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Updating Seattle's Neighborhood Residential Zones: Middle Housing Feasibility Analysis **FINAL**

City of Seattle
Office of Planning & Community Development

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ECOnorthwest

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1. Introduction & Context

The City of Seattle is working to update its Comprehensive Plan and Neighborhood Residential (NR) zones to allow a greater quantity and variety of housing in areas currently reserved for detached homes. The NR zone is the City’s lowest density designation and primarily consists of detached homes today.

This study is intended to inform the City’s policy and zoning updates by exploring the range of potential development outcomes that can be expected if middle housing options are allowed more broadly within NR zones. It evaluates the impact of these policy changes on the type and amount of development that is likely in these areas to help the City understand potential implications for Seattle’s neighborhoods and make more informed decisions regarding middle housing allowances, such as density, scale, and parking. This study is neither a recommendation of policies nor an evaluation of finalized policy decisions. Rather, it models potential outcomes based on the City’s draft NR zoning proposal released in October 2024.

The City is required to update the NR zone under House Bill (HB) 1110 (2023), which requires cities across the state to allow a greater variety of housing in areas that have historically seen detached homes. Seattle is a Tier 1 city under HB 1110 because it has a population of over 75,000. Tier 1 cities are required to allow the following on all lots predominately zoned for residential use, unless existing zoning permits greater densities:

- » Four units per lot as the minimum base density
- » Six units per lot in areas near major transit stops
- » Six units per lot when two affordable units are provided

Summary of approach

ECONorthwest analyzed a range of middle housing options across different market conditions in Seattle’s NR zones for financial feasibility—whether a market-rate housing developer could likely achieve sufficient financial returns to proceed with a potential development. The feasibility analysis used real estate pro forma to approximate developers’ early financial calculations of the expected revenues, costs, and financial returns of potential middle housing developments. This approach identifies sites where the estimated existing property value (including the value of any existing structures and land) is likely to be lower than the potential value of the future development given anticipated development costs and market conditions. It offers a snapshot of potentially viable development opportunities at a point in time, but it does not project into the future how market conditions and development costs will change over time.



The analysis tests financial viability of a range of middle housing options that would potentially be allowed in the NR zone based on the City's [proposed NR zone updates](#) as of October 2024. The analysis identifies:

- ◆ how much middle housing might be financially feasible across the City's NR zones,
- ◆ which middle housing options are most likely to be financially feasible,
- ◆ which areas are more likely to be feasible for middle housing development, and
- ◆ what the estimated prices for middle housing might be in different parts of the City.

Study area

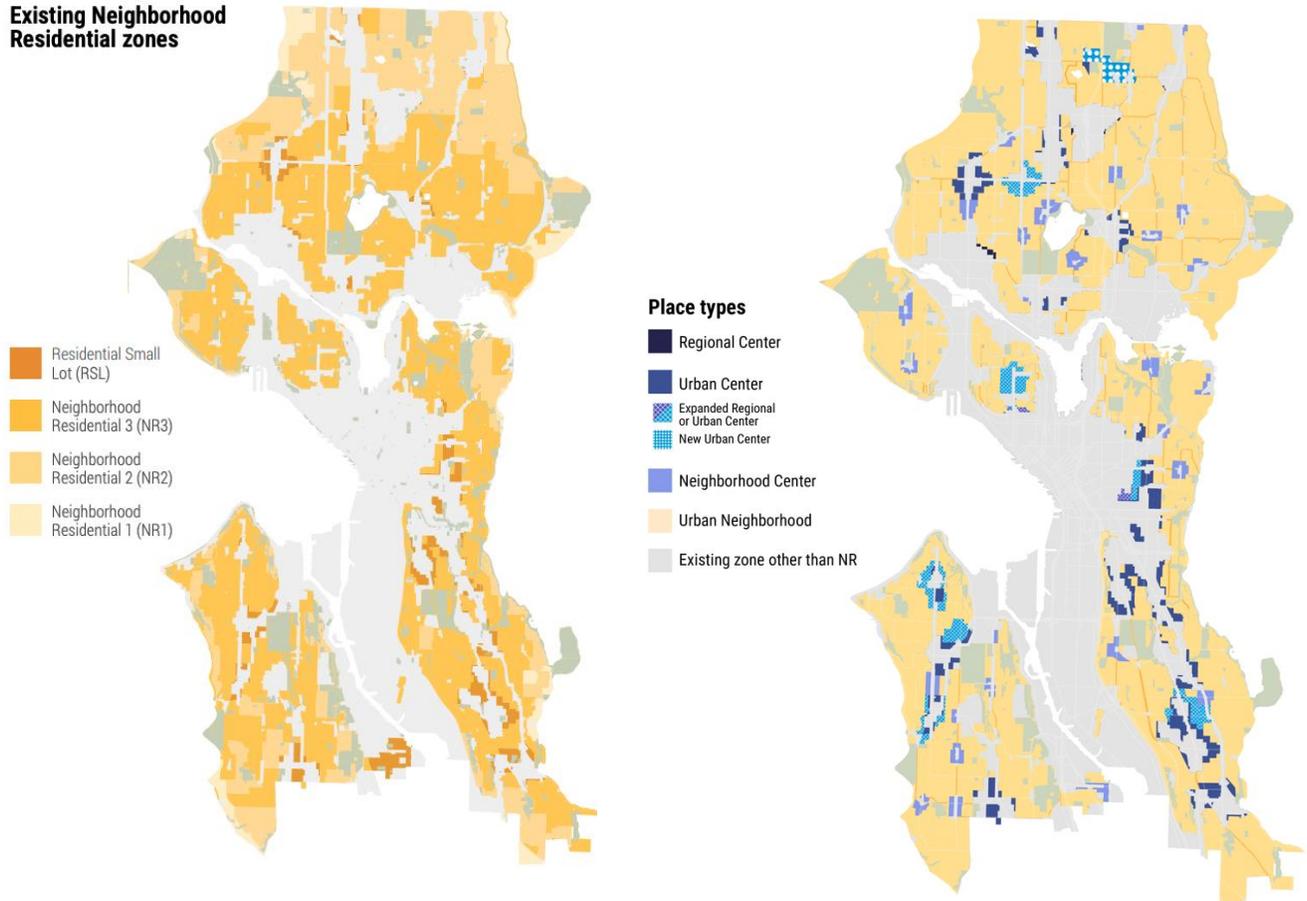
The NR zone is the focus of this analysis; it is a key area where the City is considering significant policy changes as part of the One Seattle Plan. The feasibility analysis is limited to areas that are currently zoned NR and are expected to remain in the NR zone. It does not include areas that are proposed to be designated as Regional, Urban, or Neighborhood Centers. Exhibit 1 shows proposed zoning designations as of February 2025.¹ The study area does not include areas of existing Neighborhood Residential zoning that is proposed to be rezoned to other zones.

¹ The naming and precise boundaries of the proposed zoning designations were modified by the City during this study. It is possible that the areas covered in the analysis may not perfectly align with the areas in the final, approved zones.



Exhibit 1: Draft One Seattle Plan Neighborhood Residential Concepts

Existing Neighborhood Residential zones



Source: City of Seattle, Office of Planning and Community Development

The analysis includes both vacant and developed properties within these areas, but it excludes public land and certain other undevelopable sites based on data provided by the City of Seattle (see technical appendix for details).

Middle housing options

The updates to the NR zone would allow a range of middle housing options, including detached homes, duplex, triplex, fourplex, cottage housing, apartments, and condos. For purposes of analyzing market-driven development potential, ECONorthwest focused on a limited number of options that are representative of a range of outcomes that could occur on sites where existing homes are demolished. These are summarized in brief below and in more detail in Exhibit 2 on page 5.

- ◆ **Attached housing:** Multiple units on a site, in sets of two units attached side by side. These are assumed to be built for sale with the option of a unit-lot subdivision to



enable fee-simple ownership (purchasing both the land and the unit, unlike a condominium). The analysis considers three different parking variations²:

- Garage Parking (accessed from an internal “autocourt”)
 - Surface Parking (allowed on lots with alley access)
 - No Off-Street Parking (allowed in limited areas with reduced parking requirements, assumed only on lots without alley access)
- ◆ **Stacked Flats:** Multiple units in a single, multistory building with stacked single-level units. These are assumed to be built for sale as condominiums. This prototype is consistent with a development using the stacked flat bonus as contained in the October 2024 proposal. The analysis considers two parking variations:
 - Surface Parking
 - No Off-Street Parking (allowed in limited areas)

These middle housing options were compared to selected housing options allowed under the existing NR zoning to assess the potential impacts of allowing more middle housing in Seattle's NR zones. The two existing options tested are:

- ◆ Single-Family Detached (SFD)
- ◆ Single-Family with an attached accessory dwelling unit (ADU) and a detached ADU (SF + AADU + DADU)

The analysis was informed by illustrative “prototypes” developed by MAKERS during the early phase of the City’s middle housing study. This work helped the City of Seattle determine what would be physically possible within the confines of a prototypical 5,000 sq. ft. lot, exploring factors such as detached vs. attached units, on-site parking, open space, and more, while maximizing the allowed density and FAR. ECONorthwest collaborated with the City to narrow down the specific options and physical form assumptions to include in the feasibility analysis. ECONorthwest’s analysis estimates the maximum number and size of units that would fit on each lot based on existing lot size, the proposed maximum density, the proposed maximum floor area ratio, and parking. Exhibit 2 shows a summary of the prototypes included in the analysis.

The analysis for middle housing focused on assessing the feasibility of full redevelopment including the demolition of existing homes. The analysis did not include scenarios for additions or remodels, as property-specific costs and opportunities working with an existing structure are difficult to predict and model at a citywide scale. The analysis also did not estimate the potential for increasing housing units by converting existing single-family homes into multiple units or adding principal or accessory dwelling units while retaining an existing single-family home.

² These prototypes align with housing configurations being considered by the City of Seattle.



Exhibit 2: Summary of Housing Development Options Analyzed

ZONING ALLOWANCES	HOUSING DEVELOPMENT OPTION	LOT AREA PER UNIT	FAR	NET UNIT SIZE ON 5,000 SQ. FT. LOT	FLOORS	PARKING	NOTES
Allowed under current NR zoning	SFD	5,000-9,600 sq. ft. ¹	0.5	2,100 sq. ft.	2-3	400 sq. ft. garage	Unit size limited to 4,000 sq. ft.
	SF + AADU + DADU	5,000-9,600 sq. ft. ¹	0.5 + 2,500 sq. ft.	SF: 2,100 sq. ft. AADU: 1,000 sq. ft. DADU: 1,500 sq. ft.		SF: 400 sq. ft. garage AADU: 1 surface stall DADU: 1 surface stall	SF unit size limited to 4,000 sq. ft.; AADU and DADU do not change unit size
Not allowed under current NR zoning but allowed under proposed changes to NR zoning	Attached housing	1,250 sq. ft. (e.g., 4 units on a 5,000 sq. ft. lot)	1.2	1,200 sq. ft. ²	3	Garage parking: 300 sq. ft. garage per unit ²	Garage area is included in FAR
				1,500 sq. ft.		Surface parking: 1 surface stall per unit	Limited to alley lots ³
				1,500 sq. ft.		None	Limited to major transit areas ⁴
	Stacked flats (Condos)	650 sq. ft. (e.g., 10 units on a 6,500 sq. ft. lot)	1.4	765 sq. ft.	3	Surface parking: 0.5 spaces per unit	Limited to alley lots ³ in major transit areas ⁴
				765 sq. ft.		None	Limited to major transit areas ^{4,5}

Note 1: The minimum lot area depends on zoning: NR3 = 5,000 sq. ft.; NR2 = 7,200 sq. ft.; NR1 = 9,600 sq. ft.

Note 2: Garage floor area is counted towards the maximum FAR, resulting in a lower net unit size for units with a garage.

Note 3: Surface parking is assumed to fit on a site at the maximum density and unit size only when the site has alley access.

Note 4: Off-street parking is not required in major transit areas associated with HB1110 (within 0.5 mile of major transit stops).

Note 5: Greater densities (650 sq. ft. per unit and 1.4 FAR) are proposed to be allowed in frequent transit areas (within 0.25 mile of frequent transit stops).



2. Middle Housing Development Potential

How much middle housing could be feasible if the City allows it in the NR Zones?

ECONorthwest’s analysis of middle housing feasibility showed that **roughly 19 percent of properties in the NR zone may be feasible to (re)develop with middle housing** under the proposed policy concepts tested. If all feasible properties were to redevelop with the most feasible form of middle housing, it could result in roughly 69,300 net new housing units—roughly 88,000 new units, less about 18,700 existing units on the sites that would be redeveloped.

For comparison, **under the existing zoning, only about 3 percent of properties are estimated to be feasible for (re)development.** If all feasible properties were redeveloped with the most feasible option currently allowed in the NR zone (the densest option being a single-family home with an AADU and a DADU), it could add roughly 7,800 net new units—roughly 10,500 units in new development, less about 2,700 existing units on the sites that would be redeveloped.

This represents a substantial increase in the market-feasible development capacity of the NR zone. As noted previously, the analysis did not include scenarios where an existing unit is retained and new units are added on the same site, which could *increase* the number of potential sites or could decrease the number of units on sites that do redevelop if it is challenging to fit as many units on a site without demolishing existing units. However, the analysis also did not analyze whether an investor or developer would be better off to remodel or expand the existing single-family home without adding new housing units, which could *decrease* the number of potential units. The market-feasible capacity is also not an indication of development potential within any specific time horizon (discussed below).

How much middle housing is likely to get built in the next 20 years?

Factors influencing pace and timing of development

While the analysis suggests a substantial number of units could be viable through middle housing (re)development, there are a variety of factors that will influence what share of potentially feasible redevelopment may occur over a 20-year horizon.



- ◆ **Market and financing conditions can and will change over a 20-year period.** If construction costs increase due to material or labor disruptions, or if viable sales prices decrease due to higher mortgage interest rates or reduced demand, this can impact the extent of viable development opportunities at any given time. External drivers such as interest rates, lending regulations, and investor interest can also have a substantial impact on the pace of development and whether theoretically feasible developments are able to secure financing.

How the analysis accounts for this:

- It is impossible to predict changes to market conditions in detail over a 20-year period. This analysis assumes a similar relationship between market sales prices and construction costs holds, on average, over a 20-year period.
- ◆ **(Re)development depends on property owner choices** (e.g., sell their property to a professional developer, develop on their own, etc.). Most redevelopment of existing homes and residential infill sites occurs after a property changes ownership. The number of viable properties that come available for sale or development in any given year will generally be a small fraction of the total. Over 20 years, most properties will likely come up for sale at least once, but some viable properties may not sell within this time period for owner-specific reasons.

How the analysis accounts for this:

- Roughly 70 percent of properties in the NR zone have sold over the last 20 years. This analysis assumes a similar percentage will likely come available for sale over the next 20 years.
- ◆ **Not all properties feasible for redevelopment will redevelop upon sale.** This could be due to property-specific factors, such as other options for the property (e.g., remodel existing home, add units without redeveloping), or due to demand limitations (e.g., over-saturation of a particular housing type in a particular location at the time the site comes available for development).

How the analysis accounts for this:

- ECONorthwest estimates 85 percent of sites that are market-feasible for redevelopment will redevelop upon sale in Seattle's NR zones based on the availability of other options not included in the modeling. Demand-based factors may reduce this further, as discussed below.
- ◆ **Development responds to demand.** The number of households looking to buy a new home in any given year provides another check on the pace of development—developers generally try not to flood the market and will often seek to adjust the pace of housing production with how quickly completed homes are selling. Even if there is strong overall demand, there are limits on the extent of demand for a specific housing option at a price point that makes (re)development feasible in a specific location (i.e., how many people are willing and able to pay that price for that type of home in that location, vs. choosing another option that may be lower cost, older,



and/or in a different location). This can mean that not all potentially feasible and available sites are selected for (re)development within a given time period.

How the analysis accounts for this:

- EConorthwest analyzed trends in production of single-family attached and detached housing in King County³ and Seattle's share of the county's existing housing stock⁴ and recent production⁵ in these categories as a reference point. While Seattle's NR zones may account for a larger share of future growth in these housing types due to increased development potential, overall growth of these housing types throughout the county could continue to increase as cities in the region are also expanding their capacity for new housing, which could influence the distribution of growth. However, the magnitude of market-feasible development potential in the NR zones compared to magnitude of recent production of similar housing types County-wide suggests that there may be more market-feasible capacity than could be built and sold within 20 years, which could mean a smaller share (e.g., 65 to 75 percent) of feasible properties will redevelop upon sale than would be the case based on supply-side factors alone.

Estimated development potential within 20 years

Combining the assumptions related to the factors described above, Exhibit 3 provides a range of estimates for how much of the market-feasible capacity might be reasonable to assume could be developed within 20 years. The midpoint estimate—**roughly 36,400 units, and a little over half of total market feasible capacity**—assumes an increase in this type of development in Seattle relative to recent trends, but that there would still be more potentially feasible sites that might come available for development than would be needed to meet demand.

³ King County produced an average of roughly 3,500 net new single-unit attached and detached housing units per year between 2012 and 2021 based on Puget Sound Regional Council (PSRC) Housing Development Estimates. While the mix between attached and detached shifted over time, the total number of units between the two types remained relatively consistent over time, with a slight upward trend. If a similar trend continued, the county could see between 70,000 (if production continued at the average annual amount) and 110,000 (if production continued at the average annual growth rate) single family attached and detached homes added over the next 20 years.

⁴ Currently, Seattle (citywide) accounts for roughly 30 percent of the existing stock of single-family attached and detached housing units in King County, based on US Census American Community Survey (ACS) data, 2023 1-year estimates.

⁵ Seattle accounted for roughly 28 percent of net new single-unit attached and detached housing units in King County between 2012 and 2021 based on PSRC Housing Development Estimates.



Exhibit 3: 20-year Estimates of Middle Housing Development Potential

Net new market-feasible units in NR (rounded to nearest hundred)	69,300		
Percent of feasible sites that might sell in 20 years	70%		
Percent of feasible sites that might redevelop on sale	Lower estimate	Midpoint estimate	Upper estimate
	65%	75%	85%
Percent converted in 20 years	46%	53%	60%
20-year estimate (rounded to nearest hundred)	31,500	36,400	41,200
Average annual	1,575	1,820	2,060

How does this compare to what might occur without the zone change?

As noted previously, the estimated market-feasible redevelopment capacity under existing zoning is approximately 7,800 units. However, this estimate only accounts for redevelopment not adding ADUs to a property with an existing home. This makes actual development trends in the NR zone an important reference point for development potential under existing zoning.

Regulations in the NR zone last changed meaningfully in 2020, allowing one attached and one detached ADU. However, almost no building permits were issued in the NR zone in 2020 and 2021 due to the slowdown in development activity during the COVID-19 pandemic. As a result, there is less than three years' worth of development activity available for comparison.

The observed development activity includes both homeowners adding units to their existing home and developers purchasing properties and adding units or redeveloping fully. Based on evidence from other cities, ADU production is likely to decrease when more development options become available, mostly because developers have other options that are more financially desirable. However, homeowners may continue to add ADUs to their property, because this is often something that can occur with less disruption than full redevelopment for a household living in the existing home.

To provide the most applicable comparison between development under existing zoning and development under proposed zoning, this analysis focuses on permits that most likely reflect market-driven development (based on staff's analysis of the permit data) and assumes that other development would continue in a similar way under the proposed zoning. Staff's analysis of building permit data suggests market-driven development in the NR zone was about 685 net new units per year between 2022 and 2024. Extrapolating from this limited data set, **under existing zoning, if recent market-driven development trends in the NR zone continued over the next 20 years without a policy change, this would deliver roughly 13,700 units.**



Comparing the estimate of potential new units under the existing zoning to the estimated 20-year production under the proposed zoning (Exhibit), **the estimated increase in (re)development in the NR zone due to the change in zoning would be roughly between 17,800 and 27,500 net new units over 20 years, with a midpoint estimate of roughly 22,700 additional units**, as shown in Exhibit 4.

Exhibit 4: 20-year Estimates of Middle Housing Development Compared to Potential New Units Under Existing NR Zoning

	LOWER ESTIMATE	MIDPOINT ESTIMATE	UPPER ESTIMATE
20-year middle housing estimate	31,500	36,400	41,200
20-year estimate of existing potential	13,700		
Estimated increase in 20-year development potential	17,800	22,700	27,500

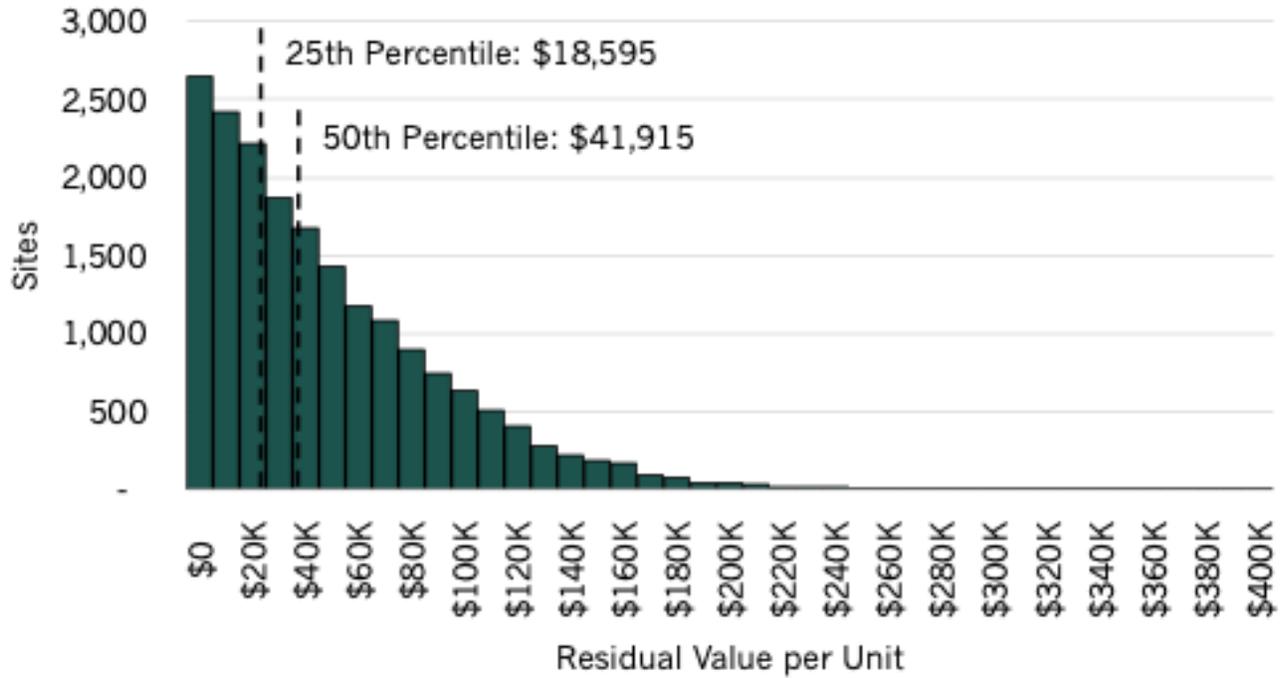
How sensitive is the middle housing development potential to additional development costs?

While the pro forma analysis accounts for many types of development costs, site-specific development costs or new development-related fees could impact the feasibility results. When the potential project value exceeds the costs (including the cost of land) and provides at least the minimum expected financial returns to make development financially feasible, the margin between the value and the costs is referred to in this report as *residual value (RV)*.

Developments with larger RVs are more likely to be feasible, while those with smaller RV will be more sensitive to additional development costs. Exhibit 5 shows the 25th percentile of RV per unit for sites where development is financially feasible is about \$18,600 and that the 50th percentile (the median) is about \$41,900. This means the number of feasible sites for middle housing would be **reduced by about a quarter with \$18,600 per unit** in additional development costs and **reduced by about half with \$41,900 per unit** in additional development costs.



Exhibit 5: Residual Value per Unit on Feasible Sites



Source: ECONorthwest



Which middle housing options are most likely to be built?

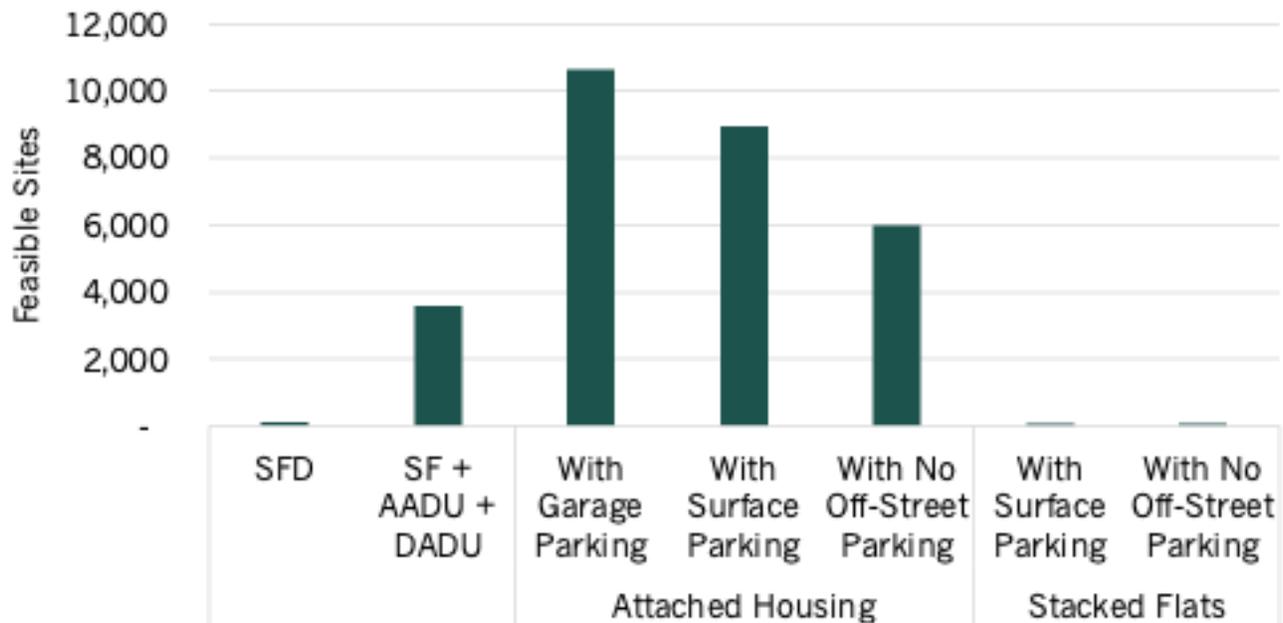
The proposed NR zone standards would allow a range of potential forms for middle housing. Overall, the analysis shows that multiple forms of middle housing are likely feasible in many situations. The differences in development feasibility are relatively subtle in many cases and may vary depending on site or market conditions. However, there are a few patterns in the results that suggest how form influences feasibility.

Exhibit 6 shows the total number of sites where each of the development options analyzed is both proposed to be allowed and is estimated to be financially feasible. (Note: The sum of the amounts reflected in the chart is larger than the total number of feasible sites because many sites have multiple options that are allowed and feasible.)

Exhibit 7 shows how all prototypes tested compared to one another, looking only at the option found to be most financially feasible on a given site. Since only the most feasible option is shown, the relative sizes of the bars represent the share of the sites where redevelopment with a prototype is the most likely to occur.

Key findings follow the charts.

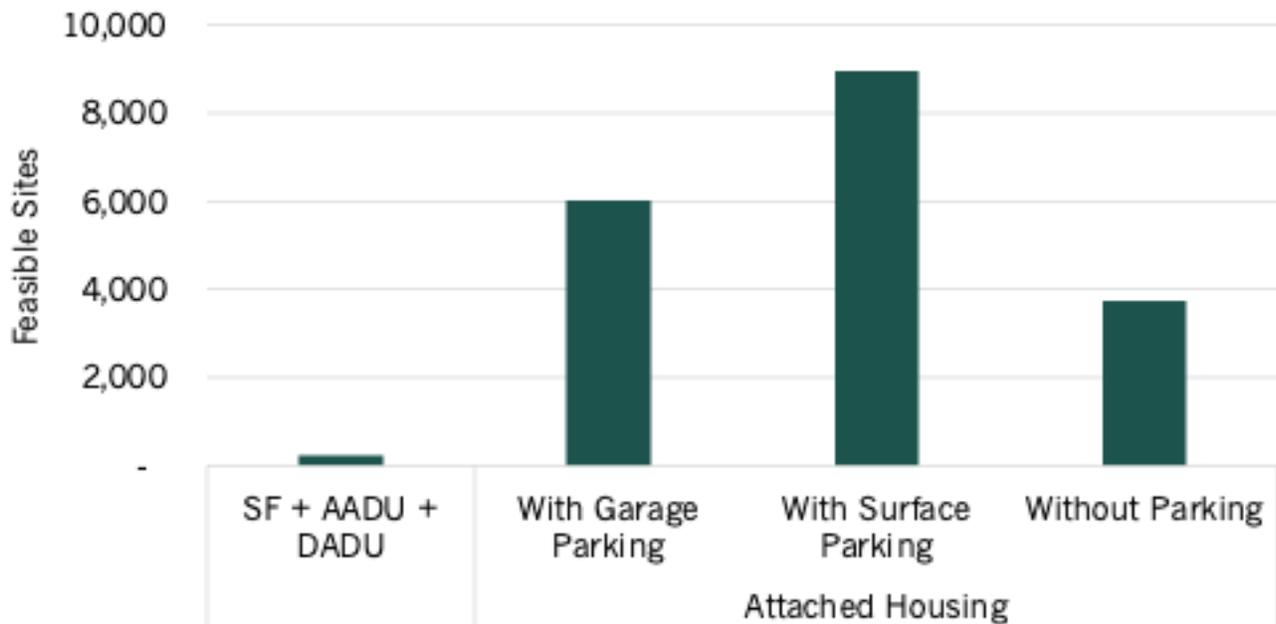
Exhibit 6: Estimated Number of Sites Where Development is Allowed and Financially Feasible by Housing Development Option



Source: ECONorthwest



Exhibit 7: Estimated Number of Sites Where Development is Allowed, Feasible, and the Most Feasible Option by Housing Development Option



Source: ECONorthwest

The results suggest:

➤ **Attached housing is feasible much more broadly than the options allowed under existing zoning.**

This is likely due mostly to the greater density and floor area ratio allowed under the proposed zoning. For a typical 5,000 sq. ft. lot, the current zoning would allow a relatively large single-family unit (about 2,100 sq. ft.) with two ADUs, resulting in 3 units with about 4,600 sq. ft. of total habitable space.

By comparison, the attached housing on the same 5,000 sq. ft. lot could result in 4 units with total habitable space of about 6,000 sq. ft., or about 4,800 sq. ft. for units with garages. This increase in development allowances makes the new options generally more feasible than the SF+AADU+DADU option, creating redevelopment opportunities on many sites where the SF+AADU+DADU option would not be feasible and creating an incentive to build at a higher density than currently allowed.

➤ **Stacked middle housing is much less likely to be feasible than other options, even with the proposed bonuses.**

Stacked housing faces specific barriers and financial challenges:

- ◆ Building more than two stacked units triggers commercial building code requirements which increase construction costs.



- ◆ Selling stacked units as condominiums triggers additional risk and/or insurance costs due to a higher risk of construction defect liability claims for condominium development.⁶
- ◆ Condominium units require condominium association dues—which lenders consider in determining how much buyers can afford to pay—and can limit the potential purchase price of condo units compared to other types of housing with lower or no condo association or homeowners association dues.

Developers in other markets have found ways to adapt to these challenges to some extent, and the same may be true in Seattle over time as well, but based on current conditions, stacked middle housing is unlikely to be the most attractive option for most developers.

The proposed density and FAR bonuses help to some extent, but the analysis suggests that these barriers likely still outweigh the value of the regulatory bonuses in most cases.

➤ **Parking adds value but competes for space.**

Among the attached housing options tested, the version with garages is likely to be feasible on more sites, as shown in Exhibit . However, this is in large part because the analysis assumes limitations on where development with surface parking is physically possible (it is assumed to require alley access), and where development without parking is allowed (only within major transit areas as defined in HB 1110).

A clearer understanding of the value of parking is illustrated in Exhibit 8, which illustrates how the most feasible parking option varies based on which parking options are analyzed. This comparison suggests that under the housing market conditions in the analysis **developers are likely to provide surface parking where possible (i.e., alley lots), and they may prefer slightly larger units with no parking to smaller units with garages within major transit areas** where the no parking option is possible.

The analysis does not consider mixed parking where some units have a different type of parking. However, one possible inference from Exhibit 8 is that developers may choose to maximize the number of surface parking they can fit on a property before deciding whether to provide garages or no parking for some units.

⁶ Based on interviews with local housing developers, the cost/risk remains a factor despite state legislation in 2019 to address this issue. Additional background on construction defect liability challenges for condominiums is included in a March 2023 [report to the legislature](#) by ECOnorthwest, BDS Planning, and the Washington State Department of Commerce on condominium conversions in Washington.



Exhibit 8: Most Likely Parking Option Based on Lot Condition for Attached Housing Development in NR Zone

		WITHIN MAJOR TRANSIT AREAS (PARKING NOT REQUIRED)	
		Yes	No
ALLEY LOTS	Yes	Surface Parking	Surface Parking
	No	No Parking	Garage Parking

Source: ECOnorthwest

There are several likely reasons for this:

- ◆ The observed value associated with parking means that **this would often be the preferred choice if it’s possible to accommodate parking on-site without reducing unit sizes.**
- ◆ However, counting garage area towards FAR limits creates a tradeoff between parking and habitable space. While past single-family and townhouse developments suggest people tend to value both larger units and garages, in Seattle’s tight housing market, given the range of likely middle housing unit sizes under the proposed NR zoning (about 1,200 sq. ft. to 1,800 sq. ft. per unit), **habitable space adds more value than garage parking.** The analysis suggests this is true even though market analysis shows a greater premium associated with garage parking than surface parking.
- ◆ Testing by staff and MAKERS suggests **providing one surface space per unit is likely only possible at the density and FAR analyzed if there is an alley** to avoid the need for a driveway. While the analysis tests a single type of parking for all units, some sites may be able to accommodate surface parking for a few units while maximizing density and FAR. This could make development somewhat more feasible than this analysis reflects.

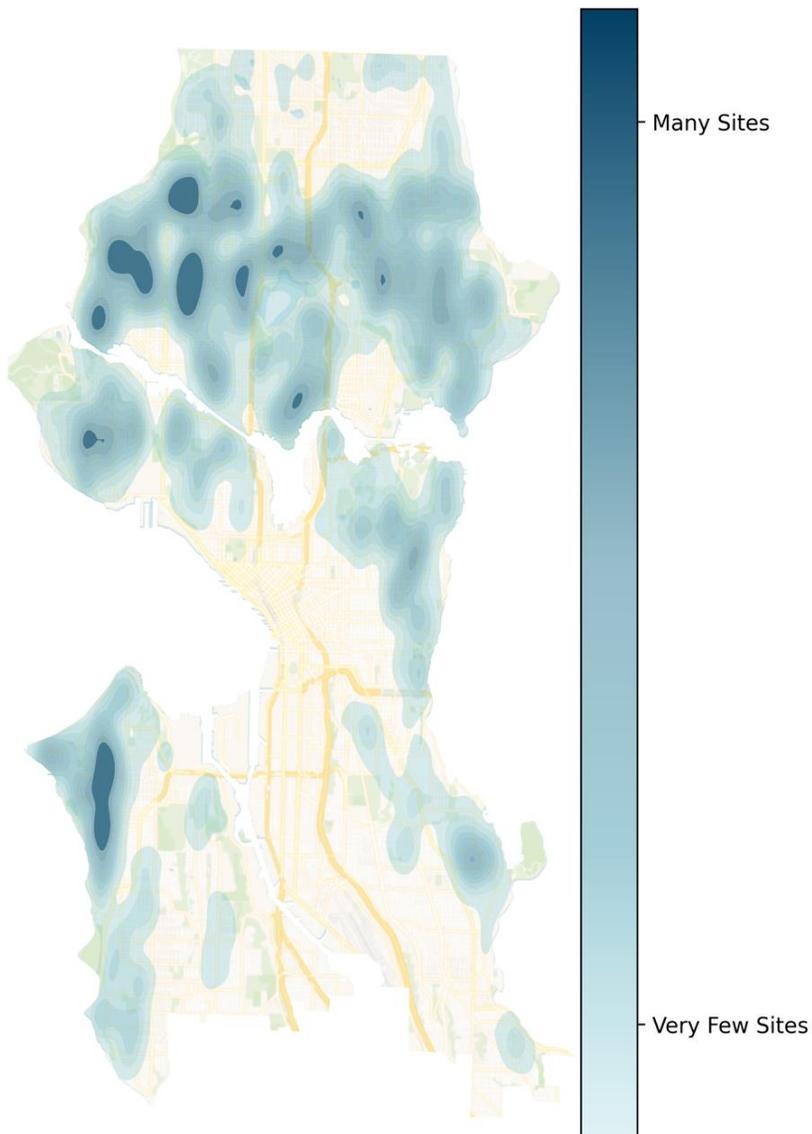


Which areas have the most middle housing potential?

Neighborhoods

Middle housing feasibility varies across Seattle's NR zones, but it is concentrated in some neighborhoods, as shown in Exhibit . Highlights of key findings follows Exhibit 9 and 10.

Exhibit 9: Distribution of feasible sites, all prototypes



Source: ECOnorthwest



Exhibit 2: Distribution of feasible sites for Single-Family + AADU + DADU



Source: ECOnorthwest

- **The distribution of where middle housing development is feasible is predominantly driven by the relationship between existing property value and the potential value for future development.**

In neighborhoods across Seattle, that means that there are, at a high level, two types of places with higher rates of market-feasible capacity:

- 1) Areas with higher value residential neighborhoods with strong demand that can overcome high land costs (including existing structures).
- 2) Areas where there is a broader mix of existing property values that support new construction at the higher end (where comparable sales values have been established) and where there are lower-cost properties that allow for redevelopment



within the same general market area. Many of these areas have seen relatively recent price increases over the last 10 years and subsequent investment in new housing development. The next section in this report summarizes where there is market feasible capacity inside and outside displacement risk areas.

➤ **Some neighborhoods of Seattle could see more middle housing due to site and infrastructure conditions that are conducive to (re)development.**

Access to existing infrastructure, nearby amenities, alleys, and larger lots make middle housing (re)development more feasible as discussed further later in this report. Areas with few site or infrastructure barriers are more likely to have feasible sites, provided that market conditions are also supportive of development. Patterns of lot sizes, alley availability, and infrastructure deficiencies can lead to higher (or lower) concentrations of feasible sites in a given area.

Some neighborhoods that are seeing higher rates of market feasible capacity for middle housing have seen recent development activity of similar housing types.

Neighborhoods such as Crown Hill, Green Lake, Greenwood, Licton Springs, North Beach, Phinney Ridge, West Seattle, parts of Ballard, and lower Wallingford are seeing similar scales and types of development occurring today in NR, LR, and NC zones based on observation of recent development trends. This analysis indicates that middle housing allowances in the NR zones adds additional market capacity for these housing types in these neighborhoods.

➤ **Detached single family housing with attached ADUs and detached ADUs will still occur throughout neighborhoods in Seattle.**

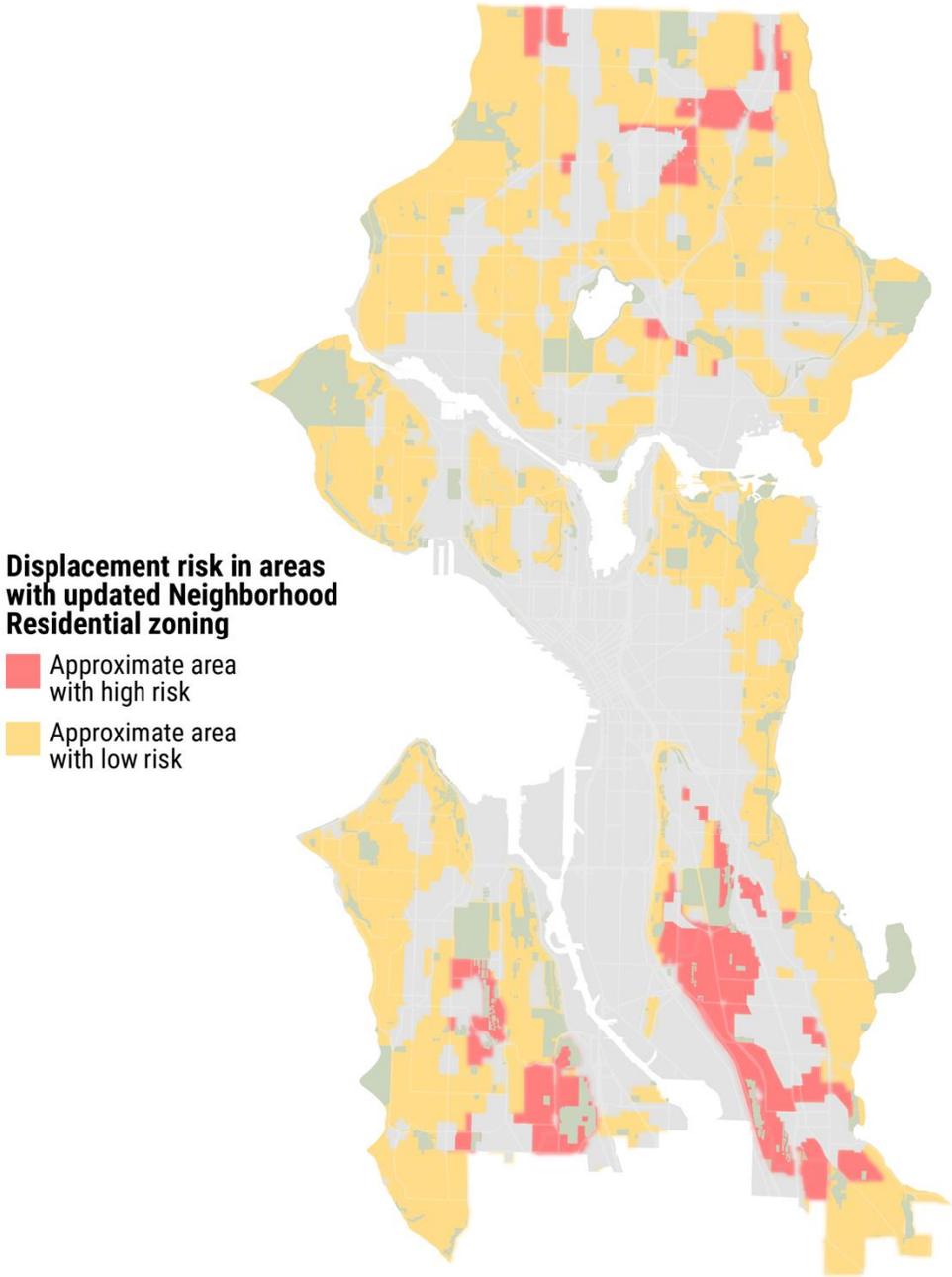
Since zoning code changes that have allowed more flexibility with AADUs and DADUs, there has been an increasing amount of this housing type getting built in neighborhoods across Seattle. After changes to the NR zone allowances, SF + AADU + DADU housing will still be feasible, but this analysis indicates these housing types are more likely in neighborhoods that have larger parcels and high sales prices like Maple Leaf, Wedgewood, and View Ridge.

Displacement risk areas

Middle housing development potential is much **greater in areas with low displacement risk**. High and low displacement areas are defined by the City of Seattle and illustrated in Exhibit 11. When the analysis results are segmented to the displacement risk categories, middle housing development potential is clearly greater for *low* displacement risk areas, as shown in Exhibit 12. While displacement could occur in high displacement risk areas regardless of the City's regulations in the NR zone, the middle housing development potential in the analysis is not concentrated in high displacement risk areas.



Exhibit 11: Map of Low Displacement Risk and High Displacement Risk Areas in NR Zones



Source: City of Seattle, Office of Planning and Community Development



Exhibit 12: Middle Housing Feasibility in High and Low Displacement Risk Areas

	HIGH DISPLACEMENT RISK AREA	LOW DISPLACEMENT RISK AREA	TOTAL
Total sites	13,000	87,200	100,200
Feasible sites	560	18,400	18,960
Feasible share	4%	21%	19%

Source: ECOnorthwest

Development constraints

The geographic distribution of where middle housing is feasible is also related to topographic and infrastructure constraints.

- ◆ **Slopes:** Many portions of the city with strong demand for housing have significant slopes that could make it challenging to redevelop. Portions of sites with steep slopes were excluded from the analysis to reflect these challenges. Roughly 10 percent of sites that include steep slopes were found to be feasible for middle housing.
- ◆ **Water main extension:** Some sites may require a water main extension to serve additional development, which would increase development costs. About 8 percent of parcels that City staff identified as needing water main extension are feasible with middle housing development.
- ◆ **Sidewalks:** For sites without existing sidewalks, new development may be required to construct sidewalks, which adds development costs. About 14 percent of sites that City staff identified as needing sidewalk improvements are feasible with middle housing development.
- ◆ **Sewer service:** If a site is not connected to a public sewer system, as identified by City staff, the analysis assumed middle housing development cannot occur on the site as the costs are difficult to estimate generally and may be cost-prohibitive.



How much is new middle housing likely to sell for?

Exhibit 13 summarizes the typical sales prices of the various middle housing options for sites where they were expected to be feasible. Exhibit 15 (in the appendix) shows that the values of middle housing prototypes vary substantially by location. For comparison, as of September 2024, the average home value for single-family in Seattle was roughly \$931,000 according to Zillow, and the median sales price was roughly \$1,008,000 according to Redfin. This suggests that the tested middle housing options in the NR zone are likely to sell for less than typical single-family homes in the market.

Exhibit 3: Median Prices of Feasible Middle Housing Prototypes

PROTOTYPE	UNIT PRICE
SFD	\$1,420,000
SF + AADU + DADU	SF: \$1,350,000
	AADU: \$581,000
	DADU: \$835,000
Attached Housing with Garage Parking	\$829,000
Attached Housing with Surface Parking	\$945,000
Attached Housing with No Off-Street Parking	\$919,000
Stacked Flats (Condos) with Surface Parking	\$506,000
Stacked Flats (Condos) with No Off-Street Parking	\$493,000

Source: ECONorthwest

Note: Values are rounded.



3. Conclusions

Middle housing allowances are expected to increase redevelopment feasibility across the NR zone in Seattle. Roughly 19 percent of NR-zoned properties could be financially feasible with middle housing options considered in the proposed NR zoning. However, not all feasible sites will be redeveloped: based on property owner choices and demand considerations, an estimated 36,400 net new units may be added over the next 20 years if the proposed NR zoning is adopted. This is an increase of roughly 22,700 compared to expected development under existing zoning, and it represents only a little more than half of the potentially market-feasible sites.

Market feasibility for middle housing appears to be concentrated more in some areas than others. Feasibility tends to be higher in areas with strong demand, and in areas where there is a range of existing property values—higher-priced units that show viability of higher sales prices for new construction, as well as lower cost properties in the same area that allow for redevelopment. Feasibility is much stronger in low displacement risk areas than high displacement risk areas due to differences in market conditions today (though that could change over time).

There is a strong market for for-sale middle housing in Seattle due to tight housing market conditions. However, stacked units are much less likely to be feasible, at least in the near-term. Even so, the analysis shows middle housing types will generate less expensive housing options than what is allowed today in NR zones.

The analysis showed that middle housing feasibility and the findings are sensitive to development costs. However, because there may be more sites that appear to be viable than can be developed within 20 years, sites with additional costs due to site-specific issues may not (re)develop. Increases in construction costs, local fees, or other factors that affect all development in the NR zone could more broadly decrease the amount of housing expected.



Technical Appendix

Sites included in the analysis

ECONorthwest used the City of Seattle’s Development Sites layer to analyze middle housing feasibility. The City of Seattle created the Development Sites layers for its Zoned Development Capacity Model (2022). Development sites are not necessarily the same as parcels used by for property tax purposes because development sites account for development constraint areas (e.g., steep slopes or easements) and consolidate some parcels into a single boundary. However, in this report, the terms “development sites,” “parcels,” “properties,” and “sites” are used synonymously.

Exclusions and Constraints

The Development Sites layer includes about 150,600 sites. This analysis excluded sites that are owned by the City of Seattle or another public entity. It included sites that were identified in the layer as vacant or developed. Also, the feasibility analysis only includes areas that are currently zoned NR and are expected to remain in the NR zone. It does not include areas that are proposed to be designated as Regional, Urban, or Neighborhood Centers. Altogether, about 100,200 sites were analyzed for this study. Analyzed sites have about 104,000 existing units on them and add up to about 13,800 acres.

The Development Sites layer contains information about sloped areas, which were excluded from the buildable area assumed to be available for development.

Current value of existing development

The current market values of the sites are important for the analysis because middle housing feasibility is dependent on the total cost to redevelop a site, including the cost of acquiring the site. This is the case even if the current property owner is seeking to redevelop their own property. While there is no expense for acquiring the site, there still is an opportunity cost (i.e., the income that could have been available to the property owner if they had sold it).

The Development Site layer provides assessed values, but properties do not necessarily sell at their assessed values. ECONorthwest’s analysis of transactions between January 2021 and March 2023 in Seattle shows that sales prices were about 1.1 times the assessed values, on average. ECONorthwest used this ratio to estimate the market values of the sites based on the assessed values of the sites.



Housing prototypes

ECONorthwest developed housing prototypes for the analysis with feedback from staff at the City of Seattle. These prototypes are intended to represent a wide spectrum of likely middle housing types that developers and architects could consider. They are based on initial designs by MAKERS architecture and urban design created to support the City of Seattle Comprehensive Plan Update. The designs were further refined by the City of Seattle for this analysis. Still, the prototypes cannot capture every possibility of potential middle housing types that could be allowed under a modified development code and site-specific factors will determine the exact shape and form of middle housing.

Currently Allowed Prototypes

The prototypes include two housing options currently allowed under the existing NR zoning. Feasibility of middle housing prototypes are compared to feasibility of the two currently allowed prototypes to assess the potential impacts of allowing more middle housing in Seattle's NR zones. The two existing options tested include:

- ◆ Single-Family Detached (SFD)
- ◆ Single-Family with an attached ADU and a detached ADU (SF + AADU + DADU)

Based on the regulations in the existing NR zone, the total building area for the single-family unit in both prototypes is based on a 0.5 FAR. The building area includes area for garages. The total building area for the SF + AADU + DADU prototype includes 2,500 sq. ft. of additional area for the ADUs.

The total number of units on each site is based on the minimum lot size per unit, which varies by zone. It is 9,600 sq. ft. in NR1 zone, 7,200 sq. ft. in NR2 zone, and 5,000 sq. ft. in NR3 zone.

Currently Not Allowed Prototypes

There are five (5) prototypes for middle housing options that are not currently allowed under the existing NR zoning but would be allowed in the proposed NR zoning. They are:

- ◆ Attached Housing with Garage Parking
- ◆ Attached Housing with Surface Parking
- ◆ Attached Housing with No Off-Street Parking
- ◆ Stacked Flats with Surface Parking
- ◆ Stacked Flats With No Off-Street Parking

For the three attached housing prototypes, total building area is based on a 1.2 FAR and the total number of units is based on the minimum lot size per unit: 1,250 sq. ft. The key differences among the three attached prototypes are parking type and parking availability. Also, some of the prototypes are limited to specific geographic areas:



- ◆ Garage Parking: This prototype would be allowed on all NR zone sites
- ◆ Surface Parking: This prototype would be limited to alley lots since on-site, uncovered parking for each unit was assumed to be physically infeasible without alley access.
- ◆ No Off-Street Parking: This prototype is limited to areas located within 0.5 mile of a major transit stops. Off-street parking is required in all other areas.

For the two stacked flat prototypes, total building area is based on a 1.4 FAR and the total number of units is based on the minimum lot size per unit: 650 sq. ft. The higher FAR and density is consistent with development using the stacked flat bonus that was proposed in the October 2024 proposal. The stacked flat bonus would be limited to sites that are 6,000 sq. ft. or greater and located within ¼ mile of frequent transit. The greater densities are allowed only in frequent transit areas (within 0.25 mile of frequent transit stops). The prototypes would also be limited to specific geographic areas (in addition to frequent transit areas):

- ◆ Surface Parking: This prototype would be limited to alley lots since on-site, uncovered parking for each unit was assumed to be physically infeasible without alley access.
- ◆ No Off-Street Parking: This prototype is limited to areas located within 0.5 mile of a major transit stops. Off-street parking is required in all other areas.

Scaling with Lot Size

All prototypes in this study were designed to adjust according to the site size. The model used for the analysis calculated the maximum unit counts and sizes for every site in the analysis based on the site size. As explained above, site size, FAR, and minimum lot size per unit are used to determine total building area and units. Average unit size is determined by dividing the total building area by the number of units. Because the site size varies by site, a prototype could have different unit sizes on different sites.

For the SF + AADU + DADU prototype, the unit size scaling logic is applicable to the single-family unit only. AADU and DADU units are fixed at 1,000 sq. ft. and 1,500 sq. ft., respectively.

The scaling logic results in unit sizes of the Garage Parking prototype ranging from about 1,200 sq. ft. to 1,950 sq. ft. and unit sizes of the Surface Parking and No Off-Street Parking prototype range from about 1,500 sq. ft. to 2,250 sq. ft., depending on the lot size. The unit size of the SFD prototype and the single-family portion of the SF + AADU + DADU prototype could range from 2,500 sq. ft. to 4,970 sq. ft. based on the scaling logic. However, it is capped at 4,000 sq. ft. The maximum unit size limit was determined after analyzing unit sizes of single-family units sold in Seattle’s NR zone between 2018 and 2022.



Moreover, additional area for circulation is assumed for larger sites. Specifically, a 15 percent circulation factor is applied for sites that are larger than 11,765 sq. ft. The circulation areas would not be developed with housing and would incur additional development costs (e.g., paving costs).

Estimated sales prices

ECONorthwest estimated sales prices for middle housing to model housing demand.

Sales Price Variation Among Middle Housing Prototypes

Because middle housing is either rare or not allowed in some parts of Seattle that are included in this analysis, ECONorthwest used publicly available data from King County Assessor, American Communities Survey (ACS), Longitudinal Employer Household Dynamics (LEHD), and Washington Department of Education to estimate potential sales prices of the middle housing prototypes. The data is used to train a machine learning algorithm (called a random forest model) that optimizes predictions by testing against the observed data. The variables used in the model to predict sales prices included property-specific attributes such as building area, spatial location (latitude & longitude), lot size, scenic views, condition, bedrooms, and bathrooms, as well as neighborhood specific attributes such as block group median household income, median household size, median age, and nearby school performance, among other variables.

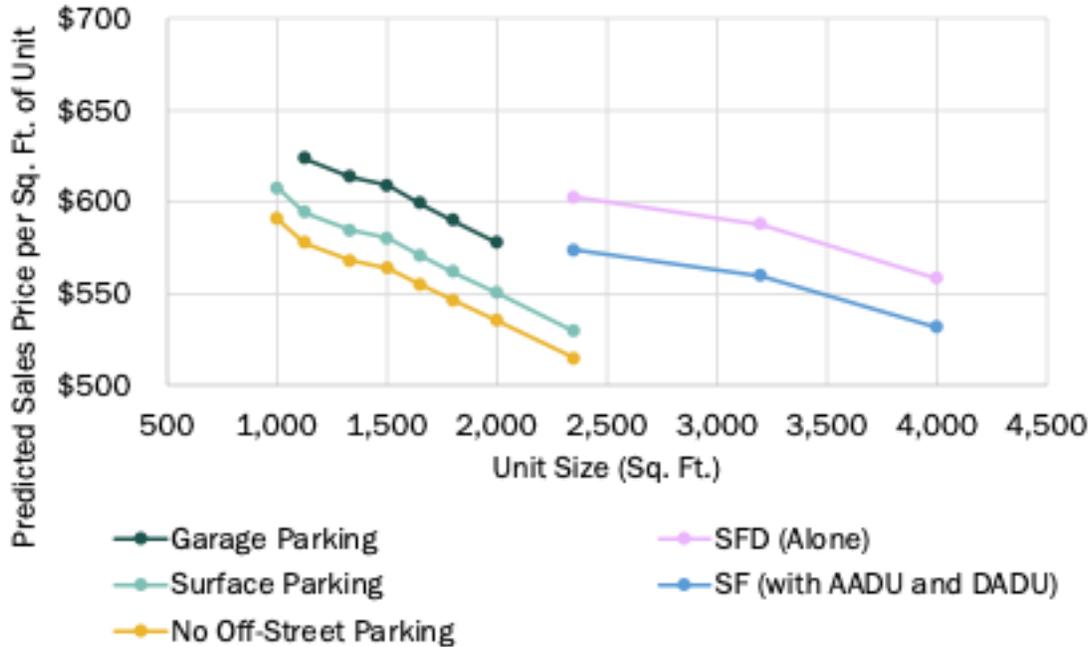
The resulting relationship between estimated sales prices and unit sizes is shown in Exhibit 14. This relationship differentiates the sales prices among middle housing prototypes. Exhibit 14 illustrates the relationship for a typical site. The shapes of the price curves remain the same for other sites, but the actual dollar amount varies by geography (geographic variation is explained in the following subsection). The modeled prices suggest:

- ◆ The sales price of a newly built attached housing unit with *garage* on a typical site can range from \$624 per sq. ft. for a 1,125-sq.-ft. unit to \$578 per sq. ft. for a 2,000-sq.-ft. unit, or from \$702,000 to \$1,156,000 (dark green/blue line).
- ◆ The sales price of a newly built attached housing unit with *surface parking* on a typical site can range from \$580 per sq. ft. for a 1,500-sq.-ft. unit to \$529 per sq. ft. for a 2,350-sq.-ft. unit, or from \$870,000 to \$1,243,150 (light green line). This prototype assumes a 5 percent discount compared to the With Garage prototype.
- ◆ The sales price of a newly built attached housing unit with *no off-street parking* on a typical site can range from \$564 per sq. ft. for a 1,500-sq.-ft. unit to \$515 per sq. ft. for a 2,350-sq.-ft. unit, or from \$846,000 to \$1,210,250 (yellow line). This prototype assumes an 8 percent discount compared to the With Garage prototype.
- ◆ The sales price of a newly built *single-family detached* unit on a typical site can range from \$602 per sq. ft. for a 2,350-sq.-ft. unit to \$558 per sq. ft. for a 4,000-sq.-ft. unit, or from \$1,414,700 to \$2,232,000 (purple line).



- ◆ For a single-family unit that has an AADU and a DADU on the same lot, the sales price on a typical site could range from \$574 per sq. ft. for a 2,350-sq.-ft. unit to \$531 per sq. ft. for a 4,000-sq.-ft. unit, or from \$1,348,900 to \$2,124,000 (light blue line). The single-family prices assume a 5 percent discount compared to a similar single-family unit that does not have an AADU and a DADU on the same lot.

Exhibit 4: Estimated Middle Housing Prices per Sq. Ft. and Unit Size (Sq. Ft.) for a Typical Site



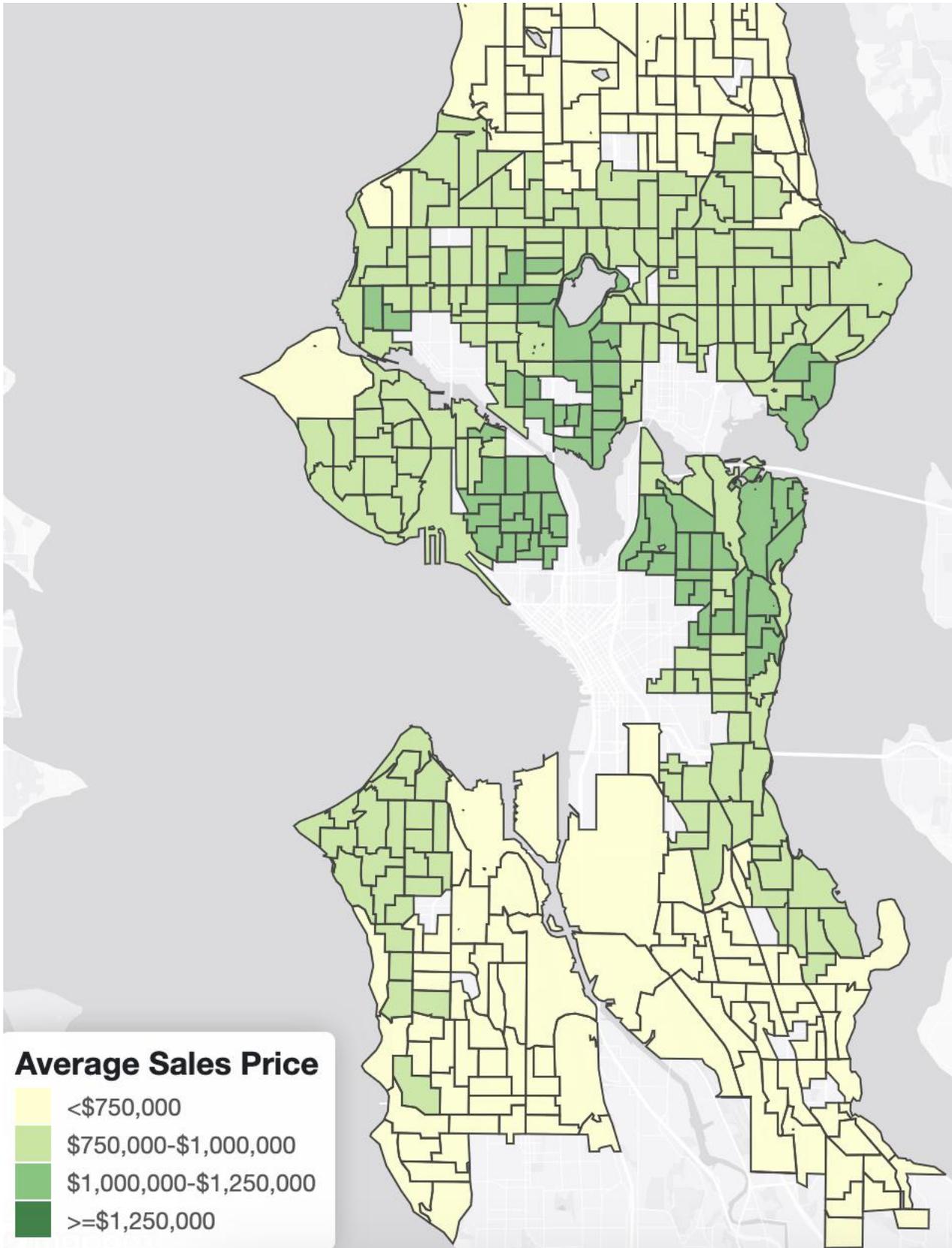
Source: ECONorthwest

Geographic Variation in Middle Housing Sales Prices

Middle housing prices can vary by location in the city. While the relationship between price and unit size in Exhibit 14 is maintained for within each site, the price relationship among the sites is also important. Neighborhoods closer to downtown Seattle and others with higher housing prices should have higher prices for middle housing. This spatial relationship was modeled with the same dataset used to estimate middle housing prices and is illustrated in Exhibit 15.



Exhibit 15: Geographic Variation in Average Estimated Sales Price of Attached Housing with Garage Parking Prototype



Source: ECOnorthwest, MapCraft



Development cost assumptions

The middle housing feasibility analysis is based on a series of assumptions about development costs. EConorthwest estimated various components of construction costs (also called “hard costs”), soft costs including City of Seattle fees, and profit margins that could be expected on middle housing developments. The estimates are based on conversation with developers in the Puget Sound region, national building cost estimates (adjusted to Seattle costs), EConorthwest’s previous analyses of middle housing across the West Coast (adjusted to Seattle costs), and multiple rounds of review with the City of Seattle staff.

Hard costs

Hard costs are the costs related to the physical construction of a real estate project. They include both material and labor as well as costs related to preparing the site for development.

Exhibit 16. Hard Cost Assumptions for Seattle Middle Housing Feasibility Analysis

COST TYPE	ASSUMPTION	UNIT
Average Building Cost		
4,000 sq. ft. unit	\$703,000	Per unit
2,100 sq. ft. unit	\$394,000	Per unit
1,500 sq. ft. unit	\$300,000	Per unit
1,125 sq. ft. unit	\$244,000	Per unit
850 sq. ft. unit	\$195,000	Per unit
Average Building Cost		
3,000 to 4,000 sq. ft. units	\$176 to \$178	Per sq. ft.
2,000 to 3,000 sq. ft. units	\$182 to \$187	Per sq. ft.
1,500 to 2,000 sq. ft. units	\$196 to \$200	Per sq. ft.
1,000 to 1,500 sq. ft. units	\$206 to \$218	Per sq. ft.
Less than 1,000 sq. ft. units	\$224 to \$230	Per sq. ft.
Garage Parking ¹	\$100	Per sq. ft.
Surface Parking ²	\$7,695	Per space
Landscaping	\$5	Per sq. ft.
Driveway ³	\$25	Per sq. ft.
Right-of-way	\$30	Per sq. ft.



COST TYPE	ASSUMPTION	UNIT
Subdivision Cost	\$20,000	Per site (greater than 11,765 sq. ft.)
Teardown and Site Prep	\$50,000	Per 5,000 sq. ft. of site ⁴
Foundation	\$25	Per sq. ft. of building footprint

Source: ECOnorthwest based on input from a range of sources

Note 1: Garage area is assumed to be 400 sq. ft. for single-family and 300 sq. ft. for middle housing.

Note 2: Surface parking area is assumed to be 180 sq. ft. per stall.

Note 3: Driveway area is assumed to be 10 percent of the site for sites with alley access and 25 percent of the site for all other sites. The driveway is used to access garages and surface parking area.

Note 4: Site area includes developable area and excludes sloped area.

Just as there is a geographic variation in prices, the feasibility analysis also assumes a geographic variation in development costs. The differentiation is not because there would be differences in construction costs (labor and material) across the city. Rather, the differentiation captures the potential for differences in the finish quality of kitchen and bathroom finishes in different submarkets. A middle housing unit in one submarket is assumed to have a different quality of finishes and appliances in kitchen and bathrooms than the same middle housing unit in another submarket. This difference is reflected through adjustments in construction costs in proportion to the variation in housing prices.

Soft costs

Soft costs include municipal fees, taxes, fees for architecture and engineering, financing costs, and developer fees.

Exhibit 17: Soft Cost Assumptions for Seattle Middle Housing Feasibility Analysis

COST TYPE	ASSUMPTION	UNIT
Permit Fees	\$6.70	Per sq. ft.
Water Capacity Charge	\$1,063	Per unit
Street Use Fee	\$1,100	Per unit
Water Tap Charge		
For Stacked Prototypes	\$25,095	Per project
For Other Prototypes	\$6,450	Per unit
Side Sewer Charge	\$10,000	Per project
Water Main Extension	\$225,000	Per project
Underground Connection	\$110,000	Per project of 9 or more units
Electrical Connection	\$4,500	Per unit
Sidewalk	\$500	Per sq. ft. of frontage ¹



COST TYPE	ASSUMPTION	UNIT
Impact Fee	\$8,000	Per unit
Street Restoration Fee	\$5,500	Per unit
Tree Replacement Fee	\$2,500	Per 5,000 sq. ft. of site
Sales Transaction Cost	6.5%	% of sales price
Real Estate Excise Tax		
Tier 1: \$525,000 to \$1,525,000	1.28%	% of sales price
Tier 2: \$1,525,000 to \$3,025,000	2.75%	% of sales price
Tier 1: \$3,025,000 or greater	3.00%	% of sales price
Sales Tax	10.25%	% of hard costs
Design and Engineering	8%	% of hard costs
Financing and Other Overhead	2%	% of hard costs
Developer Fee	3%	% of hard and other soft costs
Contingency Budget	5%	% of hard and other soft costs

Source: EConorthwest based on input from a range of sources

Note 1: Frontage is calculated based on an assumption of 100 feet lot depth.

The analysis does not assume condominium insurance costs. Conversations with developers revealed that the middle housing prototypes analyzed in this study are likely to be built as fee simple units in Seattle. Of the prototypes included in the final analysis, only the SF+ADU+DADU is assumed to be condominium ownership, which would not require condominium insurance.

Not all city fees are applicable to all prototypes. EConorthwest concluded from conversations with the City of Seattle staff that not all fees would be applicable to the SFD prototype or the SF + AADU + DADU prototype (either now or in the future). Exhibit 18 lists the fees that *are applicable* to the two prototypes. All fees are applicable for all other prototypes.

Exhibit 18: Applicable City Fees for SFD and SF + AADU + DADU Prototypes

COST TYPE	SFD PROTOTYPE	SF + AADU + DADU PROTOTYPE
Permit Fees	X	X
Water Capacity Charge		
Street Use Fee	X	X



COST TYPE	SFD PROTOTYPE	SF + AADU + DADU PROTOTYPE
Water Tap Charge		X
Side Sewer Charge		X
Water Main Extension		
Underground Connection ¹	X	X
Electrical Connection	X	X
Sidewalk	X	X
Impact Fee		
Street Restoration Fee		
Tree Replacement Fee	X	X
Wastewater Treatment (County)	X	X

Source: ECONorthwest summary based on input from City of Seattle staff

Note 1: Applicable only when the site can fit more 9 or more units

Investment return expectations

Feasibility analysis also considers a profit margin hurdle for for-sale units. The analysis assumes a minimum required profit margin of 15 percent of the total development cost, including the site value.

Pro forma approach

Real estate professionals regularly use pro forma analyses to model the revenues and costs of potential developments and evaluate their returns. For policymakers, pro form analyses can help evaluate the potential impacts of changes to development factors, including those related to zoning.

ECONorthwest used a common financial pro forma method called a *residual land value analysis* to analyze the development feasibility middle housing in Seattle. Residual land value (RLV) is an estimate of what a developer would be able to pay for land given the property’s income from rental or sales revenue, the cost to build as well as to operate the building, and the investment returns needed to attract capital for the project. In other words, it is the budget that developers have remaining to pay for land after all the other development constraints have been analyzed.

An advantage of the RLV approach is that it does not rely on land prices as an input. Rather, site values⁷ can be compared with RLV to determine whether a potential

⁷ Site values are calculated as 110 percent of assessed values for land and improvements. ECONorthwest’s comparison of assessed values to transaction (sales) prices showed that single-family properties sold at about 110 percent of their assessed values, on average.

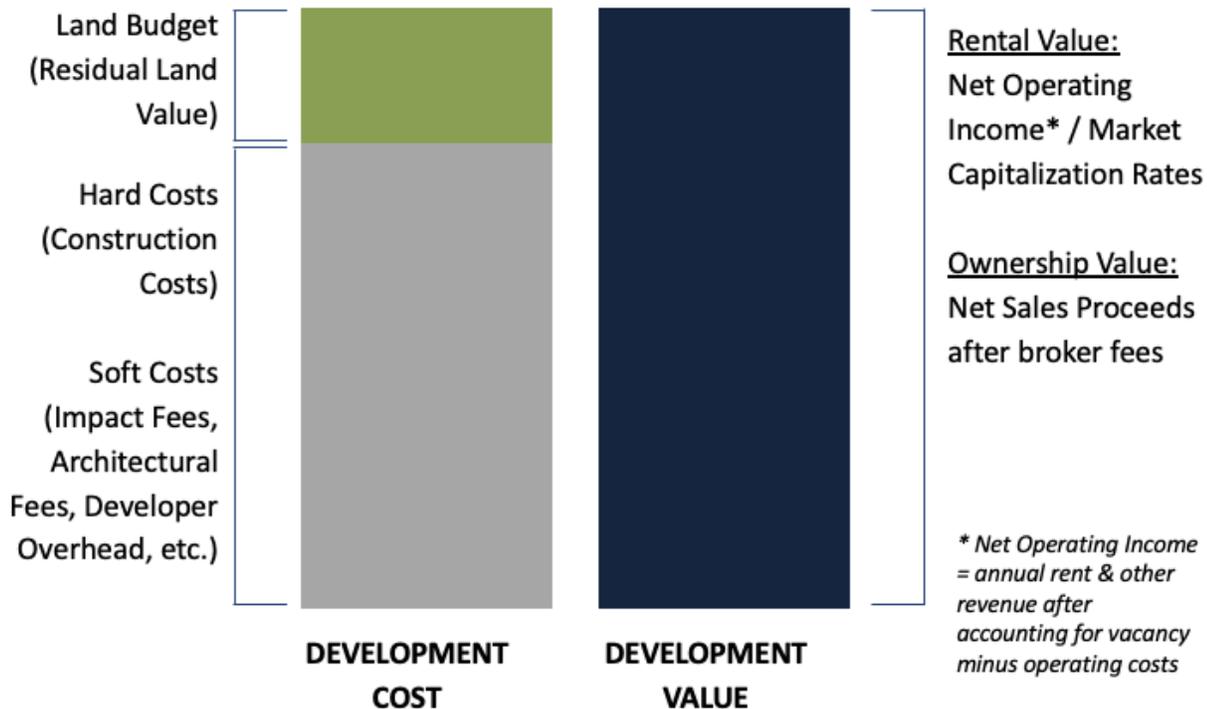


development could be feasible and by how much. It is therefore a useful metric for assessing the potential impacts of changes to middle housing development code because these policies are expected to principally affect land value, especially in the short run.

An RLV approach also allows a relatively easy comparison of different development projects across various scenarios. Different types of real estate investments may have different return metrics and their feasibility results can be sensitive to some of the assumptions, which may change across scenarios. Because the RLV approach focuses on the long-term value of a project rather than near-term cash flows, the analysis can be easily modified and compared without directly assessing implications of near-term cash flows. Exhibit 19 and Exhibit 20 summarize the residual land value method by illustrating two example developments, one which is feasible and the other likely infeasible. In both scenarios, the right-hand column (shown in dark blue) illustrates the total value that comes from the project. The left-hand column (shown primarily in grey) illustrates the total costs to build the project, both the hard construction costs and the soft costs such as the design and city fees.

If the blue column is greater than the grey column, there is budget leftover to buy the land (shown in green). Depending on the site value, the “land budget” might not be sufficient for redevelopment. A positive land budget means that a proposed development project is more likely to be feasible (contingent on the price for which the land is being offered). If the blue column is smaller than the grey column, then the land budget is below \$0 (shown in a dashed outline) and it means the proposed development project is not feasible, absent offsetting subsidies or incentives that can cover the difference.

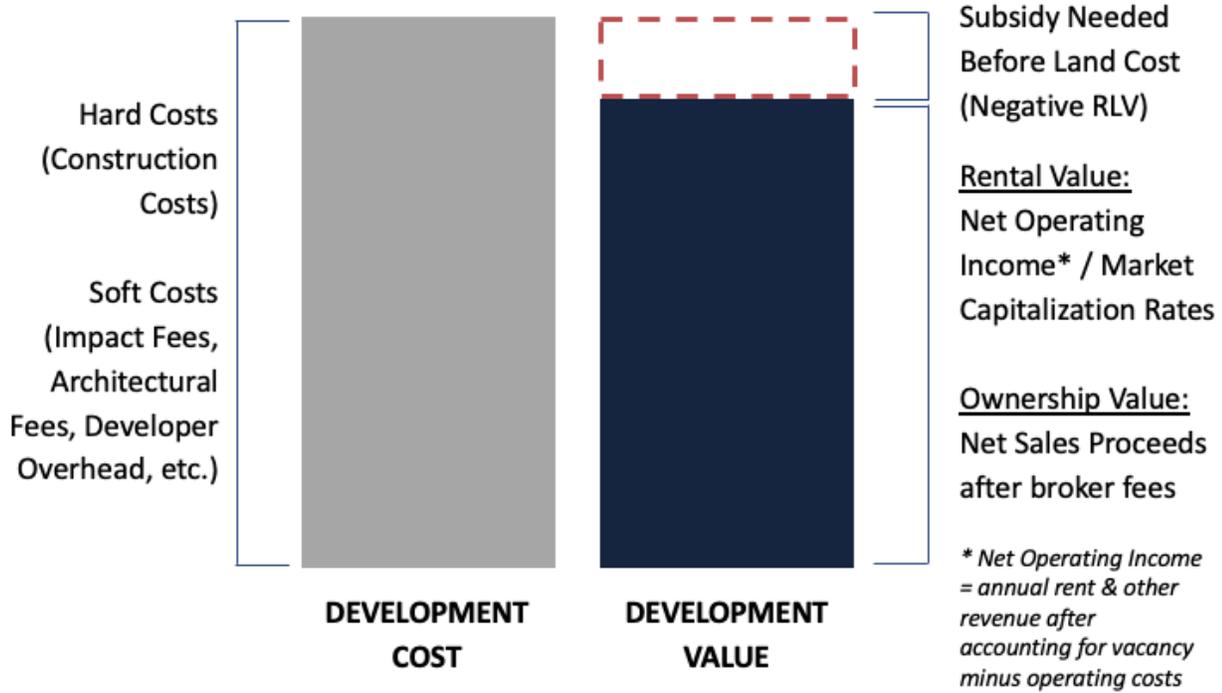
Exhibit 19: Land Budget Method for Pro Forma Modeling: Likely Feasible.



Source: ECOnorthwest



Exhibit 20: Land Budget Method for Pro Forma Modeling: Likely Infeasible.



Source: ECOnorthwest

