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Oregon Transit and Housing Study

Housing Market Primer

December, 2020

Prepared for the Oregon Department of Transportation by HDR and ECONorthwest.

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1 About the Transit and Housing Study

Transportation and housing have large, interrelated impacts on Oregonians' quality of life. Not only do they comprise the two largest expenses for a typical household, but the policy choices that governments make about transportation and housing affect environmental and physical health outcomes, economic mobility, educational and cultural opportunities, the financial well-being of households, and more.[1]

A desire to better understand the benefits of aligning housing and transportation policies has grown across the state, prompted by declining housing affordability and concerns about transportation's contributions to climate change. Last year the Oregon State Legislature asked the Oregon Department of Transportation (ODOT) to study policies and actions that could improve households' quality of life through increasing housing opportunities with easy connections to transit. And recently the Oregon Transportation Commission (OTC) – the body responsible for setting statewide transportation policy – worked with ODOT to adopt a 2021-23 Strategic Action Plan (SAP) that includes climate equity and addressing climate change as key goals, along with improving access to active and public transportation and taking steps to address congestion.

While ODOT is first and foremost a transportation agency and housing is not directly a part of its mission or vision, it seeks a better understanding of transportation and housing connections and recognizes that better alignment of housing and transportation can help to achieve the goals in the SAP among others. With these goals in mind, ODOT is pursuing this Transit and Housing Study for the following reasons:

- ODOT recognizes the bidirectional relationship between transportation planning and land use decisions, and understands that a well-designed transportation system can bring economic value to a region by improving the connection between communities and their destinations, can enable vibrant neighborhoods where commercial and social activities take place, and can reduce the need for major transportation investments in the future.
- ODOT and its partners also recognize the importance of ensuring transportation, transit, and housing plans work together, which is why partnerships and coordinated planning are important.
- ODOT helps fund transportation, transit, and coordinated land use and transportation plans; this study can inform those plans and funding allocation.
- ODOT's public transportation division and planners throughout the agency can work to help implement or promote results of this study.
- This work will help implement the Oregon Public Transportation Plan, which calls for integration of plans, supporting transit with housing, and other topics to be addressed in this study.

[1] Reconnecting America's Center for Transit-Oriented Development. 2007. Realizing the Potential: Expanding Housing Opportunities Near Transit. DC: U.S. Department of Transportation, Federal Transit Administration.

- ODOT understands that regional plans that neglect social and environmental impacts can negatively affect housing affordability, cause displacement, and increase greenhouse gas emissions via sprawl and long commutes.[2] This can also contribute to racial and economic segregation of neighborhoods.

As this Transit and Housing Study progresses, a glossary of key terms will accompany each white paper, beginning with this one. Throughout each document, an * denotes that a term is defined in the glossary, which is organized by topic area. The * is only provided on the first instance of the word.

This Transportation and Housing Study will provide a foundation and understanding of how housing and public transportation are linked and affect households' quality of life. At the conclusion of the study, the goal is to identify actionable strategies that local housing and planning departments, tribal governments, and transit providers can take, given the unique circumstances throughout Oregon.

2 Purpose of the Housing Primer

This *Housing Primer* is the first in a series of white papers that will help ODOT and its partners better understand the relationship among transportation, housing, and land use policies, and how these policies affect community well-being. This white paper provides a foundational description of:

- Housing markets, the players and their roles in the market, and the different components of housing markets that inform land use policy and implementation decisions.
- How housing markets fail and the public sector's role in the housing development process.
- How housing markets function at different geographic scales and in urban and rural areas.
- Fundamental concepts that real estate professionals consider when financing housing developments.

By providing a foundation for how housing markets function, how market failures* arise, the roles of different market players, the housing development process, and typical funding considerations, this white paper will help ODOT, local transportation agencies, local governments, tribal nations, and community partners evaluate investments and policies as they consider the connections among transportation, land use, and housing.

3 How Housing Markets Function and Fail

In the United States, the majority of housing is provided by the private market, and therefore responds to economic and market factors. These economic and market forces

[2] Chapple, Karen and Anastasia Loukaitou-Sideris. 2019. Transit-Oriented Displacement or Community Dividends?: Understanding the Effects of Smart Growth on Communities. MA: The MIT Press.

have resulted in the production of units that primarily benefit middle and upper income households. They have also consistently left lower-income communities and communities of color with fewer housing options, resulting in competition for a limited supply of affordable housing units. This section begins with a description of the economics of housing markets and how they function to meet market demand, and then discusses how housing markets fail and why this failure is experienced most by households within marginalized communities, particularly low-income households. Addressing market failures and the needs of these households requires public sector interventions, which are covered in Section 3.3.

In this white paper, the term 'preference' is used in the economic sense – how individuals rank and value different options among available choices – and is not used to connote desire for housing types.

Similarly, the term 'willingness to pay' is used economically to connote the monetary value placed on housing. Colloquially, 'willingness' refers to a simple choice and implies an ability to pay, but in economics ability to pay is separate and is informed by a household budget.

Housing markets are subject to the laws of supply and demand, though they are greatly influenced by government interventions. Price is a reflection of buyers' and sellers' willingness to pay and the amount of housing that is demanded and supplied at a given time.

The market tends to deliver the types of housing products that developers believe they can profit from building, based on buyer preferences. However, housing preferences are not uniform. Many factors can explain variations in housing prices, including—type, size, design, and amenities across locations. Household preferences* for these factors are reflected in the prices for housing products, which are an expression of households' willingness to pay.* Prices are influenced by the number of buyers in a market (demand) and the amount and type of housing available for purchase (supply). Therefore, rising housing prices can indicate that the demand for housing is greater than the supply of housing. Although the supply of housing is difficult to change over the short term (for numerous reasons discussed in Section 3.2), builders/developers will produce more housing units if they expect to meet their financial return requirements.

3.1 Demand

At its most basic level, the demand for housing reflects the number of households with preferences for a given housing type (e.g. detached single-family, apartment, etc.), a given location, and a given price. Preferences for housing type are unique to individual households that balance tradeoffs related to costs, incomes, features (e.g. bedrooms and bathrooms), design, and neighborhood amenities.

A household's willingness to pay for housing is largely based on its preference for a housing unit's various features and location. A buyer's considerations include a bundle of goods beyond a property's physical features such as a swimming pool, private garage, and wood flooring. City amenities and culture, neighborhood characteristics, transportation access, proximity to work and shopping areas, high-speed internet availability, streetscape, landscape, quality of schools, and adequate public services are

all components of a location's value that have different levels of importance by household.

In general, a higher priced property indicates a bundle of amenities that are highly valued by many households. Accessibility (and inaccessibility) to various amenities is an important factor of location. Urban areas often have higher value because many people and businesses are willing to pay more to be closer to the amenities and employment clusters that urban areas offer. A location often becomes more attractive, and that land becomes more expensive, as employers and residents seek to locate there, as the neighborhood becomes more pleasant to visit or live, and as the means of transportation in and out becomes cheaper, faster, or more reliable. For businesses, the proximity to other businesses, suppliers, customers, and employees is very important. Thus, they tend to congregate together in locations that are highly accessible to one another.

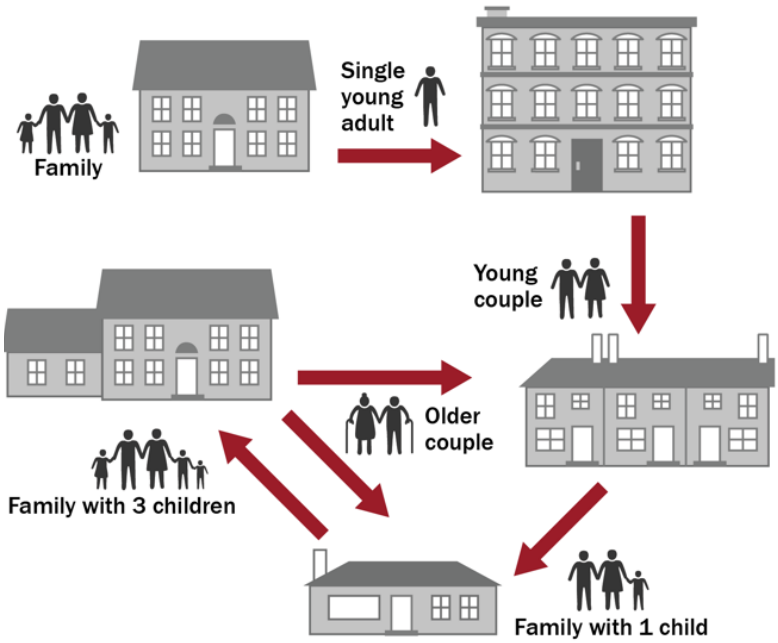
For generations, demand-sided interventions in the housing market have affected the housing choices available to different households, beyond their willingness to pay.

This has resulted in fewer housing choices for some households (typically low-income, minority, or other marginalized households) and greater choices for higher-income, white households.

These artificial constraints on demand are forms of market failures and are discussed in Section 3.3.

Households typically transition between housing types through various life stages as prices, incomes, vacancy, and economic conditions allow (see Figure 3-1). For example, a growing family might move into a larger unit. Population changes – both in-migration and household formation (young people moving out of family homes) – and the number of people and children in the household affect the types of housing people want. Housing type also includes tenure, whether people are looking to rent or own a dwelling unit.

Figure 3-1. The Intersection of Life Stages and Housing Types



Source: Clark, Willam A.V. and Frans M. Dieleman. 1996. Households and Housing. New Brunswick, NJ: Center for Urban Policy Research.

The demand for housing is also influenced by economic conditions. Low interest rates* and the availability of financing encourage more people to take out mortgages and purchase homes. Depending on the performance of other assets, such as stocks and bonds, real estate can become a more favorable option for investors. Moreover, a booming economy with growing discretionary income can lead to greater spending on housing, including improvements on existing units and purchases of newer or larger units. Finally, improvements in communication technology enable a segment of the workforce to work remotely. This decoupling of home and work locations can result in migration from large, urban cities to suburban and smaller, urban cities.

However, housing is one of many goods people can choose to purchase. Individual preferences dictate whether people spend more for housing, including housing in preferable locations, or other goods and experiences. For example, a person may choose to live in a place with fewer amenities so as to spend more on education, food, or other necessities. People will not acquire more or better housing simply because that housing is available or affordable. Instead, housing consumers make tradeoffs, trying to get the best deal they can based on their financial resources and preferences for both housing and non-housing goods, including transportation.

The complexity of housing preferences, which change over time and are influenced by many internal and external variables, makes it challenging to measure and predict housing demand. This is especially true given that some households may not have the opportunity to express their preferences, because they cannot afford the housing they would prefer. These households may appear to “demand” a particular type of housing, but in reality it is the type of housing or location that they can afford, not what they would prefer. Developers, lenders, and real estate analysts do their best to extrapolate information about demand to determine what type of units to build at what location, and with which amenities.

3.2 Supply

Market demand influences the supply for good and services. Housing is no different, in that the market demand (willingness to pay) informs decisions on the feasibility* of constructing new housing units (see a discussion of development feasibility in Section 4). The supply of housing consists of all of the housing units that exist and the new units that are built. Housing units can be modified (e.g. renovation, conversion between rental and ownership), removed (e.g., conversion to short-term rentals, deterioration), or added (e.g. new development on vacant land, addition of new units above existing buildings) to address market demand.

Residential properties are real assets made up of the structure and the land it sits on. They are different than many other goods in that they are immobile, durable, and unique.

- **Immobility:** Real assets cannot be physically moved. Land and buildings cannot be moved between markets based on their conditions. Even mobile homes, which make up only a tiny fraction of the housing market, are rarely relocated because relocations are costly and time-consuming.
- **Durability:** An investment in improving land is a long-term commitment because the physical structure and the utilities that support the structure are durable and

do not become obsolete quickly. Real assets last through multiple market cycles and generations.

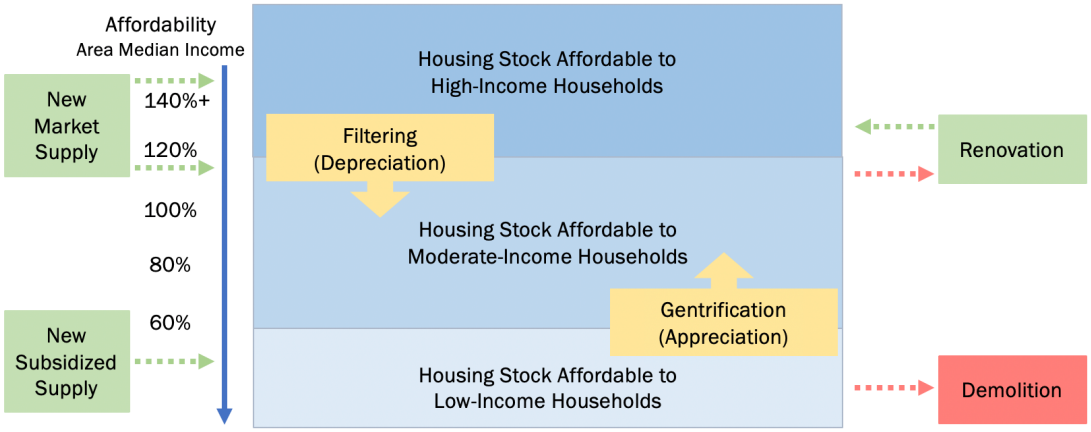
- **Uniqueness:** No land or structure is exactly alike because – as the saying goes – location matters. Each parcel can have a different relationship with neighboring properties, local amenities, and regulatory and financial conditions. Many units can be designed the same way, but they cannot duplicate the physical or locational setting.

These characteristics of real assets contribute to the rigid nature of the housing supply. New housing units cannot simply replace an existing stock of housing. Instead, newly constructed units join the pool of circulating housing stock, from which households choose. Although new housing is likely to be priced at the high end of the market due to its condition, economic theories suggest that increasing the total supply of housing will decrease the price of housing.

3.2.1 Housing Filtering

The process by which housing ages and depreciates in value so that it becomes affordable to moderate- and low-income households is known as *filtering*.* Figure 3-2 illustrates this process. New units, even those at the upper end of the market, create vacancies in the existing housing stock and expand housing options for those looking to relocate. Filtering is critically important to a functional housing market that meets the needs of a range of households and allows for some housing choice for current and new residents of a community.

Figure 3-2. Housing Market Dynamics with Filtering



Source: ECONorthwest.

However, on its own, filtering is neither a near-term nor a long-term solution to housing affordability challenges in a market. Because of the long lifespan of residential properties, the filtering process can take decades, or even generations. Further, it does not guarantee housing will become affordable, particularly for households with low incomes:

- When there are no new housing units built in a region, filtering does not occur.

- When a market is undersupplied and demand outpaces supply (marked by rapidly rising prices), filtering can operate in reverse, resulting in the gentrification* of places and displacement* of low-income residents. In this case, low-cost housing occupied by lower-income households is bought and renovated to meet the demand from higher-income households.
- Even when filtering is occurring according to theory, and new supply is lowering the price of housing in a market, market-rate housing* (which must meet return thresholds) is unlikely to meet the needs of the lowest-income residents.

Without government interventions, the market will deliver new housing at prices that are the most profitable to developers. Figure 3-2 shows that, in almost all cases, new housing stock comes into the market at prices above an area's median family income (MFI), meaning that many moderate and lower-income households cannot afford to live in this housing. These households can occupy older, more affordable housing stock. Cities can use regulations and incentive* programs (see Section 5.2) to encourage housing production for these households.

Regulated affordable housing* refers to housing that is restricted to qualified low-income households. Various agencies and jurisdictions, such as the U.S. Housing and Urban Development (HUD), establish affordability standards for tracking the state of the housing market and allocating funding. These policies consider housing to be affordable* when households that earn less than a certain percentage (typically 60% or 80%) of the area median family* income (MFI) pay no more than 30 percent of their gross income on housing costs.

The filtering process is insufficient to create an adequate supply of stable, safe, affordable housing for low-income households – this part of the housing stock requires ongoing, meaningful investments in subsidized* or regulated affordable housing as well as public-private-partnerships with mission-oriented* housing developers. Unregulated low-cost market rentals – such as those created through the filtering process – can become substandard, unsafe, or unhealthy, and unregulated rents can rise without warning thereby creating housing insecurity for residents. However, because there is not enough regulated affordable housing to meet demand, the majority of low-income households live in these low-cost, unregulated rental units, which can be unstable or substandard.

3.2.2 Other Influences on Supply

The supply of housing is influenced by demand, along with the availability of land, labor, and raw materials used to construct housing. Land can be limited by natural boundaries – water, slopes, or forests – as well as artificial boundaries set by the government. Land use policies and zoning* regulations define the types and sizes of housing that are allowed on the land, and how much land is needed for each housing unit. Policies that govern what gets built and where have numerous goals ranging from environmental sustainability, to health outcomes, to economic vitality, among others. However, these policies also influence where housing can be built, and thus a region's overall housing supply (see more discussion on public policies in Section 4.2). When demand is high and land is scarce, these policies also influence the cost of development.

Once the limited supply of land is accounted for, the supply of housing is largely determined by its development costs* which include labor costs (e.g. architects,

planners, engineers, and construction workers) and raw materials (e.g. wood, concrete, and other raw materials). These inputs are discussed in Section 5.3.

Because housing generally takes years to build, it lags behind the demand for housing. Supply is slow to increase to meet demand, and the market can continue producing housing units after housing demand falls. However, absent rapid changes in either side of the market, housing is not typically supplied without sufficient demand to meet it.

3.3 How Housing Markets Fail

Markets fail when they inefficiently allocate resources. In the case of housing markets, this means that the housing units that are available (the supply) cannot be accessed by households that can afford them and prefer them (the demand). This occurs when households desire certain housing types at specific locations, but market, governmental, or personal (usually income-based) forces prevent them from attaining that housing. Historically, when housing markets fail, the populations who are impacted the most have been people with lower incomes, people who are minoritized, or otherwise marginalized households. In addition, when markets fail they cannot fix themselves. Interventions to correct a market failure typically come from the government, philanthropy, or non-profit sectors (see Section 4.2).

Markets can also fail when the collective willingness to pay (market demand) is insufficient to influence the production of enough units compared to the number of households living in a market. If the supply of new housing does not keep up with demand, shortages* can occur, which are a type of market failure. These failures can occur for numerous reasons:

- **Externalities:** Externalities occur when the creation or consumption of a good or service affects others not directly involved in the transaction. Externalities can be positive or negative, and they can have narrow or wide-ranging effects. An example of a positive housing externality is when a new development includes public improvements, such as plazas, new sidewalks, or infrastructure improvements, and their benefits extend beyond the primary households occupying the units. These are often undersupplied because the larger pool of end users is not paying for the benefits it enjoys. An example of a negative externality is when development occurs far from amenities or job centers, and the increase in road users generate vehicle emissions or traffic congestion. If the negative effects of vehicle emissions or traffic congestion are not priced into the cost of the home, this type of development – far from amenities or job centers – will likely be oversupplied because the buyers are not paying the full cost of their purchase.
- **Lack of public goods:** A shared good or service can be underprovided because there is little incentive for people benefiting from it to pay for it. Thus, for example, streetlights and parks would be difficult to fund without some form of organized action or government intervention. Public goods, like parks, sidewalks, roads, or other infrastructure, are important components of the housing market, because they influence preferences for housing.

- **Lack of mobility in housing choice:** In a completely mobile market, households would have no barriers to moving in or out of neighborhoods or between housing types, thereby occupying housing that is the most suitable for their incomes and life circumstances. Mobility can decline when households are unable to move because an area's housing supply – and the bundle of goods that accompany housing – lack suitability for that household's preferences. Examples include: an area lacks appropriately priced housing (e.g. lower-cost housing), an area lacks the appropriate housing type (e.g. more bedrooms for a large family) or an area lacks jobs or schools.
- **Cost threshold to operate and maintain housing:*** The private housing market has minimum thresholds for the prices and rents that can be charged, which are based on the cost of operating and maintaining housing. This means that no matter the demand for a housing product, it will not be supplied by the private market below certain prices or rents. The minimum cost to supply new housing products is determined by the feasibility of development (see Section 4), while the minimum cost for an existing unit[3] is based on the costs of operating and maintaining it. Inevitably, there are households with incomes too low to afford the lowest market rents, and these households need government intervention to compete in the private housing market. In the absence of assistance and tenant protections, these households may face substandard, unhealthy, or overcrowded housing, or homelessness.
- **Asymmetric information**: Sellers and landlords know more information about their units than buyers and renters. When the shared information is unequal, one party gains an advantage in determining the price of a product.
- **Regulatory restrictions**: Prohibitive regulations or construction requirements can favor the production of certain types of housing or disallow other types, forcing homeowners and renters to choose from limited housing options. Housing prices become distorted when housing production is skewed to a type of housing.
- **Incongruent local regulations**: Discrepancies in local zoning laws, incentives, and fees (e.g. System Development Charges* or SDCs) between areas can result in developers choosing to pursue projects in one area over another. Consequently, housing prices can be rising in one area of a region, while they are falling in another.

3.3.1 Demand Side Influences

Housing demand has been influenced by governmental interventions for generations. This has come in the form of policies, subsidies,* tax incentives, land sales, lending practices, and numerous other ways of encouraging or changing housing decisions. Interventions aimed at increasing demand for housing have typically only been available to a privileged subset of households. These types of policies prevent a freely moving market where buyers and sellers are able to efficiently allocate resources and purchase housing to meet their preferences.

[3] This is most relevant for the rental market.

These interventions have tended to advantage certain groups over others and influence housing demand toward certain housing products (e.g. certain types of housing, housing in certain locations, or specific financing options). Those receiving the benefits of these interventions have tended to increase their demand for specific types of homes (e.g. single-family housing) or housing in specific locations (e.g. areas free of pollution, areas with good access to amenities). Those excluded from these interventions have seen their demand for housing change too: with few other options left, they have had to seek other types of housing (e.g. multifamily housing, or housing in poor condition) and housing in less desirable locations (e.g. areas in floodplains, near pollutants).

Housing access has historically been constrained by racist and classist policies such as redlining, exclusionary zoning, and discriminatory covenants, and the legacy of these policies have lasting effects to this day. They are discussed in this memo because they continue to prevent an efficient allocation of resources and because of the inequitable legacies these policies have left on households of color and historically disadvantaged households.

Housing interventions, at both the private and public level, reflect a history of discrimination, unequal access, and constraints on the housing choices for many households of color, households with disabilities, and households from other marginalized communities. While many of the most overtly discriminatory policies have been rescinded, their negative impacts on households and communities are persistent. Some policies, like single family housing zoning, have become so commonplace in communities that it is easy to forget their original intent to maintain racial segregation, and their continued impact on access by making housing less affordable. In addition, well-intentioned policies can have unintended or unequal outcomes (e.g. the mortgage interest tax deduction largely benefiting wealthy, predominately white homeowners).

3.3.2 Impacts of Market Failure

One of the largest examples of market failure is a price increase that is met with too little new supply. Many parts of Oregon are facing a housing affordability crisis because housing market failures have accumulated over time. When there is a shortage of housing units compared to the number of households, the prices of existing and new units increase, sometimes so much that some households are unable to afford their housing. Housing is typically considered to be affordable to a household when it consumes less than 30 percent of the household's pre-tax income. Households spending more than 30 percent on housing costs are considered to be cost burdened.*

When markets fail, government, philanthropic, or non-profit action is needed. Governments at all levels can intervene in the following ways:

- **Taxes and regulations** can help reduce an overproduction or overconsumption of goods, including specific housing types. Subsidies and tax exemptions can encourage the consumption or production of dwellings that accomplish public goals, such as increasing the homeownership rate, increasing affordable housing, incenting higher density development, or improving access to jobs. Some government interventions, such as federally backed mortgages, have been a consistent aspect of the U.S. housing market over many generations, offering access to many families who otherwise would not been able to afford their

homes. These policies, while beneficial to many, have been unequally offered, leading to differing outcomes across races and ethnicities.

- **Policies that reduce the cost of housing** can help to correct market failures that occur due to shortages of low-cost housing. These include changes to local zoning ordinances to allow more housing variety, programs to expedite planning and development review timelines, or direct subsidies or land write downs to reduce development costs (see a discussion of development costs in the next section). Such policies can often conflict with jurisdictions, homeowners, and developers who have an interest in policies that increase land and home values. Also, local zoning ordinances may reflect the interest of the jurisdiction's citizens, but they can diverge from the interests of the broader region or the nation. In such cases, a federal, state, or regional authority may need to intervene to achieve broader housing goals.
- **Policies to promote fair housing and tenant protections that reduce discrimination** can help to correct market failures that occur when households at lower income levels are constrained on their choices, or when households cannot afford the minimum rents a landlord needs to charge to operate a property (putting the household at risk of substandard or unhealthy housing choices). Removing these types of demand side interventions can help to ensure the housing market is efficient and all households have the ability to choose the housing that best suits their needs.

The rise in homelessness can be directly linked to housing shortages. Research has shown that – controlling for weather, unemployment, and a region's percentage of people with a disability – the median rents and vacancy rates in the local rental market are significantly related to the rate of homelessness in that region.[4]

Contrary to the common narrative, the majority of individuals experiencing homelessness are working adults or live in households with children. They double-up with friends or family, cycle in and out of homeless shelters, or live in an automobile when crises hit. In Oregon, the majority of those experiencing homelessness simply cannot afford their rent and are tipped into homelessness when an unexpected financial or health emergency occurs.[5] In addition to income stability and mental or physical health needs, the most effective interventions for homelessness are stable, low-cost rents with supportive services for those who need them.

4 How New Housing Is Added to a Market

New development plays two roles in the housing market: replacing depreciated units and accommodating growth in the number of households. Household growth can occur due to both in-migration (e.g. new people moving to an area) and due to new household formation (e.g. young people moving out of family homes).

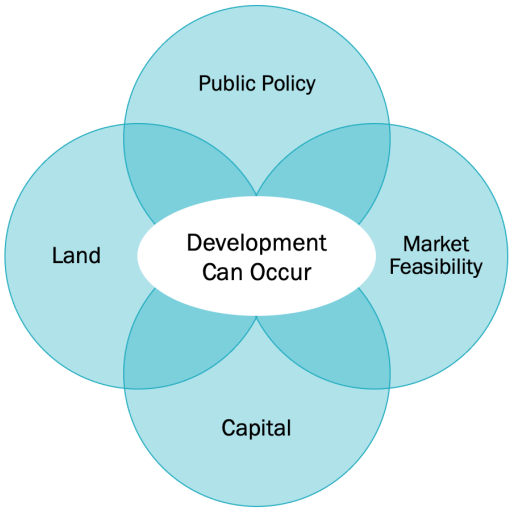
The development of new housing is a complex and lengthy process. The private sector produces the majority of all new housing, and the market is governed by economic fundamentals of supply and demand, which is influenced by government regulation.

4.1 Development Occurs at the Intersection of Land, Policy, Market Feasibility, and Capital

Housing development relies on inputs set by numerous interrelated markets and players, and each input to development functions in its own market with supply and demand factors constantly in flux. Figure 4-1 illustrates the high-level factors that must align for a developer to be able to develop housing.

- On a **parcel of land**, landowners and property developers evaluate a site for the economically highest and best use* allowed, be that office, residential, commercial, or vacant land, depending on the parcel's unique characteristics. Nonprofit or government actors will also consider uses that are mission-oriented.
- **Public policies**, like land use restrictions or zoning, dictate what types of development can occur and where, usually for aesthetic, health, safety, or economic reasons. A single policy can have many different impacts; adding new policies and removing existing regulations is a complex process with interactions and impacts across many sectors. For instance, changing land designated for farming to land for commercial use has ripple effects that must be considered. Through public infrastructure (e.g. fire service boundaries) and regulations (e.g. septic tank restrictions), public policies can also dictate the parcels that can be developed based on road access, sewer and water infrastructure, insurance coverage, and other factors.
- **Market feasibility** is a robust process that assesses the demand for development – comparing the expected revenues against the investment costs (e.g. labor and materials) – for the desired types of development. If a development project is not feasible, it will not be built. See Section 5.4 for a complete description of market feasibility decisions.
- **Capital** is necessary to pay for the costs of development, and influences market feasibility through the financing terms set by the lender and the returns expected by the investor. When real estate development cannot meet return requirements, return-seeking capital will flow to other sectors such as stocks and bonds.

Figure 4-1. Real Estate Development Factors



Source: ECONorthwest.

Development occurs when all these factors align: land is available and properly zoned, regulations allow the desired type of development, the product is financially feasible, and capital can be deployed for an investment return. If any of these conditions are not met,

development will not occur. Changes to any of these factors can determine when, where, and whether development is viable, as well as the types of development that can occur.

Encouraging development is challenging, takes time, and requires input from numerous stakeholders (e.g. government, the public, and the development community). Neighborhood support or opposition can be critical to determining where and how to build housing types such as higher density housing or low-income housing.

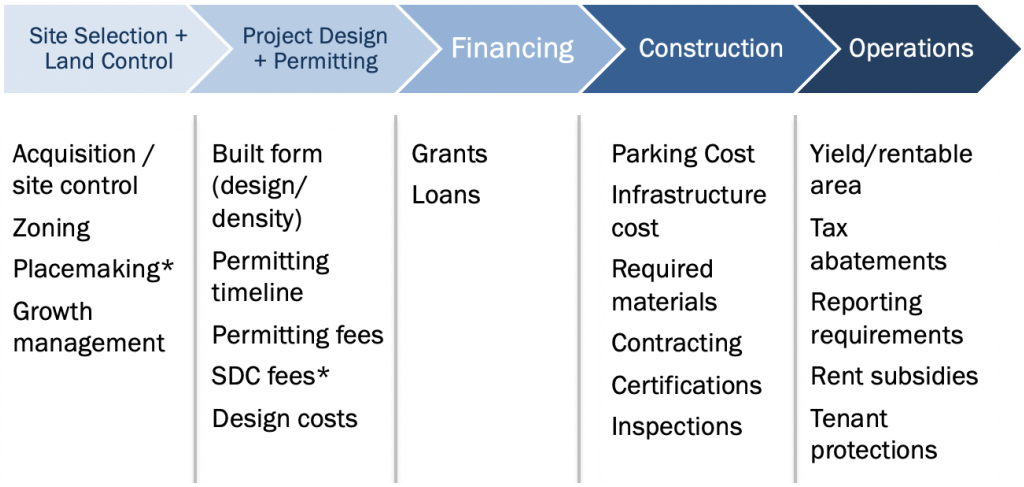
The development of regulated affordable housing can be even more challenging on all four aspects of development feasibility. Land can be expensive, particularly in high-opportunity or amenity-rich areas. Neighborhood preferences can be reflected in local regulations that limit land uses and require design and development standards unfavorable to affordable housing development. Feasibility is difficult due to the reduced rental revenues at the property. Finally, a significant portion of the property's capital typically needs to come from mission-oriented sources that will accept a below-market return on their investment. While developing these units can be challenging, regulated affordable housing is a critical part of an area's housing stock and new units can help reduce housing instability for low-income households.

4.2 The Development Process and Public Sector Influence

Housing development is a multi-stage, multi-year process without a certain outcome. First, one entity – an individual, a corporation, a nonprofit institution, or a governmental body – must gain control of a parcel of land with an interest in developing it for housing. Multiple entities may be involved especially if the parcel is large or already developed. Then, architectural and engineering firms are contracted to design one or more project concepts, which are bound by local and state regulations and influenced by demand for housing units and types. Before a feasible project can be financed for construction, it must receive the necessary permits from local authorities. Moreover, financing must cover both the construction phase* of the development – which is shorter in duration but requires a higher return on investment to account for the riskier nature of the phase – and the operational phase* of the development, during which the project produces the revenue necessary to pay off any loans and generate returns for the investors.

There are numerous roles for the public sector during the housing development process. Figure 4-2 illustrates the possible ways in which the public sector can support or hinder the prototypical housing development process.

Figure 4-2. Housing Development Process and Common Public Sector Levers at Each Step



Source: ECONorthwest.

1. **Site selection and land control**: Although most of the developed and developable land is private property, the public sector can influence which sites are actually developed and how they are developed through growth management* laws such as local land use and zoning regulations. State-level planning efforts, such as Oregon's Statewide Land Use Planning Goals, also help determine where housing can be developed.

   Developable sites can originate from publicly owned lands as well. Public agencies that own unused or underutilized parcels can play a critical role in unlocking new development sites in cities with limited development options.

2. **Project design and permitting**: Local design standards and permitting processes, which are put in place to ensure design and uses are compatible with an existing neighborhood context, can have important health, safety, and economic purposes, but can also act as barriers to new development. Housing regulations such as low-density zoning, minimum lot sizes, limits on buildable area, minimum off-street parking requirements, or landscape buffers can increase development complexity, time to completion, and total costs. Other major factors affecting housing supply (and thus prices) are the time and fees related to permitting and environmental review processes. Funders are hesitant to commit to a project before proper permits and reviews are approved.

3. **Financing**: Public funding can be the lever that makes a project feasible. When loans and equity* from the private sector are insufficient to finance a project, low-interest loans and grants from the public sector can reduce the total cost and time to completion of a project. Governments can promote public policy goals by adding conditions to its funds.

   Most affordable housing development is accomplished with meaningful public contribution. Developers receive public funding in exchange for placing a covenant* on the property's deed that requires it to rent to low-income households. Most for-profit developers will compete for public funding if the benefit from the additional funds outweighs the revenues lost by setting the rents

at a price below the market rate. Mission-oriented developers may sacrifice some financial benefits of these funds, but they may be driven by other social goals.

4. **Construction**: Most of the costs involved in the construction originate from the private sector. However, governmental requirements related to infrastructure (e.g. utilities, right-of-way) and inspection processes influence development costs and timeline. Additionally, housing affordability is a competing interest with public policy goals related to increasing the wages of construction workers and employing small businesses.
5. **Operations**: The effects of conditions for public funding are most evident after construction is completed. Affordability requirements reduce revenue, but property tax exemptions and lower borrowing cost reduce expenses. Moreover, public funding for rent subsidies can make up the gap between the market-rate rent and the amount that low-income households can afford to pay.

4.3 Geographic Scale Matters for Housing Development

While the actual development and construction process may be the same, the housing development sector functions differently in various locations, just as decisions about the demand for housing vary by location.

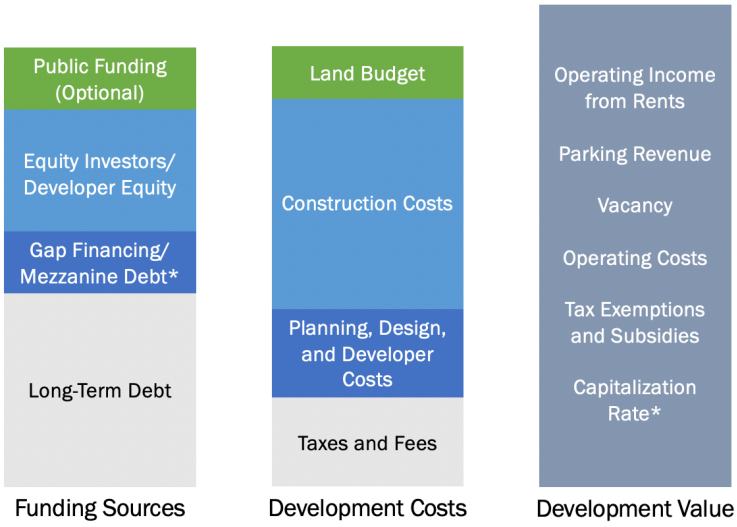
1. **Large versus small areas**: Because large urban cities are typically already built out and lack developable land, new housing development is more likely to take place on smaller parcels of land wedged between existing buildings or on the outer edges, often reaching into the nearby suburban areas. Although smaller lot sizes limit the types of developments that are likely to take place, they are also likely to have lower costs for infrastructure and other site improvements because they already have existing utility lines and right-of-way built out. In contrast, developments on larger lots and parcels that have only recently been zoned for residential use will need more time and resources to get the land ready for residential development.
2. **Population density**: The concentration of people differs across cities. More densely populated cities tend to experience greater population and economic growth, which affect the demand for housing. The demand for the type of housing will also vary across cities because the population in denser cities tends to be younger and to live in smaller households. Population density without housing density can increase travel needs as people get to jobs or city centers. It can also create an imbalance of demand and supply and cause housing prices to rise.
3. **Proximity to job centers**: Commute time is a dominant determinant of residential location at the regional scale, and the provision of housing near employment concentrations can influence residential location decisions. Moreover, service and housing amenities can change within a short distance, and thus influence housing choice. Government interventions that better match the supply and choice of housing and the supply and type of jobs can enhance the range of households' choices about residence and transportation.
4. **Size of a project**: Development feasibility and the financing sources can differ by project size. Places that can accommodate large projects – either on a large

parcel or through high and densely built buildings – are likely to be pursued by larger developers, who can take on a larger debt, compete for a lower interest rate, and stay financially solvent through a longer development time. (See the section below on Implications for Small vs. Large Projects.)

5 Housing Development Costs and Financing Models

A common way to understand the financial structure behind a housing project is laying out the sources and uses of funds. Various sources of capital – equity, debt, grants, and tax credits – build a "capital stack,"* which is used to pay for the costs of housing development. The sources must be at least as large as the uses in order to fund the project. This is as true for a multi-story building in a city center as for a single-family home in a smaller town. However, a larger and more complicated deal (e.g. Figure 5-1) will likely have more sources and more uses than a smaller project.

Figure 5-1. Sources, Uses, and Value of Rental Development



Source: ECONorthwest.
Note: Drawn for illustrative purposes only, not to scale.

Project feasibility requires the development value to be greater than the development costs. When the development value is smaller than the development costs, interventions are necessary to increase the value and/or reduce the costs. Otherwise, the project will not move forward and the resources will shift to other projects. Figure 4-1 illustrates the capital stack, various uses of funds, and determinants of a project's financial value for a rental property. These sources, uses, and determinants of value will differ across project types—not only between office, industrial, or residential, but between market-rate residential or regulated affordable residential.

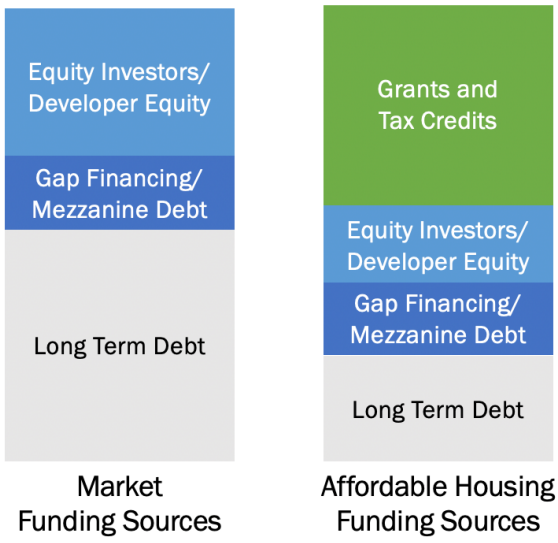
5.1 Market-Driven Sources of Housing Funding

Typically, long-term debt is the largest source of funding for housing development projects. Loans from banking institutions can be secured at a relatively low interest rate because the property serves as the collateral for the loan. Developers use a construction loan* to finance their project during development and then convert it into a permanent loan* once the project is built. Construction loans are shorter and carry a higher interest rate to account for the riskier nature of a project without a finished building.

Institutional investors* and sometimes the developers themselves gain ownership of the project through their invested capital. Equity owners face the greatest risk because they do not receive a return until other sources of capital stack are paid back. Their higher risk is compensated for by their claim to the project's returns beyond the expected return. Mezzanine debt* and other sources of gap funding* work as a hybrid of long-term debt and equity. The holders of mezzanine debt get paid after the long-term debt is paid off, but they receive a higher return than the holders of the long-term debt.

Different types of investors, each with different risk tolerances and financial return requirements, will provide different funding sources in the capital stack (see Figure 4-2).

Figure 5-2. Source of Housing Funding



Source: ECONorthwest.
Note: Drawn for illustrative purposes only, not to scale.

5.2 Non-Market Sources of Housing Funding

Both affordable housing development and market-rate development must be physically and financially feasible. Affordable housing development differs from market-rate development based primarily on its financial feasibility. Because an affordable project will offer units at below-market rents but cost at least as much as market-rate developments to build, affordable housing developers are unable to attract as much private-sector investment in their projects as they do in most market-rate deals. For this reason, there is often a "funding gap*" in the capital stack of an affordable housing development. Thus, affordable housing developments typically secure public funding, grants, operating

subsidies,* and low-cost or forgivable debt* in addition to competitive investor equity sources to make their deals financially feasible. Some affordable housing developers need to secure pre-development loans or grants as they work out the logistics of project feasibility. And sometimes, affordable housing developments are given free or reduced cost land, which aids feasibility and reduces the amount of debt needed.

Additionally, for both market-rate and affordable housing developments, government actors can offer a variety of incentives to encourage the types of housing the market is not delivering, or to meet public goals. Financial incentives often lower the cost of development (such as fee waivers or expedited permitting processes) or lower the cost of operations (e.g. tax exemptions). Regulatory incentives adjust site allowances and requirements (such as building higher or providing less parking) to increase developable space or reduce costs, thereby creating value. These incentives help increase development feasibility to shape market responses.

5.3 Determinants of Costs

Costs for housing development can be broken down into three categories: land costs, hard costs, and soft costs. The price of land is determined by both demand for space and the supply of developable land, which is influenced by topography, zoning, and existing developments, among other factors. As mentioned previously, public or private donations of land can turn an infeasible project feasible. Hard costs are the costs incurred for the construction of a building. The wages of construction workers, lease rates of construction equipment, and the prices of raw materials are components of construction costs. Finally, soft costs include the labor of architects, engineers, designers, and planners as well as the costs of interacting with the government, which include taxes and permitting processes and fees. Soft costs also include the fees that developers charge to pay for their own labor.

Development costs are a function of demand. The demand for parking is one of the most notable factors of development costs because parking spaces take up a significant portion of the parcel. Stacking parking stalls in private or shared garage structures would save space on the parcel for other uses, but this costs much more than surface parking. Demand for additional amenities, common spaces (e.g. lobbies, private parks), and aesthetic features of a property also add to the total costs.

Development costs are also a function of policy. Building codes and requirements for construction material, particularly in highly dense or tall buildings, are intended and needed to protect the general public from safety hazards. However, developers are acutely aware of the costs that certain construction requirements can add to their projects. Developers also need to navigate around design standards (e.g. setbacks, maximum lot coverage, minimum lot size, maximum residential density) and affordable housing requirements adopted by communities.

5.4 Financial Evaluation Methods

Pro forma analysis* is a method of estimating or projecting a project's revenue, costs, and returns. Real estate developers use pro forma models to determine whether a proposed development is financially feasible. The public sector can also use them to

analyze the impacts of regulatory and financial incentives on development feasibility and to anticipate how public sector actions may support or hinder housing development.

A pro forma compares a development's sources of capital to its uses of capital and end value. The pro forma considers the size of the building allowed by zoning and the revenue that building can deliver (from rents and sales prices) relative to the costs of constructing and operating the building. A cash flow model forecasts the rents, operating costs, taxes (and tax exemptions), and financing costs over the first ten years, typically, of a project's life, estimates the value of the project at the end of the ten years, and calculates the return an investor could expect.

5.5 Implications for Small vs. Large Projects

Using a financing model that estimates financial returns is suitable for analyzing the financial feasibility of projects pursued by large developers because they are assumed to possess the financial and technical resources necessary to carry out a feasible project. However, an additional financial check is required for smaller developers and individuals taking on smaller projects. Because these developers may lack the financial resources to protect themselves and the project from unexpected changes in cash flows (funds left over after paying for operating expenses and debt), investors and banks are particularly concerned about the project's ability to make regular payments on their debt. *Debt service coverage ratio* (DSCR)* – which compares the size of net operating income (a regular cash inflow) to the size of debt service (a regular cash outflow) – greater than a pre-determined threshold provides an additional indication that a small project is financially feasible. DSCR above 1.0 indicates that the development is expected to generate enough cash to make debt payments on time. Although it is not an absolute metric of feasibility, DSCR is commonly used to assess project feasibility.

Relatedly, affordable housing operations often may have insufficient cash flow to pay for any cash-flow dependent line items. Thus, DSCR could be an important determinant of project feasibility for affordable housing developers. In contrast, market-rate properties are structured to seek overall financial returns of a project, even if the cash flow is not always available due to fluctuations in market rent and vacancies.

Some very small projects, such as a homeowner paying for a renovation, building an accessory dwelling unit, or a new single-family home will not use typical institutional financing. Very small developments may be financed with the owner's own equity – such as a mortgage or home equity line. The financial risk and return profile of these types of developments differ greatly from larger projects financed with institutional funding.

6 Conclusion

The dynamics of the housing market are very complex and are constantly in flux, with many factors out of policy makers' control. Changes in demand and supply, movement in materials and labor markets that interact with each other and with development costs, and changes in housing preferences all affect the quantity, nature, and location of housing units that are demanded and supplied. Whether and where new units get built depend on physical constraints related to the land and the costs of production.

Despite this complexity, coordinated government policy action and investment can have a strong influence on the nature and location of housing that is built. ODOT's role as a transportation agency means that it must be thoughtful about how its policy decisions and investments will help achieve (or hinder) public goals like housing affordability, avoiding displacement, economic mobility, and greenhouse gas reduction, to name a few.

This white paper sets the foundation for how housing markets function and fail, who the key players are, how they make decisions, and how governments can intervene to improve outcomes. With this understanding, future white papers in this study will explore the links between transportation, transit investments, and housing markets and development feasibility. Together, this work will better enable ODOT and other state agencies – in concert with local partners – to make strategic decisions and deploy investments that can improve community outcomes relating to the availability and affordability of housing choice and efficient use of the transportation network.

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Oregon Transit and Housing Study

Glossary of Terms

December, 2020

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1 Housing Terms

AFFORDABLE HOUSING / REGULATED AFFORDABLE HOUSING "affordable housing" refers to rental housing that is income or rent-restricted so that households earning up to 60% of the area median family income (see Area Median Family Income (MFI) below) can afford to live there and pay no more than 30% of their pre-tax income on rent and utilities.

Regulated affordable housing is income or rent-restricted to ensure the housing is occupied by households earning a certain income. Regulations are set according to the types of funding used to develop the housing, such as the Low-Income Housing Tax Credit, or U.S. Housing and Urban Development (HUD) funding. Most regulated affordable housing is restricted to be affordable to households earning under 60% MFI, but these restrictions vary. Almost all regulated affordable housing has affordability covenants (see covenant definition below) on the property that can range from a few years to 99 years, depending on the program. When these covenants end, the property may lose its affordability requirements. The terms 'regulated affordable housing' and 'restricted affordable housing' are often used interchangeably.

AREA MEDIAN INCOME (AMI) / MEDIAN FAMILY INCOME (MFI) Every year the U.S. Department of Housing and Urban Development (HUD) produces a median family income to determine affordability thresholds for an area (sometimes these geographies are HUD-specific). Affordable housing projects' income limits, rent limits, loans, and other characteristics will be based on this MFI (e.g., units affordable to households earning 30% of MFI or 50% of MFI).[1]

COST BURDENED A household is considered "cost burdened" when it pays more than 30 percent of its gross income on housing costs. A household is considered "severely cost burdened" when it pays more than 50 percent of its income on housing costs. These terms come from HUD, and include mortgage payments and interest, or rent, utilities, and insurance.

COVENANT A restriction placed on the title of a property that, depending on the provision, maintains the affordability of the affected housing units in a predetermined amount of time (e.g., 50 years).This is often called a "deed restriction."

DISPLACEMENT Displacement is a process of neighborhood change where households are forced to move from their residence, or are prevented from relocating to an area that

[1] A note on MFI vs AMI from HUD: "HUD estimates Median Family Income (MFI) annually for each metropolitan area and non-metropolitan county. The metropolitan area definitions are the same ones HUD uses for Fair Market Rents (except where statute requires a different configuration). HUD calculates Income Limits as a function of the area's Median Family Income (MFI). The basis for HUD's median family incomes is data from the American Community Survey, table B19113 - MEDIAN FAMILY INCOME IN THE PAST 12 MONTHS. The term Area Median Income is the term used more generally in the industry. If the term Area Median Income (AMI) is used in an unqualified manor, this reference is synonymous with HUD's MFI. However, if the term AMI is qualified in some way - generally percentages of AMI, or AMI adjusted for family size, then this is a reference to HUD's income limits, which are calculated as percentages of median incomes and include adjustments for families of different sizes." Source: HUD. 2018. "FY 2018 Income Limits Frequently Asked Questions." https://www.huduser.gov/portal/datasets/il/il18/FAQs-18r.pdf

had previously been accessible to them, due to forces outside of their personal control.[2] Displacement can occur with gentrification (see definition below) but gentrification can occur without displacement. Generally, there are three types of displacement: a household can be forced to move by virtue of cost (called economic or indirect displacement), can be forced to move due to the physical demolition of their existing housing (called physical or direct displacement), or can be forced to move because the culture of the neighborhood changes (called cultural displacement).

FILTERING A process by which housing depreciates in value over time, sometimes due to intrinsic features (i.e., obsolescence) and sometimes due to the availability of more desirable alternatives (e.g., new housing in another location), and becomes affordable to lower-income households but remains market-rate.

GENTRIFICATION A process of neighborhood change that occurs in a historically disinvested neighborhood and includes economic change—by means of real estate investment and new higher-income residents moving in—as well as demographic change—not only in terms of income level, but also in terms of changes in the education level or racial make-up of residents.[3]

HOUSING AFFORDABILITY “Housing that is affordable” refers to any type of housing, regulated or not, that costs less than 30 percent of a household's pre-tax income. This definition is a generally accepted definition of affordability. This is not to be confused with "affordable housing."

LOW COST MARKET RENTALS Housing that is affordable to low income households but not regulated or restricted by a funding source, is referred to as “low cost market rentals.” These housing units are often affordable by nature of their location, condition, age, or the amenities offered nearby or at the property. These units are often called "naturally occurring affordable housing" or NOAHs.

MARKET-RATE HOUSING Housing where the rent or sales price is set by the building owner to reflect market conditions; typically developed by for-profit developers.

MEDIAN FAMILY INCOME (MFI) Synonymous with Area Median Income (see definition above).

MISSION-ORIENTED Refers to public or non-profit entities who are working in areas that produce social good. These can be Mission-Oriented developers – such as those who build regulated affordable housing – or mission-oriented investors (see Impact Investing above) – such as those who sacrifice some financial return for social benefits.

REGULATED AFFORDABLE HOUSING See Affordable Housing.

SUBSIDIZED HOUSING See Affordable Housing.

[2] https://www.urbandisplacement.org/resources#section-56

[3] https://www.urbandisplacement.org/gentrification-explained

2 Land Use and Planning Terms

EXCLUSIONARY ZONING restrictive zoning policies, such as very large minimum lot sizes, or prohibitions on multifamily housing, that cumulatively have the effect of limiting housing choice in a neighborhood to higher-income households who can afford to adhere to the regulations.[4]

GROWTH MANAGEMENT A set of concerted efforts, policies, or planning practices to accommodate and minimize the impact of population growth, development, and services in a way that is mindful of human and business needs, environmental conditions, and land use efficiencies.

PLACEMAKING is the process of planning and affecting a change to the built environment to be more oriented towards people and create livable places.

REDLINING A discriminatory policy created by the Home Owners Loan Corporation in the 1930's to deny mortgages to applicants wishing to purchase a home in a neighborhood based on the perception of risk. Risk was assigned not based on the creditworthiness of borrowers and the stock of housing, but entirely based on the prevalence of minority households, particularly Black households. Neighborhoods were placed into 4 categories, with areas deemed "hazardous" outlined in red, and not eligible for mortgages. This policy resulted in the disinvestment in the housing stock in these areas, and lower rates of homeownership and wealth generation for Black households, among numerous other negative consequences for these households and their future generations.[5]

SYSTEM DEVELOPMENT CHARGES (SDCs) are one-time fees charged on new development, and certain types of redevelopment, to help pay for existing and planned infrastructure to serve the development. SDCs are one means of financing growth available to local governments, they are based on impact to infrastructure, and assessed at the time of development for a variety of improvements, including water, parks, roads, sewer, and for housing units. SDCs are sometimes called "Impact Fees."

ZONING / REZONING Regulations set out by a local government on the allowable land uses and density on a parcel of land. Landowners can apply to their local government to change the zoning of their parcel of land (whether a specific use and/or the density).

3 Real Estate Finance Terms

CAPITAL STACK The mix of funding sources either in a fund or used to pay for construction of a development project. Different types of funding are "stacked" together. Each type of funding sits at a different level in the stack corresponding to risk and rate of return (lower risk corresponds with lower return and vice-versa).

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[4] https://housingmatters.urban.org/articles/how-zoning-shapes-our-lives

[5] https://www.brookings.edu/research/americas-formerly-redlines-areas-changed-so-must-solutions/, https://www.federalreserve.gov/boarddocs/supmanual/cch/fair_lend_fhact.pdf

CAPITALIZATION RATE (CAP RATE) A metric used to estimate the risk-adjusted expected rate of return on real estate investments. The expected rate of return can determine whether investors choose to place their capital with one investment or another. In real estate, the ability to attract capital determines whether proposed buildings are actually built or not. The cap rate is defined as the net operating income of the building at given time period divided by the market value of the building in that time period. Smaller cap rates imply lower market risk and thus greater value.

CONSTRUCTION LOAN A loan used to finance the construction phase of development. This loan is shorter in duration (typically 3-4 years) and is repaid with the permanent loan. Because the loan cannot be backed by a real asset (the completed building) construction loans have higher risk and carry a higher interest rate.

DEBT SERVICE COVERAGE RATIO (DSCR) The ratio of debt to net operating income (revenues less expenses) at a property, which is used by banks and lenders to assess the amount of operating income available to pay for debt service obligations. If a DSCR equals 1.0 the property has exactly enough net operating income to meet its debt obligations. Most lenders will require a cushion of 15 or 20 percent excess income (a DSCR of 1.15 or 1.20) to ensure the borrower can meet its debt obligations in the event of an unexpected expense.

DEVELOPMENT COSTS The costs of building and constructing a new development. These costs include land costs, hard costs, and soft costs.

Land costs are determined by both demand for space and the supply of developable land, which is influenced by topography, zoning, and existing developments, among other factors.

Hard costs are the costs incurred for the construction of a building, including wages of construction workers, lease rates of construction equipment, and the prices of raw materials are components of construction costs.

Soft costs include the labor of architects, engineers, designers, and planners as well as the costs of interacting with the government, which include taxes and permitting processes and fees, and fees that developers charge to pay for their own labor.

DEVELOPMENT PHASES The typical phases are predevelopment, construction, and operation. Predevelopment can be split into early-stage predevelopment (project visioning, design, and concept planning) and late-stage predevelopment (securing project funding, securing sites, permits, and entitlements such as zoning or rezoning). Early-stage predevelopment projects cannot carry debt as they may be found to be infeasible.

EQUITY a financial ownership stake in an asset. Equity can be preferred or sponsor equity, and sits at the top of the capital stack. It is riskier than debt, because it is repaid last in the event of a liquidation, but generates the highest return for investors.

FEASIBILITY A project needs to be financially feasible, demonstrating that the revenues generated from rents are sufficient to cover operations, debt servicing, and capital reserves. A project's development team will create a pro forma to determine feasibility and adjust the number of units, size, rents, and construction costs until the project revenues match expected operating costs (often referred to as "penciling out"). Funders need to understand financial feasibility before they will award a project funding.

FOREGIVABLE DEBT A type of loan that can be partially or entirely forgiven or deferred for a period of time by the lender when certain terms or conditions are met. This flexible financing source is often times part of a capital stack (see definition above) and used to help with funding gaps (see definition below).

GAP FUNDING/ FUNDING GAP Gap funding sources are relatively flexible types of funding (grants, low-cost debt, forgivable loans, etc.) sources that are sought if the capital stack has a funding gap in the sources and uses needed to construct a product, after traditional funding sources have been secured. Gap funders are usually mission-based and fill the remaining funding gap with low-cost financing to get the project to be financially feasible.

HIGHEST AND BEST USE "Highest and best use" is a term used in the real estate industry that refers to the land use that is most likely to produce the most economic benefits to the landowner (either private or public land owners). The highest and best use for any property will be: (1) physically possible, (2) legally permissible, (3) financially feasible, and (4) maximally productive.

INCENTIVES Financial motivations that encourage people to make certain economic decisions. They create additional burdens or reduce existing costs to influence the tradeoffs people face when making decisions. Governments can use incentives to promote certain public policy goals. Examples of housing incentives include the mortgage interest tax deduction to encourage homeownership, or development incentives that reduce the cost of development and encourage the construction of affordable housing.

INSTITUTIONAL INVESTOR Institutional investors pool money and invest in securities, real property, or loans to secure returns for clients. Examples include insurance companies, pension funds, mutual funds, credit unions, and banks. Institutional investors differ from individual investors, in that they are professionally managed and regulated by their relevant industries (finance, insurance, etc.). Institutional investors also operate at a significantly larger scale, with pooled funds that allow them to make large purchases and sales of investments.

INTEREST RATE The cost of borrowing to fund a project. Mission-oriented lenders may offer lower interest rates or below-market interest rates for affordable housing projects or development that has a positive social impact. Interest rates can be fixed (they do not change over the course of the loan) or variable / floating (tied to federal interest rates or other variable rates). Interest payments can be partially or completely deferred until the loan matures.

MEZZANINE DEBT A secondary debt position that is repaid after senior debt in the event of a liquidation. This is more risky than senior debt, and acts more like equity with deferred payments on the loan. Often called “mezz debt.”

PERMANENT LOAN A long-term loan used to pay off the shorter construction loan and service the residential development during operations. Because this loan is backed by a real asset (the completed development) it has lower risk and a lower interest rate.

PRO FORMA ANALYSIS A method of estimating or projecting a project’s revenue, costs, and returns. A pro forma model compares the development’s funding sources to

its uses and end value, and it is used to determine whether a proposed development is financially feasible.

SUBSIDIES Incentives, generally provided by a government, that help offset a cost. As it relates to housing, subsidies can be provided in the form of direct contributions of cash to a project, a discount on land, the reduction or waiver of fees (see system development charges below), or property tax abatements.

4 Economics Terms

MARKET FAILURE An economic situation in which a free market does not result in an efficient allocation of resources. Market actors (e.g., consumers, producers) alone are not able to provide goods and services in a manner that is economically efficient, thus market failures result in a loss of economic value.

PREFERENCE Economically, a preference reflects how individuals rank and value different options amongst available choices. It does not connote desire or intent to purchase.

SHORTAGE The underproduction of goods or services due to demand exceeding supply. It results in higher prices of the goods or services.

WILLINGNESS TO PAY Economically, willingness to pay connotes the monetary value the market places on a good or services (in this case housing), which is derived based on the sum of individual preferences. Colloquially, 'willingness' refers to a simple choice and implies an ability to pay, but in economics ability to pay is separate and is informed by a household budget.