McKINLEY RESEARCH
GROUP, LLC

Formerly McDowell Group

MANUFACTURED HOUSING COMMUNITIES

Assessment and Feasibility Study

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PREPARED FOR:

Municipality of Anchorage

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Executive Summary

Manufactured housing communities (MHCs) have historically been a part of the housing market that allows lower income individuals to own property and begin building equity. In Anchorage, and nationally, a backlash against MHCs began in the 1980s and centered around the often-poor maintenance of these neighborhoods, the concentration of poverty, and the unsightliness of communities that were not built to the same standards as other subdivisions. Regulations to make the construction of MHCs more difficult have proliferated, and in Anchorage these regulations were written into the revised Title 21 Housing Code passed by the Anchorage Assembly in 2012.

No new MHCs have been built in Anchorage since 1990, and the development of individual manufactured houses, such as for use on individual lots, has decreased from over 128 per year in 2014 to just three in 2023. Manufactured houses have to meet the standards of the US Department of Housing and Urban Development (HUD Code), as well as local building codes, which often adds layers of complexity and expense to building new MHCs that are prohibitively expensive for developers and potential buyers.

Zoning restrictions play a significant role in the decline of MHC development. Additional macroeconomic factors such as the COVID-19 pandemic and subsequent challenges in the supply chain have pushed up prices for materials and shipping. The last remaining local manufacturer of prefabricated houses in Anchorage closed in 2022.

This report analyzes the financial feasibility of building a new MHC on an undeveloped midtown Anchorage parcel, to determine what the major cost and construction barriers are and what the final sale price of units would be to recoup these costs. This study finds four main barriers:

- **Lot Availability**: Land that can legally be developed into an MHC is limited.
- **Shipping**: Costs to bring manufactured houses up to Alaska via barge add more than 40% to the total cost of each unit.
- **Infrastructure:** Local requirements that developers bear the cost of installing or extending water and wastewater, road, and other utility infrastructure is cost prohibitive.
- **Market:** New MHCs would likely not be able to provide housing units for sale at rates much below what is currently available in the condominium and townhouse market.

The feasibility analysis conducted in this report finds that the unit sale price for a manufactured home in a newly developed MHC would be between $226,000 and $332,000, based on the cost of purchasing and transporting units to Anchorage and an assumed developer profit of 15%.

Land lease costs, for manufactured home owners to rent their space, as well as HOA or service fees, would add between $600 and $1,500 per month to the cost of ownership.

Beyond the financial feasibility of purchasing a new manufactured home for residents, development of a new MHC in Anchorage is likely prohibitive for builders. A landowner wanting to develop an MHC and lease the spaces to homeowners faces up-front capital costs of between $6 million and $8 million. The market rate for space rental in Anchorage, which is $800 per month on the high end, would mean the developer does not earn enough annual lease revenue to pay debt burden associated with initial land purchase. Land lease rates would need to be $1,310 per unit per month to generate sufficient revenue to pay this debt burden.

Background and Methodology

Nationally, manufactured houses were first built and marketed in the immediate post-war era of the late 1940s and 1950s to address a housing shortage. As service members returned from abroad, and many married and had children, cities no longer had the appropriate mix of housing to provide to growing families. The development of suburbs, the growing popularity of cars and ensuing lengthening of standard commutes, increased the opportunities for where, and what kind of housing could be built for American homebuyers.

Manufactured housing communities (MHCs) filled an important part of the sector by providing affordable homeownership to lower income Americans. The first manufactured homes were mobile homes, which sat on four- or eight-wheels and could be hooked to the back of a truck and moved to new locations if necessary. Lower income Americans were drawn to this type of home as it allowed flexibility to travel, and to leave a specific MHC if the rent for their space increased or the neighborhood was no longer desirable.

Mobile homes provided an avenue for homeownership for hundreds of thousands of Americans in the post-war decades. By the 1970s, however, poor construction standards and landlord/tenant conflict created a backlash to what were called mobile home parks or trailer parks. Additionally, natural disasters like hurricanes and tornadoes often destroyed MHCs completely if they hit those areas, and insurance companies were increasingly unwilling to insure them. In 1976, the U.S. Department of Housing and Urban Development issued its first standards for construction of manufactured homes, requiring concrete foundations, 2"x 6" construction, and higher quality building materials.

The history of MHCs in Anchorage roughly followed the national trends, with mobile homes becoming popular in the homestead days after the war, and community mobile home parks developing more broadly across the 1960s and 1970s. The new HUD standards allowed developers to take advantage of the oil-and-housing boom of the late 70s and early 80s to proliferate MHCs in the Anchorage bowl, particularly in Spenard, Midtown, and East Anchorage. Developers continued to own the land that MHCs were built upon and charged land leases for the spaces in each park. However, as was common in the Lower 48, maintenance of these communities was not consistent: poor road construction at the outset meant problems with potholes, drainage, and snow removal in the winter and spring and lack of investment gradually eroded the curb appeal of individual units as well as the entire community.

The rewrite of Title 21, Anchorage's building code, began in 2009 and was completed in 2012. Incorporating years of public input, including frustration with poorly maintained MHCs, the final modified Title 21 added provisions making it exceedingly difficult to build new MHCs. The zoning required to build an MHC is complicated and overlapping, such that few vacant lots even

qualify for this kind of development. The density provisions also prevented more than four units per acre on any development, which precludes any efficient construction of an MHC.

Since 2014, few manufactured homes have been built or shipped to Anchorage. From a high of 128 in that year, only 3 units were built in 2023. The code rewrite effectively prevented the construction of new neighborhoods with manufactured homes, and all new manufactured homes sold in Anchorage since 2014 have either been put on individual lots (such as on a designated R-5 lot) or were added to an existing MHC as a replacement unit. Developers consistently say that building a new MHC is Anchorage is both cost and code prohibitive, and that it makes more financial sense to build single family homes.

The Municipality of Anchorage Long-Range Planning Department contracted with McKinley Research Group to determine the financial feasibility of developing a new MHC in Anchorage. This report evaluates the feasibility from the perspective of both a potential homebuyer in Anchorage, wanting to purchase a manufactured home, and a developer buying land and creating a new MHC on a two-acre midtown Anchorage parcel. This report considers the opportunity for new MHCs to provide low-income housing for residents looking to enter the homeownership ladder, as well as middle-income housing options in communities that have more amenities, higher quality construction, and more expensive purchase prices and land leases. Some manufactured homes may be closer in both price and quality to new construction condos or townhouses, while providing separate units for owners that do not share walls with neighbors. MHCs in many Lower 48 communities have added amenities such as pools, playgrounds, indoor community centers, walking and biking paths, and small golf courses that increase the desirability of these neighborhoods and cater towards more middle-income families.

Methodology

MRG conducted 14 executive interviews with subject matter experts in manufactured housing, shipping, infrastructure, and housing development both in and out of state. Interviews included the following organizations and agencies:

- Alaska Manufactured Housing Association
- Anchorage Water and Wastewater Utility
- Anchorage Health Department
- Anchorage Traffic Department
- Carey Homes
- Coach Corral
- Cook Inlet Housing Authority
- Fisher Investments
- Forest Park Trailer Court Homeowners Association
- Homes Direct
- Heritage Homes
- Northwest Housing Association
- Samson Tug and Barge
- Tote Maritime

In addition to these interviews, MRG identified a manufactured housing community in Buffalo, New York that was used in assessing the economic feasibility of constructing new MHCs in communities with challenging climates and heavy wind and snow loads. While Buffalo does not experience the same high shipping costs in Anchorage, the similar climate characteristics allowed for a reasonable estimate of individual housing unit costs that was used in this analysis.

Existing Conditions

Manufactured housing has long been considered "affordable housing," meaning it meets a federal definition that the total monthly price of housing is below 30% of household income, for households making 80% or less of the areawide median income (AMI). The table below shows the "affordable" housing cost threshold for Anchorage households with various levels of income. The AMI for Anchorage is $99,400, and 80% AMI is $79,520. Anchorage households with annual income at 80% AMI must spend less than $1,600 per month on housing (excluding utilities and taxes) to be considered not "cost-burdened".

Table 1. Affordable Housing Thresholds, Anchorage, 2023

	Annual Household Income	Maximum Monthly Housing Costs	Maximum Cost of Affordable Home
80% Areawide Median Income	$79,520	$1,660	$264,800
100% Areawide Median Income	$99,400	$2,070	$331,000
120% Areawide Median Income	$119,280	$2,490	$397,200
150% Areawide Median Income	$149,100	$3,106	$429,000

Sources: U.S. Department of Housing and Urban Development, U.S. Census Bureau American Community Survey 2021 5-year Estimates, McKinley Research Group calculations.
Note: The maximum housing cost calculation uses a cost-burdened threshold of 25%. This is adjusted down from HUD's 30% definition to account for additional housing-related expenses outside of mortgage or rent payments, including utilities and taxes. The maximum cost of an attainable home was calculated assuming a 30-year mortgage, a down payment of 5%, and an interest rate of 6.9% (current rate as of 8/1/2024).

Overall home prices in Anchorage have accelerated so rapidly in the past five years that the availability of affordable housing, even for moderate income households, has shrunk. As of 2023, the median single-family home price in Anchorage was $486,000.

Based on the affordable home thresholds in Table 1, single-family home prices in Anchorage do not meet affordable housing standard even for households making 150% of the areawide median income, long considered a "middle income" threshold.

The median sales price of a home that might be comparable to a manufactured home (e.g. a two-bedroom condo that is not new construction), was $210,000 in 2023. By this definition, the average sales price of an existing manufactured home in Anchorage does qualify as an affordable home for households earning less than 150% AMI.

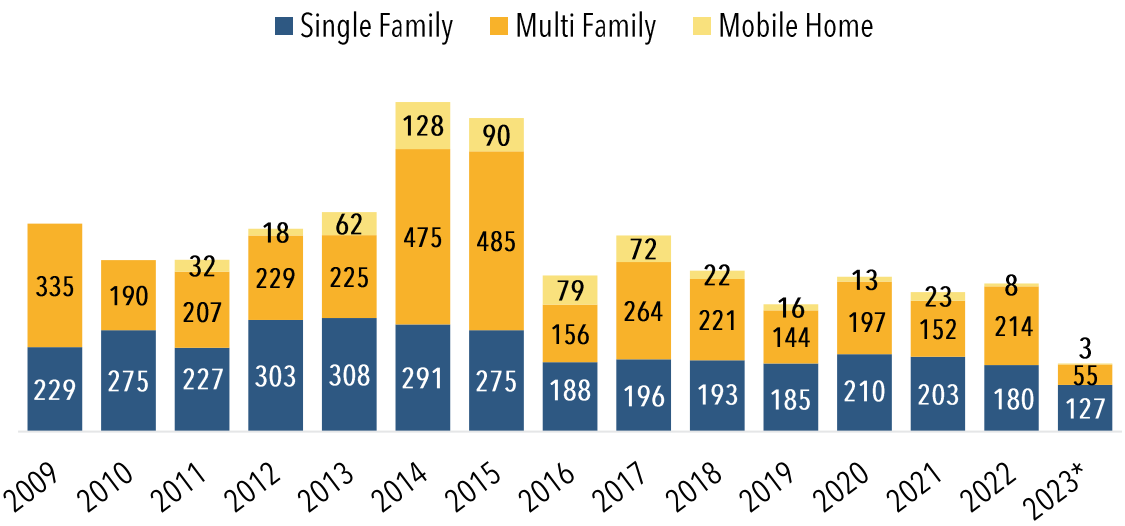
This section describes the current manufactured housing communities in Anchorage, current sales prices, and policies and challenges related to MHC development within this context of potential demand for new manufactured housing units.

Historical Context

Overall, residential construction activity in Anchorage has trended downward over the last 15 years. After a short surge in 2014 and 2015 driven by increases in multi-family and mobile home unit construction, the number of all housing units constructed declined rapidly. 2023 saw the lowest residential construction activity on record.

Very few mobile homes units have been added in Anchorage within the last 15 years. Similar to overall residential construction trends, the number of mobile homes constructed in Anchorage peaked in 2014 (128 units) and has declined rapidly after this peak. In 2022, only 8 mobile homes were added in Anchorage.

Figure 1. Total Residential Units Constructed by Type of Home, 2009 – 2023, Municipality of Anchorage

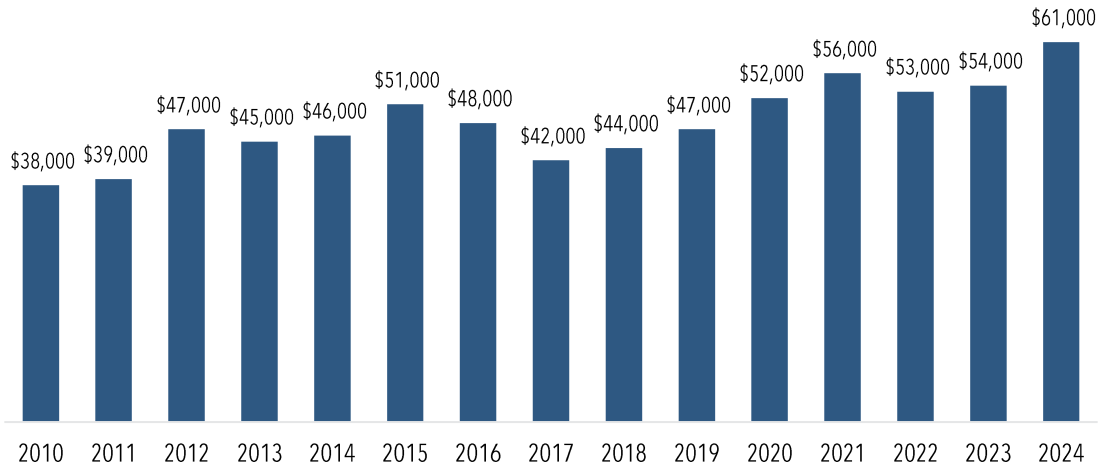


Source: Alaska Housing Finance Authority
*2023 numbers are preliminary

The average price of units within Anchorage MHCs has increased by 60% over the last 15 years. In 2010, the average price of a mobile home unit in Anchorage was $38,000, gradually increasing to a high of $61,000 in 2024.

Year-to-year variations exist in average price data due to the low number of mobile home units sold in Anchorage. Fewer than 20 units were sold within Anchorage MHCs in nine of the 15 years recorded in the figure below.

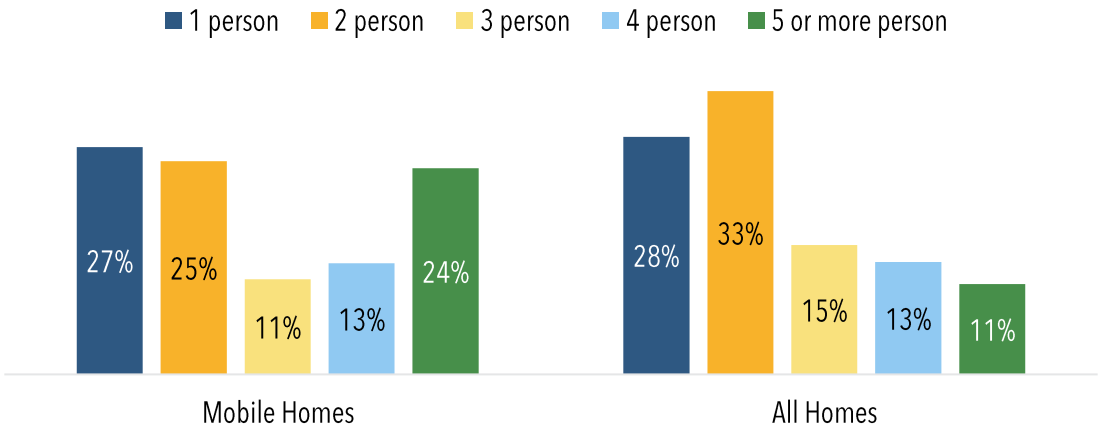
Figure 2. Average Sale Price of Mobile Home Units within MHCs, 2010 – 2024, Municipality of Anchorage



Source: Alaska Multiple Listing Service

Mobile homes in Anchorage have a higher average number of occupants than other home types. Nearly one-quarter (24%) of mobile homes in Anchorage have more than 5 occupants living in the unit. Comparatively, one in ten (10%) of all occupied units in Anchorage have more than 5 occupants.

Figure 3. Percentage of Anchorage Housing Units by Household Size and Type of Unit, 2022



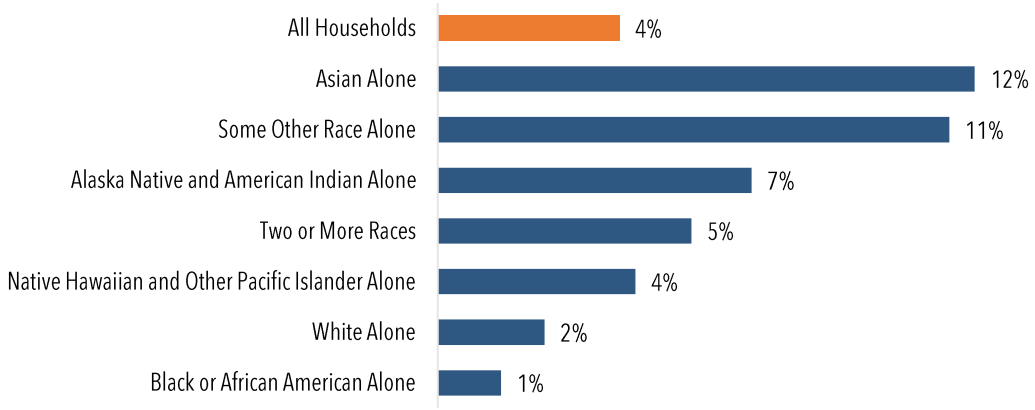
Source: U.S. Census Bureau, American Community Survey 2022 5-year Estimates.
Note: Data for mobile home households includes a small number of households living in boats, RVs, and vans.

The vacancy rate for mobile home units in Anchorage is higher than overall vacancy rates. The vacancy rate for all units in Anchorage was 10% in 2022, while the rate for mobile home units was 14%[1]. The high vacancy rate is likely due to poor habitation conditions in older mobile homes that have not been torn down or brought up to code.

The majority of occupied mobile homes in Anchorage are owner-occupied, and the rate of owner occupancy is higher for mobile homes compared to all occupied units in Anchorage. As of 2022, the U.S. Census Bureau estimated that three of four (77%) mobile homes were owner-occupied, and one-quarter were renter-occupied. Comparatively, 66% of all units in Anchorage are owner-occupied.

In 2022, 4% of all households in Anchorage lived in a mobile home. The proportion of households living in mobile homes varies significantly by the race and ethnicity of householders. Householders of Asian descent have the highest proportion of mobile home occupancy (12%), followed by householders of 'all other races' (11%). Householders of Black or African American descent have the lowest proportion of mobile home occupancy, at 1%.

Figure 4. Mobile Home Occupancy by Race and Ethnicity of Householder, 2022

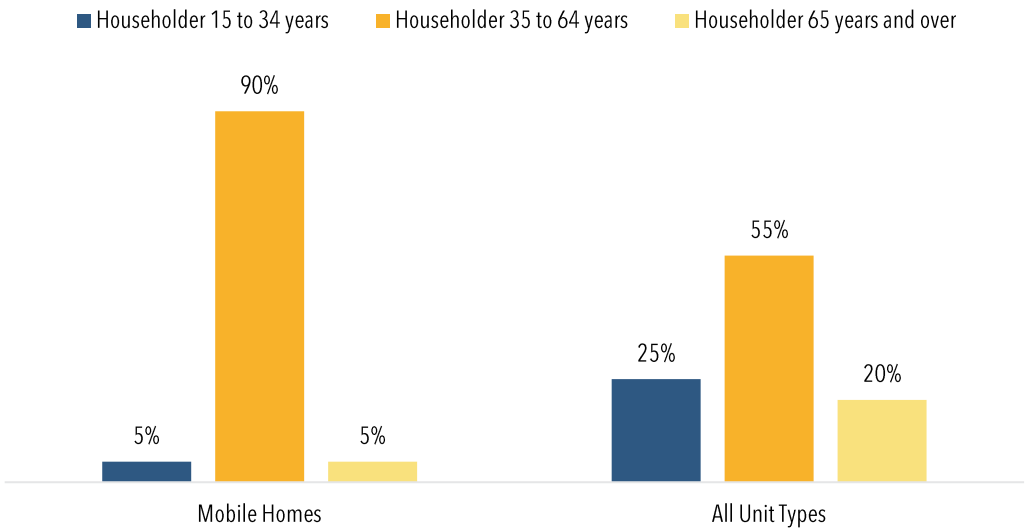


Source: U.S. Census Bureau, American Community Survey 2022 5-year Estimates.

Householders under 35 and householders over 65 are significantly underrepresented in mobile home communities in Anchorage. Of all householders living in mobile homes, 5% are over 65, and 5% are under 35. Comparatively, householders over 65 make up 20% of all householders in Anchorage, and householders under 35 make up 25% of total householders.

[1] Source: U.S. Census Bureau, American Community Survey 2022 5-year Estimates.
Note: Data for mobile home households includes a small number of households living in boats, RVs, and vans.

Figure 5. Percentage of Occupied Anchorage Mobile Homes by Age of Householder, 2022



Source: U.S. Census Bureau, American Community Survey 2022 5-year Estimates.
Note: Data for mobile home households includes a small number of households living in boats, RVs, and vans.

Current MHCs in Anchorage

A total of 38 MHCs exist within the Municipality of Anchorage, totaling 4,600 units. Twelve of these communities contain over 100 units and are defined as large MHCs. Units within large MHCs make up 80% of total mobile home units in Anchorage.

Most large MHCs are in East Anchorage, though the largest MHC in the Municipality, Dimond Estates, is in South Anchorage near Dimond Boulevard and Minnesota Drive. The average build year of units in large MHCs in Anchorage is 1977, and all MHCs were built prior to 1990. A total of 255 units within large MHCs were listed for sale within the past 15 years, equating to an average of 17 units per year. Within the last five years, units within large MHCs sold for an average of $54,400.

Table 2. Existing Large Anchorage MHC Overview

MHC	Neighborhood/ Area	Zone	Number of Units	Avg. Build Year	Avg. Square Feet	Total Listings, 2010-2024	5-year Avg. Sale Price
Dimond Estates	Dimond	R2M	522	1974	1,000	36	$63,200
Four Seasons	East	R2M	367	1976	1,100	<10	NA
Glen Caren	East	R2A	478	1986	1,100	43	$65,800
Glenn Muldoon	East	R4	128	1975	1,000	NA	NA
Golden Nugget	East	R3	163	1977	900	11	$45,300
Malaspina	East	R3	129	1977	1,000	<10	$40,600
Manoog's Isle	Lake Otis	R2M	340	1975	1,000	36	$51,600
Mayflower	East	R3	210	1982	1,100	13	$59,500
Penland Park	Airport Heights	D2	389	1977	1,000	28	$54,100
Rangeview	East	R3	305	1969	1,000	25	$52,600
Riviera Terrace	East	R2M	192	1971	800	11	$21,500
Southwood	South	R2A	402	1981	1,100	44	$63,100

Source: Municipality of Anchorage, Alaska Multiple Listing Service.
Note: Large MHCs are defined as those with over 100 units.

In addition to the large MHCs listed above, there are 26 small- to mid-size MHCs located within Anchorage. These MHCs account for 972 units, 20% of the total stock of mobile home units in the Municipality.

On average, small- to mid-size MHCs are older than large MHCs, with an average build year of 1966. They also differ from large MHCs in their distribution: small- to mid-size MHCs are distributed throughout Anchorage to a greater extent than larger MHCs, which are primarily located within East Anchorage.

The sales volume of units within small- to mid-size MHCs is much lower than the sales volume of units within larger MHCs. Between 2019 and 2023, an average of 5 units within small- to mid-size MHCs were sold annually. The average price of small- to mid-size MHC units sold within the last 5 years ($41,200) was 24% lower than the average price of large MHC units sold ($54,400). In this context, an existing manufactured home represents a comparatively more affordable opportunity than the median price of other homes on the market in Anchorage.

New Development Opportunities

The Anchorage municipal building code defines a manufactured housing community as a conditional use and requires an MHC to be a minimum of two acres in size with a maximum

density of eight units per acre.[2] The code also prohibits manufactured houses that are affixed to a permanent foundation if they are within an MHC; technically, manufactured houses can be placed in neighborhoods that are zoned for single-family detached housing if they are affixed to a permanent foundation, though this type of addition to single-family neighborhoods is uncommon.

The revised Title 21, Chapter 5, lays out the conditions for building an MHC in Anchorage after 2014. All MHCs built prior to then are grandfathered into their existing conditions and do not have to meet these standards. Consequently, redevelopment of older MHCs is a costly proposition, as the entire development would have to conform to the new standards. The new requirements within Title 21 include:

- **Lower density**: An MHC cannot have more than eight units per acre (the average existing MHC has nine units per acre).
- **Increased space between units**: A minimum of 15 feet must be provided between units on all sides (there were no previous space requirements).
- **Enhanced road development requirements**: MHCs must have fully paved roads (asphalt or concrete) to a minimum width of 33 feet; streets that service more than 100 units must be a minimum of 50 feet wide; and all other streets must have a width of 40 feet.
- **Landscaping:** MHCs are now subject to landscaping requirements, with buffer trees or plants between all units and between the MHC and the adjacent lots.

[2] Robinson, Tyler, Preservation or Redevelopment: Options, Conditions, and Risks Facing Mobile Home Parks in Anchorage, AK and the Case for Affordable Housing, Municipality of Anchorage Planning Department, July 2009

As existing MHCs in Anchorage age, some unit owners have looked to relocate to other parks where they could either save on monthly land lease rates or have more amenities. The majority of MHC units were built before the adoption of the 1976 HUD code, making them poor candidates for relocation to new parks because most landowners will not accept units that are not up to code. Even if relocation is allowed into a new neighborhood, the costs to disassemble the existing building and move it can be over $10,000, which is prohibitive for many families. Considering that many of these units are valued at less than $20,000, moving the unit does not make financial sense for those looking for a new housing location.

Figure 6. Anchorage Parcels Meeting MHC Development Criteria

Source: Municipality of Anchorage and OpenStreetMap contributors.

The Title 21 rewrite redefined available land for MHCs. In addition to broad-based zoning restrictions, individual parcels have been "blacklisted" and specific exclusions given to prevent MHCs from being built. The map at left shows the parcels currently available for development, though some of these parcels may have additional unknown restrictions that prevent them from being candidates for MHC development. As the map indicates, there are only 21 parcels that meet the requirements of being at least two acres with adequate barriers to adjoining neighborhoods and appropriate zoning requirements. Most are privately owned, though eight are owned by the Alaska Mental Health Trust Authority, the State of Alaska, or Municipal entities.

Policies to Encourage MHC Development

In 2023, the federal government launched a $225 million grant program to incentivize MHC development. The grants would be made available to developers that commit to creating new MHCs with units that meet the federal definition of affordability in cities that are experiencing an acute lack of affordable housing. To date, no grants have been made under this program.

In September 2024, the U.S. Department of Housing and Urban Development (HUD) announced updates to the Federal Manufactured Home and Safety Standards intended to reduce barriers

to new MHC development.[3] The Manufactured Housing Institute (MHI) supported the updated code as it is likely to reduce the overall costs of development and encourage new MHCs across the country. Housing advocates believe these long-awaited changes were badly needed at a time when home construction has declined to its lowest level since the global financial crisis in 2009.

Some communities have experimented with providing a public subsidy MHC developer infrastructure costs. This can include low-interest loans for infrastructure, or the city paying directly for some portion of water, wastewater, electric or gas development. Even with these programs, however, the sales prices of MHCs continue to increase, as the cost of land, interest rates, and other market forces impact all housing developments.

Another option for communities to consider is allowing development of MHCs on city-owned land. Anchorage could allow this through the Anchorage Community Development Authority (ACDA) or could partner with state entities such as a Alaska Mental Health Trust Authority, which owns a significant amount of buildable land in the Municipality. If the land costs are not included in the capital requirements for the developer, it would allow the developer to recoup costs more quickly and keep the sales prices and land lease rates for the units low.

Alaska Specific Challenges

Shipping

No prefabricated home manufacturers currently operate in Alaska. To develop a new manufactured housing community, a developer must have units shipped up from manufacturers in the Lower 48. Even at the closest locations, in Western Washington state, shipping adds tens of thousands of dollars to the overall cost of each unit. Shipping companies interviewed for this analysis were unable to commit to bulk shipping rates for units if a developer were to ship many units simultaneously.

Climate

Manufactured homes in Alaska have to withstand higher levels of wind and snow load than those that are made in or shipped to other areas. The challenging weather in Anchorage, where total snow accumulation can be more than ten feet in some winters, means that manufactured homes need to have pitched roofs instead of flat roofs, or heavier buttressing of roof beams to prevent collapse under weight. Wind loads are also a concern, since parts of the Anchorage bowl can be subject to winds of 60 miles per hour or more in winter. Coupled with heavy snow, homes

[3] https://www.manufacturedhousing.org/news/hud-code-updates/

must be built to a higher standard so that they do not collapse, suffer major roof or wall damage, or broken windows.

Most manufactured homes are not built to these standards. To meet code and safety requirements, an Anchorage developer would need manufactured houses to be build to custom standards, which adds as much as 20% to the total cost of each unit.

Warranty

Because there are no home manufacturers in Alaska, homes that are shipped to Alaska are subject to warranties from companies that are located thousands of miles away. When elements of the house require repair or replacement, a warranty specialist must be sent to Alaska from the Lower 48. This is expensive for the manufacturer, who is financially responsible for any home appliances that need repair during the warranty period (e.g. water heater, radiator, roof), and consequently few manufacturers are willing to sell to Alaskan customers.

Feasibility Analysis

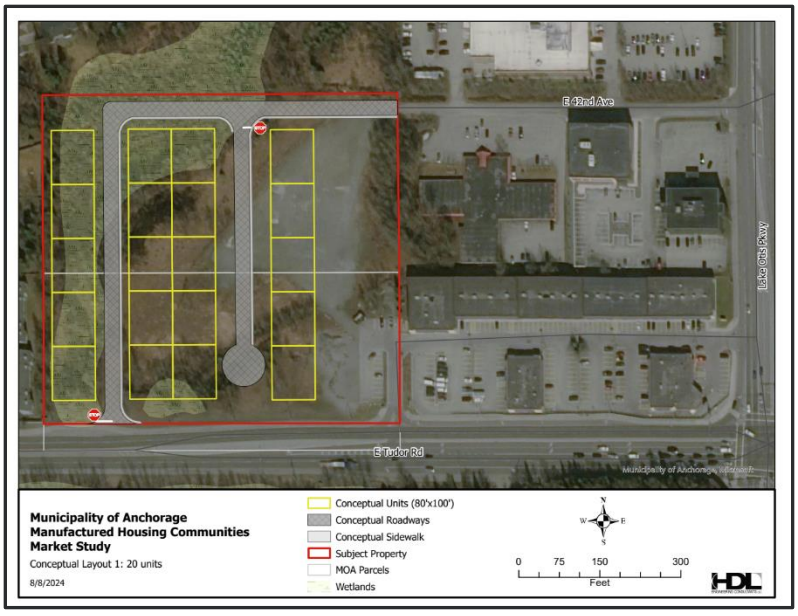
This section describes the financial feasibility of constructing and operating a new MHC in Anchorage based on the following site description.

Site Description

One of the twelve Anchorage parcels meeting the criteria for new MHC development was selected to assist the study team in developing construction and operating cost estimates.

The site chosen is near the intersection of Lake Otis and Tudor, west of Lake Otis and the strip mall on the northwest corner of the intersection. It is a privately owned lot that meets all zoning requirements for development of an MHC. It abuts Tudor Road, a main arterial road through Anchorage, and would also have access to 42nd Avenue on the northeast end of the neighborhood. It is important to note, however, that actual development of this property would be more complicated than described below given its location along the Fish Creek watershed.

Figure 7. Example 20-Unit MHC Site Plan



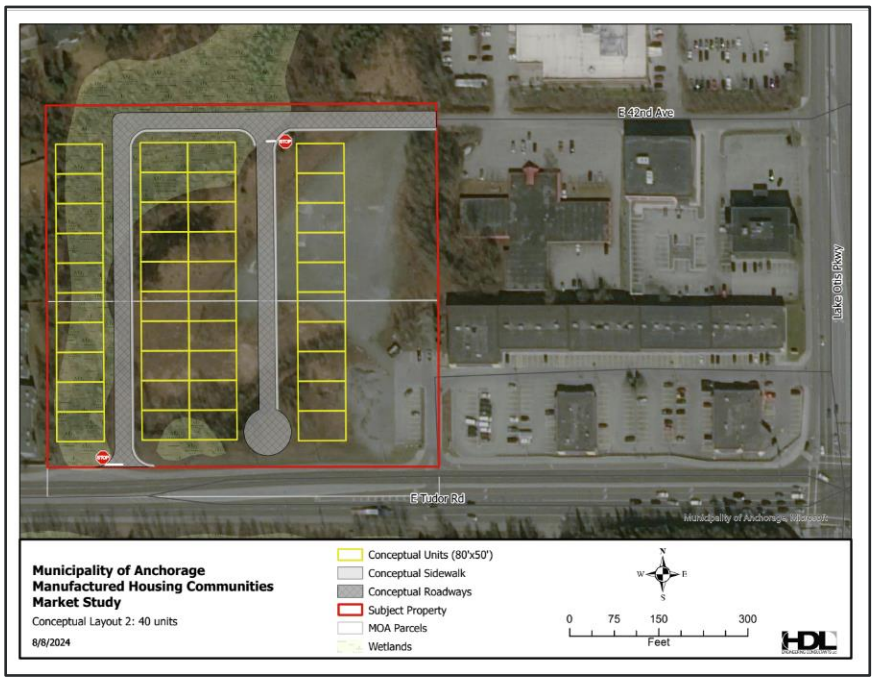
Source: HDL Engineering

Additional costs not estimated in this feasibility analysis could include environmental review and potential mitigation programs to protect the watershed and avoid building directly on the marshy land around the creek.

The site plan shown at left highlights the parcel with a red line and shows what the development would look like if 20 manufactured housing units were put there. This site plan includes road access, one-sided sidewalk, and greenspace on the east side of the lot for development into a park, playground, or other community amenity. Each lot is assumed to be 80' x 100' with mobile homes units at a maximum size of 27' x 90', or 2,430 square feet.

The site plan below shows the same parcel with 40 manufactured housing units on it. The lot for each unit would be smaller, at 80' x 50', and units would still be assumed to be a maximum of 27' x 90'.

Figure 8. Example 40-Unit Site Plan



Source: HDL Engineering

Development Costs

Mobile Home Unit Purchase and Shipping Costs

There are currently no manufacturers of prefabricated homes in Alaska. The last remaining manufacturer, Carey Homes, went out of business in 2022 after supply chain and shipping challenges that lingered during the COVID-19 pandemic.

Consequently, developing a new MHC requires buying units from out of state and having them shipped, by container vessel, to Anchorage. Some individuals do currently buy housing units from out of state and ship them up this way, in particular, rural school districts that have in recent years used manufactured houses to provide housing for critical workers, such as teachers and nurses.

Interviews with housing manufacturers in the Pacific Northwest provided the cost estimates in the table below. The average unit cost of $85,000 represents an average of 2-3 bedroom homes with approximately 1,800 square feet. A developer may choose to purchase all identical homes, or select a variety of floor plans, but the most popular homes sold for these kinds of

developments average $85,000 per unit. A 20-unit or 40-unit development would not receive bulk pricing, so the cost estimates are based on quantity alone.

Table 1. Manufactured Housing Unit Costs

Per Unit Cost	20 Units	40 Units
$85,000	$1,700,000	$3,400,000

Each unit will have to be shipped, and, again, no bulk pricing is likely to be available. Maritime shipping companies interviewed for this study provided $25,000 as an average shipping cost, determined by both square footage and weight, to bring manufactured home up from the Port of Tacoma to Anchorage. An Anchorage developer may find additional costs associated with this, such as trucking each unit to the final lot site.

Table 2. Manufactured Housing Shipping Costs

Per Unit Cost	20 Units	40 Units
$25,000	$400,000	$800,000

Site Development Costs

Developing an MHC with the infrastructure described above requires significant site preparation work. Site prep, including earthworks, sub-surface infrastructure development (water, sewer, gas and electric), surface infrastructure development (roads, sidewalks, lighting), and amenities (parks, common spaces) are outlined in the following table.

Table 3. Site Prep for Lot Development

Category	Cost
Earthworks	$120,000
Water and wastewater	$1,050,000
Electric and gas	$200,000
Roads, sidewalks, lighting	$1,800,000
Total without park	**$3,170,000**
Park / playground	$500,000
Total with park	***$3,670,000***

WATER AND WASTEWATER INFRASTRUCTURE

The costs for connecting existing water and wastewater pipe to the lot and to individual units is based on an estimate of $1,000 per linear foot provided by AWWU. The approximate total length of pipe needed is 600 feet of main pipe and 200 feet of connector pipe, plus 50 feet of service pipe for each housing unit to connect it to the main. AWWU's cost-to-build is higher per foot than a private developer. If a developer had the capacity to develop water and wastewater infrastructure independently, the price would likely be $400-$800 per linear foot, bringing costs down substantially. However, water and wastewater service is required in any new development,

and the cost is borne by the developer, not the municipality. Ultimately, the entity that builds the water infrastructure is required to maintain the infrastructure. If it is built by AWWU, the housing unit owners will become utility customers and pay the $119 per month of service fees directly to AWWU. If the water infrastructure is built by the developer, who ultimately continues to own the land the houses are placed on, the monthly water fee would be added to the cost of the land lease, or to HOA fees.

ELECTRICITY AND GAS INFRASTRUCTURE

Electric and gas utilities are cheaper to connect and install compared to water and wastewater infrastructure because they do not need to be placed as deep as water pipes. The combined estimate for the developer to connect electric and gas to each unit is $200,000 total.

SURFACE INFRASTRUCTURE

The developer is also responsible for building the road and any surface infrastructure that exists on the property. Code requirements include at least one sidewalk on a new residential road (though it is possible a development of this kind would require two sidewalks). Including road, curb, drain, and sidewalk, plus the mandatory lighting every 20 feet on the residential block, the total cost for this non-utility infrastructure is estimated at $1,800,000.

These site development estimates are based on strong assumptions about several necessary development conditions, including cooperation from the State of Alaska with regards to construction of the new road connecting to Tudor Road, which is state-owned and maintained. The State of Alaska Department of Transportation and Public Facilities can, and often does, require multiple additional traffic, environmental, and safety studies which can add significantly to road development time.

After development, the cost to maintain the road to Municipal standards (e.g. ensure proper drainage, repair potholes promptly, and remove snow within three days of a snowfall event) will be borne by the property owner. Assuming the developer acts as landlord, this cost will be passed on to residents in either their land lease price or HOA fees.

OTHER AMENITIES

Many new manufactured housing developments outside of Alaska include common amenities for residents, such as park space, indoor gathering space, and even pools and golf courses at larger developments in warmer climates. The addition of other public amenities may be important to successful development of a new MHC due to poor public perceptions of past developments.

The simplest common space to provide is a playground, because it does not require any additional buildings or utilities. A park and playground on the east side of this lot, serving as a barrier between the houses and the commercial properties at the Lake Otis & Tudor strip mall,

is included in this estimate. With most of the area dedicated to greenspace, a small 200' by 200' playground, and a small, covered picnic area, this development is estimated to cost the developer a total of $500,000.

Table 4. Total New MHC Development Costs

Category	Cost (20 Units)	Cost (40 Units)
Unit Costs	$1,700,000	$3,400,000
Shipping	$400,000	$800,000
Site Preparation	$3,670,000	$3,670,000
Total Development Costs with Park	**$5,770,000**	**$7,870,000**

Sales Prices

The sales price for each unit will be based on the cost to develop, plus an estimated 15% developer profit. With the costs estimated above including the housing units, shipping, and all site prep and infrastructure development, the price for each unit is in the table below.

Table 5. Manufactured Home Sales Price per Unit

Category	Cost (20 Units)	Cost (40 Units)
Unit Costs	$85,000	$85,000
Shipping	$20,000	$20,000
Site Preparation	$183,500	$91,750
Development Costs per Unit	$288,500	$196,750
Mobile Home Purchase Price per Unit	**$331,775**	**$226,263**

A 15% profit may be conservative compared to rates needed to induce investment in the current financial environment, given high interest rates, high supply costs, and continued strain on the supply chain. The development costs also do not include any land costs, or debt service associated with land purchased, therefore the unit sales price may be higher than the estimates provided above.

Operating Costs and Monthly Fees

In addition to the sales price, owners of manufactured homes usually pay a land lease fee for the "spot" where their home is located. The lease is paid to the landlord, or, in some cases, to a cooperative of homeowners in the development that serve as a homeowner's association (HOA). The monthly fees must pay for any landowner costs for example, debt burden associated with initial land purchase as well as the operating costs to keep the community running smoothly and looking nice. This can include anything from landscaping, snow removal, insurance, park and playground maintenance, to even private security in some higher-end MHCs.

Utilities can either be paid by each individual household based on use or can be wrapped into a total monthly fee paid to the landlord or HOA. This report assumes that all costs are bundled and paid directly to one party. If a co-op model is deployed, a higher fee is required to cover the administrative costs of operating the HOA, as usually there are bank and other fees that the HOA must pay.

Table 6. Monthly MCH Operating Costs

Category	Monthly Cost (HOA)	Monthly Cost (Landlord)
Water and wastewater	$120	$120
Electric	$90	$90
Gas	$100	$100
Landscaping	$50	$50
Snow Removal	$50	$50
Road, sidewalk, lighting maintenance	$50	$50
Public space maintenance	$50	$50
Insurance	$75	$75
Property Tax*	$320	$320
HOA Admin Fee	$25	--
HOA Reserves	$25	--
Total per unit	**$955**	**$905**

*Property tax includes the housing unit only, assessed at purchase price, at a mill rate of 17.

While this reflects the base costs of operating the MHC up to required Municipal standards, as well as producing a reserve account for the HOA of $6,000 to $12,000 annually, a landlord or HOA may choose to charge higher lease rates to cover unexpected costs. It is standard for HOAs to develop a reserve account to fund unexpected maintenance or repairs, especially in cases of natural disasters. A landlord may also be looking to offset the costs of owning the land (and debt service), and land lease could be significantly higher in that case.

Lease Revenue and Debt Burden

It is difficult to predict the land lease rate for a new MHC. The factors involved in what a landlord would charge include the cost of the land, when it was purchased, whether it was purchased using debt, and the terms of the debt finance. Market rates for MHC space lease in Anchorage range between $500 to $800 per month. If new construction with attractive community amenities would make a new MHC a desirable location for families, a landowner leasing the spaces could expect to charge $800 per month per unit. In a 20-unit MHC this would yield $192,000 annually to offset the initial capital costs of land and construction, not including the above usage fees that would be charged to residents for utilities and other services. In a 40-unit MHC this monthly

space rental fee would yield $384,000. Revenue paid to the landowner based on lease rental is described in the table below.

Table 7. Total Landowner Lease Revenue

Category	20 Unit	40 Unit
Land lease	$800	$800
Monthly Total	**$16,000**	**$32,000**
Annual Total	**$192,000**	**$384,000**

This analysis assumes the developer would finance the land purchase using a traditional bank loan. The following loan assumptions were used in this analysis of monthly debt costs.

Table 8. Land Purchases Loan Term Assumptions

Factor	Assumption
Total Land Cost	$5,000,000
Down payment	$1,000,000 (20%)
Total Loan Amount	$4,000,000
Interest Rate	10%
Loan Duration	20 years

The monthly cost of repaying debt associated with the initial land purchase exceeds the expected lease revenue. To cover these costs on a 20-year debt repayment schedule, the space rent for each unit of the 40-unit MHC would have to be more than 50% higher, or $1,310 per month.

Table 9. Monthly Landowner Lease Revenue and Debt Burden

Category	20 Unit	40 Unit
Monthly Lease Revenue	$16,000	$32,000
Monthly Debt Payment	$48,251	$48,251
Net Profit (Loss)	**($32,251)**	**($16,251)**

It is important to note that this repayment schedule does not include major improvements to the land over time. The services fees of $905 per month would cover basic maintenance and insurance, but if the developer wanted to build new amenities, or needed to repair infrastructure beyond the scope of monthly maintenance, those costs would be in addition to what is reflected above. The lease and land debt burden make this financially infeasible if the developer has to purchase land, beyond just the affordability to a prospective buyer.

In addition to the purchase price of the land, the landowner would also be responsible for property taxes of approximately $85,000 annually, or $7,083 per month.

Affordability for Homeowners

The most cost-effective way to purchase a manufactured housing unit is through the Alaska Housing Finance Corporation. Through the Tier II manufactured home program (which refers only to manufactured homes that are not on a permanent foundation), borrowers are required to make a minimum 15% down payment, $33,940 based on a purchase price of $226,262.) to qualify for a traditional manufactured home bank loan.[4] The maximum loan amount for Tier II manufactured homes located on land is $175,000 (requiring an even larger down payment than reflected above), and the maximum length of the loan is shorter than traditional home loans: for a new single-wide unit the maximum loan term is 10 years, and for a new double-wide unit the maximum loan term in 14 years. Interest rates on manufactured homes are currently at a minimum of 5.75%, assuming excellent credit for the borrower.

Using these favorable loan terms, a 14-year loan on a new double-wide unit at a sales price of $226,262 and a 15% down payment would require a monthly mortgage payment of $1,670. This is the lowest possible monthly mortgage cost (unless a higher down payment is provided) that a new manufactured home buyer could expect to pay given these loa terms. The table below shows the mortgage, land, and service fees that the homebuyer would expect to pay but does not include other fees such as private mortgage insurance or home insurance on the unit (insurance for the entire community would be included in HOA / usage fees).

Table 10. Total Costs for Homeowners

Category	Homeowner Costs (20 unit)	Homeowner Costs (40 unit)
Monthly mortgage	$2,448	$1,670
Land lease	$800	$800
Service fees	$905	$905
Monthly Total	**$4,153**	**$3,375**
Annual Total	**$49,863**	**$40,500**

Even with the most favorable assumptions, the monthly cost of $3,375 is above the maximum housing cost of $1,660 that would qualify as "affordable" for an Anchorage household earning 80% of the areawide median income. The unit would not meet the definition of "affordable" or "low income" housing.

[4] Alaska Housing Finance Corporation Manufactured Home Loan Program, https://www.ahfc.us/buy/loan-programs/manufactured-home-program

Action Plans

The results of this analysis indicate that development of a new MHC in Anchorage is not currently financially feasible. The resulting available housing units, while representing new construction and new homeownership opportunities, would nevertheless be more expensive than most low- to moderate-income households could afford.

The Municipality of Anchorage can look at actions that have been taken in other communities to incentivize housing that is attainable for lower income residents, as well as ways to change zoning requirements that allow for more financially feasible MHC development.

Infrastructure Subsidy for MHCs

As with traditional housing development, infrastructure creates a heavy financial burden for private developers. Some communities have created infrastructure banks, large financing mechanisms that allow developers to take out low or no-interest loans for the development of water, wastewater, road, sidewalk, lighting, or park infrastructure in new subdivisions. An infrastructure bank in Anchorage could reduce the up-front costs of financing new, larger developments.

Alternatively, the Municipality could consider reducing the amount of infrastructure development that is required by private developers. Currently, developers must pay for the cost of all surface and sub-surface infrastructure development for new neighborhoods. If this cost became a public investment instead, the overall costs of development would decrease. Developers that take advantage of this direct subsidy could be required to sell houses in the new neighborhood for below-market rates to reflect this public investment.

Municipal REIT

The Municipality of Anchorage could create a Real Estate Investment Trust (REIT) that goes beyond the scope of an infrastructure bank. The Municipal REIT would be financed up-front through an initial capital injection of public funds and would be obligated to manage its funds in the best interest of the community. Returns on the investment would be reinvested in the fund or returned to the Anchorage general fund.

A Municipal REIT could buy land and manufactured homes, develop infrastructure, sell manufactured housing units, and serve as landowner of the MHC after development. Public oversight of the fund and the MHC would help to alleviate problems of past MHC developments,

where rents are increased seemingly arbitrarily with no connection to improvements in MHC quality. Over time, the REIT would generate a return for the public while also creating new housing opportunities for low- to moderate-income households.

This public financial instrument could be used both as a tool for new MHC development and for financing the redevelopment of existing MHCs.

Public Land Development

As noted in the *New Development Opportunities* section, there are few viable parcels in Anchorage that are zoned appropriately for MHCs. At least eight of these parcels are publicly owned, by the Alaska Mental Health Trust Authority, the State of Alaska, or Municipal entities. One option to increase the feasibility of MHC development is to site them on public lands. A private developer can be contracted to acquire and build-out the community, but an entity such as the Anchorage Community Development Authority would facilitate a public-private partnership in the financial stakes of the development. The land might ultimately be provided for free, or at a highly reduced rate, if the developer meets certain conditions of development. Alternatively, the public entity could buy back the property, once developed, and serve as landowner of the MHC, continuing to manage the property and collect rents on the spaces.

Increase Allowable Density

Title 21 currently prohibits MHC development with any more than eight units per acre. This is in contrast to other types of housing, such as multifamily apartments, where as many as 20 units per acre are allowable. The distinction between the two is unclear: if other standards of development, such as spacing, landscaping, and infrastructure, are met, the punitively low density of MHCs makes little sense as a zoning practice. Increasing the allowable density of MHCs to 10, 12, or 14 units per acre would still provide room for individual units to have meaningful lot sizes and space around them.

Developers could be offered a "density bonus" if MHCs include additional amenities, such as parks, playgrounds, or community use buildings. Alternatively, the Municipality could allow higher densities on some properties if a cap is put in place on the space rent charged at that MHC. This would keep the monthly costs of living in an MHC low, while helping the developer to recoup more of the initial infrastructure and development costs.

Other communities have struggled with density bonuses, as in practice it can have the unintended consequence of added amenities creating a higher cost burden for buyers than can be reached by low- or medium-income buyers. The density bonus allows the developer to build expensive neighborhoods and more units, that price out the buyers that are most in need of new housing opportunities.

Conclusion

Manufactured housing communities have historically served a role in the homeownership market where lower-income, younger, or elderly people could buy and build equity in a home with minimal initial assets. At price points below $100,000, an individual or a family may only need $5,000 to put a down payment on a manufactured home and could begin building equity that eventually helps them move up the homeownership ladder, if they so choose.

In Anchorage, the costs of buying, shipping, and construction are too high for manufactured housing to neatly fit into this lower end of the market. With sales prices between $226,000 and $332,000, an MHC unit in a 20- or 40- unit development built today would be priced closer to many two-bedroom and even three-bedroom condominiums or townhouses in other parts of the Municipality. New construction may be appealing to some potential homebuyers, as would the ability to own a home that does not share walls with neighbors. A market for such homes likely exists; however, it would not add to the supply of "low- or moderate-income" housing for those making incomes near or slightly above 80% of AMI. As a consequence, MHCs in Anchorage may be more suited for moderate income buyers who are comparing manufactured houses with existing townhouses or condominiums, but prefer the new construction or the ability to have a separate unit that does not share walls with neighbors.

Other communities have found ways to make manufactured housing development cheaper, largely by subsidizing the infrastructure costs, providing down payment assistance, or helping homeowners to form cooperative associations that can keep down costs in the long run. These incentives could help marginally reduce costs in Anchorage, but the largest cost drivers are the distance to manufacturers and the infrastructure development requirements built into the Anchorage code. With developers responsible for building water, wastewater, electric, gas, road, sidewalk, and lighting infrastructure for a new housing development, the cost to re-sell the manufactured homes brought up from the Lower 48 is at least $75,000 per unit more than if infrastructure was developed by the Municipality.

Appendix: Interviewees

- Bob Maier, Alaska Manufactured Housing Association
- Jacques Annandale, Anchorage Water and Wastewater Utility
- Jed Drolet, Anchorage Health Department
- Greg Soule, Anchorage Traffic Department
- *Name withheld at interviewee's request,* Carey Homes
- Doug Fix, Coach Corral
- Tyler Robinson, Cook Inlet Housing Authority
- J. Jay Brooks, Fisher Investments
- Harrison Smith, Forest Park Trailer Court Homeowners Association
- Eric Nova, Heritage Homes
- Heather Adams, Homes Direct
- Lance Clark, Northwest Housing Association
- Alexis Abercrombie, Samson Tug and Barge
- *Name withheld at interviewee's request,* Tote Maritime

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