City of Golden Housing Needs and Strategies Assessment

Final Report - September 2022

GRUEN GRUEN + ASSOCIATES

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INTRODUCTION AND PURPOSE

This report by Gruen Gruen + Associates ("GG+A") presents the results of research and analysis on both existing and future housing needs in Golden. A primary purpose is to identify the deficiencies and challenges in meeting housing needs and the factors contributing to these deficiencies and challenges. Strategic policy recommendations are made to improve the supply of affordable housing and to address other housing needs related to the growth of the local workforce and older-age households.

WORK COMPLETED

To accomplish the study objectives, GG+A completed the following principal tasks:

1. Toured residential developments and neighborhoods within Golden;

2. Conducted interviews with representatives of non-profit organizations and academic institutions including Golden United, Foothills Regional Housing, Elevation Community Land Trust, and the Colorado School of Mines; residential developers, builders, property owners, and property managers; a large area employer; and municipal planning, community development and economic development staff.

3. Designed and analyzed a survey of Golden residents;

4. Analyzed existing housing inventory, housing market conditions, historical household and population change, the economic base, commuting patterns, labor force trends, and household characteristics of Golden;

5. Identified the number of cost-burdened households and the shortfall or "gap" in the amount of affordable housing;

6. Drawing on a synthesis of employment forecasts, analysis of the evolving local economic base, and our interviews, assessed how future employment growth and a reduction to in-commuting in Golden could generate additional workforce housing needs;

7. Projected housing needs attributable to growth and turnover of "senior" households;

8. Estimated replacement demand for new housing based upon estimated annual loss of housing stock;

9. Compared forecast housing needs to the estimated present supply of housing to identify deficiencies in supply relative to needs by price range or affordability level;

10. Evaluated the real estate economics of developing typical types of for-sale and rental housing in Golden to identify the types of housing units feasible for the private market to supply in response to demand. The analysis was also directed to identifying changes in regulations which if made would improve the feasibility of developing housing; and

11. Synthesized the research and analysis to reach judgments about existing and future housing needs and policies that would contribute to an increase in the supply of affordable housing and affordable housing developments.

REPORT ORGANIZATION

The analysis on which GG+A bases the conclusions and recommendations summarized in this report is presented in the following chapters:

- Chapter II presents a review of Golden's existing housing stock and single-family and rental housing market conditions;
- Chapter III presents an analysis of Golden's housing affordability conditions including the proportion of cost-burdened households. This chapter also presents findings on existing housing affordability gaps;
- Chapter IV summarizes demographic and household characteristics including population and household growth, household incomes, and household disability characteristics;
- Chapter V presents an analysis of Golden's economic base and labor force and describes the relationship between jobs, housing, and commutation patterns;
- Chapter VI summarizes the results of a survey of Golden residents to obtain information and perspective about current housing patterns, housing costs, and housing preferences and attitudes about affordable housing policy issues;
- Chapter VII presents a projection of future housing needs within Golden over the next 10 years related to workforce housing (employment growth), senior housing, and potential housing replacement needs; and
- Chapter VIII summarizes an analysis of housing development economics in Golden. This chapter presents the results of the evaluation of the financial feasibility of developing typical new housing units, including whether "market rate" developments can feasibly provide affordable units on-site; the types of housing units (and price points) which are infeasible for the private market to produce; and the degree of public assistance or incentives needed to bridge housing production gaps.

Strategic Policy Recommendations

FACILITATE DEVELOPMENT OF FEASIBLE AFFORDABLE HOUSING PROJECTS

New market rate housing is unlikely to be built to serve lower-income households. Policy actions will be required to motivate developers to add housing for lower-income households.

Incentives Frequently Needed

Public incentives are frequently required to make affordable housing projects financially feasible. Some incentives are in the form of non-monetary contributions such as changes in parking requirements or expedited permit and entitlement process review (see recommendations below). Other incentives that can be considered monetary in nature include incentives such as land grants, tax abatements, and lower or abated fees (for permits, water connections, and sewer hookups).

Reducing land costs can be an effective way to facilitate the development of affordable housing to serve lower-income residents. To the extent Golden has surplus properties suitable for creation of affordable housing or gains control of properties that could be appropriately developed with an affordable housing component, determine if such properties can be conveyed for affordable housing projects under land grants or long-term leases.

The Golden Urban Renewal Authority and/or Downtown Development Authority are potential resources/partners to consider for facilitating residential-oriented, mixed-use redevelopments including workforce housing. Consider the use of Tax Increment Financing to bridge feasibility gaps of qualifying housing developments.

Alter Regulations that Constrain Feasibility of Housing Developments

Alter regulations identified to constrain feasibility of housing developments. Reducing (or removing) requirements for commercial space in primarily residential developments, in combination with reduced on-site parking, significantly improves the financial feasibility of residential developments. Current minimum parking standards make developing affordable housing more difficult by increasing the overall cost of the development and by reducing the amount of housing that can be constructed on site. To ensure that parking requirements do not constrain new affordable housing construction, reduce parking standards for affordable housing (and housing for older adults) developments or projects which include below market rate units of 10 percent of the total number of units.

In addition, identify locations where it would be acceptable to eliminate the requirement that residential developments (on commercial or industrial zoned sites) contain at least 25 percent commercial space. In locations and market conditions in which demand for commercial space is weak, this requirement increases risks, reduces the capability of having more residential units at lower prices, and worsens the financial feasibility of development.

For rental and for-sale developments including 10 percent of on-site below market units, to the extent permissible, waive or rebate tap fees, construction use tax, and building permit, plan review or other fees.

REFINE REGULATIONS RELATED TO ACCESSORY DWELLING UNITS AND ENCOURAGE HOMEOWNER ASSOCIATIONS TO PERMIT ACCESSORY DWELLING UNITS

Accessory Dwelling Units ("ADU's") are almost by definition affordable housing because they are small. Adding ADU's to a single-family lot is a modest way to increase density. ADU's can help accommodate an extended or multi-generational family and provide additional income for older-aged households or for a caregiver to be able to live on site (an older owner can also age in place by living in the ADU while renting out the main house).

Golden allows ADU's both in single-family and duplex units. Golden's current ADU regulations require one off-street parking space and permit up to three residents. Additionally, Golden allows the entire floor of a primary residence to become an ADU, regardless of the 800-square-foot overall cap on size that applies to accessory structures such as carriage houses. Review with a sample of parties that have requested or completed ADUs to identify if any regulatory policies may discourage the use of ADU's while raising reservation prices[1] for residential properties that include the right to create ADU's.

Provide sample language homeowner associations can draw on to change their bylaws or declarations to permit ADUs. Host informational workshops about ADU's. Promote and participate in ADU tours. Coordinate with applicants building new single-family and duplex housing units to continue to inform them of the option of creating ADU's in new construction.

ENCOURAGE SHARED EQUITY HOMEOWNERSHIP PROGRAMS OR COMMUNITY LAND TRUSTS

Shared equity homeownership offers an alternative option to renting and traditional homeownership. Shared equity programs can create long-term, affordable homeownership opportunities by imposing restrictions on the resale of subsidized housing units. Typically, a nonprofit or government entity provides a subsidy to lower the purchase price of a housing unit, making it affordable to a low-income buyer. In return for the subsidy, the buyer agrees to share home price appreciation at the time of resale with the entity providing the subsidy. This helps preserve affordability for subsequent homebuyers.

Typically, shared appreciation loans are in the form of second mortgages provided by a public or nonprofit agency. The buyer's payoff the principal at the time of resale along with a percentage of home value appreciation. These funds are then reinvested to make homeownership affordable to another low-income buyer. Under the "shared retention approach," resale price restrictions ensure that the subsidy remains with the home. The most widely implemented subsidy retention programs include community land trusts (CLTs), deed-restricted housing programs, and limited equity housing cooperatives. CLTs increase affordability by removing the cost of the land from the sale price of a home. Homebuyers purchase the structure but lease the land from the CLT, which retains ownership. Resale price restrictions are built into the ground lease to maintain affordability for future income-eligible buyers. In a deed-restricted housing program, resale restrictions are recorded with the property's deed and generally remain valid for more than 30 years.

[1] Reservation price refers the minimum price for which owners would consider selling their properties.

EXPEDITE REVIEW AND PERMITTING PROCESS

Provide fast-track permitting and an expedited review process to incentivize projects that include a certain level of affordability or meet other affordable housing criteria.

Designate Golden's "Affordable Housing Policy Coordinator" and the Director of Community and Economic Development as points of contact for representatives of developers seeking to obtain permits and incentives for affordable housing development. In addition, coordinate with utility service providers to encourage such providers to respond to and cooperate with affordable housing developers.

FORM AFFORDABLE HOUSING COMMITTEE

Form a committee including the Affordable Housing Policy Coordinator and other pertinent municipal staff and a cross section of housing builders and developers as well as brokers and representatives of educational and healthcare institutions to "actualize" findings and recommendations determined to be priorities.

The size of the committee should not exceed nine members and could meet four times per year. The purpose of the committee would be to provide feedback from the perspective of industry participants on subjects of recurring concern including regulatory policies as well as market conditions or other factors affecting the development of housing in Golden. The committee could also be used to consider proposals and make recommendations regarding funding of affordable housing projects.

LIMITATIONS OF INCLUSIONARY HOUSING

Inclusionary housing requirements are likely to generate relatively small numbers of affordable housing units because:

- the real estate economics of private, for-profit developments can support only a relatively small number of below-market-rate units (and raise the cost of housing for buyers/renters which are not selected for the below-market units); and

- the number of market-rate projects built in any year even in communities without growth management restrictions is not usually very high.

Creating below market housing for a small proportion of households will not affect overall housing affordability or availability. Increasing housing production to alleviate a very real housing shortage would put more pressure on landlords and sellers to compete by lowering prices and raising the quality of new and existing housing units. Increasing the amount of housing that could be built in Golden each year would be the most direct way to alleviate the housing shortage.

RECONSIDER THE RESIDENTIAL GROWTH MANAGEMENT ORDINANCE

The existing residential growth management ordinance precludes meeting housing needs in a reasonable time frame. Results of this housing assessment indicate a potential need for 2,940 additional units (excluding housing replacement needs) over the next 10 years in Golden. Under the limitations of the existing one-percent residential growth management ordinance, it would take approximately 29 years to meet the estimated 10-year housing need. As a result, if the ordinance is not modified or eliminated, housing prices in Golden are likely to remain elevated.

Therefore, consider eliminating the residential growth management ordinance or modifying the definition of "one percent annual growth" to allow for greater levels of housing production consistent with housing needs. Additionally, at a minimum, new affordable housing developments of not more than 125 dwelling units should be exempted from the residential growth management ordinance, provided such developments comply with other regulations and policies and that units are affordable to households with incomes of 80 percent or less of Area Median Income.

However, recognize that changing the residential growth management ordinance alone will not be a "silver bullet" solution. Golden is primarily a built-out community that includes a limited amount of vacant land and property suitable for redevelopment. Given the land constrained nature of the Golden housing market, land use regulations that govern changes of use (e.g., nonresidential to residential) will be especially impactful to new housing production. Thus, modifying or eliminating the growth ordinance will have limited effect unless done in combination with the other changes and recommendations identified in this report.

ANTICIPATE THE NEED FOR A GREATER AMOUNT AND VARIETY OF "SENIOR HOUSING" SERVICES

Golden will experience an increase in the number of older age (so-called "senior") households. Anticipate the following:

- *An increase in request for permits to remodel homes to facilitate older households aging in place.* Limited existing housing stock provides features responsive to the needs of older households such as single-floor living, doorways and hallways that can accommodate a wheelchair, zero-step entrances, lever-style door and faucet handles, and electrical controls that can be reached from a wheelchair. To facilitate older households to age in place, an increase in healthcare support and life safety and security monitoring will be needed to help older adults live safely and comfortably in their homes;

- *Condominium-type services for single-family developments.* As single-family homeowners age, services more frequently available in multi-family condominium projects such as maintenance and repairs, yard care, snow removal, and related services will apply to single-family homeowners;

- *An increase in multi-family developments with services geared to the needs of older-age households* (the desire to avoid maintenance is one reason why many older households prefer condominiums); and

- *The need for a continuum of facilities to serve older adults.* An increase in the diversity and supply of housing choices - including active adult, independent living, assisted living and services - for the wide continuum of older age households will provide options for older adults who want to move from larger single-family homes. This would help to increase available housing supply for households with children or prime working-age households.

For example, senior housing communities that include partnerships with health service providers to link health care and affordable housing can help lower-income, higher-risk or more frail seniors retain their independence by bundling healthcare access with affordable housing. Having on-site staff members provide health services and coordinate care can help seniors better manage their health and limit emergency hospital visits. Provision of on-site healthcare services will tend to require communities large enough to create some economies of scale in service provision.

ENCOURAGE COLORADO SCHOOL OF MINES TO HOUSE MORE STUDENTS ON CAMPUS

Approximately 4,500 Colorado School of Mines students are estimated to live off campus (though, not all occupy housing within Golden). Off-campus student housing demand affects the availability and price of rental housing in Golden. Form a working team to develop an agreement that would include the Colorado School of Mines committing to building more housing for students (or even staff and faculty) and providing housing for all new student enrollment growth on campus. The agreement could also include provisions for a joint transportation and parking plan. An annual housing report for on-campus housing and off-campus housing rented by students should be published.

POTENTIAL ECONOMIC EFFECTS OF SHORT-TERM RENTALS AND REGULATIONS ABOUT SHORT-TERM RENTALS

In many resort communities, where property owners are able to rent out second homes as short-term rental ("STR") income properties, this has taken away from the housing stock available to permanent community residents. Since Golden adopted an STR license requirement in 2018, only 60 licenses have been issued. The number of licenses issued is negligible compared to the housing stock of roughly 8,800 residential units. The stipulation that STRs are only allowed in a property owner's primary residence is likely a large factor in this low rate of STR licenses.

Affordable Housing Strategies Timeline

	2022	2023	Ongoing
Evaluate Use of Incentives	X	X	X
Alter Regulations that Constrain Feasibility of Housing Developments	X	X	
Refine Regulations Related to ADU's and Encourage Homeowner Associations to Permit ADU's	X	X	X
Encourage Shared Equity Homeownership Programs or Community Land Trusts	X	X	X
Expedite Review and Permitting Process	X	X	
Form Affordable Housing Committee	X	X	X
Anticipate the Need for a Greater Amount and Variety of "Senior Housing" Services		X	X
Encourage Colorado School of Mines to House More Students On Campus and Publish Housing Report		X	X

Summary of Findings and Conditions

HOUSING CHARACTERISTICS AND MARKET CONDITIONS

Total Housing Inventory

The 2020 Census estimated a total housing inventory of 8,522 units in Golden. Since 2000, the total housing inventory is estimated to have increased by about 18 percent or 1,300 units. Jefferson County Assessor records suggest an overall housing inventory in Golden of approximately 8,700 units. This estimate is within two percentage points of the 2020 Census housing unit count.

As of December 2020, the official count of housing units in Golden for purposes of determining 2022 Residential Allocations was 8,875 units.

Composition of Housing Inventory

About 50 percent of Golden's housing inventory is estimated to be detached single-family homes. Multi-family structures with at least 10 units in the building comprise the second largest category at nearly 21 percent of existing housing inventory. Mobile homes and attached single-family units (i.e., townhomes) each represent another 10 percent of the housing inventory. The housing composition has shifted away from small multi-family structures and towards single-family housing and larger multi-family structures.

Age of Housing Inventory

Excluding mobile homes, about 15 percent of all housing (primarily consisting of single-family housing units in the core) in Golden was built prior to 1960. About one-third of housing units were built in the 1960s and 1970s. An additional 25 percent of housing units were built during the 1980s and 1990s. Just under one-quarter of the housing stock, as classified by the County Assessor, has been built since 2000.

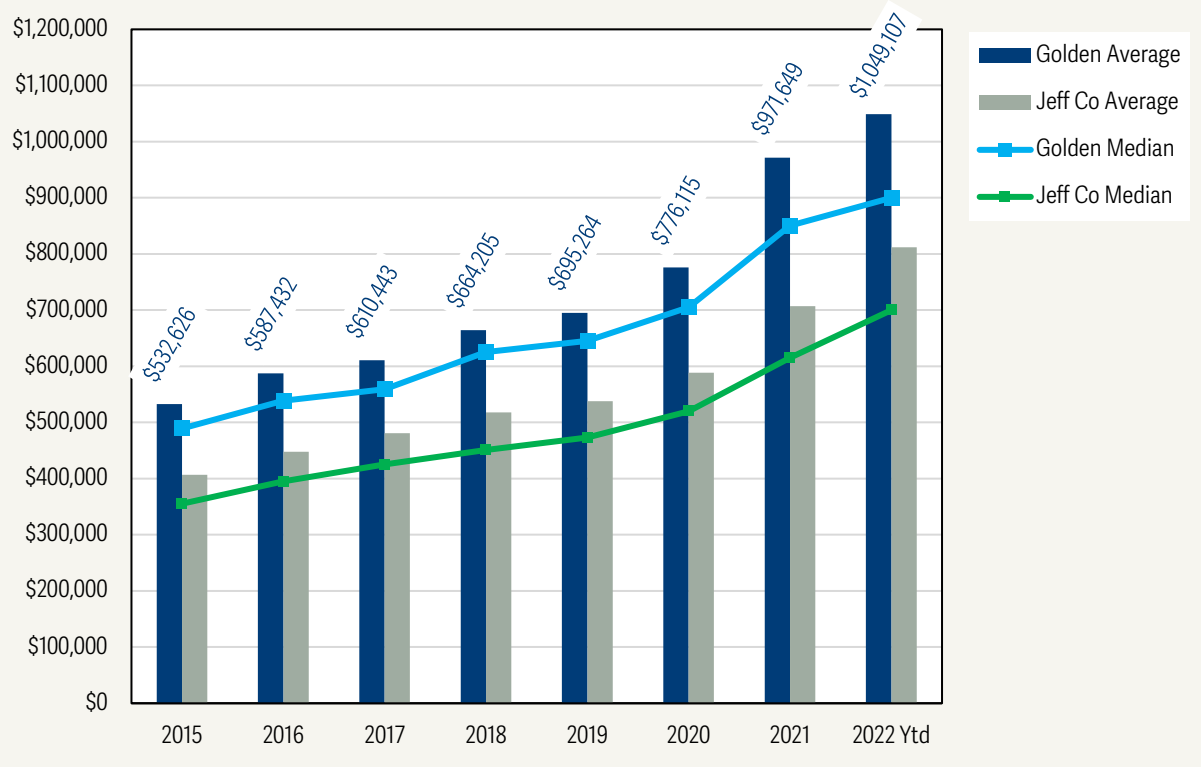
Non-Local Housing Owners

Approximately 92 percent of all single-family properties are likely locally owned and owner-occupied. A higher share of the townhome and condominium housing inventory is associated with non-local owners. An estimated 31 percent of residential properties classified as townhomes, duplexes, triplexes, or residential condominiums have mailing addresses located outside of Golden municipal limits.

Affordable Housing Inventory

Golden contains approximately 250 publicly assisted multi-family rental apartment units. These units serve households at or below 60 percent of Area Median Income ("AMI") and are estimated to represent about 10 percent of all apartment units (2.9 percent of all housing units) within Golden.

FIGURE I-1: Average and Median Single-Family Resale Prices



Housing Market Conditions

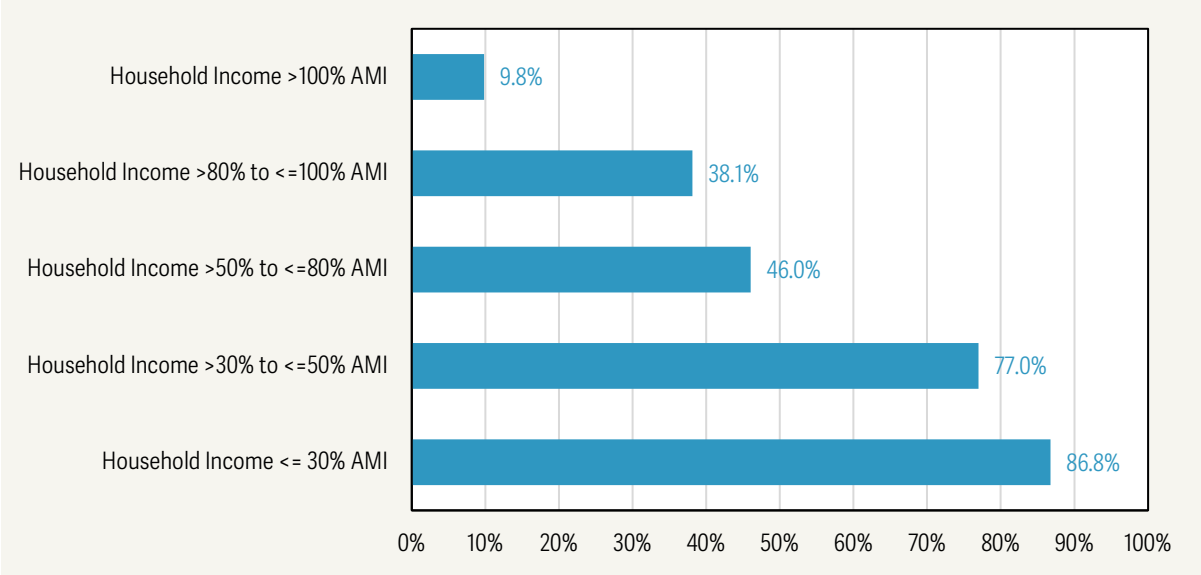
Since 2015, the Golden housing submarket has averaged approximately 670 single-family sales per year. Steady resales activity has been accompanied by significant increases in average single-family home prices. The average single-family sales price has doubled since 2015 when a typical single-family home in the Golden area sold just under $533,000. The median sales price has increased by 85 percent, growing from $489,000 in 2015 to $900,000 through the first eight months of 2022. Average sales prices for single-family housing units in Golden have ranged from 27 percent to 37 percent higher than the average price throughout Jefferson County.

The average days on market declined from 40 days in 2015 to only 18 days in 2021. The average sales-to-list ratio increased from about 99 percent in 2015-2016 to almost 104 percent in 2021.

Almost 200 single-family sales occurred with an average price of approximately $950,000 over the 12-month period from June 2021 through May 2022 (within Golden municipal limits). The average unit size was about 2,450 square feet, indicating an average price of $388 per square foot. An additional 46 townhome sales occurred with an average price of $620,000 or $398 per square foot.

The rental market in Golden is characterized by persistently low vacancy rates and high rates of rent escalation. Average monthly apartment rent is estimated to have increased from $1,511 per unit in 2016 to $1,929 per unit in 2021. Median rents have tracked average rents closely over time. Average and median rents in Golden have exhibited five percent average annual escalation over the past five years in Golden. Average and median monthly rents in Golden are approximately 15 percent to 25 percent higher than the adjoining apartment submarkets including Lakewood North and Arvada.

FIGURE I-2: Percent of Golden Households with a Housing Problem



Cost-Burdened Households

Housing affordability conditions for homeowners have remained stable over the long-term. The cost burden rate for owner-occupied households in Golden increased only slightly, from 20.3 percent in 2000 to 21 percent in 2020. More than 60 percent of homeowners incur housing expenses less than 20 percent of their before-tax income.

The cost burden rate for renters increased significantly, from 39.8 percent of households in 2000 to above 47 percent of households in 2020. The increase in cost-burdened renters relates to both persistent rent increases and stagnation in household incomes.

Approximately 79 percent of all cost burdened households in Golden are reported by Housing and Urban Development ("HUD") to be at or below 80 percent of AMI. A higher share - nearly 90 percent - of all renters with incomes at or below 80 percent of AMI are estimated to be cost burdened. A very low share of households at or above 100 percent of AMI (i.e., above median income households) are estimated to be cost burdened.

The most significant concentrations of households experiencing a housing problem are Extremely Low and Very Low Income households. Households with incomes below 50 percent AMI in Golden represent about two-thirds of all households determined to be cost-burdened.

Housing Needs Gaps

Golden has a large deficit of rental units at deeply affordable prices. This situation is not unique. Golden is estimated to contain just under 1,000 renter households who can afford to pay no more than $875 in monthly gross rent. The existing supply of rental units priced below this affordability threshold is estimated at fewer than 400 units; indicating a "gap" or deficit of approximately 600 rental units affordable to the lowest income bracket.

The gap analysis for owner-occupied housing in Golden follows a different pattern. Among the lowest income homeowners, existing supply is in relative balance with need. This finding likely reflects the large number of manufactured homes within Golden.

The gaps or "deficits" are estimated to be concentrated primarily within the middle-income segments. For example, an estimated 1,100 households whose income would suggest affordable purchase prices ranging from $187,000 to $373,000 compares to an estimated supply of less than 250 units, indicating a gap of nearly 900 owner-occupied housing units at these prices.

DEMOGRAPHIC AND HOUSEHOLD CHARACTERISTICS

Population and Household Growth

Golden's population since 2000 has increased by 2,988 or 17.2 percent to 20,399. The growth has been primarily attributable to an increase in "non-institutionalized" Group Quarters population which includes on-campus student housing. The total Group Quarters population in Golden is estimated to have more than doubled, from under 1,300 in 2000 to nearly 2,700 by the 2020 Census.

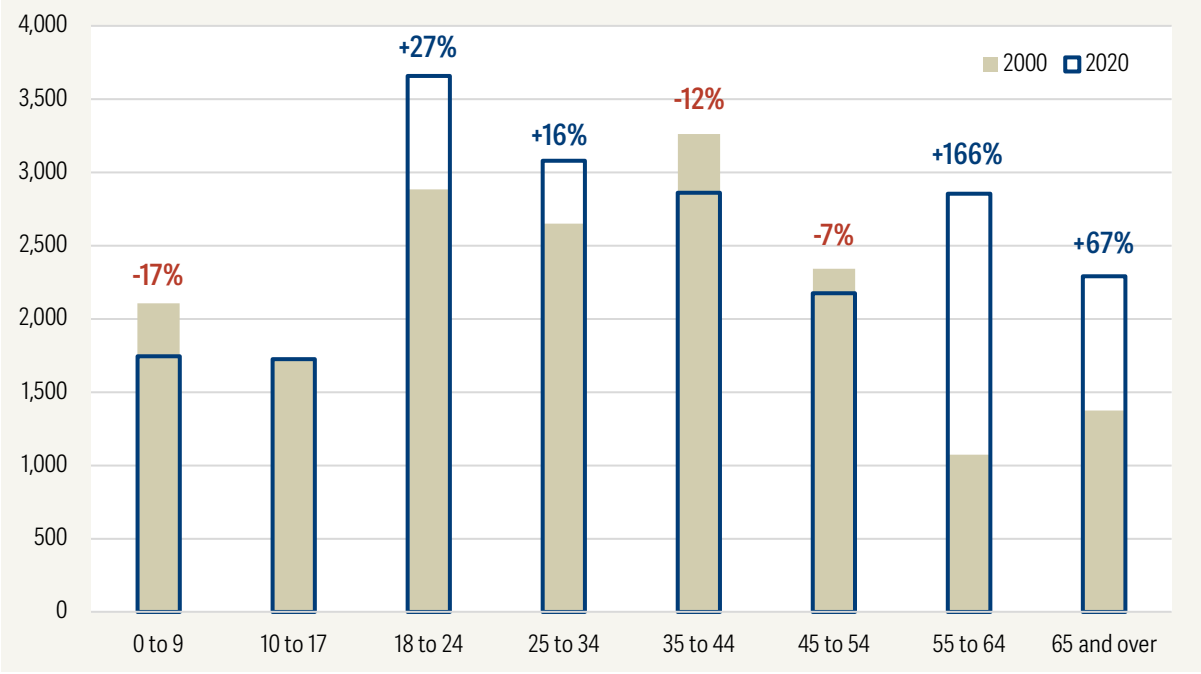
The number of households in Golden increased by 926 to 7,892 for a lower growth rate of 13.3 percent from 2000 through 2020.

Age Distribution

Net population growth since 2000 has been due to an increase in the Age 55+ cohort. The population of residents aged 55 years and over more than doubled between 2000 and 2020, increasing by 2,697 persons or 110 percent. The population of college-aged young adults (Ages 18-24) experienced strong growth over the 2000-2020 period, increasing by nearly 800 residents or 27 percent. This age cohort remains the largest in Golden. The population of prime working-age adults (Ages 25-54) declined slightly by about two percent since 2000. The number of children under 10 years of age also declined by 17 percent.

Golden's household base has shifted over time towards smaller-sized households and nonfamily households (i.e., with unrelated household members). Family households with three or more persons represented almost one-third of all households in 2000 and 23 percent of all households in 2020. The number of smaller family households with just two persons increased considerably over the same period. The number of single-person households has also grown since

FIGURE I-3: Golden Population by Age, 2000-2020



2000 to an estimated 32 percent of the household base. Larger, nonfamily households with three or more household members also comprise a larger share of the household base than before. These household types, which would align with off-campus student housing, grew from 3.7 percent of households in 2000 to an estimated 7.0 percent by 2020.

The long-term changes in household composition, as well as the aging of the population, have been accompanied by a declining share of "workforce households." As of 2020, approximately 26 percent of Golden households were estimated to include no active members of the labor force.

Income Characteristics

On an inflation-adjusted basis, median household income was relatively unchanged over a 20-year period. Real median household income increased from about $86,300 in the 2000 Census to $88,500 in the 2020 American Community Survey. This represented real growth of 2.5 percent over a 20-year period. The household income distribution has shifted with a higher proportion of households with incomes less than $35,000 per year and a higher proportion of households with incomes above $150,000 and a smaller share of households with incomes between $35,000 and $150,000.

Economic Base and Labor Force Characteristics

Total payroll employment grew by an estimated nine percent, increasing from approximately 17,900 jobs in 2005 to 19,500 jobs in 2021. Prior to the employment decline caused by the Covid-19 pandemic, employment in Golden increased rapidly for eight consecutive years. Between 2011 and 2019, the local employment base added approximately 5,000 payroll jobs, expanding at an average annual rate of 3.3 percent.

Pre-pandemic, the Manufacturing, Education and Health Care, and Public Administration sectors of the employment base represented approximately 52 percent of all jobs located in Golden. The economic base is shifting in favor of Education and Health Care and declining in the Manufacturing sector and Public Administration. The employment base has also shifted in favor of sectors such as Retail Trade, Transportation and Warehousing, and Leisure and Hospitality.

Areas with significantly higher jobs-to-housing ratios typically do not have an adequate amount of housing supply to meet the needs of the local workforce. The estimated jobs-housing unit ratio in Golden approximates 2.3 jobs per housing unit. Historical estimates of local employment and the housing stock indicate that the ratio has been persistently high, ranging from about 2.2 to 2.4 jobs per housing unit. The job-housing ratio is higher in Golden than other communities in Jefferson County. The jobs-housing ratio in Golden is also higher than the ratio for Boulder.

Commuting Patterns

The resident labor force (workers living in Golden) represents less than five percent of all workers employed in Golden. A high proportion (about 88 percent) of Golden's resident labor force also commutes out of the community for employment. The number of "in-commuters" is estimated to have grown from about 15,700 workers in 2010 to 19,300 by 2019.

SURVEY RESULTS

Characteristics of Survey Respondents Relative to Community of Golden

Well-educated, higher-income households owning detached single-family housing units are overrepresented in the sample. About 76 percent of survey respondents own their housing, for example, while the overall homeownership rate in Golden is estimated at 61 percent. The survey respondents skew towards being older. Approximately 21 percent of Golden's adult (Age 18+) population is comprised of persons between the ages of 18 to 24. Young adults in this 18-24 age cohort represented only one percent of survey respondents.

TABLE I-1: Survey Response Demographics

	City of Golden	Survey Response
Adult Population:		
Age 18-24	21%	1%
Age 25 - 44	35%	41%
Age 45 - 64	30%	35%
Age 65+	14%	23%
Housing Tenure:		
Owner	61%	76%
Renter	39%	24%
Household Income:		
< $50,000	27%	12%
$50,000 - $100,000	27%	23%
$100,000 - $150,000	16%	19%
> $150,000	30%	46%
Source: Gruen Gruen + Associates		

Satisfaction With Housing

About 82 percent of survey respondents are either very or somewhat satisfied with their current housing situation. Eight percent (8%) are somewhat unsatisfied or very unsatisfied with their current housing situation. Renters are less likely to be "very satisfied" with their current housing and much more likely to be very unsatisfied. While 65 percent of all owners are very satisfied, only 23 percent of renters are very satisfied.

Physical Condition

Seventy-five (75%) of owners describe the physical condition of their units as excellent or above average, with less than three percent of owners indicating their units are below average. This compares to about 10 percent of renters that describe their units as below average or poor. Among renters, the largest frequency of response was for units in "average" condition.

Selection Factors

For owners the most important factors influencing housing choice are cost and unit quality factors, with "overall cost of unit" ranked highest. With near equal importance, the second highest rated factor is the overall quality of the housing unit (given its price). The layout or design of the unit was the third highest rated factor. The "size of the lot (or outdoor space)" was the lowest rated factor among unit characteristics.

For renters, the three most important factors are overall cost of unit, proximity to parks, open space, or trails, and overall quality of housing unit (given its price).

Plans to Move

Approximately 28 percent of respondents plan to move within the next five years and would prefer to stay in Golden. An additional 10 percent of respondents also plan to move within the next five years but would relocate outside of Golden. The majority of respondents, 62 percent, have no plans to move. Renters plan to move at a far higher rate than owners. About 75 percent of all renters plan to move within the next five years while only 26 percent of owners plan to move within five years. Most renters planning to move would prefer to remain in Golden.

Tenure Preference

About 73 percent of renters that plan to move within the next five years would prefer to own their next housing unit. About 98 percent of respondents that currently own housing would prefer to remain owners.

Ability to Pay for Housing

Approximately 30 percent of respondents planning to move indicate they can afford maximum housing costs that are below $1,875 per month. An additional 43 percent of households planning to move can afford monthly costs ranging from $1,875 to $3,749. Approximately 19 percent indicate they can afford monthly costs exceeding $3,750.

About one-third of all respondents anticipate moving to a different housing unit with a "maximum monthly cost" that is similar to their current housing costs. This is especially the case with renters; about 54 percent of renters that expect to move indicated they cannot afford to trade-up in price.

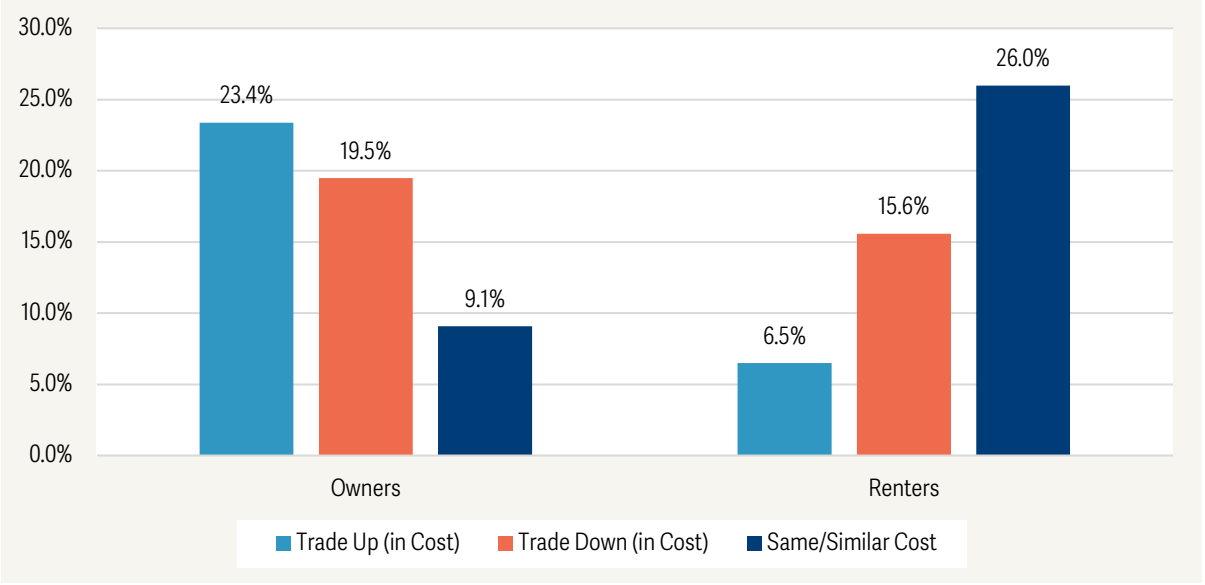
About 35 percent of households which plan to move within five years wish to reduce their housing costs.

Policy Issues

Nearly 60 percent of respondents support more affordable housing for both rental and ownership that is restricted to households making less than 80 percent of AMI. A higher share of renters (57.1 percent) than owners (29.2 percent) support exempting affordable housing units from the current growth cap.

Approximately 46 percent of respondents would support a real estate transfer tax on the sale of

FIGURE I-4: Percent of Expected Movers that Plan to Trade Up or Down in Monthly Housing Cost



housing units priced above $1 million to fund affordable housing for households earning 80 percent or less of area median income. Nearly 69 percent of renters and 40 percent of homeowners would support a transfer tax to fund affordable housing.

Only 32 percent of respondents support the enactment of a real estate property tax increase to fund affordable housing. Fifty-three percent (53 percent) of respondents oppose a property tax increase and about 16 percent are uncertain/don't know. Among the respondents who support a property tax increase, more than half support an increase in the mill levy of 1.00 mills. Nearly 60 percent of homeowners and nearly 26 percent of renters opposed such a tax policy.

FUTURE HOUSING NEEDS IN GOLDEN

Forecast Total Need Over Next 10 Years

Total potential housing need over the next 10 years is estimated at approximately 3,100 units. Workforce housing needs are estimated to total about 2,300 units, representing the largest source or 76 percent of the potential need. Senior housing needs are estimated at 600 units, representing 19 percent of total projected need. Potential housing replacement needs are estimated at about 150 units, or five percent total projected need.

The largest category of housing need is associated with households estimated to have incomes at or above 120 percent of AMI, representing approximately 45 percent of annual workforce and senior housing need. Households with incomes at or below 80 percent of AMI represent about 36 percent of estimated annual housing need.

Employment Forecast

Based on an average employment growth rate assumption of 1.5 percent, Golden is forecast to experience a gain of 3,138 jobs over the next 10 years. About 48 percent of the net increase in jobs in Golden is attributable to the education and healthcare sector (employment growth of 1,492 projected). Growth in the leisure and hospitality sector (539 added jobs) is forecast to account for 17 percent of the net increase in jobs in Golden. The finance, real estate, and insurance and professional and business service sectors are forecast to increase employment in Golden by 822 jobs, representing 26 percent of the net increase in jobs.

If just five percent of workers employed in Golden who commute to their jobs from outside of Golden were to move to Golden, this would result in 928 workers needing housing in Golden over the next 10 years.

Projection of Additional Workforce Households by Household Size and Income Bracket

Approximately 740 households, representing 32 percent of the total potential new workforce households over 10 years, are projected to have incomes below 80 percent of AMI. An additional 460 workforce households or about 20 percent of the total are estimated to have incomes between 80 percent and 120 percent of AMI. The largest category of potential workforce household growth includes households with incomes at 120 percent of AMI or greater. This represents potential growth of nearly 1,140 workforce households or 49 percent of the total potential growth.

Two-person workforce households represent the most common household size and comprise approximately 40 percent of the potential growth. Single workers represent approximately 25 percent of the potential workforce household growth over 10 years.

TABLE I-2: Summary of Potential 10-Year Housing Need in Golden

	Average Annual	Total (10-Year) Potential Need	
	# Units	# Units	% of Total
Workforce Housing Need	234	2,340	75.8
Senior Housing Need	60	600	19.4
Housing Replacement Need	15	149	4.8
Total	**309**	**3,089**	**100.0**
Source: Gruen Gruen + Associates			

Estimate of 10-Year Workforce Housing Need

A spectrum of potential housing types are needed (2,340 units in total) to accommodate workforce households over the next 10 years. Approximately 744 housing units needed will be at prices affordable to households with incomes of 80 percent or less of AMI.

Smaller-sized housing units suitable for a single- or two-person household have a total projected need of about 1,500 units over 10 years. Approximately 880 ownership units and 612 rental units are projected as needed within the one-and two-person household category. Approximately 487 units affordable to smaller-sized workforce households with income of less than 80 percent of AMI are projected to be needed over the next 10 years.

Approximately 850 housing units over 10 years (or 35 percent of the overall workforce housing need) are projected to be needed to accommodate larger-sized (three person or more) households. Most of the need will be attributable to higher income households. Approximately 180 rental workforce units, however, are projected to be needed for larger households with three or more members and with incomes below the 80 percent AMI level of affordability.

Senior Housing Need

The total senior population aged 65 or older is expected to increase by approximately 1,290 persons or 56 percent over 10 years. The projected increase represents an average annual growth rate of about five percent. Most senior population growth will be driven by an increase in persons within the Age 65-74 cohort. Approximately 50 percent of seniors in the Age 65-74 cohort and 15 percent of seniors in the Age 75+ cohort are either still active in the labor force or reside with other household members still in the labor force. This population is excluded from the projection of senior households. The total senior population that will reside in a "senior household" (not a workforce household) is projected to increase by approximately 700 persons within Golden over 10 years. Seniors living alone or in a two-person household are estimated to represent 80 percent of the potential growth.

Of these small-sized households, the proportion and number of households with incomes both above 120 percent AMI and below 50 percent AMI are equivalent at about 35 to 37 percent in each category. Small size households with incomes between 80 to 120 percent AMI make up an additional 12 percent and households with incomes between 50 to 80 percent make up an additional 15 percent.

By tenure, small size senior households which are renters are projected to have incomes that primarily place them in the 50 percent or lower AMI level. Small size senior households with no debt

are projected to have incomes that place them primarily in the 120 percent or higher AMI level.

Housing Replacement Need

The total housing need replacement over 10 years is estimated at 149 units. About 40 percent of the estimated need is attributable to units that exceed 65 years of age. An additional 42 percent of the potential 10-year replacement need is attributable to units between 45 and 65 years of age.

REAL ESTATE ECONOMICS OF HOUSING DEVELOPMENT

"Vertical Mixed Use" residential developments with structured parking (based on current parking requirements) and a 25 percent commercial space requirement are not likely to be feasibly developed where most infill housing opportunities are located.

A "Smaller Infill Apartment" use including 25 percent commercial use is still financially infeasible but is less infeasible because the lower housing density permits lower-cost surface parking rather than higher-cost structure parking.

Attached "for sale" single-family units, such as the "Attached Rowhome" housing prototype are feasible at a density of 17 units per acre. If attached single-family units could be developed with less garage parking and less usable open space to achieve a density of more than 25 units per acre, the feasibility of this type of housing development would be significantly enhanced.
If the amount of commercial space is reduced to five percent of gross floor area and the amount of residential parking is reduced by 0.5 stalls per unit, "Vertical Mixed Use" developments would support typical land costs and be feasible in many locations throughout Golden (other than higher land value locations in the Downtown).

Production Gaps

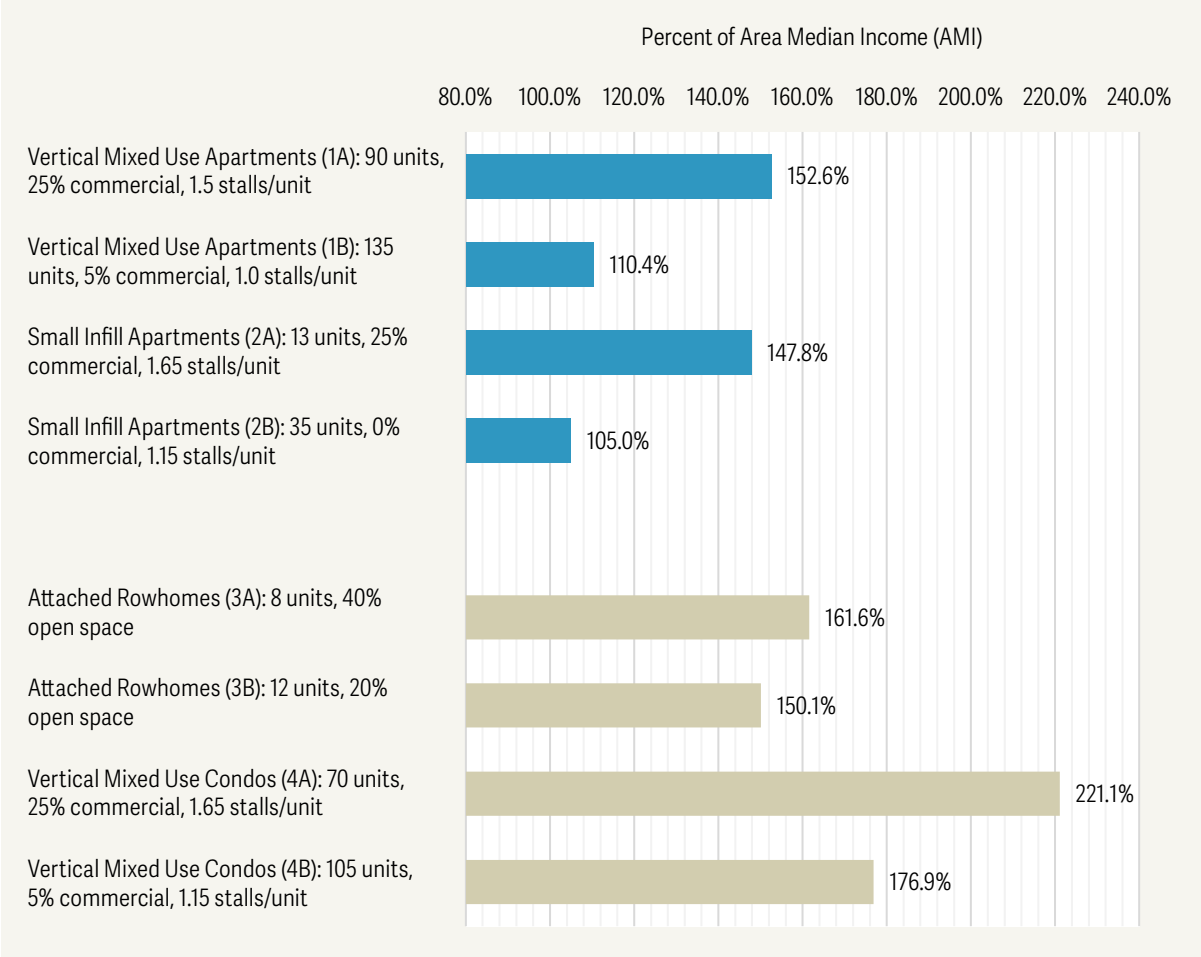
New multi-family rental housing will not be feasibly produced at prices affordable to households with incomes below 150 percent of AMI if 25 percent commercial space and 1.5 parking stalls per unit (or higher) are required.

Assuming a typical land cost of $25 per square foot of land[2], average monthly rents of approximately $3,360 and $3,590 per unit would be required to feasibly develop the Vertical Mixed-Use Apartment and Small Infill Apartment prototypes, respectively. These monthly rents would require household incomes of 148 percent to 153 percent of AMI.
New for-sale housing is also unlikely to be supplied at prices affordable to households with incomes below 150 percent of AMI.

Reduced residential parking and commercial space requirements for rental housing developments could result in feasible projects at prices affordable to households with incomes of 105 percent to 110 percent of AMI. The average monthly rents needed to support land values and provide a feasible return on investment are lower at $2,430 to $2,550 per unit. These average monthly rents would require household income of approximately 105 percent to 110 percent of AMI.

[2] Multi-family and commercial land in suburban Golden (e.g., Golden Road, Colfax) typically sells for about $20 to $30 per square foot of land. Prices for sites in the downtown are usually higher, from $50 to $150 per square foot of land.

FIGURE I-5: Minimum Annual Income Needed to Afford Market Price of Feasible Housing Developments



Feasibility with On-Site Affordable Units

The private, unassisted development of Vertical Mixed-Use housing with (i) reduced commercial space and parking requirements and (ii) ten percent of units set aside for households earning 60 percent of AMI or less, is likely to be infeasible. Fee waivers (e.g., tap fees, construction use tax) or other methods of reducing costs could be used to bridge a feasibility gap.

For-sale residential condominium developments required to include 10 percent on-site affordable units are also estimated to be infeasible. Municipal fee waivers or other assistance would be needed to bridge feasibility gaps.

Other types of infill housing developments, such as the Small Infill Apartment and Attached Rowhome prototypes are sufficiently profitable to suggest it may be feasible for these types of projects to provide 10 percent affordable units on-site, provided commercial space and standard parking requirements are waived.

II Existing Housing Inventory and Housing Market Conditions in Golden

HOUSING INVENTORY

Table II-1 identifies the housing unit inventory in Golden according to U.S. Census Bureau and municipal estimates. Group Quarters housing such as student housing on the Colorado School of Mines campus is not reflected in estimates of housing unit inventory.

2020 Census estimates suggest that Golden contains a total housing inventory of 8,522 units. Over a 20-year period from 2000 through 2020, the total housing inventory is estimated to have increased by about 18% or 1,300 units. The long-term change in housing inventory is consistent with the limitations of the residential growth management ordinance adopted in 1996.

As of December 2020, municipal estimates indicated a housing inventory including approximately 8,740 dwelling units. Over the 20-year period from 2000 through 2020, the estimates of total base dwelling units grew by 1,298 units or approximately 17%. The long-term rate of increase in housing inventory is very similar to growth suggested by Decennial Census counts. The housing unit estimates vary by about 2.5%.

TABLE II-1: Total Housing Unit Inventory in Golden, 2000-2020

	2000	2010	2020	Change 2000-2020	
	# Units	# Units	# Units	# Units	%
City Estimate of Base Dwelling Units[1]	7,441	8,044	8,739	1,298	17.4
Decennial Census Housing Unit Count	7,215	7,749	8,522	1,307	18.1
[1] Official estimates for purposes of the annual 1% growth calculation.					
Sources: U.S. Census Bureau, Decennial Census 2000-2020; City of Golden; Gruen Gruen + Associates.					

HOUSING STOCK COMPOSITION AND AGE

Table II-2 compares the composition of housing inventory by unit type in 2000 and 2020 according to U.S. Census Bureau estimates. About 50% of Golden's existing housing inventory is estimated to be detached single-family homes. Multi-family structures with at least 10 units in the building comprise the second largest category at nearly 21% of existing housing inventory. Mobile homes and attached single-family units (i.e., townhomes) each represent another 10% of existing inventory.

The housing composition has shifted away from small multi-family structures and towards single-family housing and larger multi-family structures.

GG+A also obtained and tabulated current assessment records for residential properties located within Golden municipal limits. Table II-3 presents a description of the inventory based on review of assessment records.

TABLE II-2: Composition of Housing Inventory in Golden, 2000-2020 Census Estimates

	2000	2020	Shift (Pct. Points)
Single-Family Detached	47.5%	50.0%	+2.5
Single-Family Attached	7.8%	9.7%	+2.0
Multi-Family, 2-4 Units in Structure	12.2%	5.7%	(6.5)
Multi-Family, 5-9 Units in Structure	3.7%	3.3%	(0.5)
Multi-Family, 10+ Units in Structure	18.3%	20.8%	+2.5
Mobile Home	10.3%	10.1%	(0.1)
Other	0.3%	0.4%	0.1
Sources: U.S. Census Bureau, 2000 Census, 2020 American Community Survey; Gruen Gruen + Associates.			

TABLE II-3: Current Golden Housing Stock Based on Assessment Records

Improvement Type	Dwelling Units[1]		Average Year Built
	#	% of Total	
Single Family	3,900	44.8	1973
Townhome	600	6.9	1993
Duplex/Triplex	200	2.3	1976
Condominium	650	7.5	1980
Apartment[2]	2,650	30.5	1989
Mobile Home Parks[3]	700	8.0	NA
Total	**8,700**	**100.0**	

[1] Figures are rounded.
[2] "Apartment Low Rise", "Apartment Mid Rise", "Senior Low Rise", "Senior Mid Rise", as well as those classified as "Apartment/Low Income."
[3] Refers to number of lots, not necessarily units.

Sources: GG+A Analysis of Jefferson County Assessor records

Jefferson County Assessor records suggest an overall housing inventory in Golden of approximately 8,700 units. This estimate is within two percentage points of the 2020 Census housing unit count and within one percentage point of the dwelling unit estimate.

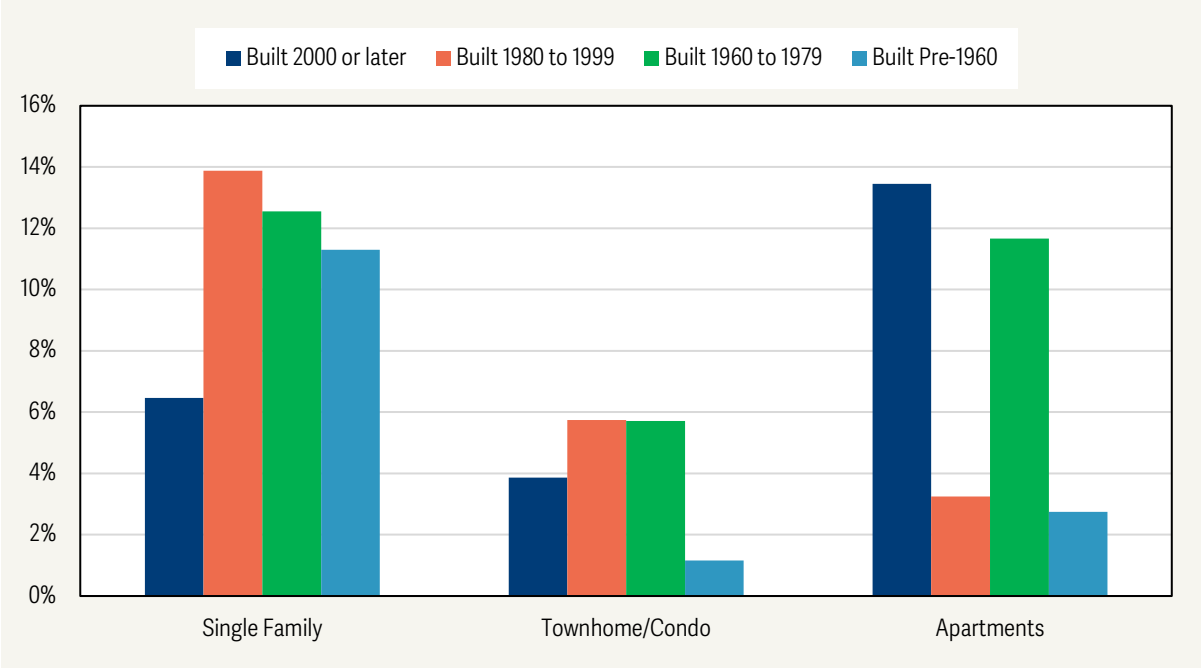
The composition of the housing inventory varies somewhat from U.S. Census Bureau estimates, although the classification of property types is also not uniform. "Single family" residential property types, for example, total approximately 3,900 units or 45% of the total housing stock based on assessment records.

Townhome and duplex/triplex improvements total approximately 800 units or 9.2% of the overall inventory. Residential condominiums represent an additional 650 units or 7.5% of the inventory. Multi-family apartments include approximately 2,650 total units and represent 30.5% of total inventory. Additionally, two mobile home parks in Golden are reported to include about 700 lots (not necessarily units/homes, which are not recorded).

Figure II-1 summarizes the existing housing stock by year built. About 15% of all housing in Golden was estimated to have been built prior to 1960. This housing stock mostly represents single-family housing units in the core of Golden. Just under one-quarter of the housing stock has been built since 2000. Most of the more recently constructed inventory has been apartment units.

The 1980's and 90's were a strong period for single-family housing development in Golden. About one-third of all single family housing in Golden was built during that era. The largest source of apartment housing includes units built since 2000.

FIGURE II-1: Golden Housing Inventory by Year Built



Sources: GG+A Analysis of Jefferson County Assessor records

NON-LOCAL RESIDENTIAL PROPERTY OWNERS

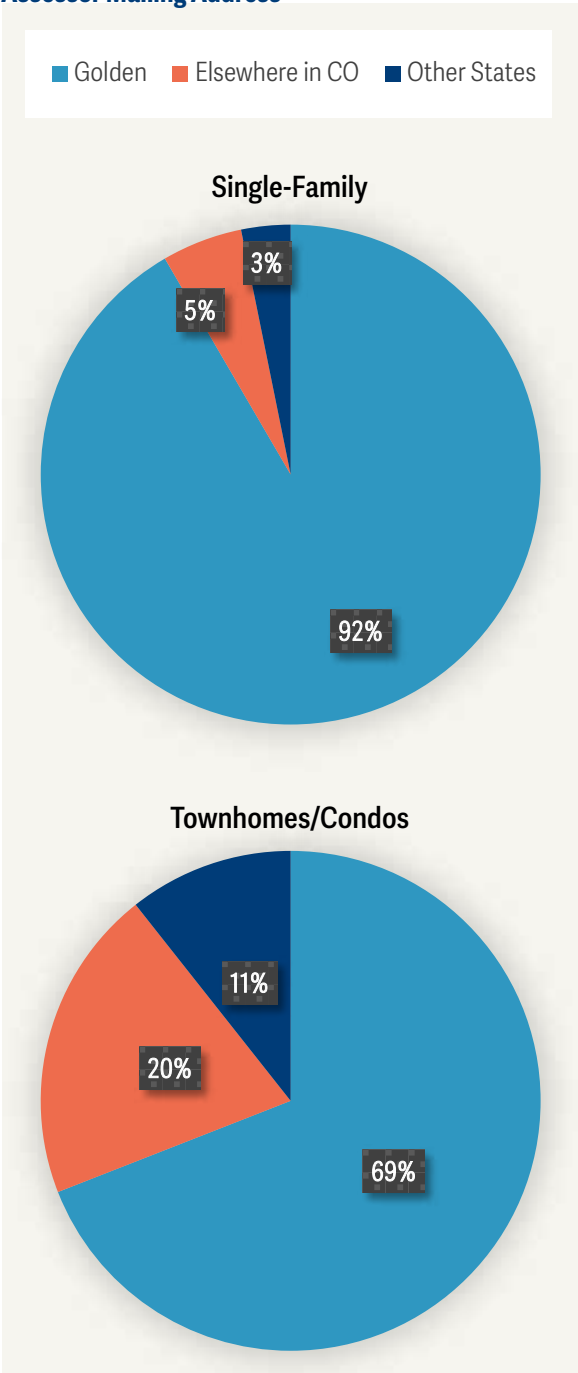
Current parcel records from the Jefferson County Assessor were also reviewed to identify residential properties with a tax bill mailing address that differs from the physical property address. Figure II-2 summarizes the proportion of units that have a non-local mailing address. Properties classified as apartments (many of which have non-local or institutional investment owners) are not included in the analysis.

The comparison indicates that approximately 92% of all single-family property records within Golden are likely owner-occupied. Approximately 5% of single-family homes have a mailing address located outside of Golden but elsewhere within the State of Colorado. An additional 3% of owners have mailing addresses outside of Colorado. The two most frequent states are Texas and California.

A higher share of the townhome and condominium housing inventory is associated with non-local owners. Among residential properties classified as townhomes, duplexes, triplexes, or residential condominiums, an estimated 31% have mailing addresses located outside of Golden.

About one-in-five records are associated with mailing addresses located elsewhere in Colorado (primarily Metro Denver). An additional 11% of attached properties have out-of-state mailing addresses. Again, Texas and California are the two most frequent out-of-state locations.

FIGURE II-2: Residential Properties in Golden by Assessor Mailing Address



Source: GG+A analysis of Jefferson County Assessor records

RECENT RESIDENTIAL DEVELOPMENT ACTIVITY

Table II-4 summarizes recent residential development activity that has occurred within the past five years according to Jefferson County Assessor records. Map II-1 illustrates the locations of the recent development activity.

Assessor records indicate that approximately 630 new dwelling units have been constructed since 2016. The new construction activity has delivered approximately 782,000 square feet of additional residential building space.

New developments classified below in Table II-4 as student housing or boarding rooms have been exempt from the growth management ordinance but are considered to be residential dwelling units by the County Assessor. These developments comprised about 35% of new building space and 42% of new dwelling units over the period.

Multi-family apartment units, not including senior housing, have represented about 35% of the residential development activity. Residential condominiums, townhomes, duplexes and triplexes, and single-family housing have comprised 21% of units delivered since 2016.

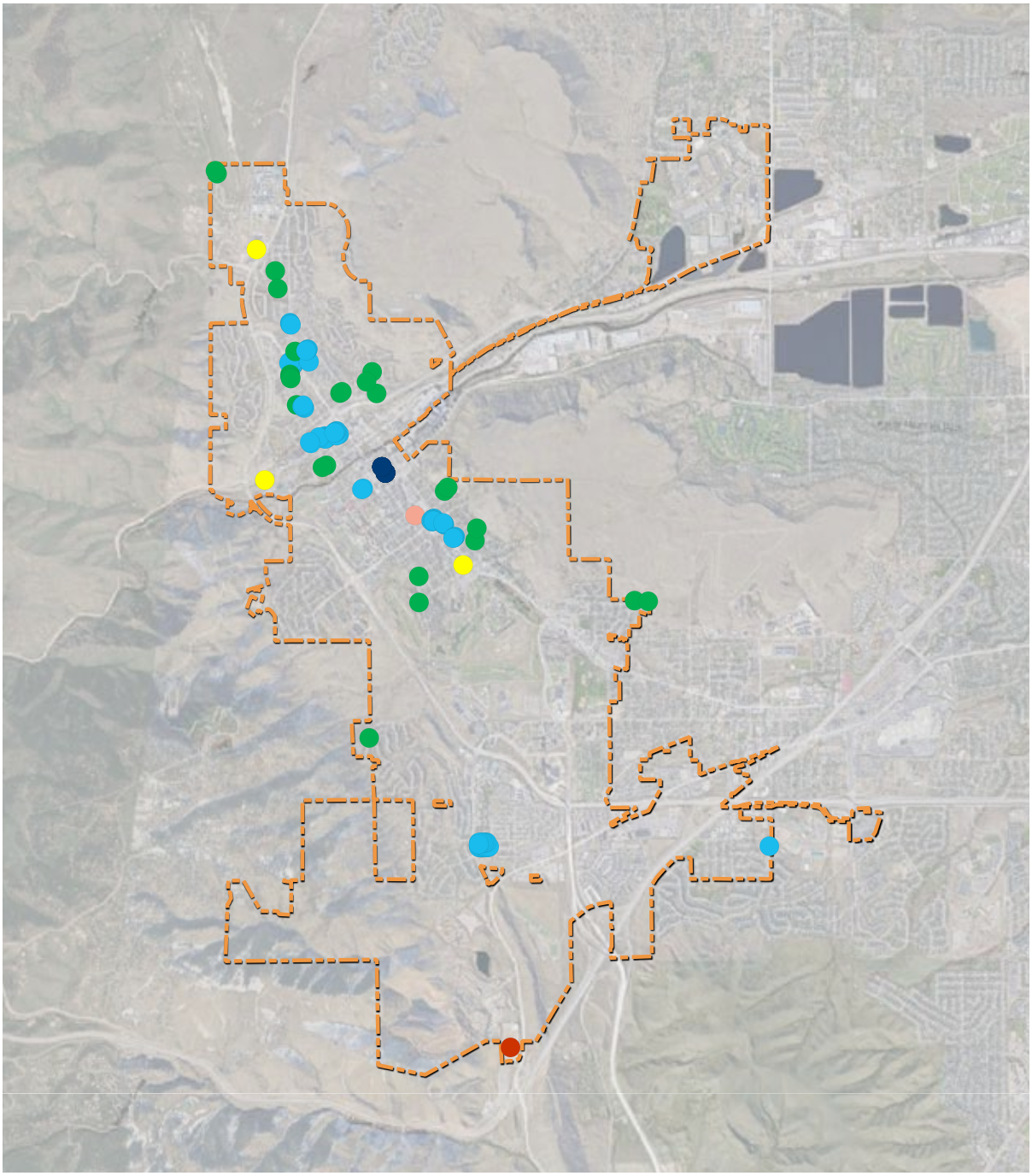
Table II-4: Residential Development in Golden, 2016-2022

	New Dwelling Units by Year Built								Gross Building Area [1]	
	2016	2017	2018	2019	2020	2021	2022	*Total*	Total	Per Unit
Apartments	0	0	0	120	0	72	44	*236*	268,800	1,139
Condos	12	6	0	0	0	0	0	*18*	20,800	1,154
Single Family	2	9	2	2	6	4	3	*28*	57,400	2,052
Townhomes [2]	13	0	33	26	0	5	7	*84*	157,300	1,873
Student Housing	0	0	0	0	98	0	0	*98*	147,300	1,503
Boarding Rooms	0	0	0	0	0	168	0	*168*	130,100	774
Total	**27**	**15**	**35**	**148**	**104**	**249**	**54**	**632**	**781,700**	**1,237**

[1] In square feet.
[2] Also includes duplexes and triplexes.

Sources: Jefferson County; Gruen Gruen + Associates.

MAP II-1: Residential Development Activity in Golden Since 2016



** Assessor classifies these as residential properties with "dwelling units." City of Golden code treats them as commercial uses which are not counted as housing units in the growth management ordinance.*

AFFORDABLE HOUSING INVENTORY

Golden contains approximately 250 multi-family rental apartment units that are publicly assisted. These units are estimated to represent about 10% of all apartment units within Golden and approximately 3% of the total housing inventory. Map II-2 identifies the publicly assisted affordable housing properties as well as examples of "naturally" occurring affordable housing within the community.

Table II-5 summarizes the publicly assisted rental inventory. The 44-unit Flats at Ford Street development is the most recent addition to affordable housing in Golden. The project, completed by the Foothills Regional Housing Authority, is assisted by Low Income Housing Tax Credits ("LIHTC") as well as project-based Section 8 vouchers. Units are set-aside for households earning 30-50% of Area Median Income ("AMI").

Other publicly assisted properties in Golden target a similar affordable income level. Four additional properties built between 1982 and 2011 provide for 209 affordable rental units. These include the Lewis Court senior apartments, Golden Pointe, Altitude, and Canyon Gate projects. Affordable restrictions for some units at the Altitude project are set to expire by year-end 2025.

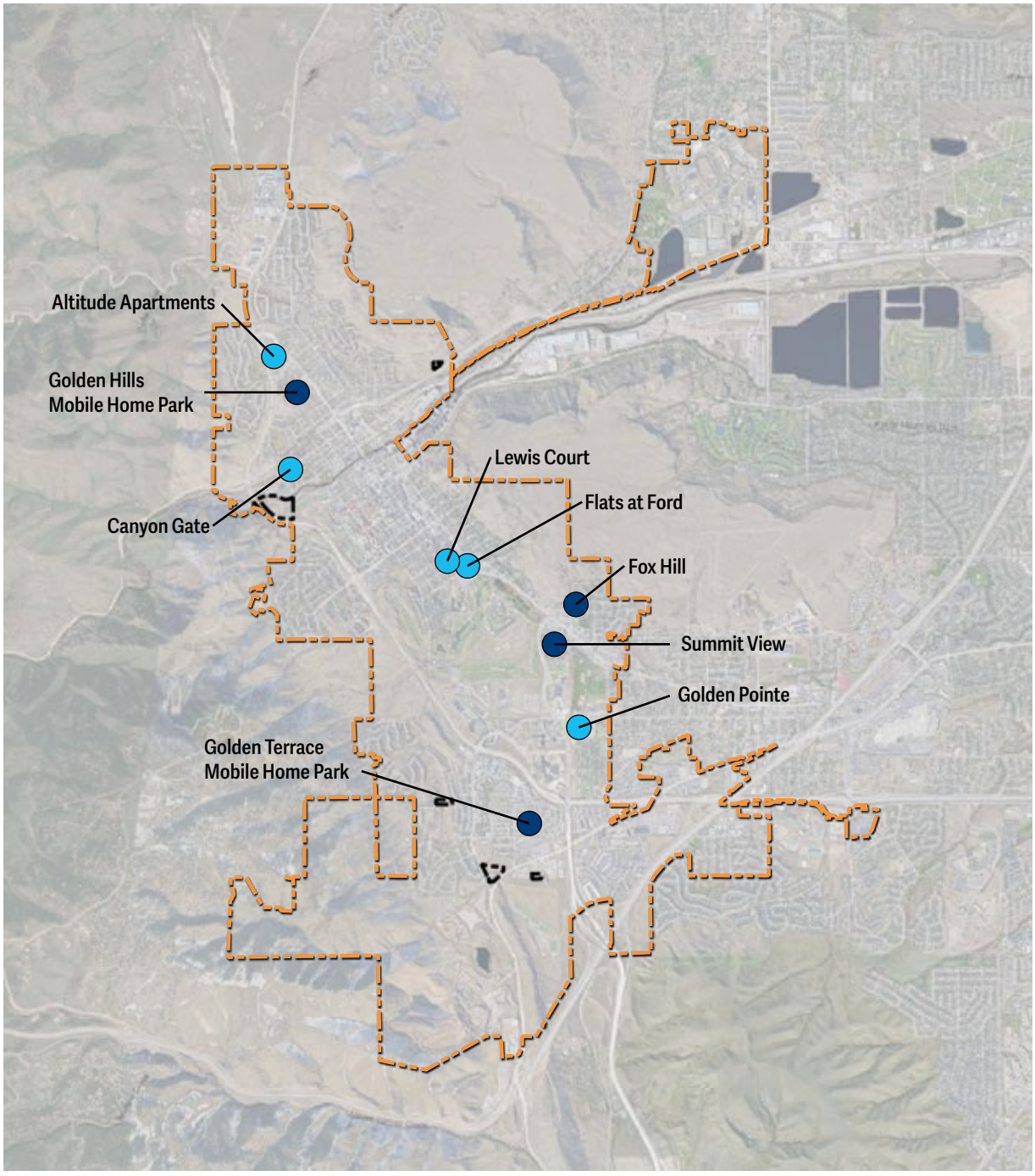
TABLE II-5: Publicly Assisted Housing in Golden

	Assisted Units #	Year Built	Income Target	Primary Funding Source(s)[1]
Altitude, 303 Jackson Dr.	50	1997	50% AMI	LIHTC; Multiple
Canyon Gate, 1411 8th St.	53	1982	50% AMI	Section 8
Lewis Court, 2200 Jackson St.	50	2011	30-60% AMI	LIHTC
Flats at Ford, 2310 Ford St.	44	2022	30-60% AMI	LIHTC; Section 8
Golden Pointe, 17400 W 10th Ave.	56	2009	40-60% AMI	LIHTC
Total	**253**			

[1] In addition to LIHTC and Section 8 vouchers, projects may be assisted by HUD mortgage programs.

Sources: National Housing Preservation Database; Colorado Housing and Finance Authority; Gruen Gruen + Associates.

MAP II-2: Affordable Housing Sources in Golden



Housing Market Conditions

SINGLE-FAMILY HOUSING MARKET

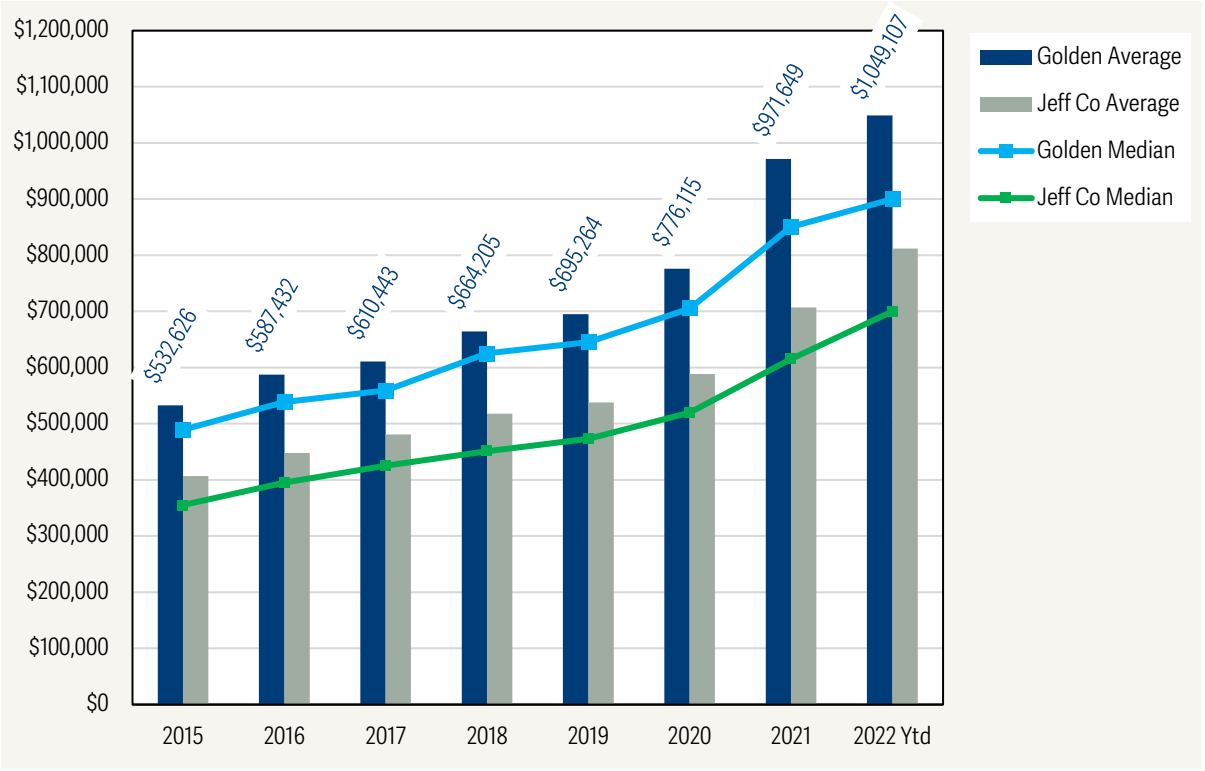
According to Denver Metro Association of Realtors data, the Golden housing submarket has averaged approximately 670 single-family sales annually since 2015. The volume of sales has recently increased from a low of 624 sales in 2019 to a reported 704 sales in 2021.

Steady resales activity has been accompanied by significant increases in average single-family home prices. Figure II-3 summarizes the average and median single-family resale prices within the Golden submarket and throughout Jefferson County according to the Denver Metro Association of Realtors.

The average single-family price was approximately $1,049,000 in the Golden area through the first eight months of 2022. The average sales price has more than doubled since 2015 when a typical single-family home in the Golden area sold just under $533,000. The median sales increased by 84% of the period, increasing from $489,000 in 2015 to $900,000 through the first eight months of 2022.

The pricing trends over the past several years indicate that a typical single-family home in Golden has experienced average price appreciation of about 10% annually since 2015.

FIGURE II-3: Average and Median Single-Family Resale Prices



The Golden market has also maintained a relatively consistent "premium" over the broader Jefferson County single-family market. The average sales price in Golden has been anywhere from 27% to 37% higher than single-family sales throughout Jefferson County since 2015. This points to the relative desirability of single-family housing in the Golden market, among other things (e.g., limited new supply).

In addition to a recent increase in the volume of activity (sales) and rapid price escalation, other indications of a tightening for-sale housing market have been evident over the past several years. The average number of "days on market" has trended downward and the ratio of sales price to listing price continues to increase.

In the Golden market, the average days on market declined from 40 days in 2015 to only 18 days in 2021. The average sales-to-list ratio increase from about 99% in 2015-2016 to almost 104% in 2021.

Recent Sales Characteristics in Golden

Recent sales within municipal limits, by type and size of unit, provide an indication of current market prices for ownership housing in the community. Over the 12-month period from June 2021 through May 2022, the average residential sales price was $384 per square foot or $776,000 per unit. Table II-6 and Figure II-4 summarize these trends by unit type.

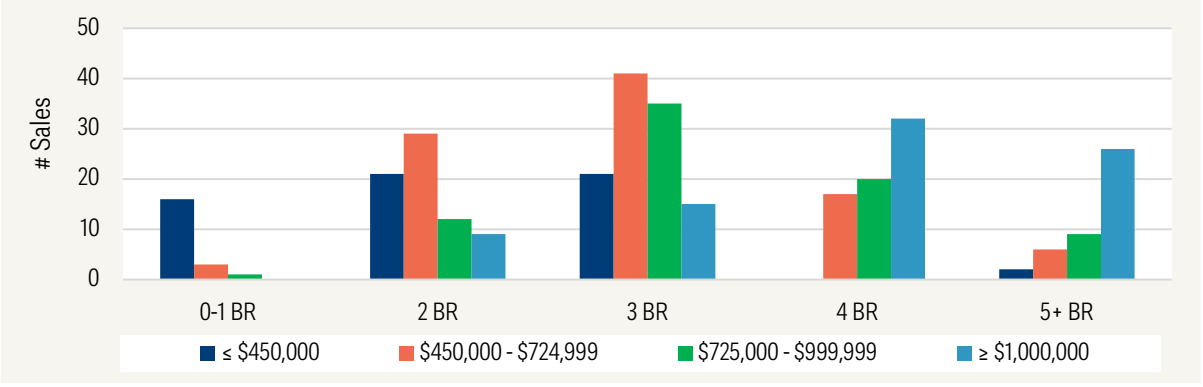
A total of 43 residential condominium units sold for an average price of approximately $463,000 per unit. The average unit size was roughly 950 square feet, suggesting an average price of $489 per square foot.

Twenty manufactured housing (i.e., mobile home) sales occurred at an average price of $94,500. The average unit size was just under 1,200 square feet, equating to an average sale price per square foot of about $79 per square foot. While these units are typically on land leases, the recent sales trends

TABLE II-6: Residential Sales Characteristics in Golden (June 2021-May 2022)

	Sales #	Average Unit Size # Square Feet	Average Sales Price Per Unit	Average Price Per Square Foot
Condo	43	948	$463,361	$489
Manufactured	20	1,193	$94,490	$79
Single-Family	197	2,447	$950,430	$388
Townhome	46	1,557	$620,098	$398
Total	**306**	**2,021**	**$776,422**	**$384**
Sources: REColorado; Zillow; Gruen Gruen + Associates.				

FIGURE II-4: Sales by Price Point and Number of Bedrooms (June 2021-May 2022)



highlight the deeply affordable nature of existing manufactured housing in the community.

Almost 200 single-family sales occurred within limits, with an average price of approximately $950,000. The average unit size was about 2,450 square feet, indicating an average price of $388 per square foot. An additional 46 townhome sales occurred with an average price of $620,000 or $398 per square foot.

Three-bedroom units represented the most frequent unit type or 36% of all sales. Approximately two-thirds of all units with three or fewer bedrooms sold for prices below $725,000. Relatively few sales occurred below prices of $450,000 and within this price bracket, sales were primarily concentrated among condominium and townhome units located in South Golden. About 60% of these sales (below $450,000) occurred, for example, at the Golden Ridge Condominiums and in smaller condominium buildings along West 3rd Avenue and West 3rd Place adjacent to the Golden Terraces mobile home park.

Larger units containing four or more bedrooms comprised about 36% of all sales within the prior 12 months. More than one-half of these sales for larger units were priced above $1,000,000.

RENTAL HOUSING MARKET CONDITIONS

Table II-7 summarizes current and historical apartment market conditions in Golden.

The rental market in Golden is characterized by persistently low vacancy rates and a high rate of rent escalation in recent years.

According to recent *Metro Denver Vacancy and Rent Survey* reports, the overall vacancy rate in the Golden market was 2.8% in the fourth quarter of 2021. Five years prior in 2016, the vacancy rate was similarly low at 3.4 percent. As reviewed previously, more than 500 new apartment units are estimated to have been delivered since 2016. New apartment construction serves new or unmet demands, rather than siphoning renter demand from existing units in Golden.

Average monthly apartment rent is estimated to have increased from $1,511 per unit in 2016 to $1,929 per unit in 2021. Monthly median rents have been within two to four percentage points of average rents. Long-term rent growth represents 5% average annual escalation over the past five years in Golden. Average and median monthly rents in Golden are approximately 15% to 25% higher than the adjoining apartment submarkets.

TABLE II-7: Apartment Market Conditions in Golden and Jefferson County, 2016-2021

Submarket	2016 [1]		2021 [1]		Rent Increase 2016-2021
	Average Monthly Rent	Vacancy Rate	Average Monthly Rent	Vacancy Rate	
Golden	**$1,511**	**3.4%**	**$1,929**	**2.8%**	**27.7%**
Arvada	$1,333	4.1%	$1,664	4.6%	24.8%
Lakewood North	$1,270	3.8%	$1,570	3.4%	23.6%
Lakewood South	$1,354	4.8%	$1,747	4.2%	29.0%
Westminster	$1,237	5.1%	$1,641	4.4%	32.7%
Wheat Ridge	$971	4.1%	$1,398	3.0%	44.0%
Jefferson County	*$1,308*	*4.4%*	*$1,669*	*4.0%*	*27.6%*

[1] Fourth quarter of each year.

Sources: Apartment Association of Metro Denver, Metro Denver Vacancy and Rent Reports; Gruen Gruen + Associates.

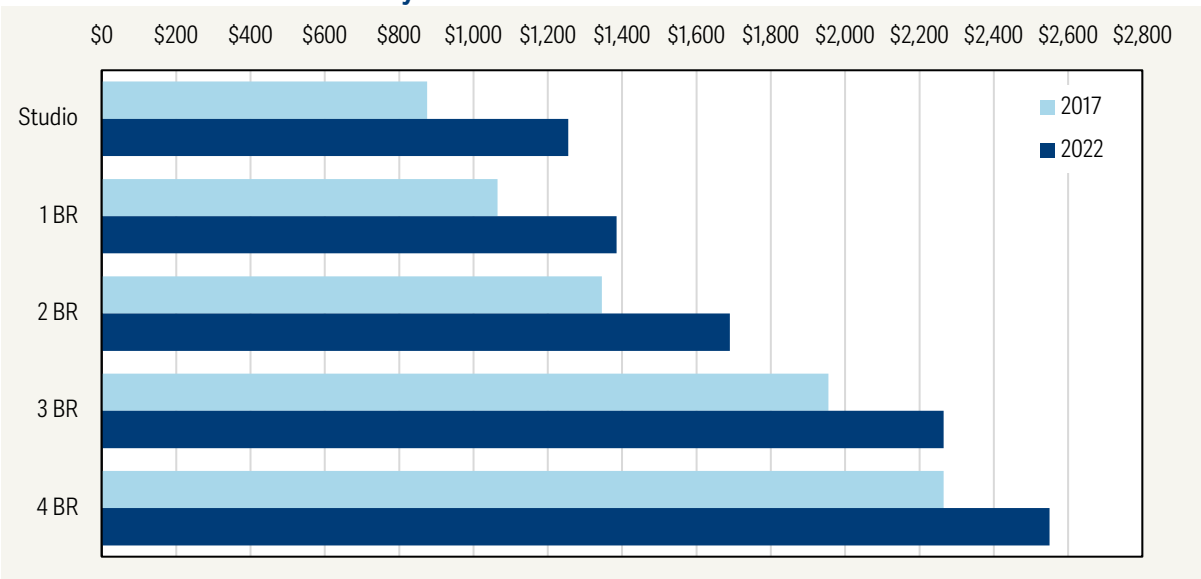
Fair Market Rents

Figure II-5 summarizes U.S. Department of Housing and Urban Development ("HUD") small area fair market rent estimates for the two zip codes encompassed within Golden. The estimates have been averaged across the two zip codes (80401, 80403) and represent "40% Percentile" rents, meaning 60% of rental units in the local area would be priced higher.

Accordingly, HUD estimates provide an indication of current market rent associated with moderately-priced, average quality dwelling units in the local market. Average rent estimates provided by a local property management company which manages smaller and older multi-family properties as well as single-family homes converted to rental units are similar to those estimated by HUD for studio, one-, and two-bedroom units.

HUD estimates that fair market rent has increased by 30% and 43% for one-bedroom and studio units, respectively, over the past five years. Average monthly rent is estimated to range from about $1,250 to $1,400 for these unit types. An average rent for a two-bedroom of modest quality is estimated at about $1,700 monthly, representing a 26% increase over the past five years.

FIGURE II-5: HUD Fair Market Monthly Rent Estimates for Golden Area



Asking Multi-Family Apartment Rents

Table II-8 summarizes advertised "asking rents",[1] as of May 2022, for a sample of larger multi-family apartment properties in Golden. These units represent more than one-half of the rental housing inventory.

Units in recently built apartment buildings and especially those near Downtown Golden are characterized by above-average rents. For example, the Fox Hill Apartments in south Golden, built in 1974, currently ask monthly rents of about $1,400 to $2,300 for one- to three-bedroom units. This represents monthly rent of about $2.30 to $2.40 per square foot. By comparison, the Basecamp project near Downtown Golden asks monthly rents of about $2,300 to $5,000 for units including one to four bedrooms. Monthly rents are essentially 40% higher at $3.15 to $3.36 per square foot.

Other newer properties ask rents generally ranging within $2.50 to $3.50 per square foot.

The recently finished 165-unit Aurum project which features "co-living" units with shared kitchens, advertises rents of approximately $1,340 to $1,860 for studio and one-bedroom units. This represents monthly rents of about $2.75 to $3.60 per square foot. Asking rents for larger two- and three-bedroom units range from $1,660 up to $3,414 or about $2.50 to $3.25 per square foot.

The 120-unit Epoque project located in north Golden advertises rents of $1,930 to $2,961 for one-bedroom units, representing monthly rents of about $3.00 to $3.25 per square foot. Asking rents for larger two- and three-bedroom units range from $2,965 up to $4,945 representing monthly rent of $2.94 to $2.98 per square foot.

TABLE II-8: Asking Rents at Larger and Newer Apartment Properties in Golden

Property	Year Built	Unit Sizes[1]	Monthly Rents $ Per Unit	Monthly Rents $ Per Square Foot
Aurum[2]	2022	371-1,209	1,339 - 3,434	2.80 - 3.61
Basecamp Golden	2020	690 - 1,595	2,319 - 5,030	3.15 - 3.36
Epoque Golden	2018	590-1,657	1,930 - 4,945	2.98 - 3.27
Residences Fossil Point	2018	513 - 904	2,171 - 2,712	3.00 - 4.23
Outlook Golden	2014	804 - 1,365	2,160 - 3,097	2.27 - 2.70
West 8th	2014	1,048 - 1,622	2,974 - 4,787	2.84 - 2.95
Clear Creek Commons	2003	605 - 960	2,159 - 3,799	3.42 - 3.57
Altitude Apartments	1997	761 - 1,142	2,319 - 3,285	2.88 - 3.05
Fox Hill Apartments	1974	580 - 984	1,390 - 2,300	2.34 - 2.40
Summit View Village	1974	864	1,640	1.90

[1] Unit sizes in square feet. Units and asking rents represent units advertised as available.
[2] Co-living units without full kitchens.

Sources: CoStar; Apartments.com; Forrent.com; Gruen Gruen + Associates

[1] Asking rents are close to effective rents. According to CoStar, concessions and rent discounts amount to less than one percent of asking rents in the two apartment submarkets encompassing Golden.

III Housing Affordability in Golden

INTRODUCTION

Housing affordability is defined by both the income of a household (its "ability to pay") and the cost of a housing unit appropriate for that household.

- Housing is considered to be "affordable" under standards defined by federal law and the U.S. Department of Housing and Urban Development (HUD) if a household spends 30 percent or less of its before-tax income on housing and related expenses.[1]

- Housing is not affordable if more than 30 percent of income is spent on housing. Households spending more than 30 percent of their income are commonly defined as "cost burdened."

The 30-percent-of-income threshold is used throughout this analysis to characterize housing affordability conditions in Golden.

CURRENT INCOME LIMITS

Table III-1 summarizes current affordable household income limits in 2022 for Jefferson County.

Affordable income limits for the Extremely Low Income category - 30% or less of Area Median Income (AMI) - range from about $25,000 for a single-person up to $35,000 for a four-person household.

Limits for the "Very Low Income" category, which represents 30% to 50% of AMI, range from $41,000 for a single-person household up to about $59,000 for a four-person household. Limits for the "Low Income" category, reflecting 50% to 80% of AMI, range from about $66,000 for a single-person household up to $94,000 for a four-person household.

Current income limits at 120% AMI range from about $99,000 for a single-person to $141,000 for a four-person household.

TABLE III-1: Jefferson County Income Limits for 2022

Household Size:	1	2	3	4	5	6	7	8
120% AMI	$98,520	$112,560	$126,600	$140,640	$151,920	$163,200	$174,480	$185,760
100% AMI	$82,100	$93,800	$105,500	$117,200	$126,600	$136,000	$145,400	$154,800
80% AMI	**$65,680**	**$75,040**	**$84,400**	**$93,760**	**$101,280**	**$108,800**	**$116,320**	**$123,840**
50% AMI	$41,050	$46,900	$52,750	$58,600	$63,300	$68,000	$72,700	$77,400
30% AMI	$24,630	$28,140	$31,650	$35,160	$37,980	$40,800	$43,620	$46,440
Sources: Colorado Housing and Finance Authority; Gruen Gruen + Associates.								

[1] The Housing and Urban Development Act in 1969 established a 25 percent threshold; Congress raised the cap to 30 percent in the 1980's. Note that "housing and related expenses" include costs such as utilities, insurance, and property taxes - not just rent or mortgage payments.

COST-BURDENED HOUSEHOLDS

Table III-2 illustrates the distribution of households in Golden by housing tenure and the percentage of income expended on housing. Again, households spending 30 percent or more of their income on housing are considered cost burdened.

Housing affordability conditions for homeowners remained relatively stable over the long-term. The cost burden rate for owner-occupied households in Golden increased only slightly, from 20.3% in 2000 to 21% in 2020. More than 60% of existing homeowners still incur housing expenses that are less than 20% of the before-tax income.

The cost burden rate for renters increased significantly over the period, from 39.8% of households in 2000 to above 47% of households in 2020. The increase in cost-burdened renters relates to both long term rent increases and stagnation in household incomes.

HOUSING PROBLEMS BY INCOME LEVEL

Approximately 79% of all cost burdened households in Golden are reported by HUD to be at or below 80% of AMI. A higher share - nearly 90% - of all renters with incomes at or below 80% of AMI are estimated to be cost burdened. A very low share of households at or above 100% of AMI (i.e., above median income households) are estimated to be cost burdened.

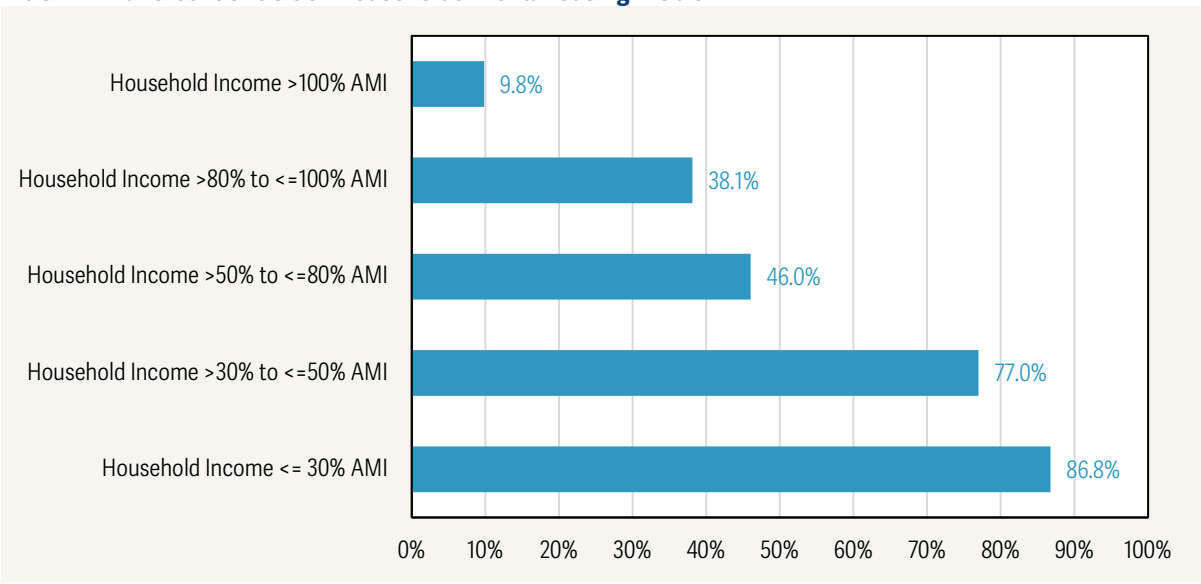
Figure III-1 illustrates the distribution of cost burdened households, as well households with other HUD-defined housing problems, within Golden by percentage of AMI. The estimates are drawn from Comprehensive Housing Affordability Strategy ("CHAS") data for the 2014-2018 period, produced by HUD.

The CHAS data indicates that the most significant concentrations of households experiencing a housing problem are Extremely Low and Very Low Income households. Households with incomes below 50% AMI in Golden represent about two-thirds of all households determined to have a housing problem.

TABLE III-2: Cost-Burdened Households in Golden

Income to Housing	2000 Census % of Households	2020 ACS % of Households	2000-2020 Shift Pct. Points
OWNERS			
Less than 20 percent	63.9	60.8	-3.1
20 to 29 percent	15.8	18.2	2.4
30 percent or more	**20.3**	**21.0**	**0.7**
RENTERS			
Less than 20 percent	27.7	28.5	0.8
20 to 29 percent	32.5	24.1	-8.4
30 percent or more	**39.8**	**47.4**	**7.6**
Sources: U.S. Census Bureau; Gruen Gruen + Associates.			

FIGURE III-1: Percent of Golden Households with a Housing Problem



HOUSING AFFORDABILITY "GAP" ANALYSIS

This section compares the existing housing inventory, by price and tenure, to the existing income characteristics of the household base. The comparison is commonly referred to as an "affordability gap" analysis, in which the gaps are the differences in the number of existing households bracketed by affordable housing costs and the number of units estimated exist at those affordable price points. The estimates are based on our analysis of *2020 American Community Survey* data and recent for-sale and rental housing market statistics in Golden.

Affordable Prices

Table III-3 summarizes estimates of the price of housing currently afforded at various household income levels.

The lowest income households with less than $35,000 of annual gross income can afford no more than $875 in monthly gross rent. Households with $50,000 of annual income could afford up to $1,250 in monthly gross rent. Assuming a household with an annual income of $50,000 could secure a 30-year mortgage, the maximum affordable purchase price would be approximately $187,000. A household with $75,000 of annual income can afford up to $1,875 in monthly rent or purchase price of approximately $280,000.

Households with annual incomes of $100,000 can afford monthly rents of $2,500 and can afford a purchase price of about $373,000. Households with annual incomes of $150,000 or above can afford monthly rents of $3,750 or higher, and purchase prices of $560,000 or higher.

TABLE III-3: Affordable Housing Prices by Household Income Bracket

Annual Income	Maximum For-Sale Housing Price [1]	Maximum Gross Monthly Rent [2]
Less than $35,000	Below $131,000	Below $875
$35,000 to $49,999	$131,000 to $186,999	$875 to $1,249
$50,000 to $74,999	$187,000 to $279,999	$1,250 to $1,874
$75,000 to $99,999	$280,000 to $372,999	$1,875 to $2,499
$100,000 to $149,999	$373,000 to $559,999	$2,500 to $3,749
$150,000 and Above	$560,000 and Above	$3,750 and Above
[1] Assumes a 3.5 percent down payment with a 30-year fixed rate mortgage at an annual interest rate of 5.0 percent. Permanent mortgage insurance is included at 0.85 percent of the loan (current FHA rates). Annual property tax and home insurance costs are assumed to approximate 1.0 percent of the purchase price. [2] Assumes monthly gross rents equal 30 percent of income.		
Source: Gruen Gruen + Associates		

Gap Estimates for Golden

Tables III-4 and III-5 on the following page summarize the existing housing inventory by tenure and affordability level, in comparison to the income characteristics of the existing household base. The estimates reflect the price of housing that households can potentially afford, not what they will necessarily elect to purchase or rent. The household income and housing price estimates have been adjusted to current dollars.

The community experiences a large deficit of rental units at deeply affordable prices. This situation is not unique to Golden. Using the 30-percent-of-income standard, Golden likely contains just under 1,000 renter households who can afford to pay no more than $875 in monthly gross rent. The existing supply of rental units priced below this affordability threshold is estimated at fewer than 400 units; indicating a "gap" or deficit of approximately 600 rental units affordable to the lowest income bracket.

At the opposite end of the income spectrum, Golden is estimated to contain about 540 renter households who could potentially afford monthly rents exceeding $3,750. There are estimated to be a relatively small number of existing rental units in Golden commanding this level of rent, indicating another gap of almost 320 units affordable to the highest income renters. This situation does not necessarily indicate a "deficiency" in the rental housing stock. Rather, it reflects the presence of a relatively small, but very high income subset of renter households in Golden.

The rental housing gaps at the lowest and highest price points of the housing spectrum indicate that the housing needs among the lowest-income and highest-income renters get satisfied somewhere "in the middle." Most high-income renters will find suitable housing that permits them spending much less than 30% of their income on rent, while most of the lowest income renters must select housing options that require spending much more than 30% of their income on rent.

The gap analysis for owner-occupied housing in Golden follows a somewhat different pattern. Among the lowest income homeowners, existing supply is in relative balance with need. While the gap comparisons are simply approximations, this finding likely reflects the large number of manufactured homes within Golden.

A large "surplus" of owner-occupied units also exists at the highest price point of the housing ladder. This, in part, reflects the significant escalation in residential sales prices that have occurred in

TABLE III-4: Estimated Rental Housing Affordability Gaps in Golden

	Existing Supply of Renter Occupied Units [1] #	Number of Renters Able to Afford Units #	Existing Surplus or (Deficit) in Units #
Monthly Gross Rent:			
Less than $875 [2]	379	974	(595)
$875 to $1,249	379	250	129
$1,250 to $1,874	1,010	599	412
$1,875 to $2,499	695	377	317
$2,500 to $3,749	474	419	55
$3,750 and Above	221	539	(318)
[1] Estimate of occupied units by price. Price distribution from 2020 adjusted upwards to account for 16% typical rent growth since mid-2020. [2] Estimated supply includes units with "no cash rent."			
Sources: U.S. Census Bureau, 2020 American Community Survey; Gruen Gruen + Associates.			

TABLE III-5: Estimated Owner-Occupied Housing Affordability Gaps in Golden

	Existing Supply of Owner-Occupied Units [1] #	Number of Owners Able to Afford Units #	Existing Surplus or (Deficit) in Units #
Home Value:			
Below $131,000	663	603	60
$131,000 to $186,999	142	280	(138)
$187,000 to $279,999	47	566	(519)
$280,000 to $372,999	189	565	(376)
$373,000 to $559,999	663	881	(219)
$560,000 and Above	3,030	1,840	1,191
[1] Estimate of occupied units by price. Price distribution from 2020 adjusted upwards to account for 29% typical residential sales price growth since mid-2020.			
Sources: U.S. Census Bureau, 2020 American Community Survey; Gruen Gruen + Associates.			

recent years. Almost two-thirds of all owner-occupied housing units in Golden are estimated to have "values" that exceed $560,000, representing approximately 3,000 units. Using the 30-percent-of-income standard and other assumptions (such as limited down payments), Golden likely contains only 1,840 existing homeowners who could afford purchase prices of $560,000. The difference suggests a surplus of nearly 1,200 units in this price bracket. The large discrepancy between incomes of existing households and home values in Golden indicates: (1) that most buyers in the Golden market are likely existing homeowners with significant equity, or otherwise have sufficient down payments to exceed FHA minimums; and (2) that historically low interest rates have inflated home purchase prices relative to local household incomes.

For the owner-occupied housing inventory in Golden, the gaps or "deficits" are estimated to be concentrated primarily within the middle income segments that would be associated with modestly priced for-sale housing. For example, an estimated 1,100 households whose income would suggest affordable purchase prices ranging from $187,000 to $373,000 compares to an estimated supply of less than 250 units, indicating a gap of nearly 900 owner-occupied housing units at these prices.

FOR-SALE HOUSING AFFORDABILITY

For-sale housing affordability within Golden is further illustrated by a comparison between recent residential sales prices and current affordable income limits within Jefferson County.

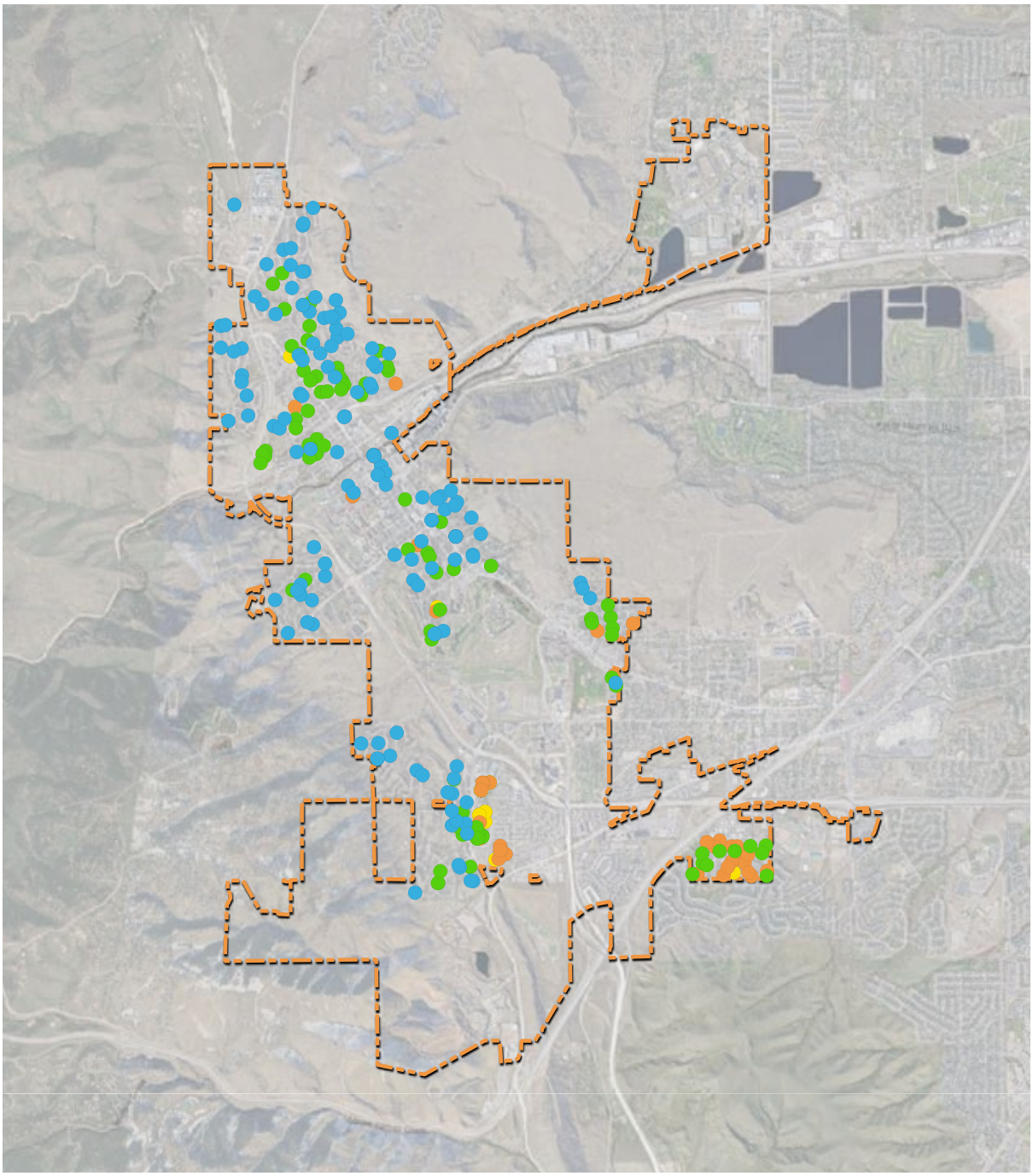
Map III-1 summarizes recent home sales by level of affordability.[2] The sample includes approximately 285 sales that occurred within Golden over the prior 12 months (sales previously reviewed in Section 2). Manufactured housing sales are excluded from the analysis and map.

Less than 9% of all residential sales in the past year have been affordable to households at or below 80% AMI. These sales were primarily small one- or two-bedroom condominium units. Only 13% of sales were affordable to households at 80% to 120% AMI. A majority of these sales occurred in south Golden neighborhoods.

About 29% of recent sales were affordable to households within the 120% to 160% AMI bracket. Nearly 49% of all residential sales were affordable only to households with incomes at or above 160% AMI. These were primarily larger homes or units located in north Golden as well as properties within or near the Downtown. Many of the purchases would require incomes, after adjusting for household size, that are well above 200% AMI.

[2] Based on 2022 income limits for Jefferson County, adjusted for household size. Assumes 1.5 persons per bedroom.

MAP III-1: Recent Residential Sales by Level of Affordability



Recent Residential Sales [1] by Affordability Level

- < 80% AMI
- 80% AMI - 120% AMI
- 120% AMI - 160% AMI
- ≥ 160% AMI

City of Golden

0 0.5 1.0 mi

N

[1] Single-family, townhome, and residential condo sales within prior 12 months. Affordability levels reflect number of bedrooms and income limits by household size.

IV Demographic and Household Characteristics

HISTORICAL POPULATION AND HOUSEHOLD GROWTH

Table IV-1 summarizes historical population and household growth within Golden, neighboring communities, and Jefferson County.

Census estimates indicate the population grew by approximately 1,500 residents during each of the prior decades. The population grew from 17,411 in 2000 to 18,867 in 2010, representing 8.4% total growth over the 2000-2010 decade. Population grew to an estimated 20,399 persons as of the 2020 Census, representing 8.1% percent population growth over the 2010-2020 decade.

Household growth has occurred less rapidly. Between 2000 and 2010, the number households grew by approximately 430 or 6.1%. The number of households increased by 498 over the subsequent 2010-2020 decade representing 6.7% growth.

Although the residential growth management ordinance in Golden was enacted in 1996, Golden has still outpaced Jefferson County and neighboring communities such as Lakewood and Wheat Ridge in long-term population and household growth since 2000. This relates to growth in student population which is exempt from the ordinance.

GROUP QUARTERS POPULATION

A significant share of population growth that occurred within Golden between 2000 and 2020 related to an increase in Group Quarters population, as summarized in Table IV-2. The growth has been primarily attributable to an increase in "non-institutionalized" Group Quarters population which includes on-campus student housing. The total Group Quarters population in Golden is estimated to have more than doubled, from under 1,300 in 2000 to nearly 2,700 by the 2020 Census.

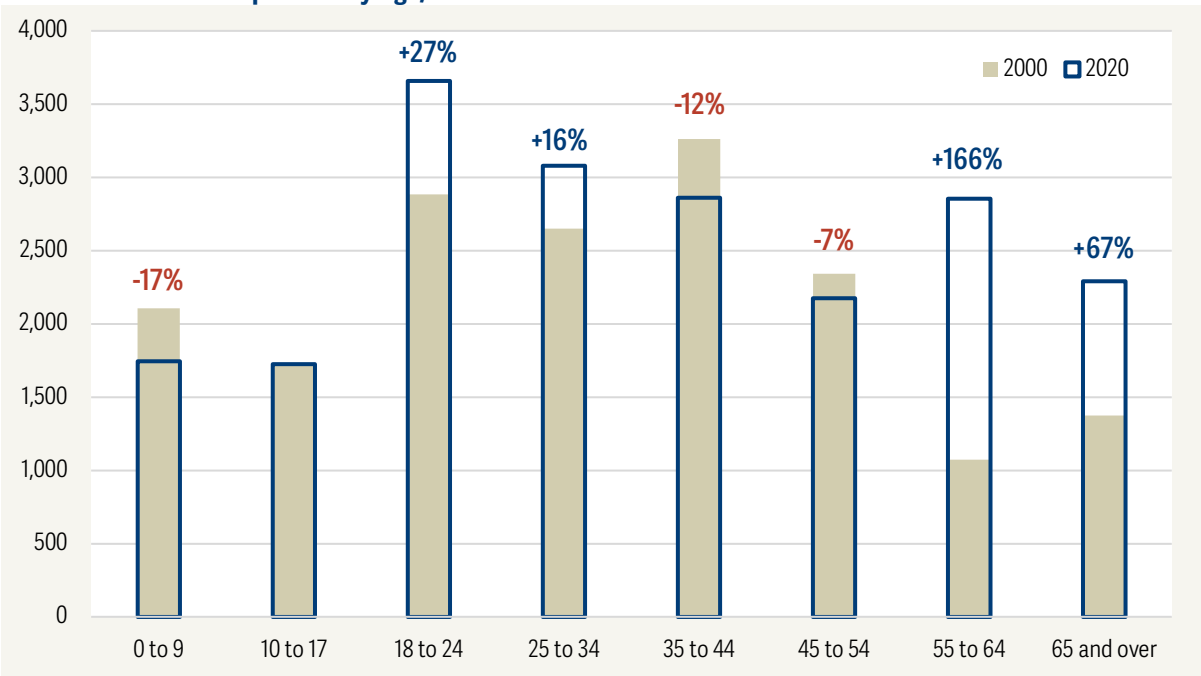
TABLE IV-1: Historical Population and Household Growth, 2000-2020 Census

		2000 #	2010 #	2020 #	2000-2020 Growth
POPULATION	**Golden**	**17,411**	**18,867**	**20,399**	**17.2%**
	Arvada	102,153	106,433	124,402	21.8%
	Lakewood	144,126	142,980	155,984	8.2%
	Wheat Ridge	32,913	30,166	32,398	-1.6%
	Jefferson County	527,056	534,543	582,910	10.6%
HOUSEHOLDS	**Golden**	**6,966**	**7,394**	**7,892**	**13.3%**
	Arvada	38,914	42,701	49,545	27.3%
	Lakewood	60,577	61,986	67,292	11.1%
	Wheat Ridge	14,591	13,976	14,663	0.5%
	Jefferson County	206,067	218,160	237,676	15.3%
Sources: U.S. Census Bureau, 2000-2020 Decennial Census; Gruen Gruen + Associates.					

TABLE IV-2: Historical Group Quarters Population in Golden, 2000-2020 Census

	2000 #	2010 #	2020 #	2000-2020 Growth
Group Quarters Population:				
Institutionalized [1]	715	648	814	13.8%
Non-institutionalized [2]	578	927	1,867	223.0%
Group Quarters Population	**1,293**	**1,575**	**2,681**	**107.3%**
Household Population	16,118	17,292	17,718	9.9%
Total Population	17,411	18,867	20,399	17.2%
[1] Definition primarily includes adult and juvenile correctional facilities and nursing homes. [2] Definition primarily includes college or university student housing.				
Sources: U.S. Census Bureau, 2000-2020 Decennial Census; Gruen Gruen + Associates.				

FIGURE IV-1: Golden Population by Age, 2000-2020



POPULATION BY AGE

Figure IV-1 summarizes the estimated change in population by age cohort from 2000 to 2020.

The population base has aged considerably. All net population growth since 2000 has been due to an increase in the Age 55+ cohort. The population of residents aged 55 years and over more than doubled between 2000 and 2020, increasing by 2,697 persons or 110%.

The population of college-aged young adults (Ages 18-24) experienced strong growth over the 2000-2020 period as well, increasing by nearly 800 residents or 27%. This age cohort remains the largest in Golden.

The population of prime working-age adults (Ages 25-54) declined slightly by about 2% over the period. The number of children under 10 years of age also declined by 17%.

POPULATION BY RACE

Table IV-3 summarizes the population in Golden by Hispanic origin and race.

The minority population in Golden is estimated to have grown modestly since 2000. The non-Hispanic White population comprised approximately 87% of wide population in 2000 and declined to an 80% share as of the 2020 Census.

The population of Hispanic or Latino origin represents the second largest demographic within the , estimated to currently comprise about 10% of the total population. While still relatively small, the Hispanic population grew by approximately 840 persons or 74% over the 2000-2020 period.

The non-Hispanic Asian population represents 3.8% of residents and the non-Hispanic Black population represents 1.3% of residents. Other non-Hispanic minorities, primarily including residents that identify as mixed race, comprised 5.1% of the population according to the 2020 Census.

DISABILITY CHARACTERISTICS

According to 2020 American Community Survey estimates, approximately 8.5% of the non-institutionalized population in Golden has one or more disabilities. Figure IV-2 summarizes the age composition of Golden residents with a disability.

The elderly population is disproportionately affected by disabilities. About 52% of all residents with a disability are estimated to be 65 years of age and older. Adults between the ages of 35 and 64 represent approximately 29% of residents with a disability.

Ambulatory difficulties and independent living difficulties are the most prevalent among the population aged 65 or older. Cognitive difficulties are most prevalent among the non-senior adult population aged 18 to 64.

FIGURE IV-2: Age Composition of Golden Population with a Disability

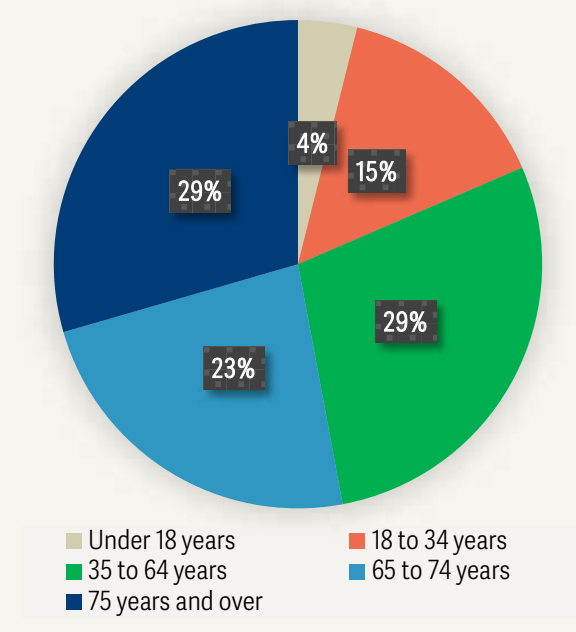


TABLE IV-3: Golden Population by Hispanic Origin and Race

	2000 Census		2020 Census	
	#	% of Total	#	% of Total
Hispanic or Latino	1,130	6.6	1,970	9.7
Non-Hispanic, White alone	14,922	87.0	16,372	80.3
Non-Hispanic, Asian alone	509	3.0	767	3.8
Non-Hispanic, Black alone	139	0.8	258	1.3
Non-Hispanic, Other or two or more races	459	2.7	1,032	5.1
Total Population	17,159	100.0	20,399	100.0
Sources: U.S. Census Bureau, 2000-2020 Decennial Census; Gruen Gruen + Associates.				

HOUSEHOLD COMPOSITION

Table IV-4 presents household characteristics related to family status and household sizes for 2000 and 2020. Golden's household base has shifted over time towards smaller-sized households and nonfamily households (i.e., with unrelated household members). This pattern is not unique to Golden.

Family households with three or more persons represented almost one-third of all households in 2000. The share declined only 23% of households by 2020. The number of smaller family households with just two persons increased considerably over the same period.

The number of single-person households has also grown since 2000 and are now estimated to represent nearly 32% of the total household base. Larger, nonfamily households with three or more household members also comprise a larger share of the household base than before. These household types, which would align with off-campus student housing, grew from 3.7% of households in 2000 to an estimated 7.0% by 2020.

The long-term changes in household composition, as well as the aging of the Golden's population, have been accompanied by a declining share of "workforce households." As of 2020, approximately 26% of Golden households were estimated to include no active members of the labor force. Put differently - about one-quarter of all housing in Golden is occupied by households that are retired, non-working students, or with members otherwise unable to work.

An estimated 35.6% of households include one worker (i.e., one wage earner) and 38.5% of households include two or more workers, a category frequently referenced as "dual income" households.

TABLE IV-4: Golden Households by Family Status and Household Size

	2000 Census		2020 ACS	
	#	% of Total	#	% of Total
Family Households:				
2-person	1,701	24.9	2,156	28.3
3-person	983	14.4	625	8.2
4+ persons	1,220	17.9	1,154	15.1
Family Subtotal	**3,904**	**57.1**	**3,935**	**51.7**
Nonfamily Households:				
1-person	2,037	29.8	2,404	31.6
2-person	639	9.4	740	9.7
3-person	169	2.5	269	3.5
4+ persons	84	1.2	270	3.5
Nonfamily Subtotal	**2,929**	**42.9**	**3,683**	**48.3**
Sources: U.S. Census Bureau, 2000 Census, 2020 American Community Survey; Gruen Gruen + Associates.				

REAL HOUSEHOLD INCOMES

Table IV-5 summarizes median household income (in "real" inflation-adjusted dollars) over the past 20 years in Golden, as well as the estimated change in the distribution of households by income over time. Household incomes exclude individuals living in Group Quarters housing such as students.

On an inflation-adjusted basis, median household income was relatively unchanged over a 20-year period. Real median household income increased from about $86,300 in the 2000 Census to $88,500 in the *2020 American Community Survey*. This represented real growth of 2.5% over a 20-year period.

For both 2000 and 2020, a consistent 19 to 20 percent of households possessed annual incomes of less than $35,000 in current dollars. The number of households estimated to have annual income exceeding $150,000 in current dollars grew substantially, from about 23 percent in 2000 to over 30 percent by 2020.

The local patterns are consistent with broader trends indicative of increasing income polarization. Middle or moderate income households have tended to shrink over time, accompanied by increasing numbers of both very low and very high income households.

TABLE IV-5: Estimated Distribution of Golden Households by Income

Household Income in 2022 Dollars[1]	2000 % of Households	2020 % of Households	Shift 2000-2020 Percentage Points
Less than $15,000	7.6	8.1	0.5
$15,000 - $34,999	11.6	11.8	0.2
$35,000 - $49,999	9.9	6.7	(3.2)
$50,000 - $74,999	15.2	14.7	(0.5)
$75,000 - $99,999	12.5	11.9	(0.6)
$100,000 - $149,999	19.7	16.5	(3.2)
$150,000 and Above	23.4	30.3	6.9
Median Household Income	$86,300	$88,500	

[1] Historical income adjusted for inflation to current 2022 dollars (as of April 2022), based on the Consumer Price Index for the Denver-Aurora-Lakewood, CO metropolitan statistical area. Percentage of households in each adjusted income bracket assumes a normal distribution.

Sources: U.S. Census Bureau, 2000 Census, 2020 American Community Survey; Bureau of Labor Statistics, Denver MSA Consumer Price Index; Gruen Gruen + Associates.

V Economic Base and Labor Force Characteristics

EMPLOYMENT BASE

Figure V-1 shows long term change in employment (jobs) located in Golden between 2005 and 2021. Employment estimates include wage and salary (i.e., payroll) jobs covered in the Quarterly Census of Employment and Wages and tabulated by the Denver Regional Council of Governments.

Total payroll employment grew by an estimated 9% over the period, increasing from approximately 17,900 jobs in 2005 to 19,500 jobs in 2021. Prior to the recession brought about by the Covid-19 pandemic, employment in Golden had been growing rapidly for several consecutive years. Between 2011 and 2019, the local employment base added approximately 5,000 payroll jobs and was expanding at an average annual rate of 3.3%. As of the second quarter of 2021, employment had not yet recovered to its previous peak of 21,300 jobs in 2019.

FIGURE V-1: Wage and Salary Employment in Golden

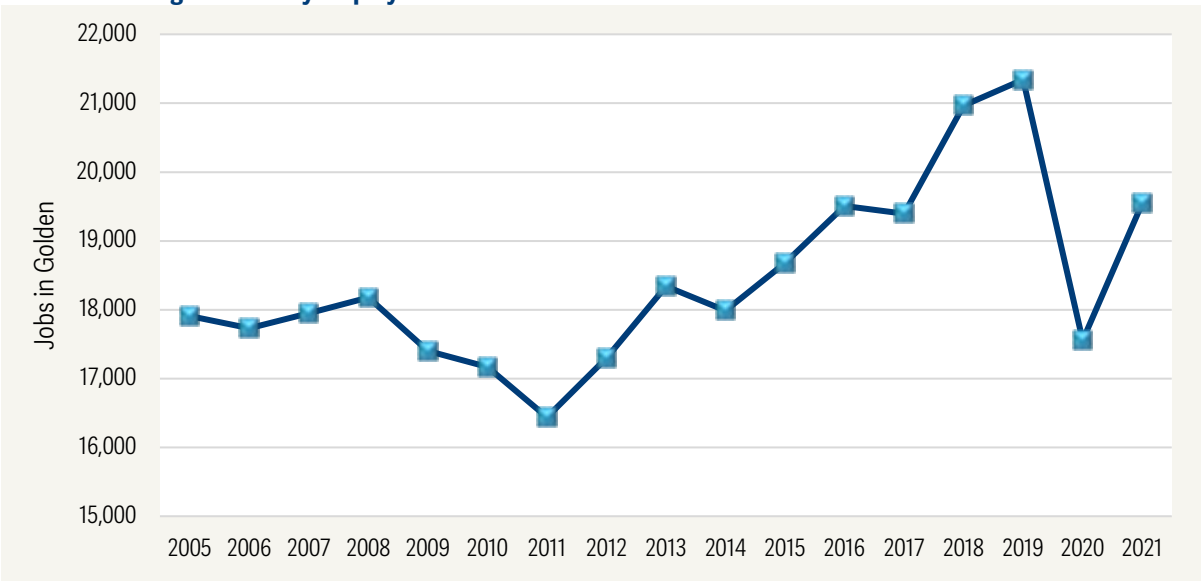


TABLE V-1: Composition of the Employment Base by Industry Sector

	Share of Total Employment		
	2011 %	2019 %	Shift Percentage Points
Natural Resources	0.7	0.3	(0.4)
Utilities	0.5	1.2	0.7
Construction	4.3	4.7	0.4
Manufacturing	21.6	18.5	(3.0)
Wholesale Trade	4.2	3.6	(0.6)
Retail Trade	6.5	8.1	1.6
Transportation and Warehousing	0.2	1.9	1.6
Information	1.8	1.0	(0.9)
Financial Activities	3.2	4.6	1.4
Professional and Business Services	14.0	11.9	(2.1)
Education and Health Care	13.3	17.1	3.8
Leisure and Hospitality	6.4	7.3	1.0
Personal Services	1.9	2.6	0.7
Public Administration	21.4	17.2	(4.2)
Sources: U.S. Census Bureau, Center for Economic Studies; Gruen Gruen + Associates.			

INDUSTRY COMPOSITION

Table V-1 above presents changes in Golden's employment base by sector over the 2011 to 2019 period during which strong job growth was occurring. Estimates for the composition of the local employment base by detailed industry sector are drawn from longitudinal employer-household data produced by the U.S. Census Bureau.

Pre-pandemic, the Manufacturing, Education and Health Care, and Public Administration sectors of the employment base represented approximately 52% of all jobs located in Golden. While these sectors have been historically important sources of local economic activity, their growth patterns have differed in recent years. Education and Health Care continues to comprise a larger share of local employment, while the share of jobs attributable to the Manufacturing sector and Public Administration have declined.

The employment base has also shifted in favor of sectors such as Retail Trade, Transportation and Warehousing, and Leisure and Hospitality. This is notable primarily because workers employed in these sectors tend to earn among the lowest wages in Jefferson County. The average weekly wage in 2021 among Retail Trade and Leisure and Hospitality workers was $652.

JOBS-HOUSING RATIO

A jobs-to-housing ratio is considered an important indicator in local and regional planning. It is also a generalized but useful indicator of housing demand pressures within a given area. Regions or communities with persistently high ratios of jobs to available housing units are most often those that experience high increases in housing cost over time. While jobs to housing relationships will vary given differences among communities in labor force, social, and economic characteristics; transportation linkages, geographical constraints, and land use regulatory conditions, the generally accepted ratio for a balanced relationship between jobs and housing tends to fall within 1.3-to-1.7-jobs-per-housing unit. Areas with significantly higher jobs-to-housing ratios typically do not have an adequate amount of housing supply to meet the needs of the local workforce.

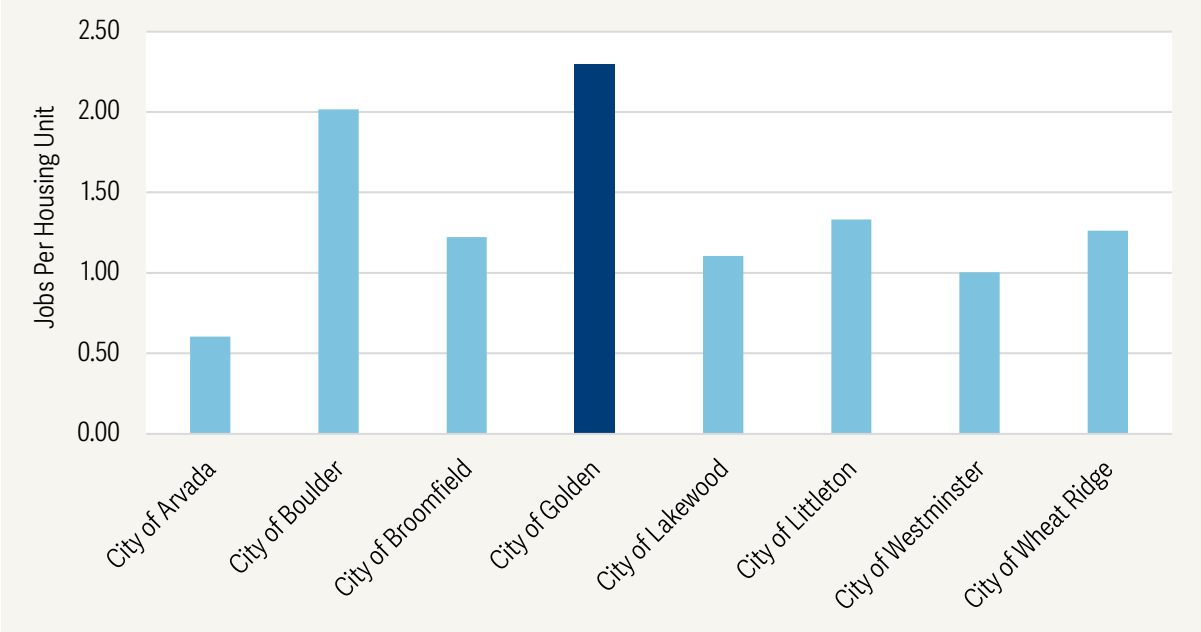
The estimated jobs-housing unit ratio in Golden currently approximates 2.3 jobs per housing unit. Historical estimates of local employment and the housing stock indicate that the ratio has been persistently high, ranging from about 2.2 to 2.4 jobs per housing unit.

Figure V-2 provides a comparison of current jobs-to-housing unit ratios[1] for other nearby municipalities. In other Jefferson County communities such as Arvada, Lakewood, Westminster and Wheat Ridge, current ratios range from approximately 0.6 to 1.3 jobs per housing unit.

The jobs-housing ratio in Golden also exceeds that of Boulder, which currently includes about two jobs for every housing unit.

[1] Payroll employment estimates for 2021, by municipality, are compared to 2020 Census housing unit estimates to develop current jobs-housing ratios.

FIGURE V-2: Comparison of Current Jobs-Housing Ratios by Municipality



COMMUTATION PATTERNS

Consistent with its high jobs-housing ratio, Golden imports a significant share of labor.

According to data from the U.S. Census Bureau's Center for Economic Studies, the resident labor force (workers living in Golden) represents less than 5% of all workers employed in Golden. Non-resident workers that commute into Golden for employment primarily originate from areas east of Golden, but west of the major north-south transportation corridors of Interstate 25, US-36, and Highway 85. Map V-1 illustrates this primary labor shed for non-resident workers.

Similarly, a high proportion (about 88%) of Golden's resident labor force commutes out of the community for employment. The top locations to which residents commute include Denver, Lakewood, and Boulder.

The degree to which local employers in Golden rely upon non-resident labor appears to have increased over time. The number of "in-commuters" is estimated to have grown from about 15,700 workers in 2010 to 19,300 by 2019.

OCCUPATIONAL MIX

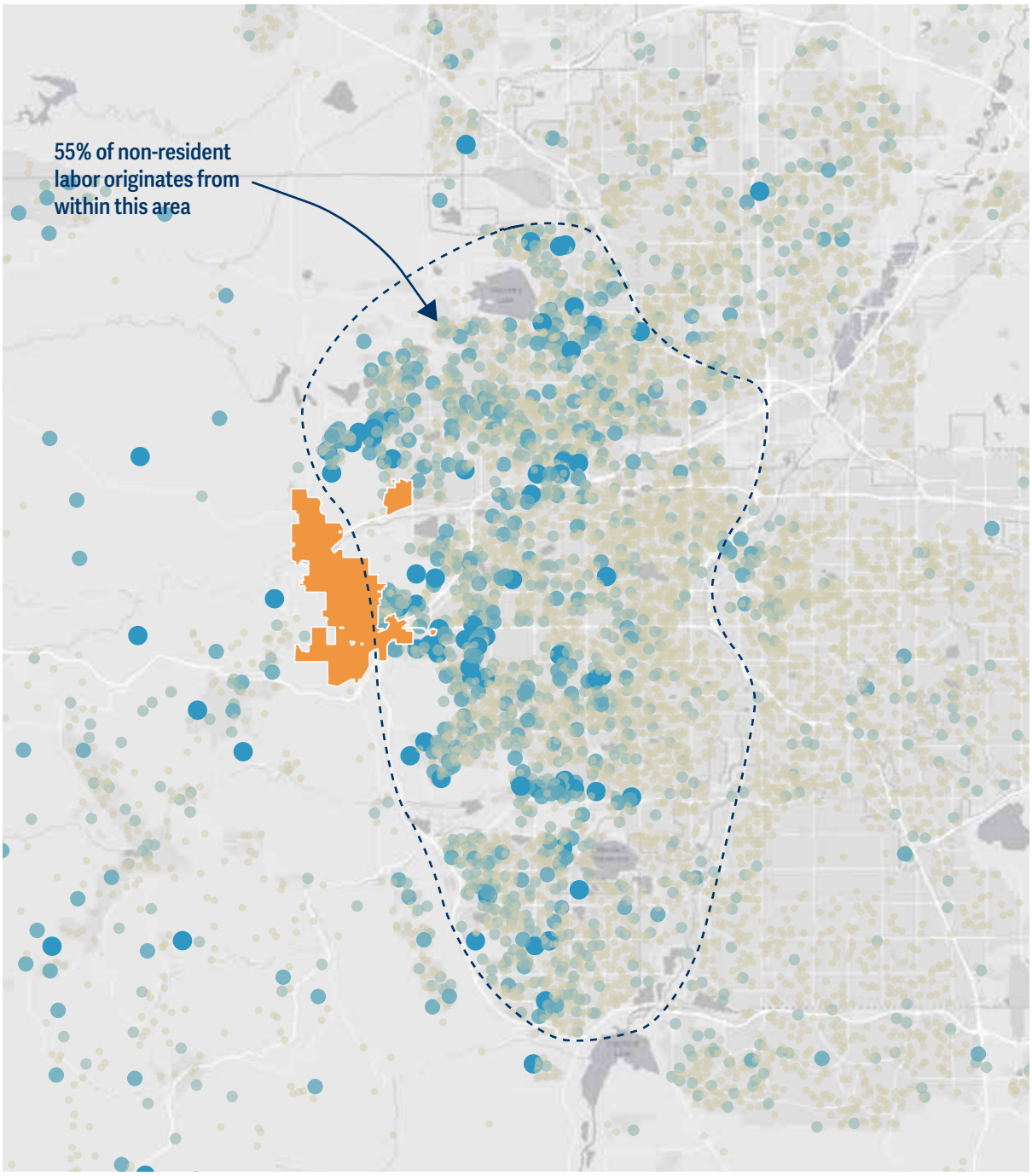
Almost 60% of Golden's resident labor force is employed in management, business, science and arts-related occupations. The share of residents employed in these typically high-skill occupations has increased over time, from about 46% in 2000 to 57% in 2020 . Sales and administrative support occupations and others related to production, construction, and natural resources are much less prevalent among Golden residents today than 20 years ago.

According to most recent *American Community Survey* estimates, almost 20% of the resident labor force in Golden also works from home. This is not surprising given the high share of residents employed in business, science and arts-related fields for whom remote work is more practical and common. The increasingly prevalence of the location-neutral workforce in Golden can be expected to amplify the already large "mismatch" between the local economic base and housing inventory.

TABLE V-2: Commutation Patterns for Golden

	2002 #	2010 #	2019 #
Resident Labor Force	8,626	7,988	8,303
Employed within Golden	1,146	928	956
Out-Commuters	**7,480**	**7,060**	**7,347**
Employment Base (Jobs)	16,755	16,641	20,270
Jobs Held by Resident Labor	1,146	928	956
In-Commuters	**15,609**	**15,713**	**19,314**
Estimates are for primary jobs only.			
Sources: U.S. Census Bureau, Center for Economic Studies; Gruen Gruen + Associates.			

MAP V-1: Labor Shed for Non-Resident Workers Commuting Into Golden



VI Community Housing Survey

INTRODUCTION

To obtain information and perspective about the current housing patterns, housing costs, and housing preferences of existing Golden households, GG+A designed and administered an online housing survey.

With assistance from Golden staff, the electronic survey was distributed via multiple methods including a notice in the Golden Informer newsletter, an insert in monthly utility bills, and notifications on social media accounts. A link to the survey was also posted on the Guiding Golden website. A total of 208 completed survey responses were collected during the months of May and June.

The total number of households that received notification of the survey is unknown (and thus, an overall survey response rate cannot be determined). However, given that the total population of Golden is known, the 208 finished surveys provide a large enough sample to satisfy typical standards for statistical significance. [1]

The following chapter summarizes the responses and findings drawn from the results of the survey.

Survey Purpose

- Collect timely data about current housing characteristics and costs
- Identify relative importance of housing preferences
- Document housing satisfaction levels
- Investigate potential support for Affordable Housing policies
- Quantify expected housing moves (turnover)
- Understand type/cost of housing preferred by expected movers
- Estimate housing turnover demand

[1] According to SurveyMonkey, a population universe of approximately 17,700 (the household population of Golden, as of the 2020 Census) would require a minimum "sample size" of 194 people to obtain results with a 95% confidence level and 7% margin of error.

Housing Patterns of Survey Respondents

CURRENT RESIDENTIAL LOCATION

Table VI-1 summarizes the survey response by zip code.

Eighty-three percent (83%) of survey respondents indicated they live within Golden municipal limits. Approximately 17% of respondents indicated they do not live within Golden (or were unsure). Approximately 60% of the in-city respondents live in Golden's larger (by population) 80401 zip code. The remaining 40% of in-city respondents live in the 80403 zip code which generally corresponds to neighborhoods located north of Highway 58.

TYPES OF HOUSING UNITS IN WHICH RESPONDENTS LIVE

Table VI-2 shows that 66% of all respondents live in detached single-family housing units. Another 30% live in attached single-family housing or multi-family housing units.

Most owners live in detached single-family homes while the majority of renters live in attached single-family or multi-family housing units. Responses for "other" types of housing units, including mobile homes or student housing, were a small proportion of both owner and renter respondents. The survey sample included only two students.

TABLE VI-1: Geographical Representation

Zip Code	In-City Respondents	Other Respondents[1]
80401	49%	8%
80403	34%	4%
Other	---	5%
Total	**83%**	**17%**
[1] Includes respondents who indicated the "don't know" if they live within limits. Primarily represents respondents who are employed in but not necessarily living in Golden.		
Source: Gruen Gruen + Associates		

TABLE VI-2: Housing Tenure by Type of Housing Unit

	Owners		Renters		Total[1]	
	#	%	#	%	#	%
Detached single-family	128	81.5	9	18.4	138	66.4
Attached single-family	18	11.5	20	40.8	39	18.8
Multi-family	6	3.8	18	36.7	24	11.5
Other	5	3.2	2	4.1	7	3.4
Total	**157**	**100.0**	**49**	**100.0**	**208**	**100.0**
[1] Sum of total for owners and renters does not match total responses because two respondents did not report their tenure arrangement.						
Source: Gruen Gruen + Associates						

LENGTH OF TIME IN CURRENT HOUSING UNIT

Figure VI-1 shows that approximately 19% of respondents have lived in their current housing units for less than three years. Another 15% have lived in their units for three to five years. Approximately 41% of respondents have lived in their current housing units for six to 20 years, and 25% have lived in their current units for more than 20 years.

HOUSING TENURE

Seventy-six percent (76%) of all survey respondents own their housing unit. Forty-nine (49) respondents or 24% rent their housing unit.

NUMBER OF BEDROOMS

Figure VI-2 summarizes the housing tenure of respondents by number of bedrooms in their housing unit.

More than 140 respondents, or approximately 71% of all respondents, live in units containing three or more bedrooms. Approximately 23% of all respondents live in two-bedroom units. Less than 6% of all respondents live in smaller studio or one-bedroom units. Nearly 50% of current renters live in units with two bedrooms and another 14% of renters live in one-bedroom units. The preponderance of current owners (almost 83%) live in units with at least three bedrooms.

FIGURE VI-1: Respondents by Length of Time in Current Housing Unit

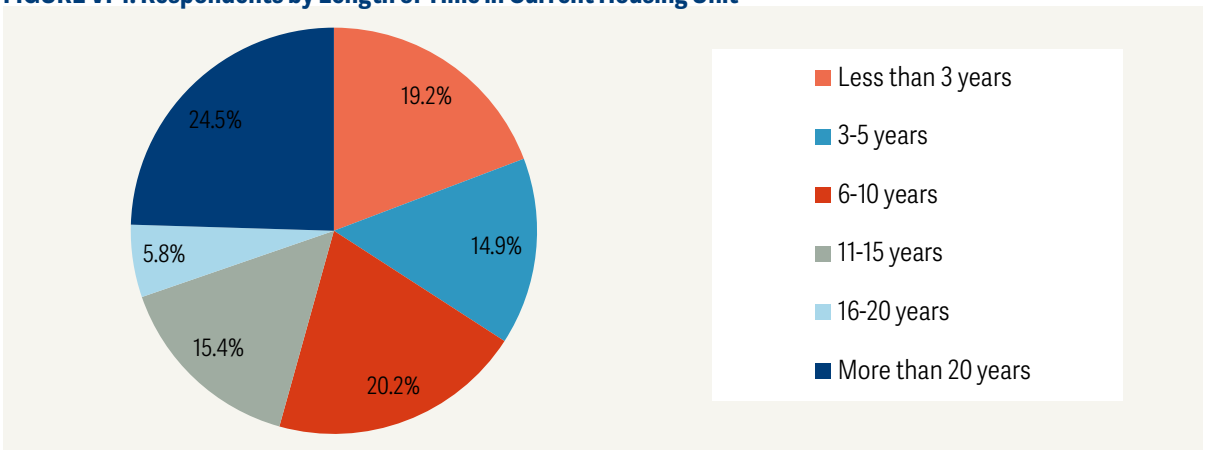
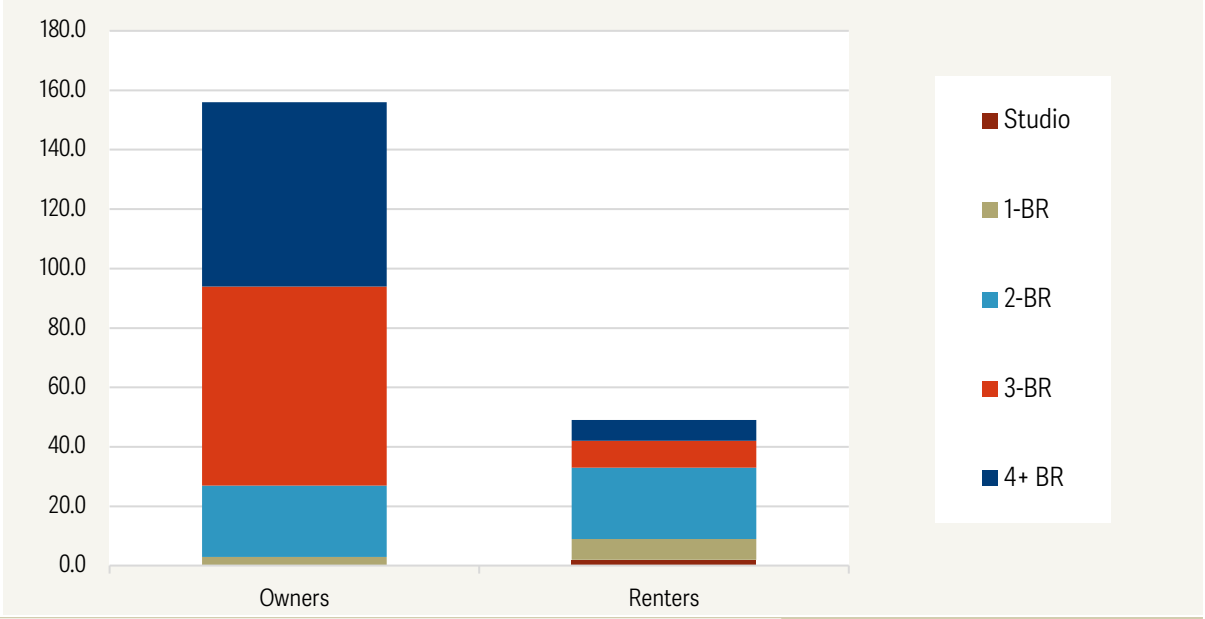


FIGURE VI-2: Respondents by Tenure and Bedrooms in Housing Unit



MONTHLY HOUSING COSTS

Each of the respondents was asked, "Approximately how much are your total monthly housing costs, including utilities, insurance, mortgage and property tax or rental payments?" Table VI-3 summarizes current monthly housing costs by housing tenure.

The majority or 62% of all respondents have housing costs that exceed $1,875 per month. About 8% of respondents spend less than $875 per month on housing. Assuming a normal response distribution within each price bracket, the average monthly cost for owners and renters is about $2,400 and $2,500, respectively.

Among owners with monthly housing costs below $1,250, approximately 60% are single-family homeowners that have lived in their housing unit for more than 20 years.

About 45% of renter households are paying more than $2,500 in monthly housing costs as compared to only 37% of owner households. Among renters, household size is not generally a determining factor of monthly rental costs. The same proportions of single renters and renter households with three or more members spend at least $2,500 on monthly housing cost.

TABLE VI-3: Monthly Housing Costs by Housing Tenure

	Owners		Renters		Total[1]	
	#	%	#	%	#	%
Less than $875	15	9.9	2	4.1	17	8.4
$875-$1,249	20	13.3	4	8.2	24	11.9
$1,250-$1,874	22	14.6	11	22.5	34	16.8
$1,875-$2,499	38	25.2	10	20.4	48	23.8
$2,500-$3,749	34	22.5	18	36.7	53	26.2
$3,750-$4,999	14	9.3	2	4.1	16	7.9
$5,000 or more	8	5.3	2	4.1	10	5.0
Total	**151**	**100.0**	**49**	**100.0**	**202**	**100.0**

[1] Sum of total for owners and renters does not match total responses because two respondents did not report their tenure arrangement.

Source: Gruen Gruen + Associates

Housing Satisfaction and Selection Factors

SATISFACTION WITH CURRENT HOUSING SITUATION

Table VI-4 summarizes differences in housing satisfaction among renters and owners.

About 82% of all respondents are either very or somewhat satisfied with their current housing situation. Another eight percent are neutral on their current housing situation. Eight percent (8%) are somewhat unsatisfied or very unsatisfied with their current housing situation.

Renters are less likely to be "very satisfied" with their current housing and much more likely to be very unsatisfied. While 65% of all owners are very satisfied, only 23% of renters are very satisfied. Similarly, a much higher proportion of renters are very unsatisfied with their current housing situation. Among the four respondents indicating they are very unsatisfied, three of them are renters.

The differences in housing satisfaction between renters and owners are statistically significant at the 95% confidence level.[2]

TABLE VI-4: Satisfaction with Current Housing Situation

	Owners		Renters[1]		Total[2]	
	#	%	#	%	#	%
Very satisfied	102	65.0	11	22.5	114	54.8
Somewhat satisfied	37	23.6	20	40.8	58	27.9
Neutral	10	6.4	7	14.3	17	8.2
Somewhat unsatisfied	7	4.5	8	16.3	15	7.2
Very unsatisfied	1	0.6	3	6.1	4	1.9
Total	**157**	**100.0**	**49**	**100.0**	**208**	**100.0**

[1] Differences in housing satisfaction of renters (compared to owners) are statistically significant at the 95% confidence level.
[2] Sum of total for owners and renters does not match total responses because two respondents did not report their tenure arrangement.

Source: Gruen Gruen + Associates

[2] A confidence interval expresses the degree of uncertainty associated with a sample statistic. The 95% confidence level indicates the survey could be repeated 100 times with the same method and the responses would fall within the 7% margin of error 95% of the time.

PHYSICAL HOUSING CONDITION

Respondents were asked to qualitatively describe the physical condition of their housing unit. Only two respondents (about one percent) indicated the condition of their unit as "Poor." Similar to housing satisfaction, existing owners describe the physical condition of their housing units more positively. The differences in perceived housing condition between renters and owners are also statistically significant at the 95% confidence level.

The majority or 75% of owners describe the physical condition of their units as excellent or above average, with less than 3% of owners indicating their units are below average. This compares to about 10% of renters that describe their units as below average or poor. Among renters, the largest frequency of response was for units in "average" condition.

HOUSING SELECTION FACTORS

One purpose for conducting the survey was to identify factors that are most important to the housing decisions of existing residents. One question contained a list of housing preference factors. Each respondent was asked to rate each of the factors on a scale of 1 to 5 as to their overall importance to the respondent's housing choice.

Figure VI-4 summarizes the mean ratings for the housing preference factors, with a score of 5 signifying the most important and a score of 1 being the least important.

The most important factors influencing housing choice are cost and unit quality factors, with "overall cost of unit" ranked highest. With near equal importance, the second highest rated factor is the overall quality of the housing unit (given its

FIGURE VI-3: Respondents by Physical Housing Condition

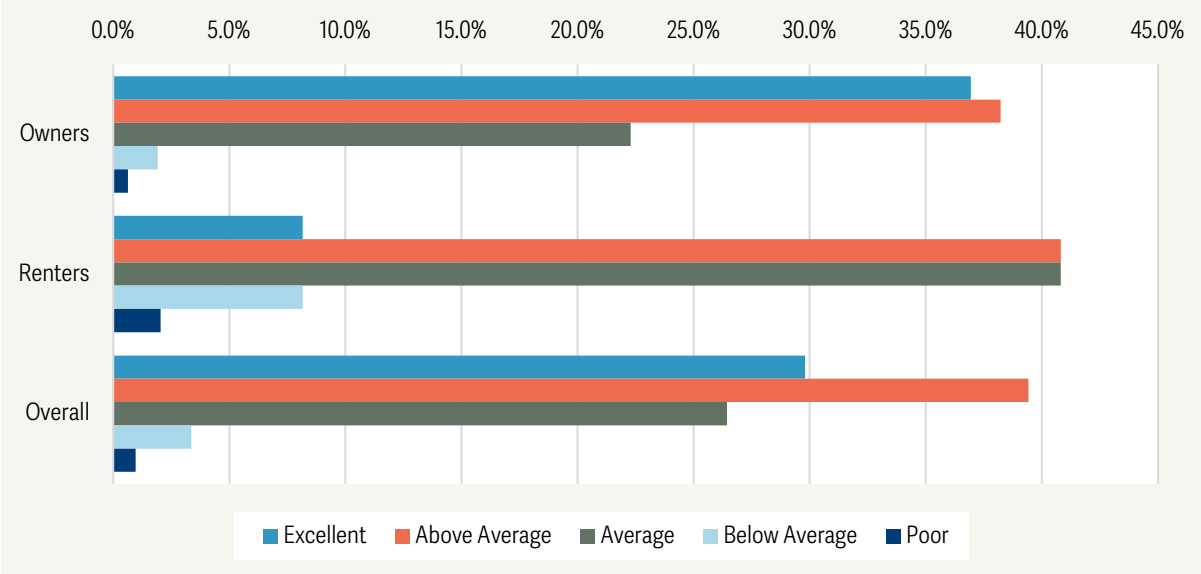
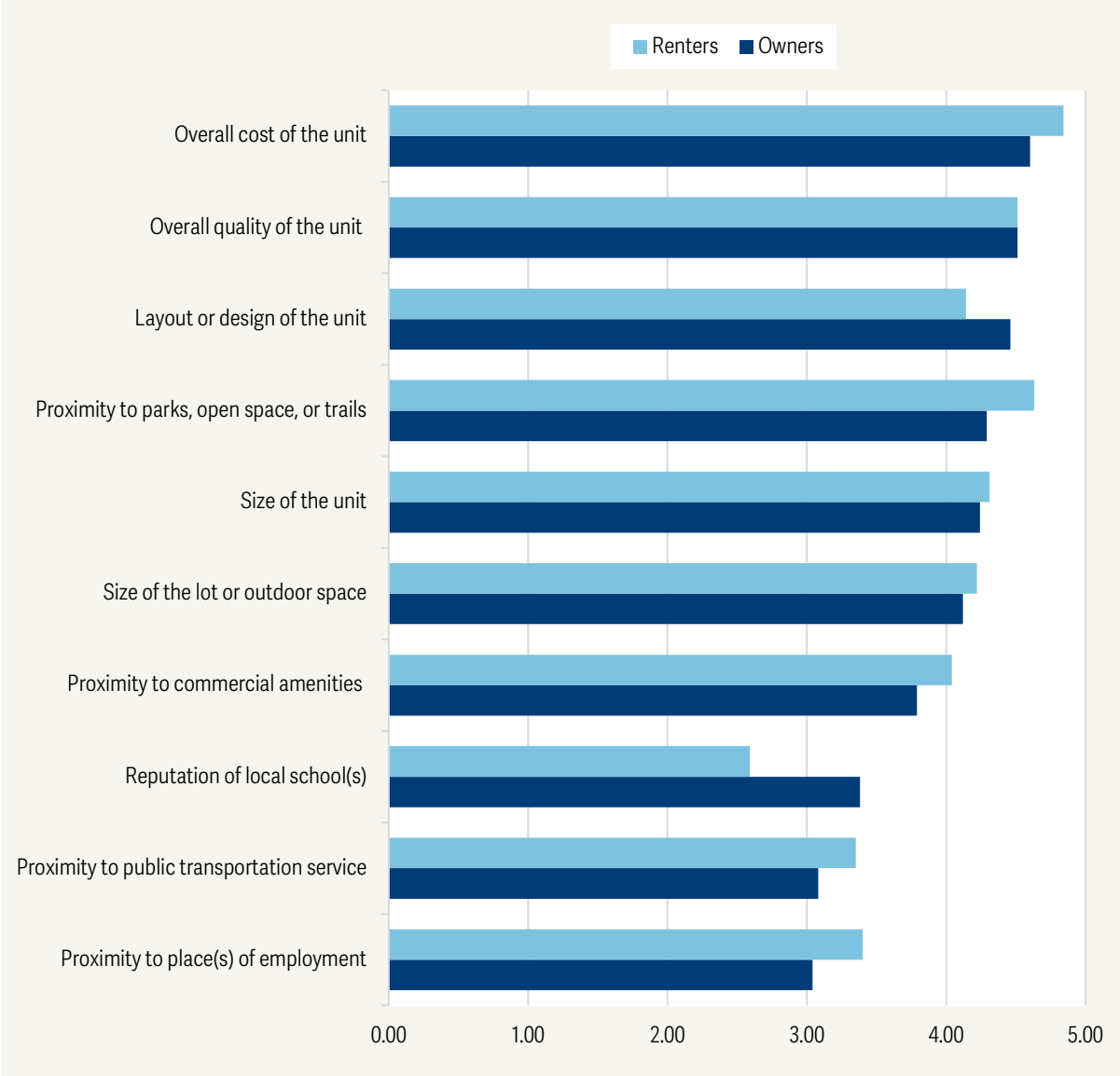


FIGURE VI-4: Mean Ratings for Housing Selection Factors



price). The layout or design of the unit is the third highest rated factor. These are the three most important factors for owners. The "size of the lot (or outdoor space)" is the lowest rated factor among unit characteristics.

For renters, the three most important factors are overall cost of unit, proximity to parks, open space, or trails, and overall quality of housing unit (given its price).

On factors related to location, proximity to parks or open space, and proximity to commercial amenities both rated more highly than reputation of schools (a result corresponding to most respondents that do not have school-aged children at home) and proximity to employment places and public transportation.

For both owners and renters, proximity parks or open space are more important than proximity to commercial amenities. None of the factors related to location, however, scored as highly as those associated with the cost or physical attributes of housing units.

Plans to Move and Type/Cost of Housing Preferred

Table VI-5 shows respondents' plans to move from their current housing units within the next five years. Approximately 28% of all respondents plan to move within the next five years and would prefer to stay in Golden. An additional 10% of respondents also plan to move within the next five years but would relocate outside of Golden. The majority of respondents, 62%, have no plans to move.

Renters plan to move at a far higher rate than owners. About 75% of all renters plan to move within the next five years while only 26% of owners plan to move within five years.

NUMBER OF BEDROOMS PREFERRED

Among renters that expect to move in the next five years, two-thirds would prefer the same number of bedrooms. Approximately 28% of renters that expect to move would prefer more bedrooms, while only 6% would prefer a unit with fewer bedrooms. Only 17% of owners that expect to move in the next five years would prefer a unit with more bedrooms. About 40% of owners would prefer the same number of bedrooms and 43% would prefer to downsize into a unit with fewer bedrooms. Most owners that plan to downsize, about 60%, are age 55 or older.

Respondents that currently live in a unit with at least four bedrooms (regardless of tenure) indicate the highest propensity to "downsize." About 47% of those expecting to move within five years would prefer a unit with fewer bedrooms. An additional 42% would prefer another unit with four bedrooms.

Among all respondents currently living in units with less than four bedrooms, most that expect to move within five years (58%) will prefer a unit with the same number of bedrooms. Such housing moves will likely be motivated by housing cost, location, or quality/layout (more than housing unit size).

TABLE VI-5: Plans to Move from Current Residence Within Next Five Years

	Owners		Renters		Total[1]	
	#	%	#	%	#	%
No plans to move	116	73.9	12	24.5	129	62.0
Plan to move and want next unit to be located in Golden	28	17.8	31	63.3	59	28.4
Plan to move and want next unit to be located elsewhere (outside of Golden)	13	8.3	6	12.2	20	9.6
Total	**157**	**100.0**	**49**	**100.0**	**208**	**100.0**

[1] Sum of total for owners and renters does not match total responses because two respondents did not report their tenure arrangement.

Source: Gruen Gruen + Associates

TENURE PREFERENCE

About 73% of renters that plan to move within the next five years would prefer to own their next housing unit.

About 98% of respondents that currently own housing would prefer to remain owners, indicating moves among existing homeowners are not likely to represent a source of demand for rental units in Golden.

MAXIMUM AMOUNT RESPONDENTS CAN AFFORD TO SPEND ON HOUSING

Table VI-6 shows the maximum monthly housing costs that respondents indicated they could afford to spend on a different housing unit. (Respondents with no plans to change housing in the next five years were not asked this question).

Among all respondents that plan to move within the next five years, approximately 30% indicate they can afford maximum housing costs that are below $1,875 per month. An additional 43% of expected movers can afford monthly costs ranging from $1,875 to $3,749. Approximately 19% indicate they can afford monthly costs exceeding $3,750.

Approximately 95% of existing renters that plan to move indicate they cannot afford housing costs that exceed $3,749 monthly. A smaller share of existing owners (about 78%) indicate they cannot afford housing costs that exceed $3,749 monthly.

TABLE VI-6: Maximum Monthly Housing Costs that Respondents Can Afford to Spend on Different Housing

	Owners		Renters		Total[1]	
	#	%	#	%	#	%
Less than $875	1	2.5	1	2.7	2	4.2
$875-$1,249	6	15.0	4	10.8	10	8.3
$1,250-$1,874	6	15.0	6	16.2	12	17.5
$1,875-$2,499	12	30.0	12	32.4	24	30.0
$2,500-$3,749	6	15.0	12	32.4	19	13.3
$3,750-$4,999	3	7.5	2	5.4	5	10.0
$5,000 or more	6	15.0	0	0.0	6	9.2
Total	**40**	**100.0**	**37**	**100.0**	**78**	**100.0**

[1] Sum of total for owners and renters does not match total responses because one respondent did not report their tenure arrangement.

Source: Gruen Gruen + Associates

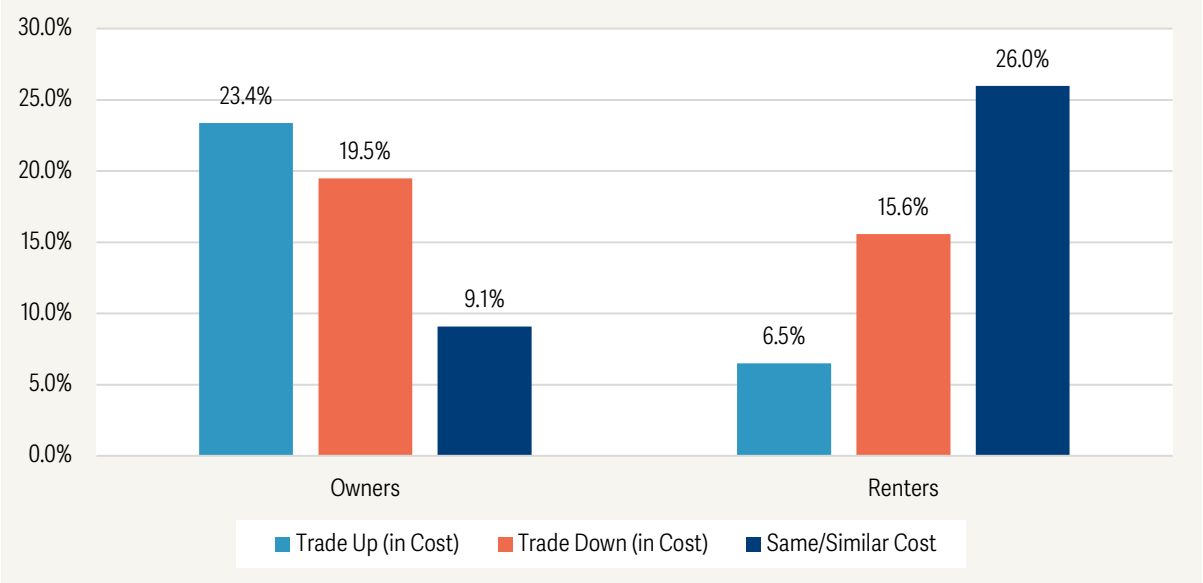
Figure VI-5 summarizes trade-up and trade-down moves (in terms of monthly housing cost) among respondents that anticipate changing housing units in the next five years.

About one-third of all respondents anticipate moving to a different housing unit with a "maximum monthly cost" that is similar (within the same price bracket) to their current housing costs. This is especially the case with renters; about 54% of renters that expect to move indicated they cannot afford to trade-up in price. The majority of respondents within this category would prefer a unit with the same or fewer bedrooms, suggesting these housing moves are likely to be associated with changes in unit size, quality or location.

About 35% of all expected moves within five years are associated with a trade-down in monthly housing cost. These housing moves are more likely associated with affordability, especially among existing renters and older-age homeowners.

The smallest though significant type of expected housing move can be categorized as a trade-up in housing cost, representing 30% of respondents that anticipate moving within five years. Existing owners are much more likely to trade-up in housing cost than renters.

FIGURE VI-5: Percent of Expected Movers that Plan to Trade Up or Down in Monthly Housing Cost



Policy Related Issues

One purpose for conducting the survey was to identify support from existing residents on affordable housing policy issues. One-hundred seventy-four respondents who live within Golden's municipal limits answered the policy-related questions.

Table VI-7 shows the results for whether residents would support more affordable rental and ownership housing in Golden restricted to households with annual incomes of 80 percent or less of area median income. Nearly 60% of all respondents support more affordable housing for both rental and ownership that is restricted to households making less than 80 percent of area median income.

GROWTH MANAGEMENT ORDINANCE

One policy question asked whether respondents would support or oppose exempting development of below-market rate housing from Golden's residential growth management ordinance. Table VI-8 summarizes the responses by current housing tenure.

Only 35% of respondents would support such an exemption, while 50% of respondents oppose the exemption for below-market rate housing. Fifteen percent (15%) of respondents were undecided or didn't know whether they would support or oppose an exemption. The differences in opposition with respect to housing tenure are statistically significant at the 95% confidence level.

TABLE VI-7: Support for Affordable Housing Restricted to Households with 80 Percent or Less of Area Median Income

	Affordable Rental Housing		Affordable Ownership Housing	
	#	%	#	%
Support	101	58.1	103	59.2
Oppose	50	28.7	45	25.9
Uncertain / Don't Know	23	13.2	26	14.9
Total	**174**	**100.0**	**174**	**100.0**
Source: Gruen Gruen + Associates				

TABLE VI-8: Support for Exempting Affordable Units from Growth Management Ordinance

	Owners		Renters		Total	
	#	%	#	%	#	%
Support	40	29.2	20	57.1	60	34.9
Oppose [1]	78	56.9	8	22.9	86	50.0
Uncertain / Don't Know	19	13.9	7	20.0	26	15.1
Total	**137**	**100.0**	**35**	**100.0**	**172**	**100.0**
[1] The difference in opposition, between existing owners and renters, is statistically significant at the 95% confidence level.						
Source: Gruen Gruen + Associates						

REAL ESTATE TRANSFER TAX

Table VI-9 summarizes the results on whether respondents would support or oppose a real estate transfer tax on the sale of housing units priced above $1 million to fund affordable housing for households earning 80 percent or less of area median income. A higher number and proportion of respondents support a real estate transfer tax on $1+ million homes to fund affordable housing.

Less than half of respondents, about 46% , would support the enactment of a real estate transfer tax to fund affordable housing should it become legal under the Colorado State Constitution. Fifty-four percent (54%) of respondents either oppose or are uncertain/don't know. The differences in opposition with respect to housing tenure are again statistically significant at the 95% confidence level. Approximately 44% of existing homeowners oppose a transfer tax, while less than 9% of existing renters oppose a transfer tax.

Among the respondents which are in favor of a real estate transfer tax on $1+ million homes, about 46% support the imposition of a tax which is 0.5% of the value of real property transferred (equating to $5,000 for every $1,000,000 in value of real estate transferred). The remaining 54% of respondents support the imposition of a real estate transfer tax at lower amounts.

PROPERTY TAX INCREASE

Table VI-10 summarizes the results on whether respondents would support or oppose a property tax increase to fund affordable housing for households earning 80 percent or less of area median income. Only 32% percent of respondents support the enactment of a real estate property tax increase to fund affordable housing. Fifty-three percent (53%) of respondents oppose a property tax increase and about 16% are uncertain/don't know. Among the respondents who support a property tax increase, more than half support an increase in the mill levy of 1.00 mills.

TABLE VI-9: Support for Real Estate Transfer Tax on Units Priced at $1+ Million to Fund Affordable Housing Restricted to Households with 80 Percent or Less of Area Median Income

	Owners		Renters		Total[2]	
	#	%	#	%	#	%
Support	54	40.0	24	68.6	79	45.9
Oppose [1]	60	44.4	3	8.6	64	37.2
Uncertain / Don't Know	21	15.6	8	22.9	29	16.9
Total	**135**	**100.0**	**35**	**100.0**	**172**	**100.0**
[1] Difference in opposition, between owners and renters, is statistically significant at the 95% confidence level. [2] Includes two respondents who did not indicate their housing tenure arrangement.						
Source: Gruen Gruen + Associates						

TABLE VI-10: Support for Property Tax Increase to Fund Affordable Housing Restricted to Households with 80 Percent or Less of Area Median Income

	Owners		Renters		Total	
	#	%	#	%	#	%
Support	36	26.9	17	48.6	54	31.6
Oppose [1]	80	59.7	9	25.7	90	52.6
Uncertain / Don't Know	18	13.4	9	25.7	27	15.8
Total	**134**	**100.0**	**35**	**100.0**	**171**	**100.0**
[1] Difference in opposition, between owners and renters, is statistically significant at the 95% confidence level.						
Source: Gruen Gruen + Associates						

Characteristics of Survey Respondents

AGE OF RESPONDENTS

As shown on Figure VI-6, respondents under the age of 35 made-up about 17% of all responses. Those between the age of 35 and 44 comprised an additional 25% of the response. Respondents between the age of 45 and 54 represented 21% of responses, while those between the age of 55 and 64 comprised 14% of all responses. Respondents aged 65 or older comprised 23% of the survey response.

HOUSEHOLD COMPOSITION

The majority (77%) of respondents are married or partnered while 23% of respondents are single.

Slightly less than 15% of households have one adult member. Seventy-one percent (71%) of households include two adult members, while 9% have three adult members. Only 5% of respondents live in larger households with at least four adults. Two-adult households, with no children, represented 50% of all survey respondents.

About 70% of respondents do not have children under the age of 18 living at home. About 8% of respondents have one child while nearly 22% of respondents have multiple children living in their household.

FIGURE VI-6: Number of Respondents by Age

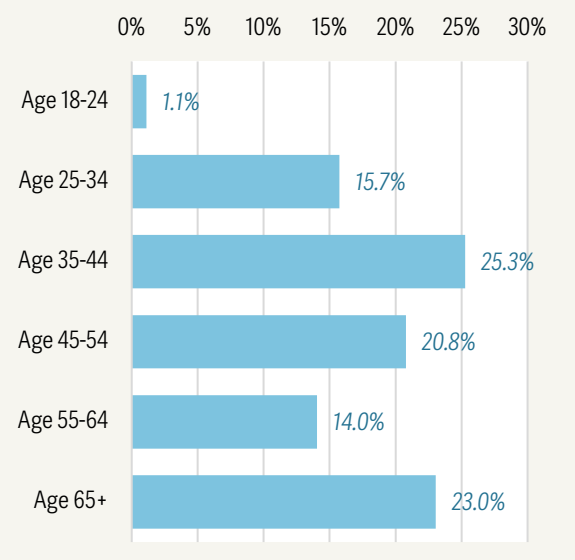
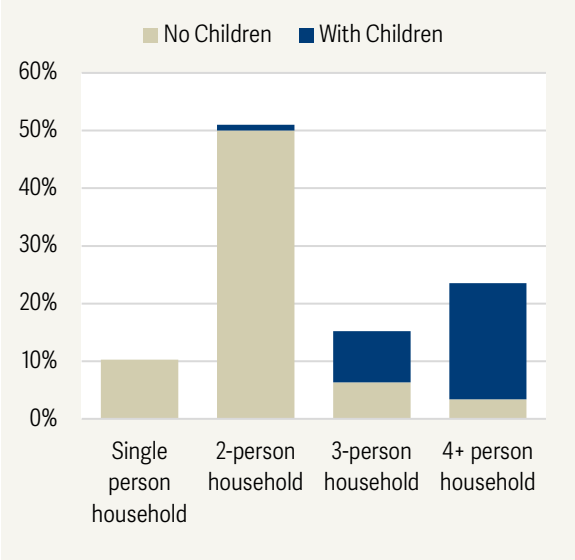


FIGURE VI-7: Household Size by Presence of Children



HOUSEHOLD INCOME DISTRIBUTION

Table VI-11 shows the gross 2021 household income reported by respondents. Approximately 12% of respondents had a 2021 gross household income of below $50,000. Approximately 23% of respondents reported a 2021 income ranging from $50,000 to $99,999. An additional 19% of respondents reported 2021 incomes ranging from $100,000 to $149,999. Respondents with 2021 incomes exceeding $150,000 represented 46% of all survey respondents.

EMPLOYMENT STATUS

Respondents were asked to identify the number of adults in their household that are employed either full-time or part-time. Table VI-12 provides a summary of respondents' households when categorized by the number of employed adults.

Approximately 51% of all respondent households contain two employed adults. Approximately 22% of all respondent households contain one adult member that is employed. Just over 7% of all respondents have three or more adults employed.

Nearly 20% of respondent households do not include any employed adults.

TABLE VI-11: Respondent's 2021 Gross Household Income

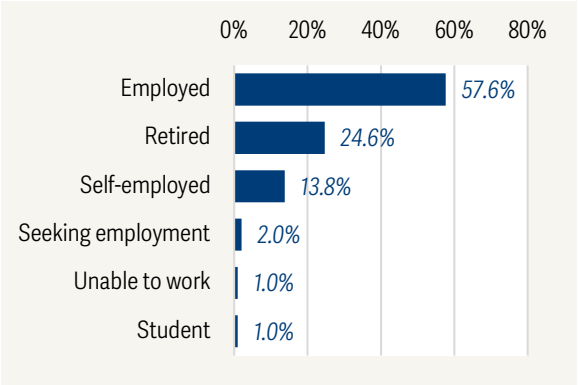
	Number #	Percent of Respondents %
Under $25,000	4	2.2
$25,000 - $34,999	5	2.7
$35,000 - $49,999	12	6.7
$50,000 - $74,999	17	9.3
$75,000 - $99,999	25	13.4
$100,000 - $149,999	35	19.1
$150,000 - $199,999	40	21.9
$200,000 or more	45	24.6
Total	**183**	**100.0**
Source: Gruen Gruen + Associates		

TABLE VI-12: Number of Employed Adults in Respondent's Household

	Number #	Percent of Respondents %
None	40	19.7
One Adult	45	22.2
Two Adults	103	50.7
Three Adults	11	5.4
Four or More Adults	4	2.0
Total	**203**	**100.0**
Source: Gruen Gruen + Associates		

Figure VI-8 summarizes the number of respondents by their employment status. About 58% of respondents are employed by a private or public company, government, university, hospital or other organization. Twenty-five percent (25%) of individual respondents are retired. An additional 14% of respondents are self-employed. The remaining 4% are either seeking employment, unable to work, or students.

FIGURE VI-8: Respondents by Employment Status



OCCUPATIONAL AND COMMUTE CHARACTERISTICS

In addition to questions about their employment status and the presences of employed adults in their household, respondents were asked several questions pertaining to their occupation and commute patterns. Key highlights of the response sample include:

- About 20% percent of employed respondents that commute to work indicated their primary place of employment is in Golden. An additional 20% of employed respondents commute to locations elsewhere in Jefferson County. Approximately 34% of respondents indicate their employer is located outside of Jefferson County, but elsewhere in metro Denver. (About 26% of employed respondents indicate they are employed outside of the Denver area or work remotely on a permanent basis).
- As summarized in Table VI-13, respondents employed in professional (e.g., medical, law), managerial, or executive positions represent about 62% of employed individuals.
- As summarized in Table VI-14, during a typical work week, about 34% of all employed respondents indicate they work "remotely from home" every day with an additional 18% indicating they work remotely 3-4 days per week. Just over a quarter of respondents never work remotely.

EDUCATIONAL ATTAINMENT

Consistent with the high proportion of respondents employed in high skill and white-collar occupations, educational attainment is high among survey respondents. Table VI-15 summarizes the highest level of education completed by respondents. Nearly 92% of respondents are college graduates or have obtained a post graduate degree. An additional 4% of respondents have completed some college. Educational attainment of survey respondents is very high relative to the broader population.

TABLE VI-13: Respondent's Occupational Status

	Number #	Percent of Respondents %
Professional (medical, law, etc.)	57	39.3
Managerial, executive	33	22..8
Administrative, clerical	5	3.5
Engineering, technical	29	20.0
Marketing, sales	11	7.6
Trade workers	7	4.8
Service or retail workers	3	2.1
Total	**145**	**100.0**
Source: Gruen Gruen + Associates		

TABLE VI-14: Respondent's Frequency of "Remote" Work from Home

	Number #	Percent of Respondents %
Every day	49	33.6
3-4 days a week	26	17.8
1-2 days a week	31	21.2
Never	40	27.4
Total	**146**	**100.0**
Source: Gruen Gruen + Associates		

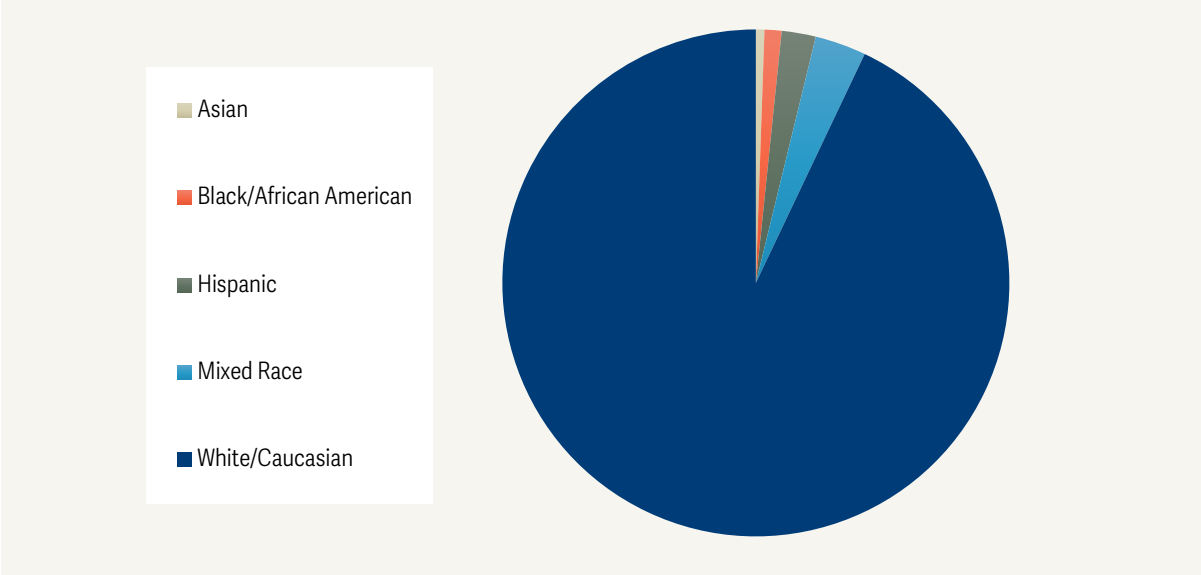
TABLE VI-15: Respondent's Educational Attainment

	Number #	Percent of Respondents %
College graduate	52	35.9
Post graduate degree	81	55.9
Some college	6	4.1
High school graduate	4	2.8
Post high school vocational training	2	1.4
Did not complete high school	0	0.0
Total	**145**	**100.0**
Source: Gruen Gruen + Associates		

ETHNICITY

Figure VI-9 summarizes the make-up of respondents by ethnicity. Ninety-three percent (93%) of respondents are White/Caucasian while 2% are Hispanic. All other ethnicities represent 5% or less of the total respondents.

FIGURE VI-9: Respondents by Ethnicity



VII Projection of Future Housing Needs in Golden

INTRODUCTION

This chapter presents estimates of potential future housing needs within Golden over the next 10 years.

The focus of the analysis is on the first and often most significant source of need for new housing related to the growth of the local workforce. "Workforce housing" in this projection is defined as housing required by any household with at least one active member of the labor force.

A projection of future "senior housing" need is also made. The projection provides perspective on how the aging of households may impact demands for housing in Golden. For consistency with age cohorts used regularly by the U.S. Census Bureau, the projection of senior housing need considers any household containing at least one-person age 65 or older (and not active in the labor force) as a "senior household."

An estimate of potential housing replacement need is also made. The estimate identifies the order-of-magnitude scale of potential replacement needs, given (a) the age of the existing housing stock in Golden and (b) typical housing "loss rates" by age of structure.

Housing demand in a community is typically influenced by:

Employment Growth

Job creation and new employment opportunities often represent the largest source of new housing needed in a community, as additional jobs attract new workers (and their households). Added jobs in a community frequently create increased demand for housing from non-resident workers who take those added jobs. Many workers prefer to live near where they were work if housing is suitable, available and affordable.

Lifecycle Events / Lifestyle Change

Demographic change among an existing population base can stimulate demand for new or different types of housing units. Households that experience a major lifecycle event, such as children leaving the nest or aging, are often associated with changes in housing preference or need.

Housing Replacement

Physical housing inventory is periodically lost. Some existing stock may become so old, obsolete, or under-maintained that it is no longer safe or habitable. Market conditions may also encourage the merger or conversion of residential units. "Replacement need" reflects the need to replace units removed from the housing stock.

SUMMARY OF POTENTIAL HOUSING NEED

Table VII-1 summarizes the 10-year projection of housing need in Golden. Total potential housing need over the next 10 years is estimated at approximately 3,100 units.

The estimates of potential need are not intended to suggest "effective demand" for 3,100 new construction housing units in Golden, or that capa and existing policy would permit this scale of additional housing. The estimates do provide insight about the likely composition of future housing need (by type, tenure, and level of affordability) and the relative balance between housing demand and supply in Golden.

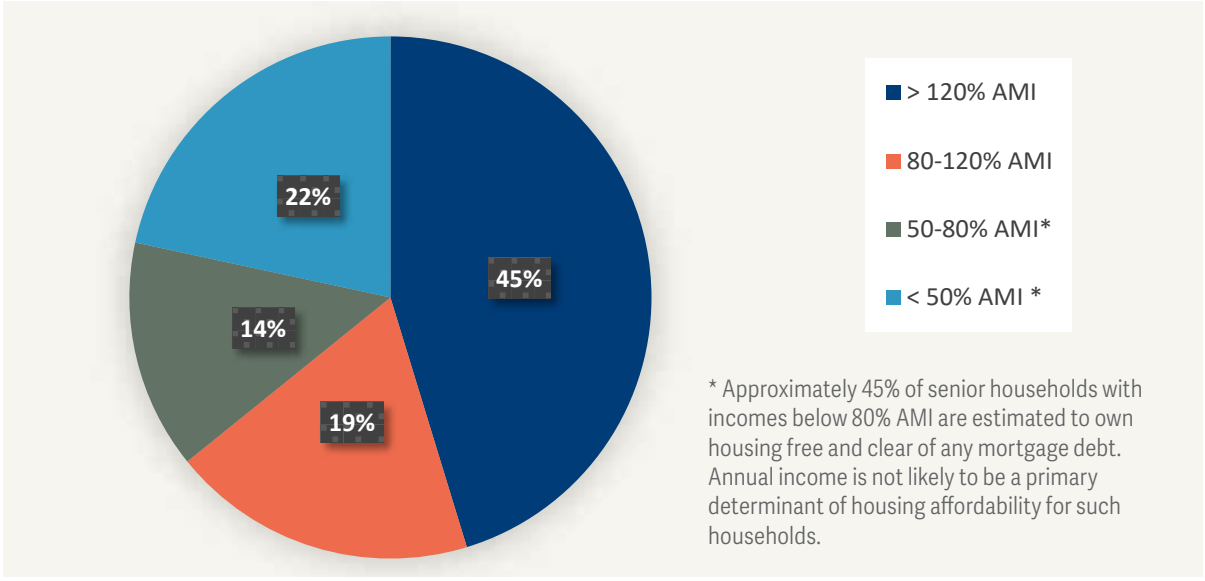
Workforce housing needs are estimated to total about 2,300 units, representing the largest source or 76% of the potential need. Senior housing needs are estimated at 600 units, representing 19% of total projected need. Potential housing replacement needs are estimated at about 150 units, or 5% total projected need.

Figure VII-1 summarizes the estimated distribution of future workforce and senior housing need by level of affordability (expressed as percentage of Area Median Income or "AMI"). The largest category of housing need is associated with households estimated to have incomes at or above 120% AMI, representing approximately 45% of annual workforce and senior housing need. Households with incomes at or below 80% AMI represent about 36% of estimated annual housing need.

TABLE VII-1: Summary of Potential 10-Year Housing Need in Golden

	Average Annual	Total (10-Year) Potential Need	
	# Units	# Units	% of Total
Workforce Housing Need	234	2,340	75.8
Senior Housing Need	60	600	19.4
Housing Replacement Need	15	149	4.8
Total	**309**	**3,089**	**100.0**
Source: Gruen Gruen + Associates			

FIGURE VII-1: Distribution of Workforce and Senior Housing Needs by Level of Affordability



Workforce Housing Need Projection

A "workforce household" contains at least one active member of the labor force. Most workforce households contain more than one worker. Approximately 75% of the existing housing unit inventory in Golden is estimated to be occupied by workforce households.

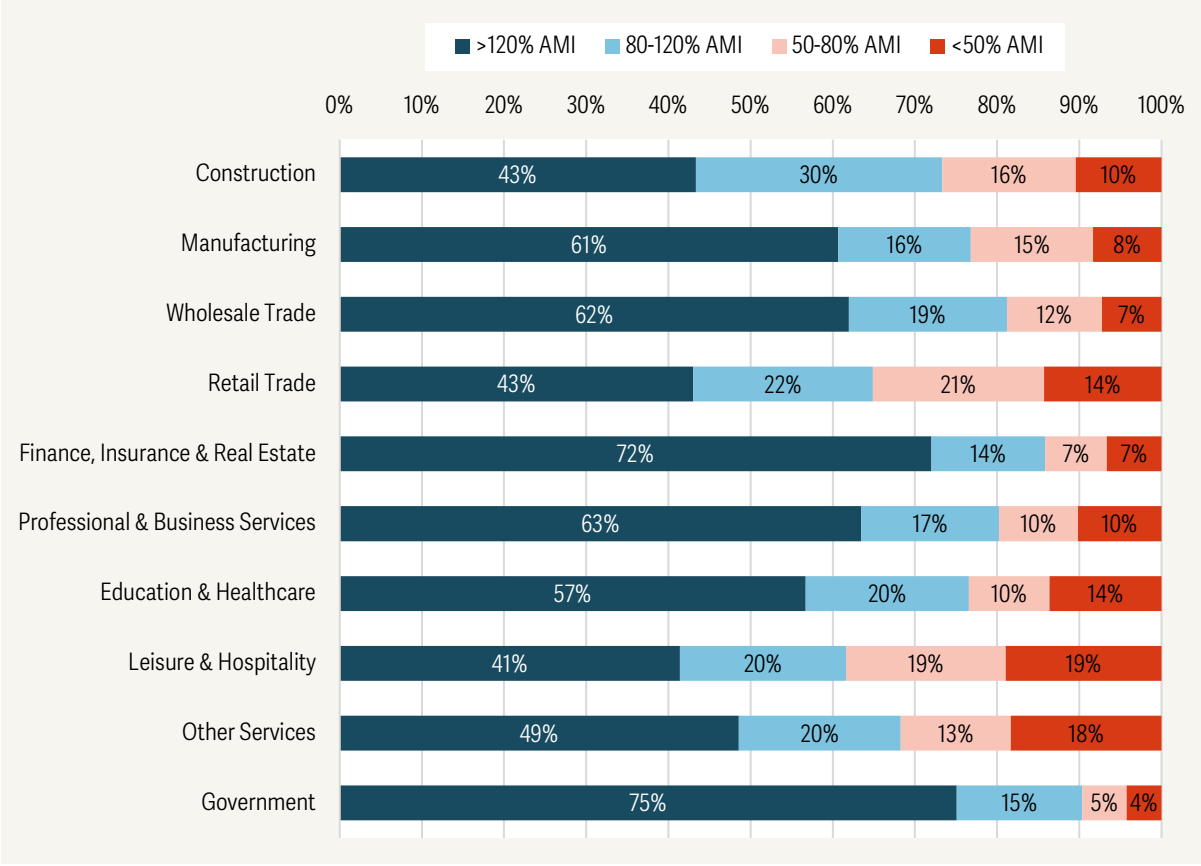
The purpose of the workforce housing need projection is to quantify the amount, type, and cost of housing units that would be required to house all new workers over the next decade. The projection also quantifies the type and amount of additional housing needed to reduce current in-commuting by 5%. Golden is estimated to contain more than 19,000 non-resident workers who commute in for employment.

The employment-based projection utilizes secondary data that quantifies the linkage between local jobs, the characteristics of the workforce employed in those jobs, and the housing characteristics of the households in which the workers reside.

WORKFORCE HOUSEHOLD CHARACTERISTICS

Figure VII-2 summarizes the estimated distribution of the regional workforce by two characteristics: (a) industry of employment; and (b) the total annual income of the household in which the worker resides. Household incomes are expressed as percentage of AMI, adjusted for household size. This data is based on Public Use Microdata Samples

FIGURE VII-2: Regional Workforce by Industry of Employment and Household AMI Bracket



(PUMS) from the American Community Survey for the geographic area corresponding to Golden's primary labor shed.

Approximately 25% of the regional workforce is estimated to reside in a household that can be considered Low Income earning less than 80% of AMI when adjusted for household size. A smaller proportion of workers, about 10% of total, live in households that can be characterized as "Extremely Low" or "Very Low" income, earning below 50% AMI.

The percentage of workers residing in households with incomes at or above 120% AMI range from a low of 41% (Leisure & Hospitality workers) to a high of 75% (Government sector workers). Workforce households at the 120% AMI level are far less likely to be challenged to find affordable housing.

Workers employed in typically lower-wage, lower skilled industries are most likely to reside in a lower income household earning less than 80% of AMI. More than 25% of workers employed in Construction, Leisure and Hospitality, Retail Trade, and Other/Personal Service sectors are estimated to live in a Low Income household.

Table VII-2 summarizes the estimated distribution of workers by size and household income level. Workforce households earning above 120% of AMI tend to be larger, while the lowest income households (earning below 50% of AMI) are generally smaller on average. More than 60% of workforce households earning less than 50% AMI are single- or two-person households.

The incomes of workforce households are correlated to household size and the number of workers (wage earners) in the household. Households at the higher income brackets tend to have multiple wage earners and many (almost one-half) are estimated have three or more household members. Less than 5% of households earning above 120% of AMI are single persons. Conversely, more than 30% of all workforce households earning below 50% of AMI are single-person households.

The size and income characteristics of workers and their households are also indicative of housing tenure and occupancy patterns.

About 80% of workforce households with three or members and incomes of 120% of AMI and higher are estimated to own detached single-family units. More than 50% of smaller workforce households and incomes below 80% AMI rent their housing, primarily in multi-family buildings.

TABLE VII-2: Distribution of Workforce by Household Size and Income Segment

	Workforce Household Income			
	> 120% AMI	80-120% AMI	50-80% AMI	< 50% AMI
1-Person	7%	19%	23%	32%
2-Person	45%	34%	26%	29%
3-Person	20%	20%	15%	14%
4+ Persons	27%	27%	36%	25%
Total	100%	100%	100%	100%

Sources: U.S. Census Bureau, American Community Survey, Public Use Microdata Sample (PUMS); Gruen Gruen + Associates.

POTENTIAL GROWTH IN GOLDEN WORKFORCE

Table VII-3 summarizes local and regional employment growth rates forecast by public agencies including the Colorado Department of Labor and Employment, Colorado Department of Local Affairs (DOLA), and Denver Regional Council of Governments (DRCOG).

The Department of Labor and Employment forecasts robust employment growth for Metro Denver, with an overall growth rate of 2.2% annually over 10 years. A secondary forecast of total employment in Jefferson County, prepared by DOLA, predicts 1.7% annual growth over the 2021-2031 period. Socio-economic projections prepared by DRCOG for its regional planning efforts indicate employment in the traffic analysis zones fully or partially located within Golden is anticipated to also expand at 1.7% annually (over a 2020-2030 projection period).

Future workforce housing needs in Golden are estimated on the assumption that future local employment will grow at an average annual rate of 1.5% over the next 10 years. This is consistent with historical patterns in which the local employment base has grown at a rate similar to Jefferson County, but below the rate of regional job growth.

Based on estimated 2021 employment of approximately 19,500 jobs in Golden, a 1.5% annual growth rate would equal to approximately 3,100 additional jobs over 10 years.

Golden has a very high share of non-resident workers with approximately 95% of jobs filled by in-commuters. The housing survey indicates a high share of residents living outside of Golden would prefer to live in Golden.[1] Therefore, to illustrate the results of an assumed 5% reduction to in-commuters, we present a projection of housing need associated with the assumption that about 930 in-commuting workers move to Golden over the next 10 years.

[1] More than 40% of housing survey respondents who live outside of Golden, but indicated plans to move within five years, would prefer their next housing unit be in Golden.

TABLE VII-3: Secondary Employment Forecasts

	Average Annual Growth Rate in Future Employment	Period	Source
Metro Denver	2.2%	2021-2031	Colorado Department of Labor and Employment
Jefferson County	1.7%	2021-2031	Colorado Department of Local Affairs (DOLA)
Golden Area[1]	1.7%	2020-2030	Denver Regional Council of Governments
[1] Traffic analysis zones located fully or partially within Golden.			
Source: Gruen Gruen + Associates			

Table VII-4 presents the 10-year projection of potential workforce growth in Golden attributable to a continued increase in local employment and a slight (5%) reduction to in-commuting patterns.

The composition of future employment growth by industry sector reflects an analytical technique called "shift-share analysis".[2] It is a particularly useful tool when predicting future change in mature local economies that are mostly built-out, such as Golden.

[2] The shift-share methodology decomposes observed historic employment growth or decline into three separable assumed causes of growth: (1) a regional effect; (2) an industry effect; and (3) a "competitive" local effect. These observed historical "effects" are based on comparisons to the regional Metro Denver economy. A prediction of future change within Golden is then made, given the forecast growth in the regional Metro Denver employment (sourced from the State Department of Labor and Employment).

The second source of future resident workforce growth reflects a simple 5% share of current non-resident workers (i.e., in-commuters), equally applied to all industry sectors.

Based on an average employment growth rate assumption of 1.5%, Golden is forecast to experience a gain of 3,138 jobs over the next 10 years. About 48% of the net increase in jobs in Golden is attributable to the education and healthcare sector (employment growth of 1,492 projected). Growth in the leisure and hospitality sector (539 added jobs) is forecast to account for 17% of the net increase in jobs in Golden. The finance, real estate, and insurance and professional and business service sectors are forecast to increase employment in Golden by 822 jobs, representing 26% of the net increase in jobs.

If five percent of workers employed in Golden who commute to their jobs from outside of Golden were to move to Golden, this would result in 928 workers needing housing in Golden over the next 10 years.

TABLE VII-4: Potential 10-Year Growth in Golden Resident Workforce

Sector	Future Employment Growth[1] # Workers	5% of In-Commuters # Workers	Combined 10-Year Change # Workers
Construction	229	44	273
Manufacturing	29	172	201
Wholesale Trade	(41)	34	(7)
Retail Trade	123	75	198
Finance, Insurance & Real Estate	370	42	412
Professional & Business Services	452	111	563
Education & Healthcare	1,492	159	1,651
Leisure & Hospitality	539	68	607
Other Services	253	24	277
Government	(308)	160	(148)
All Other Sectors [2]	0	39	39
Total	**3,138**	**928**	**4,066**

[1] Total future employment projection based on 1.5% average annual growth rate.
[2] Industry sectors such as Information, Utilities, and Transportation/Warehousing comprise less than 5% of jobs in Golden. No employment growth is assumed.

Source: Gruen Gruen + Associates

PROJECTED GROWTH IN WORKFORCE HOUSEHOLDS

Figure VII-3 presents the projection of additional workforce households by household size and income bracket. The conversion from additional workers to additional workforce households is based on the estimated distribution of workers by household size and income (reviewed previously, Table VII-2), as well as the average number of workers per household. Two-person households are estimated to include about 1.4 to 1.8 workers, on average, depending on income level.

Approximately 740 households, representing 32% of the total potential new workforce households over 10 years, are projected to have incomes below 80% of AMI.

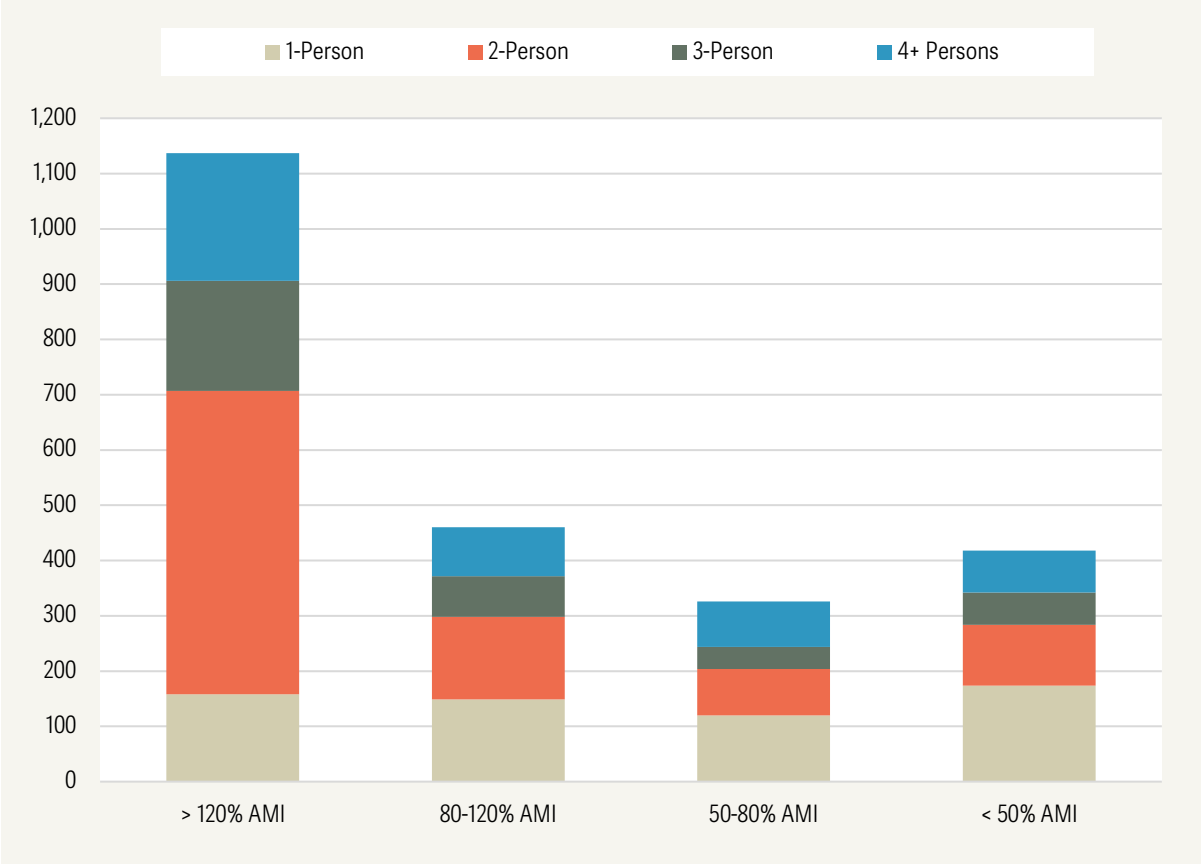
An additional 460 workforce households or about 20% of the total are estimated to have incomes between 80% and 120% of AMI.

The largest category of potential workforce household growth includes households with incomes at 120% of AMI or greater. This represents potential growth of nearly 1,140 workforce households or 49% of the total potential growth.

Two-person workforce households represent the most common household size and comprise approximately 40% of the potential growth.

Single workers represent approximately 25% of the potential workforce household growth over 10 years.

FIGURE VII-3: Potential 10-Year Workforce Household Growth, by Size and AMI Bracket



ESTIMATE OF 10-YEAR WORKFORCE HOUSING NEED

Table VII-5 presents the final summation of the workforce housing projection; an estimate of additional housing need by housing tenure and income bracket over 10 years.

Smaller-sized housing units suitable for a single- or two-person household, with a projected total need of about 1,500 units over 10 years, represent 64% of the total additional workforce housing need. Within this category, approximately 880 ownership units and 612 rental units are projected as needed, given prevailing housing tenure patterns.

A primary source of need is expected to be ownership units for smaller workforce households with incomes at or above 120% AMI. More than 700 units affordable to smaller households (1-2 persons) with incomes at or above 120% AMI are projected to be needed over the next 10 years.

Approximately 490 units affordable to smaller-sized workforce households with income of less than 80% AMI are projected to be needed over the next 10 years. This includes about 280 rental units and 210 ownership units (based on current tenure patterns). This source of workforce housing need will probably have to be addressed via existing units at deeply affordable prices (of which there are few) and/or additional sources of publicly assisted housing.

Larger-sized housing units suitable for workforce households with at least three persons have a projected need of about 850 units over 10 years, representing about 35% of overall need. A primary source of need among larger-sized workforce households is again likely to be for units at or above the 120% AMI level of affordability.

Approximately 180 rental workforce units are projected to be needed for larger households with three or more members and below the 80% AMI level of affordability.

The workforce housing projection suggests a wide-ranging scope of potential housing needed over the next 10 years, with a majority of units likely needed at income levels that will be infeasible or challenging for the private market to supply, assuming current housing price conditions and trends continue.

TABLE VII-5: Potential Workforce Housing Unit Need by Tenure and AMI Bracket

		> 120% AMI	80-120% AMI	50-80% AMI	< 50% AMI	Total
Smaller Units (1-2 Person Households)	Ownership	524	148	99	109	880
	Rental	183	150	104	175	612
	Subtotal	*706*	*298*	*203*	*284*	*1,492*
Larger Units (3+ Person Households)	Ownership	376	104	45	37	562
	Rental	54	58	77	97	286
	Subtotal	*430*	*162*	*122*	*134*	*848*
10-Year Total		**1,136**	**460**	**326**	**418**	**2,340**
Source: Gruen Gruen + Associates						

Senior Housing Need Projection

The growth in senior households over the next 10 years as Baby Boomers continue to age will continue to influence the housing market and housing needs in Golden. Partially, this is because older households may be affected by inadequate housing or unique needs brought about by aging. Many seniors will prefer to remain in their current home and community as they age, and most if not all of the future increase in senior households will simply represent the aging of existing residents/ households who remain in Golden over the 10-year projection period.[1]

The senior housing need projection quantifies the likely turnover of existing households as they age, and the household and income characteristics that bear on the type and affordability of housing potentially needed.

Like the workforce housing need projection, PUMS data from the most recent American Community Survey were drawn upon to characterize the typical household arrangements, sizes, housing tenure, and income attributes of senior households in the region. Results from the housing survey pertaining to expected housing moves among seniors, and the households incomes of seniors, in Golden also inform the analysis. The combination of estimates are used to quantify how changes in senior population, households, and their turnover, may result in additional housing needed.

Estimates of potential senior housing need are provided as a function of household size, housing tenure, and household income.

Especially among senior households which (by definition) are not earning wages or salaries from employment, it is also important to note that annual income is not the only measure of housing affordability. Senior households frequently comprise a disproportionate share of Low Income households with annual incomes below 80% of AMI. The ability to pay for housing, however, reflects both assets and income. Many of these households currently own a housing unit that is free and clear of any mortgage debt. Some of these households will have enough wealth to permit them to stay in or purchase or rent more expensive housing than their income alone would suggest. Senior households that do not own homes tend to be less affluent than those that do and may be less able to afford market rate housing, while senior households that own their units free and clear usually have relatively low housing costs.

[1] Jefferson County and Golden have historically experienced outward migration (i.e., negative migration) among the senior population.

SENIOR (AGE 65+) POPULATION GROWTH

Figure VII-4 summarizes the historical and projected population in Golden between the ages of 65 to 74 and those aged 75 or older. (Note the most recently available population estimates by age for Golden are from 2020; projected growth represents a 10-year increase from that base population).

The total senior population aged 65 or older is expected to increase by approximately 1,290 persons or 56% over 10 years, representing an average annual growth rate of about 5%.

Most senior population growth will relate to an increase in persons within the Age 65-74 cohort. This reflects a large Baby Boomer population in Golden, currently between the ages of 55 and 64, who will age over the next 10 years.

Table VII-6 summarizes the projected 10-year change in the senior population, by household size. Approximately 50% of seniors in the Age 65-74 cohort and 15% of seniors in the Age 75+ cohort are either still active in the labor force or resides with other household members still in the labor force. This population is excluded from the projection of senior households.

The total senior population that will reside in a "senior household" (not a workforce household) is projected to increase by approximately 700 persons within Golden over 10 years. Seniors living alone or in a two-person household are estimated to represent 80% of the potential growth.

FIGURE VII-4: Projection of Senior (Age 65+) Population in Golden

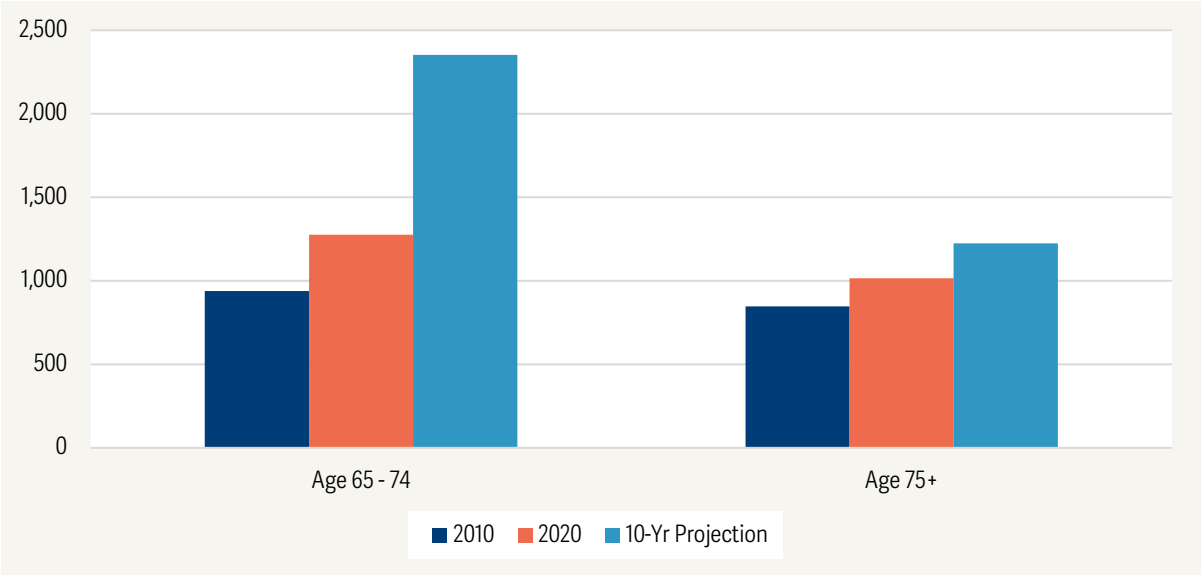


TABLE VII-6: Projected Change in Senior Population by Household Size

	2020 Estimate # Senior Population [1]	2030 Projected # Senior Population [1]	10-Year Change # Senior Population [1]
1-Person	425	618	193
2-Person	726	1,091	365
3+ Person	287	420	133
Total	**1,438**	**2,129**	**691**
[1] Excludes seniors living in a workforce household or group quarters.			
Sources: U.S. Census Bureau; DOLA; Gruen Gruen + Associates.			

TABLE VII-7: Projected Annual Turnover of Senior Households in Golden

	2020 Estimate		2030 Projection		**2020-2030**	
	Senior Households #	Annual Turnover [1] #	Senior Households #	Annual Turnover [1] #	**Average Annual Turnover #**	**Total 10-Year Turnover #**
1-Person	425	21	618	30	**26**	**260**
2-Person	393	19	590	28	**24**	**240**
3+ Person	178	8	260	12	**10**	**100**
Total	**995**	**48**	**1,468**	**70**	**60**	**600**
[1] Estimates of annual and total 10-year turnover are rounded to the nearest full household. Based on annual turnover rate of 5.5% for Age 65-74 and annual turnover rate of 7.25% for Age 75+. Based on housing survey results, assumes that 75% of all turnover will occur within Golden.						
Sources: U.S. Census Bureau; DOLA; Gruen Gruen + Associates.						

FUTURE GROWTH AND TURNOVER OF SENIOR HOUSEHOLDS

Current and future senior population estimates, by household size, are converted into current and future estimates of senior households in Golden based upon estimates of the average number of seniors residing in each sized household. Two-person senior households, for example, contain an average of 1.85 seniors. [2]

Table VII-7 summarizes the projected growth in senior households by size. The table also summarizes annual turnover or the number of senior households likely to move within Golden in a given year. The turnover rate for senior households was derived from the housing survey of existing Golden households.

Total senior households are projected to increase by approximately 470 households over 10 years. Eight percent (8%) of the increase in senior households is for one-and two-person households.

Utilizing a projected annual turnover rate of about 4.7% results in 48 senior households likely to move in 2020 and by 2030, an increase to 70 senior households likely to move. Over the 10-year

[2] The estimated number of seniors residing in a two-person household (1,091) is then divided, for example, by the average number of seniors per household (1.85 in this case) to make a projection of the number of two-person senior households, and so forth.

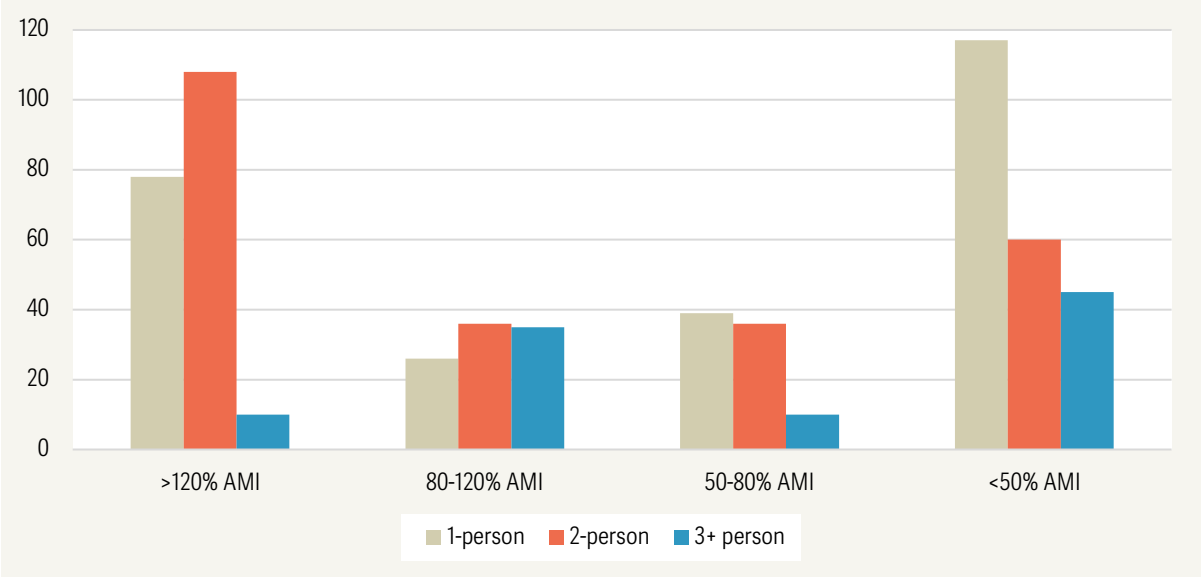
forecast period, 600 senior households are likely to move, or on average about 60 senior households per year. This amount of senior households who may move over the 10-year forecast period includes both existing and the future increase in senior households.

Figure VII-5 summarizes the senior household turnover of 600 households over the 10-year forecast period by household size and AMI bracket.

Approximately 31% of all senior household moves over the next 10 years are expected to relate to one- or two-person households with annual incomes of 120% AMI or greater.

Approximately 30% of senior household moves relate to one- or two-person households with annual incomes below 50% AMI.

FIGURE VII-5: Senior Household Turnover by Size and AMI Bracket (10-Year Total)



PROJECTED SENIOR HOUSING UNIT NEED

Table VII-8 presents the 10-year projection of senior housing need by household size, tenure, and level of affordability. Estimates of housing need are presented separately for senior households that are likely to already own housing free and clear of debt (thus an indication that lower incomes may not be a constraint to renting or purchasing a different housing unit).

Smaller sized households of one- and two-persons are projected to makeup over 80% of the senior housing need. Of these small-sized households, the proportion and number of households both above 120% AMI and below 50% AMI are equivalent at about 35% to 37%.

Smaller sized households between 80% to 120% AMI make up about 12% of expected senior housing need. Smaller households between 50% and 80% AMI represent an additional 15% of projected need. By tenure, small size senior households which are renters are projected to be primarily have incomes at or below 50% AMI. Small size senior households with no debt are projected to be primarily in the 120 percent or higher AMI level.

For larger-sized senior households, the majority or about 80% of households are projected to be owners, primarily in either the 80% to 120% AMI level or at or below the 50% AMI.

TABLE VII-8: Potential Senior Housing Unit Need by Tenure and AMI Bracket (10-Year Total)

		> 120% AMI	80-120% AMI	50-80% AMI	< 50% AMI	Total
Smaller Units (1-2 Person Households)	Owners	41	17	11	33	102
	Owners, No Debt	132	34	52	59	277
	Renters	13	11	11	85	121
	Subtotal	*186*	*62*	*75*	*177*	*500*
Larger Units (3+ Person Households)	Owners	2	18	5	16	40
	Owners, No Debt	8	18	5	29	59
	Renters	1	0	0	0	1
	Subtotal	*10*	*35*	*10*	*45*	*100*
10-Year Total		**196**	**97**	**85**	**222**	**600**
Source: Gruen Gruen + Associates						

Housing Replacement Needs

This section present an estimate of needs related to the replacement of existing units "lost" or removed from the existing housing stock over time. While it is difficult to predict total replacement need accurately because of exogenous or unpredictable factors which can lead to large removals of housing stock (e.g., floods or fires), some amount of housing replacement need is related to the declining physical condition of the existing housing stock.

Aging and obsolescence of residential structures beyond reasonable repair will generate a continual need to house displaced residents (frequently tenants/renters) irrespective of other housing needs. Changing market conditions and socioeconomic factors also lead to varying degrees of housing removal. Existing units or lots can be merged and existing structures may change from their initial use.

HOUSING "LOSS RATES"

National-level data via *American Housing Survey* samples are periodically evaluated to determine dynamics of housing stock change. The U.S. Census Bureau also applies regional housing loss rates (by age of structure) when preparing annual housing inventory and population estimates.

Table VII-9 summarizes data from the most recent *"Components of Inventory Change: 2015-2017"* study sponsored by the U.S. Department of Housing and Urban Development.

The newest housing stock less than 25 years old is estimated to experience no housing loss/removal when housing additions (not associated with new construction - such as unit splits or conversions of structures to residential use) are considered. In other words, the housing "loss rate" for newer units is negative. Beginning with existing housing

TABLE VII-9: Housing Loss Rates by Age of Housing Unit

	2015 Housing Stock # Units	Permanent Losses, 2015-17 # Units	Non-Construction Additions[1], 2015-17 # Units	Net Housing Loss, 2015-17 # Units	Net Housing Loss Rate % Annually
25 Years or Less	40,940,900	209,600	237,900	-28,300	-0.03%
26 to 35 Years	18,747,000	101,800	57,000	44,800	0.12%
36 to 45 Years	20,023,400	138,000	46,300	91,700	0.23%
46 to 55 Years	14,603,600	115,900	30,600	85,300	0.29%
56 to 65 Years	14,407,900	66,000	27,800	38,200	0.13%
66 to 75 Years	6,860,300	78,400	11,100	67,300	0.49%
76 to 85 Years	4,372,500	71,600	14,000	57,600	0.66%
85 Years or Older	14,834,300	209,600	78,200	131,400	0.44%
Total	**134,790,000**	**991,000**	**503,000**	**488,000**	**0.18%**

[1] Such as existing units being split or non-residential structures being converted to residential use.

Sources: Econometrica, Inc., "Components of Inventory Change: 2015-2017" prepared for HUD Office of Policy Development and Research, 2020; Gruen Gruen + Associates.

stock built in the 1980s, the net housing loss rate increases. All existing units that exceed 65 years in age are estimated to experience a net housing loss rate that is above 0.4% annually. Approximately four to seven existing units, out of 1,000 units of existing inventory, will be lost or removed in a given year.

Overall, the *"Components of Inventory Change: 2015-2017"* study from HUD suggests that the annual nationwide housing loss rate is relatively low at 1.8 units per 1,000. Implicitly this indicates that the newest housing units added to inventory will not need replacing within the next 500 years. This is not likely to be the case but the generalization that newer units are less susceptible to abandonment or becoming uninhabitable due to functional obsolescence and disrepair is reasonable.

ESTIMATE OF POTENTIAL HOUSING REPLACEMENT NEED

To make an approximation of the potential housing replacement need over the next 10 years, we apply the net annual housing loss rates to the existing housing stock in Golden. Table VII-10 presents the estimate of potential housing replacement need over 10 years.

Based on national housing loss rates, the existing inventory of approximately 8,000 units (excluding mobile homes) and the age distribution of the housing stock suggest the potential need to replace about 15 units annually.

The total housing need replacement over 10 years is estimated at 149 units. About 40% of the estimated need is attributable to units that exceed 65 years in age. An additional 42% of the potential 10-year replacement need is attributable to units between 45 and 65 years in age.

TABLE VII-10: Housing Replacement Need Estimate

Age of Housing [1]	Existing Housing Stock[2] # Units	Housing Loss Rate (Annual) %	10-Year Housing Replacement Need # Units
25 Years or Less	2,700	0.00%	0.0
26 to 35 Years	800	0.12%	10.0
36 to 45 Years	750	0.23%	17.0
46 to 55 Years	1,900	0.29%	55.0
56 to 65 Years	650	0.13%	8.0
66 Years or Older	1,200	0.49%	59.0
Total	**8,000**	**0.19%**	**149.0**

[1] Age of existing housing stock as of 2022.
[2] Figures are rounded. Excludes mobile homes. Estimate of existing inventory by age based on review of Jefferson County Assessor records and 2020 American Community Survey.

Source: Gruen Gruen + Associates

VIII Real Estate Economic Analysis of Prototypical Infill Housing Developments

INTRODUCTION

This chapter summarizes an analysis of housing development economics in Golden. The purpose of the analysis is to evaluate and identify:

- The financial feasibility of developing typical new housing units in Golden;
- Whether "market rate" developments can feasibly provide affordable units on-site;
- Types of housing units (and price points) which are infeasible for the private market to produce; and
- The degree of public assistance or incentives needed to bridge housing production gaps.

The results and conclusions drawn from the analysis provide insights about the constraints and barriers to provision of new housing across all income levels of housing need. Several prototypical housing development alternatives ("housing prototypes") provide the foundation of the analysis. The prototypes are differentiated by housing density, type, and tenure. They describe the amount and type of housing that could be developed on representative infill sites given estimates and assumptions about land area, housing density, parking requirements, and other factors or land use policies that influence housing development.

ANALYTICAL APPROACH

The most significant determinants of residential land values are the potential income (rents) or sales prices that can be earned from new construction housing units, development costs for different types of housing, and the land use and zoning regulations that govern the right to develop land and the physical limitations on development (e.g., building height). Given the land constrained nature of the Golden housing market, land use regulations that govern changes of use (e.g., nonresidential to residential) are especially impactful to new housing production.

Although market conditions, the physical circumstances of a particular site, land use or zoning policies, and political/entitlement "feasibility" may vary by location within the community (which the prototypes cannot explicitly quantify), property owners and developers tend to share a common motivation to maximize their own economic return from a particular development undertaking. One reference point for measuring development financial feasibility is the **residual land value**; a yardstick used to evaluate each prototypical housing development alternative. We simulate the development economics of each alternative from the viewpoint of a potential developer/builder and estimate how much each project could afford to pay for land given current relationships between market rate prices for housing and estimated development costs – including targeted return-on-investment (profit margin) thresholds.

In essence, we asked the following question:

> ***"How much could a prospective developer/ builder pay for the amount of land needed to site each prototypical housing development and earn a reasonable profit margin commensurate with the risk of each hypothetical development?"***

A project is feasible if a developer can achieve a return on the developer/investor equity that meets a hurdle rate commensurate with the associated risk. If the residual land value from the investment is zero or less, the cost of the land makes the investment infeasible without public financial assistance or incentives.

For the rental housing prototypes, residual land value estimates reflect a "hurdle rate" or return on equity investment equal to a 16 percent annual Internal Rate of Return (IRR). For the ownership (for-sale) housing prototypes, the estimates of residual land value reflect a minimum profit margin equal to 18 percent of gross sales revenues.

Note that the residual land value benchmark is best used to compare alternatives and obtain insight on the "ability to pay". Actual market value of land is also affected by the price of competing entitled land supply and in cases of redevelopment, the "as-is" value[1] of an existing land use.

Accordingly, the differences between each prototype are primarily intended to demonstrate:

1. How land values and financial feasibility change with housing density, parking configuration, unit type/sizes, and other regulatory factors; and

2. Which of the housing prototypes may be sufficiently profitable so as to support on-site affordable units.

[1] This is also commonly referred to as the "reservation price" of an existing property owner. Consider the example of an old, functionally obsolete retail building with high vacancy. Even if the building is only 50% leased at low rents of $15 per square foot, the owner would likely perceive the value of the current use to be on the magnitude of $20 per square foot land. Redevelopment to residential use would not be feasible if the re-use of the site generates a residual land value below $20 per square foot of land, etc.

HOUSING PROTOTYPES

Table VIII-1 summarizes the key physical assumptions underlying each housing prototype. The housing prototypes were selected for their consistency with potential infill housing sites, examples of which are demonstrated in Map VIII-1. Representative sites or areas are mostly located on the periphery of the community, buffered from existing established single-family neighborhoods, and beyond the purview of the recently-adopted zoning code rewrite for residential zoning districts. Some represent vacant or underutilized properties currently zoned M2 (General Industrial) and C1 or C2 (Commercial), where residential uses are permitted by right.[2]

Two versions of each prototype have been modeled in order to demonstrate the economic effects of modifying or removing existing requirements related to commercial space, off-street parking, and usable open space. Version "A" of each prototype represents housing development that would comply with existing parking and mixed use (commercial space) requirements. Version "B" then demonstrates alternative, more dense housing developments that could be possible if existing policies related to commercial space, usable open space, and off-street parking are relaxed or reduced.

[2] Per current zoning regulations, residential dwellings in the M2, C1, and C2 districts are only allowed in a "mixed use development on a lot where at least 25 percent of the gross square footage of the structures is designed for non-residential uses."

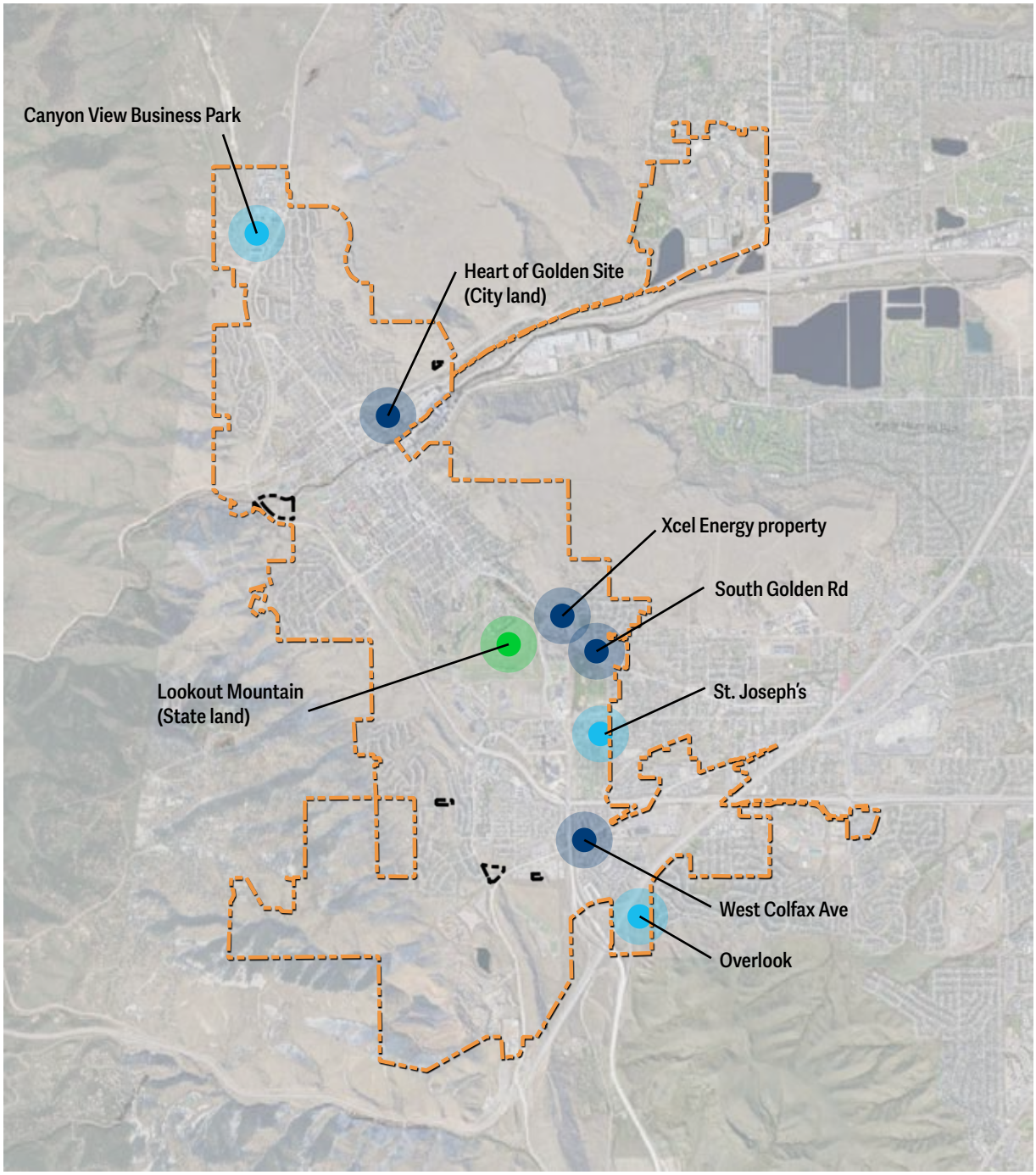
TABLE VIII-1: Summary of Housing Development Prototypes

	Building Height	Housing Density	Average Unit Size[1]	Commercial Use[2]	Parking Ratios[3]
Rental Prototypes					
1A - Vertical Mixed Use Apartments	4 story	49 du/ac	800	25%	1.5
1B - Vertical Mixed Use Apartments	4 story	74 du/ac	800	5%	1.0
2A - Small Infill Apartments	3 story	14 du/ac	960	25%	1.65
2B - Small Infill Apartments	3 story	38 du/ac	960	0%	1.15
For-Sale (Ownership) Prototypes					
3A - Attached Rowhomes	2 story	17 du/ac	1,600	0%	2.0
3B - Attached Rowhomes	2 story	26 du/ac	1,600	0%	1.5
4A - Vertical Mixed Use Condos	4 story	38 du/ac	1,050	25%	1.65
4B - Vertical Mixed Use Condos	4 story	57 du/ac	1,050	5%	1.15

[1] In square feet of rentable area (for multi-family units) or above-grade living area (for single-family units).
[2] Percent of gross floor area provided for commercial use.
[3] On-site residential parking (stalls per unit). All commercial space assumed to require four stalls per 1,000 square feet.

Sources: City of Golden; Gruen Gruen + Associates.

MAP VIII-1: Examples of Potential Infill Housing Areas



Example Infill Development Locations (by Current Zoning)

- Industrial or Commercial Zoning
- PUD Zoning
- R1 Zoning
- City of Golden

0 0.5 1.0 mi

N

HOUSING DEVELOPMENT FEASIBILITY

One purpose of the economic analysis was to compare the financial feasibility of new residential developments at market rate housing prices. The key findings are reviewed below. Figure VIII-1 also summarizes the residual land value estimates for the market rate housing scenarios.

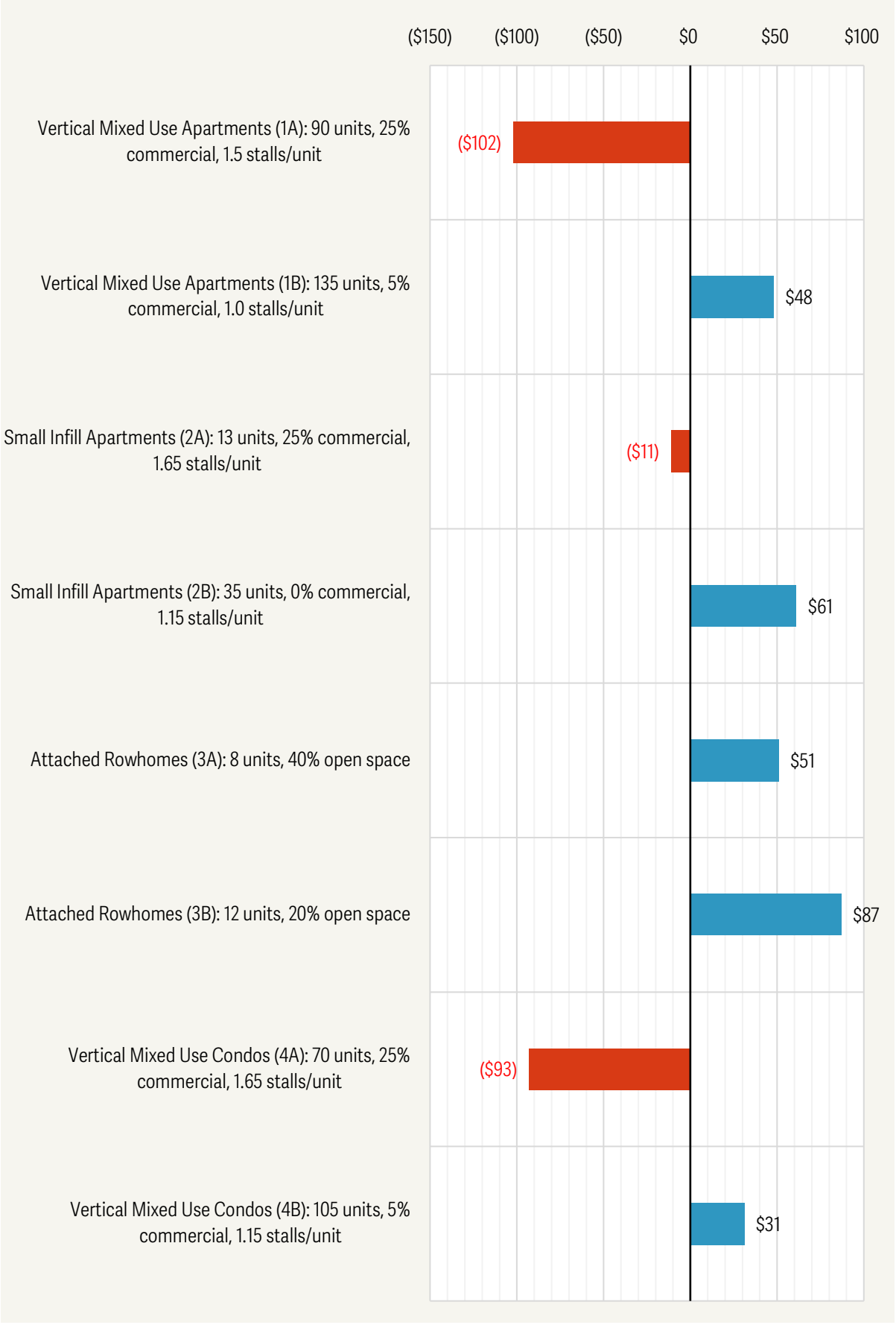
"Vertical Mixed Use" residential developments with structured parking (based on current parking requirements) and 25% commercial space are not likely to be feasibly developed where most infill housing opportunities are located. Two development alternatives were modeled with 25% commercial space and current parking ratios. These included the Vertical Mixed Use Apartments (1A) and Vertical Mixed Use Condominiums (4A). Residual land values are each negative, ranging from negative $102 per square foot of land to negative $93 per square foot of land. This indicates that a private developer or builder would require land at no cost (i.e., land contribution) plus financial assistance/incentives ranging from about $90,000 to $106,000 per housing unit to feasibly build these types of mixed use housing developments at market rate housing prices.

The feasibility gap for the Smaller Infill Apartment use mixed with 25% commercial space is smaller, although the residual land value is still negative. This primarily relates to a lower density that would permit lower cost surface rather than higher cost structure parking. The residual land value generated by the Small Infill Apartment prototype (2A), which includes 5,000 square feet of commercial space and 13 apartment units on a 40,000 square foot site, is negative ($11) per square foot of land. A land dedication and subsidy of about $34,000 per housing unit would be required for a developer/investor to achieve a 16% annual return on equity investment.

Attached "for sale" single-family units, such as those exemplified by the Attached Rowhome housing prototype, generate high land values. At a density of 17 units per acre (Version 3A), this type of for-sale development is estimated to generate a residual land value of $51 per square foot of land or nearly $128,000 per housing unit. If the same type of attached single-family units could be developed with less garage parking and less usable open space (Version 3B), resulting in a density of more than 25 units per acre, the residual land value would increase to $87 per square foot or about $146,000 per housing unit.

Reducing (or removing) requirements for commercial space in primarily residential developments, in combination with reduced on-site parking, has significant beneficial impacts on residential land values. If the amount of commercial space is reduced to 5% of gross floor area and the amount of residential parking is reduced by 0.5 stalls per unit in the Vertical Mixed Use prototypes (Versions 1B, 4B), the estimates of residual land value improve to approximately +$30 to +$50 per square foot of land. These land values would permit feasible acquisition and redevelopment of underutilized or vacant property to market rate housing in many locations throughout Golden (other than higher land value locations in the Downtown). Changes, however, in land use policy would be required to permit this type of housing development.

FIGURE VIII-1: Residual Land Values (Per Square Foot) of Market Rate Housing Scenarios



HOUSING PRODUCTION GAPS

Housing "production gaps" refer to the price points (and types) of housing that the private market is unlikely to supply in sufficient quantity. Findings drawn from the economic analysis are summarized below. Figure VIII-2 also summarizes the minimum annual incomes needed to afford the market price of feasible housing developments.[3]

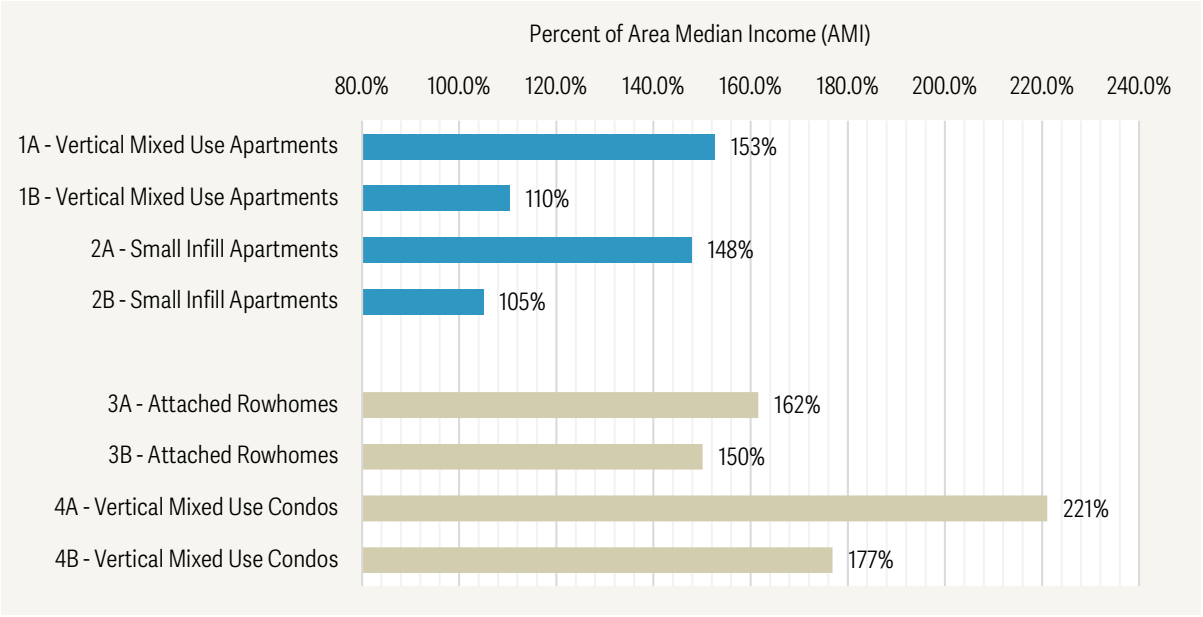
New multi-family rental housing will not be feasibly produced at prices affordable to households earning below 150% of Area Median Income (AMI) if 25% commercial space and 1.5 parking stalls per unit (or higher) are required. The average monthly rents needed to support a land value of $25 per square foot are approximately $3,360 and $3,590 per unit for the Vertical Mixed Use Apartment and Small Infill Apartment prototypes, respectively. These average monthly rents would require 148% to 153% of AMI to afford.

[3] Rather than "solving" for land value, the minimum incomes presented in Figure 2 assume a land cost of $25 per square foot. This assumption reflects the approximate average of recent transactions for development in suburban Golden.

Reduced residential parking and commercial space requirements for rental housing developments could result in feasible projects at prices affordable to 105%-110% of AMI. The average monthly rents needed to support land values of $25 per square foot for the alternative versions of the rental apartment prototypes (1B, 2B) are reduced to about $2,430 to $2,550 per unit. These average monthly rents would require approximately 105% to 110% of AMI to afford.

New for-sale housing is also unlikely to be supplied at prices affordable to households earning below 150% of AMI. Condominium projects with structured parking would require even higher incomes. The average sales prices required for feasible development of the Attached Rowhome and Vertical Mixed Use Condominium prototypes are estimated to range from about $670,000 to $750,000, respectively. These prices would require approximately 160% to 220% of AMI to afford. Alternative versions of each prototype with reduced parking, commercial space, and more housing density (Versions 3B, 4B) would require lower sales prices equating to about 150% to 180% of AMI.

FIGURE VIII-2: Minimum Annual Income Needed to Afford Market Price of Feasible Housing Developments



ON-SITE AFFORDABLE HOUSING

Table VIII-2 summarizes the residual land value estimates for each feasible housing prototype at market rate rents or sales prices. Residual land value estimates are also presented for a scenario in which 10% of housing units are provided at prices affordable to 60% AMI.

The private, unassisted development of Vertical Mixed Use housing with (i) reduced commercial space and parking requirements and (ii) 10% of units set aside for households earning 60% AMI or less, is likely to be infeasible. The rental version of the prototype (1B) with 10% on-site affordable units is estimated to support a residual land value of approximately $9,000 per unit or $14 per square foot of land. This value may not be sufficiently high enough to acquire land in many parts of Golden. Fee waivers (e.g., tap fees and/or rebate of construction use tax) could be used to bridge a feasibility gap. The for-sale condominium prototype with 10% on-site affordable units is estimated to support a negative residual land value equal to negative ($27) per square foot of land or negative ($21,000) per housing unit.

A feasible development with 10% on-site affordable units would require land at no cost plus financial assistance or incentives of $21,000 per unit. Again, municipal fee waivers could bridge some or most of the feasibility gap.

Other types of infill housing developments, such as the Small Infill Apartment and Attached Rowhome prototypes, generate high enough land values that suggest it may be feasible for these types of projects to provide 10% affordable units on-site. The development of a three-story apartment use (assuming no commercial space and reduced parking) including 10% of units at 60% AMI is estimated to generate a residual land value of $51,000 per housing unit or approximately $40 per square foot of land. The for-sale Attached Rowhome prototypes, with 10% of units sold at prices affordable to 60% AMI, are estimated to support residual land values of $31 to $42 per square foot of land, or about $70,000 to $80,000 per unit.

TABLE VIII-2: Summary of Residual Land Values with 10% On-Site Affordable Housing

	100% Market Rate		**10% Affordable @ 60% AMI / 90% Market Rate**	
	Land Value Per Square Foot	Land Value Per Housing Unit	**Land Value Per Square Foot**	**Land Value Per Housing Unit**
Vertical Mixed Use Apartments (1B): 135 units, 5% commercial, 1.0 stalls/unit	$48	$28,000	**$14**	**$9,000**
Small Infill Apartments (2B): 35 units, 0% commercial, 1.15 stalls/unit	$61	$70,000	**$44**	**$51,000**
Attached Rowhomes (3A): 8 units, 40% open space [1]	$51	$128,000	**$31**	**$78,000**
Attached Rowhomes (3B): 12 units, 20% open space [1]	$87	$146,000	**$42**	**$70,000**
Vertical Mixed Use Condos (4B): 105 units, 5% commercial, 1.15 stalls/unit	$31	$24,000	**($27)**	**($21,000)**
[1] Note for the small Attached Rowhome prototypes, the number of affordable units are rounded up to the nearest full unit (i.e., one affordable unit in the 8-unit prototype and two affordable units in the 12-unit prototype).				
Source: Gruen Gruen + Associates				

Analysis of Rental Housing Alternatives

PROTOTYPE ASSUMPTIONS

Table VIII-3 summarizes the key physical assumptions for the rental housing prototypes.

The ***Vertical Mixed Use*** prototype includes three levels of multi-family apartments built over a ground-floor podium. One level of underground parking is also included. The first version (1A) includes 30,000 square feet of ground floor commercial space, representing 25% of the total gross floor area. Structure parking is provided at ratio of 1.5 stalls per housing unit and 4.0 stalls per 1,000 square feet of commercial space. The overall floor-area-ratio (FAR) would be 1.5 and the housing density would approximate 50 units per acre.

A second version of the Vertical Mixed Use prototype (1B) demonstrates an increased housing yield by reducing the amount of ground-floor commercial space and residential parking ratio. Residential parking is provided at a ratio of 1.0 stalls per unit and the amount of commercial space is reduced to represent about 5% of the gross floor area. The housing density would increase to about 70 units per acre and the FAR would be 1.75.

The ***Small Infill Multi-Family*** prototype includes apartment units in a three-story building with surface (rather than structured) parking, and integrated horizontally with separate commercial space. The first version (2A) includes a 15,000 square foot multi-family apartment building and a 5,000 square foot commercial building, representing 25% of the total gross floor area on the site. Usable open space would approximate 40% of the site. Surface parking is provided at a ratio of 1.65 stalls per housing unit and 4.0 stalls

TABLE VIII-3: Rental Housing Prototype Assumptions

	Vertical Mixed Use		Small Infill Multi-Family	
	1A	***1B***	***2A***	***2B***
Site Area (in Square Feet)	80,000	80,000	40,000	40,000
Building Height	4 stories	4 stories	3 stories	3 stories
Parking Configuration	Structure[1]	Structure[1]	Surface	Surface
Total Housing Units	**90**	**135**	**13**	**35**
Average Unit Size in Square Feet	800	800	960	960
Housing Density (Units / Acre)	*49*	*74*	*14*	*38*
Gross Floor Area (in Square Feet)	**120,000**	**142,000**	**20,000**	**40,000**
Residential	90,000	135,000	15,000	40,000
Commercial	30,000	7,000	5,000	---
Floor Area Ratio (F.A.R.)	*1.5*	*1.8*	*0.5*	*1.0*
Total Parking Stalls	**255**	**163**	**41**	**40**
Residential	135	135	21	40
Commercial	120	28	20	---
Residential Ratio (per Unit)	*1.50*	*1.00*	*1.65*	*1.15*
Commercial Ratio (per 1,000)	*4.0*	*4.0*	*4.0*	---

[1] One level of parking underground and additional covered parking within ground-floor podium.

Source: Gruen Gruen + Associates

per 1,000 square feet of commercial space. The overall FAR would be 0.5 and an estimated 13 apartment units could be accommodated on the site. A second version of Small Infill Multi-Family prototype (2B) increases the amount of housing by removing the commercial space and again reducing the residential parking ratio (to about 1.15 stalls per unit). The FAR would increase to 1.0 and the housing density would increase to about 38 units per acre.

Residential Parking Ratios

The amount of on-site parking, and especially structured parking, can be an important determinant of housing development feasibility in land constrained housing markets such as Golden. The residential parking assumptions for each rental housing prototype are based on current requirements (outside of the Downtown). These include off-street parking ratios of:

- 1.5 stalls per unit containing two or fewer bedrooms; and
- 2.0 stalls per unit containing three or more bedrooms.

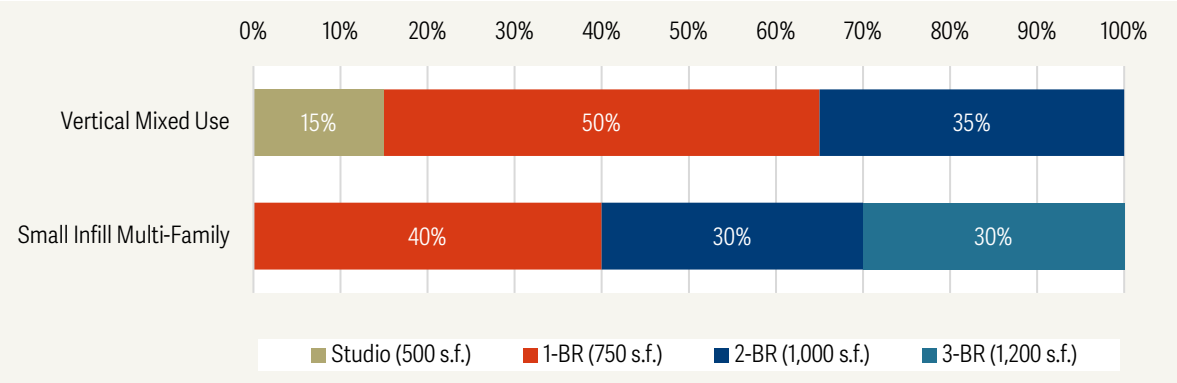
Version "B" of each prototype reduces the off-street parking ratios by 0.5 stalls per unit.

Rental Unit Mix

Figure VIII-3 summarizes the unit mix assumed for each rental housing prototype. The Vertical Mixed Use unit mix includes primarily studio and one-bedroom units, representing 15% and 50% of units respectively. Two-bedroom units are assumed to make-up another 35% of the unit mix. The overall average unit size would be 800 square feet.

The Small Infill unit mix includes 40% one-bedroom units, 30% two-bedroom units, and 30% three-bedroom units. The overall average unit size is larger at 960 square feet.

FIGURE VIII-3: Rental Housing Unit Mix



DEVELOPMENT COST ESTIMATES

Table VIII-4 and Table VIII-5 summarize estimated development costs, excluding land and financing, for each rental housing prototype. The estimates are based upon our recent experience evaluating similar developments, interviews with market participants, review of hard construction and total reported development costs for comparable projects in Golden and other Jefferson County communities, in addition to secondary construction cost reports.

The hard construction cost estimates reflect sitework costs of $20 per square foot of land area, residential building area costs of $200 per gross square foot, commercial building area (including tenant improvements) costs of $275 per gross square foot, and parking costs equal to $5,000 per surface stall and $35,000 to $45,000 per structured stall.[1]

"Soft cost" estimates related to municipal fees reflect current Golden fee schedules for building permits, plan review, construction use tax, and utility taps. Total municipal fees are estimated to range from about $14 to $17 per square foot for the rental housing prototypes.

A development fee equal to three percent of hard construction cost is uniformly applied to each prototype. Additional soft costs attributable to cost contingency, architecture and engineering, other professional, and legal fees, and pre-development expenses, etc., are included at 18 percent of hard construction costs. For prototypes with commercial space, leasing commissions are included at $6 per square foot.

[1] Underground parking structures are typically more costly to construct than ground-level or "podium" parking stalls.

TABLE VIII-4: Vertical Mixed Use Development Cost Estimates

	Version 1A (90 Units, 25% Commercial, 1.5 stalls/unit)		Version 1B (135 Units, 5% Commercial, 1.0 stalls/unit)	
	Per GSF [1]	Total	Per GSF [1]	Total
Hard Costs				
Sitework	$13	$1,600,000	$11	$1,600,000
Structure Parking	$89	$10,675,000	$49	$6,905,000
Building	$219	$26,250,000	$204	$28,925,000
Soft Costs				
Municipal Fees [2]	$17	$2,006,087	$16	$2,287,368
Other Soft [3]	$59	$7,114,500	$48	$6,779,400
Total Cost (before Land and Financing)	**$397**	**$47,645,587**	**$327**	**$46,496,768**

[1] Per square foot of gross floor area.
[2] Building permit and plan review fees, construction use tax, and water/sewer tap fees.
[3] Contingency, development fee, A/E design fees, legal and consultants, commercial leasing commissions, etc.

Source: Gruen Gruen + Associates

TABLE VIII-5: Small Infill Multi-Family Development Cost Estimates

	Version 2A (13 Units, 25% Commercial, 1.65 stalls/unit)		Version 2B (35 Units, 0% Commercial, 1.15 stalls/unit)	
	Per GSF [1]	Total	Per GSF [1]	Total
Hard Costs				
Sitework	$40	$800,000	$20	$800,000
Parking	$10	$205,000	$5	$200,000
Building	$219	$4,375,000	$200	$8,000,000
Soft Costs				
Municipal Fees [2]	$15	$290,635	$14	$557,645
Other Soft [3]	$50	$998,400	$41	$1,620,000
Total Cost (before Land and Financing)	**$334**	**$6,669,035**	**$279**	**$11,177,645**

[1] Per square foot of gross floor area.
[2] Building permit and plan review fees, construction use tax, and water/sewer tap fees.
[3] Contingency, development fee, A/E design fees, legal and consultants, commercial leasing commissions, etc.

Source: Gruen Gruen + Associates

Total estimated development costs before land and financing range from approximately $330 to $400 per square foot for the Vertical Mixed Use prototypes. The lower per square foot costs are associated with the alternative (Version 1B) that includes less commercial space and fewer structured parking stalls. The total residential cost would range from approximately $330,000 to $350,000 per housing unit, or about $410 to $440 per rentable square foot.

Total estimated development costs range from approximately $280 to $330 per square foot for the Small Infill Multi-Family prototypes. The lower costs are associated with the alternative (Version 2B) that excludes commercial space and reduces the residential parking ratio. The total residential cost would approximate $320,000 per housing unit, or about $335 per rentable square foot.

TABLE VIII-6: Monthly Apartment Rent Assumptions by Unit Type

	Studio	1-Bedroom	2-Bedroom	3-Bedroom
Market Rate Units:				
Average Unit Size (in Square Feet)	500	750	1,000	1,200
Average Monthly Rent	$1,800	$2,300 - $2,400 [1]	$2,800 - $3,000 [1]	$3,400
Monthly Per Square Foot	$3.60	$3.07 - $3.20	$2.80 - $3.00	$2.83
Affordable Units (60% AMI):				
Average Unit Size (in Square Feet)	500	750	1,000	1,200
Average Monthly Rent [2]	$1,126	$1,203	$1,426	$1,621
Monthly Per Square Foot	$2.25	$1.60	$1.43	$1.35

[1] Market rate units in the larger Vertical Mixed Use prototype are assumed to command slightly higher rents than a smaller multi-family building with fewer common area amenities.
[2] Monthly utility allowances ranging from $105 for a studio unit up to $207 for a three-bedroom unit are deducted from affordable rents at 60% AMI.

Sources: CoStar; CHFA, 2022 Rent Limits; Gruen Gruen + Associates.

MARKET AND OPERATING PARAMETERS

Table VIII-6 summarizes estimated obtainable apartment rents based on our interviews and review of secondary multi-family market data. Revenue estimates are presented under two scenarios:

(1) assuming all units are market rate; and
(2) assuming 10% of units are affordable to renters at 60% AMI.

Average market rate rents by prototype are based on the following monthly rent assumptions:

- Studio units at $1,800;
- One-bedroom units at $2,300 to $2,400;
- Two-bedroom units at $2,800 to $3,000; and
- Three-bedroom units at $3,400 monthly.

Market rate units in the larger Vertical Mixed Use prototype are assumed to command slightly higher monthly rents than a smaller multi-family building with fewer common area amenities.

Monthly market rents for the Vertical Mixed Use prototype are estimated to average $2,520 per unit or $3.15 per square foot. Market rents for the Small Infill prototype, which includes a larger unit mix, are estimated to average $2,780 monthly or $2.90 per square foot.

Affordable Apartment Rents

Based on current 2022 income and rent limits for Jefferson County, monthly gross affordable rents at 60% AMI include:

- Studio units at $1,231;
- One-bedroom units at $1,319,
- Two-bedroom units at $1,582; and
- Three-bedroom units at $1,828.

Monthly utility allowances ranging from $105 for a studio unit up to $207 for a three-bedroom unit are deducted from affordable rents.

Commercial Rents

The real estate economic analysis optimistically assumes that commercial space(s) included in the prototypes are fully leased upon completion of construction at an annual triple-net ("NNN") rent of $24 per square foot.[2] Triple-net refers to a lease structure in which operating expenses, insurance expense, and property tax costs are paid by the tenant. The spaces are assumed to remain leased throughout the period of analysis with rent escalations of 10% every five years. Landlord operating expenses of $1.00 per square foot are included, as well as a 7% vacancy and credit loss factor for commercial spaces. To the extent commercial rents are lower or the space is not fully occupied, the returns and therefore mixed-use development feasibility would be lower than presented in this report.

[2] CoStar reports average market rents for retail space of $21.67 and $21.56 per square foot for the Northwest and West Jefferson County submarkets. Asking rents for smaller retail and office spaces in Golden currently range from about $15 to $30 per square foot in developments such as the Golden Market Place, Clear Creek Square, The Village at Golden, and Miner's Point.

Apartment Lease Up, Ancillary Revenue, and Operating Expense Assumptions

Table VIII-7 presents the assumptions underlying the real estate economic analysis related to occupancy and absorption (pace of lease up) and operating expenses for the prototypical rental housing development alternatives.

The existing multi-family rental inventory is extremely well occupied, with physical vacancy reported below 3% in the Golden apartment submarket. Secondary market data as well as our interviews also suggest that the majority of new units delivered in the past have usually been occupied quickly following construction. For purposes of this analysis, we assume that 15 apartment units are absorbed each month so that each prototypical development reaches stabilized occupancy within one to nine months. Upon stabilization, a 5% vacancy and credit loss factor is included each year thereafter.

The analysis assumes annual apartment rent and expense growth of three percent. Miscellaneous revenues associated with reserved covered parking, pet fees and rents, etc., are assumed to represent additional monthly revenues of $100 to $200 per apartment unit. Upon stabilization, total annual residential operating expenses are estimated at 30% of effective gross income. This represents annual expenses of approximately $9,600 to $10,100 per unit at stabilization, or about $8.90 to $9.60 per square foot of gross building area. Property

TABLE VIII-7: Apartment Occupancy, Ancillary Revenue, and Operating Expense Assumptions

	Vertical Mixed Use	Small Infill Multi-Family
Monthly Absorption during Lease Up	15 units monthly	15 units monthly
Monthly Ancillary Revenue	$200 per unit	$100 per unit
Annual Operating Expense at Stabilization	30% of Gross Income $9,581 per unit $9.58 per square foot	30% of Gross Income $10,145 per unit $8.90 per square foot
Vacancy/Credit Loss Factor	5.0%	5.0%
Annual Rent and Operating Expense Escalation	3.0%	3.0%
Sources: CoStar; National Apartment Association; Gruen Gruen + Associates.		

taxes would comprise about 20% of all operating expenses based on current assessments for newer apartment buildings in Golden.

INVESTMENT AND FINANCING

Table VIII-8 summarizes the financing and investment parameters for the rental housing prototypes. Each prototypical development is assumed to have a two-year pre-development and construction period which is typical for moderately sized projects. Equity investment is assumed to be held for a period of seven years from date of construction.

Financial parameters include equity and debt terms, construction and permanent loan arrangements, Internal Rate of Return (IRR) requirements, and capitalization rates. The sources of capital funding include 35% equity investment and 65% debt. This provides for a reasonable debt service coverage ratio following the stabilized occupancy of each prototype.

A "hurdle rate" or return on equity investment equal to a 16% annual IRR is applied. We estimate a construction loan interest rate of 5.25% percent and loan fees/points of 0.5 percent. A permanent mortgage loan is assumed to be obtained in the third year of each project to retire the construction loan, with an annual interest rate of 5.0% and a loan amortization schedule of 25 years.

We estimate the capitalization rate would be 4.75% for apartment units and 6.5% for commercial space, where applicable. Expenses associated with the sale of the property (in Year 7) are estimated at 2%of the transaction value.

TABLE VIII-8: Investment and Financing Assumptions for Rental Housing Prototypes

	Rental Housing Prototypes
Timeline:	
Predevelopment & Construction	24 months
Investment Holding Period	7 years
Source of Capital Funds:	
Equity Investment	35%
Debt Financing	65%
Equity Return Requirement:	
Annual Internal Rate of Return (IRR)	16.0%
Interim (Construction) Financing:	
Annual Interest Rate	5.25%
Loan Fees / Points	0.5%
Loan Duration	24 months
Permanent Mortgage:	
Annual Interest Rate	5.0%
Loan Amortization	25 years
Property Sale:	
Income Capitalization Rate	4.75% Residential / 6.5% Commercial
Cost of Sale	2.0%
Sources: CoStar; CBRE; Essex Financial Group; Gruen Gruen + Associates.	

RESIDUAL LAND VALUE ESTIMATES

Table VIII-9 presents the results of the analysis for the **market rate** (i.e., no on-site affordable housing) development scenarios.

The results of the analysis indicate that a requirement to provide 25% of gross floor area as commercial use in a primarily residential development makes the production of rental housing infeasible.

In the case of the Vertical Mixed Use prototype featuring 25% commercial space, the residual land value is negative ($8,132,000). This indicates that an investor/developer would need land provided at no cost plus an upfront incentive of $8.1 million to develop this housing prototype and still achieve a 16 percent annual return on equity investment. The amount of assistance required equates to a land contribution plus $90,000 per rental housing unit.

Analysis of the Small Infill Apartment prototype with 25% commercial space indicates a smaller negative residual land value or feasibility gap. The residual land value is estimated to be negative ($437,000). Incentives or assistance totaling $437,000 in present value and a 40,000 square foot site would be required at no cost. The smaller feasibility gap associated with the Small Infill prototype is primarily associated with the absence of structured parking.

The removal or significant reduction to commercial space, as well as relaxation of residential parking requirements, have a significant beneficial impact on development feasibility and residual land value. These results are demonstrated by version "B" of each rental housing prototype.

The second version of the Vertical Mixed Use prototype (which reduces commercial use to 5%, increases the number of housing units on the site, and reduces residential parking) is feasible with an estimated residual land value of $3,831,000. This represents a land value of about $28,000 per housing unit or $48 per square foot of land.

The Small Infill Multi-Family prototype is also highly feasible if the 25% commercial use requirement is removed, parking is reduced, and usable open space requirements are relaxed. The residual land value is estimated to be $2,444,000, meaning an investor/developer could pay about $60 per square foot of land and still achieve a 16 percent annual return on equity investment.

TABLE VIII-9: Residual Land Value Estimates for Market Rate Scenarios

	Vertical Mixed Use		Small Infill Multi-Family	
	Version 1A (90 Units, 25% Commercial, 1.5 stalls/unit)	Version 1B (135 Units, 5% Commercial, 1.0 stalls/unit)	Version 2A (13 Units, 25% Commercial, 1.65 stalls/unit)	Version 2B (35 Units, No Commercial, 1.15 stalls/unit)
Residual Land Value (Total)	**($8,132,000)**	**$3,831,000**	**($437,000)**	**$2,444,000**
Per Housing Unit	($90,000)	$28,000	($34,000)	$70,000
Per Square Foot of Land	($102)	$48	($11)	$61
Return Metrics				
Leveraged IRR in Year 7	16.0%	16.0%	16.0%	16.0%
Stabilized Yield-on-Cost	6.4%	6.1%	6.4%	5.9%
[1] Figures rounded to nearest thousand.				
Source: Gruen Gruen + Associates				

Table VIII-10 presents the results of the analysis for the **on-site affordable scenario** which includes 10% of units at rents affordable to 60% AMI.

The rental version of the Vertical Mixed Use prototype (1B) with 10% on-site affordable units is estimated to support a residual land value of approximately $9,000 per unit or $14 per square foot of land. This value may not be sufficiently high enough to acquire land in many parts of Golden. Fee waivers (e.g., tap fees, construction use tax) could be used to bridge a feasibility gap.

The Small Infill Apartment prototype generates a high enough land value to suggest it may be feasible for this type of development to provide 10% affordable units on-site. The development of a three-story apartment use (assuming no commercial space and reduced parking) including 10% of units at 60% AMI is estimated to generate a residual land value of $51,000 per housing unit or approximately $40 per square foot of land.

TABLE VIII-10: Residual Land Value Estimates for On-Site Affordable Scenarios[1]

	Vertical Mixed Use	Small Infill Multi-Family
	Version 1B (135 Units, 5% Commercial, 1.0 stalls/unit)	Version 2B (35 Units, No Commercial, 1.15 stalls/unit)
Residual Land Value (Total)	**$1,159,000**	**$1,771,000**
Per Housing Unit	$9,000	$51,000
Per Square Foot of Land	$14	$44
Return Metrics		
Leveraged IRR in Year 7	16.0%	16.0%
Stabilized Yield-on-Cost	6.1%	5.9%
[1] 10% of total units provided at rents affordable to 60% AMI. Land value figures rounded to nearest thousand.		
Source: Gruen Gruen + Associates		

Analysis of For-Sale Housing Alternatives

PROTOTYPE ASSUMPTIONS

Table VIII-11 summarizes the key physical assumptions for the for-sale housing prototypes.

The ***Attached Rowhome*** prototype includes attached single family units in an alley-loaded configuration (i.e., rear garages and no back yards). Units would contain two stories of living area. Prototypical units average 1,600 square feet in living area. The first version (3A) includes eight units on a 20,000 square foot site. It is assumed that approximately 40% of the site remains usable open space (front/side yards, ground level patios, etc.) and that each unit has a two-car garage. The housing density would be about 17 units per acre. A second version of the Attached Rowhome prototype (3B) reduces the amount of open space and garage parking to an average of 1.5 stalls per unit. Under these assumptions, up to 12 units (of the same size) could be accommodated on the same 20,000 square foot site. The housing density would increase to about 26 units per acre.

The ***Vertical Mixed Use Condominium*** prototype represents the same building modeled for rental housing, except the unit mix is assumed to be larger, owner-occupied condominium units. It again includes three levels of multi-family residential space built over a ground-floor podium that includes commercial space and covered parking. Structure parking is provided at ratio of 1.65 stalls per housing unit and 4.0 stalls per 1,000 square feet of commercial space. The overall housing density would approximate 38 units per acre.

A second version of the prototype (4B) again reduces the amount of ground-floor commercial space and residential parking ratio. Residential parking is provided at a ratio of 1.15 stalls per unit and the amount of commercial space is reduced

TABLE VIII-11: For-Sale Housing Prototype Assumptions

	Attached Rowhomes		Vertical Mixed Use Condominium	
	3A	***3B***	***4A***	***4B***
Site Area (in Square Feet)	20,000	20,000	80,000	80,000
Building Height	2 stories	2 stories	4 stories	4 stories
Parking Configuration	Garages	Garages	Structure[1]	Structure[1]
Total Housing Units	**8**	**12**	**70**	**105**
Average Unit Size in Square Feet	1,600	1,600	1,050	1,050
Housing Density (Units / Acre)	*17*	*26*	*38*	*57*
Gross Floor Area (in Square Feet)	**12,800**	**19,200**	**120,000**	**142,000**
Residential	12,800	19,200	90,000	135,000
Commercial	---	---	30,000	7,000
Floor Area Ratio (F.A.R.)	*0.6*	*1.0*	*1.5*	*1.8*
Total Parking Stalls	**16**	**18**	**235**	**148**
Residential	16	18	115	120
Commercial	---	---	120	28
Residential Ratio (per Unit)	*2.0*	*1.5*	*1.65*	*1.15*
Commercial Ratio (per 1,000)	---	---	*4.0*	*4.0*

[1] One level of parking underground and additional covered parking within ground-floor podium.

Source: Gruen Gruen + Associates

to represent about 5% of the gross floor area. The housing density would increase to about 57 units per acre.

For-Sale Housing Unit Mix

Figure VIII-4 summarizes the unit mix assumed for each for-sale housing prototype. The Attached Rowhome unit mix includes two-bedroom units representing 25% of units, three-bedroom units at 50%, and four-bedroom units at 25%. The overall average unit size would be 1,600 square feet of living area.

The Vertical Mixed Use Condominium prototype includes 25% one-bedroom units, 50% two-bedroom units, and 25% three-bedroom units. The overall average unit size is assumed to be 1,050 square feet.

MARKET RATE AND AFFORDABLE SALES PRICES

Table VIII-12 summarizes estimated obtainable sales prices based on our interviews and review of secondary market data. Sales price estimates are presented for market rate units and affordable units at 60% AMI.

Market rate sales prices for unit types included in the for-sale Attached Rowhome prototype are estimated to range from $600,000 to $900,000 per unit, or $450 to $500 per square foot. Market rate prices for smaller Condominium units are estimated to range from $500,000 to $725,000, or about $560 to $625 per square foot. Estimates of obtainable market rate sales prices equate to a 15-20% price premium, on average, over existing townhome and condominium inventory sold in Golden over the past several months.

Affordable sales prices at 60% AMI, for the same unit types, are estimated to range from approximately $150,000 to $260,000 per unit, or $130 to $188 per square foot. The conversion from current 2022 income limits to affordable sales prices reflect key assumptions such as 1.5 persons per bedroom, a 3.5% down payment, a 5% rate on a 30-year mortgage, and additional monthly housing costs of $520 to $730 monthly per unit (insurance, taxes, utilities, and HOA).

FIGURE VIII-4: For-Sale Housing Unit Mix

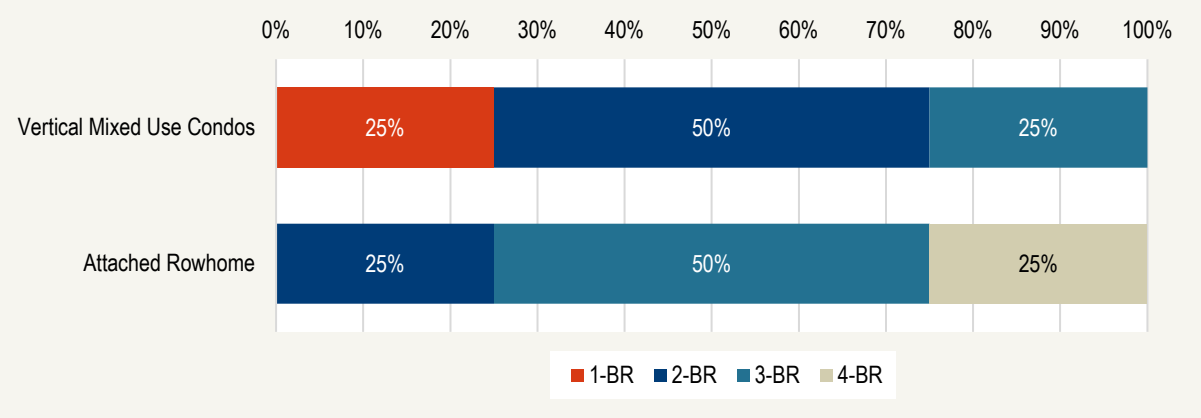


TABLE VIII-12: Housing Sales Price Assumptions by Unit Type

	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom
Market Rate Units				
Rowhomes:				
Average Unit Size (in Square Feet)	N/A	1,200	1,600	2,000
Average Sale Price		$600,000	$750,000	$900,000
Price Per Square Foot		$500	$469	$450
Condominiums:				
Average Unit Size (in Square Feet)	800	1,050	1,300	N/A
Average Sale Price	$500,000	$600,000	$725,000	
Price Per Square Foot	$625	$571	$558	
Affordable Units (60% AMI) [1]				
Rowhomes:				
Average Unit Size (in Square Feet)	N/A	1,200	1,600	2,000
Average Sale Price		$206,000	$235,000	$260,000
Price Per Square Foot		$172	$147	$130
Condominiums:				
Average Unit Size (in Square Feet)	800	1,050	1,300	N/A
Average Sale Price	$150,000	$183,000	$212,000	
Price Per Square Foot	$188	$174	$163	

[1] Based on 2022 income limits by household size for Jefferson County. Conversion from household income to affordable sales price reflects 3.5% down payment (minimum FHA), 5.0% interest rate on 30-year mortgage, annual mortgage insurance equal to 0.85% of loan (FHA rates), annual property tax and home insurance equal to 1.0% of purchase, and monthly utilities ranging from $116 to $250 per unit. Monthly HOA fee also included at $50 and $200 per unit for rowhomes and condos, respectively.

Sources: CHFA; Gruen Gruen + Associates.

DEVELOPMENT COSTS

Table VIII-13 and Table VIII-14 summarize estimated development costs, excluding land, of each for-sale housing prototype.

Many of the same hard and soft construction cost assumptions utilized for the rental housing prototypes are applied here. Sitework, parking, and commercial space costs, for example, are held constant. Hard costs for residential condominium units are increased by 5% to account for a higher level of interior finish. Hard building costs for the Attached Rowhomes are included at $180 per square foot, or approximately 10% less than assumed for the multi-family buildings.

"Soft cost" estimates again include municipal fees based on current Golden fee schedules. Additional soft costs for the for-sale residential units are included at 17% of sales revenues. This accounts for closing, commission and marketing

TABLE VIII-13: Attached Rowhome Development Cost Estimates

	Version 3A (8 Units, 40% Open Space)			Version 3B (12 Units, 20% Open Space)		
	Per GSF [1]	Total	% of Sales	Per GSF [1]	Total	% of Sales
Hard Costs						
Sitework	$31	$400,000	6.7%	$21	$400,000	4.4%
Residential Building(s)	$180	$2,304,000	38.4%	$180	$3,456,000	38.4%
Soft Costs						
Municipal Fees [2]	$14	$174,064	2.9%	$13	$244,796	2.7%
Other Soft [3]	$80	$1,020,000	17.0%	$80	$1,530,000	17.0%
Total Cost (before Land)	**$305**	**$3,898,064**	**65.0%**	**$293**	**$5,630,796**	**62.6%**

[1] Per square foot of gross floor area.
[2] Building permit and plan review fees, construction use tax, and water/sewer tap fees.
[3] Commissions, closing, and marketing costs; A/E design; cost of funds; insurance and warranty reserves; financing.

Source: Gruen Gruen + Associates

TABLE VIII-14: Vertical Mixed Use Condominium Development Cost Estimates

	Version 4A (70 Units, 25% Commercial, 1.65 stalls/unit)		Version 4B (105 Units, 5% Commercial, 1.15 stalls/unit)	
	Per GSF [1]	Total	Per GSF [1]	Total
Hard Costs				
Sitework	$13	$1,600,000	$11	$1,600,000
Residential Building Area	$158	$18,900,000	$200	$28,350,000
Commercial Building Area	$69	$8,250,000	$14	$1,925,000
Structure Parking	$81	$9,775,000	$44	$6,260,000
Soft Costs				
Municipal Fees [2]	$15	$1,803,147	$14	$1,998,821
Other Soft	$81	$9,779,375	$80	$11,400,660
Total Cost (before Land)	**$418**	**$50,107,522**	**$363**	**$51,534,481**

[1] Per square foot of gross floor area.
[2] Building permit and plan review fees, construction use tax, and water/sewer tap fees.

Source: Gruen Gruen + Associates

costs equal to 7% of sales revenues and additional expenses related to general overhead, design, financing, insurance, warranty reserves (which can be a large expense for for-sale housing units given construction defect litigation) and other indirect expenses equal to 10% of residential sales revenues.

RESIDUAL LAND VALUE ESTIMATES

Table VIII-15 presents the results of the analysis for the market rate development scenarios. Residual land value estimates are based on a minimum required profit margin equal to 18 percent of gross sales revenues.

The results suggest that an owner-occupied Attached Rowhome product type is likely to support high land values. The residual land value for version 3A (which includes eight attached units on a 20,000 square foot site) is estimated at approximately $1,021,000. This represents a supportable land value of $128,000 per lot or approximately $50 per square foot of land.

The residual land value associated with the higher-density version of the Attached Rowhome prototype ("3B") is estimated at $1,749,000. This assumes that 12 lots/units could be created on the same 20,000 square foot size via reductions to useable open space and parking. The higher-density land value equates to nearly $146,000 per lot or about $87 per square foot of land.

Analysis of the for-sale Vertical Mixed Use Condominium prototype including 25% commercial space and 1.65 parking stalls per housing unit generates results similar to the rental housing (apartment) version. The estimated residual land value is negative ($7,401,000), indicating an investor/builder would require an 80,000 square foot site at no cost plus an upfront incentive of $7.4 million to feasibly develop this type of for-sale housing.

If the amount of commercial space is reduced to 5% of gross floor area, and residential structured parking is reduced from 1.65 to 1.15 stalls per unit (version "4B"), the residual land value improves to a positive $2,509,000. This represents a supportable land value of $24,000 per housing unit or $31 per square foot of land.

TABLE VIII-15: Residual Land Value Estimates for Market Rate Scenarios

	Attached Rowhome		Vertical Mixed Use Condominium	
	3A	3B	4A	4B
Residential Sales Revenue	$6,000,000	$9,000,000	$42,438,000	$63,656,000
Commercial Sales Revenue [1]	$0	$0	$9,643,000	$2,250,000
Total Sales Revenue	*$6,000,000*	*$9,000,000*	*$52,081,000*	*$65,906,000*
Development Costs [2]	($3,898,000)	($5,631,000)	($50,108,000)	($51,534,000)
Required Profit @ 18% Margin	($1,080,000)	($1,620,000)	($9,375,000)	($11,863,000)
Residual Land Value (Total) [3]	**$1,022,000**	**$1,749,000**	**($7,401,000)**	**$2,509,000**
Per Housing Unit	$128,000	$146,000	($106,000)	$24,000
Per Square Foot of Land	$51	$87	($93)	$31

[1] Fully leased commercial space assumed to be sold at 6.5% capitalization rate.
[2] Excluding land.
[3] Residual land value equals Total Sales Revenues less Development Costs and Required Profit.

Source: Gruen Gruen + Associates

Table VIII-16 presents the results of the analysis for the on-site affordable development scenarios. Residual land value estimates are based on the same profit margin estimated for the market rate scenarios and 10% of units are assumed to be sold at prices affordable to 60% AMI.

The for-sale Attached Rowhome prototypes with on-site affordable housing are estimated to support residual land values of $31 to $42 per square foot of land, or about $70,000 to $80,000 per unit. These values are likely to be high enough to acquire land in many parts of Golden, an indication that providing 10% of units at 60% AMI may be feasible for a private builder.

Analysis of the for-sale Vertical Mixed Use Condominium prototype with reduced parking, reduced commercial space, and 10% of units affordable to 60% AMI generates a residual land value of negative ($2,171,000), indicating an investor/builder would require an 80,000 square foot site at no cost plus an upfront incentive of $2.2 million.

TABLE VIII-16: Residual Land Value Estimates for On-Site Affordable Scenarios

	Attached Rowhome		Vertical Mixed Use Condominium
	3A	3B	4B
Residential Sales Revenue	$5,606,000	$8,091,000	$58,977,000
Commercial Sales Revenue [1]	$0	$0	$2,250,000
Total Sales Revenue	*$5,606,000*	*$8,091,000*	*$61,227,000*
Development Costs [2]	($3,898,000)	($5,631,000)	($51,534,000)
Required Profit [3]	($1,080,000)	($1,620,000)	($11,863,000)
Residual Land Value (Total) [4]	**$628,000**	**$840,000**	**($2,170,510)**
Per Housing Unit	$78,000	$70,000	($20,672)
Per Square Foot of Land	$31	$42	($27)

[1] Fully leased commercial space assumed to be sold at 6.5% capitalization rate.
[2] Excluding land.
[3] 18% margin on market rate sales revenues. (Unchanged from market rate scenario - see Table VIII-15).
[4] Residual land value equals Total Sales Revenues less Development Cost and Required Profit.

Source: Gruen Gruen + Associates

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