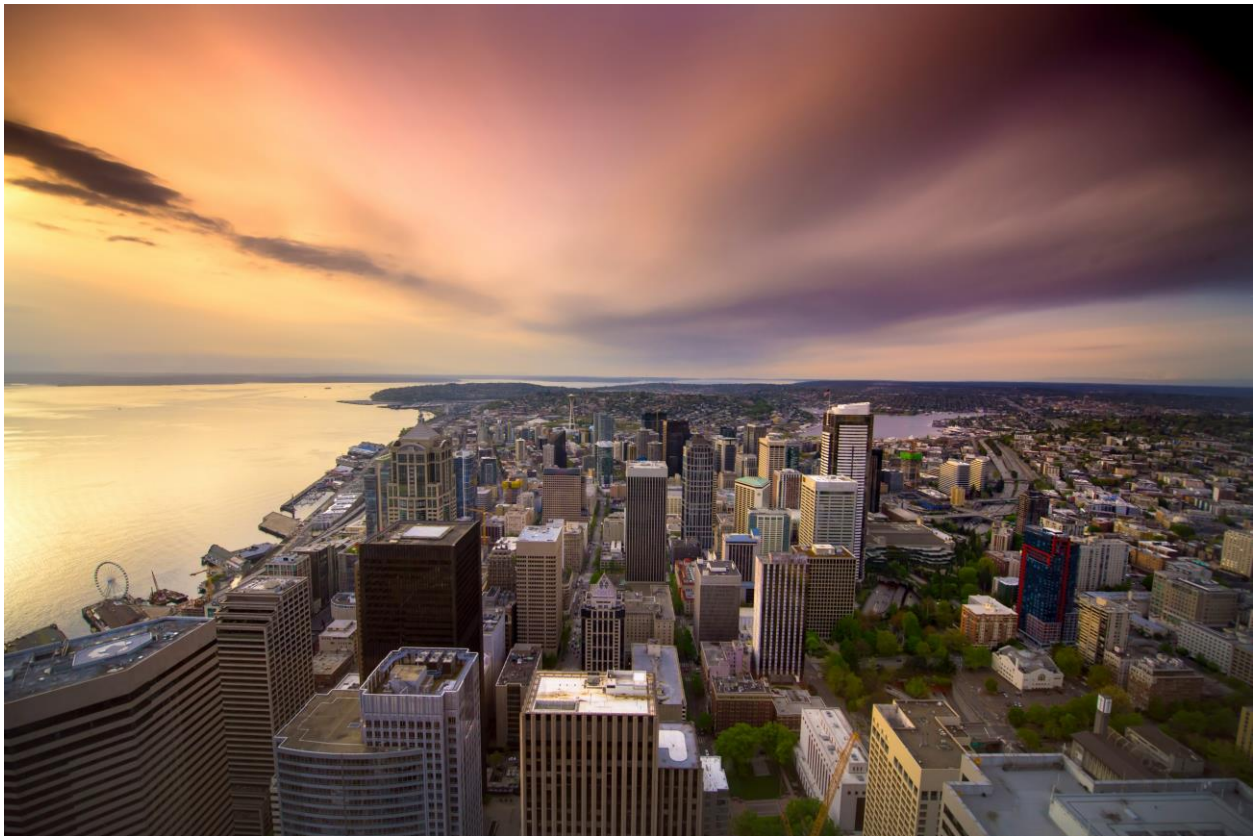


SEATTLE MANDATORY HOUSING AFFORDABILITY FIVE YEAR EVALUATION



MARCH 2025

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Executive Summary

Seattle’s Mandatory Housing Affordability (MHA) policies were adopted to mitigate the need for affordable housing that is generated through commercial and multifamily residential development. The MHA program requires developers who build in zones where development capacity was increased to provide either income-restricted affordable housing or pay a fee-in-lieu to a city fund for supporting affordable housing production. It was first implemented in 2017 in several neighborhoods near Downtown and the U District, then adopted in most multifamily and commercial zones citywide in 2019.

MHA requirements apply to areas where Seattle adjusted zoning to increase development capacity. In this way, MHA policies are intended to impact developer decision-making and action during the development process. The program is intended to offset the market value lost due to affordability requirements or the in-lieu fee with the additional value associated with increased development capacity. Housing affordability requirements were set with a goal of having a neutral impact on development feasibility¹ to not suppress the rate of housing production.

BERK Consulting (BERK) and Heartland LLC (Heartland) conducted an independent evaluation of Seattle’s MHA program to identify the intended and unintended impacts on housing production and supply. This includes impacts on both affordable and market-rate housing production, the mix of housing types produced, and the geographic variation in outcomes. This Executive Summary highlights key evaluation questions with regards to the impacts of MHA on market housing production as well as affordable housing production in Seattle. It also identifies considerations for ongoing policy discussions about trade-offs inherent to this program and changes that could improve its effectiveness in achieving city goals.

Impacts to Market Housing Production

MHA is one of several factors that have negatively impacted development feasibility since 2019.

When MHA was first implemented in 2017 and 2019, commercial and multifamily housing development benefitted from unprecedented favorable conditions. At the time, many developers were able to absorb the additional costs (or loss of revenue) associated with MHA and other local requirements. Since then, there was a global pandemic that impacted living patterns and demand for rental housing, construction costs ballooned, Washington State and Seattle adopted new building codes, and interest rates and capitalization rate requirements increased dramatically. These factors all contribute to a more challenging environment for developers seeking financially feasible opportunities in 2024.

This study finds that the internal rate of return for real estate developments declined significantly between 2019 and 2024 for all housing types evaluated and in all MHA fee areas, thus reducing project feasibility. The declines in project feasibility are due to several different factors, and MHA requirements play a relatively small but important role. Our analysis found that even if MHA requirements were removed entirely, development would still typically be infeasible for all project types as of 2024.

However, if market conditions improved somewhat, this analysis shows that MHA fees would likely have an impact on market housing development feasibility. When the modeled return on investment is closer to the “go or no-go” threshold, the impact of MHA fees can be significant enough to prevent a developer from proceeding with a project.

¹ Development feasibility is defined as a developer’s conclusion that there is enough potential profit in a development project to make it worth pursuing. Typically, the amount of profit required for feasibility depends on the level of uncertainty and project risk.

The balance between the value provided by upzones and the costs of MHA are not durable over time.

Development project feasibility is primarily determined by the projected revenues and costs. Seattle's upzone created increased development capacity that offered an increase in potential net operating income from the additional housing units and/or commercial space included in the new building. MHA compliance requirements add costs. The payment option imposes a fee prior to building permit issuance. The performance option reduces operating income by limiting the rents that can be collected on a specified number of units and a marginal increase in management and reporting costs. The potential increase in operating income and compliance costs must balance for MHA to not impact project feasibility.

Another important component of project feasibility is land costs. As market conditions change, land prices would also need to adjust to sell at levels that continue to support a rate of return that entices development. However, land prices often do not adjust to align with continued development feasibility. When this happens, it creates barriers to new housing production.

There are many reasons why land costs to the developer have risen and impacted development feasibility, such as:

- Landowners are not obliged to sell their land and may be speculating that land prices will rise. Landowners may believe that land prices that were achieved during peak development conditions will be attainable in the future. Developers report that the historical peak land value often represents the floor price at which landowners are willing to sell.
- Many landowners are not in a rush to sell their land. Current uses such as commercial rents or paid parking may be providing sufficient revenue to cover carrying and maintenance costs.
- The upzone sends a signal to landowners that their land is more valuable due to the increased revenue potential. As a result, many landowners may demand a higher price for their land, making the price too high to support feasible development after accounting for MHA costs and changes in market conditions. Developers report significant price gaps, also called the "bid-ask spread," between what the developer can afford to pay and the price at which the landowner is willing to sell. This dynamic is anticipated after significant policy changes or during periods of rapidly changing conditions and typically attenuates after enough land transactions reset that land value expectations of both parties.

Within the five-year evaluation period, Seattle experienced a slowdown in permit activity (described below) and an increase in median land prices. This suggests a lack of alignment between the asking price for land and what developers are able and willing to pay.

Multifamily housing production in Seattle has declined since adoption of MHA, but not disproportionately more than neighboring or peer jurisdictions.

Seattle has experienced a notable reduction in multifamily housing permitting during the last few years. However, Seattle's rate of housing production during this evaluation period is on par with, or higher than, nearly all the 13 peer cities that were assessed, including cities with and without mandatory inclusionary zoning (IZ) programs like MHA. This suggests that the changes in market conditions that have impacted housing production in Seattle since 2019 have also impacted many peer jurisdictions in similar ways.

Low-rise housing production shifted to neighborhood residential zones following adoption of MHA.

When Seattle applied MHA to most LR zones in 2019, it provided an upzone that offered limited value to townhome developers. For instance, increased building heights allowed for a fourth floor in the LR1 zone, but there is limited market value for a fourth story for townhomes. Likewise, market demand for parking prevents developers from taking advantage of reduced parking requirements. So, while the MHA program imposed compliance costs to the developer or reduced the potential sales prices of the resulting units, the corresponding upzone did not translate to increased income potential for the developer. As a result, project feasibility degraded.

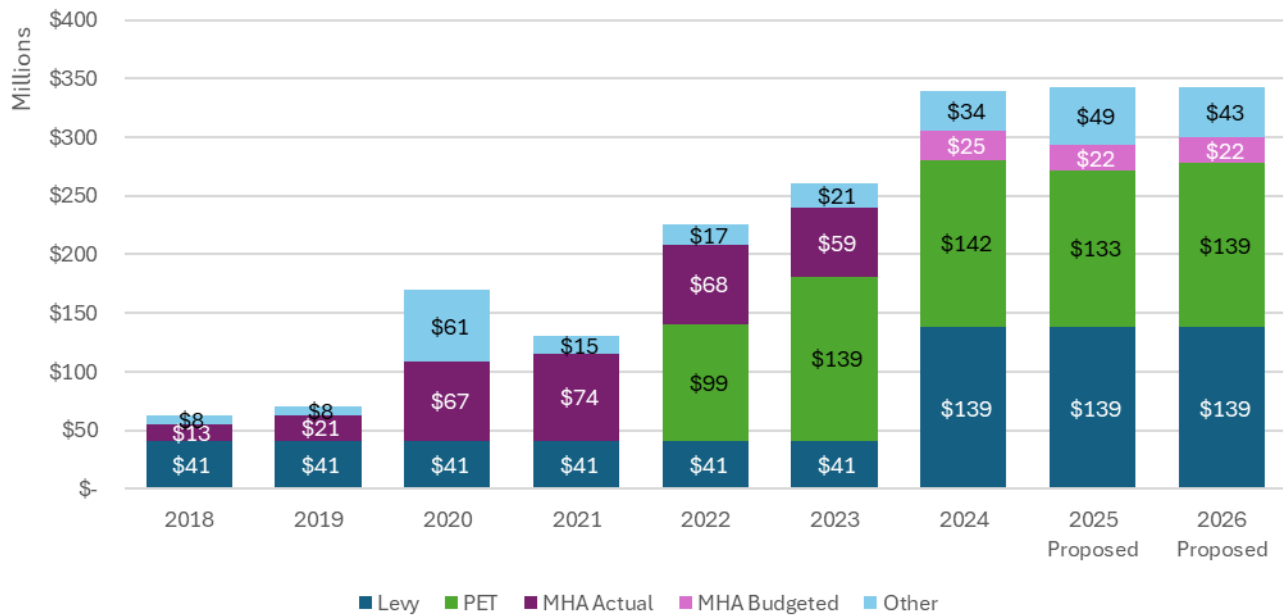
In addition, in 2019 Seattle also adopted reforms to accessory dwelling unit (ADU) regulations. These changes enabled a new low-rise housing product type similar to townhomes to be built in Neighborhood Residential (NR) zones where MHA is not imposed. The combined impacts of these two regulatory changes prompted many townhome developers to cease building in LR zones and shift to building in NR zones. This shift is consistent with permit trends analyzed in this evaluation.

Impacts to Affordable Housing

MHA has generated significant revenue for affordable housing, but is expected to be a small share of Seattle’s future affordable housing funds as other sources increase.

MHA payments are one source of revenue that the City’s Office of Housing (OH) uses to fund new affordable housing development. As of the end of 2023, the program has generated over \$300 million in payment revenue. As shown in Exhibit 1, MHA provided a large share of OH revenues between 2018 and 2021, between 21% and 57%. However, starting in 2022 Seattle began collecting new revenue from the Payroll Expense Tax (PET) while MHA revenue declined in 2023 and 2024². Starting in 2024, Housing Levy revenues are expected to increase significantly, and MHA is budgeted to provide a much smaller share (7%) of overall revenue. Looking forward, the City’s budget office projects MHA payment revenues to be about \$22 million annually, about a third of its peak revenue in 2021.

EXHIBIT 1. OFFICE OF HOUSING REVENUES BY FUND SOURCE



Note: All values are budgeted except for “MHA Actual” which represents collected MHA revenues. For other fund sources, City budget staff report that there is little variation between budgeted and actual revenue.

Sources: City of Seattle Budget Office, 2024; BERK, 2024.

MHA payment revenue has supported the production of 4,702 income-restricted units

Affordable housing developers typically combine multiple sources of funding in their projects. Seattle’s Office of Housing leverages MHA payment revenue by combining it with multiple other funding sources, which may include

² City budget office data shows that 2024 MHA revenue through December 4 was just over \$24 Million, roughly on track to hit the budgeted \$25 Million revenue for that year.

federal, state, and other local funds. Through the end of 2023, MHA funding contributed to projects with 4,702 new income-restricted units.

To estimate the proportional impact of MHA payment funding on new affordable housing production in Seattle, BERK completed a hypothetical scenario to calculate what this amount of funding would have built if no other leverage had been available. This analysis is provided in Section 5. Affordable Housing Impacts of MHA.

Despite efforts to set MHA compliance fees to make developers agnostic to the compliance method, most developers select the payment option to comply with MHA requirements.

Citywide, 95% of all commercial, residential, and mixed-use development projects subject to MHA selected to pay an in-lieu fee rather than build affordable housing onsite. Developers report challenges associated with financing, marketing, management, and reporting requirements associated with the performance option. However, there was some variation by project type. Close to a quarter of all mid-rise projects selected the performance option, while nearly all low-rise and high-rise projects selected to pay the fee in-lieu. In total, 404 new income restricted rental units have been produced by developers that selected the performance option through the end of 2023.

Seattle is using MHA revenues to fund new affordable housing in High Opportunity Areas.

One common argument in favor of encouraging developers to choose performance over payment in lieu is based on an assumption that performance units would more likely be built in higher demand locations with access to desirable amenities, when compared to affordable housing projects. To test whether outcomes are consistent with this argument, we classified the location of housing permits by opportunity level using Seattle's 2016 Opportunity Index. This Index measures proximity to a variety of amenities that people need to succeed and thrive. We found that affordable units funded with MHA payments are just as likely to be in High Opportunity Areas (52%) when compared to all market rate units subject to MHA (53%), and more likely to be in a High Opportunity Area than performance units (31%). Moreover, only 5% of the new affordable housing produced through MHA are in Low Opportunity Areas of the city. These outcomes are consistent with City policies on prioritizing investments to improve access to opportunity.

Policy Considerations

This evaluation assesses the impacts of MHA between 2017 and 2024. The analysis and stakeholder input provides insight that can inform ongoing policy discussions about how to modify MHA to more effectively achieve certain policy objectives. At this time of significant unmet need for housing in general, and affordable housing in particular, City officials must strive to balance the tradeoffs between incentivizing and funding affordable housing production with the need to provide for conditions that encourage market housing production more generally.

Here are some actions City officials could consider as they determine how to best balance this tradeoff:

1. Regularly calibrate MHA requirements to align with market conditions.

The analysis that informed the original fee structure for MHA was sound. However, the impact of those fees is not durable over time. The fee levels were assessed in an era of market conditions markedly different than today. Factors both within and beyond the City's control have impacted the demand for housing as well as the costs to build and finance housing production. Given that housing market conditions are constantly changing, achieving a balance between maintaining housing production and leveraging that housing production to produce affordable housing, either via fee or performance, will require more regular monitoring. The City should consider replacing the formulaic annual adjustment of MHA fee levels with regular studies to recalibrate fees to align with market conditions.

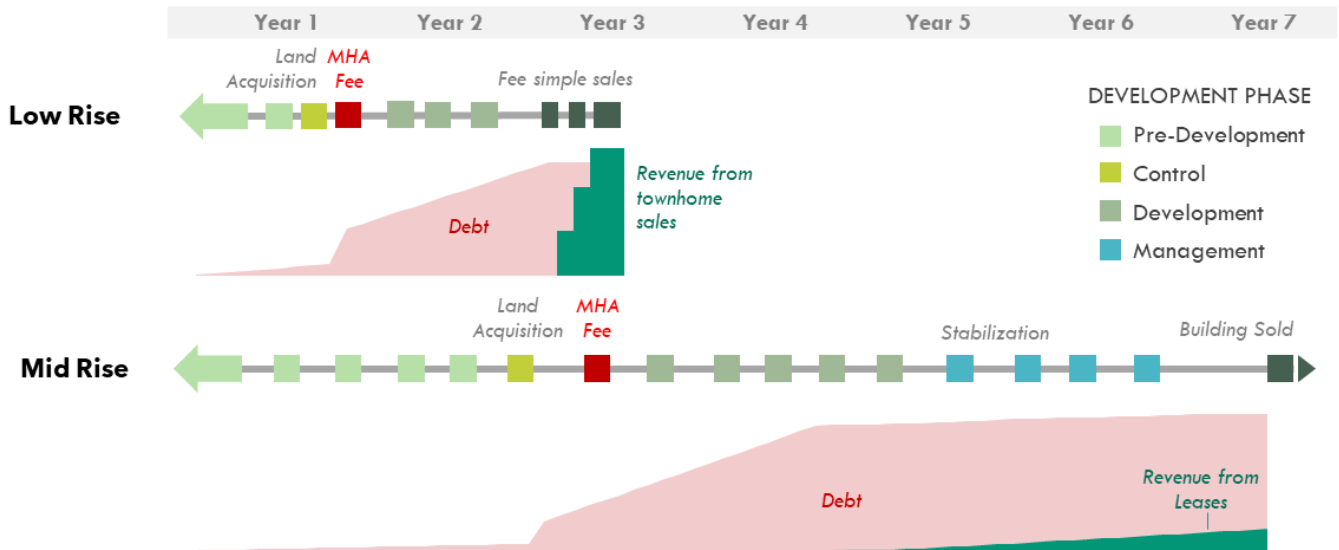
Studies to recalibrate MHA fees and requirements could consider how development feasibility varies for prevailing housing product types in different zones and in different areas of the city.

2. Adjust the timeline of MHA compliance requirements to lessen impacts to project feasibility.

MHA requires developers to pay MHA in-lieu fees early in the development timeline, before all project financing has been secured and potentially several years before any operating revenue is generated, illustrate in **Exhibit 2**.

For some developers, particularly local builders or nonprofits without easy access to capital, the fees must be paid several months to a year before construction financing is available. In High MHA Fee Areas, these fees can sometimes double the total predevelopment costs for a project. When developers are able to finance the cost of MHA fees, the long duration before revenues results in higher financing costs, thus increasing the burden of those fees on project feasibility.

EXHIBIT 2. TYPICAL DEVELOPMENT PROJECT TIMELINES



See Exhibit 6. Phases of a Typical Development Project on page 16 for more detail.

Sources: BERK, 2024; Heartland, 2024.

The City should consider moving the deadline for payment until later in the development timeline to support development feasibility. For instance, developers have access to new forms of construction financing after building permit issuance. Therefore, delaying the MHA fee payment to this point in time can make it easier for developers to finance the fee payment, and reduce the amount of time they must pay interest on the debt. Alternatively, postponing MHA payment until later points in the development cycle, such as when the building gets a certificate of occupancy or when units sell (in the case of townhomes or condos) could further reduce the cost of complying with MHA.

The City could also consider spreading the payments out over time. An example of a program with this kind of payment structure is a Local Improvement District.

3. Continue to provide options for complying with MHA requirements to support development feasibility.

Nearly all developers select the payment option for complying with MHA requirements. The development feasibility modeling shows that including affordable units onsite typically results in a lower return on investment than paying the in-lieu fee. More importantly, developers report many qualitative factors that discourage the selection of the performance option.

If the city wished to encourage more developers to select the performance option (including affordable units on site), it could either increase MHA in-lieu fees, remove the option to pay in-lieu fees altogether, reduce the management or reporting burden of including permanently affordable units, or offer other incentives for including performance units. Based on the findings of this evaluation, however, strategies focused on increasing the costs associated with the in-lieu fee would result in a decrease in housing development overall.

4. Evaluate other options for incentivizing multifamily housing production in Seattle.

Beyond adjustments to the MHA program, Seattle has several other options for making market housing development more feasible. These may include changes that reduce development costs or speed up timelines.

Options include:

- Eliminate design review requirements and streamline permitting timelines for all multifamily housing projects subject to MHA. The City already waives design review for performance projects. Payment projects also support affordable housing production and could be incentivized in the same way. Often design review and the lengthy permitting process add additional time and costs as developers will often hire design professionals who specialize in ushering a project through the design review, entitlement, and permitting processes. These costs are compounded by financing costs and keep capital tied up in a prolonged predevelopment and development phases that could be deployed in other developments.
- Implement future upzones without additional MHA fees or requirements. This could apply just in zones where MHA is already applied, or potentially be applied to zones where MHA is not currently applied. Many of the zones where MHA is not currently applied, such as Neighborhood Residential areas, do not currently experience high demand for rental housing. Applying MHA requirement to these zones which are not proven markets may result in a lack of feasible projects.
- Allow developers to count MHA performance units towards MFTE affordable unit requirements. Currently MHA units do not count towards MFTE requirements, so developers that want a property tax exemption must rent restrict at least 25% and possibly 30% of units to comply with MHA performance and MFTE requirements. This number of affordable units is well above what most market rate developers would feel comfortable constructing, even with a property tax abatement. Allowing MHA to count towards MFTE could prompt more developers to choose the performance option, as the difference between MFTE rent and MHA rent is much less significant than the difference between market rent and MHA rent.

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Section 1. Evaluation Design

Background and Purpose

Seattle's Mandatory Housing Affordability (MHA) program was adopted to ensure that new commercial and multifamily residential development contributes to affordable housing. The program requires developers who build in designated zones to provide either income-restricted affordable housing in their project or pay a fee-in-lieu to a city fund for supporting affordable housing production. It was first implemented in 2017 in several neighborhoods near Downtown and the U District, then adopted in most multifamily and commercial zones citywide in 2019. MHA requirements apply to areas where the City Council approved a rezone that adds development capacity. The program is intended to offset the value lost in rents or the in-lieu fee with the additional value associated with increased development capacity.

The City of Seattle asked BERK Consulting (BERK) and Heartland LLC (Heartland) to conduct an independent evaluation of MHA to review the intended and unintended impacts the program has had on housing production and supply. This includes impacts on both affordable and market-rate housing production, the mix of housing types produced, and the geographic variation in outcomes. The purpose of this evaluation is to inform ongoing policy discussions about trade-offs inherent to this program as well as changes that could improve its effectiveness in achieving City goals.

Evaluation Questions

The City established seventeen questions to guide the evaluation. These evaluation questions are:

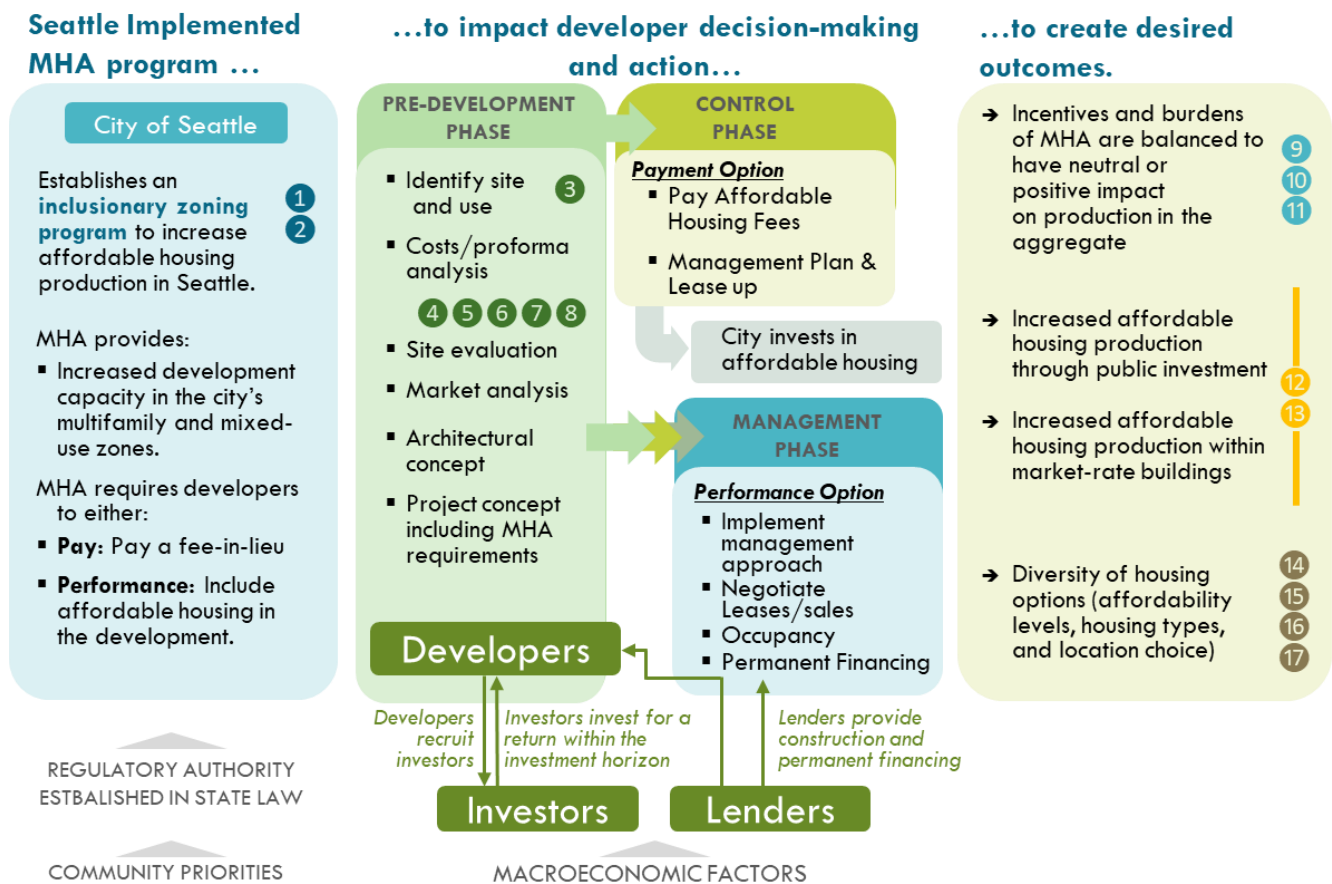
- 1 What is the current evidence base on inclusionary zoning programs and the impacts of such programs, positive or negative?
- 2 Are there any general takeaways from existing rigorous research studies that can inform Seattle's program, understanding that programs vary widely across jurisdictions?
- 3 How can the City better understand the value of an MHA upzone and the added development capacity provided in different zones versus the added costs associated with the program (either to build on-site/or make a payment in lieu of) to inform whether program modifications are needed?
- 4 What tools exist that may help the City assess incremental policy decisions and their impacts on local housing production?
- 5 What factors drive housing development in Seattle?
- 6 What is the relative impact of factors that drive development in Seattle on project costs?
- 7 What is the cumulative impact of these factors on project costs?
- 8 To what extent can the City determine the degree to which these costs, both within and outside the City's control, influence housing production?
- 9 How does Seattle's housing production overall compare to "peer" cities, both before and after the pandemic?
- 10 What larger macroeconomic trends overlay this trend line?
- 11 How has Seattle's housing production changed since the adoption of MHA?
- 12 What factors influence a developer's decision to participate in on-site performance vs. payment in-lieu?
- 13 What have been the impacts of the MHA program on affordable housing production in Seattle?
- 14 What are the pros and cons associated with on-site performance vs. payment in-lieu?

- 15 What could the City do, should it be inclined, to incentivize more on-site performance?
- 16 How should the City weigh costs and the potential future costs against potential benefits?
- 17 How might the City weigh the broader program benefits (revenue for affordable housing generated) versus the potential costs?

Theory of Change

This evaluation assesses the MHA program’s outcomes and impacts according to the goals and intents at the time of implementation. **Exhibit 3** presents a conceptual model of the Mandatory Housing Affordability Program’s Theory of Change which shows how the MHA program is expected to lead to desired outcomes and impacts.

EXHIBIT 3. SEATTLE MHA THEORY OF CHANGE



Note: Numbers represent evaluation questions.

Source: BERK, 2024.

Program Design

The leftmost section of the Theory of Change, indicated by blue, models the context factors that shape the program’s design. Specifically, the Theory of Change highlights two significant context factors relevant to the design and implementation of MHA: community priorities and the City’s regulatory authority established in state law.

Historic Context and Community Priorities

The City designed MHA at a time when there was robust market-rate housing development, rapid housing price acceleration, as well as a significant and growing number of low-income households that could not afford market

rate housing. At the time, absent any incentives to provide low-income housing, market conditions resulted in housing development in many areas that lacked units affordable to low-income households, leading to adverse socioeconomic effects.³ The City of Seattle also found that “new market-rate housing is generally not affordable to lower-income households. At the same time, new market-rate housing creates an increased need for affordable housing.”⁴

In 2014, the Mayor and City Council established ([Resolution 31546](#)) the HALA Committee which convened between September 2014 and July 2015 to identify recommendations focused on (1) increasing the housing supply, (2) strategically preserving housing, (3) providing protections for vulnerable tenants and homeowners, (4) streamlining systems and implementing other reforms to reduce housing costs, (5) growing resources for production and preservation of affordable housing, and (6) building affordably as Seattle grows. The advisory committee published 65 recommendations in the [Seattle Housing Affordability and Livability Agenda \(HALA\) – Final Recommendations to Mayor Edward B. Murray and the Seattle City Council](#).⁵

Following the publication of the HALA report, the City conducted three years of public engagement and found that the community “broadly supports actions to address housing affordability and curb displacement of current residents.”⁶ The City implemented the MHA Program, among other policy and regulatory changes, to incentivize the production of affordable housing. Based on community concerns related to displacement, the City published “[Principles for MHA Implementation](#)” and demarcated low, medium, and high areas to mitigate potential displacement impacts related to the upzone across different market areas.

Regulatory Authority Established in State Law

MHA was designed and established according to requirements and authority prescribed in Washington state law.

1. The Growth Management Act ([RCW 36.70A](#)) requires jurisdictions to “plan for and accommodate housing affordable to all economic segments” of the City.⁷
2. The Revised Code of Washington ([RCW 36.70A.540](#)) grants jurisdictions authority to require residential developments to provide a minimum amount of low-income housing units in areas where increased residential development capacity has been provided. The statute imposes bounds to some programmatic elements of jurisdiction’s affordable housing incentive programs, including:
 - **Definitions of affordable housing.** The statute specifies that “affordable to low-income households” includes rental housing that is affordable by households with an income of 50% or less of the county median family income, adjusted for family size, and owner housing that is affordable to households with an income of 80% of county median family income, adjusted for family size. The statutes allow local jurisdictions to establish higher income targets through a public process to account for local market conditions. The higher income level cannot exceed 80% of county area median family income for rental housing and 100% of county area median family income for owner housing ([RCW 36.70A.540](#) (2b(i-iii))).
 - **Unit requirements.** Units produced in response to the affordable housing incentive programs:

³ [Ordinance 125108](#) adopted these findings of fact, based on findings established by the 2006 Washington State Legislature establishment of the Affordable Housing Incentives Program ([RCW 36.70A. 540](#)).

⁴ Ibid. See Attachment A, page 3.

⁵ Accepted by Seattle City Council through Resolution 31546.

⁶ Sources: [Summary of Community Input](#) includes summary of engagement objectives, goals, and findings; [Mandatory Housing Affordability Citywide Implementation Director’s Report and Recommendation](#).

⁷ This represents the revised GMA housing goal. Since MHA was established, HB 1220 changed the GMA housing goal from “encourage the availability of affordable housing to all economic segments.”

- Must be provided in a range of sizes comparable to those units that are available to other residents. ([RCW 36.70A.540](#) (d)),
 - Must be distributed throughout the development and have substantially the same functionality as other units in the development. ([RCW 36.70A.540](#) (d)),
 - Must be committed to continuing affordability for at least 50 years. ([RCW 36.70A.540](#) (e)), and
 - Are encouraged to be provided within the development for which a bonus or incentive is provided, but may be provided in a building located in the general area of the development for which a bonus or incentive is provided ([RCW 36.70A.540](#) (g)).
- **Development Incentives.** Washington State law requires jurisdictions implementing an affordable housing incentive program authorized by [RCW 36.70A.540](#) to provide increased residential development capacity through zoning changes, bonus densities, height and bulk increases, parking reductions, or other regulatory changes or incentives. Seattle’s MHA program includes zoning changes that increased the development capacity in all areas in which the MHA program was applied.⁸

Seattle’s MHA Program Components

Seattle’s MHA Program is a mandatory **inclusionary zoning program** to increase affordable housing production in Seattle. The program has two primary components:

MHA Component 1. New zoning that adds development capacity in the city’s multifamily and mixed-use zones.

In 2017, Seattle implemented the MHA program in five Seattle neighborhoods: University District, Downtown and South Lake Union, Chinatown/International District, 23rd Avenue Corridor, and Uptown.⁹ Later, in 2019, the MHA Program was expanded to include all urban villages designated in the [Seattle 2035 Comprehensive Plan](#), newly expanded urban villages near frequent transit hubs, and other areas with commercial and multifamily zoning. The City increased the zoned capacity in designated urban centers and urban villages to at least 125% of Seattle’s adopted housing growth estimates and implemented additional development standards changes that increase the zone’s capacity.

The 2019 ordinance also rezoned approximately 1,240 acres of single-family zoned land, or about six percent of all Seattle land with single-family zoning, to allow multifamily housing. Of the rezoned single-family land in the proposal, 62% become Residential Small Lot (RSL), a zone that encourages various small- to moderate sized housing options in cottages, townhouses, and small apartments. The 2019 ordinance prohibited increased development capacity in areas zoned for SF 5000, SF 7200, or SF 9600, or upzoning of these areas unless other criteria are met.¹⁰ MHA zoning changes do not apply in designated historic districts.

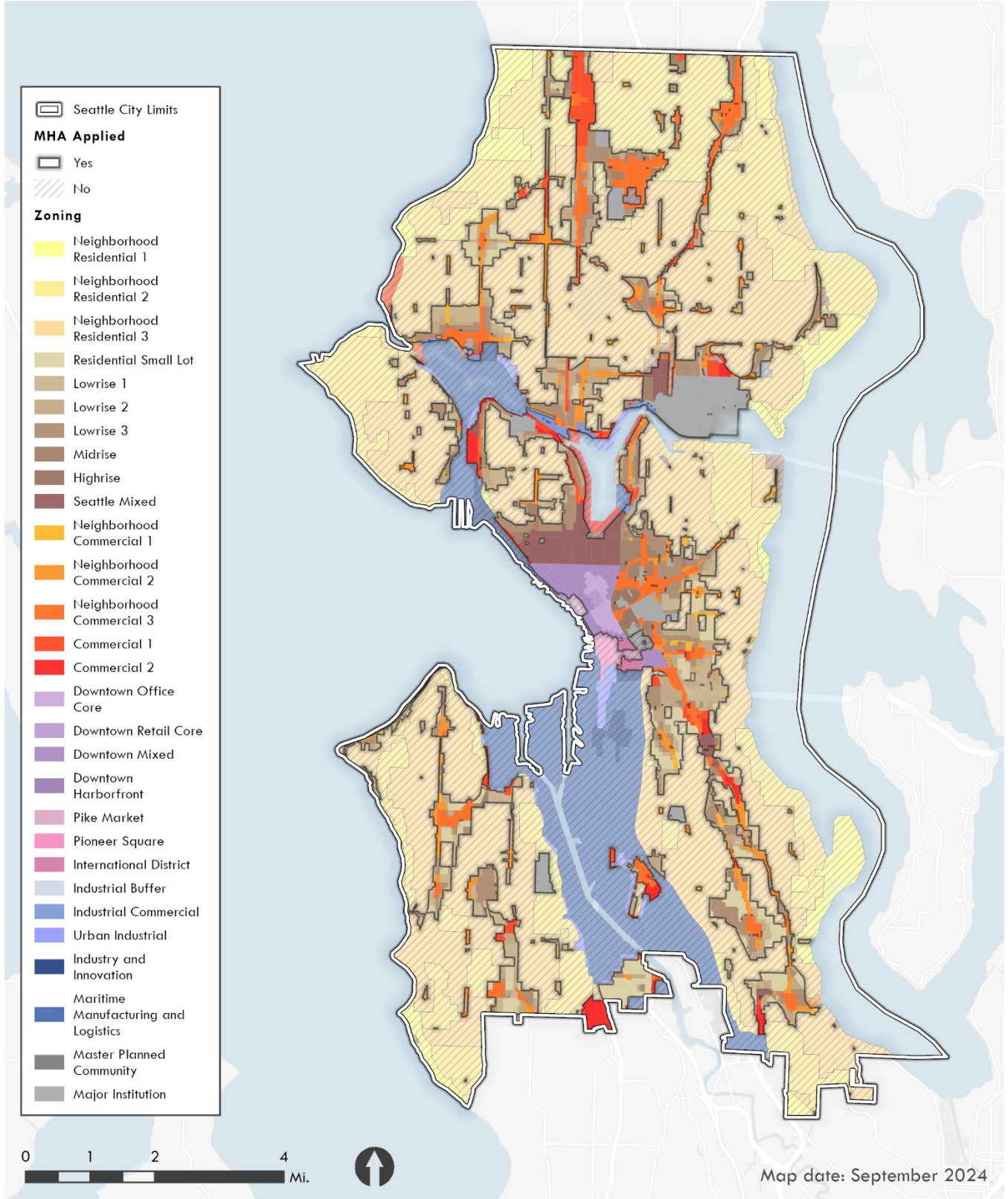
A map of Seattle zoning and areas currently subject to MHA requirements is presented in **Exhibit 4**. The City estimated that the 2019 MHA Program rezones would increase the housing production capacity by 38% over 20 years and result in 17,026 additional new homes when compared to projections under prior zoning (OPCD, 2018).

⁸ (Ennis, 2013) provides an overview of Washington’s “takings” framework and why previous municipal inclusionary zoning policies were rejected by the courts. Available at: <https://digitalcommons.law.uw.edu/wlr/vol88/iss2/10>.

⁹ The MHA Program was first implemented in 2017 in the University District ([Ordinance 125267](#)), in Downtown and South Lake Union ([Ordinance 125291](#)), Chinatown/International District ([Ordinance 125371](#)), 23rd Avenue Corridor ([Ordinances 125359](#), [125360](#), and [125361](#)), and Uptown ([Ordinance 125432](#)),

¹⁰ See [Ordinance 125791](#).

EXHIBIT 4. SEATTLE ZONING AND AREAS SUBJECT TO MHA REQUIREMENTS



Sources: City of Seattle, 2024; BERK, 2024.

MHA Component 2. Requirements for developers to include affordable housing in the new development or pay a fee-in-lieu.

MHA requires applicants seeking a permit for development to enter into a voluntary agreement with the City to mitigate impacts on the need for affordable housing through either a payment option or through a performance option. The requirements differ for commercial and residential development, by geographic area of the city (Low, Medium, or High), and by scale of the zoning change (indicated by M, M1, M2 suffixes), with exceptions for affordable housing projects meeting specified criteria.¹¹

Performance Option:

- **Agreement with the City.** The owner must enter into an agreement with the city that is recorded on the title of the property specifying the MHA requirement.
- **Amount of restricted affordable housing.** Performance requirements for affordable housing in residential projects are calculated as a percentage of total units. Performance requirements for commercial projects are calculated as a percentage of gross floor area. Both floor area ratio calculations exclude portions of the buildings that are underground and some ground-floor commercial uses. With the performance option, between 5% and 11% of homes in new multifamily residential buildings are reserved for low-income households.¹²
- **Income and housing cost restrictions**
 - Rental housing must be affordable to renter households with incomes no greater than 60% of area median income (AMI) at initial certification and no greater than 80% of AMI at annual recertification.
 - Units with a net area of 400 square feet or less have a rent limit of no greater than 40% of AMI at initial certification and no greater than 60% of AMI at annual recertification. “Rent limit” includes a utility allowance for heat, gas, electricity, water, sewer and refuse collection.
 - Ownership units must only be sold to households with incomes no greater than 80% of AMI at initial occupancy and that meet a reasonable limit on assets. The initial sale price may not exceed 35% of the monthly income for a household with an income of 65% of AMI. The program includes a process to ensure affordable resale prices that allows for modest growth in homeowner equity while maintaining long-term affordability for future buyers.
- **Housing conditions**
 - Housing must be comparable to the other dwelling units in terms of number and size of bedrooms and bathrooms.
 - Housing must be newly constructed and generally distributed throughout the residential portion of the development.
- **Ongoing management requirements (rental units)**

¹¹ Exemptions are described in [Ordinance 125108](#) as development that receives public funding and/or an allocation of federal low-income housing tax credits, is subject to a regulatory agreement, covenant, or other legal instrument recorded on the property title and enforced by the City of Seattle, Washington State Housing Finance Commission, State of Washington, King County, U.S. Department of housing and urban development, or other similar entity as approved by the Director of Housing, which restricts at least 40% of the units to occupancy by household earning no greater than 60% of median income, and controls the rents that may be charged, for a minimum period of 40 years.

¹² For small multifamily buildings, the percentage can rise due a floor detailed in [23.58C.050.A.2](#): “If the number of MHA-R units that meet the requirements according to subsection 23.58C.050.C calculated according to subsection 23.58C.050.A.1 equals less than two, the applicant shall: a. Round up to two units; or b. Provide one dwelling unit that meets the requirements according to subsection 23.58C.050.C that is three bedrooms or larger, as determined by the Director of Housing.”

- Duration. The rental housing through the performance option must be provided for 75 years from the date of certificate of occupancy or the final building permit inspection.
- Marketing plan. Proposed marketing efforts shall be submitted to the Office of Housing for review and approval.
- Annual recertification. The owner must obtain from each tenant a certification of household size and annual income on an annual basis to recertify household eligibility. When possible, the owner shall attempt to substantiate income through a third party at each certification verification. Household eligibility must be certified on an annual basis. No fees can be charged to households for income certifications or reporting requirements related to MHA.

If a previously eligible household's income makes them ineligible due to exceeding the income limits, the owner must designate a comparable substitute unit of housing within the development to transfer the requirements.

- Replacement housing. If the MHA housing unit is destroyed or rendered unfit for occupancy, the owner shall designate a comparable substitute unit of housing within the development for the tenant to move into.
- Reporting. The owner must submit a written report on the occupancy and vacancy of each unit of MHA housing, the monthly rents charged for each housing unit, and the income and size of each household that occupies the housing.
- Administration fee. The owner must pay the City of Seattle Office of Housing an annual fee of \$150 per unit of MHA housing for monitoring compliance. The fee updates annually based on CPI and cannot be charged to households occupying the housing.
- Transfer of ownership. If the owner of the development required to mitigate affordable housing impacts is not the owner of the MHA housing, the two owners shall execute a developer's agreement acceptable to the City of Seattle Director of Housing that allows the exclusive use of the MHA housing to satisfy the requirements.

If the building is converted to ownership units, demolished, or the use changes before the 75-year affordability requirement is done, the building owner shall pay the City a payment in-lieu of continuing affordability or convert the rental units provided through the performance option to performance ownership units.

Payment Option

Payment amounts are calculated by multiplying the MHA payment dollar amount per gross square foot by the total gross floor area of residential and commercial development, excluding portions of buildings that are underground as well as commercial area exempted from floor area ratio (FAR) calculations such as certain ground floor retail.

Use of MHA payment revenues

The enacting ordinance includes requirements and restrictions for the use of funds paid as a fee-in-lieu. These requirements include:

- **Location.** The supported housing must be within the Seattle city limits.
- **Rental Housing**
 - Preservation and production of housing affordable to renter households with incomes no higher than 60% AMI.

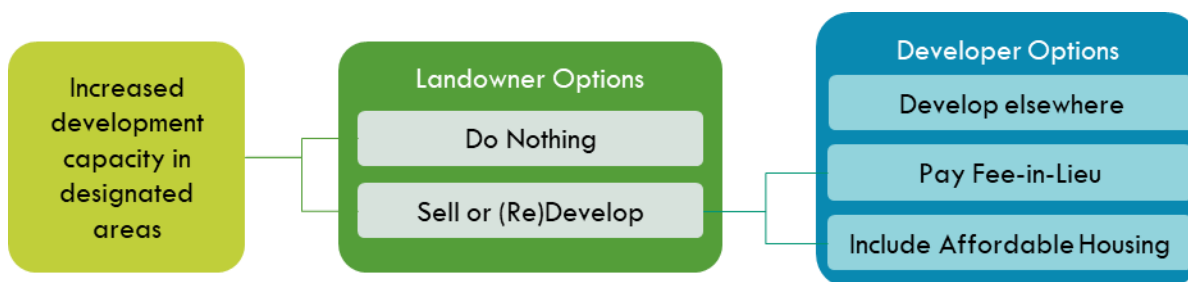
- Rental housing will be rent- and income-restricted for a minimum of 50 years with an expectation of ongoing affordability.
- The City will consider whether the housing advances the following factors:¹³
 - Affirmatively furthering fair housing choice.
 - Located within an urban center or urban village.
 - Locating in proximity to frequent bus services or current or planned light rail or streetcar stops.
 - Furthering city policies to promote economic opportunity and community development and addressing the needs of communities vulnerable to displacement.
 - Locating near developments that generate cash contributions.
- **Ownership Housing**
 - Five percent of total MHA funds distributed each year must be used for projects supporting owner-occupied housing for owner households with income of 80% of AMI or less.
 - Resale restrictions for 50 years and an expectation of ongoing affordability.

Intended Impacts on Developer Decision Making

The Theory of Change illustrates that the intended outcomes of the MHA Program are contingent on a change in behavior by the people seeking development permits from the City, namely real estate developers. By implementing the MHA program, Seattle intended to change the actions of commercial and residential building developers. This point of intervention is similar to other city affordable housing incentive programs such as the [Multifamily Tax Exemption Program](#) and [Seattle’s Incentive Zoning Program](#).

Exhibit 5 illustrates the direct impact of the MHA program starting with the aspect most within the City’s control—its regulatory authority over land within Seattle city limits. The rezones of the MHA Program increase the development capacity of the applicable land, thus increasing the land’s potential economic productivity. The increase in development capacity and potential economic productivity may benefit landowners and may impact their actions. Landowners can choose to do nothing (no changes), sell their property based on the change in the potential economic productivity, or become developers themselves by (re)developing the property.

EXHIBIT 5. DECISION TREE OF LANDOWNERS AND DEVELOPERS



Source: BERK, 2024.

By enacting MHA, Seattle required developers of new development projects to pay a fee-in-lieu or provide affordable housing within the development. If they wish to pursue a development permit on a parcel subject to MHA, developers must decide whether to pay a fee-in-lieu or to include dedicated affordable housing within the new development. Developers may also choose to develop elsewhere, such as areas not applicable to the MHA Program within Seattle or outside of Seattle city limits.

¹³ Criteria explained in (City of Seattle, 2017).

The degree of influence of the City’s policy action on developer behavior is dependent on the conditions and decision factors relevant to the developer. To isolate the conditions and factors relevant to developer decision-making, it is helpful to put them into the context of a typical development project process, illustrated in **Exhibit 6**.

EXHIBIT 6. PHASES OF A TYPICAL DEVELOPMENT PROJECT



Sources: BERK, 2024; Heartland, 2024.

The Theory of Change posits that the MHA Program intervenes in the development process in the pre-development phase. This is the phase in which the developer makes decisions about the project concept, including site, use, market, costs, architectural concept, and exit strategy (to sell or to hold and operate the building(s)). Site availability, market potential, cost assumptions, investor interest, and access to debt (both construction and permanent financing) all constrain the developer’s decision about whether to develop and whether to satisfy the MHA requirements through payment or performance. Other decision makers in this process include *investors* and *lenders*, whose decisions are influenced by their assessment of the likely return on investment. Judgments about the likely return on investment are largely made based on macroeconomic factors outside the City’s control, such as the strength of the economy, population and job growth, market preferences, and monetary policy (which impacts the cost of debt for developers).

The MHA Program’s primary point of intervention is in the pre-development phase, with limited modification to the control and development phases except for the need to pay the fee in advance of receiving a permit (control phase). However, pre-development decisions about payment or performance impact the requirements in the management phase.

Desired Outcomes

MHA was designed with the intent to achieve the following outcomes:¹⁴

¹⁴ These goals are summarized from the report: *Mandatory Housing Affordability (MHA) Citywide Implementation Director’s Report and Recommendations* (OPCD, 2018)

- **Increase the supply of housing.** By increasing development capacity through rezones, the City estimated that the citywide implementation of MHA in 2019 would increase total housing production over the 20 years by 17,026 units compared to projections under previous zoning.
- **Commercial and multifamily residential development contributes to affordable housing.**
- **Increase in the amount of rent- and income-restricted affordable housing.** The MHA Program is intended to produce at least 6,000 new rent- and income-restricted homes for households with incomes at 60% AMI or below by 2025.¹⁵
- **Distribute affordable housing units produced through MHA to neighborhoods throughout the city.**
- **Advance racial and social equity.** The city expects rent and income-restricted housing created through MHA payments to primarily serve vulnerable populations, including racial and ethnic minorities, immigrants, people with disabilities, and seniors, including communities vulnerable to displacement (City of Seattle, 2017).
- **Achieve a mix of projects using the performance and payment option.**
 - Benefits of performance units: “creates mixed-income buildings with affordable homes that open at the same time as market rate development” (OPCD, 2018, p. 10).
 - Benefits of payment options: “allows the City to leverage non-City funds to build two to three times as many affordable homes and support other goals like locating housing near transit or in areas with high risk of displacement” (OPCD, 2018, p. 10).

Evaluation Methods

The evaluation uses a mixed methods approach to answer the evaluation questions. These methods include:

- A review of peer-reviewed research studies on the impacts of mandatory IZ programs in cities and regions across the United States.
- Interviews with Seattle City staff to better understand the intent and implementation of the program.
- Interviews with developers to identify the factors that influence their decisions about pursuing projects in Seattle. The qualitative input includes unmeasurable factors, such as confidence in the City of Seattle’s program administration or unconscious bias, that are independent of the specific program design. Interviewees provided insights into the relative weight of each factor (based on their experience and perception).
- Proforma development feasibility modeling of several project types in Seattle reflecting real estate market conditions shortly before MHA, at the time MHA was adopted, and in 2024. The comparison of feasibility at different points in time provides more insight into the relative impact of MHA policies on developer decision-making.
- Identification of changes in other policies and regulations in Seattle and Washington State that may have impacted development feasibility during the years following implementation of MHA.
- An analysis of comparable building permit data across Seattle and peer jurisdictions to determine whether trends in Seattle diverge following adoption of MHA.
- An analysis of Seattle building permit data to assess the direct impacts of the program (changes in developer behavior) and outcomes of MHA (types, location, and affordability of new housing).

¹⁵ This goal was stated in the Citywide Implementation of MHA Final Environmental Impact Statement (City of Seattle, 2017) as producing 6,000 affordable housing units over ten years.

- An analysis of affordable housing production in Seattle, including an estimation of units that can be directly attributed to MHA after accounting for the proportional contribution of other funding sources.

MHA has only been implemented citywide for five years at the time of this evaluation. While this is enough time to identify some preliminary impacts, more time will be needed to understand the policy's full impacts. This is particularly true for larger development projects, such as high-rise structures, which often take five or more years between conception and completion.

Additionally, the effectiveness of mandatory IZ programs is highly dependent on regional economic factors and local political contexts. Therefore, the evaluation findings in this report are specific to Seattle over the last five years and have limited generalizability to other policy contexts.

Section 2. Review of Research on IZ Program Impacts

The evaluation includes two questions best answered through a review of existing evidence on the impacts of inclusionary zoning on housing production. The relevant evaluation questions include:

Evaluation Question 1

What is the current evidence base on inclusionary zoning programs and the impacts of such programs, positive or negative?

Evaluation Question 2

Are there any general takeaways from existing rigorous research studies that can inform Seattle’s program, understanding that programs vary widely across jurisdictions?

We reviewed peer-reviewed research studies that attempt to measure changes in housing outcomes in cities, counties, and regions implementing mandatory inclusionary zoning programs. These studies are typically conducted by scholars in disciplines such as urban planning, geography, and economics and published in academic journals with rigorous standards for peer review.¹⁶ Some examples of the outcomes measured in these studies are total housing production, the cost of market rate housing, and the production of new affordable housing. The purpose of this review is to summarize the range of housing market outcomes measured in cities with mandatory IZ programs, as well as how those outcomes compare to nearby jurisdictions without mandatory IZ. In doing so, we can identify whether there are general patterns or tendencies with regards to the outcomes of IZ policies in cities that are comparable to Seattle.

There are some limitations to these studies that must be considered when assessing the relevance of findings. First, housing production in the United States is shaped by many factors beyond just inclusionary zoning policies. This is because it is carried out by decision makers that are responding to a complex web of local land use and development regulations, building codes, development fees, design review processes, and permitting process. Local housing market dynamics that vary from region to region and macroeconomic factors also impact the production of new housing. It is difficult to measure the specific impacts of the IZ program in isolation of these other factors. This is why these studies tend to examine whole metropolitan regions and include dozens or even hundreds of jurisdictions. By increasing the number of jurisdictions in their sample, they can measure general tendencies and patterns in outcomes among jurisdictions with IZ policies compared to those without.

Another challenge in this body of research is the wide diversity of approaches to IZ program implementation across different jurisdictions. These programs can vary with regards to the affordability level of required units, allowance for payment in-lieu, whether the program is applied to an entire jurisdiction or specific zones, the project size threshold that triggers affordability requirements, whether the program was paired with an upzone to increase capacity, etc. As would be expected, prior research finds that housing outcomes are very sensitive to IZ program parameters (Hamilton, 2021; Wang & Fu, 2022). Therefore, it is difficult to generalize the findings in any one study as directly relevant to Seattle’s MHA program, and caution should be taken when interpreting these findings.

IZ Impacts Outside of Seattle

Exhibit 7 presents a summary of peer-reviewed research studies that examined housing outcomes in U.S. jurisdictions outside of the Seattle region that have adopted mandatory IZ programs. This summary emphasizes findings related to total housing production and the price of market rate housing. None of the studies are able to demonstrate whether there is a causal relationship between mandatory IZ programs and housing production or market price. Rather, the studies use different statistical techniques to measure whether jurisdictions with mandatory

¹⁶ The evaluation focuses on research subject to peer-review, meaning that scholars have deemed the studies to be fit for publication based on a standard of methodological rigor.

IZ experience higher rates of housing production or lower housing prices than similar jurisdictions in the same region without mandatory IZ.

When interpreting the relevance of these research findings to Seattle's MHA program, it is important to keep in mind a few characteristics that are common to nearly all these studies. First, these studies typically focus on a single metropolitan region or state and compare outcomes in cities and towns with mandatory IZ policies to other cities and towns that do not have such policies within the same region. The study design helps to isolate the impact of the IZ program because all the jurisdictions are affected by the same macroeconomic factors such as regional population growth, job growth, and construction costs. However, the study design is limited in that it does not compare the central cities in these metro regions to peer cities (in terms of size, demographics, industry mix, etc.). Instead, it compares outcomes among jurisdictions in the same metropolitan region that vary from large central cities to small suburban or rural towns and everything in between. Moreover, most of the jurisdictions by count are suburban cities, as most metropolitan regions have just one or two central cities. So, results that measure the average impact of IZ on housing outcomes among the jurisdictions would be weighted towards the experience of suburban communities rather than central cities that may most closely resemble Seattle's role in the Central Puget Sound Region.

A limitation of studies that analyze housing market prices is that they nearly always focus on ownership housing sales. This makes sense given that most of the jurisdictions analyzed are suburban communities where detached, fee simple housing has historically been the norm, and the vast majority of the ownership housing is detached homes. Seattle's MHA program, on the other hand, only applies to zones that allow for multifamily housing construction, where rental housing is the most common type developed. Therefore, studies that analyze rental housing price trends in other cities with and without mandatory IZ would be more useful to this evaluation. Unfortunately, we did not identify any peer-reviewed research studies that examine rental housing price trends.

EXHIBIT 7. SUMMARY OF EVIDENCE: HOUSING PRODUCTION AND PRICE OUTCOMES IN JURISDICTIONS WITH MANDATORY IZ COMPARED TO NON-IZ CITIES

Region	Study Description	Total housing production	Market housing prices*	Citation
California	Analysis of 369 cities in California, mostly in the San Francisco, Los Angeles, and San Diego metropolitan regions. The study compared outcomes in the 65 cities that implemented an IZ program to outcomes in cities that did not implement any form of IZ. Analysis of housing cost was limited to sales prices (not rents).	<ul style="list-style-type: none"> 7% increase in multifamily housing production as a share of total housing production. No statistically significant impact on housing production. 	<ul style="list-style-type: none"> Single family housing prices in cities with IZ increased about 2-3% faster than cities without IZ. No analysis of multifamily housing rents. 	(Bento et al., 2009)
San Francisco Bay Area	Analysis of 114 permitting jurisdictions in the San Francisco MSA. The study compared outcomes in the 55 jurisdictions with IZ programs (51 mandatory and 4 voluntary) to outcomes in jurisdictions with no IZ program. Most IZ programs apply to all residential development, with a few exceptions. Most IZ programs allow for fee in-lieu. As most jurisdictions are suburban, this study focused exclusively on impacts to detached fee simple housing production and costs.	<ul style="list-style-type: none"> No relationship between IZ programs and single-family housing production. 	<ul style="list-style-type: none"> IZ programs appear to increase single-family housing prices in times of regional price appreciation, but to decrease prices during cooler regional markets. 	(Schuetz et al., 2011)
Boston	Analysis of 187 cities and towns in the Boston MSA which compared outcomes in the 99 jurisdictions with IZ programs (58% were mandatory) to outcomes in jurisdictions with no IZ program. In most cases, IZ requirements are narrowly applied to only certain zones, housing types, or larger projects. An in-lieu fee option was only available in about a third of all programs. Most jurisdictions did not include a density bonus associated with the IZ requirements. As most jurisdictions are suburban, this study focused exclusively on impacts to detached fee simple housing production and costs.	<ul style="list-style-type: none"> Negative effect on single-family housing permits, but impact is small and significant only during hot housing market. 	<ul style="list-style-type: none"> IZ programs appear to increase housing costs, but this impact is only significant during hot housing market. 	(Schuetz et al., 2011)
California	Analysis of housing outcomes over time in all California cities and towns with 10,000 population or greater. Includes comparisons between cities with mandatory inclusionary zoning to those without.	<ul style="list-style-type: none"> 7-8% reduction in housing production on average. 	<ul style="list-style-type: none"> 9-20% higher housing prices on average. 	(Means & Stringham, 2012)
LA/Orange County	Analysis of housing outcomes in over 100 cities in Los Angeles and Orange Counties. The study compared outcomes in the 17 jurisdictions with IZ programs (14 mandatory and 3 optional) to outcomes in jurisdictions with no IZ program. It also analyzed differences between jurisdictions with mandatory and voluntary programs.	<ul style="list-style-type: none"> No evidence that mandatory IZ programs reduce overall housing production. Programs with density bonuses were more likely to increase total housing production. 	<ul style="list-style-type: none"> Not included in study. 	(Mukhija et al., 2016)
DC/Baltimore	Analysis of 56 permitting jurisdictions across Maryland, Virginia, and Washington DC that compared outcomes in the 24 jurisdictions with IZ programs (16 mandatory and 8 optional) to outcomes in jurisdictions with no IZ program. It also analyzed differences between jurisdictions with mandatory and voluntary programs.	<ul style="list-style-type: none"> No evidence that mandatory IZ programs reduce overall housing production or permitting. 	<ul style="list-style-type: none"> Cities with mandatory IZ saw larger increases in for-sale (predominantly single family) housing prices. 	(Hamilton, 2021)

* Note: All studies focus on housing sales prices and exclude consideration of rental housing price.

Source: BERK summary of prior research findings (see citations in table), 2024.

Impacts of Seattle's MHA Program

Seattle's own MHA program was the subject of a recent study (Krimmel & Wang, 2023). Unlike the studies reviewed in **Exhibit 7**, this paper focuses on a single jurisdiction (Seattle) and evaluates the volume and distribution of new housing production before and after the adoption of MHA policies. The authors find that the total amount of new housing production did not diminish in the years following the adoption of MHA. However, they found that the distribution of new development had shifted to areas outside of zones subject to MHA. They specifically found evidence of development shifting from low-rise zones to low-density zones outside of the MHA applicable areas.

Krimmel and Wang's study does not establish causality between the new MHA requirements and the shift in development activity. It is likely that a combination of factors is contributing to the shifting distribution of housing development in Seattle. Some change can also be explained by other regulatory changes unrelated to MHA that could impact the distribution of housing development in Seattle. Most notably, in 2019, around the same time that MHA was expanded to multifamily zones citywide, Seattle adopted reforms to its accessory dwelling unit (ADU) regulations that made it easier to build two additional units on all parcels zoned for detached, single family housing. The new ADU regulations primarily impacted Neighborhood Residential zones where MHA does not apply. Since these ADU reforms were adopted, the city has reported rapid growth in ADU production.¹⁷ The new ADU units explain part of the shift in permitting activity identified in this study, as will be discussed in more detail later.

General Takeaways About IZ Program Impacts

There are four general takeaways from this review of the literature:

- The impacts of IZ on housing production are highly dependent on the program design. They also depend on how the IZ program interacts with local market conditions and other incentives or subsidies designed to reduce the cost or increase the financial return for new development.
- Peer-reviewed research on mandatory IZ programs is limited in its applicability to Seattle's MHA program. This is because the studies are typically regional in scale, where the majority of jurisdictions are suburban. Results for more directly comparable central cities like Seattle are not provided.
- Evidence from literature on the market effects of inclusionary zoning are mixed. Most studies reviewed for this evaluation indicate that mandatory IZ programs are not associated with reduced housing production. However at least two peer reviewed studies did find reduced production in cities with IZ, under some conditions.
- Several studies indicate that IZ programs are associated with higher market rate housing prices. However, these studies focused nearly exclusively on the sales price of detached, fee-simple homes. Seattle's MHA program only applies to multifamily housing production and attached fee-simple housing, so the relevance of these findings to Seattle are limited.

¹⁷ See OPCD's [Accessory Dwelling Unit 2022 Annual Report](#).

Section 3. Development Feasibility

Evaluation Questions 3 through **8** focus on the concept of development feasibility. For this report, development feasibility is defined as a developer’s conclusion that there is enough potential profit in a development project to make it worth pursuing. It differs from profitability in that a project can be potentially profitable but not be considered feasible given the risk level of the project. This includes understanding the various factors that shape the decision of a private developer to proceed with a multifamily housing project in Seattle as well as the specific impacts of MHA on this decision. To answer these questions, this section presents a framework for understanding the relationship between MHA and development feasibility, introduces a feasibility modeling approach used by multifamily developers, and presents feasibility modeling results that show how feasibility has changed over time during MHA’s five years of implementation.

MHA’s Relationship to Development Feasibility

Evaluation Question 3

How can the City better understand the value of an MHA upzone and the added development capacity provided in different zones versus the added costs associated with the program (either to build on-site/or make a payment in lieu of), assuming this information will help the City understand if program modifications are needed?

As discussed in **Section 1**, MHA was designed with the intent to balance the added costs (or reduced revenue potential) associated with affordability requirements with an upzone that, in theory, provides additional value to developers. By balancing these benefits and costs, city officials hoped that the program would have a neutral or positive impact on development activity overall. However, as we describe below, the balance between these costs and benefits is not durable over time as market conditions change. This is due, in large part, to economic factors beyond the City’s control. Moreover, in some cases developers are not able to realize the theoretical value provided by an upzone, even without the additional cost or loss of revenue associated with affordability requirements.

Here we provide an overview of the costs imposed by MHA requirements, the theoretical value that an upzone provides to balance those costs, and the kinds of barriers that can prevent developers from realizing the full theoretical value of an upzone. Later in this section we show how these costs and benefits impact development feasibility for three different product types and how that has changed over time.

Costs of MHA requirements

The requirements of complying with MHA directly impact development feasibility by increasing costs (in the case of in-lieu payments) or reducing revenues (in the case of providing affordable units at below-market rents or prices). To avoid negatively impacting development feasibility, the costs of MHA requirements need to be offset in some way. This could be in the form of discounted land prices or incremental profitability on the additional capacity made available through an upzone.¹⁸

Theoretical value that an upzone provides developers

The upzones provided as part of the MHA program allow developers to increase the height of new buildings. This change creates increased development capacity on a given parcel of land, and therefore an increased potential net operating income from the additional housing units and/or commercial space included in the new building.

¹⁸ A reader may ask why developers cannot absorb these additional costs. Construction costs, material and labor costs, infrastructure costs, design costs, and engineering costs are not flexible, as building codes generally require a certain level of design, and aesthetic choices such as kitchen finishes or appliances only marginally affect costs. Moreover, developers typically fund projects with a relatively small amount of their own capital (about one to seven percent of total development costs). The rest of the project must be financed with loans from banks or third-party investors which have fixed interest rates and return requirements, respectively. These fixed costs prevent developers from absorbing additional costs, resulting in an impact to feasibility.

Upzones can also potentially increase the number of available development opportunities, due to creating new areas where certain types of development can occur.

Barriers to developers realizing the value of an upzone

There are several barriers that can prevent developers from realizing the full potential value of an upzone.

- **The benefits of the upzone fall to the landowner, not necessarily the developer.** One challenge with MHA is that the benefit of the upzone and impacts of the program requirements typically fall to two different parties. The upzone benefits landowners, while the MHA fees and/or affordable housing requirements impact developers. Developers are typically land buyers, not owners. Developers generally avoid holding land for long periods of time for two primary reasons. First, holding land is very capital intensive, which ties up the developers' resources for development. Second, the cost of holding the land diminishes a project's overall returns and attractiveness to additional investors or financiers, who are often needed to fund projects.
- **Inputs that influence land value don't always efficiently translate to adjusted land pricing.** Sellers and developers are people with different preferences and goals. The decision to sell is based on many factors. Land prices are highly influenced by market competition (demand) and are also driven by speculation on future market conditions (belief the value of the land will go up). Land speculation, which can be optimistic, pessimistic, or neutral, skews the relationship of land value and prices depending on the current sentiment within the market. In most circumstances the value and price do not translate cleanly within transactions, resulting in an uneven distribution of benefits and costs between parties.
- **Increased revenues from larger buildings are offset by higher development costs.** The upzone can create increased development capacity that increases potential gross revenues. However, it also increases project costs and operating expenses. Larger projects cost more to build based on the increased square footage. They can also trigger greater construction costs by requiring a new construction typology, such as going from a timber-framed building to a podium building.
- **Imperfect utilization of increased development capacity.** Another complication of determining the value of the upzone is that the additional zoning capacity is not utilized in every case. In some cases, the construction typology dictates the maximum feasible development capacity of a site. Going into new construction typologies, such as switching from timber-framed to podium construction, can be prohibitively expensive. Therefore, an upzone that crosses these thresholds imposes MHA costs without the benefit of the upzone, functionally reducing the development feasibility of the site. When this happens, the value of land to developers can be negatively impacted, discouraging landowners from selling land at what they consider to be less than it is worth.

Another example of imperfect utilization of increased capacity is demonstrated in low-rise zones and supported by developer feedback. Developers specializing in townhome development report that available building sites in Low-rise (LR) zones often have encumbrances or other factors preventing utilization of its full allowed development capacity. Furthermore, market demands for parking prevent them from taking advantage of reduced parking requirements, and there is limited market value for a fourth story for townhomes. As a result, the value of increased development capacity is diminished.

Evaluation Question 4

What tools exist that may help the City assess incremental policy decisions and their impacts on local housing production?

The City has a variety of options for assessing the impacts of policy changes on local housing production. No single tool provides perfect information, and the City would be wise to select tools optimized for specific purposes, such as:

- Evaluating the potential impact of a proposed policy change on financial feasibility of development, and therefore the likelihood that future housing production will increase or decrease following adoption of the policy.
- Evaluating how development feasibility has changed over time, and the proportional contribution of the policy (such as MHA) to any changes in development feasibility.
- Monitoring housing production following adoption of new or changed policy to determine if any notable changes occur.

This evaluation is focused on the latter two bullets. This section of the report describes the pro forma modeling approach used in this study, its benefits for answering the City’s evaluation questions, and how it contrasts with previous studies that focused on the first bullet (evaluating the potential impacts of a policy change on future development feasibility and housing production). In this study we use a discounted cash flow model similar to what a developer or investor would use to assess feasibility for a potential development site. The discounted cash flow model examines all development costs and anticipated revenue on a monthly schedule from the start of predevelopment activities through a projected sale date. The outputs focus on return on investment metrics, such as an annual yield on equity or an overall internal rate of return.

The advantages of the discounted cash flow model include:

- It is designed to determine the return on investment for a developer and their investors and allows a closer examination of inputs that impact developer decisions, including those driven by macroeconomic conditions such as inflation and interest rates.
- It allows for modeling the debt and equity market conditions that provide funding for real estate development.
- It more accurately reflects the full costs related to the timing of fees and predevelopment timelines than a static pro forma model, which is a model type described below.

Previous studies commissioned by the City of Seattle, including technical memoranda by Community Attributes, Inc. in [2016](#) and 2023 and a [report by DRA](#) analyzing the Seattle Affordable Housing Incentive Program from 2014 have used financial models to understand the potential impact of MHA on developer decision making. The primary tool used by these studies is a static pro forma model, which is designed to determine the impact of policy (e.g., fees or affordability requirements) on residual land value.¹⁹ This static model analyzes the conditions that impact development at a moment in time to determine the residual land value that allows for a development to be feasible, assuming that all other costs and revenues remain relatively stable. While it can theoretically include escalated costs and revenues, it does not account for development timelines and the time value of money metrics that are of high importance to real estate investment.

A static pro forma model examines current development metrics such as market rents and construction costs to compare the value of a hypothetical completed project against the costs to construct it. After factoring in a developer’s needs for profit, the difference in the cost to build and the market value (potential sales prices or rents) can be attributed to the residual value of the land. In this approach, residual land value represents what a developer would theoretically be willing to pay to acquire a property for development. Modeling efforts of previous studies for MHA suggested that:

¹⁹ Residual land value refers to the value of land after all development costs, profits and returns have been subtracted from the total estimated finished value of the development. In other words, the residual land value is the price for land a developer could pay to have a feasible development. If the residual land value is lower than the price a landowner is willing to sell the land for, it is unlikely that the land will be used for development until conditions change.

- Adding additional costs via mandatory fees or reducing market rents via mandatory affordability requirements lowers the residual value of the land.
- Upzoning land to allow for more intensive development increases the residual value of the land.
- Keeping the other assumptions in the model constant, the mandatory fees and/or ratio of affordable housing units can be set to have a neutral impact on residual land value.

There are limitations to static pro forma modeling, including:

- They are highly sensitive to certain metric assumptions such as capitalization rates.²⁰
- They often do not consider financing costs, both from the debt and equity perspective.
- They often do not consider inflationary and rent-growth projections.
- They often do not factor in development timing considerations, such as permitting or design review timelines, or the timing of when fees and costs are incurred and the cost to finance those.

There are of course disadvantages to the discounted cash flow model we have chosen to utilize. One significant disadvantage, which is specifically cited by Community Attributes in their memoranda, is that the discounted cash flow model is constructed to examine specific projects and is not effective in a study where the goal is to establish fees such as MHA fees or impact fees. We agree with this statement, as it is not realistic to build a discounted cash flow model that can examine the large volume of potential zones and development types as flexibly as a static pro forma model can. The effort to do so would be exceptionally cumbersome. However, the purpose of this study is to review the effectiveness of the MHA legislation that relied on a static/residual land value modeling tool, and because the discounted cash flow model is the primary lens through which a developer will establish the feasibility of a development project, we chose to utilize the discounted cash flow model instead and pair that with a detailed analysis of permit data to summarize development outcomes.

Model Scenarios and Iterations

We use a discounted cash flow model of typical developments in Seattle to answer evaluation questions 5 through 8. These questions all focus on the factors that influence housing development in Seattle, including their cumulative and relative impacts.

Every development project is defined by a unique set of site conditions and is influenced by unique parties with varying interests. In this section we review example projects to demonstrate the trends and impacts of the MHA policy as they relate to the evaluation questions. The model uses generalizing assumptions to demonstrate relationships and project dynamics within the examples.

This feasibility analysis uses a discounted cash flow model for three example project types, presented in **Exhibit 8**. The examples represent prevalent development typologies which make up the majority of Seattle’s housing production subject to MHA. The development typologies are categorized by height classification and include low-, mid- and high-rise projects. Typically, development organizations specialize in one of these classifications and develop buildings of a similar height in specific zones. For example, in a mid-rise zone the highest and best use, that is the project that offers the highest return, is often a six or seven story multifamily building. That type of building requires specialized knowledge of relevant building codes, design considerations, permitting processes,

²⁰ Capitalization rates, or “cap rate” are calculated by dividing a property’s net operating income by its market value. It is a rate that represents a buyer’s willingness to pay for a defined cash flow. In a lower cap rate environment, such as the one that existed in 2019, real estate investors are willing to pay more for the same cash flow that they would pay in a higher cap rate environment, such as the one that exists in 2024. An increasing cap rate environment reduces the exit value for a developer looking to sell their property following its completion. For example, a property with a \$1M Net Operating Income (NOI) would sell for \$25M in a 4% cap rate environment, but \$20M in a 5% cap rate environment. This swing has a large impact on residual land value analysis.

financing terms, investment partners, construction practices, customer preferences and operational management. All that specialization results in cohorts of companies and professionals that typically focus on mid-rise projects. The assumptions that inform a development model are inherently different for low, mid, and high-rise projects.

EXHIBIT 8. EXAMPLE PROJECT TYPES USED FOR FEASIBILITY ANALYSIS MODELING

Example Scenarios	Low-Rise	Mid-Rise	High-Rise
Prevailing Development Typology	For Sale Townhome	Mixed Use Multi-Family	Mixed Use Multi-Family
Number of Units	6	147	456
Avg Unit Gross Sq. Ft.	1,300	650	650
Unit Mix	3-bd	Studio, 1-bd, 2-bd	Studio, 1-bd, 2-bd, 3-bd
Parking Spaces per Unit	1	0.0	0.5

Sources: Heartland, 2024; BERK, 2024.

Summary of Inputs

This section responds to Evaluation Question 5, which concerns the inputs and assumptions contained in the discounted cash flow modeling.

Evaluation Question 5

What factors drive housing development in Seattle?

Fundamental drivers of housing production include regional jobs and population growth. Job and population growth creates the demand for housing that leads to housing price appreciation and rent growth. While these factors are the underlying force that drives housing development, they are only a part of the overall factors that influence housing development. In other words, job and population growth alone will not guarantee that housing development occurs.

This Evaluation Question specifically asks about factors that drive housing development in Seattle. These factors are multifaceted, dynamic, and span both qualitative and quantitative topics. Factors also vary depending on the type of housing being developed, the location, the relevant land use regulations, and the existing infrastructure. Typically, a developer considers the combined impacts of all these factors when deciding whether to proceed with development, exit the market (e.g., build outside of the Seattle), or wait for conditions to improve. **Exhibit 9** outlines the cost factors that are most often analyzed by developers to assess the viability of development opportunities. Orange text indicates factors that are within the City’s control. **Exhibit 10** does the same for revenue factors.

EXHIBIT 9. MULTIFAMILY HOUSING DEVELOPMENT COST FACTORS IN SEATTLE

Type	Influenced by	Components of Cost
Land Costs		
Land	<ul style="list-style-type: none"> Market conditions Site characteristics Land use regulations 	<ul style="list-style-type: none"> Land price
Land Pursuit & Transaction	<ul style="list-style-type: none"> Site characteristics Cost of professional services 	<ul style="list-style-type: none"> Legal fees, Title and Escrow fees, Brokerage fees, real estate excise tax

Type	Influenced by	Components of Cost
	<ul style="list-style-type: none"> ▪ Complexity of land use regulation interpretation ▪ Permitting processes and requirements 	<ul style="list-style-type: none"> ▪ Due diligence studies which generally include geotechnical, environmental, ALTA Survey, critical areas, traffic impact assessments, architectural massing, and others depending on unique site considerations
Land Financing (equity or debt)	<ul style="list-style-type: none"> ▪ Interest rates and/or return requirements ▪ Lender or investor terms 	<ul style="list-style-type: none"> ▪ Interest payments ▪ Origination fees ▪ Brokerage fees ▪ Appraisal
Soft Costs		
Design and Engineering	<ul style="list-style-type: none"> ▪ Building regulations ▪ Local design regulations and processes ▪ Site characteristics 	<ul style="list-style-type: none"> ▪ Building and landscape architectural design ▪ Civil, structural, mechanical, electrical, and traffic engineering
Entitlements/Regulatory Approvals	<ul style="list-style-type: none"> ▪ City of Seattle, State and federal laws ▪ City processing capacity ▪ Permitting requirements 	<ul style="list-style-type: none"> ▪ Impact Fees ▪ Permit Fees ▪ MHA payment fees, if applicable ▪ Cost of equity or predevelopment loans
Cost of Construction Capital	<ul style="list-style-type: none"> ▪ Market conditions ▪ Interest Rates ▪ Lender terms ▪ Investor terms ▪ Developer's internal criteria 	<ul style="list-style-type: none"> ▪ Debt financing – Interest Rates ▪ Investor Equity – Preferred Returns ▪ Developer Equity – Opportunity cost (developers prefer to use capital to invest in predevelopment of new projects) ▪ Appraisals ▪ Brokerage fees ▪ Legal ▪ Inspections
Operating Costs	<ul style="list-style-type: none"> ▪ Tenant regulations ▪ Labor costs ▪ Utility costs ▪ Insurance costs 	<ul style="list-style-type: none"> ▪ Property management lease up services ▪ Operating expenses (payroll, repairs and maintenance, services, utilities, administrative, insurance)
Holding Costs	<ul style="list-style-type: none"> ▪ Federal, state and local tax laws 	<ul style="list-style-type: none"> ▪ Property taxes ▪ Maintenance ▪ Security
Hard Costs		
Horizontal Construction	<ul style="list-style-type: none"> ▪ Labor rates and availability of labor ▪ Inflation ▪ Market conditions ▪ Material costs ▪ Site conditions ▪ Design and Engineering ▪ Building codes 	<ul style="list-style-type: none"> ▪ Demolition, earthwork, grading, excavation subsurface preparations ▪ Utility extensions for water, sewer, stormwater, electricity ▪ Roads, sidewalks, paving, ROW improvements ▪ Management fees, overhead and insurance
Vertical Construction	<ul style="list-style-type: none"> ▪ Labor rates and availability of labor ▪ Inflation ▪ Market conditions 	<ul style="list-style-type: none"> ▪ Utility connections, foundations, reinforced masonry, structural and interior framing, envelope assemblies, glazing, roofing assemblies, elevators, insulation, mechanical, electrical, plumbing, fire protection, data and communications, drywall, painting, cabinets and finish carpentry, light fixtures, plumbing

Type	Influenced by	Components of Cost
	<ul style="list-style-type: none"> Architectural design and finishes Site characteristics 	<ul style="list-style-type: none"> fixtures, mechanical fixtures, appliances, window coverings, furniture, fixtures and equipment, etc. Management fees, overhead, and insurance

Orange text indicates factors that are within the City’s control.

Source: Heartland, 2024.

EXHIBIT 10. MULTIFAMILY HOUSING DEVELOPMENT REVENUE FACTORS IN SEATTLE

Type	Influenced by	Components of Revenue
Low-Rise (For Sale)		
<ul style="list-style-type: none"> Sale Revenue 	<ul style="list-style-type: none"> Site characteristics & location Market conditions, demand & rate of sales 	<ul style="list-style-type: none"> Sale price Transaction costs (brokerage, transfer tax, closing costs, legal fees)
Mid- & High-Rise (For Rent)		
<ul style="list-style-type: none"> Rental Revenue 	<ul style="list-style-type: none"> Operational expenses Regulatory compliance If MHA performance, rent reductions Management fees Bad debt Vacancy and time to release/lease Site characteristics & location Market conditions, demand & absorption rate 	<ul style="list-style-type: none"> Apartment rent Parking rent Storage rent Utility reimbursement Fees and other charges
<ul style="list-style-type: none"> Sale Revenue 	<ul style="list-style-type: none"> Market conditions, demand Interest rates Investor requirements Site characteristics & location Transaction costs 	<ul style="list-style-type: none"> Sale price Transaction costs (brokerage, transfer tax, closing costs, legal fees)
<ul style="list-style-type: none"> Other revenue 	<ul style="list-style-type: none"> Market conditions Design Design regulations 	<ul style="list-style-type: none"> Parking Other Rent (Pet rent, storage rent) Utility reimbursements Retail or commercial rent (if mixed use)

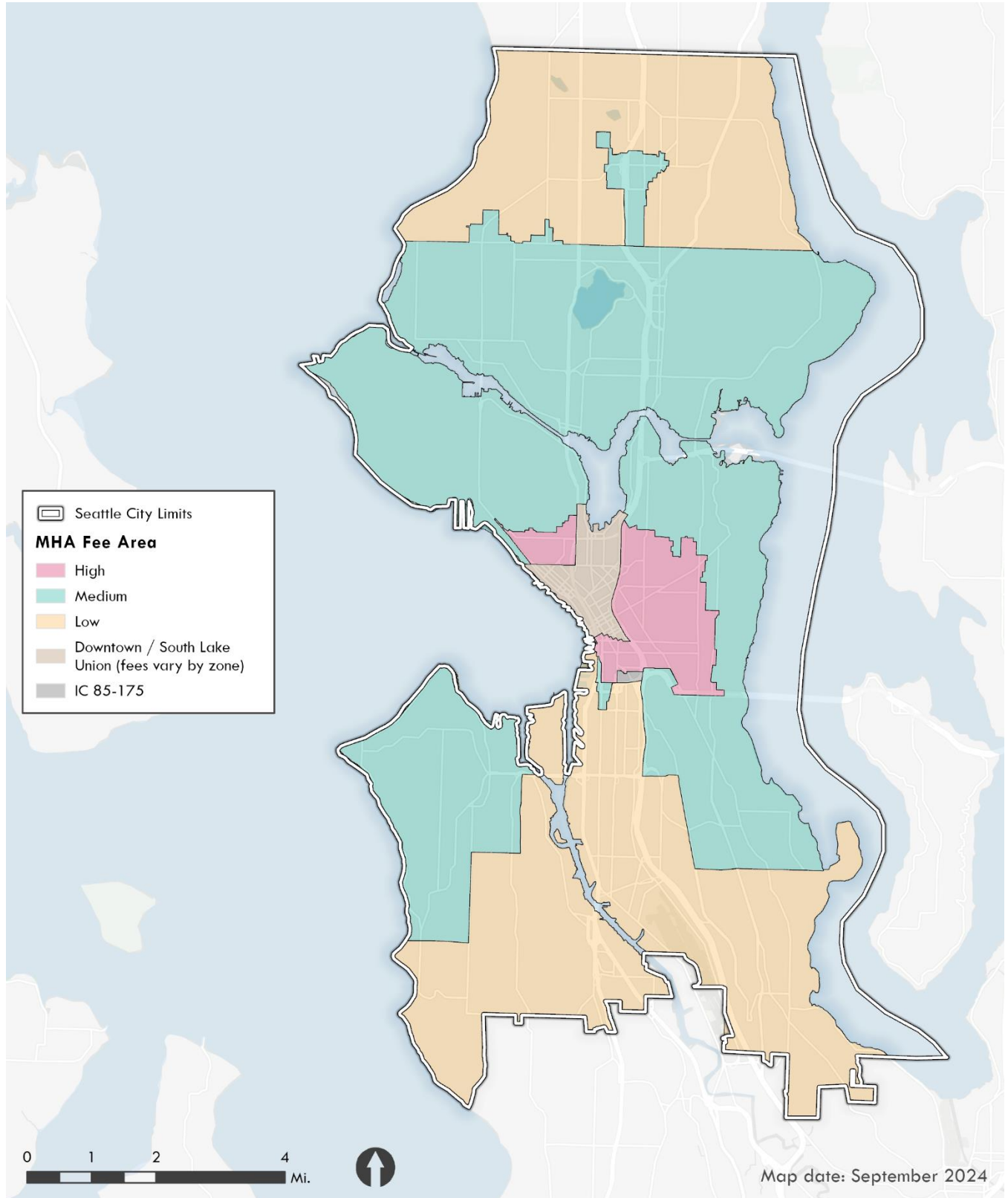
Orange text indicates factors that are within the City’s control.

Source: Heartland, 2024.

Variation of Factors Over Geography & Time

The costs and revenues outlined in **Exhibit 9** and **Exhibit 10** change both within different areas of the City and over time. To capture these variations in the model, the analysis team reviewed cost and revenue trends within the MHA fee areas, shown in **Exhibit 11**. We assessed geographic variations in variables such as land prices, rent, and sale values to inform the example models. Showing this variation in the model allows for a more accurate representation of the relationship between MHA costs and the example projects.

EXHIBIT 11. MHA FEE AREAS

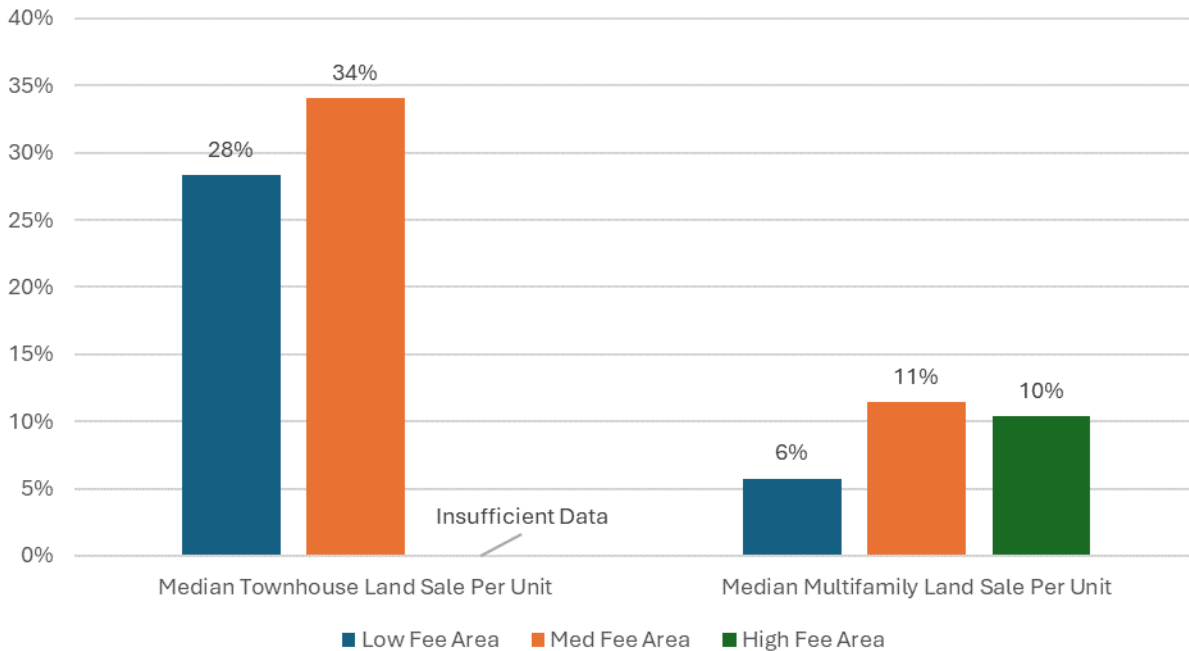


Note: MHA payment and performance requirements for IC 85-175 are set out Sections 23.58B.040 (Table B), 23.58B.050 (Table B).

Source: City of Seattle, 2024.

Escalating land costs: As stated above, land cost is one of the factors that can influence housing development in Seattle. Understanding land costs is crucial for housing development and allows developers to determine whether a project is financially viable. **Exhibit 12** outlines the percent change in the median land sales price per unit for townhouse and multifamily in the Low, Medium, and High MHA fee areas from 2019 to 2024.

EXHIBIT 12. PERCENT CHANGE IN MEDIAN LAND SALES PRICE PER UNIT BY MHA FEE AREA, 2019 TO 2024



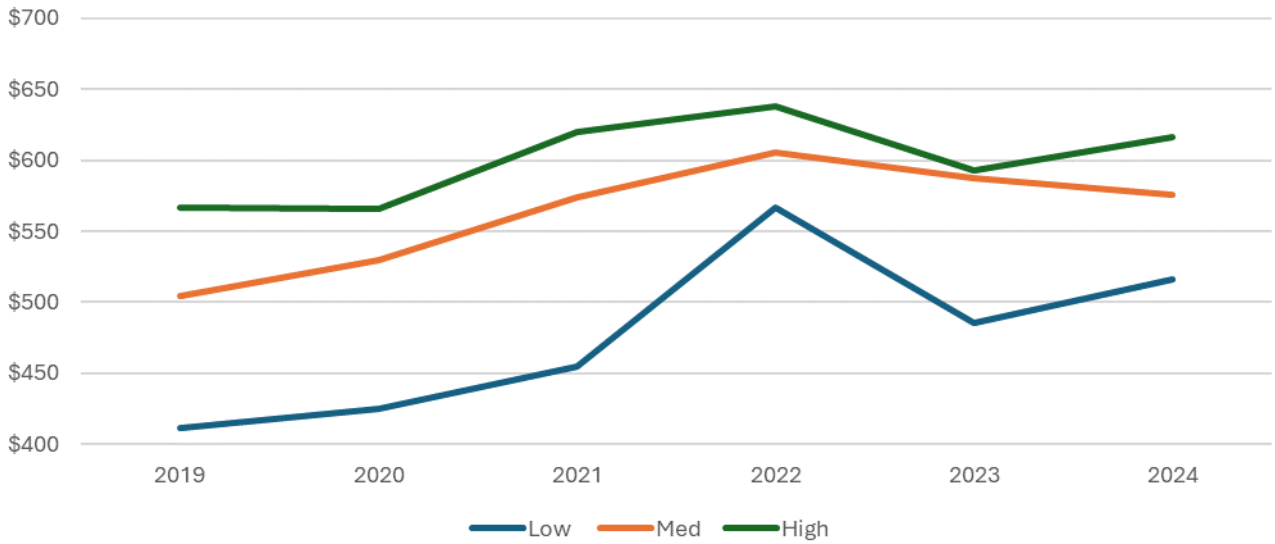
Source: *Seattle in Progress, 2024.*

The median land sales price per unit is calculated by analyzing the trailing three years of land sale values for each listed year. The trailing three years of sales are used due to limited relevant land transactions. The most credible land sales data are for lots with confirmed developments with current permit applications, are under construction, or were recently completed. Most of these developments have land transactions that happened sometime before permit applications were submitted. As a result, credible land transactions are often a year or more old. The median values presented in **Exhibit 12** use only land transactions where an application has been submitted to the City, indicating the development typology and number of units. Thus, even with many applications, only a portion of those is tied to underlying land transactions that occurred in a relevant time period. Insufficient data in a single year within a certain fee area can result in median values that are more reflective of the individual characteristics of land sales than they are indicative of trends.

The land sale price per unit of multifamily development increased throughout the three fee areas during the past five years, ranging from 6% growth in low fee areas to 11% growth in high fee areas. The townhouse land values per unit display a significant increase in both low and median fee areas, and insufficient data in the high fee area. The limited number of projects, particularly for the years 2019, 2020, and 2024, may not provide a comprehensive view of the economic conditions impacting land values during this period.

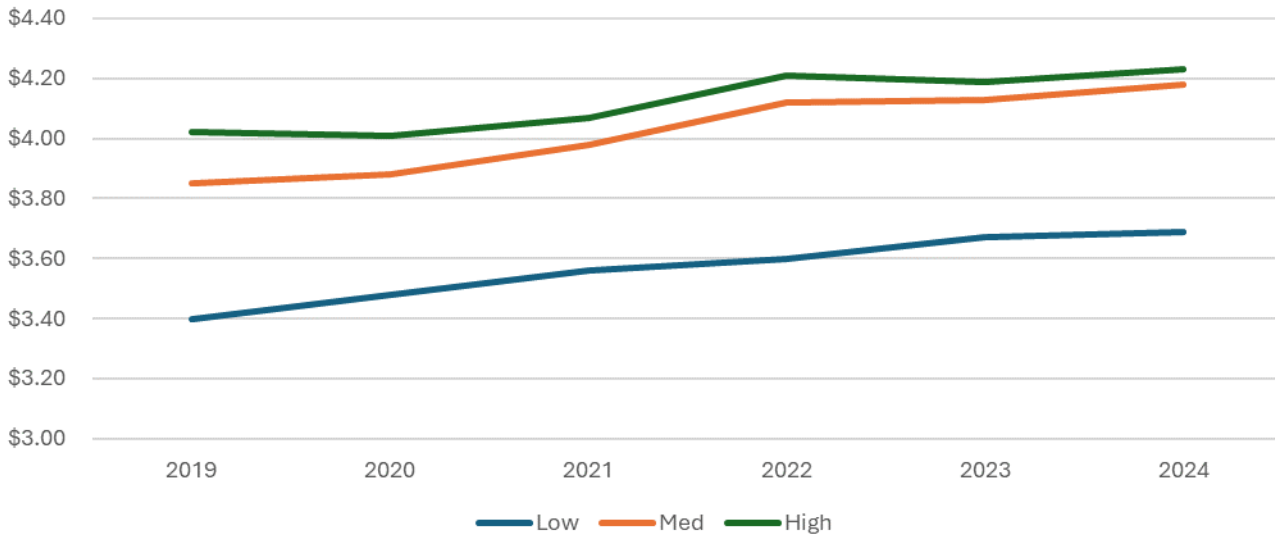
Growth in Sale Values and Rents: **Exhibit 13** and **Exhibit 14** demonstrate the fluctuation of market rate townhouse sale price per square foot and market rate multifamily asking rent per square foot from 2019 to 2024 in the three different MHA fee areas. Townhome sale prices increased over this period most significantly in Low fee areas. On average, townhome sale prices per square foot increased by 16%. Low fee areas also saw the highest increase in rents per square foot, however less pronounced than with townhome sale prices. On average multifamily rents increased by 9% over the same period.

EXHIBIT 13. TOWNHOUSE SALES PRICE PER SQUARE FOOT, 2019-2024



Sources: Northwest Multiple Listing Service, 2024; Heartland, 2024.

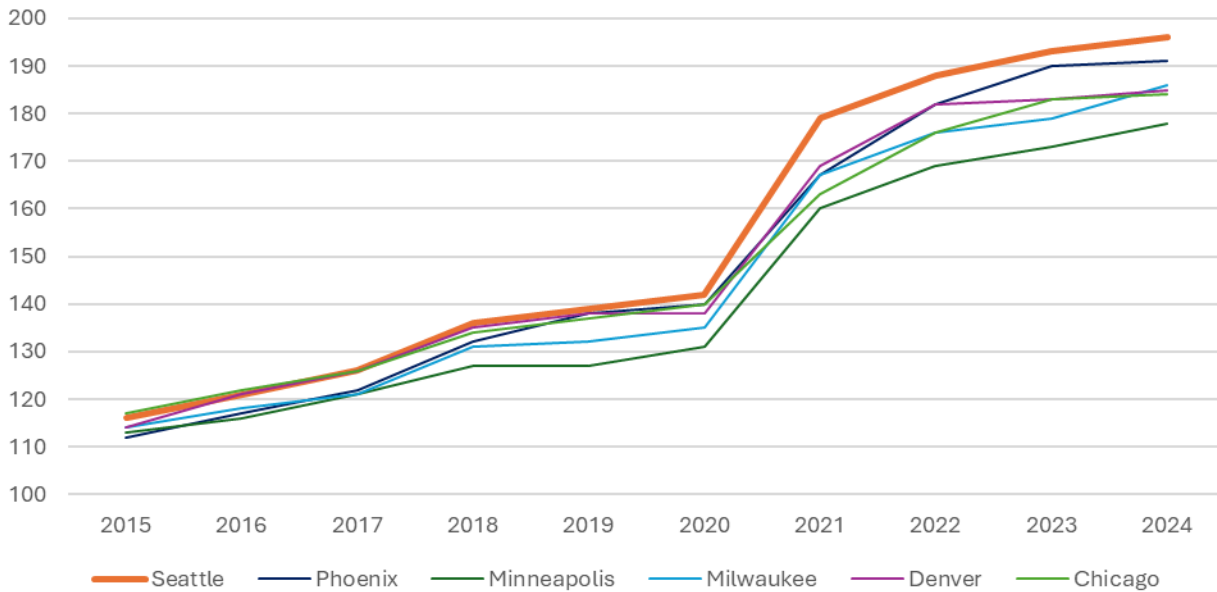
EXHIBIT 14. MULTIFAMILY ASKING RENT PER SQUARE FOOT, 2019-2024



Sources: Costar, 2024; Heartland, 2024.

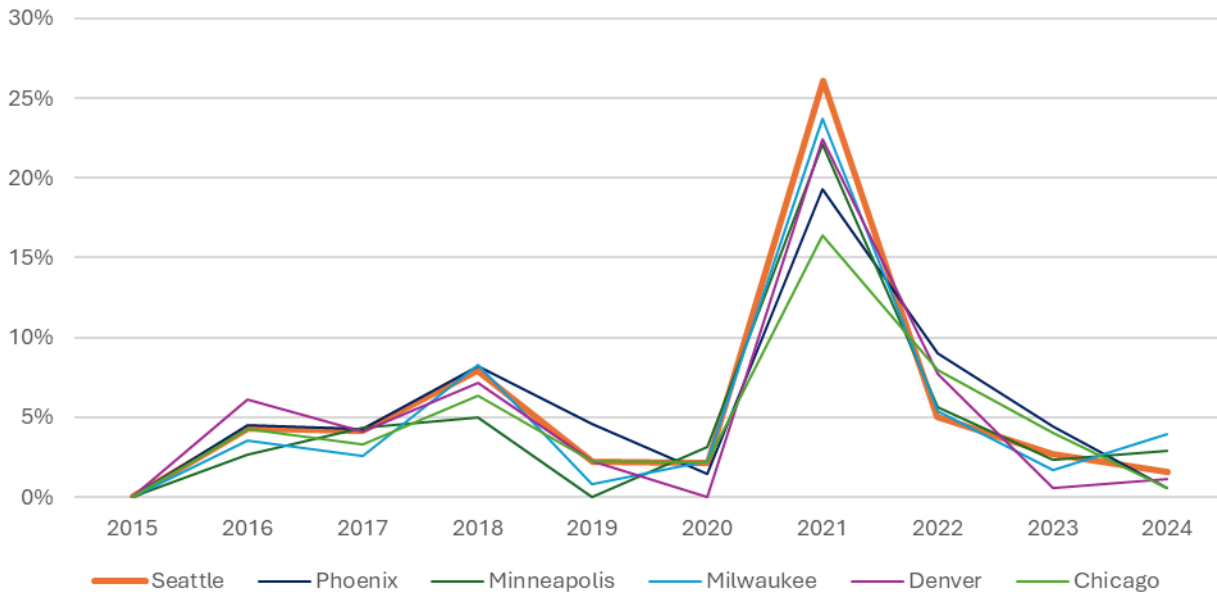
Rapid Growth in Construction Costs: According to Mortenson's Construction Cost Index shown in **Exhibit 15** and **Exhibit 16**, construction costs in Seattle increased by 38% from 2019 to 2024. In 2021, there is a sharp increase, and costs continue to grow over the following three years. This is partially attributable to disruptions in the global supply chain, labor shortages, and higher material costs resulting from the COVID-19 pandemic.

EXHIBIT 15. CONSTRUCTION COST INDEX BY METRO REGION, 2015-2024



Sources: Mortenson, 2024; Heartland, 2024.

EXHIBIT 16. CONSTRUCTION COST INDEX YEAR-OVER-YEAR CHANGE BY METRO REGION, 2015-2024



Sources: Mortenson, 2024; Heartland, 2024.

Rapid Escalation of Capital Costs: Capital costs generally reflect two things in housing development. First, the cost of procuring and holding debt. This is influenced by fees banks charge to originate loans and the interest they charge on the loan amount. Second, the promised return to investors, which is based on the investor’s perception of the risk involved with the development. Slight adjustments to interest rates and investor return thresholds can have a significant impact on the overall cost of development. From 2019 to 2024, the federal funds rate increased by approximately 3%, which impacts both the cost of loan payments during construction and during operations. The result is an apartment building that costs more to produce and supports a lower sale price.

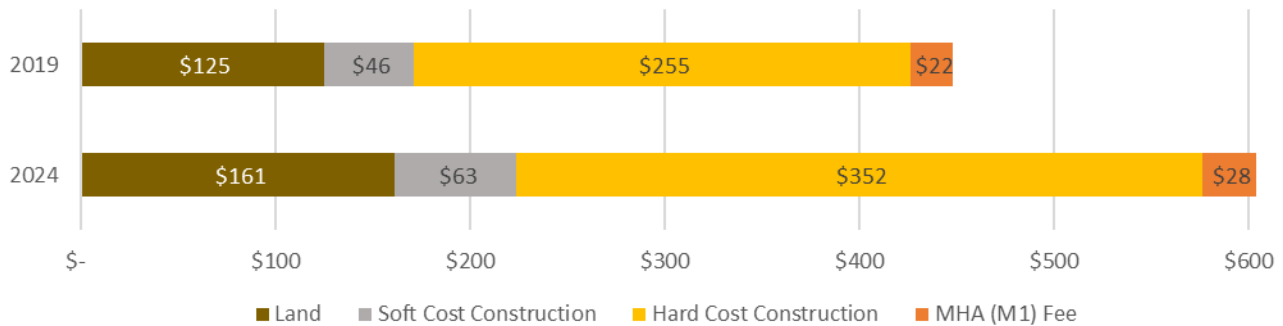
Summary of Modeled Inputs

PROJECT COSTS

Exhibit 17 and **Exhibit 18** compare the modeled project cost per building square foot in 2019 and 2024 for each of the major project components, including the MHA fee, for the low-rise example project.²¹ **Exhibit 19** and

Exhibit 20, show the same information for a mid-rise example project. Across all examples, the cumulative impacts of increased project costs are significant, ranging from a 33% to 37% increase between 2019 and 2024. Much of the increase in costs can be attributed to hard construction costs, however there are increases across most components. The mid-rise charts show an example project in an MHA (M1) zone in a Medium fee area. The summary tables show the same information for other fee areas and zone suffixes (M, M1, M2). **Exhibit 21** and **Exhibit 22** present the same information for a high-rise example project in the DMR 280 fee area.

EXHIBIT 17. LOW-RISE EXAMPLE PROJECT COST PER BUILDING SQUARE FOOT, MEDIUM FEE AREA



Sources: Heartland, 2024; BERK, 2024.

EXHIBIT 18. LOW-RISE EXAMPLE PROJECT COST SUMMARY

Low-Rise Cost Summary

Fee Area Year	Low				Medium				High			
	2019	% of TDC	2024	% of TDC	2019	% of TDC	2024	% of TDC	2019	% of TDC	2024	% of TDC
Costs per Building Sq. Ft. ⁽¹⁾												
Land	\$ 86	23%	\$ 107	22%	\$ 125	29%	\$ 161	28%	\$ 143	32%	\$ 179	30%
(per Unit)	\$ 120,000		\$ 150,000		\$ 175,000		\$ 225,000		\$ 200,000		\$ 250,000	
Soft Cost Construction ⁽³⁾	\$ 43	12%	\$ 59	12%	\$ 46	9%	\$ 63	9%	\$ 47	9%	\$ 65	9%
Hard Cost Construction ⁽²⁾	\$ 236	66%	\$ 327	69%	\$ 255	66%	\$ 352	68%	\$ 260	66%	\$ 359	68%
Cost & Expense Growth Rate	3.0%		3.0%		3.0%		3.0%		3.0%		3.0%	
Total Development Cost (TDC)	\$ 365		\$ 493		\$ 426		\$ 577		\$ 449		\$ 602	
MHA (M) Fee	\$ 7.64	2.1%	\$ 9.80	2.0%	\$ 14.46	3.4%	\$ 18.55	3.2%	\$ 22.65	5.0%	\$ 29.06	4.8%
MHA (M1) Fee	\$ 12.28	3.4%	\$ 15.75	3.2%	\$ 21.83	5.1%	\$ 28.01	4.9%	\$ 32.47	7.2%	\$ 41.66	6.9%
MHA (M2) Fee	\$ 13.64	3.7%	\$ 17.50	3.5%	\$ 24.29	5.7%	\$ 31.16	5.4%	\$ 35.75	8.0%	\$ 45.66	7.6%

⁽¹⁾ Values account for projected growth in costs over a typical development timeline

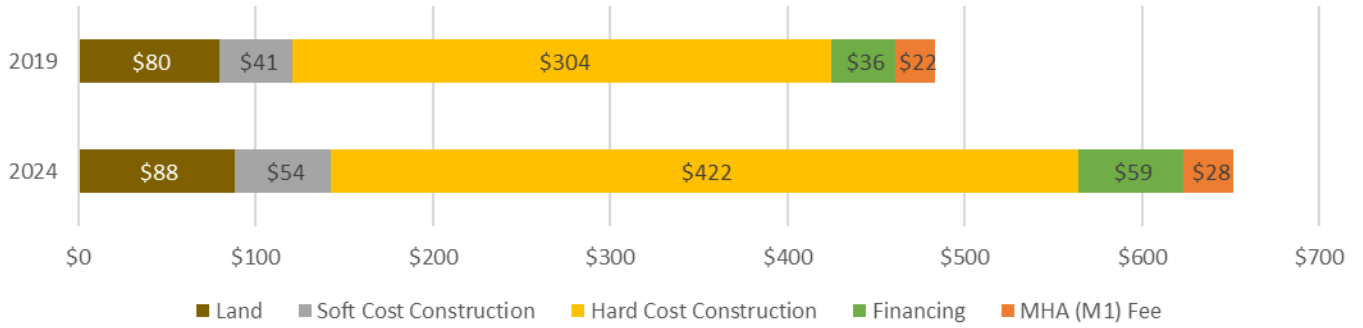
⁽²⁾ 2019 value calculated based on FRED Producer Price Index for Final Demand Construction. This index was used because it is inclusive of all construction types as compared to indices like Mortenson's Construction Cost Index which includes only non-residential construction.

⁽³⁾ Soft cost includes financing. The cost is less significant for low rise due to an overall shorter project durations.

Source: Heartland, 2024.

²¹ This section focuses exclusively on modeling the payment in-lieu option. The performance option performs more poorly in our feasibility modeling and is discussed in more detail in Section 5. As previously noted, the values provided in the example model are generalizations for demonstration purposes only, the actual assumptions are unique to each individual project.

EXHIBIT 19. MID-RISE EXAMPLE PROJECT COST PER BUILDING SQUARE FOOT, MEDIUM FEE AREA



Sources: Heartland, 2024; BERK, 2024.

EXHIBIT 20. MID-RISE EXAMPLE PROJECT COST SUMMARY

Mid-Rise Cost Summary

Fee Area Year	Low				Medium				High			
	2019	% of TDC	2024	% of TDC	2019	% of TDC	2024	% of TDC	2019	% of TDC	2024	% of TDC
Costs per Building Sq. Ft. ⁽¹⁾												
Land	\$ 77	17%	\$ 77	13%	\$ 80	17%	\$ 88	14%	\$ 80	17%	\$ 88	14%
(per Unit)	\$ 63,000		\$ 63,000		\$ 65,000		\$ 72,000		\$ 65,000		\$ 72,000	
Soft Cost Construction	\$ 41	9%	\$ 52	9%	\$ 41	9%	\$ 54	9%	\$ 42	9%	\$ 56	9%
Hard Cost Construction ⁽²⁾	\$ 295	66%	\$ 410	69%	\$ 304	66%	\$ 422	68%	\$ 308	66%	\$ 428	68%
Financing Cost	\$ 36	8%	\$ 59	10%	\$ 36	8%	\$ 59	9%	\$ 36	8%	\$ 59	9%
Perm Interest Rate	4.0%	0%	6.0%	0%	4.0%	0%	6.0%	0%	4.0%	0%	6.0%	0%
Construction Interest Rate	4.5%	0%	8.0%	0%	4.5%	0%	8.0%	0%	4.5%	0%	8.0%	0%
Cost & Expense Growth Rate	3.0%		3.0%		3.0%		3.0%		3.0%		3.0%	
Total Development Cost (TDC)	\$ 450		\$ 598		\$ 461		\$ 623		\$ 466		\$ 631	
MHA (M) Fee	\$ 7.64	2%	\$ 9.80	2%	\$ 14.46	3%	\$ 18.55	3%	\$ 22.65	5%	\$ 29.06	5%
MHA (M1) Fee	\$ 12.28	3%	\$ 15.75	3%	\$ 21.83	5%	\$ 28.01	4%	\$ 32.47	7%	\$ 41.66	7%
MHA (M2) Fee	\$ 13.64	3%	\$ 17.50	3%	\$ 24.29	5%	\$ 31.16	5%	\$ 35.75	8%	\$ 45.66	7%

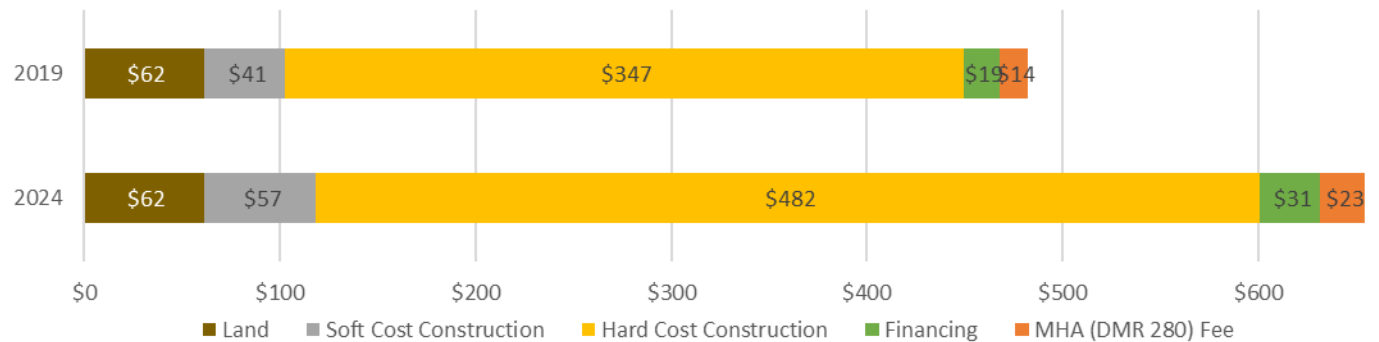
⁽¹⁾ Values account for projected growth in costs over a typical development timeline

⁽²⁾ Calculated 2019 value based on Mortenson Cost Index for Seattle

⁽³⁾ No parking included

Source: Heartland, 2024.

EXHIBIT 21. HIGH-RISE EXAMPLE PROJECT COST PER BUILDING SQUARE FOOT, DMR 280 FEE AREA



Sources: Heartland, 2024; BERK, 2024.

EXHIBIT 22. HIGH-RISE EXAMPLE PROJECT COST SUMMARY

High-Rise Cost Summary

Fee Area Year	DMR 280			
	2019	% of TDC	2024	% of TDC
Costs per Building Sq. Ft. ⁽¹⁾				
Land	\$ 62	13%	\$ 62	10%
(per Unit)	\$ 50,000		\$ 50,000	
Soft Cost Construction	\$ 41	9%	\$ 57	9%
Hard Cost Construction ⁽²⁾	\$ 347	74%	\$ 482	76%
Financing Cost	\$ 19	4%	\$ 31	5%
Perm Interest Rate	4.0%	0%	6.0%	0%
Construction Interest Rate	4.5%	0%	8.0%	0%
Cost & Expense Growth Rate	3.0%		3.0%	
Total Development Cost (TDC)	\$ 468		\$ 632	
MHA (M) Fee	\$ 14.19	3%	\$ 22.89	4%
MHA (M1) Fee	\$ -	0%	\$ -	0%
MHA (M2) Fee	\$ -	0%	\$ -	0%

⁽¹⁾ Values account for projected growth in costs over a typical development timeline

⁽²⁾ Calculated 2019 value based on Mortenson Cost Index for Seattle

⁽³⁾ Parking included

Source: Heartland, 2024.

PROJECT REVENUES

Exhibit 23, Exhibit 24, and Exhibit 25 summarize modeled project revenues for Low, Medium and High fee areas. These revenue inputs were informed by Northwest MLS and Costar data. The median values were calculated for each fee area. Low-rise revenues have had the highest growth rates, with sale prices increasing by 25%, 14% and 9% in Low, Medium and High fee areas respectively.

Mid-rise and high-rise revenues are comprised of revenues from operations, primarily in the form of rent payments, as well as the revenues from the sale of the completed and stabilized building. Rent growth drives the future sales value and is therefore an important assumption projecting future revenues. In 2019, developers and lenders were justified in assuming an annual rent growth of 3%. However, from 2019 to 2024, actual average rents grew much more slowly (about 2.3%, 1.7%, and 1.0% in Low, Medium and High fee areas respectively). Our analysis based on 2024 conditions assumes a lower annual rate of growth for rents at approximately 1.75% over the assumed five-year holding period before the building is sold. In short, flat rent growth leads to a lower projected building sale price. This growth rate assumption reflects the risk within the market and has significant implications on the value of finished projects.

Compounding on the declined revenue outlook for mid-rise and high-rise are increased lending rates which ultimately influence purchase prices and exit capitalization rates (also called “exit cap rates”). Cap rates represent the proportion of the annual net operating income of a property to the sale price. When interest rates are high the payments on debt are higher which results in less purchasing power for prospective buyers and ultimately a lower purchase price.

EXHIBIT 23. MODELED LOW-RISE PROJECT REVENUES BY MHA FEE AREA, 2019 AND 2024

Fee Area	Low		Medium		High	
	2019	2024	2019	2024	2019	2024
Year						
Revenues						
Sale Price per Sq. Ft.	\$412.00	\$516.00	\$505.00	\$576.00	\$567.00	\$617.00
Sale Price per Unit	\$576,800	\$722,400	\$707,000	\$806,400	\$793,800	\$863,800

Sources: Heartland, 2024; NorthwestMLS, 2024.

EXHIBIT 24. MODELED MID-RISE PROJECT REVENUES BY MHA FEE AREA, 2019 AND 2024

Fee Area	Low		Mid		High	
	2019	2024	2019	2024	2019	2024
Year						
Revenues						
Avg Rent per Sq. Ft	\$3.30	\$3.69	\$3.85	\$4.19	\$4.02	\$4.23
Exit Cap Rate	4.50%	5.50%	4.40%	5.40%	4.40%	5.40%
Revenue Growth Rate	3%	1.75%	3%	1.75%	3%	1.75%

Sources: Heartland, 2024; Costar, 2024.

EXHIBIT 25. MODELED HIGH-RISE PROJECT REVENUES 2019 AND 2024

Fee Area	DMR 280	
	2019	2024
Year		
Revenues		
Market Avg. Rent per Sq. Ft	\$4.36	\$4.39
Exit Cap Rate ⁽¹⁾	4.40%	5.40%
Revenue Growth Rate	3.00%	1.75%

Sources: Heartland, 2024; Costar, 2024.

Model Results

Together these assumptions provide insight into **Evaluation Questions 6, 7, and 8**

Evaluation Question 7

What is the cumulative impact of these factors on project costs?

Developers utilize several different metrics when underwriting a potential development project. Rarely is there one single metric that will determine if a development will or will not proceed. However, the internal rate of return (IRR) metric is used almost universally, and other than in extenuating circumstances generally needs to hit a minimum threshold to attract investor equity as well as the developer who will consider the time, labor, and capital required of their firm to proceed with a project.

The model used in this study examines the IRR, which is an annualized rate measuring the growth of an initial investment over time by looking at both the amounts and timing of all cash flows between that initial investment and the end of the investment. It is called “internal” because it is not compared against external factors such as inflation or risk-free investment rates.

When developers raise capital to fund a development, they typically must prioritize cash flow to equity partners at a level that is at a premium to the risk-free rate, which will vary based on several factors such as project risk, time horizons, and the developer’s experience. While developers also often invest their own equity, it is typically a much smaller amount than the equity investors. For a developer to profit at a level necessary to justify the time and

risk of moving forward with a development, they will often participate at a higher level in profits above the returns that are prioritized to equity investors, which is referred to as a promote structure, with the promote acting similar to a bonus for surpassing the financial objectives of the development. Thus, developers will underwrite projects with the goal of achieving an IRR even higher than the prioritized investor equity returns in order to achieve the profit necessary to earn their promotion fee, often in the form of additional equity share.

For example, if the risk-free rate is 5%, an equity investor may require a prioritized IRR of 12%, the developer will likely need to achieve a 15% or higher IRR in order to substantially benefit from a promote structure.

Many factors can impact the IRR that a developer or investor must believe is achievable in order to invest.

- When inflation and/or interest rates are higher and risk-free investments such as treasury bonds or certificates of deposit have higher interest rates, an investor will likely seek a high IRR for a project (and the opposite may be true with the opposite market conditions).
- Many developers of multi-family buildings will look to sell their building upon completion of construction and stabilization/lease-up of the property. The IRR in this instance will be very dependent on the potential sale value of the property, and often developers of this type of product will look for a higher IRR.
- Developers that build to hold the building longer term will be more focused on stable and increasing returns and less on a sale event, and thus their expectations for an IRR will likely be lower than developers with a more short-term focus.
- The risk associated with uncertainty will also impact the IRR required for project feasibility. A mid-rise podium multi-family project that is being constructed in a submarket that has primarily only had low-rise construction and is aiming to achieve market rents at the top of the market would be considered riskier than a similar project in a more well-established submarket with a significant existing stock of mid-rise podium buildings. Thus, the IRR expectations may be higher in this submarket.

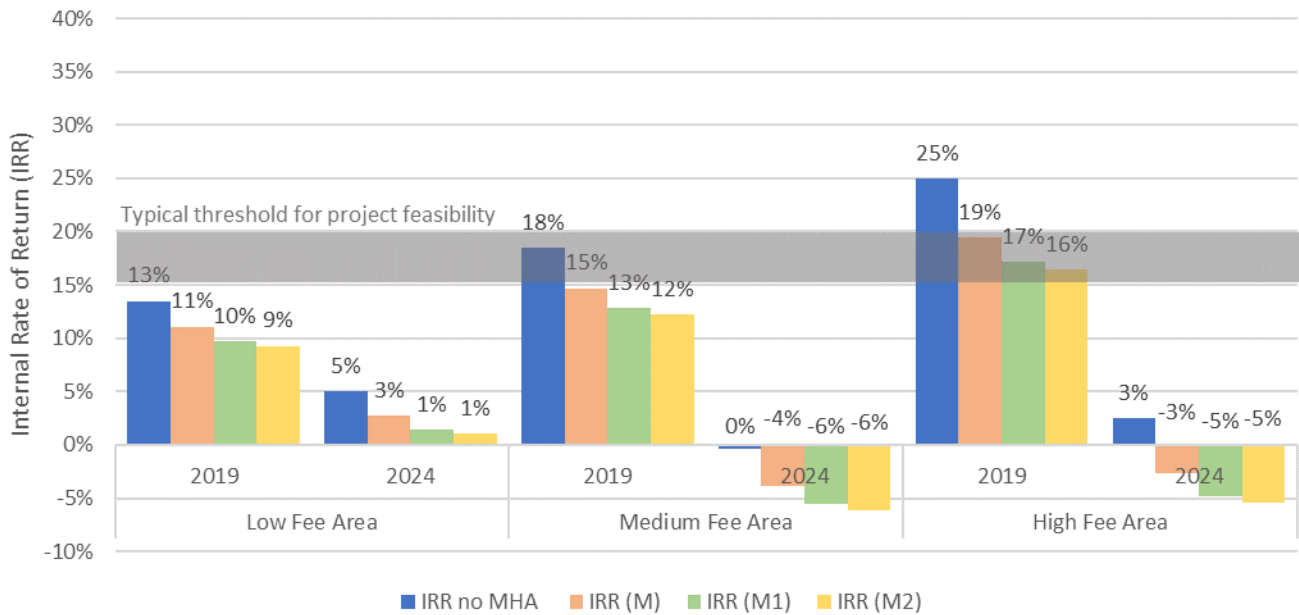
Cumulative Impact on Modeled Returns

Exhibit 26 presents a comparison of the cumulative impact of the factors outlined above on the IRRs of the example projects. The returns are shown for example projects in 2019 and 2024. They represent the modeled change in project feasibility due to the cumulative impact of the changing factors over that time period. The exhibit also demonstrates the relative impact on project return based on the MHA fee area and suffix.²² For context, the chart labels the IRR range (15-20%) typically needed for a project to be feasible.

For our example low-rise project, a townhome development, the cumulative impact on changes from 2019 to 2024 was very impactful, as shown in **Exhibit 26**. The model shows that townhouse developments were typically feasible in Medium and High Fee Areas city prior to the adoption of MHA in 2019. Increased costs have resulted in our example project being infeasible in all areas of the City by 2024. There was a smaller decrease in returns in the low-fee areas due to higher-than-average sale price growth over the period. MHA fees alone decrease the example project's returns anywhere from four to nine percent depending on the location.

²² The returns demonstrated in these exhibits are intended to illuminate the relationship between specific variables and feasibility, and the impact the change in those variables has. The presented returns are not indicative of all projects within the City. As previously mentioned, each location has unique conditions, and each developer has unique approaches to development. All of this variability means that our example projects should not be construed to be indicative of all developments within the City.

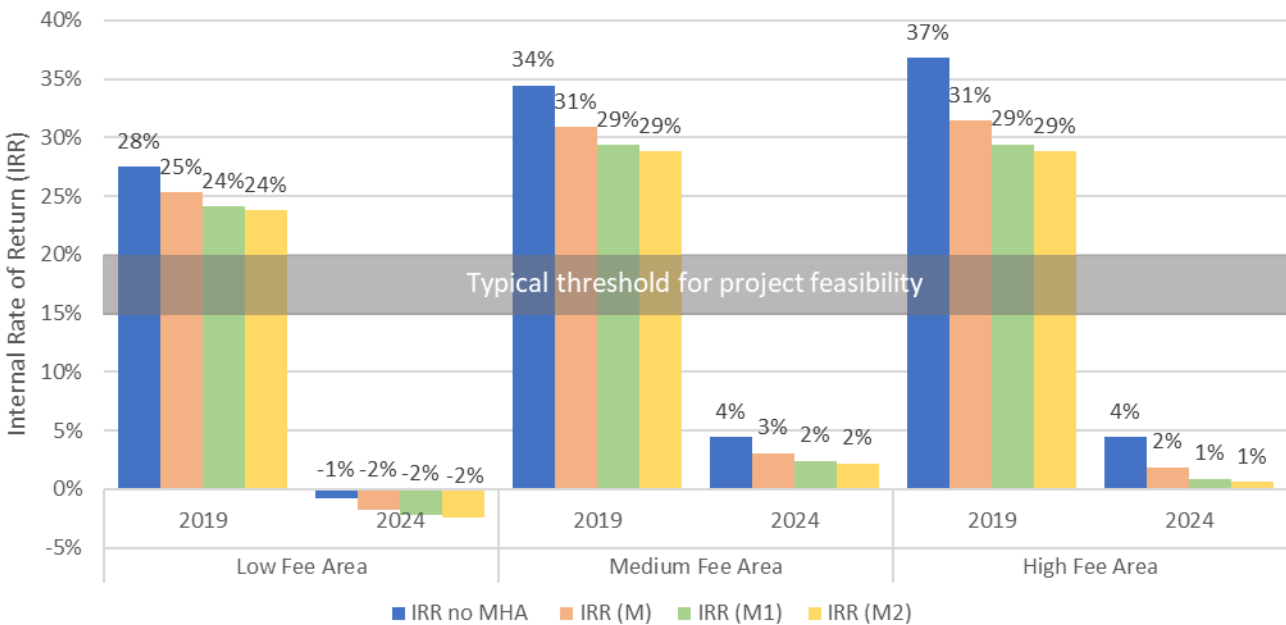
EXHIBIT 26. LOW-RISE (TOWNHOUSE) INTERNAL RATE OF RETURN MODEL RESULTS BY MHA FEE AREA, 2019 & 2024



Sources: Heartland, 2024; BERK, 2024.

The cumulative impact of factors was even more impactful for mid-rise developments as illustrated in **Exhibit 27**. For our example, project feasibility was high in 2019 across all areas of the city, even after accounting for the new MHA requirements. However, feasibility declined dramatically by 2024, falling far below the feasibility threshold. MHA fees alone resulted in a decrease in IRR from one to six percent.

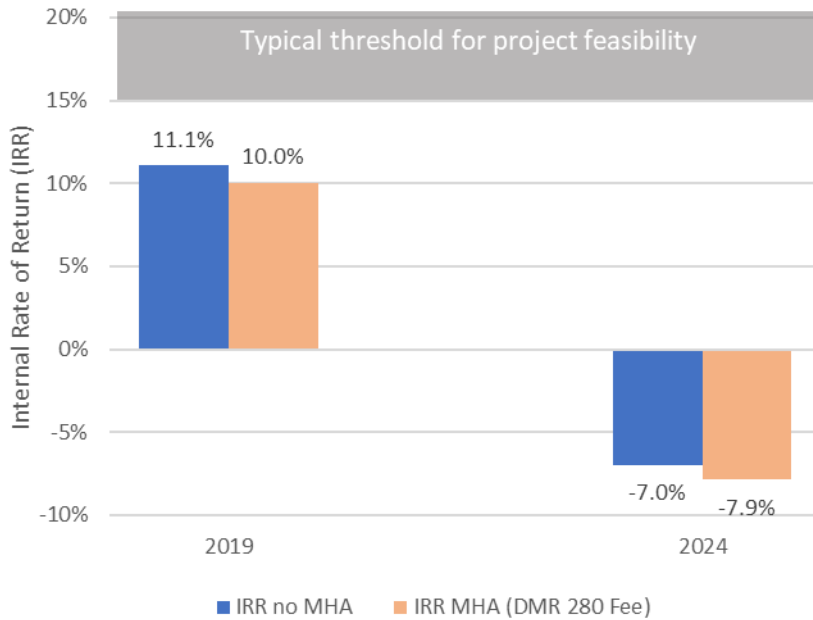
EXHIBIT 27. MID-RISE INTERNAL RATE OF RETURN (IRR) MODEL RESULTS BY MHA FEE AREA, 2019 & 2024



Sources: Heartland, 2024; BERK, 2024.

Exhibit 28 shows IRR model results for an example high-rise project. It shows returns being somewhat lower than for mid-rise as of 2019 and negative returns in 2024. Additionally, the MHA fee has a relatively smaller impact on IRR for high-rise than for low- and mid-rise projects.

EXHIBIT 28. HIGH-RISE INTERNAL RATE OF RETURN (IRR) MODEL RESULTS, 2019 & 2024



Sources: Heartland, 2024, BERK, 2024.

It is worth noting the relationship between the IRR and the residual land value. The price a developer is willing to pay for land is often the output of their own model, which will seek a minimum IRR given all the fixed inputs to solve for the one input that is not fixed, which is the land cost. Thus, if the developer requires a 20% IRR, they will decide what price they can pay for land, and on what terms (e.g., before or after permits are received) to achieve a 20% IRR before they will make an offer for the land. If the land price needed to generate the minimum required IRR is below what the land seller would accept, then it is likely that no project will occur. A project will only occur once other fixed costs change in a combination that brings the land seller’s expectations back in line with the developer’s willingness to pay for land.

Evaluation Question 6

What is the relative impact of factors that drive development in Seattle on project costs?

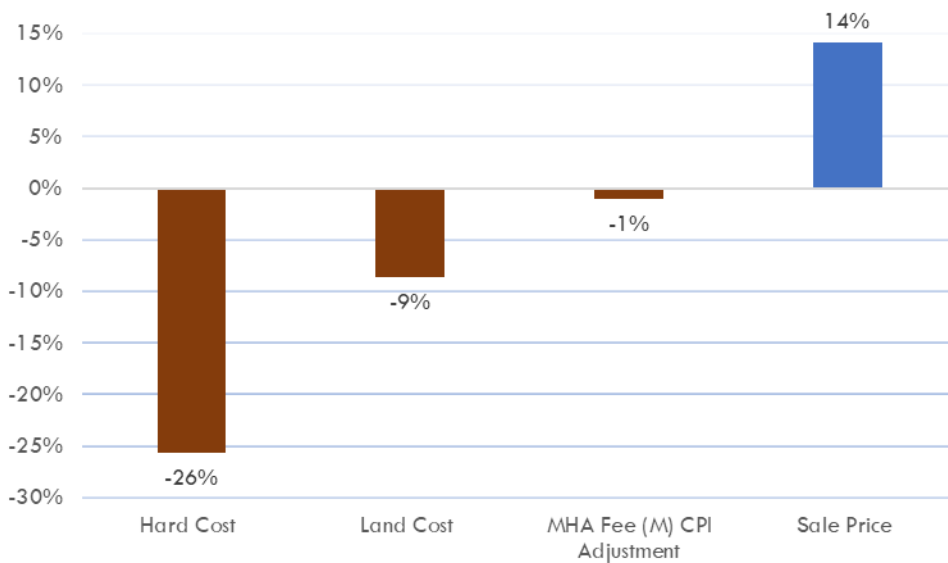
The discussion above addresses many aspects of this question, including the relative impacts of different cost factors and revenue factors on IRR at a specific point in time. The summaries of Project Costs and Project Revenues above provide this information. They show, for example, that construction costs are the biggest cost driver, and other costs such as MHA fees have a relatively smaller, yet meaningful, impact.

Another way to answer this question is to consider the relative impacts of different factors on the decline in modeled IRR between 2019 and 2024. To do this, we conducted additional analysis, shown in **Exhibit 29** for a townhome development in an LR zone with an M suffix in the Medium MHA Fee Area. The key factor with the biggest impact on the change in IRR was Hard Costs. Construction costs increased dramatically between 2019 and 2024, increasing overall development costs to developers and reducing the potential IRR by 28%. Land costs also increased, resulting in a 9% decline in IRR. On the flip side, sales prices increased during this same period, resulting in a potential increase in IRR of 15%. While MHA fees increased consistent with CPI during this period, this increase

only had a small impact (-1%) on IRR.²³ The cumulative impact of these components is a negative 22% impact to IRR.

Cumulatively these factors have had a more limited impact on low-rise projects compared to mid-rise projects. While hard costs have had a significant negative impact, the shorter overall project durations for typical townhome developments reduces the impact of factors like interest rates, resulting in a less significant impact relative to overall project costs. For example, low-rise projects have a shorter construction timeline and therefore construction interest payments are a lower order of magnitude cost compared to a lengthier mid-rise project construction process. Additionally, sale revenues are driven by demand from residential consumers, as opposed to investors who are heavily focused on interest rates and capitalization rates, therefore sales prices are not restricted by revenue generation as they are with for-rent housing.

EXHIBIT 29. IMPACT OF COST AND REVENUE FACTORS ON CHANGE IN IRR FROM 2019 TO 2024, LOW-RISE

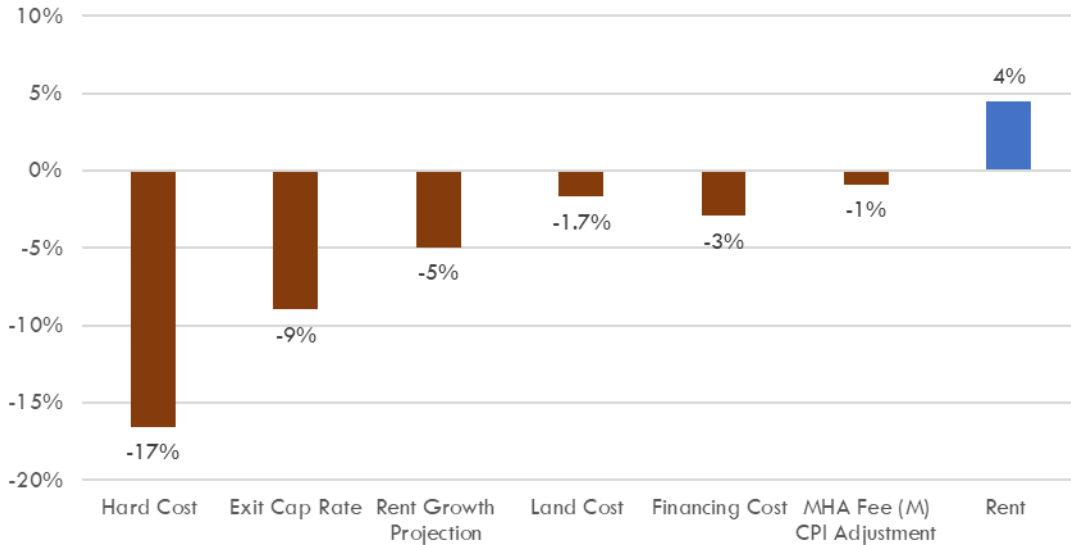


Source: Heartland, 2024.

Mid-rise and high-rise for-rent developments are influenced by even more factors than low-rise for sale due to the nature of the asset as a revenue generating investment. Factors related to construction cost as well as capital costs and rent growth expectations all can have significant impacts to a return on a multifamily investment. Similar to the low-rise example, the change in hard costs from 2019 to 2024 had the largest negative impact on IRR, as shown in **Exhibit 30 and Exhibit 31**. Exit cap rates and rent growth projections had the next most significant impacts.

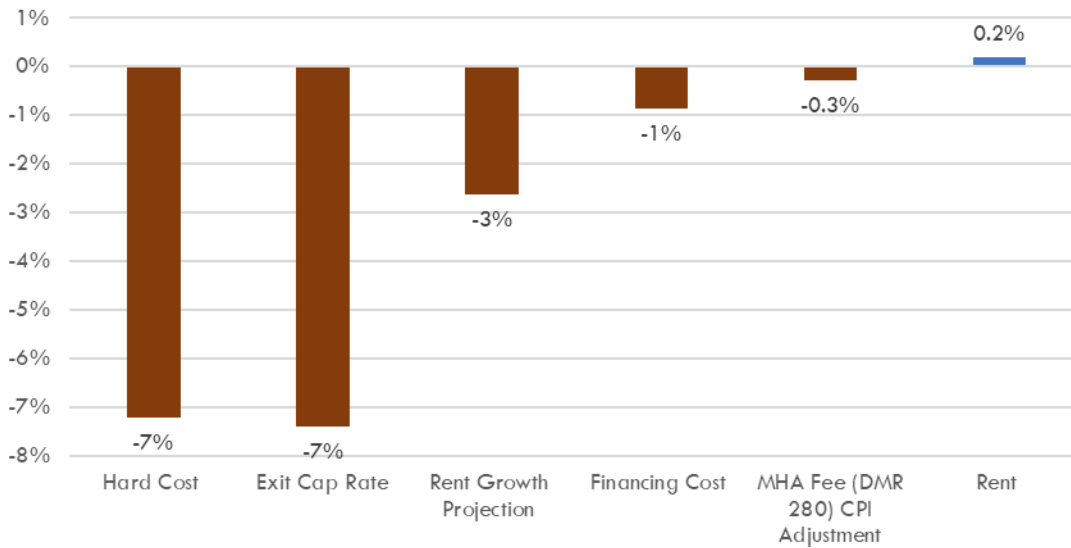
²³ Note, this analysis is not showing the impact of MHA on IRR at a specific point in time. For that see Exhibit 26 and Exhibit 27. Instead, here we’re measuring how the increase in MHA fees between 2019 and 2024 impacted the change in IRR between 2019 and 2044.

EXHIBIT 30. IMPACT OF COST AND REVENUE FACTORS ON CHANGE IN IRR FROM 2019 TO 2024, MID-RISE



Source: Heartland, 2024.

EXHIBIT 31. IMPACT OF COST AND REVENUE FACTORS ON CHANGE IN IRR FROM 2019 TO 2024, HIGH-RISE



Source: Heartland, 2024.

Evaluation Question 8

To what extent can the City determine the degree to which these costs, both within and outside the City's control, influence housing production?

As demonstrated in the modeling results described above, development feasibility is influenced by a combination of different factors, some within the City's control and many outside its control. For the example project types tested, the cumulative impact of those many factors in 2019 resulted in a feasible IRR even after the MHA

requirements were added. By 2024, however, conditions have changed dramatically. The cumulative impact of these factors results in an IRR far below what is typically feasible, with or without MHA requirements. The factors that have the biggest impact on development are mostly outside of the City's control. Construction costs increased dramatically during this period in Seattle as well as peer metropolitan regions across the US. Financing costs also increased due to changes in interest rates.

MHA fees account for a relatively small share of overall project costs. But they could potentially have an impact on decisions about whether to move forward with a project that is at the margins of feasibility. Unfortunately, it is impossible to measure precisely how many projects didn't move forward due in small part to the costs of MHA requirements. But it is possible to analyze data about housing production in Seattle in the years before and during the implementation of MHA. We turn to this topic in the following section.

Section 4. Housing Production Trends

This section explores findings related to two evaluation questions:

Evaluation Question 9

How does Seattle’s housing production overall compare to “peer” cities, both before and after the pandemic?

Evaluation Question 10

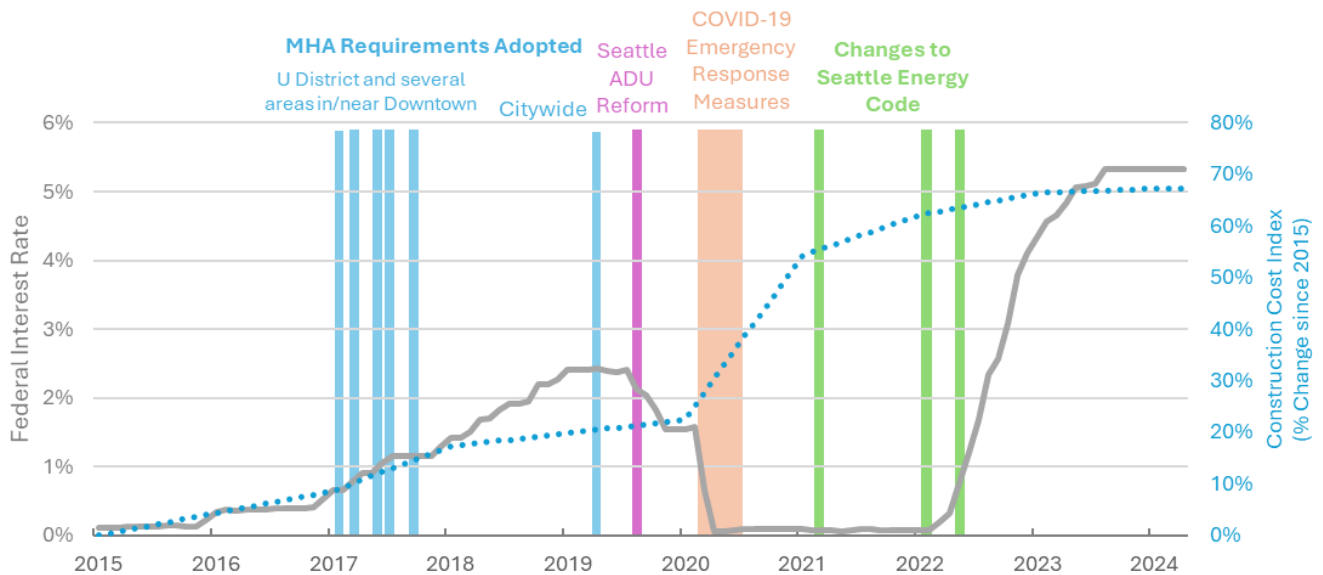
What larger macroeconomic trends overlay this trend line?

These questions address a common critique of mandatory inclusionary zoning programs like MHA: that they discourage new housing production by imposing additional costs that reduce project feasibility. While MHA was designed to mitigate the impact of these costs on project feasibility by providing increased development capacity, this evaluation indicates that the increased capacity does not typically outweigh the costs in practice (see **Section 3**). In this section, we examine multifamily housing permitting and production trends in Seattle before and after the adoption of MHA. We also compare these trends to permitting activity in several peer cities that share key economic and housing market characteristics with Seattle. Some of these peer cities have mandatory IZ programs, while others do not. Finally, we consider the impacts of macroeconomic trends as well as other events and changes to state and local regulations that also affect development activity during the same period.

Timeline of Factors that Impact Development Feasibility in Seattle

Exhibit 32 presents a timeline of macroeconomic events and regulatory changes that have impacted the development environment in Seattle. These include the incremental adoption of MHA requirements in areas across the city (shown in blue), with adoption in all remaining multifamily zones in March 2019.

EXHIBIT 32. TIMELINE OF CHANGES TO SEATTLE’S DEVELOPMENT ENVIRONMENT



Sources: City of Seattle, 2024; Board of Governors of the Federal Reserve System (US), 2024; [Mortenson, 2024](#); BERK, 2024.

During and after the adoption of MHA, several other factors have also shaped the development environment in Seattle:

- New MHA requirements were adopted over time starting in 2017. They began in several areas in and near Downtown and South Lake Union as well as the U District. The requirements were extended to most multifamily areas of the city in March 2019.

- Later in 2019, Seattle adopted new ADU regulations to encourage ADU and DADU construction in Neighborhood Residential zones, where MHA is not imposed.
- Starting in early 2020, emergency measures in response to COVID-19 affected labor availability and productivity, material supply chains, renter protections, and the ability of cities to efficiently process building permit applications. COVID also reduced the demand for commercial office space as more businesses allowed remote or hybrid working. This reduced demand is still impacting the commercial real estate market in Seattle as of mid-2024.
- New building code requirements to encourage energy efficiency went into effect in 2021 in Washington State. The City of Seattle also adopted more stringent energy codes later in 2021 and 2022. These requirements impact construction costs.
- The Federal Interest Rate is shown as a gray line in Exhibit 32. It fell sharply in 2020 and then increased dramatically between early 2022 and mid-2023. This has impacted borrowing costs for developers.
- Nationwide and in the Seattle region construction costs increased dramatically. An index of construction costs in Seattle (shown as a dotted blue line) increased by close to 70% between 2015 and mid-2024. Much of this increase occurred during the COVID-19 pandemic.

Expected Timing of Policy Impacts

The events shown on the timeline in **Exhibit 32** do not have an immediate impact on housing production or permit activity. A large multifamily building can take years between the pre-development phase and occupancy (management phase). A new development project is typically subject to the regulations and building code requirements at the time of its vesting date, which in Seattle is either the date of its building permit application or approval of its master use permit (MUP), whichever is earlier.²⁴ The permit may not be completed and issued until months or years after the initial application. At that point construction can begin. Therefore, there is typically a delayed impact on the rate of permit issuance and housing production when a regulatory change, such as MHA, is implemented. The expected delay is essential to consider when interpreting the data in this section.

BERK analyzed permit data from the Seattle Office of Planning and Community Development (OPCD) and the Seattle Department of Construction and Inspections (SDCI) from 2019 to 2024 to calculate the median duration between the assumed vesting date²⁵ and permit issuance. The results are shown in **Exhibit 33**. For a typical mid-rise apartment building, the period between the permit application and issuance typically ranges between 331 days (11 months) to 672 days (over 22 months), with a median of 475 days (almost 16 months). This duration has been longer in recent years.

²⁴ See [SMC 23.76.026 Vesting](#). In some cases, the vesting date could be earlier. For instance, a MUP that includes a design review component is considered vested at the date of a completed application for early design guidance process or streamlined design review guidance process is submitted to the Director.

²⁵ Here “assumed vesting date” is defined as either the date of the completed building permit application or the date of approval of its master use permit (MUP), whichever is earlier. Application dates for early design guidance or streamlined design review guidance are not recorded in available permit data.

EXHIBIT 33. DURATION BETWEEN ASSUMED VESTING DATE AND ISSUANCE FOR ISSUED CONSTRUCTION PERMITS IN SEATTLE, 2019-2024*

Building Type	Total Projects	25 th Percentile Days	50 th Percentile Days (Median)	75 th Percentile Days
SF+ADU(s) Outside MHA zones	869	141	200	285
Townhome in MHA zone	522	217	289	426
All low-rise in MHA zone	1,142	190	276	399
Mid-Rise in MHA zone	156	331	475	672
High-Rise in MHA zone	15	237	428	470

* This analysis includes data about projects that are assumed to have vested following March 18, 2019, the day MHA was adopted in most multifamily and commercial zones citywide, through April 2024.

Sources: [City of Seattle, 2024](#); BERK, 2024.

Comparison of Production Trends in Peer Cities

Exhibit 34 presents information on the housing production and permitting trends in several peer jurisdictions. The list includes a mix of cities and counties with mandatory IZ programs, as well as ones with no programs in place. The exhibit includes statistics on metropolitan-level population and job growth for each jurisdiction, which drive demand for new residential construction. Seattle has been among the fastest growing metropolitan regions for each of these metrics, but it has grown significantly slower than the Austin region (which is an outlier on this list).

The exhibit also includes jurisdiction-level market characteristics that can shape demand for multifamily housing production. Seattle has a relatively higher median household income than most reference cities, indicating a larger share of the population that is likely to afford high-cost apartments than in other cities. As of 2022, Seattle’s vacancy rate was on par with many reference cities but somewhat higher than Spokane, San Jose, and Austin. Lower vacancy rates indicate a tighter housing market with more competition for available units and potentially more demand for new construction.

EXHIBIT 34. PEER JURISDICTION SUMMARY STATISTICS, ORDERED BY METRO POPULATION GROWTH RATE

	Metro Average Annual Growth Rate, 2012 - 2022		Jurisdiction Characteristics				
	Population	Jobs	2022 Multifamily Housing Stock	Homeownership Rate	Vacancy Rate	Median Household Income	Mandatory IZ Program
Austin	2.8%	3.8%	192,525	44%	5%	\$89,415	No
Boise	2.3%	3.4%	13,865	66%	5%	\$81,425	No
Spokane	2.0%	1.3%	24,526	60%	4%	\$62,287	No
Dallas	1.8%	2.6%	247,391	41%	8%	\$65,400	No
Phoenix	1.5%	1.4%	146,658	58%	7%	\$75,969	No
Atlanta	1.4%	2.0%	118,626	46%	9%	\$83,251	No
Seattle	1.3%	2.0%	176,588	44%	8%	\$115,409	Yes
Denver	1.3%	2.2%	137,112	50%	7%	\$88,213	Yes
Washington D.C.	1.1%	1.0%	173,003	41%	9%	\$101,027	Yes
Portland, OR	1.0%	1.6%	92,756	51%	7%	\$81,119	Yes
Minneapolis	1.0%	1.0%	79,649	48%	8%	\$74,473	Yes
Boston	0.6%	1.2%	125,536	35%	8%	\$86,331	Yes
San Francisco	0.4%	1.4%	165,219	39%	13%	\$136,692	Yes
San Jose	0.4%	1.7%	91,619	55%	5%	\$133,835	Yes

Note: Multifamily is defined here as five or more units in a structure.

Sources: ACS 1-year estimates, 2012-2022; Bureau of Labor Statistics, Local Area Unemployment Statistics 2012-2022; Grounded Solutions, 2024; BERK, 2024.

Different mandatory IZ programs can have very different characteristics. These characteristics can significantly impact development feasibility. **Exhibit 35** presents information on the characteristics of mandatory IZ programs in reference cities that have programs in place. This information is based on data collected and summarized in the [Inclusionary Housing Map and Program Database](#), a resource provided by [Grounded Solutions Network](#). The programs in these cities vary in several respects, including:

- The year the program was first adopted.
- The areas of the city in which the program requirements apply.
- Whether there is a project size unit threshold under which the program requirements do not apply.
- Options for compliance include requiring the affordable units to be provided on-site, providing them off-site, or paying an in-lieu fee to a city affordable housing fund.
- The affordability level requirements for on- and off-site units. These are not applicable to in-lieu fees.

These differences in program design and requirements can significantly impact development feasibility and, therefore, the response of private housing developers. Furthermore, in newer programs, the real estate market may still be in a period of adjustment, when the impacts of the program change on development activity may still

be unclear. For cities with older programs, the local real estate market has likely already adjusted and settled on a new normal.

EXHIBIT 35. MANDATORY IZ PROGRAM CHARACTERISTICS FOR PEER CITIES, ORDERED BY YEAR PROGRAM ADOPTED

Jurisdiction	Year(s) Adopted	Applicable Area	Unit Threshold	Compliance Options	Highest Income Served*	Lowest Income Served*
Boston	2000	Entire jurisdiction	10	On-site units; off-site units; rehab regulated units; renovate unregulated units; in-lieu fee	Not included in database	Not included in database
San Francisco	2002	Entire jurisdiction	5	On-site units; off-site units; in-lieu fee; donate land	130% AMI	80% AMI
Washington, D.C.	2009	Certain zones, neighborhoods, or districts	10	On-site units	Not included in database. Likely 80% AMI	Not included in database. Likely 50% AMI
San Jose	2010	Entire jurisdiction	20	On-site units; off-site units; renovate unregulated units; in-lieu fee; donate land	120% AMI	50% AMI
Portland, OR	2017	Entire jurisdiction	20	On-site units; off-site units; rehab regulated units; renovate unregulated units; in-lieu fee	80% AMI	80% AMI
Seattle	2017, 2019	Certain zones, neighborhoods, or districts	None	On-site units; in-lieu fee	80% AMI	60% AMI
Minneapolis	2019	Certain zones, neighborhoods, or districts	20	On-site units; off-site units; rehab regulated units; in-lieu fee; donate land	80% AMI	80% AMI
Denver	2022	Entire jurisdiction	30	On-site units; in-lieu fee	90% AMI	60% AMI

* Income level served refers to the affordability level of units produced to comply with the program. In-lieu fees may be used by the jurisdiction to support other affordability levels.

Sources: [Grounded Solutions Network. \(2020\). Inclusionary Housing Database](#); BERK, 2024.

Exhibit 36 and **Exhibit 37** summarize issued multifamily building permits (those with five or more units) for Seattle and each of the comparison cities.²⁶ The first chart compares Seattle to cities without mandatory IZ programs in place. The second chart compares Seattle to cities that have adopted mandatory IZ programs. In some cases, adoption occurred during the period of analysis. For these cities, the line color reflects the periods before and

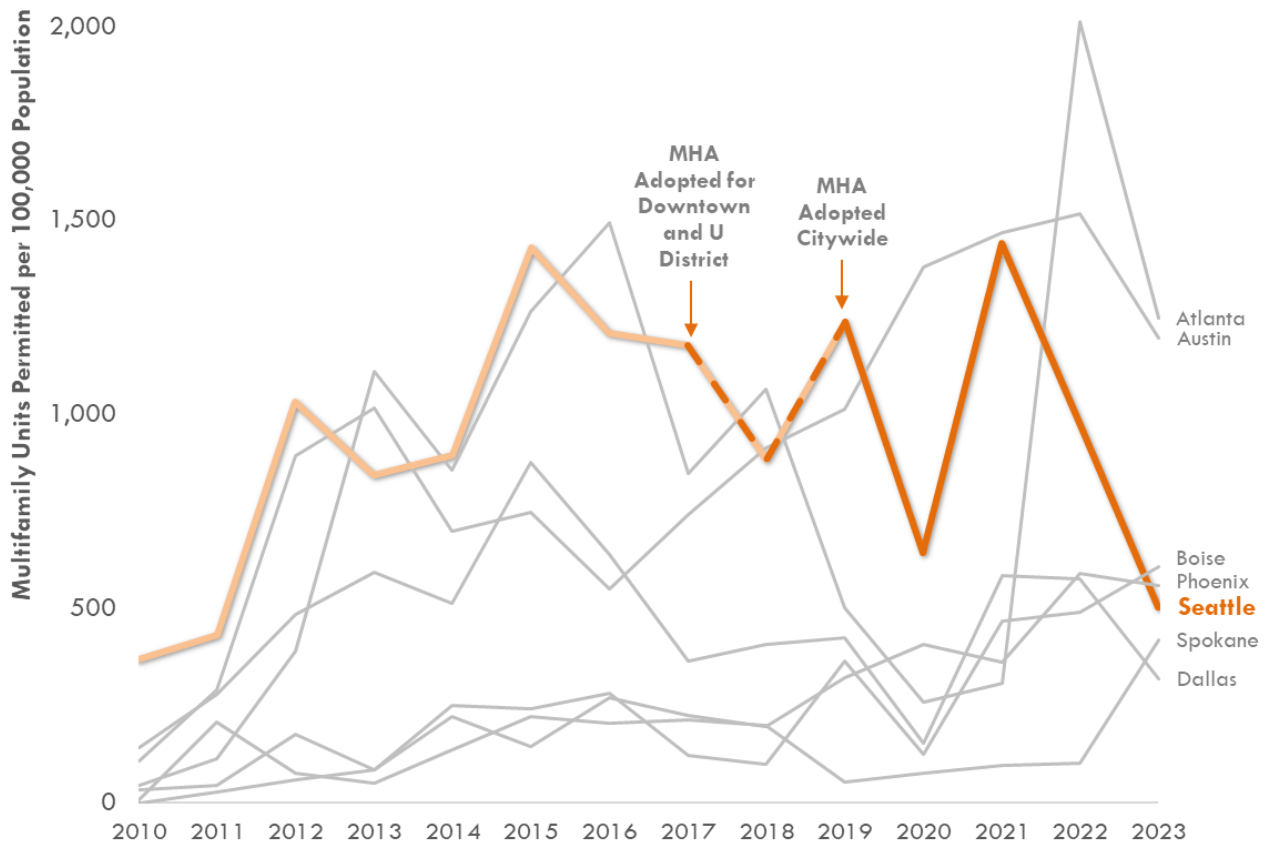
²⁶ When analyzing issued permit data from different cities, it is important to keep in mind that differences in average permitting timelines between cities can complicate direct comparison. For instance, townhomes typically have a much shorter permit duration than mid-rise. So, a city in which a large share of new multifamily units are mid-rise would see a much longer delay between initial permit application and permit issuance, compared to a city where most multifamily permitted units are in townhomes.

after IZ program adoption. Finally, to normalize the comparison in both charts, we divided the total units permitted each year by the city population for that year and multiplied by 100,000.

Permit trends indicate:

- For much of the period, Seattle was among the cities with the highest permit activity. In 2020, there was a sharp dip in activity, followed by a sharp increase in 2021. Seattle's permitting department staff (SDCI) suggest that the jumps in permit activity are likely related to challenges processing and issuing building permits during the COVID-19 pandemic, followed by staff working through the backlog the following year. The subsequent downward trend in 2022 and 2023, therefore, may be partially explained by the fact that 2021 was artificially high due to working through the permit backlog.
- Among peer cities, Denver, Dallas, and Atlanta also show the dip in 2020 and subsequent increase in 2021 observed in Seattle.
- By 2023, Seattle's permitting activity was roughly on par with or higher than that of most comparison cities. Two notable exceptions are Austin and Atlanta, which had significantly higher permitting activity in 2022 and 2023. Neither of these cities has mandatory IZ programs. However, several other cities that also do not have mandatory IZ programs did not perform better than Seattle, including Boise, Dallas, Phoenix, and Spokane.
- Many peer cities also had a decline in permit activity during the last few years, particularly between 2022 and 2023. These include a combination of cities with and without mandatory IZ programs: Atlanta, Austin, Boston, Denver, Minneapolis, San Francisco, and Washington DC. It is likely that broader macroeconomic factors, most notably increases in the federal interest rate in 2022, partially explain these observed reductions in permit activity.
- Cities that don't show a dip in 2023 (Boise, Spokane, San Jose, and Minneapolis) typically underperformed compared to Seattle during this period of analysis. These cities vary in size and market characteristics. An examination of local factors would be necessary to explain these differences.
- With the exception of Austin and Atlanta, there doesn't appear to be a meaningful differences in permitting activity between cities with and without mandatory IZ programs.

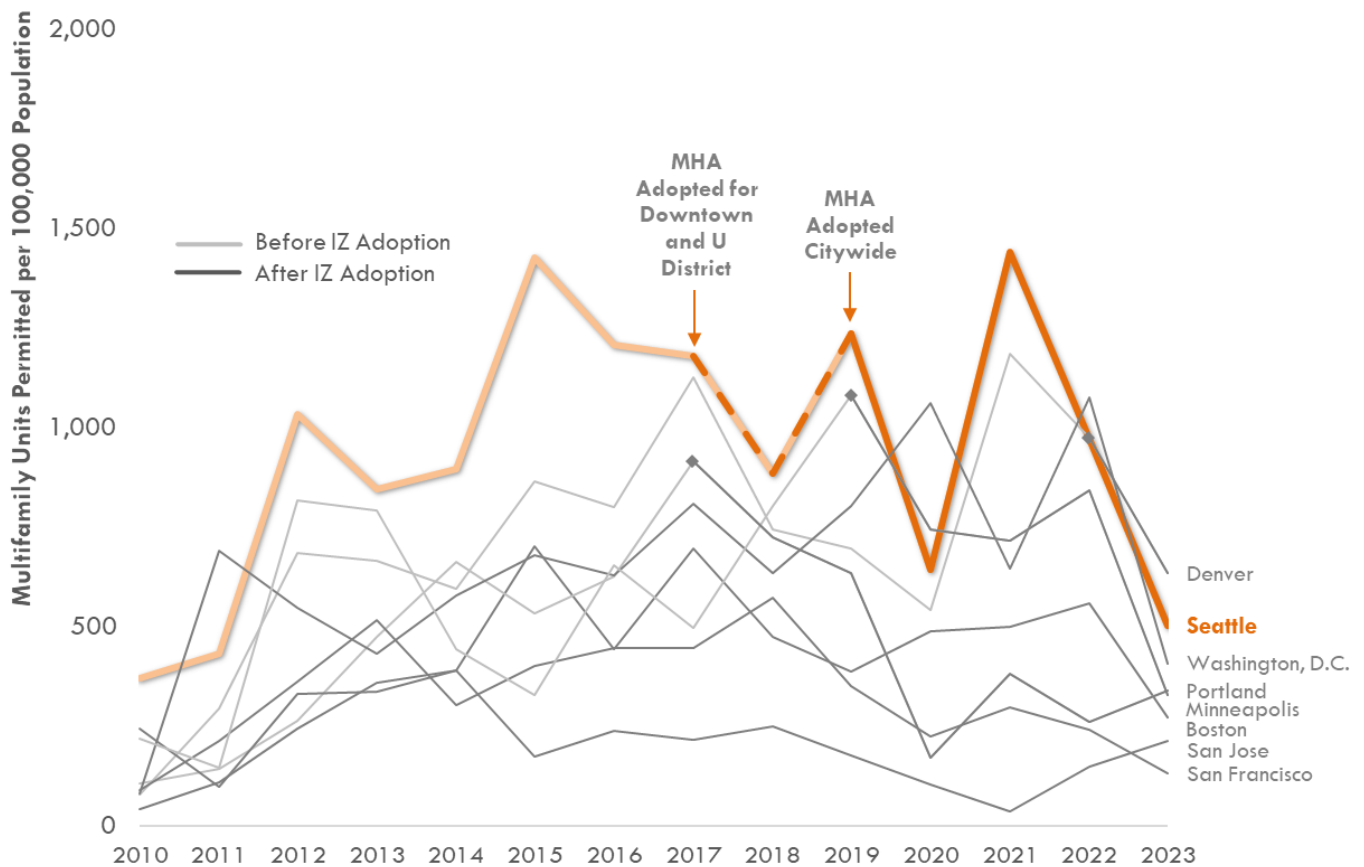
EXHIBIT 36. MULTIFAMILY UNITS PERMITTED PER 100K POPULATION, SEATTLE AND PEER CITIES WITHOUT MANDATORY IZ



Note: Here “multifamily” is defined as permits for housing with 5 or more units in the structure due to characteristics of available data.

Sources: Census Building Permit Survey, 2010-2023; Census Population Estimates Program 2010-2023; BERK, 2024.

EXHIBIT 37. MULTIFAMILY UNITS PERMITTED PER 100K POPULATION, SEATTLE AND PEER CITIES WITH MANDATORY IZ



Note: Here “multifamily” is defined as permits for housing with 5 or more units in the structure due to characteristics of available data.

Sources: Census Building Permit Survey, 2010-2023; Census Pop Estimates Program 2010-2023; BERK, 2024.

Seattle Metropolitan Area City Comparisons

Another way to evaluate the potential impacts of MHA on permit activity is by comparing Seattle to other jurisdictions in the same metropolitan region. If MHA made conditions for residential construction in Seattle unfavorable, it is reasonable to assume that local developers specializing in multifamily housing would decide to pursue projects in other nearby jurisdictions. We compared multifamily permitting trends in Seattle and the remainder of King County (all jurisdictions combined) to determine if there is any evidence of development shifting to other jurisdictions.

Seattle is not the only jurisdiction in King County with a mandatory IZ program in place. **Exhibit 38** presents information on mandatory IZ programs in eight other King County jurisdictions. These programs all vary in characteristics and the years in which they were adopted and last updated.

EXHIBIT 38. MANDATORY IZ PROGRAM CHARACTERISTICS FOR CITIES IN SEATTLE METROPOLITAN REGION, ORDERED BY YEAR PROGRAM ADOPTED

Jurisdiction	Year Adopted (Updated)	Applicable Area	Unit Threshold	Compliance Options	Highest Income Served*	Lowest Income Served*
Redmond	1995 (2017)	Certain zones, neighborhoods, or districts	10	On-site units; off-site units; in-lieu fee; donate land	80% AMI	80% AMI
Federal Way	1997 (2008)	Certain zones, neighborhoods, or districts	25	On-site units	80% AMI	50% AMI
Kenmore	2003 (2014)	Certain zones, neighborhoods, or districts	20	On-site units, off-site units	85% AMI	85% AMI
Kirkland	2004 (2015)	Certain zones, neighborhoods, or districts	4	On-site units; off-site units; in-lieu fee	90% AMI	70% AMI
Sammamish	2010	Certain zones, neighborhoods, or districts	none	On-site units	80% AMI	80% AMI
Issaquah	2012 (2018)	Certain zones, neighborhoods, or districts	none	On-site units, off-site units, in-lieu fee	90% AMI	90% AMI
Newcastle	2012	Certain zones, neighborhoods, or districts	none	On-site units, off-site units, in-lieu fee	80% AMI	70% AMI
Bothell	2018	Certain zones, neighborhoods, or districts	5	On-site units; off-site units; in-lieu fee	80% AMI	60% AMI

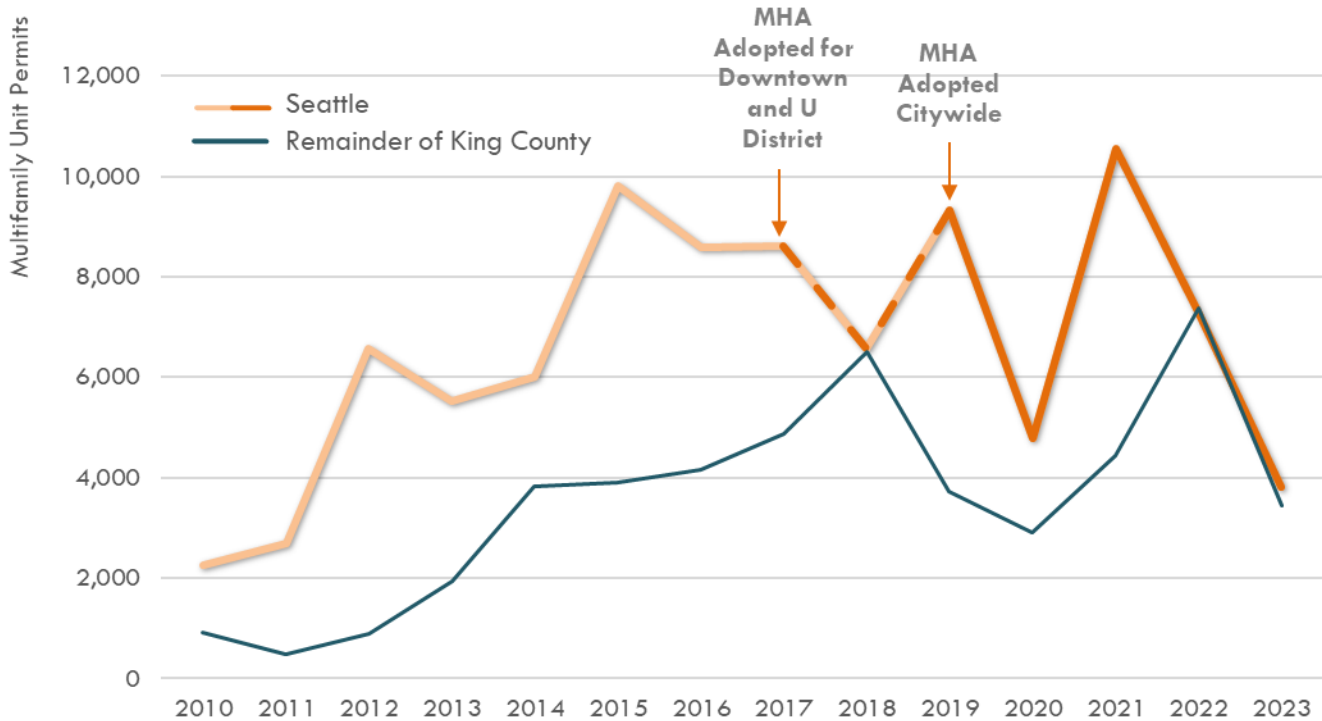
* Income level served refers to the affordability level of units produced to comply with the program. In-lieu fees may be used by the jurisdiction to support other affordability levels.

Sources: [Grounded Solutions Network. \(2020\). Inclusionary Housing Database](#); BERK, 2024.

Real estate market conditions for multifamily development have also changed over time in King County. Most notably, Sound Transit Link Light Rail service extended to parts of Seattle and South King County in 2009 and 2016. An extension to Northgate opened in 2021. In 2024, service opened in East King County, with a connection to Seattle expected in 2025. Additional extensions north to Lynnwood and south to Federal Way are expected between 2024 and 2026. Many of the jurisdictions on these routes have taken recent actions to encourage new transit-oriented development around new and future light rail stations. Increases in multifamily permitting in these jurisdictions are likely due in part to a change in market conditions and not simply a shift in developer focus away from the City of Seattle.

The comparison of permitting trends does not provide clear evidence of developers shifting from Seattle to other jurisdictions in King County. **Exhibit 39** presents total units in multifamily building permits in Seattle and the remainder of King County on an annual basis. As discussed previously, Seattle’s production fluctuates over time, with a notable dip in 2020 during the pandemic and a rebound in 2021, followed by a downward trend in 2022 and 2023. The remainder of King County follows a similar, if less volatile, pattern. Permit activity also dropped notably in 2020, with a rebound in 2021 and 2022. Like Seattle, permitting declined significantly in 2023.

EXHIBIT 39. UNITS IN ISSUED MULTIFAMILY BUILDING PERMITS, SEATTLE AND REMAINDER OF KING COUNTY



Note: “Multifamily” is defined as permits for housing with 5 or more units in the structure.

Sources: Census Building Permit Survey, 2010-2023; BERK, 2024.

Seattle Production Trends by Housing Type

The peer city comparison does not provide clear evidence that the adoption of MHA in Seattle resulted in a reduction in multifamily permitting compared to trends in other cities. However, MHA may have impacted the types of housing built in Seattle and the distribution of development across the city. So, this section examines City of Seattle permit data more closely to answer Evaluation Question 11.

Evaluation Question 11

How has Seattle’s housing permitting changed since the adoption of MHA?

Residential Permitting Inside and Outside of MHA Zones

MHA was adopted in nearly all multifamily zones in Seattle in 2019 and it was not adopted in most low-density residential zones.²⁷ To evaluate if MHA discouraged development, we compare residential building permit trends inside and outside of zones subject to MHA. **Exhibit 40** presents annual counts of new residential building projects (not units) for 2012 through 2023.²⁸ The annual counts are summarized by assumed vesting date (see definition on

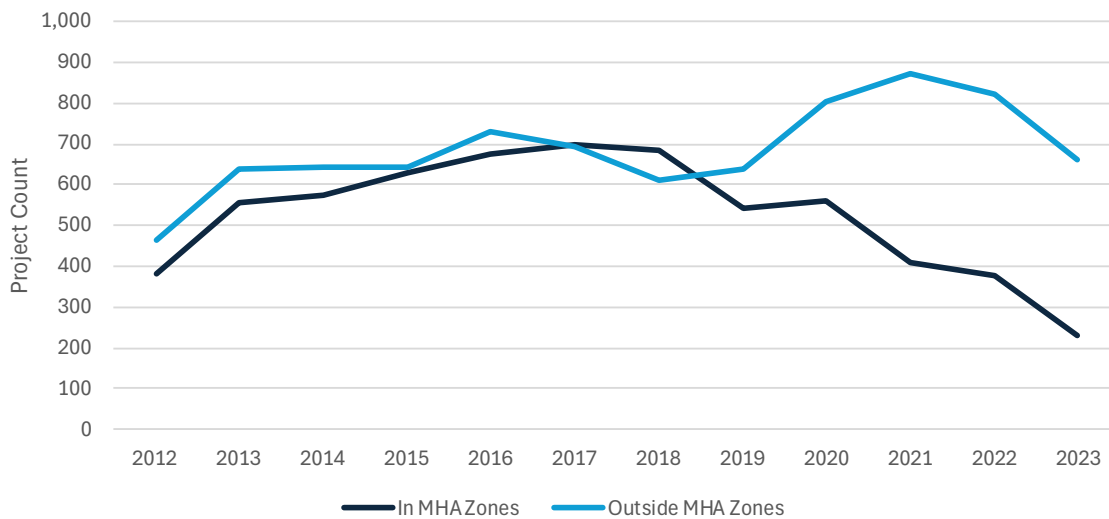
²⁷ Ordinance 12591 explicitly restricts the impact of increased development capacity on areas zoned SF 5000, SF 7200, or SF 9600 (SMC 23.34.010)

²⁸ Note that a single residential development project can encompass multiple building permits. This could be the case when a project includes multiple types of buildings (e.g., a single-family home and a DADU) or multiple primary-use buildings (e.g., multiple townhome buildings, duplexes, or single-family residences on the same site). The City’s permitting database links related construction permits with a “parent construction permit” number. In this section of the report, the unit of analysis for analyzing permitting trends is projects, not individual permit applications. This is done by grouping permits by parent construction permit, as identified in the City’s permit database. The benefit of this approach is to capture an individual

page 45). The use of the vesting date differs from the peer city comparison analysis above, which summarizes permits by the building permit issue date. The building permit vesting date determines the regulations the building is subject to. So, if MHA had an immediate impact on developer decisions to apply for new building permits, we would expect to see a shift in permit activity in 2017 (when MHA was adopted in areas near Downtown and the U District) with a bigger shift in 2019 (when MHA was adopted in multifamily and mixed-use zones across the entire city).²⁹

Exhibit 40 shows a clear divergence in project counts starting around 2019. Prior to 2019, the annual count of projects inside and outside of MHA zones tracked closely together. But in 2019, the trend in project counts dropped inside MHA zones, diverging from the trend in project permits outside MHA zones. Permits outside of MHA zones increased starting in 2019, peaked in 2021, and declined in 2022 and 2023.³⁰ By 2023, there were nearly three times as many new residential projects outside MHA zones compared to inside MHA zones.

EXHIBIT 40. ANNUAL RESIDENTIAL PROJECT COUNTS BY ASSUMED VESTING DATE



Sources: City of Seattle, 2024; BERK, 2024.

Low-Rise Permitting Trends

Prior to MHA, the most frequently built low-rise housing format aside from detached single-family homes was the townhome.³¹ These were typically built in Low-Rise (LR) zones that are currently subject to MHA. In 2019, when MHA was applied to most of these LR zones, another regulatory change impacted the types of homes that can be built in Neighborhood Residential (NR) zones³² where MHA was not applied. Specifically, new regulations allowed

developer’s decision to advance a project, regardless of the project’s permitting complexity, the number of units proposed, or the number and type of buildings. Note that the parent construction permit is not synonymous with development site, as there may be multiple parent permits per site address or multiple site addresses per parent permit.

²⁹ It is also possible that there could be an increase in permit activity directly before the adoption of MHA. This could happen if developers were motivated to vest projects before the requirements of MHA were imposed, on the assumption that it would be more profitable to build under the older, pre-MHA, regulations.

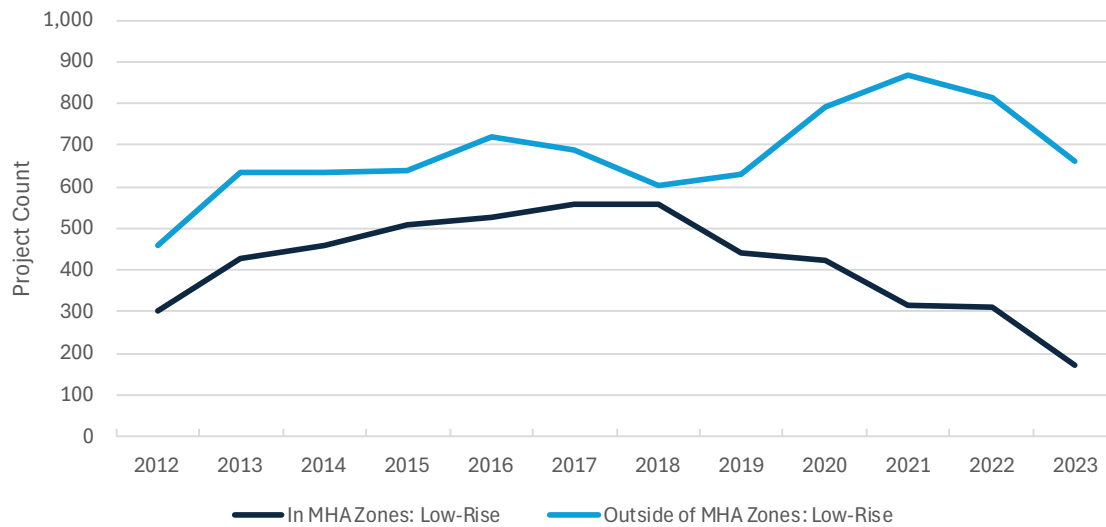
³⁰ Note that this analysis includes all residential building permit applications, not just permits that have been issued. So the drop off in permit activity in 2023 cannot be partially explained by the fact that some building permit applications are still in process and not yet issued.

³¹ Excluding single-family homes, the most frequent housing type built in terms of net units among issued permits in low-rise zones was apartments in 2012 and townhomes from 2013-2018. Rowhouses were the third most frequent type built from 2012-2018.

³² At the time, these zones were titled “Single Family” (SF).

for up to two accessory dwelling units (ADUs) along with a primary unit on all NR lots. This change, along with other changes to development regulations such as parking standards, made it more feasible to redevelop NR lots with three-unit projects that closely resemble townhome development. As a result, developers that specialize in three-story residential buildings were provided with significantly more opportunity to build in the city’s Neighborhood Residential zones, by far the zone with the greatest residential acreage in Seattle. Developers could now build three unstacked units (a primary home and two ADUs) and sell each of them separately as condominiums. **Exhibit 41** compares the number of low-rise projects inside and outside of MHA zones, by assumed vesting date. It shows a similar pattern as **Exhibit 40**, where project counts track closely until 2019 and then diverge, with project counts in MHA zones taking a downward trend. If the increase in residential projects outside of MHA zones represents developers choosing to avoid MHA requirements, we would expect to see a steep reduction in low-rise development inside the MHA zones. The permit data is consistent with this expected pattern. The data also shows an increase (through 2021) in low-rise permitting outside of MHA zones.

EXHIBIT 41. ANNUAL LOW-RISE RESIDENTIAL PROJECT COUNTS BY ASSUMED VESTING DATE³³

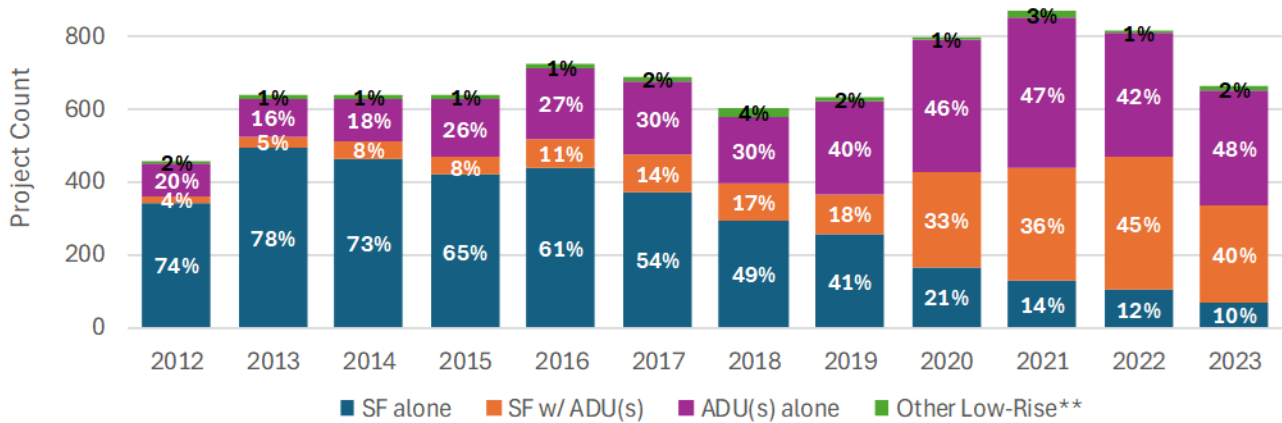


Sources: City of Seattle, 2024; BERK, 2024.

As detailed in **Section 3**, low-rise developers who specialize in townhomes report during interviews that they were not able to benefit from the increase in zoned capacity for several reasons. The increase in zone capacity allowed some projects to build up to four stories; however, given the small building footprint, adding a fourth story does not increase the sales price of the home. Buyers of townhomes simply don’t value a fourth story enough to warrant the extra building costs. In addition, while the zoning regulations may not require onsite parking, the market for townhomes still requires off-street parking. In sum, for low-rise developers, MHA added additional development costs that were not offset by profit association with additional development. These same developers report that many townhome developers chose to switch to building in NR zones. **Exhibit 42** shows the breakdown of low-rise projects outside of MHA zones by project type. There was a significant shift in 2019 whereby the number of projects involving the construction of a single-family home alone shrinks while projects that include a single-family home with ADU(s) and projects with just ADUs significantly increase. This finding is consistent with the theory that changes to ADU regulations in NR zones encouraged new project types and may have enticed some low-rise developers to build in NR zones as an alternative to building in LR zones.

³³ Note that some projects include a mix of building types. And a very few include a mix of midrise and low-rise building types. In this analysis, for projects with a mix of building heights including low-rise, a 4-story height cut-off was used for project-level classification. A project with a single 4-story building, on the other hand, would be considered mid-rise unless it is a townhome.

EXHIBIT 42. LOW-RISE PROJECTS OUTSIDE OF MHA ZONES BY PROJECT TYPE AND ASSUMED VESTING DATE



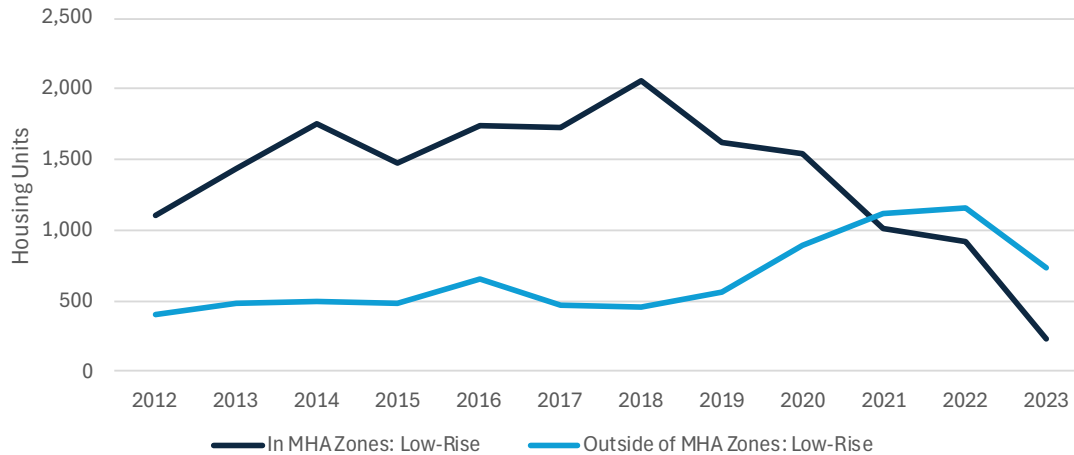
Notes: Labels show the percentage of annual projects for each building type. Other Low-Rise** includes projects with other low-rise building types (than SF, ADU/DADU, and townhome) and projects with a mix of SF, ADU/DADU, and townhome (other than the combination of SF and ADU/DADU only).

Sources: City of Seattle, 2024; BERK, 2024.

Exhibit 43 provides a different comparison of low-rise permit activity inside and outside of MHA zones. This chart summarizes net new units (rather than project counts) and only includes projects with issued building permits. It shows that prior to MHA, there had been significantly more net new units in low-rise projects inside MHA zones compared to outside, despite there being less projects overall (see **Exhibit 41**). This is because projects inside MHA zones tend to be much larger in unit counts, while projects outside of MHA zones are more likely to be on small NR lots and may not include any net new units (for instance, if an older single-family home is replaced only by a newer single-family home). Between 2012 and 2018 net new units in low-rise projects inside MHA zones increased, while outside of MHA zones net new units remained steady. This began to shift in 2019, when net new low-rise units inside MHA zones started to decrease each year and net new units outside MHA zones increased through 2022. Unit counts decline in 2023 both inside and outside of MHA zones, which can be attributed in part to the fact that some new permit applications in 2023 had not yet been issued at the time of analysis.³⁴

³⁴ BERK’s analysis of Seattle permit data showed that the duration between application and issuance for ADU permits is typically much shorter than for townhomes. So, we may expect a slightly stronger drop off in 2023 for projects inside MHA zones, where permit applications for townhomes and other low-rise projects are more common. These permits were less likely to have been issued by the time of analysis.

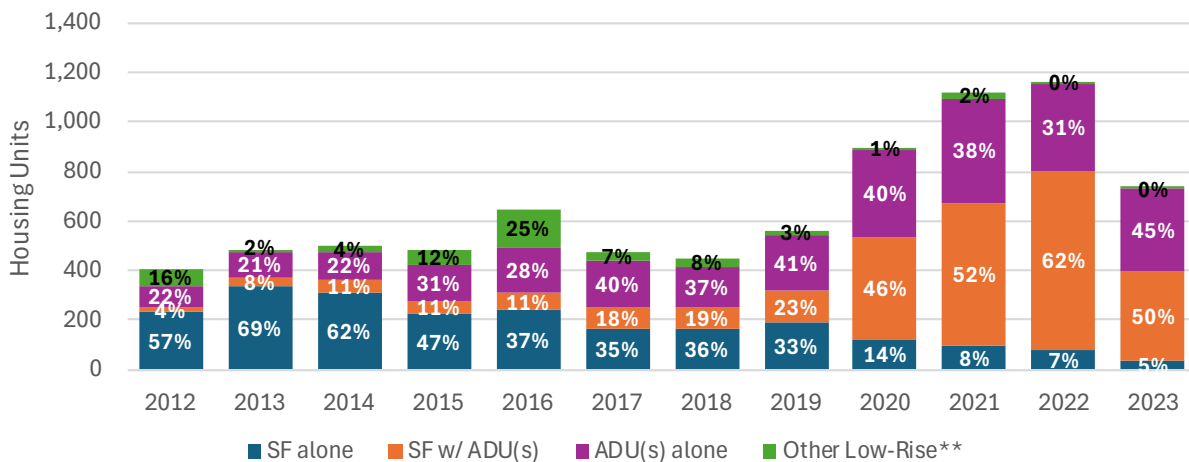
EXHIBIT 43. NET NEW UNITS IN LOW-RISE PROJECTS WITH ISSUED BUILDING PERMITS BY ASSUMED VESTING DATE



Sources: City of Seattle, 2024; BERK, 2024.

Much of the increase in permit activity from 2019 to 2022 outside of MHA zones included projects with ADUs. **Exhibit 44** presents net new units by low-rise project type for areas outside of MHA zones. It shows the greatest amount of growth in projects that have both a single-family home and one or more ADUs. These projects can produce up to two net new units when redeveloping a lot with a single-family unit, or three net new units on a vacant lot.

EXHIBIT 44. NET NEW UNITS IN LOW-RISE PROJECTS WITH ISSUED PERMITS OUTSIDE OF MHA ZONES BY ASSUMED VESTING DATE



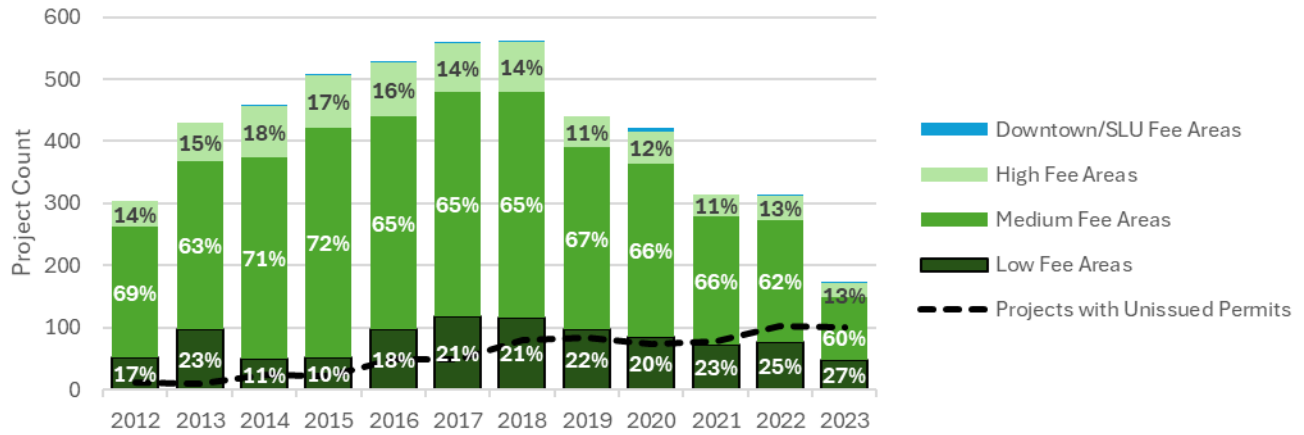
Notes: Labels show the percentage of annual projects for each building type. Other Low-Rise** includes projects with other low-rise building types (than SF, ADU/DADU, and townhome) and projects with a mix of SF, ADU/DADU, and townhome (other than the combination of SF and ADU/DADU only).

Sources: City of Seattle, 2024; BERK, 2024.

One theme we heard in interviews with townhome developers was that the different MHA fee levels (Low, Medium, and High) were not well calibrated to land values and sales prices, and therefore they suspected a steeper decrease in low-rise permitting activity in the Medium and High areas compared to Low areas. To test this theory, we analyzed low-rise permitting trends by MHA fee area. **Exhibit 45** shows low-rise permitting trends by MHA fee area. While project counts started declining in 2019, the percentage of projects in each MHA fee area did not

shift significantly. The share of low-rise project counts in Low fee areas increased only slightly from 21% in 2018 to 27% in 2023.

EXHIBIT 45. ANNUAL LOW-RISE PROJECTS IN MHA ZONES BY FEE AREA AND ASSUMED VESTING DATE

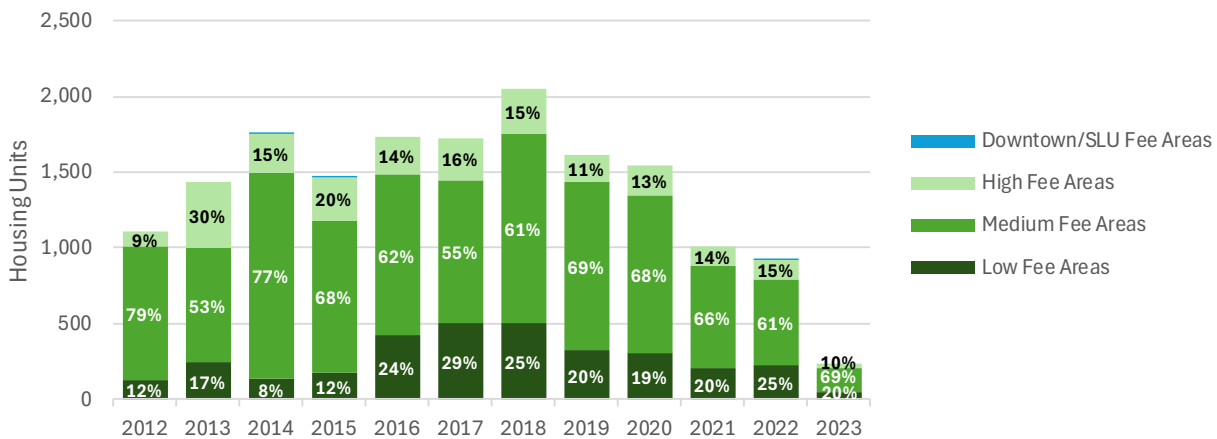


Notes: Labels show the percentage of annual projects in each fee area. Labels are not shown for shares under 2%.

Sources: City of Seattle, 2024; BERK, 2024.

Exhibit 46 presents net new housing units in low-rise projects in MHA zones by MHA fee area. It shows a similar pattern, with only minor shifts in percentage shares by MHA fee area from year to year. The year 2023 appears quite different between the two charts, and that may be explained by the fact that **Exhibit 46** only includes projects with issued building permits while **Exhibit 45** includes projects with and without issued building permits.

EXHIBIT 46. NET NEW UNITS IN LOW-RISE PROJECTS WITH ISSUED PERMITS IN MHA ZONES BY FEE AREA AND ASSUMED VESTING DATE



Notes: Labels show the percentage of annual net units in each fee area. Labels are not shown for shares under 1%.

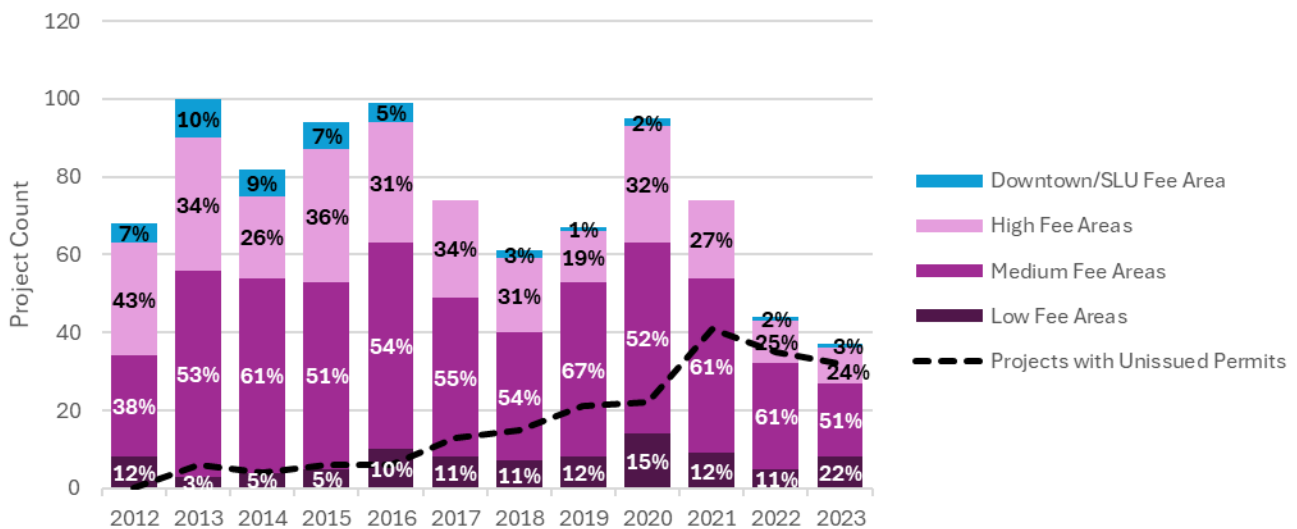
Sources: City of Seattle, 2024; BERK, 2024.

Mid-Rise Permitting Trends

This section details permitting trends for mid-rise projects. These are defined as residential or mixed-use buildings with between four and nine stories in height.³⁵ **Exhibit 47** presents annual mid-rise project counts in MHA zones by fee area and assumed vesting date. It shows high points in 2013 and 2016, followed by a sharp decline in 2017 that continues to 2019. This period is also notable for the reduction in the number of projects in Downtown/SLU, which could be related to the adoption of MHA requirements in these areas in 2017. The reduction can also be related to the increasing value of office development over residential, driven by the large amount of tech office space that was built in this period. The drop in project counts also happened in other areas of the city that did not yet have MHA requirements.

In 2020, there is another spike in new projects. If developers were trying to vest projects before MHA requirements were imposed, we would expect the spike to occur in 2018 or 2019. More likely, this spike represents a rush to vest projects in advance of new building codes that went into effect in early 2021. This spike may also be driven by pandemic-driven economic policy that lowered interest rates to historic lows throughout 2020. Starting in 2021, there was a steady decline in new projects, most notably in Medium and High fee areas.

EXHIBIT 47. ANNUAL MID-RISE PROJECTS IN MHA ZONES BY FEE AREA AND ASSUMED VESTING DATE



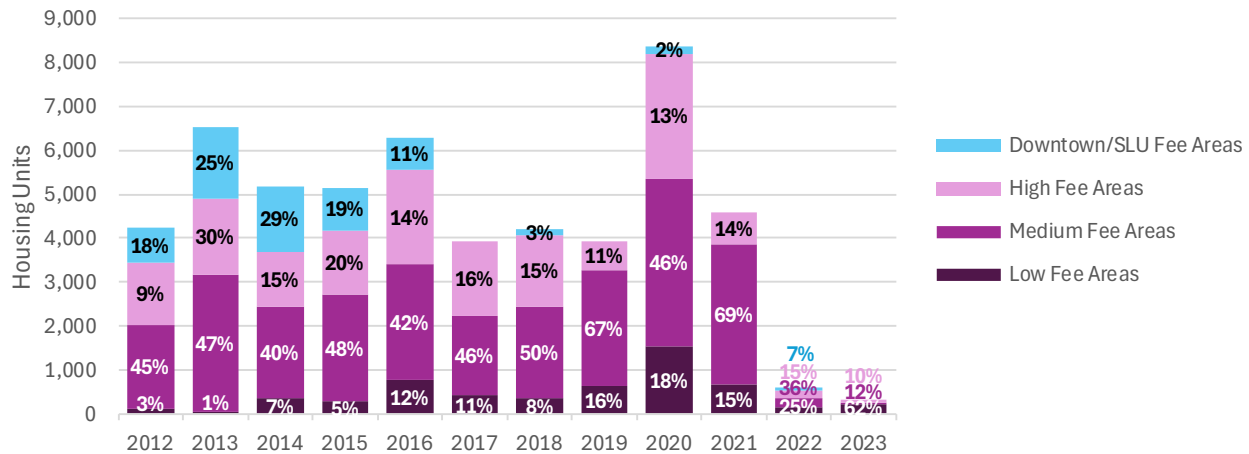
Note: Labels show the percentage of annual projects in each fee area.

Sources: City of Seattle, 2024; BERK, 2024.

Exhibit 48 presents net new units in mid-rise projects with issued permits. This chart excludes projects with permits that have not yet been issued (those shown as the black dashed line in **Exhibit 47**). These data are from spring 2024, and the majority of 2022 and 2023 mid-rise projects in MHA zones did not yet have their building permits due to the delay between project vesting and permit issuance discussed earlier. This explains the sharp decline in net new units during those years.

³⁵ In a small number of cases, projects with 4 stories in height were categorized at low-rise. These included townhome projects and projects with a mix of different building types including low-rise structures such as townhomes.

EXHIBIT 48. NET NEW UNITS IN MID-RISE PROJECTS WITH ISSUED PERMITS IN MHA ZONES BY MHA FEE AREA AND ASSUMED VESTING DATE



Note: Labels show the percentage of annual net units in each fee area.

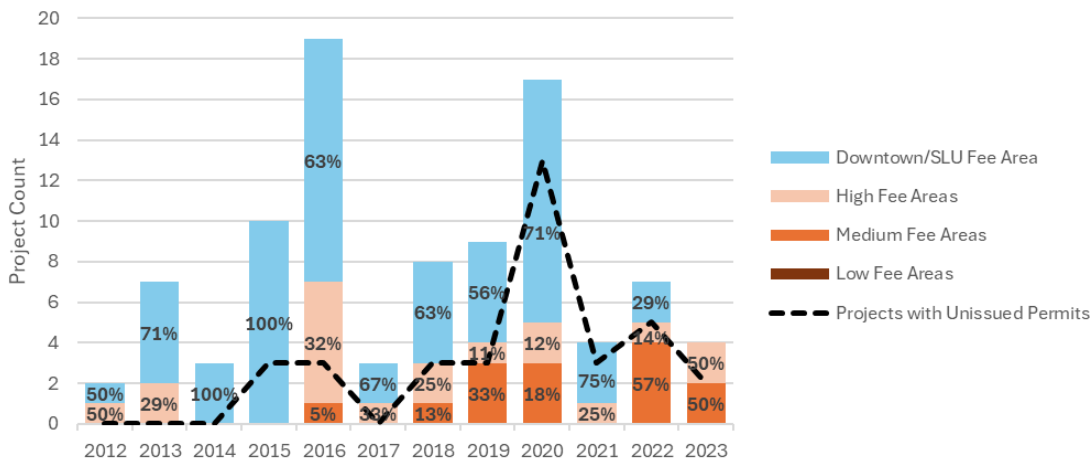
Sources: City of Seattle, 2024; BERK, 2024.

High-Rise Permitting Trends

High-rise projects are residential or mixed-use buildings that have 10 or more stories in height. **Exhibit 49** summarizes annual high-rise projects in MHA zones by fee area and assumed vesting date. Overall, there are far fewer high-rise projects than low- or mid-rise. Historically, most of these high-rise projects have been located in Downtown and South Lake Union. These neighborhoods contain much of the area in Seattle zoned for high-rise development.

The greater year-to-year fluctuation in projects compared to the low- and medium-rise permit trends is due to the small number of projects in the high-rise zones. The spike of 19 projects in 2016 could reflect a rush to vest projects in advance of the new 2017 MHA requirements in Downtown/SLU. The subsequent dip in new projects in the Downtown/SLU area is consistent with this interpretation. The spike of 17 projects in 2020 could reflect developers seeking to vest projects in advance of the building code updates that went into effect in early 2021. Permitting between 2021 and 2023 has been more typical of the non-spike years in this observation period.

EXHIBIT 49. ANNUAL HIGH-RISE PROJECTS IN MHA ZONES BY FEE AREA AND ASSUMED VESTING DATE

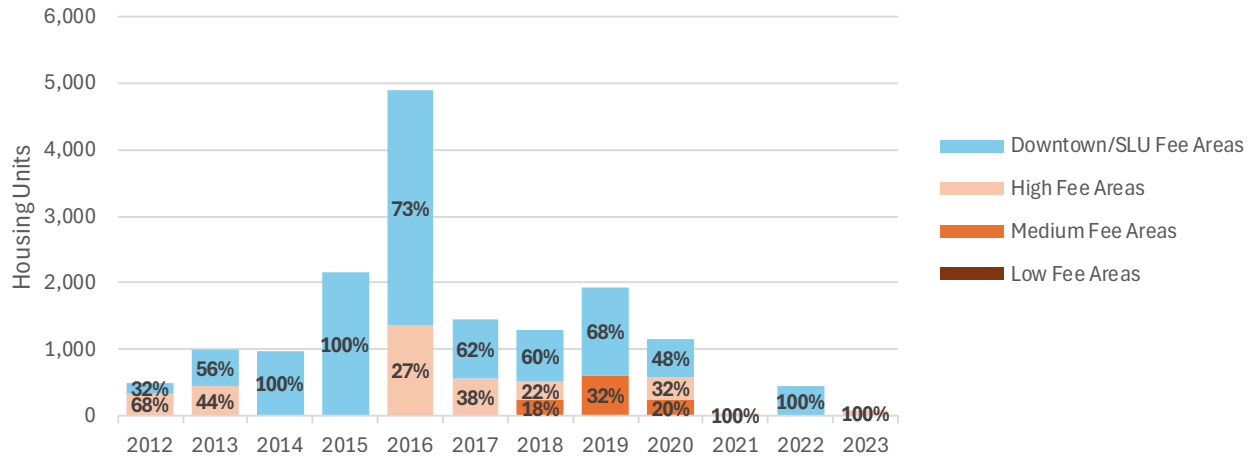


Note: Labels show the percentage of annual projects in each fee area.

Sources: City of Seattle, 2024; BERK, 2024.

Exhibit 50 presents net new units in high-rise projects with issued permits. The projects with permits that have not yet been issued, shown in **Exhibit 49** as the black dashed line, are excluded in this chart. Many of the projects that vested in 2020 had not yet (as of spring 2024) completed the permitting process, which explains the apparent inconsistency between the spike in new projects in 2020 and the relative lack of net new units in issued permits that year.

EXHIBIT 50. NET NEW UNITS IN HIGH-RISE PROJECTS WITH ISSUED PERMITS IN MHA ZONES BY MHA FEE AREA AND ASSUMED VESTING DATE



Note: Labels show the percentage of annual net units in each fee area.

Sources: City of Seattle, 2024; BERK, 2024.

Section 5. Affordable Housing Impacts of MHA

So far, this report has focused on evaluating the impacts of MHA on development feasibility and total housing production, including both market rate and affordable housing. Here, we focus on MHA’s impacts on new affordable housing production. First, we describe the decision-making patterns of developers subject to MHA requirements regarding their selection of performance or payment in-lieu options. Next, we summarize the new affordable housing production enabled by MHA, including its distribution across the city. Finally, we consider the pros and cons associated with the on-site performance vs payment in-lieu options and actions the city could take to encourage on-site performance.

Developer Selection of Performance or Payment In-Lieu

This section addresses the twelfth evaluation question:

Evaluation Question 12

What factors influence a developer's decision to participate in on-site performance vs. payment in lieu?

Building on the model that we utilized in the Development Feasibility section, we analyzed the impact of the performance option against the fee-in-lieu option. The analysis shows that choosing the performance option decreases feasibility more than paying the fee.

Low-Rise Feasibility with Payment and Performance Options

Exhibit 51 shows the IRR for example townhouse low-rise projects across the three upzone levels (M, M1, and M2) at various levels of the MHA fee payment (low, medium, and high) and when the MHA performance option is chosen. In all Fee Areas and for all upzone levels, the performance option provides a lower IRR when compared to the payment option. It should also be noted that the example project modeled here is a six-unit townhome project, thus for all fee levels and all upzone levels the number of performance units is one unit for the project.

EXHIBIT 51. INTERNAL RATE OF RETURN FOR A LOW-RISE PROJECT, 2019 AND 2024

Fee Area Year	Low		Medium		High	
	2019	2024	2019	2024	2019	2024
IRR no MHA	13%	5%	18%	0%	25%	3%
IRR (M)	11%	3%	15%	-4%	19%	-3%
IRR (M1)	10%	1%	13%	-6%	17%	-5%
IRR (M2)	9%	1%	12%	-6%	16%	-5%
IRR Performance	-7%	-16%	-2%	-21%	5%	-18%

Source: Heartland, 2024.

Key takeaways from the analysis of the MHA performance option for a townhouse project in low-rise zones include:

- The fewer units in the development, the larger the negative impact to project feasibility.
- Performance requires at least one performance unit per 14-20 total units, depending on the fee zone. Thus a six-unit project and a 20-unit project in a low fee zone could both require the same amount of performance units.
- There is also uncertainty/variability to the impact of performance beyond the control of the City. The sale value of a performance unit is directly tied to interest rates. The MHA affordability requirements state that homeownership units must be priced to be affordable to households earning 65% of AMI and that housing costs (which include the mortgage payment amount) cannot exceed 35% of household income. A higher

interest rate tends to decrease the affordable house price by making payments more expensive, thus reducing buying power. This may differ from market rate pricing which in Seattle is supported by high demand which outpaces available homes and therefore may or may not decrease when interest rates go up.

Mid-Rise & High-Rise Feasibility with Payment and Performance Options

Exhibit 52 shows the IRR for example mid-rise projects across the three Fee Areas at various levels of the MHA fee payment and when the MHA performance option is chosen. In all Fee Areas and for all upzone levels, the performance option is less feasible than the payment option. **Exhibit 53** shows a similar trend for the IRR of the high-rise example project.

EXHIBIT 52. INTERNAL RATE OF RETURN FOR A MID-RISE PROJECT, 2019 AND 2024

Fee Area Year	Low		Medium		High	
	2019	2024	2019	2024	2019	2024
IRR no MHA	28%	-1%	34%	4%	37%	4%
IRR (M)	25%	-2%	31%	3%	31%	2%
IRR (M1)	24%	-2%	29%	2%	29%	1%
IRR (M2)	24%	-2%	29%	2%	29%	1%
IRR Performance (M2)	20%	-7%	27%	-2%	28%	-3%

Source: Heartland, 2024.

EXHIBIT 53. INTERNAL RATE OF RETURN FOR A MID-RISE PROJECT, 2019 AND 2024

Fee Area Year	DMR 280	
	2019	2024
IRR no MHA	11%	-7%
IRR (DMR 280)	10%	-8%
IRR MHA Performance	8%	-9%

Source: Heartland, 2024.

Key takeaways from the analysis of the MHA performance option in mid- and high-rise zones include:

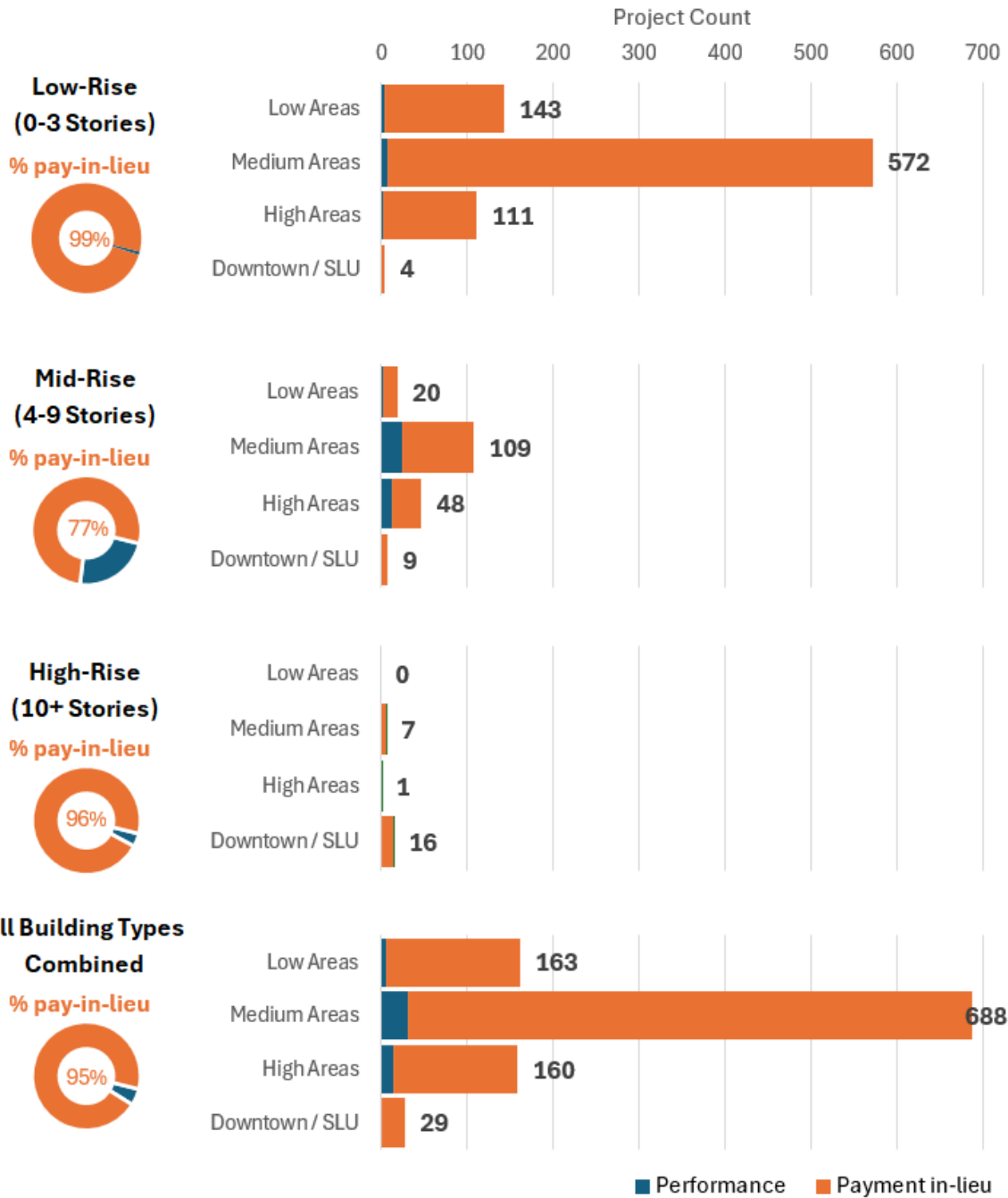
- Choosing the performance option results in a decreased property sale value when the developer chooses to sell. This is a result of the net operating income being lower due to the reduced rent in the performance units, which results in a loss of revenue compared to the fee option. This can have a significant impact on the IRR of a project, and limits the upside potential for profit, which as explained in the Development Feasibility section of this report is often where a developer derives the majority of the profits.
- Buildings that have affordable units tend to trade at slightly higher cap rates than market rate buildings. This relates to the reduction in sale value above as a buyer wants to capture upside on rents to justify the purchase, which is limited by the affordable unit requirements in the performance option. MHA performance compliance increases operation cost, often requiring an occupancy specialist, program compliance, and managing two different pools of renters.
- MHA performance requires more ownership management time, due to the program complexity and the need to stay current with regulations that are subject to change.

- There is an increased perception of operational risk for managing buildings with tenants that are low income who may have previously lacked permanent housing and have not always received the support to transition into permanent housing.
- It can often take well over a month to income-qualify affordable units with the city. This delay may cause the tenant to choose another housing option, and create a potential vacancy issue for the affordable units.

Exhibit 54 summarizes all projects with issued permits subject to MHA since the program’s inception through the end of 2023. There were 1,040 projects with issued building permits. The exhibit presents the count and percentage of projects that have selected the performance or the payment option and presents these numbers by building type and MHA fee area.³⁶ In most cases, developers have chosen the payment in-lieu option to comply with MHA requirements. The pattern varies by building type. Nearly a quarter of all mid-rise projects use the performance option, much higher than for low-rise (1%) and high-rise (5%) projects. This pattern is consistent across MHA fee areas, suggesting building type rather than fee area has more influence over developer decisions for whether to comply with MHA through the performance or payment option. Except for one project, developers exclusively chose the payment option for all projects in the Downtown/SLU area.

³⁶ Mixed-use projects where the compliance option elected differs between the commercial and residential portions of the building are classified as performance projects. All five of these projects elect payment for the commercial portion of the building and performance for the residential portion of the building.

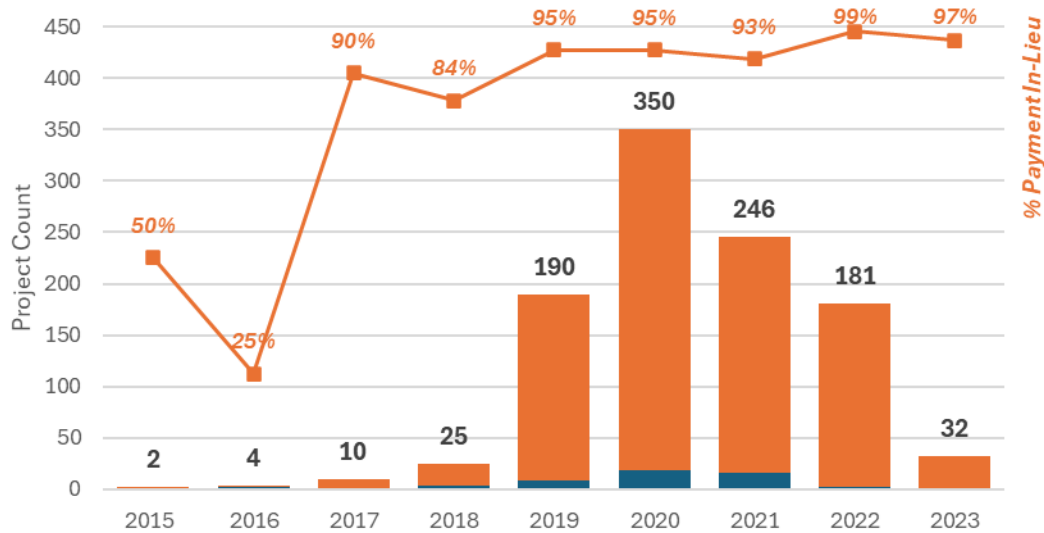
EXHIBIT 54. MHA OPTION SELECTED BY PROJECT TYPE AND MHA FEE AREA, 2017 - 2023



Sources: City of Seattle, 2024; BERK, 2024.

Exhibit 55 presents this same data by assumed vesting year. Though 2017 was the earliest year that MHA was in place in any area of Seattle, there are a few projects with assumed vesting dates for 2015 and 2016. These projects may have made significant changes to their permit applications after 2017 and became subject to MHA requirements. The performance option was somewhat more common in the early years of MHA before it was adopted citywide, but those years had a small number of projects. After MHA was adopted citywide in 2019, over 90% of projects selected the payment option, with little variation over time.

EXHIBIT 55. MHA OPTION SELECTED BY ASSUMED VESTING YEAR



Sources: City of Seattle, 2024; BERK, 2024.

MHA Affordable Housing Production

This and the following sub-sections address Evaluation Question 13.

Evaluation Question 13

What have been the impacts of the MHA program on affordable housing production in Seattle?

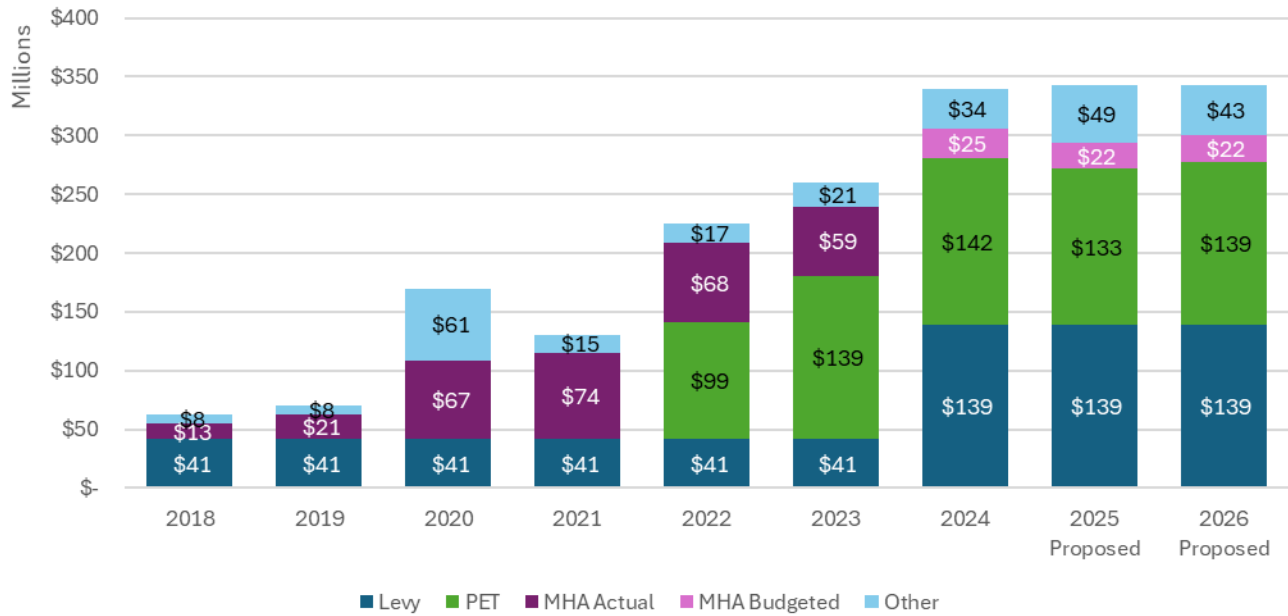
MHA was designed to support new affordable housing production while having a neutral or positive impact on the rate of total housing production in Seattle. **Section 4** considers the impacts on housing production overall. This section considers MHA’s impact on the production of affordable housing, specifically income-restricted units. We also consider the mix of affordability levels and unit types and the geographic distribution of those units in Seattle.

Revenue for Affordable Housing Production

MHA payments are one source of revenue that the City uses to fund new affordable housing development through the Office of Housing. As of the end of 2023, the program has generated over \$300 million in payment revenue. As shown in Exhibit 56, MHA provided a large share of OH revenues (21 – 57%) between 2018 and 2021. However, starting in 2022 Seattle began collecting new revenue from the Payroll Expense Tax (PET) while MHA revenue declined in 2023 and 2024³⁷. As of 2024, revenues from the Seattle Housing Levy and payroll expense tax (PET) provide over 80% of the total budget, with MHA contributing 7%. Looking forward, the City’s budget office projects MHA payment revenues to be \$22 Million annually, less than a third of the \$74 Million in actual revenue received in 2021, the year MHA revenues peaked.

³⁷ City budget office data shows that 2024 MHA revenue through December 4 was just over \$24 Million, roughly on track to hit the budgeted \$25 Million revenue for that year.

EXHIBIT 56. OFFICE OF HOUSING REVENUES BY FUND SOURCE



Note: All values are budgeted except for “MHA Actual” which represents collected MHA revenues. For other fund sources, City budget staff report that there is little variation between budgeted and actual revenue.

Sources: City of Seattle Budget Office, 2024; BERK, 2024.

Number of Income-restricted Units

When it adopted MHA citywide in 2019, Seattle set a goal of creating 6,000 new rent- and income-restricted housing units over a 10-year period. These new units would be created in one of two ways:

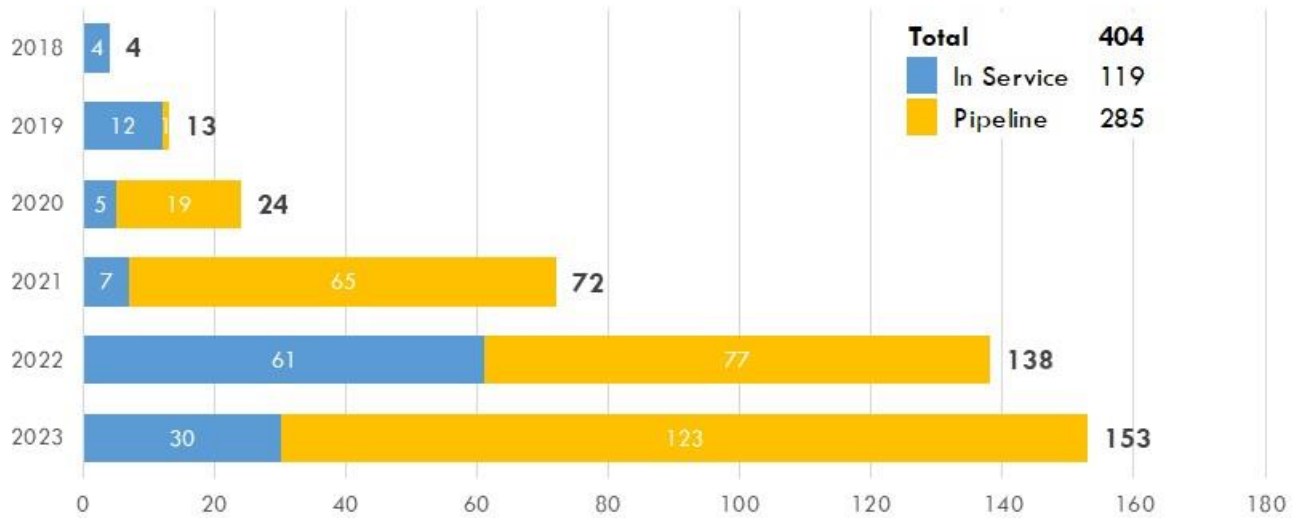
- Developers set aside MHA performance units in new housing built in MHA zones, or
- Developers pay MHA in-lieu fees that the Seattle Office of Housing grants to housing developers who then build new affordable housing projects in the city.

Affordable housing created through the MHA program includes the sum of units built by developers using the performance option (performance units) and the units supported by paying MHA fees (payment units).

Performance Units

Performance units provide affordable housing in largely market-rate developments. This creates access to housing in buildings that would likely be inaccessible to low-income households without public investment. Between the start of the program and December 2023, MHA has generated 404 affordable housing units in otherwise market-rate developments, presented in **Exhibit 57**. Most units (285 units) are still in the pipeline as of December 2023, and 119 units are in service for households with incomes between 40% of AMI and 80% of AMI, depending on the project.

EXHIBIT 57. SEATTLE MHA PERFORMANCE UNITS, 2019 – 2023

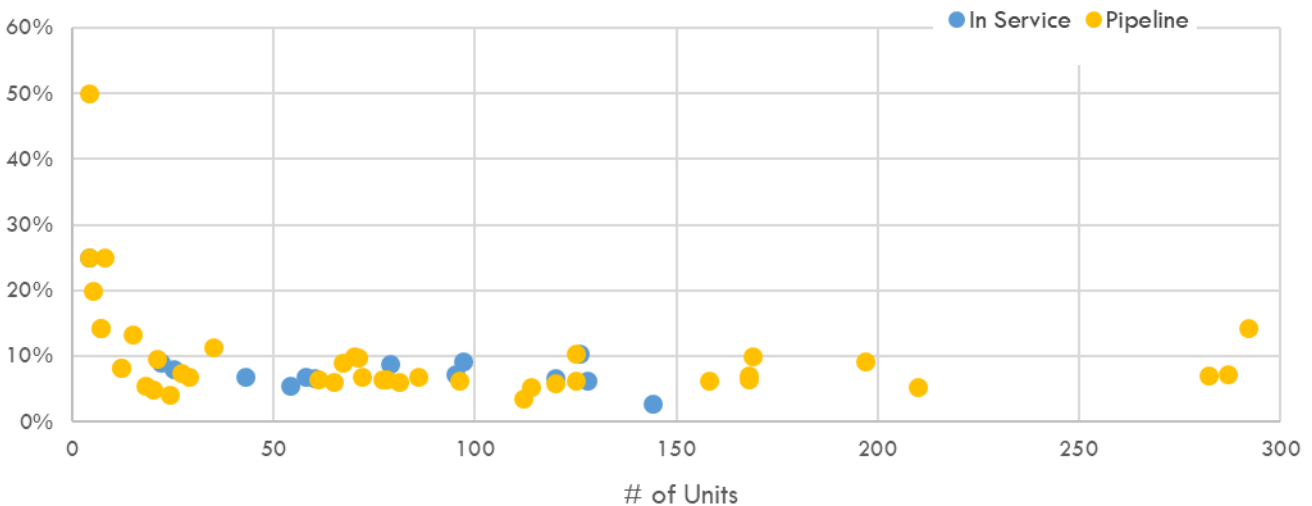


Sources: City of Seattle, Office of Housing, 2024; BERK, 2024.

Across all performance projects, the performance units (permanently affordable units) range from 3% to 50% of the total units in the project, with a median of 7%. Permanently affordable set-aside units comprise larger portions of the units in smaller projects, generally those with less than 25 total units, as shown in **Exhibit 58**.

EXHIBIT 58. MHA PERFORMANCE UNIT PROPORTION OF ALL UNITS BY PROJECT, 2019 – 2023

MHA % of Units



Sources: City of Seattle Office of Housing, 2024; BERK, 2024.

Units in Buildings Supported in Part with MHA Payment Funds

Affordable housing built with the support of MHA payment funds can include many partners and a mix of funding sources, in-kind contributions, land contributions, and tax credits to make the affordable housing project feasible. The City of Seattle uses funds from several programs to support new affordable housing development.³⁸ The City

³⁸ The City of Seattle has additional programs focused on incentivizing affordable housing production and preserving existing affordable housing, including affordable housing for a variety of specific needs such as senior housing and supportive

makes awards available to developers through a competitive Office of Housing Notice of Funding Availability (NOFA) published each year. The Office of Housing typically awards funds in the same calendar year as when the MHA fee payments are received (City of Seattle, 2024). As of December 31, 2023, Seattle has received nearly \$304.3 million in MHA payments and has committed \$252.2 million to projects (City of Seattle, 2024).

Exhibit 59 summarizes the number of units in projects awarded MHA funds between 2017 and 2023. If we combine the 404 performance units (see **Exhibit 57**) with the 4,702 units in housing supported with MHA funds (shown in **Exhibit 59**) the total is 5,106, representing 85% of the permanently affordable housing target the City of Seattle set in 2019. By this measure, Seattle appears poised to hit their 10-year target by the end of 2025.

EXHIBIT 59. UNITS IN BUILDINGS SUPPORTED IN PART WITH MHA PAYMENT FUNDING BY YEAR OF AWARD, 2017 - 2023

	2017	2018	2019	2020	2021	2022	2023	Total
Rental Units	377	638	1,015	650	1048	637	232	4,597
Ownership Units	0	0	0	13	36	30	26	105
Total	377	638	1,015	663	1084	667	258	4,702

Sources: Seattle Office of Housing, 2024; BERK, 2024.

Whereas the number of permanently affordable units produced through performance is easy to identify, the number of units attributable to the fees collected through the MHA program is less direct. When reporting the number of units supported by MHA fees, the Office of Housing includes all affordable units in any project receiving MHA funds. This is consistent with the assumption that all payment revenue would be leveraged by contributing to 4% Low Income Housing Tax Credit and no additional public funds.³⁹ However, in many cases, Seattle combines MHA funds with additional city funds, including HOME funds, Payroll Expense Tax (PET) Funds, and others, in their awards to individual projects. Moreover, many affordable housing developers combine the city funding with additional funds from other sources.

This study assumes that some projects that received MHA funding would have proceeded without the support from MHA. Therefore, to evaluate the impacts of MHA, we must consider the specific contribution of MHA funding relative to all the other funding streams to increasing the affordable housing supply. In many cases, MHA funds are only a small portion of the capital used to build affordable housing. Consider Altaire at Jackson Park, a 207-unit apartment building located at 14343 15th Ave NE. **Exhibit 60** presents the breakdown of the project's costs. In 2022, Seattle awarded Altaire at Jackson Park a total city contribution of \$30,250,000. The city contribution includes \$11.2 million of MHA funding, \$15.3 million of PET funding, and \$3.8 million of other Seattle Office of Housing funding. The Washington State Housing Finance Commission estimated the full development cost of Altaire at Jackson Park to be \$98.6 million, thus the Seattle Office of Housing funding comprises approximately 31% of the estimated full development cost. The \$11.2 million of MHA funding comprises 11% of project costs.

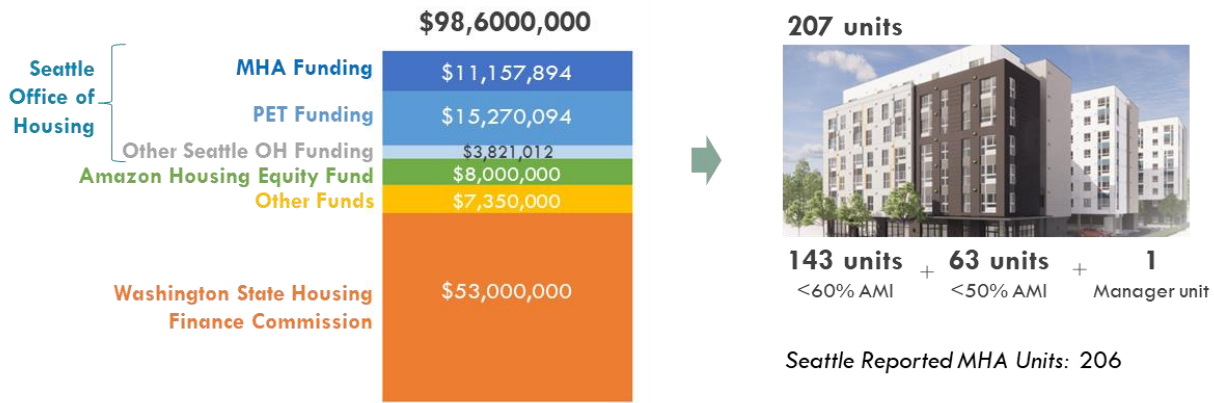
Similarly to **Exhibit 59**, Seattle Office of Housing Annual Reports on MHA summarize the total number of units in affordable housing projects supported with MHA payment funding. The inclusion of all units may be due to administrative data constraints since not all MHA-supported projects have verified full development costs, thus preventing the Office of Housing from estimating the proportion of the development costs supported by MHA funds. For Altaire at Jackson Park, MHA funds account for 11% of the full development cost, representing proportionally 23 units (11% of the 207 units). An alternative calculation divides the MHA funding amount by the

housing for those experiencing homelessness. See the Seattle Office of Housing [2023 Annual Housing Investments Report](#) for an overview of programs.

³⁹ This assumption is mentioned in the ordinances for the MHA-R (CB 118736) and MHA-C (CB 118498) framework passed by City Council. It is described in greater detail in the Summary of MHA Production Modeling report (City of Seattle, 2016). The model assumes that MHA payment funding would be contributed to 4% Low Income Tax Credit projects with no additional public subsidy such that it could support one new affordable housing unit per \$80,000 of contribution.

per unit costs. In the case of Altaire at Jackson Park, the Daily Journal of Commerce estimates per unit costs to be \$476,329, yielding 23 units.

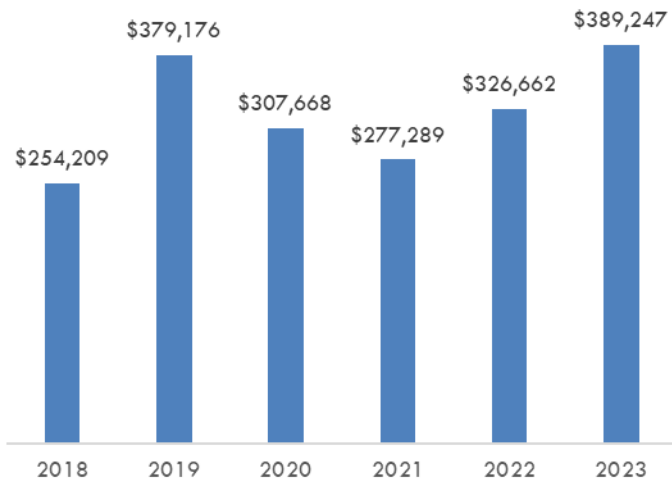
EXHIBIT 60. ALTAIRE AT JACKSON PARK PROJECT EXAMPLE



Sources: Seattle Office of Housing, total cost figures reported by Daily Journal of Commerce, 2023; The Registry, 2024.

To estimate the proportion of new permanently affordable rental units supported by MHA funding, we estimated a per-unit cost for affordable housing for each year in which the Seattle of Housing awarded MHA funding. Per-unit cost estimates were derived from affordable housing development costs reported by the Washington State Housing Finance Commission, summarized in **Exhibit 61**.⁴⁰

EXHIBIT 61. AVERAGE PER-UNIT RENTAL AFFORDABLE HOUSING DEVELOPMENT COSTS IN SEATTLE, 2018 – 2023



Note: YO\$ = Year of dollars; figures are not adjusted to a standard year.

Sources: Washington State Housing Finance Commission, 2024; BERK, 2024.

⁴⁰ The Washington State Housing Finance Commission submits an annual affordable housing cost data report to the Washington State Legislature which includes the final costs for projects financed through the Low-Income Housing Tax Credit (LIHTC) program or the Housing Trust Fund.

Affordable owner unit cost estimates are higher, estimated at \$489,443 per unit based on costs reported by Habitat for Humanity Seattle-King & Kittitas Counties. Of the five affordable ownership housing projects, three were with Habitat for Humanity which published project per-unit costs. We estimated the cost of the two other projects to be the average of the costs reported by Habitat for Humanity.

Exhibit 62 presents the results of BERK’s analysis to estimate the proportion of new affordable housing units that were supported by MHA funding. To derive this summary, BERK divided the total MHA funding award by the average per unit construction cost during the year of the award and calculated the total across all projects in each funding year. Seattle awarded \$248.26 million in MHA funding to 37 rental projects with a combined 4,597 rental units and \$10.9 million to 5 ownership projects that include 105 units of permanently affordable ownership units. We estimate that MHA funding is proportionally equivalent to 16% of the rental units, roughly 724 units, and 22%, of the ownership units, roughly 23 units in total. The exact number of these units that would have been built without the MHA funding is unknown but given the availability of the other funding sources and policy priority for permanently affordable housing, it is likely that many would have been built.

EXHIBIT 62. PERMITTED UNITS IN BUILDINGS SUPPORTED WITH MHA FUNDS BY FUNDING SOURCE AND YEAR OF AWARD, 2017-2023

	2017	2018	2019	2020	2021	2022	2023	Total	Percent of Total
Rental Units									
Proportion of Units Attributable to MHA Funds	29	47	110	153	278	168	21	806	18%
Proportion of Units Attributable to Other City Fund:	91	116	80	21	227	130	61	726	16%
Proportion of Units Attributable to Non-city Funds	256	475	825	475	543	340	150	3,065	67%
Total Affordable Units In MHA Supported Projects	377	638	1,015	650	1,048	637	232	4,597	
Ownership Units									
Proportion of Units Attributable to MHA Funds	-	-	-	3	7	4	9	23	22%
Proportion of Units Attributable to Non-city Funds	-	-	-	10	29	26	17	82	78%
Total Affordable Units in MHA Supported Projects	-	-	-	13	36	30	26	105	
Estimated Units Attributable to MHA Funding	29	47	110	156	285	172	30	829	18%
Total Affordable Units in MHA Supported Projects	377	638	1,015	663	1,084	667	258	4,702	

	2017	2018	2019	2020	2021	2022	2023	Total	Percent of Total
Rental Units									
Estimated Units Attributable to MHA Funds	22	36	118	159	205	161	24	724	16%
Estimated Units Attributable to Other City Funds	69	87	86	22	167	125	69	625	14%
Estimated Units Attributable to Non-city Funds	286	515	811	469	676	351	139	3,247	71%
Total Affordable Units In MHA Supported Projects	377	638	1,015	650	1,048	637	232	4,597	
Ownership Units									
Estimated Units Attributable to MHA Funds	-	-	-	3	7	4	9	23	22%
Estimated Units Attributable to Non-city Funds	-	-	-	10	29	26	17	82	78%
Total Affordable Units in MHA Supported Projects	-	-	-	13	36	30	26	105	
Estimated Units Attributable to MHA Funding	22	36	118	162	212	166	32	747	16%
Total Affordable Units in MHA Supported Projects	377	638	1,015	663	1,084	667	258	4,702	

Sources: City of Seattle, 2024; BERK, 2024.

Estimated Impact of MHA on Income-restricted Units Production

Exhibit 63 summarizes the combined permanently affordable housing attributable to MHA. Using the proportional unit equivalent approach, we estimate that MHA has supported 1,233 permanently affordable housing units in Seattle. This is a positive addition to the housing options in Seattle. While Seattle has made significant progress towards its 2025 10-year goal of 6,000 permanently affordable units, outside of the impacts of the associated upzones, MHA’s contribution to this progress is somewhat modest at 20%. Additionally, the rate of permanently affordable unit production is likely to decline in years to come due to a slowdown in overall housing production compared to the rate of production during the first few years of MHA implementation. This will likely result in fewer performance units and less payment revenues.

About 33% of estimated affordable units directly attributable to MHA are from performance projects, despite the fact that only 5% of all projects selected the performance option. A primary reason for this outcome is the fact that nearly all the performance projects were in mid-rise projects that have relatively high unit counts compared to the much more numerous low-rise projects. Additionally, units supported with MHA payments are more likely to support deeper levels of affordability, such as 30% AMI or below.

EXHIBIT 63. ESTIMATED IMPACT OF MHA ON AFFORDABLE UNIT PRODUCTION BY YEAR OF PERMIT OR AWARD

	2017	2018	2019	2020	2021	2022	2023	Total
Performance Units								
Rental	-	4	13	24	72	138	153	404
Ownership	-	-	-	-	-	-	-	-
Units Supported with MHA Funding								
Rental Units Attributable to MHA	29	47	110	153	278	168	21	806
Ownership Units Attributable to MHA	-	-	-	3	7	4	9	23
Total	29	51	123	180	357	310	183	1,233
<hr/>								
Additional Units in MHA-funded Rental Projects	348	591	905	497	770	469	211	3,791
Additional Units in MHA-funded Ownership Projects	-	-	-	10	29	26	17	82

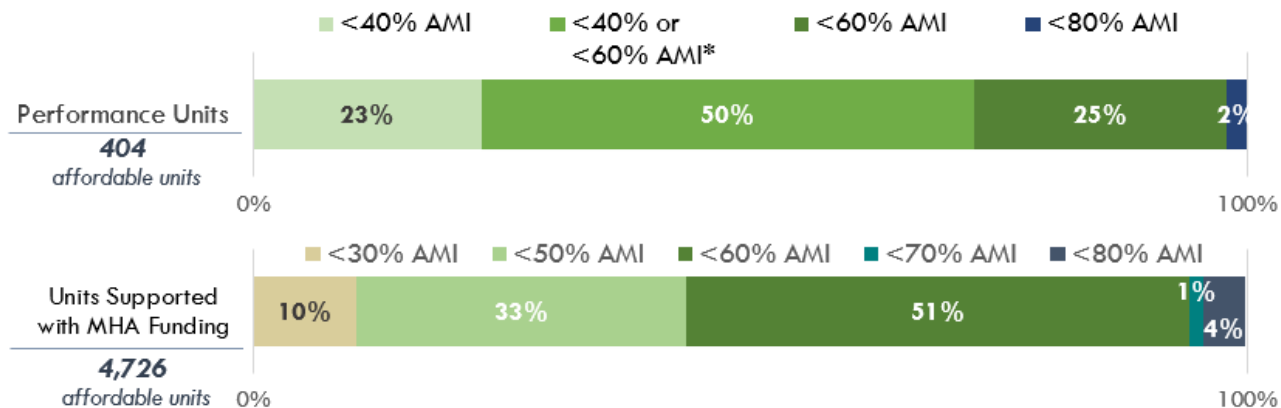
Sources: City of Seattle, 2024; BERK, 2024.

Types of Income-restricted Units

MHA includes objectives related to equity and addressing the most underserved housing needs in Seattle. When MHA was enacted, Seattle stated that the permanently affordable housing created through MHA would primarily serve vulnerable populations, including racial and ethnic minorities, immigrants, people with disability, and seniors (City of Seattle, 2017). To evaluate the degree to which MHA is achieving this objective, we first consider the affordability levels generated through the program.

Exhibit 64 presents the proportion of affordable units created with support of MHA by affordability level. Nearly all performance units serve households with incomes at or below 40% or 60% of AMI. Both income levels are underserved by market-rate housing. The funds collected through MHA fees enable the City of Seattle to fund housing at deeper affordability levels (households earning <30% AMI) than what has been realized through MHA performance units. About 10% of these units serve these households. The majority of units funded with MHA payments serve households at or below 50% or 60% AMI. Additionally, development supported with MHA funding has generated more permanently affordable ownership housing (105 units, compared to eight units through performance). These units are typically available to households with incomes 80% AMI or below.

EXHIBIT 64. AFFORDABILITY LEVEL OF PERFORMANCE UNITS AND UNITS SUPPORTED IN PART BY MHA FUNDING, 2017 – 2023



Note: Figures include pipeline units that have been permitted or received funding but have not yet been built. Due to data constraints, bin ranges overlap.

*Data does not distinguish the number of units affordable to <40% AMI and <60% AMI

Sources: City of Seattle, 2024; BERK, 2024.

Geographic Distribution of Units

Mitigating the Impact of Development

An intended outcome of the MHA program is to increase affordable housing options across Seattle. MHA was designed to achieve permanently affordable housing in the neighborhoods experiencing development as a strategy to mitigate the impacts of development on the need for affordable housing. For example, a new market rate residential tower generates demand for new local serving businesses such as coffee shops, markets, and other services in the immediate area. This in turn creates a demand for additional lower-wage workers to staff these new businesses. These workers typically cannot afford market rents, and therefore need affordable housing. The MHA program is designed to spur the development of new permanently affordable housing either within market-rate development through performance units, or in the vicinity by using MHA-generated funding to support the development of affordable housing in the same area. **Exhibit 65** summarizes the market rate housing development in zones where MHA applies, and permanently affordable housing created through MHA by area of Seattle between 2017 and 2023. The areas are grouped according to their place type designation, which also influences the type of development most likely to be built in the area.⁴¹





- Urban Centers.** Most of the new market-rate housing built between 2017 and 2023 is in urban centers (11,849 units, 54% of all market-rate units). For every 100 units of new market-rate housing in urban centers, MHA has generated three permanently affordable units. Each urban center except South Lake Union has gained some permanently affordable housing, though the areas that have had the most market-rate development have not gained the most permanently affordable housing. Downtown has had the most residential development (4,797 units), but only 80 permanently affordable units (two per 100 market-rate units). Northgate and First Hill/Capitol Hill have had the greatest ratios between permanently affordable housing and market rate housing at 12 and 14 units per 100 market-rate units, respectively.

⁴¹ For permits that do not fall within an urban center or urban village, BERK assigned it to the closest center or village within 1/2 mile. If a permit is more than 1/2 mile from a center or village, BERK assigned it to one of the [Neighborhood Map Atlas Districts](#), which are grouped as “Outside of Urban Centers and Villages.”

- HUB Urban Villages.** About 15% of new market-rate housing units have been built in the HUB Urban Villages, 3,211 units. MHA has supported the addition of 266 permanently affordable housing unit across the six HUB Urban Village neighborhoods. Mt Baker has gained the greatest number of permanently affordable housing at 115 units, while Bitter Lake Village has received none. Ballard has had the greatest market rate development (1,082 units), but MHA has generated a relatively low number of permanently affordable units in Ballard (26 units, or two per 100 market-rate units). At the other end of the range, Lake City has had modest market-rate growth, but a higher ratio of MHA-generated permanently affordable units (54 units, or roughly 19 per 100 market rate units).
- Residential Urban Village.** Residential Urban Village gained 6,615 new market-rate housing units between 2017 and 2023, with an additional 497 MHA-generated permanently affordable units. The overall ratio of new market-rate housing to permanently affordable housing is eight, the same as for the HUB Urban Villages and greater than both Urban Centers (three per 100 market-rate units) and Neighborhood (four per 100 market-rate units) zoning designations. Like the other zoning designations, there is a wide range in the ratio of market-rate housing to MHA-generated permanently affordable housing. Four Urban Villages have no MHA-generated permanently affordable housing despite gaining new market-rate housing ranging from 65 units (Roosevelt) to 381 units (Upper Queen Ann). Rainier Beach has gained more MHA-generated affordable housing (82 units) than the number of market-rate units (29 units).
- Outside of Urban Centers and Villages.** Outside of urban centers and villages there is limited capacity for multifamily housing development. Typically, it is along narrow arterial corridors. Given lower development capacity, these areas had the smallest gain in new market-rate housing at 353 units and the smallest number of MHA-generated permanently affordable housing at 14 units. Only Queen Anne and Delridge gained new MHA-generated permanently affordable housing at all. Queen Anne has 11 new permanently affordable units, a ratio of six per 100 market-rate units. Delridge has three new permanently affordable units for a ratio of 57 per 100 market-rate units.

With only five years of development results, it is early to assess whether MHA has achieved its goal of generating permanently affordable housing in areas impacted by new market-rate development. Building concepts can take multiple years for completion, especially for higher density, more complex projects in the urban core. In addition, Seattle's investments in permanently affordable housing using MHA-generated funds have been contingent on the development proposals the City receives from developers. It is possible that the City is not receiving development proposals for areas highly impacted by new market-rate development. This assessment of early outcomes suggests that there is a mismatch in the areas impacted by market-rate development and the addition of MHA-generated permanently affordable housing. Some of this mismatch could be explained by the short observation period. However, the combination of developer preference for complying with MHA through paying fees-in-lieu and a lack of development proposals in higher-impacted areas makes it unlikely that it will significantly rebalance under the current program design.

EXHIBIT 65. MARKET-RATE AND AFFORDABLE HOUSING PRODUCTION BY AREA, 2017 – 2023

	Area	Market Rate Units	MHA Affordable Units			MHA Affordable Units Per 100 Market Rate Units
			Performance Units	MHA-Funded	Total	
Urban Centers 374 <i>MHA Affordable Units</i> 3  <i>Per 100 Market Rate Units</i>	University District	2,680	17	0	17	1
	Downtown	4,797	5	75	80	2
	First Hill/Capitol Hill	866	29	89	118	14
	Uptown	1,582	52	0	52	3
	South Lake Union	1,056	0	0	0	0
	Northgate	868	0	107	107	12
	Total	11,849	103	271	374	3
HUB Urban Village 266 <i>MHA Affordable Units</i> 8  <i>Per 100 Market Rate Units</i>	Ballard	1,082	14	12	26	2
	West Seattle Junction	375	5	0	5	1
	Fremont	627	5	61	66	11
	Mt Baker	809	53	62	115	14
	Bitter Lake Village	34	0	0	0	0
	Lake City	284	11	43	54	19
	Total	3,211	88	178	266	8
Residential Urban Village 497 <i>MHA Affordable Units</i> 8  <i>Per 100 Market Rate Units</i>	Eastlake	427	7	0	7	2
	Roosevelt	65	0	0	0	0
	Admiral	70	0	0	0	0
	Crown Hill	551	12	4	16	3
	Madison-Miller	119	5	21	26	22
	Wallingford	764	21	25	46	6
	Westwood-Highland Park	110	0	0	0	0
	Columbia City	370	8	12	20	5
	Aurora-Licton Springs	194	4	0	4	2
	Upper Queen Anne	381	0	0	0	0
	Morgan Junction	151	1	0	1	1
	23rd & Union-Jackson	1,418	91	68	159	11
	North Beacon Hill	236	7	18	25	10
	Greenwood-Phinney Ridg	908	27	4	31	3
	Othello	615	9	13	22	4
	Rainier Beach	29	1	81	82	282
South Park	88	0	26	26	30	
Green Lake	119	9	24	33	28	
Total	6,615	202	295	497	8	
Outside of Urban Centers and Villages 14 <i>MHA Affordable Units</i> 4  <i>Per 100 Market Rate Units</i>	Greater Duwamish	39	0	0	0	0
	Magnolia	65	0	0	0	0
	Northeast	7	0	0	0	0
	Queen Anne	178	11	0	11	6
	Delridge	5	0	3	3	57
	West Seattle	17	0	0	0	0
	Interbay	17	0	0	0	0
	Rainier Valley	4	0	0	0	0
	Northwest	17	0	0	0	0
	North Central	4	0	0	0	0
Total	353	11	3	14	4	
Total	22,028	404	747	1,151	5	

Note: "MHA-Funded" units are adjusted to account for proportion of total project funding provided by MHA.

Sources: City of Seattle, 2024; BERK, 2024.

Access to Opportunity

The previous section considers the alignment of market-rate development to MHA-generated permanently affordable housing. This section considers the geographic outcomes of MHA generally, to assess the degree to which MHA-generated housing is developing permanently affordable housing in areas that offer amenities and locational benefits associated with opportunity.

In 2016, Seattle produced a [Growth and Equity Atlas](#) to help evaluate alternative growth strategies considered for their 2016 Comprehensive Plan. One goal of this work was to determine whether the growth strategy would increase access to opportunity for marginalized populations. To support this analysis, the City produced an Access to Opportunity Index that combines data about school performance as well as proximity to resources that people need to succeed and thrive like jobs, higher education, transit, libraries, parks, community centers, fresh produce, and health care. These data layers combine to form an index that scores areas of the city based on their relative access to opportunity.

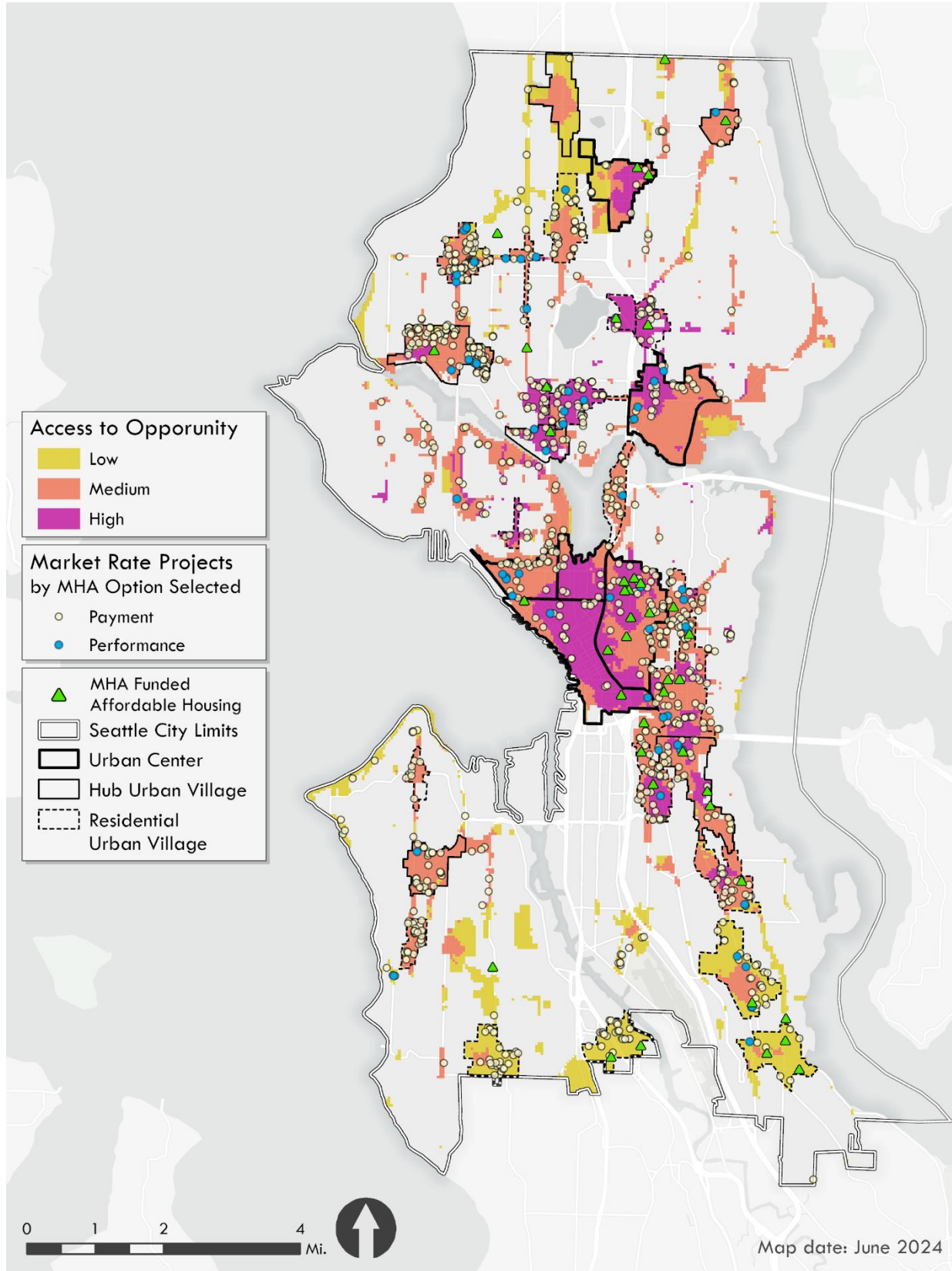
To assess the impacts of MHA on access to opportunity, we used the Access to Opportunity Index to classify all areas within Seattle's residential (excluding Neighborhood Residential), mixed-use, and commercial zones into simplified Access to Opportunity levels: Low, Medium, and High. **Exhibit 66** presents a map of these simplified Access to Opportunity levels along with the point location of all issued permits for residential, commercial, and mixed-use projects that have been subject to MHA requirements. The symbol color corresponds to the option selected: performance or payment in-lieu. It also includes the location of affordable housing projects that were funded in part by MHA in-lieu payments collected by the City.

Exhibit 67 summarizes the same data in two ways. The first section compares the percentage of all market rate units, and all permanently affordable housing produced through MHA. The second section compares MHA performance units to affordable units funded with MHA payments.

The distribution of new housing across the High, Medium, and Low Access to Opportunity Areas is similar between market-rate and MHA-generated housing. Market-rate housing is slightly more represented in High Opportunity Areas (53%) compared to affordable housing produced through MHA (45%).

The comparison of performance units to affordable housing funded with MHA payments is presented in unit counts rather than proportions. The data demonstrate that the majority of MHA performance units are in Medium Opportunity Areas (276 units, or 68% of all performance units), while the majority of affordable units funded with MHA payments are in High Opportunity Areas. It is worth noting that MHA does not appear to be significantly generating permanently affordable housing in Low Opportunity Areas, though there are 53 MHA-funded units in areas categorized as Low Opportunity Areas such as Bitter Lake, South Park, Delridge, and Rainier Beach.

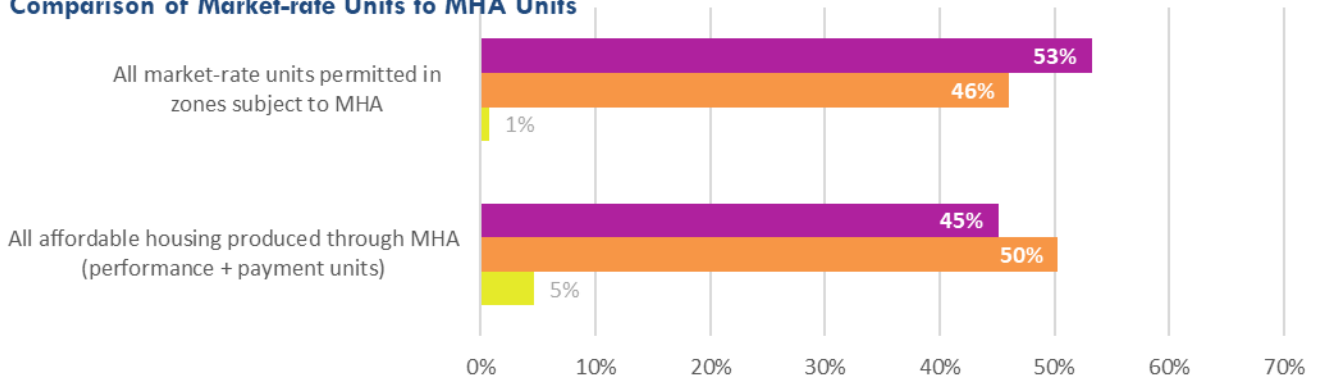
EXHIBIT 66. HOUSING PRODUCTION SINCE ADOPTION OF MHA AND ACCESS TO OPPORTUNITY LEVELS



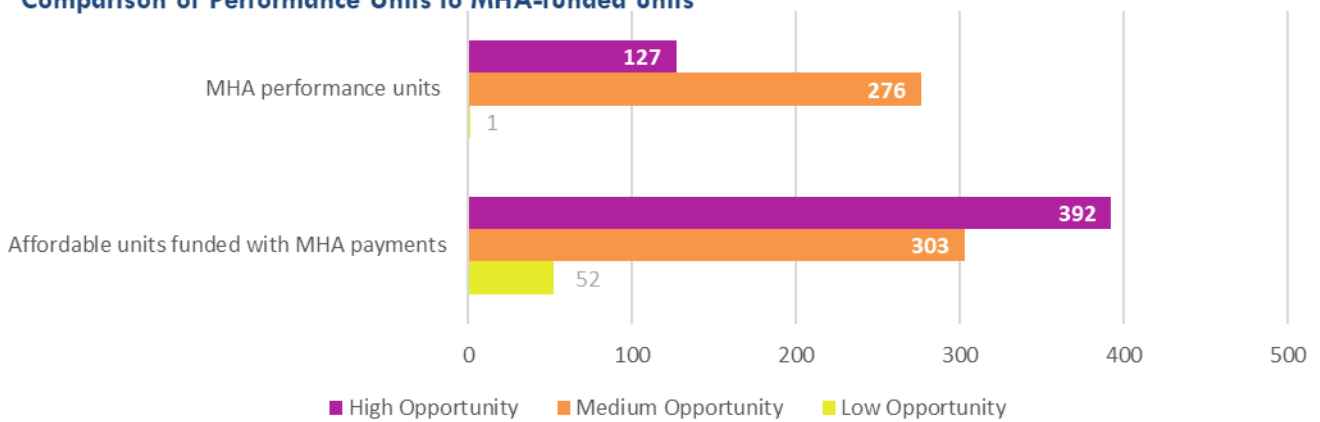
Sources: City of Seattle, 2024; BERK, 2024.

EXHIBIT 67. SHARE OF PERMITTED HOUSING UNITS BY ACCESS TO OPPORTUNITY LEVEL

Comparison of Market-rate Units to MHA Units



Comparison of Performance Units to MHA-funded units



Sources: City of Seattle, 2024; BERK, 2024.

One common argument in favor of encouraging developers to choose performance over payment in lieu is that performance units would more likely be in High Opportunity areas (due to the high demand for new housing production in those areas) than affordable housing projects that receive MHA payment funds. This concern is based on the assumption that land values are typically cheaper in Low Opportunity Areas, and affordable housing projects would therefore more likely be located there for cost efficiency. However, to date, the permit data suggests that affordable units funded with MHA payments are just as likely to be located in High Opportunity Areas (52%) when compared to all market rate units (53%), and more likely to be in a High Opportunity Areas than performance units (31%).

Section 6. Summary of Policy Tradeoffs

This section addresses four evaluation questions that focus on policy tradeoffs inherent to MHA and all mandatory IZ programs. They are organized into two sub-sections. The first includes questions about the relative benefits and drawbacks of the MHA compliance options: performance and payment in-lieu. The second pulls back to summarize the bigger picture costs and benefits of MHA as a whole.

Encouraging Performance or Payment

Evaluation Question 14

What are the pros and cons associated with on-site performance vs. payment in-lieu?

Seattle policy priorities include increasing housing options and opportunity for low-income households across Seattle. Seattle has many strategies in place, including prioritizing investments in neighborhoods that have proportionally more low-income households and improving access or preventing exclusion of low-income households in neighborhoods with proportionally higher income households.

The MHA compliance options each serve both these objectives. Compliance through payment increases the resources with which Seattle can invest in affordable housing across the city consistent with their policy priorities. Compliance through performance can generate several benefits aligned to Seattle's policy goals. Firstly, the performance option creates housing opportunities that can prevent displacement and support inclusion by generating permanently affordable housing in high-demand areas. Second, housing in economically integrated communities can create other benefits for low-income households. There is more than 50 years of research on the benefits and challenges associated with socioeconomic integration at the building and neighborhood level.⁴² Research has found significant benefits for very low-income adults moving to areas with proportionally higher income households including benefits to health and well-being. Well-being benefits include feeling safer, experiencing fewer instances of violent crime, higher-quality living conditions, and higher assessment of life satisfaction. However, the evidence is mixed on the impacts on earnings or employment rates of very low-income adults or older youth. Recent research led by economist Raj Chetty have demonstrated durable benefits for children of low-income households moving to lower-poverty neighborhoods (Chetty, Hendren, & Katz, 2015). The research suggests that some benefits to low-income residents in higher income neighborhoods can be achieved without integration within the same building. That is, economically diverse neighborhoods can achieve similar outcomes.

Exhibit 68 summarizes the policy trade-offs associated with encouraging either the performance option or payment in-lieu. The city has some options available to mitigate many of the implementation challenges associated with each option. These options are discussed in the remainder of this section.

⁴² Much of the research on socioeconomic integration focuses on households that are eligible for federal housing assistance, which may not be representative of households who could benefit from permanently affordable housing generated by MHA. Federal income eligibility standards often focus on very low-income households with incomes at or below 40% of the area median income. MHA affordability levels for housing produced through MHA are set at less than 60% of AMI for rental housing and less than 80% AMI for ownership housing.

EXHIBIT 68. TRADE-OFFS ASSOCIATED WITH ON-SITE PERFORMANCE AND PAYMENT IN-LIEU OPTIONS FOR MHA COMPLIANCE

Option	Intended Outcomes of Policy	Implementation Challenges
Performance	<ul style="list-style-type: none"> ▪ New affordable units are available concurrently with new market rate development. ▪ New affordable units are available in the area impacted by development. ▪ Affordable units include access to amenities in high-demand (and high opportunity) areas of Seattle. ▪ Residents of affordable units have opportunity to form relationships with higher-income residents. These connections can lead to social and professional opportunities. 	<ul style="list-style-type: none"> ▪ Market-rate developers typically optimize projects for profitability and may not choose to provide the unit sizes or configurations that match the housing needs of low-income households. ▪ Compliance with MHA requirements, such as vetted marketing plans, screening residents for income qualification, and annual income review and reporting, adds to the cost of building operations. ▪ Property management services have specialized skills in low-income housing or market rate housing. Few have skills for serving across the market spectrum. ▪ Changes in household income distribution (AMI calculations) and market rents make it difficult to predict the costs of maintaining the permanently affordable units. ▪ Cumulative impact of above challenges has potential to discourage development and reduce housing production overall. ▪ Study findings confirm these challenges. Under market conditions in 2024, performance typically provides a lower rate of return to developers when compared to the payment option.
Payment In-Lieu	<ul style="list-style-type: none"> ▪ Provides the City with funding to support more deeply affordable housing with services that could not be provided in a typical market-rate building. ▪ Provides flexibility to developers for compliance with MHA, increasing project feasibility when compared to a program that requires performance only. As a result, providing a payment in-lieu option has potential to promote more housing production overall compared to a program that only allows for performance. 	<ul style="list-style-type: none"> ▪ With housing market conditions changing over time, it is challenging to maintain a payment in-lieu fee level that does not negatively impact project feasibility and reduces overall housing production. ▪ Development relies on proposals from affordable housing developers, who may not be able to acquire or afford land in high demand and High-Opportunity Areas. This has potential to result in the concentration of affordable housing in areas of the city not in demand by market-rate development or lower-opportunity areas of the city. <ul style="list-style-type: none"> ○ However, this study finds that projects supported with MHA funds are more likely to be in High Opportunity Areas than performance projects.

Source: BERK, 2024.

Evaluation Question 15

What could the City do, should it be inclined, to incentivize more on-site performance?

As discussed in the Policy Considerations, if the City has a priority to minimize any negative impacts of MHA on market housing production, the findings of this evaluation support maintaining as much flexibility as possible with

regards to the compliance options available to developers. There are significant financial and operational reasons why most developers select the payment option. While rising MHA fee levels could make performance a relatively more attractive option, this would likely reduce housing production overall. Therefore, the city could consider other ways to encourage on-site performance, such as:

- Allow developers to count MHA performance units towards MFTE affordable unit requirements.
- Reduce the marketing, management, and or reporting burdens of maintaining performance units.
- Incentivize performance through density bonuses or other incentives.

Weighing the Overall Costs and Benefits of MHA

Two evaluation questions (16 and 17) focus on comparing the costs and benefits of the MHA program as a whole. Here we briefly summarize evidence of these costs and benefits identified in this evaluation. We also discuss policy options that have the potential to mitigate costs and increase benefits.

Evaluation Question 16

How should the City weigh costs and the potential future costs against potential benefits?

Evaluation Question 17

How might the City weigh the broader program benefits (revenue for affordable housing generated) vs. the potential costs?

Summary of Program Benefits

There are inherent tradeoffs to any inclusionary zoning program like MHA. The designers of MHA included components to try and increase the potential benefits while mitigating potential drawbacks. **Exhibit 69** summarizes the intended benefits along with evaluation findings related to those benefits.

EXHIBIT 69. SUMMARY OF INTENDED MHA BENEFITS AND RELATED EVALUATION FINDINGS

Intended Program Benefits	Evaluation Findings
Increase the supply of housing overall by balancing the cost of new MHA requirements with increased zoned capacity for new development.	On average, the number of new multifamily units permitted per year in Seattle did not increase following the adoption of MHA, compared to the peak years of 2015-2019. In fact, the number of multifamily units decreased. See additional discussion of program costs in Exhibit 70 .
Generate 6,000 new affordable units over 10 years through a combination of performance and payment revenue to support new construction.	If all affordable units in buildings that receive MHA funding are counted, the program has supported 4,702 units in total and is on pace to achieve its goal. However, after accounting for the proportional contribution of MHA funding to affordable housing projects, this study estimates that the program has resulted in 1,233 permitted affordable housing units as of the end of 2023. This is significantly slower than the pace needed to produce 6,000 new affordable units in ten years. See Exhibit 63 .
Distribute new affordable housing in neighborhoods throughout the city, including those seeing significant market rate housing development.	Early findings indicate that new affordable housing is less represented in many areas with higher market rate housing development. Areas with higher density zoning have received the greatest number of market rate units, though more modest rates of new affordable housing. However, longer development timelines of larger buildings make this finding preliminary. See Exhibit 66 .
Advance racial and social equity by providing new housing for vulnerable populations, including racial and ethnic minorities, immigrants, people with disabilities, and seniors.	Complete data about the residents of new affordable housing created through MHA is not available. However, available data shows that most of the housing is accessible only to households with incomes of 60% AMI or less. The data also shows that almost half (45%) of this new affordable housing is in High Opportunity Areas, according to Seattle's Opportunity Index. Only 5% is located in Low Opportunity Areas. See Exhibit 66 .
Achieve a mix of new affordable housing through MHA's performance and payment options.	Nearly all developers (95%) selected the payment option to comply with MHA requirements. This evaluation identified significant barriers to increasing the rate of developers selecting the performance option. See Exhibit 54 .

Sources: OPCD, 2018; BERK, 2024; Heartland, 2024.

Summary of Program Costs

The costs associated with MHA are real, but more difficult to measure. Most importantly, MHA has the potential to reduce market-rate housing production in Seattle by making it too costly or undesirable for developers to build housing in the city when compared to opportunities elsewhere. The housing affordability crisis in Seattle is fundamentally due to a shortage of available housing compared to demand. The system of housing production relies upon private developers to provide the bulk of new housing supply in the city. Any barrier to new housing development in Seattle can lead to higher market-rate housing costs. Moreover, if MHA requirements are set at a level that discourages new housing production, that results in a decrease in revenues from MHA payments and a decrease in affordable units from performance projects.

Exhibit 70 summarized evaluation findings related to several potential program costs.

EXHIBIT 70. SUMMARY OF POTENTIAL MHA COSTS AND RELATED EVALUATION FINDINGS

Potential Program Costs	Evaluation Findings
<p>MHA contributes to a reduction in market rate housing development by making it too costly or undesirable for developers to build housing in the city when compared to opportunities elsewhere. This could lead to an increase in market housing costs due to housing supply falling further behind demand.</p>	<ul style="list-style-type: none"> ▪ On average, annual multifamily housing production has decreased following the adoption of MHA. However, many factors outside of the City’s control contributed to this decline, and this same decline is observed in many peer communities as well as the remainder King County. Seattle also outperformed nearly all peer jurisdictions in terms of multifamily units permitted per 100,000 residents during this period. ▪ This study finds that the internal rate of return for real estate developments declined significantly between 2019 (following adoption of MHA) and 2024 for all housing types evaluated and in all MHA fee areas, thus reducing project feasibility. The declines in project feasibility are due to several different factors, and MHA requirements play a relatively small but important role.
<p>Loss of City revenue due to reduced development activity and/or reduced improvement value from new development:</p> <ul style="list-style-type: none"> ▪ MHA payment revenue ▪ Real Estate Excise Tax (REET) ▪ Property tax ▪ Sales tax on construction ▪ B&O tax on construction related businesses 	<ul style="list-style-type: none"> ▪ It is impossible to estimate how much MHA contributes to any decrease in development activity in Seattle compared to other bigger factors such as constructions costs, interest rates, and housing demand. However, at the margins, MHA likely had some impact on some projects moving forward. As a result, we can assume there is some impact to potential MHA, REET, and property tax revenue when compared to a hypothetical world with reduced or eliminated MHA requirements.
<p>MHA program administration costs consume resources that could otherwise be used to support new affordable housing production.</p>	<ul style="list-style-type: none"> ▪ According to OH, approximately 5% of total MHA payments revenues are allocated for program administrative costs (City of Seattle, 2024). ▪ Through the end of 2023, MHA generated over \$304 million in payments and awarded \$252 million for affordable housing production. This leaves \$52 million (~17%) of revenue not yet awarded. Presumably some of these funds could be awarded to projects in 2024 (City of Seattle, 2024). ▪ This evaluation does not include a full accounting of MHA administrative costs, including any costs that may not be covered by the 5% of MHA payments. According to interviews with OH staff, the costs are “not insignificant.” Additionally, due to the nature and implementation of MHA, staff within several departments are involved in different aspects of program administration. These include, at minimum, OH, OPCD, and SCDI. So, there are likely additional program costs outside of OH that are not covered by MHA payment revenues.

Sources: BERK, 2024; Heartland, 2024.

References

- Bento et al., A. (2009). Housing Market Effects of Inclusionary Zoning. *Cityscape*.
- Chetty, R., Hendren, N., & Katz, L. F. (2015). *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*. Harvard University and NBER.
- City of Seattle. (2016). *Mandatory Housing Affordability (MHA) Affordable Housing Production Model Summary*.
- City of Seattle. (2017). *Citywide Implementation of Mandatory Housing Affordability (MHA) Final Environmental Impact Statement*.
- City of Seattle. (2024). *2023 Mandatory Housing Affordability and Incentive Zoning Annual Report*. Office of Housing, Seattle. Retrieved from https://www.seattle.gov/documents/Departments/Housing/Reports/MHARports/2023_OH_MHA-IZAnnualReport.pdf
- David Paul Rosen & Associates (DRA). (2014, October 10). *City of Seattle*. Retrieved from Seattle Affordable Housing Incentive Program Economic Analysis: https://clerk.seattle.gov/~public/meetingrecords/2014/plus20141014_1d.pdf
- ECOnorthwest. (2024). *Updating Seattle's Neighborhood Residential Zones: Middle Housing Feasibility Analysis DRAFT*. Seattle: City of Seattle Office of Planning & Community Development.
- Ennis, J. L. (2013). Making Room: Why Inclusionary Zoning is Permissible under Washington's Tax Preemption Statute and Takings Framework. *Washington Legislative Review*, 591.
- Federal Highway Administration. (2017). *Fact Sheets: Land Value Taxes*. Center for Innovative Finance Support. Retrieved from https://www.fhwa.dot.gov/ipd/fact_sheets/value_cap_land_value_taxes.aspx
- Grounded Solutions Network. (2020). *Inclusionary Housing Map & Program Database*. Retrieved from Inclusionary Housing: <https://inclusionaryhousing.org/MAP/>
- Hamilton, E. (2021). Inclusionary Zoning and Housing Market Outcomes. *Cityscape: A Journal of Policy Development and Research*.
- Hullseman, P., Rovang, A., Bales, D., & Nguyen, H. T. (2019). *Land Value Tax Analysis: Simulating the Tax in Multnomah County*. Northwest Economic Research Center. Retrieved from https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1036&context=nerc_pub
- Inc., Community Attributes. (2016, November 29). *City of Seattle*. Retrieved from Technical Memorandum - Re: Economic Analysis of MHA: https://www.seattle.gov/documents/Departments/HALA/Policy/2016_1129%20CAI%20HALA%20Economic%20Analysis%20Summary%20Memorandum.pdf
- Inc., Community Attributes. (2023, July 21). Technical Memorandum - Re: 2022 Economic Analysis of MHA. Seattle, Washington.
- Krimmel, J., & Wang, B. (2023). Upzoning with Strings Attached: Evidence from Seattle's Affordable Housing Mandate. *Cityscape: A Journal of Policy Development and Research*, 257-278. Retrieved from <https://www.jstor.org/stable/48736629>
- Means, T., & Stringham, E. (2012). Unintended or Intended Consequences? The Effect of Below-market Housing Mandates on Housing Markets in California. *Journal of Public Finance and Public Choice*.
- Mukhija et al., V. (2016). Can Inclusionary Zoning Be an Effective and Efficient Housing Policy? Evidence from Los Angeles and Orange Counties. *The Journal of the Urban Affairs Association*.

- OPCD. (2018). *Mandatory Housing Affordability (MHA) Citywide Implementation: Director's Report and Recommendation*. City of Seattle. Retrieved from https://www.seattle.gov/Documents/Departments/HALA/Policy/Directors_Report_MHA_Citywide.pdf
- Ramakrishnan, K., Treskon, M., & Greene, S. (2019). Inclusionary Zoning - What Does the Research Tell Us about the Effectiveness of Local Action? *Urban Institute*.
- Ramakrishnan, K., Treskon, M., & Greene, S. (2019). Inclusionary Zoning - What Does the Research Tell Us about the Effectiveness of Local Action? *Urban Institute*.
- Robert Schalkenbach Foundation. (2023). *What happened when Pennsylvania taxed land?* Retrieved from <https://schalkenbach.org/wp-content/uploads/What-happened-when-PA-taxed-land.pdf>
- Schuetz et al., J. (2011). Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets in the United States. *Urban Studies Journal*.
- Wang, R., & Fu, X. (2022). Examining the Effects of Policy Design on Affordable Unit Production Under Inclusionary Zoning Policies. *Journal of the American Planning Association*.