible sales prices for new single-family homes and for new middle housing ownership units. Estimated pricing is based on recent sales data in Washington County for the most comparable housing types, filtered to include only housing types that were found to be financially feasible to develop somewhere in the UUA. The estimated price range for new middle housing is between about \$220,000 and \$460,000, depending on housing type and location. By contrast, the estimated feasible range for new single-family detached homes is between about \$390,000 and \$700,000 (though some large, custom homes would exceed the upper limit of what was considered in this analysis).

²² Attached housing types are allowed through a discretionary process under current regulations in many Washington County land use designations.

²³ Based on County staff review of the 1959 zoning code for Washington County.

Exhibit 13: Estimated Economically Feasible Pricing for New Construction: Single-Family Housing vs. Middle Housing



Source: ECONorthwest

Equity Considerations by Area

The specific equity benefits and the potential for unintended consequences can vary between different geographic areas depending on the nature of the existing housing stock, the demographics of existing residents, and the access to amenities and opportunities from each area. This section evaluates equity considerations by subarea, including:

- Demographics of existing residents, focused on factors that relate to housing stability and security.
- Displacement potential for existing renter households due to redevelopment of existing single-family rental housing.

Demographics of Existing Residents

Exhibit 14 summarizes six demographic metrics drawn from the American Community Survey (ACS) for each subarea that are commonly used as indicators of housing stability/vulnerability to changes in the housing market:

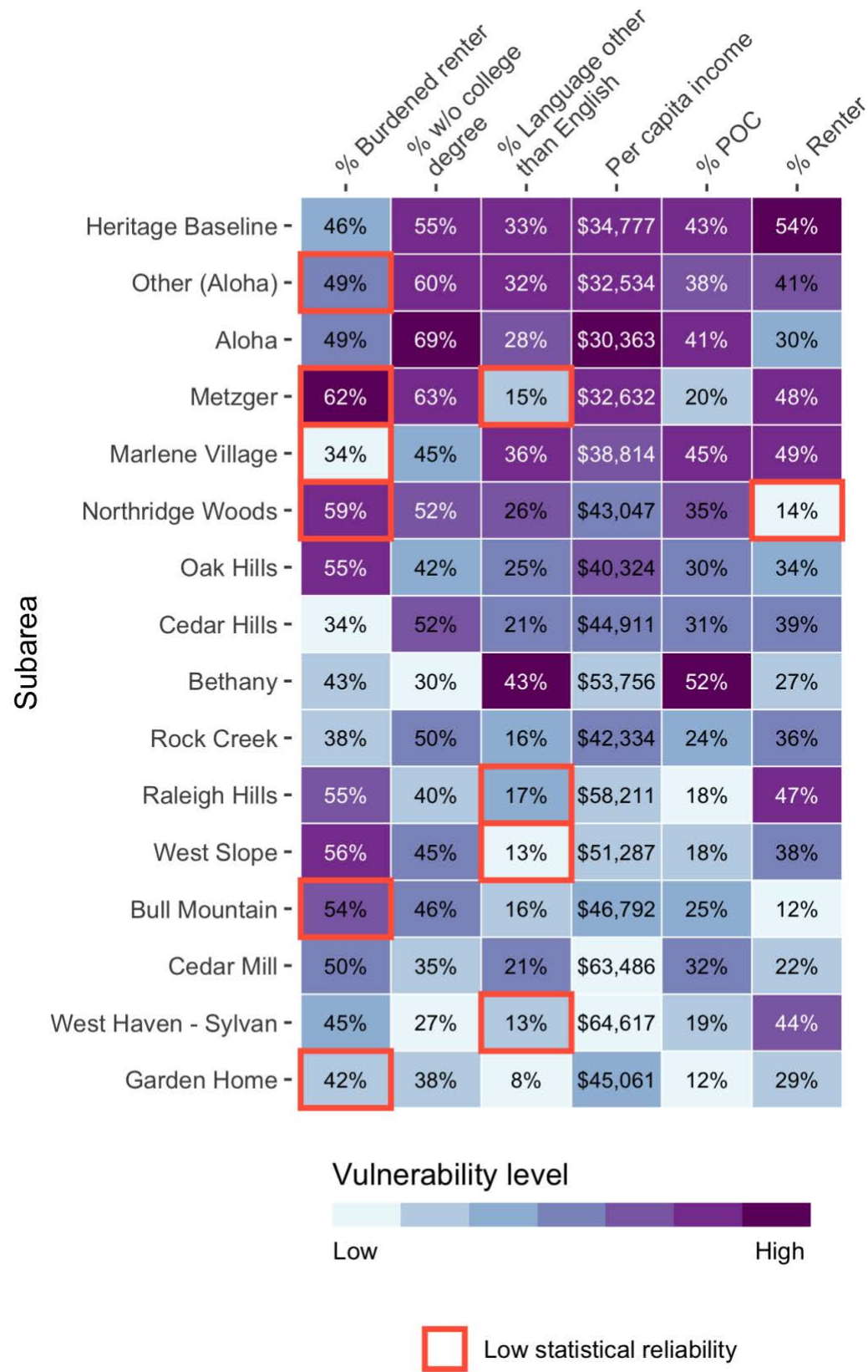
- **Renter cost burden** (“% burdened renter”) – meaning the share of renters in the area who are spending more than 30 percent of their income on rent
- **Education** (“% w/o college degree”) – the share of adults over age 25 in the area who do not have a bachelor’s degree or higher levels of education

- **Language** (“% language other than English”) – the share of the population 5 years and older who speak a language other than English at home
- **Income** (“Per capita income”) – the per capita income, e.g., aggregate reported income divided by total population
- **Race & ethnicity** (“% POC”) – the share of the population that does not identify as White alone, non-Hispanic
- **Tenure** (“% Renter”) – the share of occupied housing units that are renter occupied

The metrics for each subarea are shaded with darker purple shades indicating higher levels of vulnerability to changes in the housing market, and the subareas are arranged by their overall composite vulnerability. Since all ACS data is derived from survey samples (1 percent of the population for one-year data, 5 percent of the population for five-year data), each metric is an estimate with an associated margin of error. In cases where the margin of error is greater than 30 percent of the estimate, and therefore not statistically reliable, that estimate is outlined in red.

Heritage Baseline stands out as the most vulnerable subarea, having the highest proportion of renter households of all subareas and a low per capita income, though it has a relatively average share of cost-burdened renters. Bethany, despite having the highest rank in two of the metrics—share of people of color and share of households who speak a language other than English at home—is, overall, not as vulnerable as other subareas due to a high rate of education attainment, high per capita income, and a low share of renter households.

Exhibit 14: Housing Displacement Vulnerability by Subarea



Source: ECONorthwest, using 2019 ACS 5-year estimates

Displacement Risk

Displacement concerns typically center around renters instead of homeowners. There are several reasons for this:

- In Oregon, homeowners are largely insulated from the financial effects of market changes due to the property taxation system, which decouples market sales prices from assessed values, meaning that rising home values only impact property tax amounts in very limited circumstances.
- Rental leases provide renters with less housing stability and cost predictability compared to typical mortgages. Generally, renters only have the right to remain in a given location for the duration of their lease, and shorter leases can be relatively easily broken (although recent laws enacted in 2019 strengthen renter and lease protections).²⁴ While new state laws have limited the amount a landlord can raise rents annually for certain types of properties, these increases can still reach about 10 percent per year.²⁵
- Renters are also not in control of decision-making about the property: the property owner is the one who decides whether to upgrade the property, redevelop it, or make other changes that would affect the rent and the tenants.
- Because renters typically have lower incomes than homeowners, the financial impact of a rent increase can be more challenging for households to absorb.

For these reasons (and many others), governments and mission-oriented community organizations focus antidisplacement efforts on renters, particularly low-income renters.

For HB 2001 implementation, the primary displacement risk is from the redevelopment of existing single-family rental housing to build new middle housing. Single-family rental housing that is older and relatively low value compared to the land area tends to have the highest risk of redevelopment that could lead to displacement.

Exhibit 15 shows the total number of parcels with financially feasible development by subarea, broken out by broad housing type (single-family vs. middle housing) and whether the parcel is currently developed with rental housing. Property with existing rental housing was identified based on data from the tax assessor for each parcel, including property type, owner address, and property address. Existing residential use was determined based on property type codes that most commonly indicate developed residential property. Owner occupancy was determined based on whether the address data indicates that the owner lives on site (i.e., the owner's address matches the site address). Parcels with missing addresses were flagged as unknown.

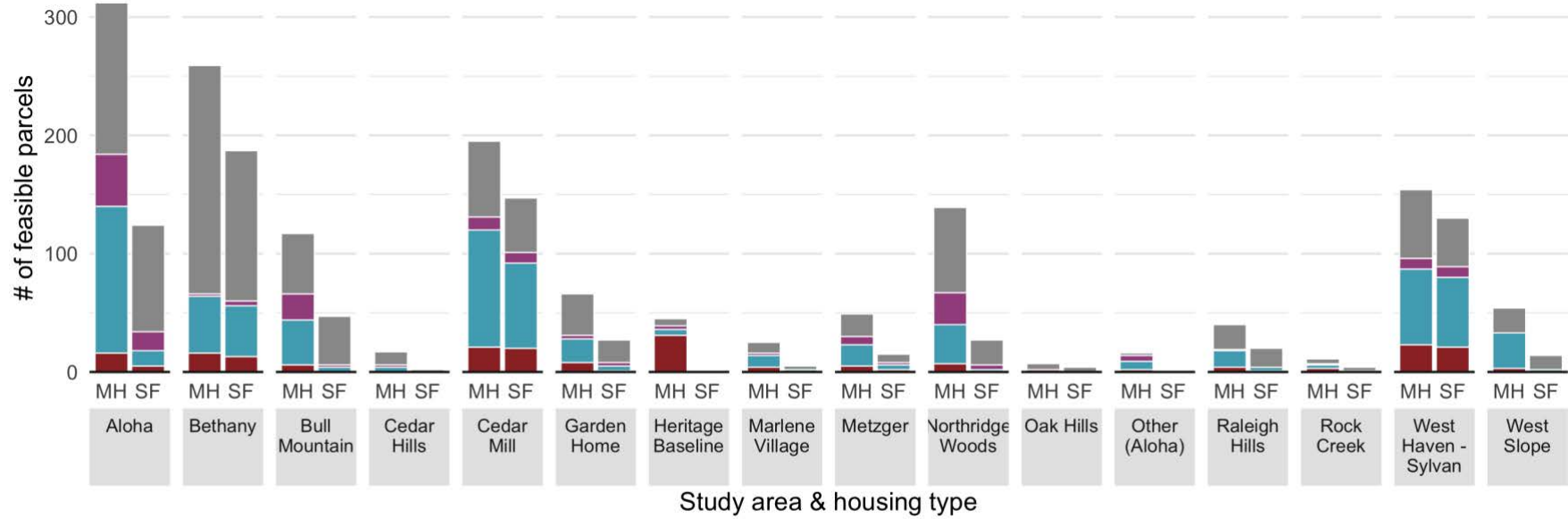
²⁴ Senate Bill 608, enacted in 2019, prohibits landlords from terminating a month-to-month lease for “no cause” after one year of tenancy, extends the written notice for lease termination in other circumstances to ninety days, and makes several other changes to state laws strengthening lease.

²⁵ Senate Bill 608 also caps rent increases for properties built more than fifteen years ago, to a maximum of 7 percent per year plus Consumer Price Index.

In total, 126 properties that are thought to be developed with rental housing could be newly feasible for redevelopment with middle housing based on implementation of HB 2001 (less than 10 percent of the total properties identified in this analysis as financially feasible for middle housing development). However, 37 of these are also identified as being potentially feasible for redevelopment with new single-family housing. Thus, the estimated total impact is less than 100 properties in affected areas of the UUA where existing renter households might be at risk of displacement due to redevelopment that would be newly financially feasible with implementation of HB 2001.

The Heritage Baseline subarea stands out for both the high number (31) and high share (74%) of developable parcels that are believed to be renter-occupied homes. As noted previously, many of these homes are manufactured or mobile homes on individual lots adjacent to a manufactured home park. Combined with the subarea's demographic vulnerability seen in Exhibit 14, residents in Heritage Baseline could be particularly susceptible to displacement. The next largest concentration of rental homes that could be newly at risk of redevelopment is in Aloha, though only a fraction of a percent of the parcels there are rental homes that are potentially at risk due to new middle housing allowances.

Exhibit 15: Tenure Status and Development Type of Feasible Parcels by Subarea



Tenure status



Source: ECONorthwest analysis using data from Washington County

Infrastructure Considerations

County staff sought input from Clean Water Services (CWS) and Tualatin Valley Water District (TVWD) regarding infrastructure considerations associated with the development potential identified in this analysis. TVWD did not express any concerns. CWS indicated interest in exploring potential stormwater and sanitary sewer infrastructure needs in North Bethany depending on the extent of middle housing that might occur on areas that have not yet developed and possible stormwater infrastructure issues in Aloha due to existing challenges with topography and soils. County staff is continuing to coordinate with staff from CWS regarding these concerns.

Strategies

While many of the factors that drive middle housing development are outside the County's control, several important factors are within its control and can be used as policy levers to influence outcomes. In addition, the County is required to consider several financial strategies to increase the affordability of middle housing.²⁶ The strategies identified below offer a starting point for discussion with policy makers.

Regulatory Options

Preliminary regulatory strategies recommended for consideration are described below. The County may choose to consider additional regulatory options as part of the code writing process, depending on policy goals, provided that the regulations do not create unreasonable cost or delay. Note that County staff is also exploring options regarding limitations on development of middle housing in certain areas of North Bethany that have not yet developed according to existing plans (restrictions are allowed in some master-planned areas). This will be the subject of future issue papers from staff.

Add basic design requirements to address common design concerns.

- **What's required:** The County is not required to apply design standards to middle housing. However, under state rules, design standards cannot be applied to duplexes unless they are also applied to single-family detached housing. Other types of middle housing can have clear and objective standards that go beyond what is required for single-family detached housing, and some options that are allowed under state rules are provided in the Model Code.
- **Potential benefits:** Concerns about the design and look of middle housing can generate opposition to middle housing from neighbors. Adding regulations that address common

²⁶ Pursuant to OAR 660-046-0030(2): "In adopting or amending regulations or amending a comprehensive plan to allow Middle Housing, a local government must include findings demonstrating consideration, as part of the post-acknowledgement plan amendment process, of methods to increase the affordability of Middle Housing through ordinances or policies." Several specific examples are listed for consideration.

design concerns (e.g., no windows or doors facing the street, location of parking, and storage of refuse bins) can reduce opposition.²⁷

- **Potential impacts:** Basic design standards as outlined in the Model Code may add a modest amount of cost but do not constitute unreasonable cost or delay.

Waive frontage improvement requirements for some or all middle housing development.

- **What's required:** The County will need to treat single-family detached homes and duplexes equally with regard to requiring frontage improvements for compliance with HB 2001 (either requiring improvements for both or waiving improvements for both). For other middle housing types, the requirements do not need to be the same as for single-family detached housing. The administrative rules state that the jurisdiction shall work with an applicant to determine if "sufficient infrastructure" (including public water and sewer with adequate capacity, access that meets emergency vehicle access standards, and adequate storm drainage facilities) will or can be available to serve new triplexes, quadplexes, townhouses, or cottage cluster development.²⁸ DLCDC staff has indicated that the County may require developers of middle housing to provide reasonable and proportionate mitigation of localized infrastructure constraints as is required for any other development proposal.²⁹ However, there may be limitations on the County's ability to require frontage improvements that are not required for other types of development, such as single-family homes and duplexes.
- **Potential benefits:** The cost of frontage improvements can be significant. If the County waives this requirement for a single duplex or new single-family detached home on an existing lot, this could improve the financial feasibility of duplex development somewhat, particularly on corner lots, though duplexes may still not be more financially feasible than other housing types. If the County were to also waive this requirement for up to four units of affordable middle housing on an existing lot, this could remove one obstacle to affordable middle housing development.
- **Potential impacts:** The County will need to balance the benefits of middle housing development with the benefits of incrementally filling gaps in the street and sidewalk network.

Exempt townhomes from the minimum lot size to divide in the R-5 district. Current regulations require parcels to be at least 14,000 square feet in order to do a land division.

- **What's required:** The County could keep this restriction, but it would need to justify the public benefit of the restriction and show that townhomes continue to be possible on a certain percentage of lots in various areas to comply with state rules.

²⁷ While middle housing is required to be allowed with clear and objective standards, some developments may need minor adjustments to standards to address site-specific constraints; for these developments, neighbor opposition could create challenges for land use approval.

²⁸ 660-046-0020(16)

²⁹ February 3, 2021 HB 2001 Consultant Open Forum Question and Answer Written Response, Published 2/12/2021

- **Potential benefits:** Expands middle housing options for lots under 14,000 square feet in the R-5 district.
- **Potential impacts:** The overwhelming majority of these lots would not be financially feasible to redevelop with townhomes in any case. While there are a handful of lots in areas like Aloha and Metzger that would be financially feasible to redevelop with townhomes if this restriction were removed, close to half of these are also feasible for redevelopment with other middle housing types that do not require land division. (Note that the potential for flag lot development and other forms of infill that retain the existing home is likely higher on these properties, but that is not captured in the analysis.)

Refine existing parking reductions for regulated affordable housing and areas with high-quality transit service to better apply to middle housing. There is an existing parking reduction available for affordable housing (0.75 spaces per unit) and up to a 30 percent reduction for residential within a half-mile of major transit or quarter-mile of high frequency bus. (The parking ratio cannot go below 0.5 spaces per unit even with multiple combined reductions, though.) For developments with just a few units, if parking requirements are rounded up to the nearest space, these reductions may not allow for a reduction. The County could clarify rounding rules to ensure that small middle housing developments can get the benefits of these reductions.

- **What's required:** The County is not required to allow middle housing with lower parking ratios than those assumed for this analysis.
- **Potential benefits:** For small sites, this could improve development feasibility, particularly for rental housing where there is less expectation of having a dedicated parking space for each unit.
- **Potential impacts:** The impact of these changes is likely to be small in aggregate, but it could be important for individual developments that qualify for them.

Allow a density bonus in certain districts for regulated affordable housing and/or if all units are under a certain size. The County has an existing option for up to a 50 percent density bonus through the flexible design option for regulated affordable housing (CDC Section 404-5), but this is a discretionary process that adds time and cost for development. The County could offer a targeted density bonus for middle housing as-of-right for qualifying housing development (either for development of regulated affordable housing or based on unit size). This density bonus could take the form of allowing triplexes and fourplexes on smaller lots and/or allowing up to a sixplex on lots that would otherwise allow a fourplex.

- **What's required:** The County is not required to offer a density bonus or to allow sixplexes. However, the County is required to consider options to increase the affordability of middle housing, and these options could support that goal.
- **Potential benefits:** A density bonus (especially if paired with parking reductions) would create an incentive to build smaller units (which are more likely to be rental housing and lower cost) or to support development of regulated affordable middle housing.

- **Potential impacts:** A density bonus for smaller units could make rental housing more financially feasible compared to ownership housing. While it would likely still not be the most financially feasible development in most cases, it could be competitive with larger ownership units. For regulated affordable housing, these changes could increase the number of affordable units that could be produced and reduce the subsidy required per unit.

In addition, if the County advances **strategies to protect residents of manufactured housing parks**, that will address much of the displacement risk that could be associated with implementing HB 2001. These are being developed and considered through a separate project and are not addressed in detail here.

Financial Incentives

A variety of financial incentives to encourage more middle housing, or more affordable units, are discussed below. There are revenue and other policy questions associated with each that would best be considered in more depth as part of a broader discussion of measures to support affordable housing in the County generally. Collaboration with other County partners, such as the Office of Community Development and the Department of Housing Services, is recommended.

Offer property tax exemptions for affordable and/or rental middle housing development.

There is one available locally implemented exemption that could apply to rental middle housing and another that could apply to for-sale housing. Both can have affordability requirements that are set by the jurisdiction and could be offered only to regulated affordable middle housing.

- **What's required:** The County is not required to offer tax exemptions. However, the County is required to consider options to increase the affordability of middle housing, including property tax exemptions.
- **Potential benefits:** A tax exemption for rental middle housing could make it more competitive with ownership housing if the rents are not restricted. Alternatively, this exemption could be offered only for affordable rental housing (for both middle housing and multifamily), which would make affordable housing more viable. A tax exemption for middle housing units built by nonprofit developers (e.g., Habitat for Humanity) would make those units more affordable to low and moderate-income homebuyers, supporting affordable homeownership.
- **Potential impacts:** These programs may apply to a small share of middle housing development but would be very beneficial to those developments. They would result in some lost property tax revenue to the County, but likely a small amount.

Offer TDT waivers or reductions for regulated affordable middle housing development, and/or change TDT rate structures to incentivize smaller middle housing units (e.g., by scaling fees based on unit size relative to a typical single-family detached home).

- **What's required:** The County is not required to offer TDT waivers or reductions. However, the County is required to consider options to increase the affordability of middle housing, including SDC (or, in the County's case, TDT) waivers.
- **Potential benefits:** A TDT waiver or reduction for regulated affordable housing (for both middle housing and multifamily) would make affordable housing more viable and reduce the subsidy required per unit. A reduced rate for smaller units would provide an incentive to build smaller units, which are more likely to be rental units and have lower costs than larger units.
- **Potential impacts:** These programs may apply to a small share of middle housing development but would be very beneficial to those developments. A TDT reduction for smaller units could make rental housing more financially feasible compared to ownership housing. While it would likely still not be the most financially feasible development in most cases, it could be competitive with larger ownership units. They would result in some lost revenue to the County.

Implement a construction excise tax (CET) to generate funding for affordable housing, including affordable middle housing. A CET is a tax imposed on new development and expansions as a percentage of the permit value. It can be applied to commercial and industrial development and/or to residential development (affordable housing and certain public and institutional uses are exempt). Funds are used primarily for local housing programs.

- **What's required:** The County is not required to implement a CET; however, the County is required to consider options to increase the affordability of middle housing, including a CET.
- **Potential benefits:** A CET can generate additional locally controlled funding for affordable housing that the County can use somewhat flexibly for a range of housing programs and incentives.³⁰ Having additional funding for affordable housing that is flexible and can be applied to smaller affordable housing developments could help fill a gap in the availability of funding for affordable middle housing.
- **Potential impacts:** A CET would increase costs on development that is subject to it (affordable housing is exempt, and the County can add other exemptions, such as developments under a certain permit value).

Next Steps

ECONorthwest and staff are seeking feedback on the results of this analysis and direction from the Board of County Commissioners regarding strategies that should be explored further and

³⁰ If a jurisdiction imposes a CET on residential development, 50 percent of net revenue (after subtracting up to 4 percent for administrative costs) must be used to pay for statutorily authorized developer incentives, including fee and SDC waivers, tax abatements, or finance-based incentives; 35 percent may be used flexibly for affordable housing programs, as defined by the jurisdiction; and the remaining 15 percent goes to Oregon Housing and Community Services for home ownership programs that provide down-payment assistance.

what additional information is needed to support broader public outreach and preliminary recommendations related to HB 2001.

Appendix A: Documentation of Assumptions

This appendix provides a summary of the financial assumptions used in our pro forma feasibility analysis.

For each middle housing prototype, we evaluated whether a developer could pay at least estimated market value for land after all revenues, costs, and the respective financial return metric were accounted for. This methodology is called a residual land value (RLV) analysis. RLV is a measure of what a developer is able to pay for land, given expected construction, operating costs, and revenue. In other words, it is the budget that developers have remaining for land after all the other development constraints have been accounted for. It is a useful metric for assessing how code changes and potential development incentives interact to impact development feasibility.

Development Costs

Development costs include hard costs (cost of labor and materials for construction) and soft costs (fees, design, permitting, and other nonconstruction costs). Costs were informed by input from experienced middle housing developers and the Homebuilders Association of Oregon (HBA). In total, estimated development costs (excluding land) per unit range from \$130,000 to \$315,000 for the middle housing types, and \$250,000 to \$410,000 for single-family detached prototypes.

Hard Costs

Hard costs for construction of the housing account for variations in unit size, finish quality (e.g., entry-level vs. luxury), and variations in how much spaces like bedrooms and kitchens cost compared to other finished space in a unit. For specific housing types like stacked flats with three or more units, we've accounted for the additional costs of fire sprinklers that are required by code for this development type.

Other hard costs include the cost of garages, driveways and off-street parking, and exterior landscaping. Demolition costs are included if a property is currently developed. The analysis includes a rough estimate of the costs of frontage improvements that are required if a property is on an underimproved or unimproved roadway.³¹ The cost of building new local streets if needed for access in a larger development is also included.

Costs tend to be higher for development on steep slopes; however, the cost increase (for more complex structural and/or geotechnical analyses, more expensive foundations, retaining walls,

³¹ County staff identified streets that are more likely to require frontage improvements (e.g., curb, gutter, and sidewalk); for this high-level analysis, staff identified any street that was not built as part of a recent development or recently improved by a County project as potentially requiring frontage improvements. While the specific improvements needed and the associated costs can vary substantially, ECONorthwest estimated an average cost of frontage improvements based on the City of Portland's Local Transportation Infrastructure Charge (LTIC) fee of \$600 per linear foot.

etc.) varies depending on slope and soil conditions. Without detailed data about these slope and soil conditions, we have not estimated the cost impacts of slopes on development feasibility.

Soft Costs

Soft costs include:

- System development charges (SDCs), Transportation Development Tax (TDT), permit fees and excise taxes that vary by housing type, subgeography, and water provider.
- Design costs such as architectural plans and engineering fees
- Carrying costs for the duration of the development
- Legal and survey costs for land division or to establish a condominium, where applicable

Local fees are based on published fee schedules; other soft costs are estimated based on industry standard assumptions and input from developer interviews.

Revenue

Estimated sales prices and rents vary by housing type based on unit size, finish quality, attached vs. detached, and condominium vs. fee simple ownership (for sale pricing). They also vary geographically by subarea based on observed trends in home prices, particularly for newer homes and current rents. Sales data was based on recent sales transactions in Washington County (including its cities) for three and four-bedroom detached homes and townhouses. Rents were based on data from CoStar and rental listing services.

For rental housing, we've made standard assumptions about vacancy and operating costs.

Return Requirements

Financial feasibility on for-sale housing is based on typical profit expectations for home builders. For rental housing, we assume a required ratio between ongoing net operating income (NOI) and estimated loan payments (debt service on a long-term loan) based on typical lending requirements. Both were informed by interviews with local developers.

Appendix B: Prototype Assumptions

Housing Type	# of Units	Configuration	Condo/Fee Simple if for sale	Starting Parcel Size (min)	Unit Type (BD/BA)	Unit Size (sf) excl. garage	Market Segment	Parking Ratio (spaces per unit)	Parking location	Land Use Designations	Est. Frontage Needed (ft)	Height in Stories
Triplex	3	side-by-side (long way)	condo	5,500	3BD/2.5BA	1,650	Midrange	1	shared driveway, individual garages	R-5+	50	3
Triplex	3	side-by-side (long way)	condo	5,000	2BD/2.5BA	1,100	Entry	1	shared driveway, individual garages	R-6+	50	2
Triplex	3	side-by-side (long way)	condo	5,000	3BD/2.5BA	1,650	Midrange	1	shared driveway, individual garages	R-9+	50	3
Triplex	3	stacked	condo	5,000	2BD/1BA	810	Entry	1	surface (driveway to rear)	R-6+	50	3
Triplex	3	stacked	condo	5,500	2BD/2BA	1,150	Midrange	1	surface (driveway to rear)	R-5+	50	3
Fourplex	4	side-by-side (long way)	condo	7,000	3BD/2.5BA	1,650	Midrange	1	shared driveway, individual garages	R-5+	60	3
Fourplex	4	side-by-side (long way)	condo	6,500	2BD/2.5BA	1,100	Midrange	1	shared driveway, individual garages	R-5+	55	2
Fourplex	4	stacked	condo	4,500	2BD/1BA	900	Entry/mid-range	1	surface (driveway to rear)	R-9+	60	2
Duplex	2	stacked	condo	3,600	2BD/1BA	810	Entry	1	surface (driveway to rear)	R-9+	45	2
Duplex	2	stacked	condo	2,100	2BD/1BA	810	Entry	1	shared front driveway	R-9+	25	2

Housing Type	# of Units	Configuration	Condo/Fee Simple if for sale	Starting Parcel Size (min)	Unit Type (BD/BA)	Unit Size (sf) excl. garage	Market Segment	Parking Ratio (spaces per unit)	Parking location	Land Use Designations	Est. Frontage Needed (ft)	Height in Stories
Duplex	2	stacked	condo	4,000	2BD/ 2BA	1,150	Midrange	1	surface (driveway to rear)	R-5+	50	2
Duplex	2	side-by-side	condo	4,356	3BD/ 3BA	1,920	Midrange	1	tuck-under garage	R-5+	50	3
Townhouse	2	side-by-side	fee simple ownership	4,356	3BD/ 3BA	1,920	Midrange/ high-end	1	tuck-under garage	R-5+	50	3
Townhouse	2	side-by-side	fee simple ownership	3,630	3BD/ 2.5BA	1,650	Midrange	2	1 garage, 1 driveway	R-6+	50	3
Townhouse	2	side-by-side	fee simple ownership	3,485	3BD/ 2.5BA	1,650	Midrange	2	1 garage, 1 driveway	R-9+	50	3
Townhouse	4	side-by-side	fee simple ownership	8,712	3BD/ 2.5BA	1,650	Midrange	2	1 garage, 1 driveway	R-5+	95	3
Townhouse	4	side-by-side	fee simple ownership	7,260	2BD/ 2.5BA	1,350	Midrange	2	1 garage, 1 driveway	R-6+	95	2
Townhouse	4	side-by-side	fee simple ownership	6,970	2BD/ 2.5BA	1,350	Midrange	2	1 garage, 1 driveway	R-9+	90	2
Cottage Cluster	3	detached	condo	7,000	2BD/ 1.5BA	1,100	Midrange/ high-end	1	surface (shared drive, parking front/side)	R-5+	70	1.5
Cottage Cluster	4	detached	condo	11,500	3BD/ 2BA	1,400	Midrange/ high-end	1	shared driveway, carport cluster	R-5+	100	2
Cottage Cluster	4	detached	condo	10,500	3BD/ 2BA	1,400	Midrange/ high-end	1	shared driveway, carport cluster	R-9+	100	2

Housing Type	# of Units	Configuration	Condo/Fee Simple if for sale	Starting Parcel Size (min)	Unit Type (BD/BA)	Unit Size (sf) excl. garage	Market Segment	Parking Ratio (spaces per unit)	Parking location	Land Use Designations	Est. Frontage Needed (ft)	Height in Stories
Cottage Cluster	4	detached	condo	14,400	3BD/2BA	1,800	Midrange/high-end	1	2 driveways with parking pads	R-5+	120	2
Cottage Cluster	6	detached	condo	11,875	1BD/1BA	650	Midrange	1	shared driveway, surface parking	R-9+	95	1
Cottage Cluster	6	detached	condo	12,825	1BD/1BA	650	Midrange	1	shared driveway, surface parking	R-5+	95	1
Single Family	1	detached	fee simple ownership	4,000	3BD/2.5BA	1,800	Midrange/high-end	2	1 garage, 1 driveway	R-6+	50	2
Single Family	1	detached	fee simple ownership	4,000	3BD/2.5BA	1,800	Entry/mid-range	2	1 garage, 1 driveway	R-6+	50	2
Single Family	1	detached	fee simple ownership	5,500	4BD/3BA	2,500	High-end	4	2 garage, 2 driveway	R-5+	12	2
Single Family	1	detached	fee simple ownership	2,800	3BD/2.5BA	1,650	Midrange	2	1 garage, 1 driveway	R-9+	30	2
Single Family	1	detached	fee simple ownership	4,000	4BD/2.5BA	2,050	High-end	4	2 garage, 2 driveway	R-6+	50	2
Single Family	1	detached	fee simple ownership	2,100	3BD/2.5BA	1,470	Midrange	2	1 garage, 1 driveway	R-15+	20	2
Single Family	1	detached	fee simple ownership	2,100	4BD/2.5BA	2,200	Midrange/high-end	2	1 garage, 1 driveway	R-15+	25	2

Source: ECONorthwest

Appendix C: Results Details

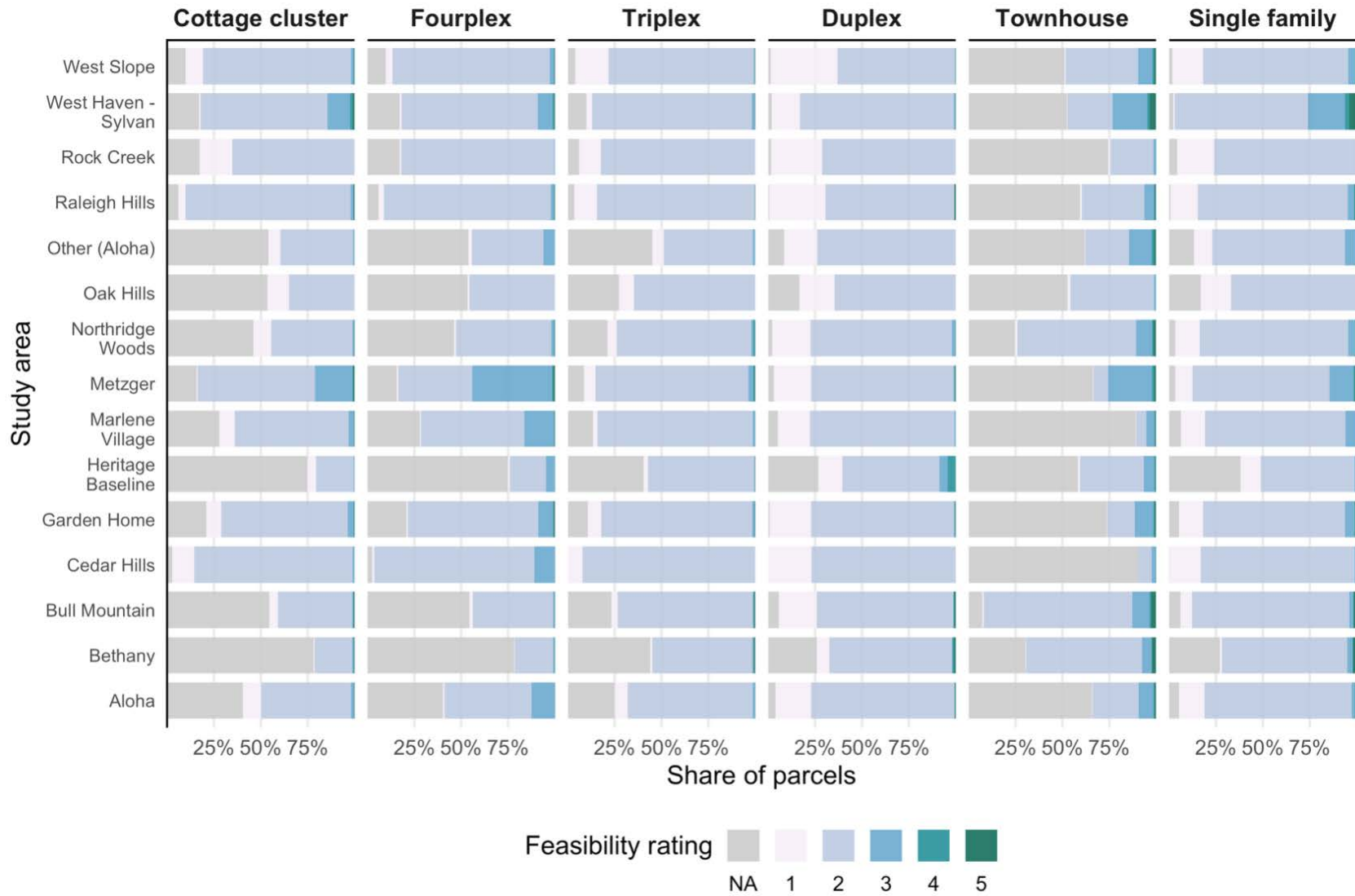
Feasibility Ratings

The rating system below (0–5) helps to generalize feasibility results and give a sense of how sensitive these results might be to site-specific differences or changing market conditions.

Rating	Description
0/NA	Parcel is not eligible for a given type of middle housing (too small, or not consistent with development regulations). Middle housing development is not possible under the assumed regulations.
1	Revenues (sales prices or rents) do not cover costs of development, even before accounting for land costs. Middle housing development is highly unlikely.
2	Revenues cover the costs of development (excluding land), but the estimated value of the property is much too high to make development feasible (specifically, the RLV is less than 50 percent of the estimated property value). Middle housing development is unlikely, but might be possible in unique circumstances.
3	Revenues cover the costs of development and are close, but not sufficient, to afford the estimated price of the property (specifically, the RLV is 50–99 percent of the estimated property value). Middle housing development is unlikely with current conditions and property values but might be possible if market conditions improved, development costs were below average, and/or the cost of acquiring the property were reduced.
4	Revenues cover the costs of development and allow for acquiring property at roughly the cost of the property in question (RLV is 100–120 percent of the estimated property value). Middle housing development is potentially financially feasible, depending on the specifics of the situation.
5	Revenues cover the costs of development and allow for acquiring a property at or above the cost of the property in question (RLV is over 120 percent of the estimated property value). Middle housing is very likely financially feasible, even if costs are somewhat higher than anticipated or rents/sales prices are somewhat lower than anticipated.

Exhibit 16 on the following page summarizes the feasibility ratings for each housing type on all the parcels in each subarea.

Exhibit 16: Percent of Parcels by Feasibility Rating, Housing Type, and Subarea



Source: ECONorthwest

Feasibility Results by Housing Type and Subarea

Exhibit 17: Parcels with Market Feasible Development by Housing Type and Subarea

Subarea	Parcels with Market Feasible Single-Family Development	Parcels with Feasible Duplex	Parcels with Market Feasible Triplex	Parcels with Market Feasible Fourplex	Parcels with Market Feasible Townhomes	Parcels with Market Feasible Cottage Clusters	Parcels with Market Feasible Middle Housing Development (all types)	Parcels with No Feasible Development	Total Parcels
Aloha	124	67	38	40	249	40	312	13,501	13,816
Bethany	187	142	79	32	232	43	259	8,283	8,559
Bull Mountain	47	37	22	11	115	15	117	2,763	2,881
Cedar Hills	2	1	1	3	14	1	17	2,578	2,595
Cedar Mill	147	15	14	24	188	41	195	4,510	4,735
Garden Home	27	10	15	21	43	15	66	2,310	2,378
Heritage Baseline	2	34	3	1	10	0	45	758	803
Marlene Village	5	2	9	8	18	5	25	1,640	1,666
Metzger	15	4	11	15	33	13	49	1,066	1,118
Northridge Woods	27	9	45	25	106	15	139	3,734	3,877
Oak Hills	4	0	0	1	7	2	7	3,161	3,168
Other (Aloha)	1	0	0	0	16	0	16	432	448
Raleigh Hills	20	12	7	7	30	10	40	1,565	1,606
Rock Creek	4	3	2	2	10	2	11	2,837	2,848
West Slope	14	5	6	11	45	11	54	1,836	1,890
West Haven-Sylvan	130	6	10	29	130	53	154	1,894	2,088
Total	756	347	262	230	1,246	266	1,506	52,868	54,476

Source: ECONorthwest

Displacement Risk

Exhibit 18: Parcels Feasible for Development (Middle Housing and Single Family) by Current Use and Tenure

Subarea	Parcels Feasible for Middle Housing Development					Parcels Feasible for Single-Family Detached Development				
	Developed with Housing			Vacant/ Non-residential	Total	Developed with Housing			Vacant/ Non-residential	Total
	Likely Rental	Likely Owner-Occupied	Unknown			Likely Rental	Likely Owner-Occupied	Unknown		
Aloha	16	124	44	128	312	5	13	16	90	124
Bethany	16	48	2	193	259	13	43	4	127	187
Bull Mountain	6	38	22	51	117		4	2	41	47
Cedar Hills		4	2	11	17				2	2
Cedar Mill	21	99	11	64	195	20	72	9	46	147
Garden Home	8	20	3	35	66	1	4	3	19	27
Heritage Baseline	31	5	3	6	45	1	1			2
Marlene Village	4	10	2	9	25		2		3	5
Metzger	5	18	7	19	49	2	4	2	7	15
Northridge Woods	7	33	27	72	139		2	4	21	27
Oak Hills			2	5	7				4	4
Other (Aloha)	2	7	5	2	16			1		1
Raleigh Hills	4	14	1	21	40	1	3		16	20
Rock Creek	3	3	1	4	11	1			3	4
West Haven - Sylvan	23	64	9	58	154	21	59	9	41	130
West Slope	3	30		21	54		2		12	14
Total	149	517	141	699	1,506	65	209	50	432	756

Source: ECONorthwest