Final Report

Feasibility Study for Inclusionary Housing and Affordable Housing Linkage Fees

The Economics of Land Use

Prepared for:
City of Fort Collins Social Sustainability Department

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August 31, 2020

EPS #193158

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Foreword

The findings of the analysis documented in this report were presented to Fort Collins City Council on March 24, 2020, two weeks after a national emergency was declared and two (2) days before Colorado's Governor issued a mandatory shelter-in-place order in response to the global COVID-19 pandemic.

Upon completion of this report, conditions have evolved rapidly, including growing concerns among housing advocates and stakeholders, as well as local and elected officials regarding the impacts this global pandemic and the resulting economic disruptions will have on our communities' most vulnerable populations – low-income households, minorities, and individuals working in customer-facing professions and in close contact with others.

While the impact of this pandemic on the housing market is only just beginning to emerge, the impacts from previous market shocks, natural disasters, and recession provide some indication of the trajectory the market may face, including decreased rates of housing production, increased foreclosures, increased evictions (following a lifting of the national moratorium on evictions in public housing), and broader affordability challenges and concerns such as pronounced cost-burden.

Early indicators of these impacts have already been seen in employment and unemployment reports, which have shown unprecedented levels of layoffs nationally (predominately in low-paying industries like Retail Trade, and Accommodation & Food Services) in the month of April (followed by declining but still unprecedented levels in the subsequent few months). Such a pattern is especially concerning given that national research suggests between one half and three-quarters of households in the US already live paycheck-to-paycheck and are, thus, more susceptible to mortgage default, eviction, and sudden economic shocks.

As the current situation relates to this study's evaluation of two specific development-based policies, however, the success and effectiveness of an IHO or affordable housing impact fees would be lessened to the extent that the rate of local housing production slows; the development industry perceives a softening of demand; and as lease-holders, homebuyers and renters become more price-conscious across all income spectrums.

Acknowledgements

This project is funded in part by Amendment 35 Health Disparities Grant Program funding. The views expressed do not necessarily reflect the official policies of, nor does the mention of imply endorsement by, the Colorado Department of Public Health and Environment. This funding supports the Home2Health program in Fort Collins.

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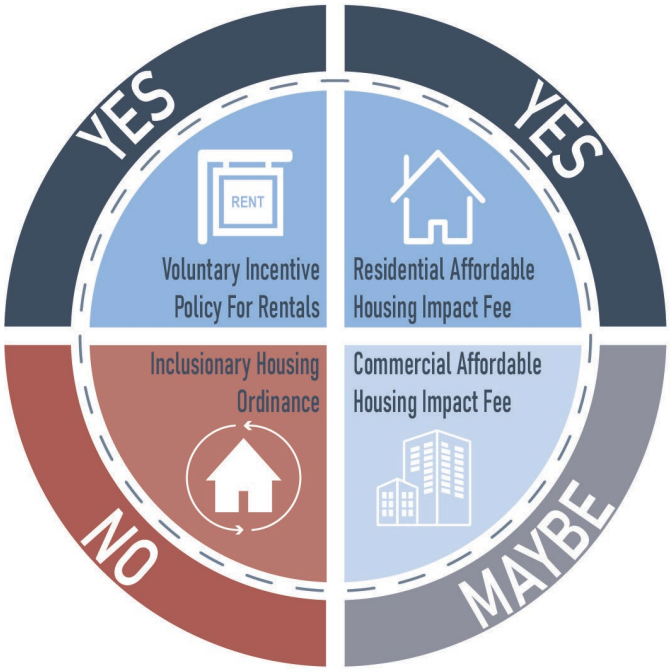
1.0 EXECUTIVE SUMMARY

1.1 Introduction



The City of Fort Collins 2015-2019 Affordable Housing Strategic Plan (AHSP) sets a goal of having 6% of Fort Collins' housing stock comprised of affordable housing built utilizing affordable housing programs by 2020. The City's long-term goal is for this ratio of supported, affordable housing to overall housing units increases to 10% by 2040. The AHSP and the 2014 Housing Affordability Policy Study (HAPS), which formed the basis of the AHSP, recommended that the City re-evaluate the use of inclusionary zoning and/or housing linkage fees in five years, which is 2019. This Feasibility Study for Inclusionary Housing and Affordable Housing Linkage Fees (Feasibility Study) was procured by the City to follow up on those recommendations from the AHSP and HAPS study. Economic & Planning Systems (EPS) prepared this study for the City.

The purpose of this Feasibility Study is to examine housing and economic conditions in the City and make a recommendation of whether or not an inclusionary housing ordinance (IHO) or linkage fee program would be viable tools for increasing the City's supply of affordable housing. The scope of work contains the major tasks and activities outlined below. An important consideration in adopting linkage fees and IHOs is their potential impact on the private development market. In any housing market, most housing is built by the private market and these two tools only generate affordable units or revenues as new development occurs. If the programs create too much of a burden or deterrent to development, they will not be effective.

- Economic and Demographic Conditions – Analyzed regional growth patterns, commuting to Fort Collins, and demographic factors such as household income.
- Housing Market Conditions – Evaluated housing production trends by unit type, home prices and rents, sales volume by price range and unit type, and prices in surrounding communities.
- Stakeholder Input – Facilitated meetings with affordable and market rate housing developers and City Council Members to hear input on housing issues and their opinions on the two proposed tools.
- Linage Fee Nexus and Feasibility Study – Completed the legally required nexus analysis to calculate legally allowable linkage fees. Applied potential linkage fee levels to prototypical real estate development proformas to gauge the impact of fees on development feasibility.

- Inclusionary Housing Ordinance Feasibility Study – Analyzed development costs and real estate development feasibility with different levels of inclusionary housing requirements, fee-in-lieu options, and property tax abatement options. Prepared a literature search on the effectiveness of IHOs in the U.S.
- Recommendations – Considered the results of the feasibility analyses, potential unit and revenue yields for the two programs, and stakeholder input in preparing recommendations for the City.

1.2 Definitions

An **affordable housing linkage fee** is a form of impact fee. Linkage fees function like capital impact fees (e.g. fire, police, transportation) or water and sewer tap fees in that they are levied on new development proportional to its impact on the public infrastructure and facilities funded with the fee. There must be a rational nexus and rough proportionality between the fee charged and the impact of the development on which it is levied. The purpose of the Nexus Study is to illustrate that nexus. Linkage fees are typically charged on a per square foot basis at time of building permit. Like capital impact fees, linkage fees must be accounted for in a fund and spent on costs related to their purpose, affordable housing development in this case. These costs include construction, land acquisition, planning and design services, development fees, fee reimbursements or any cost related to the production or expansion of affordable housing. As a fee, not a tax, linkage fees are adopted by ordinance by the local governing body.

An **inclusionary housing ordinance (IHO)** is a land use regulation implemented under a city's or county's land use regulation and zoning powers to regulate health, safety, general welfare, and morals. IHOs can have numerous variations in how they are designed depending on each communities' goals and priorities. At the most basic level, an IHO requires that new development set aside a portion of the units or land in a new project for permanently affordable, often deed-restricted, housing. IHOs often include a fee-in-lieu component that is either optional or mandated depending on the community's preferences. The fee-in-lieu option can be limited to circumstances of where a fraction of a unit is required, or if the development can demonstrate that it is impractical to construct units in the project with conditions defined by the community. If it is an option, a developer can pay a fee for housing mitigation rather than building units in the project. The fee-in-lieu option is often preferred by developers as it is typically less costly and involves less risk and complexity compared to developing, marketing, and selling or leasing affordable units.

Linkage fees and IHOs differ in three primary ways:

- **Fee First –** Linkage fees are a "fee first" program but can be designed to allow an option to construct units. In reality, the "build" option would be used rarely if ever. IHO programs have been designed traditionally to prioritize the production of units or dedication of land over the payment of in-lieu fees, although IHO programs can be designed with any number of variations.
- **Applicability to Different Land Use Categories –** In Colorado, IHOs have been interpreted by the State Supreme Court to be a form of rent control which is not permitted in Colorado. IHOs therefore largely apply only to for-sale housing, with some rare exceptions involving partnerships between developers and housing authorities. In contrast, linkage fees

can be levied on for-sale, rental, and non-residential (commercial) development. This allows the burden of mitigating affordable housing impacts to be shared among more property types rather than just on for-sale residential development.

- **Legal Authority –** IZ is implemented as a land use regulation. Linkage fees are implemented under the legal authority for impact fees.

In Colorado, affordable housing as defined by the local government, can be exempt from impact fees. Likewise, permanently affordable housing at 80 percent of AMI or below would be exempt from affordable housing linkage fees.

This report presents EPS's analysis and recommendations for two housing policy approaches: 1) inclusionary zoning (referred to also as an Inclusionary Housing Ordinance (IHO) for policy purposes); and 2) residential or commercial affordable housing linkage fees. The scope of work for this study contained three main components, each with their own chapters within this Report.

- Economic and Demographic Conditions – An overview of key trends in population growth, housing growth, home prices and rents, affordability metrics, and commuting patterns.
- Linkage Fee Nexus Analysis – A summary of the nexus analysis that is legally required for adopting affordable housing linkage fees, a form of an impact fee.
- Inclusionary Zoning Feasibility Study – The analysis and results of real estate development feasibility testing designed to determine the optimal elements for an IHO in Fort Collins.

Following are the major findings and recommendations of this study.

1. ***The escalation in housing prices in Fort Collins continues to elevate affordability concerns.***

   Mirroring state and national trends, housing prices in Fort Collins and the surrounding communities have escalated at a greater rate than inflation-adjusted incomes. As a result, the affordability gap (difference between the median sales price and the purchasing power of a household earning 100 percent of AMI) for households in Fort Collins increased substantially between 2013 and 2019 from $54,000 to $124,000. Although similar patterns in housing affordability occurred in surrounding communities, strong population growth in many of them is evidence that they offer alternatives to Fort Collins to suit price or community preferences.

2. ***The overlap of market-rate and deed-restricted housing prices poses a challenge to the successful adoption of an Inclusionary Housing Ordinance (IHO).***

   IHOs are effective where the supply of housing available below 100 percent AMI is scarce. Analysis of these conditions in 2013 and 2019 illustrate how this has not been the case in Fort Collins(see **Figure 25** and **Figure 26**). In 2013, 23 percent of home sales were affordable to a household earning 100 percent AMI, and in 2019, the same portion of sales were affordable to households earning median income. In markets where housing is affordable at this income level, buyers are more likely to choose unrestricted units and avoid deed restrictions like price appreciation caps, or shared equity.

3. A mandatory Inclusionary Housing Ordinance is not recommended at this time.

As discussed in the section "Conditions for Successful Implementation of an IHO" beginning on page 70, numerous conditions would need to be satisfied in order for an IHO to be successful in Fort Collins. This includes: legal constraints (i.e. statutory prohibition against rent control); supply-side scarcity; affordable housing buyer indifference to deed restrictions; the absence of competitive price points or rents; market-rate housing buyer demand inelasticity (i.e. indifference to market-rate pricing increases); and a perception from the development community and buyer side that additional density has value and is possible under the City's Land Use Code. If a market cannot meet these preconditions, it is possible that an IHO could: 1) negatively impact land values; 2) diminish a project's feasibility; 3) potentially deter some projects; and 4) result in "cost-shifting", i.e. an increase of market-rate pricing structures if a project did proceed. It is also important to consider the potential yield for this policy, which would apply only to for-sale housing production. As discussed in **Figure 7** on page 14, the average pace of single-family construction in the City was 400 units per year between 2005 and 2019. Assuming even that an additional 100 units of multifamily housing were for-sale condominiums, a 5 to 10 percent set-aside on a total of 500 units per year would yield between 25 and 50 units per year.

4. The City could pilot a rental project incentive policy (without violating statute) that leverages the property tax abatement for rental projects.

Findings support this recommendation: 1) the gaps analysis (refer to **Table 4** and **Table 10** beginning on page 24) illustrates that the need for affordable rental housing is twice as great as the need for deed-restricted affordable ownership housing; 2) the feasibility modeling (refer to the discussion of **Table 34** on page 66) suggests that the density bonus and the property tax incentive are far more effective at replicating a rental project's base entitlement Internal Rate of Return (IRR) than the density bonus and any other incentive (e.g. per-affordable unit cash subsidy) are at replicating a for-sale project's base entitlement IRR; and 3) the sensitivity tests run on set-asides at various AMI levels (refer to the discussion of **Table 35** on page 68) indicate that affordability set-asides are more supportable in more programmatically meaningful magnitudes in rental prototypes than for-sale prototypes.

Because the statutory prohibition against rent control still stands[1], EPS believes it would be strategic for the City to consider offering an incentive policy that applies to market-rate rental projects. Under such a policy, participation in the policy is not compulsory, but voluntary. That is, developers interested in providing affordable rentals could access a property tax abatement equal to the difference between the market and affordable rents provided in the development up to 50 percent of the difference between the pre- and post-development property taxes. Modeling suggests that 3-, 5-, and 10-story rental prototypes could provide a set-aside of four (4) to nine (9) percent of units at 60 percent AMI and achieve base entitlement IRRs. For Fort Collins, this policy option requires the agreement and participation of Larimer County and the Poudre School District.

1 Senate Bill 225 had been proposed at the beginning of this year's legislative session to repeal the prohibition on rent control. As of April 30th, the bill will not be moving forward this year. https://www.denverpost.com/2019/04/30/rent-control-bill-colorado-senate/

5. Residential linkage fees are viable as a funding source for affordable housing and could be implemented with minimal impact to the market.

The City currently spends approximately $1.5 to $3.0 million per year on affordable housing. Residential linkage fees could be a useful supplemental funding source for affordable housing, with the potential to generate roughly $750,000 per year if adopted at 5.0 percent of the maximum justified by the nexus analysis. The market may be able to bear fees at around 50 percent of the maximum or approximately $5.00 per square foot with a phase-in period. At this level, residential linkage fees would generate roughly $7.0 million per year in a strong development cycle similar to the last 10 years. It should be noted that depending on the fee levels, markets often adjust to new fees through a combination of factors such as gradual compression of land values, value engineering, reduced unit sizes, and compressed developer profit.

6. Commercial linkage fees should be considered as an equitable sharing of the cost of funding affordable housing.

While commercial linkage fees generate less revenue, perhaps $50,000 to $100,000 per year, it could be considered more equitable for both land use categories to share the burden in funding affordable housing. The commercial linkage fees supported by this analysis are in the $1.00 to $2.00 per square foot range and would have a negligible impact on the market.

1.3 Literature Review

Inclusionary housing ordinances (IHO) or inclusionary zoning (IZ) have been the topic of many peer-reviewed research studies and law journal articles. Among the scores published over the last 30 years, EPS has selected a few of the more notable publications to illuminate the breadth of national academic debate around the topic. As with many policies, there is no lack of documentation of opposition or support. While a scan of the literature demonstrates that these articles are among the more frequently cited, we have selected what we believe represent rigorous analyses and well-constructed presentation of the issues, in addition to the fact that they simultaneously represent turning points in the evolution of thought regarding how to address national housing affordability challenges.

The literature and case studies examined by EPS suggest that inclusionary zoning is most effective under a narrow set of conditions:

- In very high cost and highly supply-constrained housing markets;
- In rental project applications;
- Where density can effectively be leveraged as an incentive for producing affordable units; and
- Where buyers of market-rate units are not price-sensitive, and buyers of affordable units do not have reasonable market-rate alternatives to choose over deed restricted units (often appreciation-capped).

"Reflections on Inclusionary Housing and a Renewed Look at its Viability," (Padilla, 1995)

- This journal article was written at a time when the State of California was considering the adoption of a statewide inclusionary zoning mandate to respond to the ever-expanding affordable housing crisis. The article is primarily a legal review but has been among one of the more frequently cited sources of principle considerations of the positive versus negative impacts of this regulatory mechanism. The author notes that the policy is not problem-free: it places "the onus of solving a society-wide problem on a small group, namely developers" and that "the group primarily responsible for solving the problem is not primarily responsible for causing the problem." The author suggests, though not through quantitative analysis, that the policy may lead to a decrease in the production of housing generally, but that a balancing of public and private interests can be achieved to "equitably share any of its burdens and benefits."[2]
- **"Why is Manhattan So Expensive? Regulation and the Rise in House Prices" (Glaeser and Gyourko, 2003)**: This journal article for the National Bureau of Economic Research debates the justifiability of gaps between construction costs and housing prices in Manhattan against data from other markets throughout the US. It argues that land use restrictions are the natural explanation of this gap and presents present evidence toward the widely-accepted notion that a constraint in the supply of housing leads to much higher prices and fewer units in many markets across the country. Glaeser and Gyourko are careful to note that "regulations limiting building need not be economically inefficient" – i.e. that their findings do not recommend eliminating regulation.[3]

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2 Padilla, Laura M. (1995) "Reflections on Inclusionary Housing and a Renewed Look at its Viability," Hofstra Law Review: Vol. 23: Iss. 3, Article 1. Available at: http://scholarlycommons.law.hofstra.edu/hlr/vol23/iss3/1

3 Glaeser, Edward L., Joseph Gyourko, and Raven Saks. "Why is Manhattan So Expensive?: Regulation and the Rise in House Prices." Journal of Law and Economics 48, 2 (2005): 331-370.

- **"Economics of Inclusionary Zoning Reclaimed" (Powell and Stringham, 2005)**: The authors summarize their work with the following statement: "Although authors such as Dietrich, Padilla, and Kautz provide the most sophisticated defense of inclusionary zoning to date, they make some fundamental economic errors and, thus, advocate misguided policy proposals." They provide a review of the literature, an examination of the economic errors made in those studies, and conclude that many of the arguments "seem to be based more on egalitarian ideology rather than sound economic logic." For example, they illustrate that unless affordability is subsidized by government, inclusionary zoning functions like a price control (a tax on development), in which the impacts are felt by builders, market-rate home buyers, and owners of undeveloped land. They also address various other arguments made, including: 1) that builders do not absorb the cost of providing affordability as a cost of doing business; and 2) that typical programs do not offer incentives that sufficiently offset these costs. The authors conclude that "evidence demonstrate[s] that imposing price controls and taxes on housing is one of the worst ways of encouraging the production of housing." [4]
- **"Housing Market Effects of Inclusionary Zoning" (Bento, et al, 2008)**: Through statistical analysis of California communities between 1988 and 2005, these authors found that inclusionary zoning policies had measurable effects on housing markets such as increasing the share of multifamily housing starts by seven percent; increasing the rate of single-family housing price appreciation by two (2) to three (3) percent per year; and a decrease in the size of single family houses. [5]
- **"Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets in Greater Boston" (Schuetz, Meltzer, and Been, 2009)**: Although the focus of this article was on the Greater Boston area, its analytical conclusions were broadly applicable (and in alignment with other literature) in that "prices in jurisdictions with inclusionary zoning programs in place for 5 to 14 years [were] 3.75 to 3.95 percent higher than prices in similar jurisdictions with very recent or no inclusionary zoning programs."[6]
- **"Unintended or intended consequences? The effect of below-market housing mandates on housing markets in California" (Means and Stringham, 2012)**: These authors present rigorous quantitative analysis to conclude that "cities adopting below-market housing mandates end up with higher prices and fewer homes." They provide findings from their analysis that demonstrates cities that had adopted such policies ended up with housing prices 9 percent higher prices and production volumes 8 percent lower than cities without those policies (between 1980 and 1990). They also concluded that during the next decade, cities with the same regulation saw housing prices increase 20 percent higher and production decrease 7 percent overall.[7]

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4 Benjamin Powell & Edward Stringham, "The Economics of Inclusionary Zoning Reclaimed": How Effective are Price Controls?, 33FLA.ST.U.L.REV.471(2005).

5 Antonio Bento, Scott Lowe, Gerrit-Jan Knaap and Arnab Chakraborty *Cityscape* Vol. 11, No. 2, Regulatory Innovation and Affordable Housing (2009), pp. 7-26

6 Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets in the United States Jenny Schuetz, Rachel Meltzer and Vicki Been Urban Studies Vol. 48, No. 2 (February 2011), pp. 297-329

7 Means, Tom, and Edward Peter Stringham, 2012. "Unintended or Intended Consequences? The Effect of Below-Market Housing Mandates on Housing Markets in California" Journal of Public Finance and Public Choice, 30(1-3): 39-64.

- **"Inclusionary Zoning in the US: Prevalence, Impact, and Practices" (Thaden, 2017)**: The article in the Lincoln Institute for Land Policy broadly assesses the production yield (units and fees in-lieu) of inclusionary zoning policies across the US and identifies the number of jurisdictions nationwide (886) that have an inclusionary zoning policy. The study documents that of the jurisdictions with inclusionary zoning policies, 45 percent are in New Jersey, 27 percent in Massachusetts, 17 percent in California, and 11 percent scattered throughout the rest of the U.S. There are 12 IHO policies in Colorado (1 percent of programs nationwide). The study finds that 373 of them reported a total of $1.7 billion in impact or in-lieu fees generated and the production of 173,707 units. Although the authors note that "these numbers substantially underestimate the total fees and units created", the numbers suggest that jurisdictions have created an average of 190 units per program since adoption, whereas most programs have been in effect for at least 15 years.
- **"Can More Housing Supply Solve the Affordability Crisis?" (Anenburg and Kung, 2018)**: Responding to the growing suggestion that land use regulation itself is the source of unnecessarily high housing price or rent escalation, some began turning to the broader debate over the fundamental proposition that relaxing constraints on housing production supply might mitigate against housing price escalation. The authors use a Neighborhood Choice Model with nationwide 2014 American Community Survey public-use microdata to simulate how rental rates would respond to an increase housing supply in a neighborhood. The findings demonstrate that "rent elasticity is low", i.e. that rents are not likely to shift (up or down) as a result of an increase in supply, and that "marginal reductions in supply constraints alone are unlikely to meaningfully reduce rent burdens."[8]
- **"Fewer Players, Fewer Homes: Concentration and the New Dynamics of Housing Supply" (Cosman and Quintero, 2019)**: A more recent contribution to the literature examines an observed trend in the production capacity and yield of the nation's builders. The authors analyze nationwide data and determine that in the 10 years following the end of the Great Recession, that the number of developers and home-builders has declined, resulting in a "lower production, volume, fewer units in the production pipeline, and greater unit price volatility."[9]

8 Elliot Anenberg & Edward Kung, 2018. "Can More Housing Supply Solve the Affordability Crisis? Evidence from a Neighborhood Choice Model," Finance and Economics Discussion Series 2018-035, Board of Governors of the Federal Reserve System (U.S.).

9 Cosman, J. and Quintero, L. (2018), Fewer players, fewer homes: concentration and the new dynamics of housing supply. Carey Business School. Johns Hopkins University

2.0 ECONOMIC AND DEMOGRAPHIC CONDITIONS

The purpose of this chapter is to provide background on the market supply and demand conditions that are fundamental to the evaluation of inclusionary zoning policy and residential or commercial linkage programs.

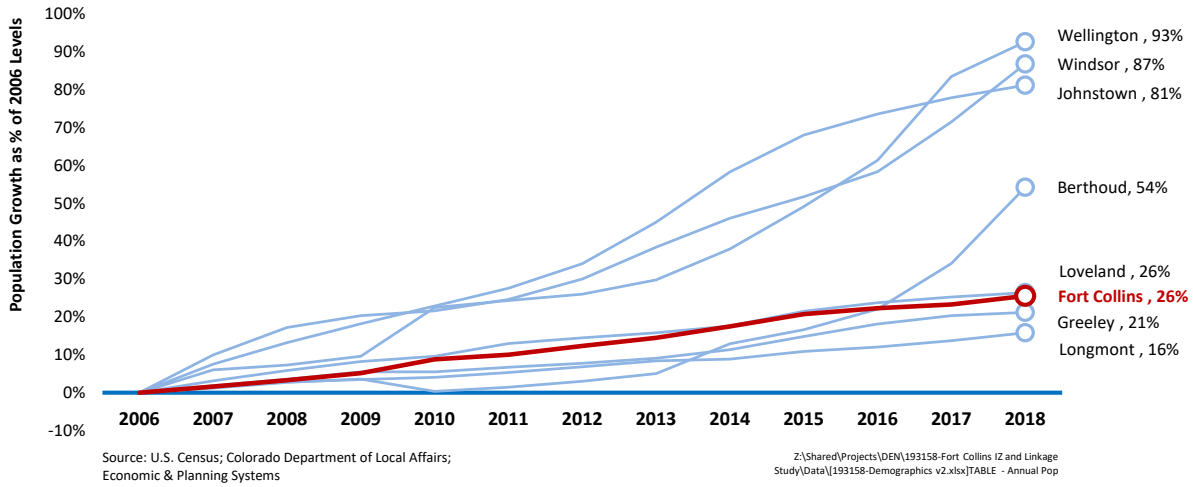
2.1 Demographics

This section presents key trends that frame the context for the following housing affordability policy analysis. This section identifies relevant trends of population growth, a growing segment of 20-34 year-olds and seniors in Fort Collins, and a shift towards rental housing.

2.1.1 Population and Households

Figure 1 illustrates the increase in population for Fort Collins and the surrounding municipalities. To illustrate comparable magnitudes of growth in these communities, this graphic displays the growth of each population in proportion to its 2006 level. The population of Fort Collins has grown by 26 percent over its 2006 base, or by 34,000 people, which reflects annual growth of over 2,800 people. By contrast, Johnstown has grown 81 percent above its 2006 level, but it has only grown by approximately 6,700 people and 560 people per year. Timnath (not shown in the figure) experienced the highest level of growth, reaching more than 1,260 percent of its 2006 level, though its population grew from approximately 292 to 3,972 between 2006 and 2018. The lowest growth was experienced by Longmont, which grew by 16 percent over its 2006 level, an increase of just 13,170 people.

Figure 1 Population Trends in Surrounding Communities, 2006-2018

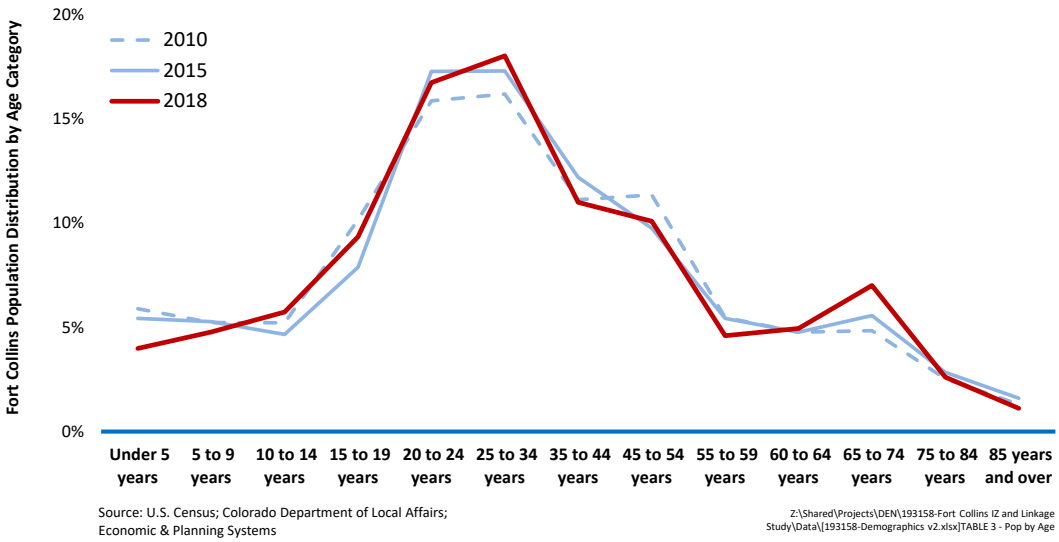


Source: U.S. Census; Colorado Department of Local Affairs; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Demographics v2.xlsx]TABLE - Annual Pop

Fort Collins' growth by age group illustrates several notable points of demographic change (**Figure 2**). Most of the City's population growth was in the 20 to 34 and 45 to 75-year-old age groups. In actual numbers, 20 to 34-year-olds accounted for 52 percent of total population growth between 2010 and 2018, while 45 to 75 year-olds only accounted for 28 percent of the total population growth. There were declines in the number of people under the age of 5. The percent of population between the ages 20 and 34 years increased from 32 percent to 35 percent between 2010 and 2018. The City's population of 45 to 75 year-olds also increased, though slightly from 26 to 27 percent. The largest relative increase was for ages 65-74, from 5 to 7 percent of the City's population.

Figure 2 Fort Collins Population Distribution by Age

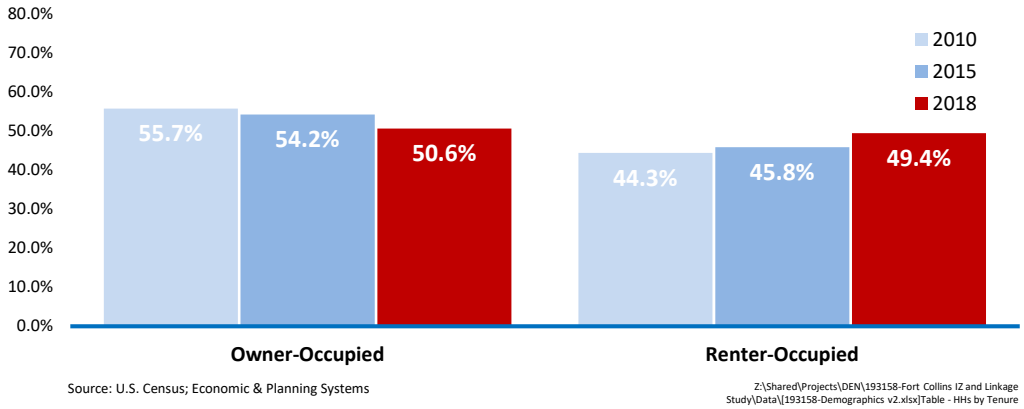


Source: U.S. Census; Colorado Department of Local Affairs; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Demographics v2.xlsx]TABLE 3 - Pop by Age

The portion of renter-occupied households has increased from 44 percent in 2010 to just over 49 percent in 2018, which is indicative of a population whose younger cohorts have become a greater presence, as shown in **Figure 3**. Likewise, the portion of owner-occupied households has decreased from approximately 55 percent in 2000 to 50 percent in 2018.

Figure 3 Fort Collins Household Distribution by Tenure, 2010-2018



Source: U.S. Census; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Demographics v2.xlsx]Table - HHs by Tenure

2.2 Employment, Incomes, and Commuting

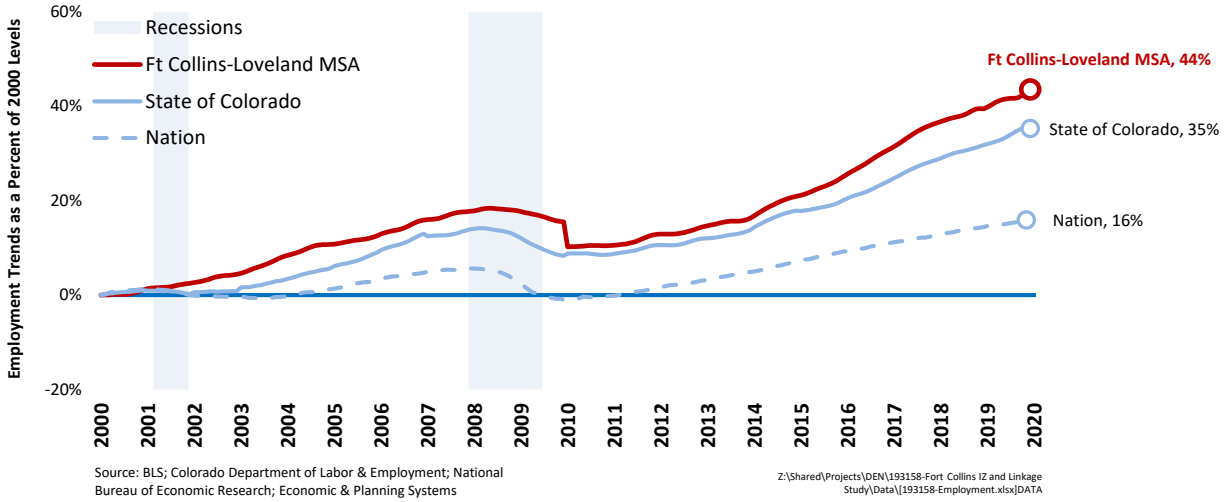
Population growth is largely fueled by employment and income growth. This section provides details on the growth in wage and salary jobs in Fort Collins, median household incomes as defined by the Department of Housing and Urban Development, and commuting patterns between Fort Collins and the surrounding communities. It shows that the Fort Collins MSA has benefited from a strong labor market. However, growth in real incomes has been minimal, and a growing number of those employed in Fort Collins have chosen to live elsewhere the region.

2.2.1 Wage and Salary Jobs

According to information from the Colorado Department of Labor and Employment, total wage and salary employment in the Fort Collins-Loveland MSA increased by an average of 2.0 percent per year between 2000 and 2020, as shown in **Figure 4**.[10] The MSA experienced generally stronger growth in the years leading up to the Great Recession,[11] and though it did lose jobs during the recession, it recovered more quickly than other areas. In contrast, the state's employment has increased by 1.5 percent annually since 2000 and the nation's employment by 0.8 percent annually.

In the Fort Collins-Loveland MSA, nearly 9,000 jobs were lost following the Great Recession, the state lost 125,000 jobs, and the nation lost nearly 7.7 million jobs. While the Fort Collins-Loveland MSA, the state, and the nation recovered their pre-recession employment peaks in early 2014, employment in the Fort Collins-Loveland MSA experienced the strongest recovery in the decade overall, growing at 2.9 percent annually between 2010 and 2020 compared to 2.2 percent statewide and 1.6 percent nationwide.

Figure 4 Comparative Wage and Salary Job Trends, 2000-2020



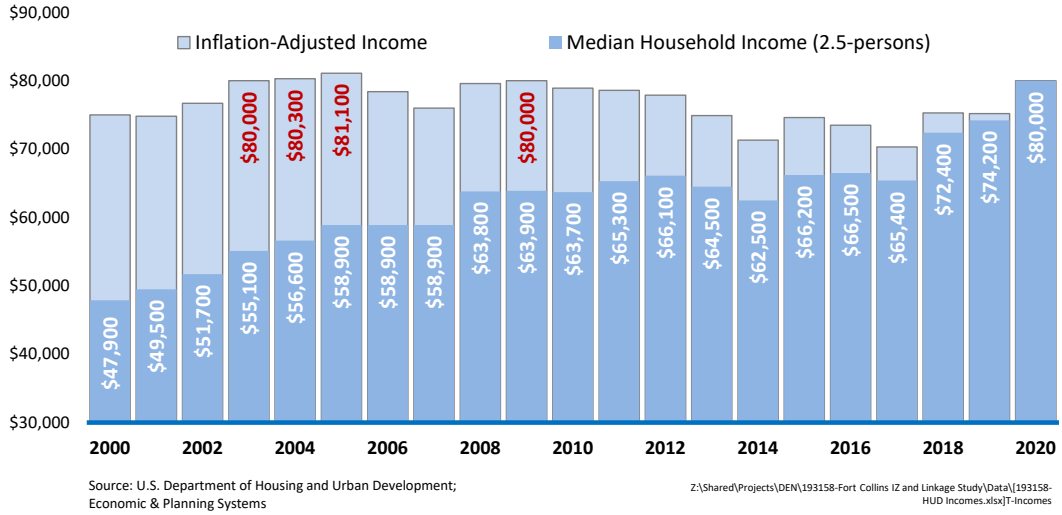
[10] The BLS reports county-level seasonally-adjusted employment information tracked by individual state departments of labor and employment. The information it reports are wage and salary jobs (i.e. those jobs for which unemployment insurance records are filed by employers). Sole proprietors (i.e. the self-employed, as typically represent 20 to 30 percent of a total workforce) are not included in this overview.

[11] According to the National Bureau of Economic Research, the official arbiter of U.S. recessions, the Great Recession as it has been called, began in December 2007 and ended in June 2009.

While the engine of employment growth in the Fort Collins-Loveland MSA is strong, household incomes have barely kept pace with the cost of living. **Figure 5** illustrates a 20-year trend in household incomes in constant and inflation-adjusted dollars, using data from the Department of Housing and Urban Development (HUD).[12]

While household incomes have grown (in constant dollars) at 2.6 percent per year on average, inflation has increased at 2.3 percent per year.**13** With an adjustment for cost of living, household incomes have increased by 0.3 percent per year since 2000, which implies that households with the median income have slightly higher buying power than they did 20 years ago.

Figure 5 HUD Median Household Income Trends, 2000-2020



Source: U.S. Department of Housing and Urban Development; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-HUD Incomes.xlsx]T-Incomes

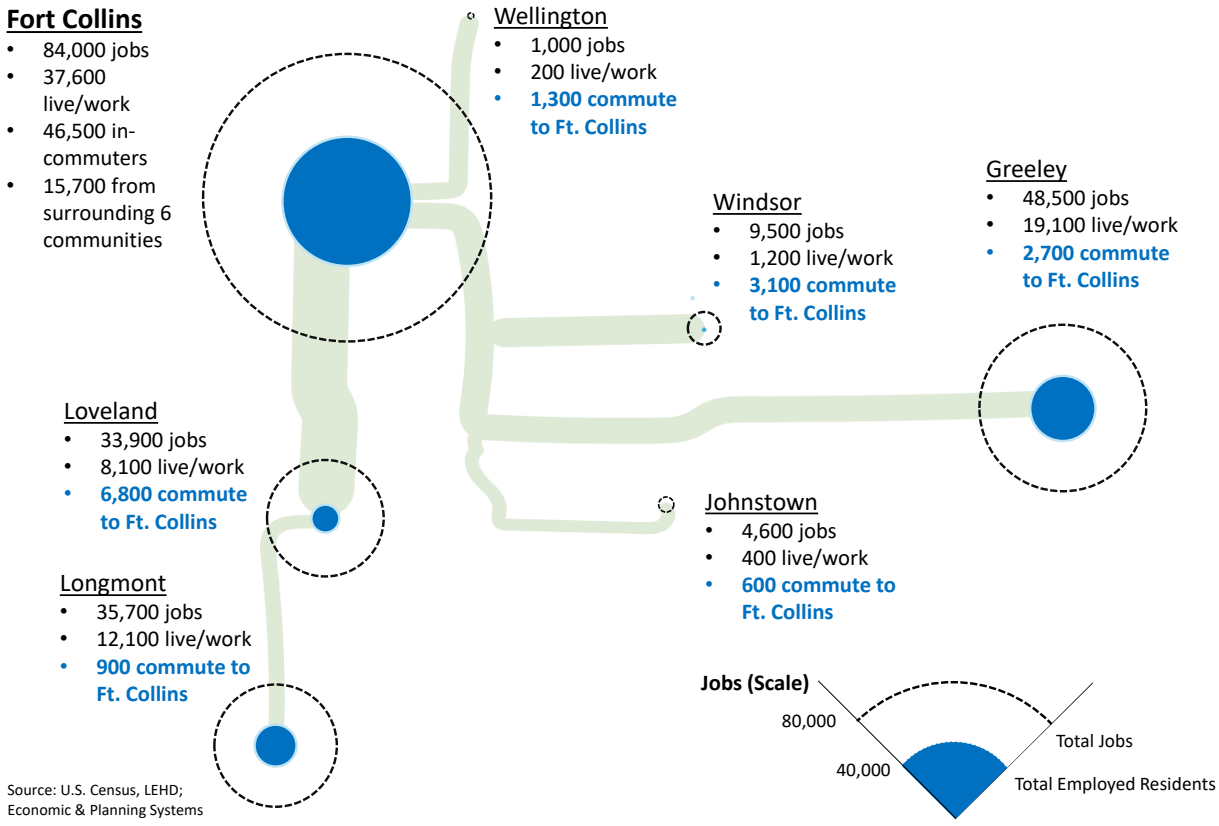
12 Data are presented using an extrapolation of the standard 4-person household metric provided by HUD. The household incomes shown are calibrated to the average household size of 2.5 persons in Fort Collins.

13 Using the Bureau of Labor Statistics consumer price index for western urban consumers.

2.2.2 Commuting Patterns

Between 2010 and 2017, out-commuting from Fort Collins increased by over 7,800 employees, and the number of in-commuters increased by more than 8,200 (illustrated in **Figure 6**, which illustrates only commuting into Fort Collins). From the surrounding communities illustrated below, in-commuting increased by approximately 5,600 jobs. That is, approximately 8,200 new employees in the Fort Collins workforce chose to live elsewhere and 5,600 new jobs chose to live in one of the communities illustrated below, whether for lifestyle preference or economic reasons. Of all in-commuters, nearly 60 percent come from Greeley, Loveland, Wellington, and Windsor.

Figure 6 Fort Collins Economic Trade Area In-Commuting Patterns, 2017



2.3 Housing Market

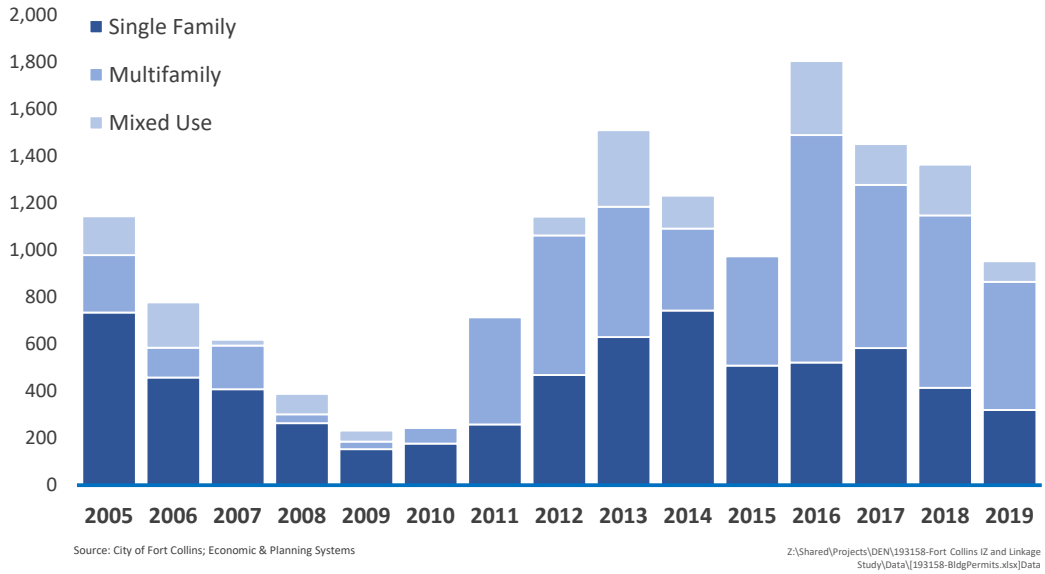
This section documents trends and conditions in for-sale and rental housing in Fort Collins and the surrounding communities. It shows that the housing mix in Fort Collins has shifted towards multifamily and renter-occupied housing. At the same time, strong demand for housing has led to increases in home prices and monthly rents. In response to strong demand, there continues to be a significant pipeline of residential development.

2.3.1 Residential Construction Trends

Between 2005 and 2019, single-family detached housing construction accounted for an average of nearly 400 units per year, according to data obtained from the City's Building Department. On average, single-family construction accounted for nearly 46 percent of all units built during the year. Since 2015, however, single-family accounted for just 36 percent of units built, compared to 52 percent of units built for multifamily. The increase in multifamily unit construction seems to be fueled in part by sharply declining rental housing vacancies, private student housing, and demands placed on the market by a growing population.

Another pressure on the rental market was the spike in foreclosures during the recession, which pushed some households from ownership to rental. Additionally, since the passage of HB-1394 in 2010, which provided clarification regarding contractor general liability insurance and gave rise to greater risk of construction defects claims on for-sale multifamily projects (i.e. condominiums), most of multifamily construction has been rental housing. There continues to be a large pipeline of planned multifamily rental housing.

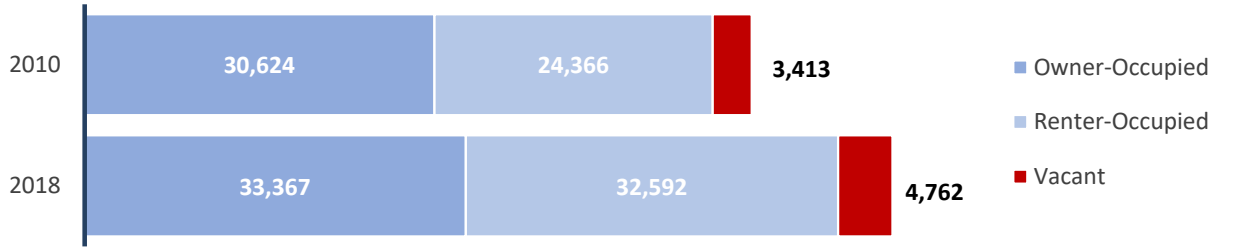
Figure 7 City of Fort Collins Residential Construction Trends, 2005-2019



2.3.2 Housing Inventory

The distribution of housing by tenure, shown in **Figure 9**, also reveals the general shift toward rental housing. Between 2010 and 2018 among occupied units, the portion of owner-occupied housing dropped from 55.7 to 50.4 percent, and the portion of renter-occupied housing increased from 44.3 to 49.6 percent. Vacant units meanwhile increased from 6 percent of the total housing stock in 2010 to 7 percent of the total housing stock in 2018. While overall housing unit inventory grew by 2.4 percent per year on average between 2010 and 2018, owner-occupancy increased at 1.1 percent, and renter-occupancy increased at 3.7 percent per year.

Figure 8 Housing Inventory, 2010 and 2018



Source: U.S. Census; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Units by Tenure.xlsx]T-units by tenure

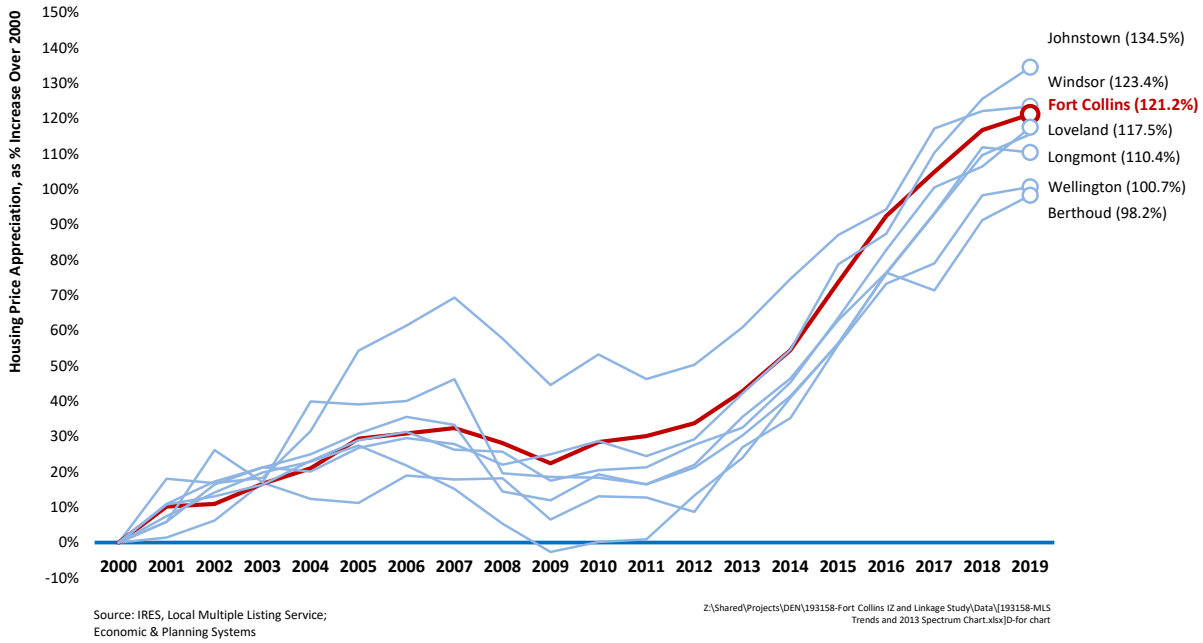
2.3.3 Housing Costs

This section examines the general trends in the cost of housing in the for-sale and rental markets. It includes collection and analysis from a variety of data sources, including the local multiple listing service (MLS) to gather records of the sale of new and existing for-sale housing, as well as information from the Colorado Division of Housing on monthly rents and vacancy rates.

For-Sale Housing

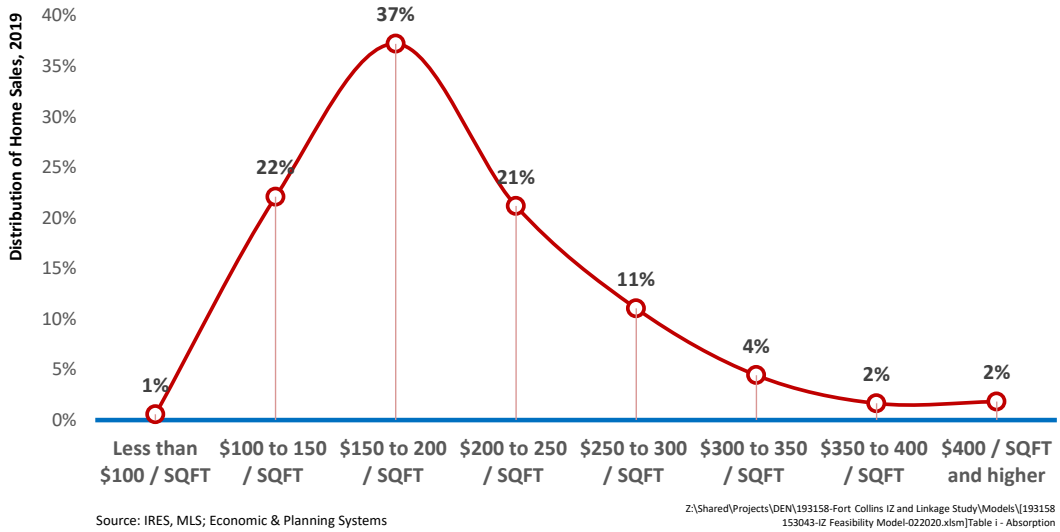
The following chart presents information on the relative increases in average housing sales prices for Fort Collins and a selection of surrounding communities. Overall, sales prices have risen by 4.3 percent per year in Fort Collins, or an overall increase of 121 percent between 2000 and 2019. In comparison to surrounding communities, Fort Collins experienced the third highest total increase in housing prices while Johnstown and Windsor experienced the highest escalations. Between 2013 and 2019, housing prices experienced an especially significant increase, rising by 7.6 percent per year in Fort Collins, 9.7 percent per year in Greeley, 8.7 percent per year in Johnstown, and 8.6 percent per year in Loveland. The slowest rate of increase was in Timnath, where housing prices grew by 4.8 percent per year. This shows the strong pace of recent growth in Fort Collins and surrounding areas and how housing price growth has been especially high in the years following the Great Recession.

Figure 9 Normalized Ownership Housing Sale Price Trends, 2000-2019



In 2019, homes in Fort Collins sold for an average of $435,000 (median of $380,000). Out of 2,300 home sales, 90 percent sold at price points between $380,000 and $470,000 (illustrated in **Figure 11**) or $100 and $300 per square-foot (illustrated in **Figure 10**). Sales above $300 per square-foot accounted for less than 10 percent of the market, in which average price points were slightly more than $500,000. This information and an analysis of the volume of sales (monthly) on a price per square-foot basis were used in the inclusionary zoning feasibility analysis as inputs to market-rate price point monthly absorption rates.

Figure 10 Distribution of Home Sales by Price per Square Foot, 2019



Source: IRES, MLS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table i - Absorption

Figure 11 Distribution of Home Sales by Price, 2019

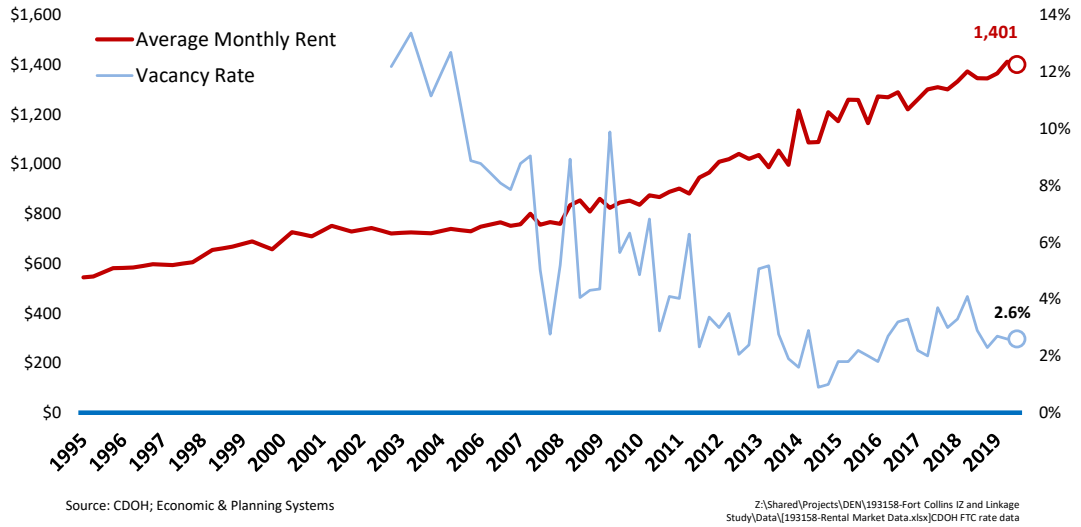
Source: IRES, MLS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-MLS and 2019 Spectrum Chart.xlsx]Table i - Absorption

Rental Housing

The analysis of rental housing market conditions focused on monthly average rents and vacancy, as well as the pipeline of multifamily. As shown (**Figure 12**), the rental market has experienced a tightening since 2003, as the citywide vacancy rate has declined from more than 12 percent in early 2003 to 3 percent toward the end of 2019.[14] Between 2010 and 2019, average monthly rent grew from $868 to $1401, which equates to a 5.5 percent annual increase compared to a 2.5 percent increase in inflation.

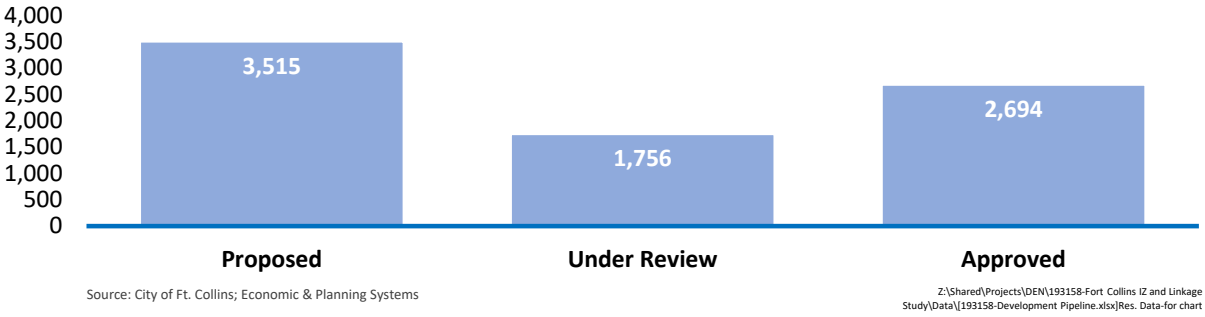
Figure 12 Rental Market Trends, 1995-2019



2.3.4 Development Pipeline

According to most recent (August 2020) data from the City, there are more than 7,965 units in various stages of planning and review. As shown in **Figure 13**, approximately 44 percent of the pipeline is proposed, 23 percent is under review, and 30 percent is approved. Although affordability level information for these projects is not finalized, this would substantially increase the City's supply (approximately 66,000 units) by 16 percent.

Figure 13 Residential Development Pipeline, Fort Collins, 2020



[14] According to more recent sources, the vacancy rate has continued is decline to less than 2 percent through the first half of 2014.

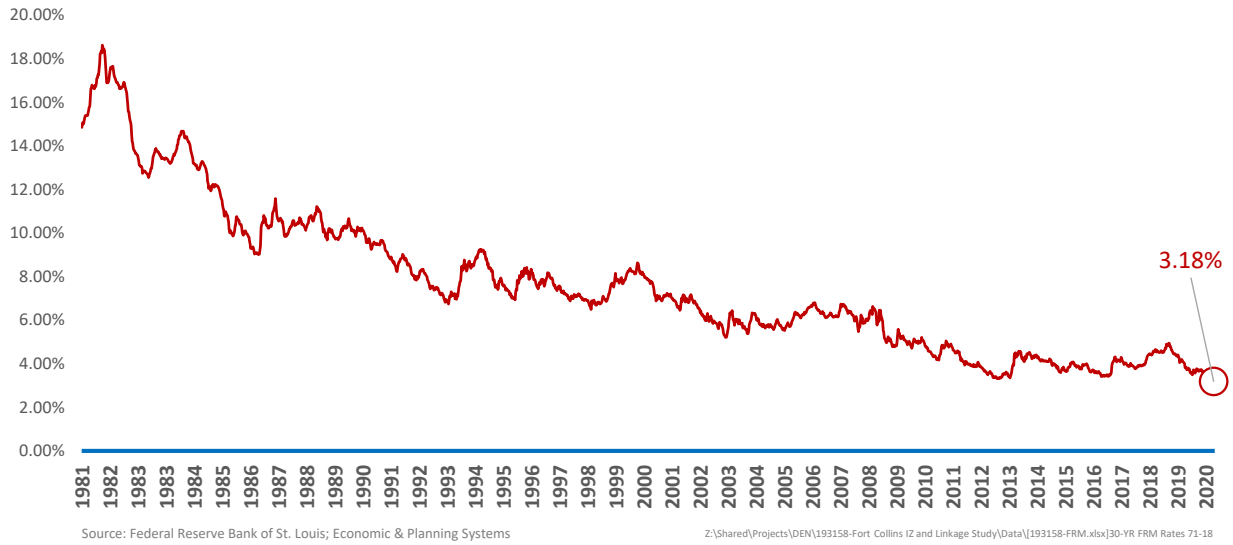
2.4 Housing Affordability

The definition of housing affordability lies at the intersection of housing costs and household incomes. [15] This section provides a juxtaposition of the affordable housing purchase price for a household earning the area median income (AMI) against median housing price levels for Fort Collins and the surrounding communities. Rising home prices have driven a widening of affordability gaps in Fort Collins, and in almost all surrounding communities, since 2013.

2.4.1 Purchasing Power

Since the early 1980s, the average interest on a 30-year fixed-rate mortgage has dropped precipitously (**Figure 14**). All else being equal, a by-product of this has been the steady increase in a borrower's purchasing power. For example, visualized below, the 30-year FRM averaged 8.1 percent in 2000, whereas by 2019, it averaged 3.9 percent. In 2019, a household earning $68,297 (estimated household median income for Fort Collins in 2019, based on data from the U.S. Census) could afford to purchase a home priced at $268,500. If interest rates were as high as they were in 2000, that same household could afford a home only at $182,700.

Figure 14 Average Interest Rate on 30-Year Fixed Rate Mortgage, 1970-2020

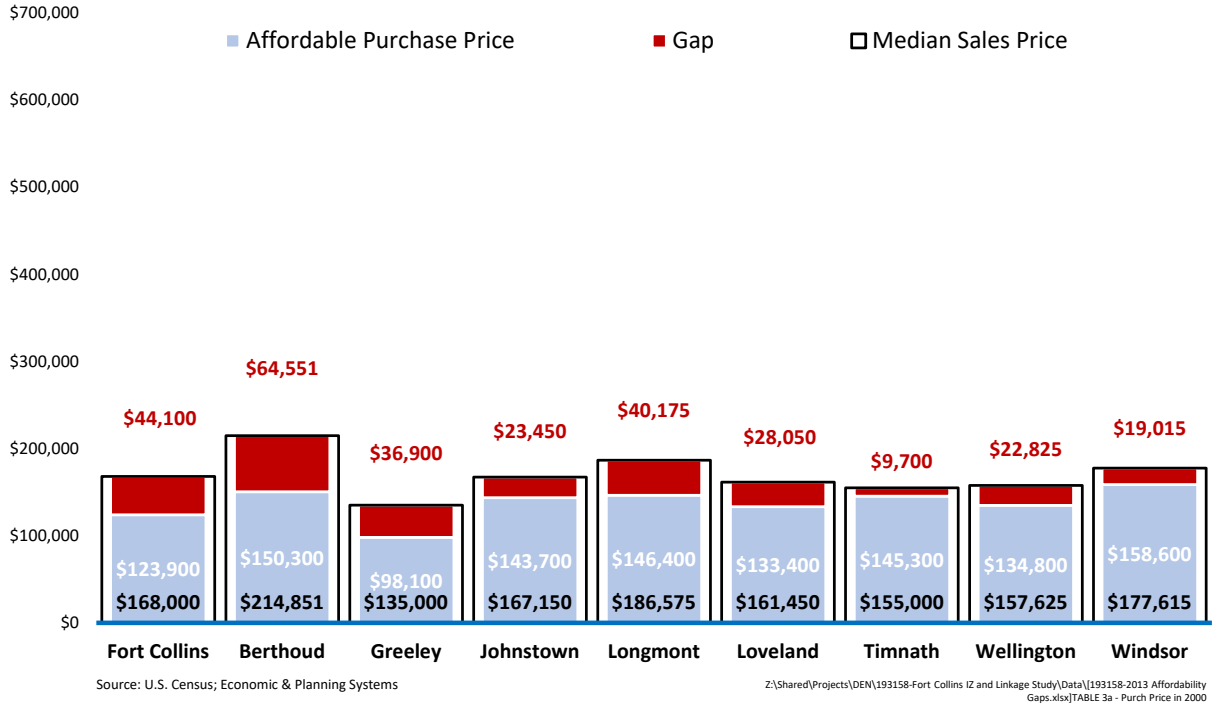


[15] Affordability is defined as a household spending no more than 30 percent of its income on housing, including payments on principal, interest, taxes, and insurance. EPS also includes an estimate for HOA dues for analyses in markets where this is common, such as Fort Collins. The assumptions used in this analysis reflect average lending terms and conditions for each time period evaluated, 2000 through 2019. For 2000, the assumptions are: 8.1 percent mortgage interest rate; 30-year fixed rate mortgage, 5 percent down payment; property taxes of 1 percent of total housing value per year; insurance of $1,000 per year; and HOA dues of $100 per month. For 2013, the assumptions are: 4.0 percent mortgage interest rate; 30-year fixed rate mortgage, 5 percent down payment; property taxes of 1 percent of total housing value per year; insurance of $1,500 per year; and HOA dues of $150 per month. For 2019, the assumptions are: 3.9 percent mortgage interest rate; 30-year fixed rate mortgage, 5 percent down payment; property taxes of 1 percent of total housing value per year; insurance of $1,500 per year; and HOA dues of $150 per month.

2.4.2 Community Comparison

Using information relevant to 2000, 2013, and 2019, the following figures illustrate the extent of affordability gaps between what households could afford to buy and the median-priced house in 2000 and in 2019. In 2000, shown in **Figure 15**, the gap between what a household in Fort Collins could afford and the median of what was available was $44,100. While gaps for local households in Johnstown, Loveland, Timnath, and Wellington also existed, they each offered less expensive housing options than Fort Collins.

Figure 15 Fort Collins Trade Area Affordability Gaps, 2000



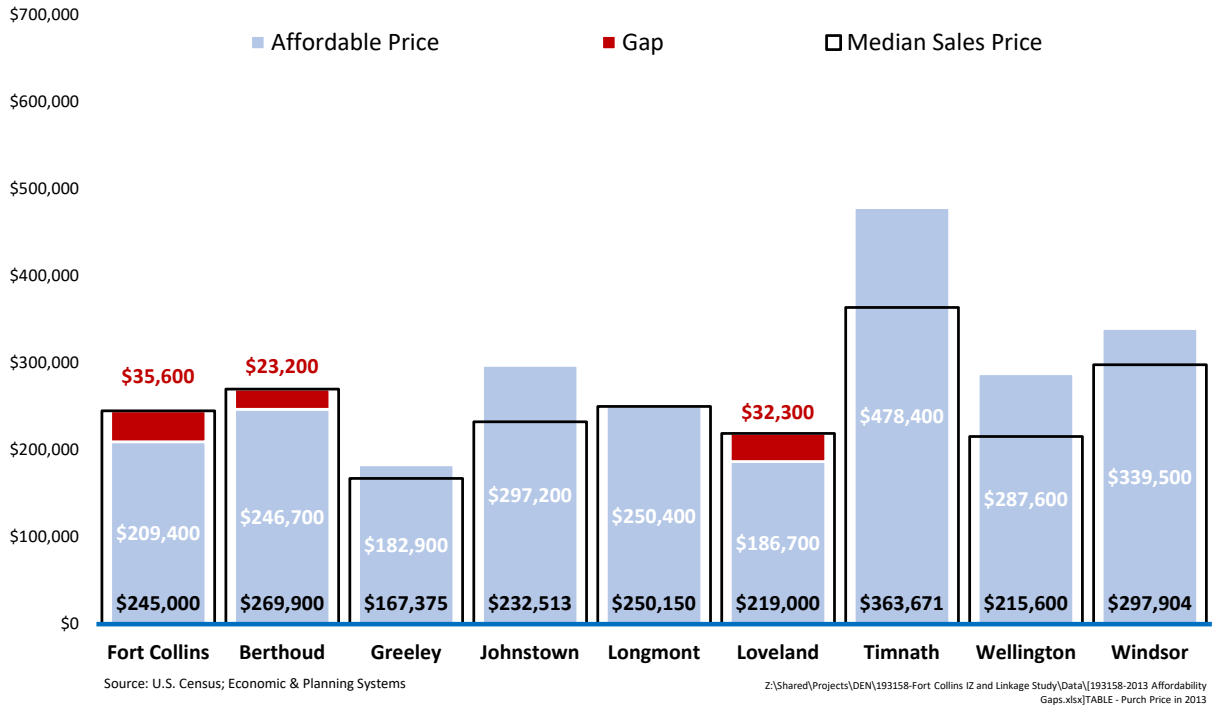
Source: U.S. Census; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-2013 Affordability Gaps.xlsx]TABLE 3a - Purch Price in 2000

Updating information to illustrate these conditions in 2013 reveals a few changes. One of the changes in a positive direction was that the affordability gap for a household earning median income narrowed slightly (**Figure 16**) to an estimated $35,600. Much of the narrowing of these affordability gaps came from both: 1) a rapid rate of increase in household median incomes (particularly in Fort Collins where median incomes increased at 5.7 percent per year between 2000 and 2013); as well as 2) a decline in the average mortgage interest rate from 8.1 to 4.0 percent. For households in six (6) of these surrounding communities, the affordability gap vanished, and for households of those employed in Fort Collins or another community with relatively unaffordable median prices, some of the surrounding communities still offered more affordable options.

As noted in the discussion of commuting patterns (see **Figure 6** on page 13), it is interesting to note that nearly 60 percent of in-commuters (who work in Fort Collins) live in Greeley, Loveland, Wellington, and Windsor where (except for Windsor), median prices are lower. That is, Fort Collins working households appear to be continuing to choose to live outside of Fort Collins, based on either lifestyle preferences or purely economic (i.e. housing affordability) reasons.

Figure 16 Fort Collins Trade Area Affordability Gaps, 2013



Source: U.S. Census; Economic & Planning Systems

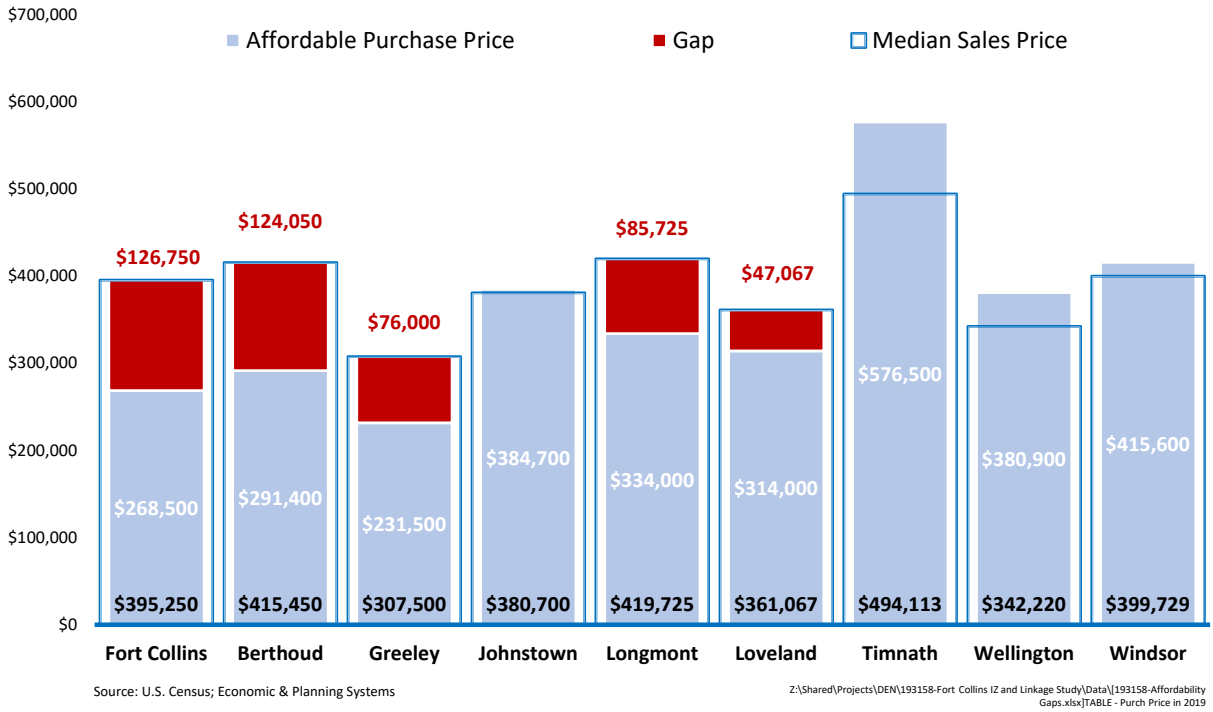
Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-2013 Affordability Gaps.xlsx]TABLE - Purch Price in 2013

By 2019, the affordability gap for households in Fort Collins, and some of the surrounding communities has widened substantially (**Figure 17**). Given the relationship between their household median incomes and the median sales prices in these communities, Johnstown, Timnath, Wellington, and Windsor are not experiencing a widening of the affordability gap.

Two trends that have contributed significantly to the divergence of the affordable purchase price and the affordable purchase price for several of the communities, including Fort Collins. First, as noted in the discussion of housing price escalation (see **Figure 9** on page 16), rates of average sales price appreciation in Fort Collins, Greeley, Johnstown, Longmont, Loveland, and Wellington were all in excess of 7.0 percent per year. Secondly, the average 30-year FRM offered continued historically low borrowing rates of 3.9 percent.

Related to the in-commuting patterns, the findings in of the 2013 affordability gaps analysis remain relatively consistent, in which prices in Greeley, Johnstown, Loveland, and Wellington are lower, and in which residents in those respective communities comprise a majority of Fort Collins workforce. Again, Fort Collins working households appear to be continuing to choose to live outside of Fort Collins, based on either lifestyle preferences or purely economic (i.e. housing affordability) reasons.

Figure 17 Fort Collins Trade Area Affordability Gaps, 2019



Source: U.S. Census; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Affordability Gaps.xlsx]TABLE - Purch Price in 2019

2.4.3 Gap Analysis

This section reports on estimates of estimated citywide housing inventory mismatch, often referred to as "gaps" by income level and tenure. Although referred to as gaps, which does not specifically mean a lack or shortage of inventory, this analysis is intended rather to draw attention to the imbalances within local housing inventory. It is best suited to illustrating how closely the distribution of housing inventory by affordability level does or does not match the distribution of households by income level. Also included in this section is a report of the magnitude of households that are housing cost-burdened, i.e. who are spending more than 30 percent of their gross income on shelter alone, not including utilities.

As reference for the analysis that follows, **Table 1** shows the maximum monthly rental rates and maximum purchase price using the Department of Housing and Urban Development's area median income (AMI) for a household size of 4 persons.

Table 1 Maximum Rents and Purchase Price, 4-Person Household, 2010 and 2018

	Maximum Rent		Maximum Purchase Price	
	2010	2018	2010	2018
Less than 30% AMI	$562 / month	$638 / month	$78,700	$96,700
31% to 50% AMI	$936 / month	$1,064 / month	$156,900	$185,100
51% to 60% AMI	$1,124 / month	$1,277 / month	$194,900	$229,300
61% to 80% AMI	$1,498 / month	$1,702 / month	$270,900	$315,700
81% to 100% AMI	$1,873 / month	$2,128 / month	$346,900	$404,100
101% to 120% AMI	$2,247 / month	$2,553 / month	$423,000	$492,600

Source: HUD; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps.xlsx]Sheet13

Owner Housing Gaps

On the supply side of the ownership housing gaps analysis is the distribution of inventory by affordability level (**Table 2**). The analysis reveals a few significant trends: 1) the collective loss of nearly 3,000 units affordable to households below 80 percent AMI; 2) the collective increase of more than 5,700 units above 80 percent AMI.

Table 2 Owner Housing Inventory by AMI, 2010-2018

										2010-18	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total Δ	Ann. %
Less than 30% AMI	1,190	1,340	1,408	2,341	1,263	1,749	1,573	1,533	1,414	224	2.2%
31% to 50% AMI	1,627	1,432	2,967	1,510	1,273	1,511	1,976	1,178	1,198	-429	-3.8%
51% to 60% AMI	1,657	3,570	3,688	2,027	1,825	1,577	2,588	1,708	1,621	-36	-0.3%
61% to 80% AMI	9,666	12,098	10,482	10,568	7,422	9,109	9,595	7,434	6,875	-2,790	-4.2%
81% to 100% AMI	7,541	6,038	5,306	7,384	8,393	8,878	7,565	8,186	8,204	663	1.1%
101% to 120% AMI	4,006	3,824	2,636	4,803	4,496	5,549	4,520	6,358	6,251	2,245	5.7%
Greater than 120% AMI	4,936	4,262	3,693	4,653	5,403	5,560	4,749	7,056	7,804	2,867	5.9%
Subtotal Owner Units	**30,623**	**32,565**	**30,180**	**33,286**	**30,076**	**33,932**	**32,565**	**33,453**	**33,367**	**2,744**	**1.1%**
as % of Total	56%	57%	52%	58%	53%	55%	53%	55%	51%		
Total Housing Units	**54,236**	**57,493**	**57,844**	**57,546**	**56,735**	**62,149**	**61,719**	**60,391**	**65,276**	**11,040**	**2.3%**

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps.xlsx]Table 1 - Owner Units by AMI

On the demand side is the distribution of households by AMI level (**Table 3**). Like the supply-side analysis, this trend also reflects a bifurcation of the citywide demographic in two ways: 1) the collective loss of 2,200 households that earn less than 120 percent AMI; and 2) the gain of 4,700 households earning more than 120 percent AMI.

Table 3 Owner Households by AMI, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. %
Less than 30% AMI	2,863	4,004	3,333	3,168	2,480	2,893	2,076	2,909	2,958	95	0.4%
31% to 50% AMI	3,557	2,598	2,745	3,234	2,937	2,623	3,119	3,014	3,184	-373	-1.4%
51% to 60% AMI	1,957	1,536	1,714	1,890	1,535	1,695	1,725	1,533	1,461	-495	-3.6%
61% to 80% AMI	4,028	4,237	3,191	3,833	2,998	3,992	3,389	2,902	3,662	-366	-1.2%
81% to 100% AMI	4,087	4,538	3,188	3,815	2,951	3,927	3,463	2,903	3,267	-820	-2.8%
101% to 120% AMI	3,187	3,676	3,490	3,085	3,109	3,461	3,810	3,331	2,935	-252	-1.0%
Greater than 120% AMI	10,944	11,977	12,520	14,261	14,066	15,342	16,400	15,623	15,629	4,685	4.6%
Owner Households	**30,623**	**32,565**	**30,180**	**33,286**	**30,076**	**33,932**	**33,983**	**32,215**	**33,367**	**2,744**	**1.1%**
as % of Total	56%	56%	52%	57%	53%	54%	53%	53%	51%		
Total Households	**54,989**	**58,111**	**58,401**	**57,908**	**57,064**	**62,631**	**63,735**	**60,376**	**65,959**	**10,970**	**2.3%**

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps DRAFT V2.xlsx]Table 3 - Owner HHs by AMI

In contrast between one another, the analysis of inventory imbalances (**Table 4**) reveals a few significant findings: 1) that "gaps" below 50 percent AMI of approximately 2,800 to 3,500 have been common in all of the years between 2010 and 2018; 2) that "gaps" above 120 percent AMI are commonly seen in any community's inventory, which indicates merely that households earning more than 120 percent AMI rarely purchase a home that "maximizes" their expenditure on shelter at 30 percent of gross household income; and 3) most concerning, that the "over balance" of units affordable to middle income, or community service sector workers, between 60 and 80 percent AMI, has declined by 2,400 units over the time period.

Table 4 Owner Gaps by AMI, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. Δ
Less than 30% AMI	-1,673	-2,664	-1,925	-826	-1,217	-1,144	-503	-1,377	-1,544	129	16
31% to 50% AMI	-1,930	-1,166	222	-1,724	-1,664	-1,112	-1,144	-1,836	-1,986	-56	-7
51% to 60% AMI	-300	2,034	1,974	138	290	-118	863	176	160	459	57
61% to 80% AMI	5,637	7,861	7,291	6,735	4,424	5,117	6,206	4,532	3,213	-2,424	-303
81% to 100% AMI	3,454	1,500	2,118	3,569	5,442	4,951	4,101	5,283	4,937	1,484	185
101% to 120% AMI	819	149	-854	1,718	1,387	2,088	710	3,027	3,316	2,497	312
Greater than 120% AMI	-6,008	-7,715	-8,827	-9,609	-8,663	-9,782	-11,652	-8,567	-7,825	-1,817	-227

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps DRAFT V2.xlsx]Table 5 - Owner Gaps by AMI

More intuitive of housing affordability challenges, however, is the presentation of households that are housing cost-burdened (**Table 5**). Presented with both actual counts of households and the portion of households in each AMI category, this analysis points to a few findings: 1) that the overall number of owner households spending more than 30 percent of their gross incomes on shelter has declined by 2,500 over time; 2) that the portion of housing cost-burdened owner households has declined from 31 to 21 percent of all owner households; and 3) that those declines in the portion of cost-burdened households have been larger at lower AMI categories.

Table 5 Cost-Burdened Owner Households by AMI, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. Δ
Less than 30% AMI	2,225	3,013	2,335	1,996	1,564	1,863	1,649	1,998	1,854	-371	-46
31% to 50% AMI	2,114	1,257	1,875	1,849	1,708	1,358	1,718	1,236	1,458	-656	-82
51% to 60% AMI	1,000	711	1,095	888	817	706	903	583	721	-280	-35
61% to 80% AMI	1,588	1,472	1,219	1,275	1,124	1,212	1,065	1,000	1,442	-146	-18
81% to 100% AMI	1,378	1,335	803	1,011	783	871	713	844	639	-739	-92
101% to 120% AMI	131	103	110	92	120	52	49	101	89	-42	-5
Greater than 120% AMI	1,105	925	988	827	398	466	441	905	798	-307	-38
Owner Households	**9,541**	**8,815**	**8,425**	**7,939**	**6,514**	**6,527**	**6,538**	**6,666**	**7,000**	**-2,541**	**-318**
As % of Owner HHs											
Less than 30% AMI	78%	75%	70%	63%	63%	64%	79%	69%	63%	-15%	-2%
31% to 50% AMI	59%	48%	68%	57%	58%	52%	55%	41%	46%	-14%	-2%
51% to 60% AMI	51%	46%	64%	47%	53%	42%	52%	38%	49%	-2%	0%
61% to 80% AMI	39%	35%	38%	33%	38%	30%	31%	34%	39%	0%	0%
81% to 100% AMI	34%	29%	25%	27%	27%	22%	21%	29%	20%	-14%	-2%
101% to 120% AMI	4%	3%	3%	3%	4%	1%	1%	3%	3%	-1%	0%
Greater than 120% AMI	10%	8%	8%	6%	3%	3%	3%	6%	5%	-5%	-1%
Owner Households	**31%**	**27%**	**28%**	**24%**	**22%**	**19%**	**19%**	**21%**	**21%**	**-10%**	**-1%**

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps DRAFT V2.xlsx]Table 7 - Owner CB by AMI

The nuance applied to the housing cost-burden analysis is an examination of the portion of owner households with and without a mortgage by income level. Data are not available in sufficient granularity from the U.S. Census to assess the full spectrum of 0 to 120 percent (and greater) AMI, but a couple of findings from these data are relevant. The portion of owner households with a mortgage has declined from 76 to 69 percent, in spite of the historically low borrowing rates (as discussed earlier with **Figure 14** on page 19). It is notable that nearly 2,500 fewer households in Fort Collins had mortgages in 2018 than in 2010, but there is not a comparable portion of households "buying into the market" (i.e. there are actually fewer households with a mortgage now). It is also indicative of the housing market's appreciation over this time that there was a decline of 5,400 households with gross incomes less than $75,000 with a mortgage, and an increase of nearly 5,100 households with gross income greater than $75,000 with a mortgage.

Table 6 Owner Households by Mortgage Status, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. %
Households w/ Mortgage											
Less than $20,000	1,572	1,900	1,352	705	736	1,052	640	1,084	544	-1,028	-12.4%
$20,000 to $34,999	2,046	1,277	1,833	1,954	1,841	1,336	1,584	958	1,207	-839	-6.4%
$35,000 to $49,999	2,905	2,062	2,590	2,529	2,278	1,865	2,120	1,748	1,168	-1,737	-10.8%
$50,000 to $74,999	5,341	5,764	3,764	4,666	3,797	4,508	3,747	3,231	3,534	-1,807	-5.0%
$75,000 or more	11,212	13,358	14,265	14,587	13,709	16,023	16,563	15,531	16,218	5,006	4.7%
Zero or negative income	114	215	41	269	106	156	69	149	193	79	6.8%
Subtotal	**23,190**	**24,576**	**23,845**	**24,710**	**22,467**	**24,940**	**24,723**	**22,701**	**22,864**	**-326**	**-0.2%**
as % of Owner HHs	76%	75%	79%	74%	75%	73%	73%	70%	69%		
Households w/ No Mortgage											
Less than $20,000	725	1,379	1,128	1,511	1,076	1,124	850	1,030	1,082	357	5.1%
$20,000 to $34,999	1,323	1,160	837	1,175	1,151	630	1,148	2,024	1,575	252	2.2%
$35,000 to $49,999	1,013	941	719	1,210	854	1,341	1,188	1,245	1,315	302	3.3%
$50,000 to $74,999	1,480	1,807	1,263	1,693	1,221	1,955	1,647	1,401	1,845	365	2.8%
$75,000 or more	2,892	2,702	2,351	2,922	3,165	3,718	4,427	3,814	4,124	1,232	4.5%
Zero or negative income	0	0	37	65	142	224	0	0	291	291	---
Subtotal	**7,433**	**7,989**	**6,335**	**8,576**	**7,609**	**8,992**	**9,260**	**9,514**	**10,232**	**2,799**	**4.1%**
as % of Owner HHs	24%	25%	21%	26%	25%	27%	27%	30%	31%		
Owner Households	**30,623**	**32,565**	**30,180**	**33,286**	**30,076**	**33,932**	**33,983**	**32,215**	**33,096**	**2,473**	**1.0%**

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Owner Mortgage w CB Details.xlsx]Table - Mortgage Status

The second layer of nuance is the portion of owner households by mortgage status who are housing cost-burdened (**Table 7**). With this assessment, it can be determined the portion of owner households that are cost-burdened because of their mortgages or because of other housing costs, i.e. specifically property taxes or insurance. The analysis reveals important findings: 1) that the number of cost-burdened owner households with no mortgage increased three-fold over the last nine years to 1,200 households; and 2) that such households generally fall below the income level of $35,000, approximately 40 percent AMI in 2018 terms.

Table 7 Cost-Burdened Owner Households by Mortgage Status, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. %
Households w/ Mortgage											
Less than $20,000	1,572	1,900	1,352	705	736	989	640	1,084	544	-1,028	-12.4%
$20,000 to $34,999	2,046	1,110	1,665	1,703	1,643	1,226	1,516	891	1,138	-908	-7.1%
$35,000 to $49,999	2,003	1,390	2,114	1,713	1,667	1,335	1,732	1,095	1,060	-943	-7.6%
$50,000 to $74,999	2,299	2,427	1,526	1,752	1,332	1,853	1,413	1,535	2,118	-181	-1.0%
$75,000 or more	1,227	1,039	1,117	924	438	532	500	1,017	939	-288	-3.3%
Subtotal	**9,147**	**7,866**	**7,774**	**6,797**	**5,816**	**5,935**	**5,801**	**5,622**	**5,799**	**-3,348**	**-5.5%**
as % of HHs w/ Mort.	39%	32%	33%	28%	26%	24%	23%	25%	25%		
Households w/ No Mortgage											
Less than $20,000	301	875	606	954	588	555	636	665	832	531	13.6%
$20,000 to $34,999	93	74	45	143	110	37	101	336	159	66	6.9%
$35,000 to $49,999	0	0	0	45	0	0	0	43	210	210	---
$50,000 to $74,999	0	0	0	0	0	0	0	0	0	0	---
$75,000 or more	0	0	0	0	0	0	0	0	0	0	---
Subtotal	**394**	**949**	**651**	**1,142**	**698**	**592**	**737**	**1,044**	**1,201**	**807**	**14.9%**
as % of HHs w/ No Mort.	5%	12%	10%	13%	9%	7%	8%	11%	12%		
CB'd Owner Households	**9,541**	**8,815**	**8,425**	**7,939**	**6,514**	**6,527**	**6,538**	**6,666**	**7,000**	**-2,541**	**-3.8%**

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Owner Mortgage w CB Details.xlsx]Table - Mortgage Status w CB

Renter Housing Gaps

The renter housing gaps findings follow the same analytical framework. On the supply side is the distribution of rental inventory by affordability level (**Table 8**). Excluded from the inventory counts are units the U.S. Census reports as having "no cash rent". A few findings are notable from this analysis: 1) overall, the inventory of rental units in Fort Collins grew more than three (3) times faster than the ownership inventory did – a rate of 3.8 percent per year; 2) as with the decline in inventory affordable to lower AMI households, there was a collective loss of more than 3,400 units affordable below 50 percent AMI; and 3) there was a collective increase in the inventory of units affordable to households earning above 50 percent AMI of nearly 11,700 units.

Table 8 Renter Housing Inventory by AMI, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. %
Less than 30% AMI	2,374	1,982	2,145	2,359	2,629	2,015	2,536	1,233	2,001	-373	-2.1%
31% to 50% AMI	11,350	11,404	12,410	9,100	8,390	9,251	7,322	6,106	8,263	-3,087	-3.9%
51% to 60% AMI	4,296	5,127	6,040	5,429	5,463	5,982	6,690	5,386	6,791	2,495	5.9%
61% to 80% AMI	3,986	3,970	4,367	4,535	6,174	6,411	8,245	7,628	9,912	5,926	12.1%
81% to 100% AMI	1,304	1,961	2,004	2,061	3,387	3,465	3,857	5,159	3,975	2,671	14.9%
101% to 120% AMI	300	483	698	775	549	1,093	502	1,425	967	667	15.8%
Greater than 120% AMI	2	0	0	0	66	0	0	0	0	-2	---
Subtotal Renter Units [1]	**23,613**	**24,928**	**27,664**	**24,260**	**26,659**	**28,217**	**29,154**	**26,938**	**31,909**	**8,296**	**3.8%**
as % of Total	44%	43%	48%	42%	47%	45%	47%	45%	49%		
Total Housing Units [1]	**54,236**	**57,493**	**57,844**	**57,546**	**56,735**	**62,149**	**61,719**	**60,391**	**65,276**	**11,040**	**2.3%**

[**Note 1**]: Excludes units with no cash rent.

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps DRAFT V2.xlsx]Table 2 - Renter Units by AMI

The analysis of the rental demand side shows a collective loss of approximately 500 households earning less than 60 percent AMI, while there is an increase of approximately 8,700 households earning more than 60 percent AMI.

Table 9 Renter Households by AMI, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. %
Less than 30% AMI	9,538	10,890	10,684	7,830	8,638	9,166	9,741	7,572	8,951	-587	-0.8%
31% to 50% AMI	4,902	4,463	5,927	5,243	5,528	5,928	5,954	6,146	5,060	158	0.4%
51% to 60% AMI	2,602	2,256	2,222	2,469	2,553	2,737	3,601	2,591	2,529	-74	-0.4%
61% to 80% AMI	3,046	3,097	3,224	2,975	3,699	2,952	3,480	3,325	5,912	2,865	8.6%
81% to 100% AMI	1,946	2,409	2,573	2,103	2,757	2,358	2,355	2,567	3,787	1,840	8.7%
101% to 120% AMI	896	865	1,091	1,426	1,425	1,980	1,528	1,649	2,189	1,293	11.8%
Greater than 120% AMI	1,435	1,567	2,500	2,576	2,388	3,579	3,094	4,312	4,166	2,731	---
Renter Households	**24,366**	**25,546**	**28,221**	**24,622**	**26,988**	**28,699**	**29,752**	**28,161**	**32,592**	**8,226**	**3.7%**
as % of Total	44%	44%	48%	43%	47%	46%	47%	47%	49%		
Total Households	**54,989**	**58,111**	**58,401**	**57,908**	**57,064**	**62,631**	**63,735**	**60,376**	**65,959**	**10,970**	**2.3%**

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps DRAFT V2.xlsx]Table 4 - Renter HHs by AMI

The analysis of rental inventory imbalance, like the "gaps" analysis of ownership inventory, reveals a fairly constant mismatch of housing for rental households earning less than 30 percent AMI, fluctuating between a gap of approximately 5,500 and nearly 9,000 units over time. Over the time period, there is a precipitous decline in the "excess" of units affordable to households between 30 and 50 percent AMI. The "gaps" for households above 100 percent AMI, as mentioned previously, does not imply a shortage of units priced at those income levels, rather that renter households earning that level of income are choosing not to maximize the amount they spend on shelter as a percent of their gross income.

Table 10 Renter Gaps by AMI, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. %
Less than 30% AMI	-7,164	-8,909	-8,539	-5,471	-6,010	-7,151	-7,204	-6,339	-6,950	214	27
31% to 50% AMI	6,448	6,941	6,482	3,857	2,862	3,323	1,368	-40	3,203	-3,245	-406
51% to 60% AMI	1,694	2,872	3,817	2,960	2,911	3,246	3,090	2,795	4,263	2,569	321
61% to 80% AMI	940	873	1,143	1,561	2,476	3,459	4,765	4,304	4,000	3,060	383
81% to 100% AMI	-642	-448	-569	-42	631	1,108	1,502	2,593	188	830	104
101% to 120% AMI	-597	-381	-393	-651	-876	-887	-1,025	-223	-1,222	-626	-78
Greater than 120% AMI	-1,433	-1,567	-2,500	-2,576	-2,321	-3,579	-3,094	-4,312	-4,166	-2,733	-342

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps DRAFT V2.xlsx]Table 6 - Renter Gaps by AMI

This analysis can also be nuanced with an understanding of supply-demand pressures from the current student population, most of whom are earning less than $25,000 per year, which falls below the 30 percent AMI mark. It is understood that Colorado State University currently has a student enrollment of nearly 34,000, of which approximately 26,400 are undergraduates. Based on previous analysis and discussions with the Institutional Research Division at CSU about the student body, a few important guiding assumptions can be applied to the previous gaps analysis: 1) approximately 75 percent of the student body lives off-campus (i.e. 25,500); 2) within the City of Fort Collins, approximately 5 percent of off-campus students live at home (1,275). This leaves an estimated 21,675 students residing in rental units throughout the City. As such, EPS estimates that these off-campus students generate demand for between 7,225 (assuming 3.0 students per rental unit).[16]

16 Given the 3-unrelated persons occupancy rule, which applies uniformly throughout the City, EPS does not believe that an average of greater than 3.0 students per unit is an appropriate factor for determining the number of units occupied in the City by students. Discussions with CSU staff indicate that the factor is more realistically between 2.5 and 3.0, even given the likelihood that some students could be living with more than 3 unrelated peers in units without an exemption.

Again, a more intuitive analysis of housing affordability challenges is represented by the number of renter households who are housing cost-burdened (**Table 11**). This analysis shows that: 1) the overall number of renter households spending more than 30 percent of their gross incomes on shelter has increased by 3,200 over time, unlike the housing cost-burden trend among owner households; 2) that the portion of housing cost-burdened renter households is still a majority of all renter households (though it has declined from 58 to 53 percent); and 3) that the portion of cost-burdened renters between 30 and 50 percent AMI and between 50 and 60 percent AMI has increased substantially – from 72 to 100 percent, and from 42 to 74 percent, respectively.

Table 11 Cost-Burdened Renter Households by AMI, 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-18 Total Δ	2010-18 Ann. %
Less than 30% AMI	8,173	8,707	9,061	6,795	7,338	7,397	8,394	6,257	7,029	-1,144	-143
31% to 50% AMI	3,551	3,576	5,028	4,410	4,566	5,976	4,916	5,396	5,047	1,496	187
51% to 60% AMI	1,105	1,055	989	1,234	1,555	1,869	2,179	1,785	1,877	772	96
61% to 80% AMI	925	1,181	645	993	1,662	1,142	1,389	1,664	2,189	1,263	158
81% to 100% AMI	272	761	228	348	690	499	529	899	905	633	79
101% to 120% AMI	7	9	8	4	74	28	14	55	25	18	2
Greater than 120% AMI	65	84	72	36	34	251	122	493	228	163	20
Renter Households	**14,098**	**15,373**	**16,030**	**13,820**	**15,919**	**17,162**	**17,542**	**16,547**	**17,299**	**3,201**	**400**
As % of Owner HHs											
Less than 30% AMI	86%	80%	85%	87%	85%	81%	86%	83%	79%	-7%	-1%
31% to 50% AMI	72%	80%	85%	84%	83%	101%	83%	88%	100%	27%	3%
51% to 60% AMI	42%	47%	45%	50%	61%	68%	61%	69%	74%	32%	4%
61% to 80% AMI	30%	38%	20%	33%	45%	39%	40%	50%	37%	7%	1%
81% to 100% AMI	14%	32%	9%	17%	25%	21%	22%	35%	24%	10%	1%
101% to 120% AMI	1%	1%	1%	0%	5%	1%	1%	3%	1%	0%	0%
Greater than 120% AMI	5%	5%	3%	1%	1%	7%	4%	11%	5%	1%	0%
Owner Households	**58%**	**60%**	**57%**	**56%**	**59%**	**60%**	**59%**	**59%**	**53%**	**-5%**	**-1%**

Source: U.S. Census, ACS; Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Data\[193158-Housing Gaps DRAFT V2.xlsx]Table 8 - Renter CB by AMI

3.0 LINKAGE FEE NEXUS ANALYSIS

This Chapter summarizes the nexus analysis for potential housing linkage fees in Fort Collins. The analysis establishes a nexus between new residential and non-residential development and the demand for housing affordable at incomes of 80 percent of AMI or less. The analysis uses economic impact techniques to estimate the new households generated from demand created by new development. The basis of the linkage fee is the gap between what the households generated can afford in mortgage or rent payments and the cost to construct typical 3 story affordable rental apartments.

3.1.1 Rationale

The reasoning behind linkage fees is as follows:

- New residential development brings in new residents with incomes that vary according to the price or rent of their home. These new households spend disposable income on things such as retail purchases, eating out, and repair and maintenance services.
- This new household spending generates new jobs in these industry and occupation categories. The wages in each occupation category determine what this person, along with a second earner, can afford for housing. On average, there are 1.29 earners per household.
- For some wage and income levels there will be a gap between what the workers can afford and the cost to construct housing affordable to that income range. The linkage fee is designed to mitigate the gap between affordable housing construction costs and the price or rent affordable at that income range.

For nonresidential development, the same overall rationale holds except that the jobs and wages generated are determined directly by the land use type, rather than from the indirect impacts of household spending. Retail, office, or hotel development for example generate different numbers of jobs per square foot of development, and wage levels also vary by the type of industry and occupation typical in these building types. In the linkage fee framework, land use types that generate lower paying jobs will be required to pay mitigation for more jobs or households than land uses that generate higher paying jobs.

3.1.2 Methodology

The nexus analysis uses an economic impact model, IMPLAN, which estimates the relationships between new development and job generation. Impact Analysis for Planning (IMPLAN) was developed by the U.S. Forest Service, Bureau of Land Management, Federal Emergency Management Agency, and the University of Minnesota in the 1980s. IMPLAN is now maintained and supported by a private organization. It is widely used by state and federal agencies, academic researchers, and local economic development organizations to evaluate the economic impacts of proposed policies, new industries, and land use changes.

The analysis uses development prototypes for residential and non-residential development, described in the next section. The methodology is outlined below and illustrated in **Figure 18**. More detailed information on the calculations is provided in subsequent sections in this Chapter.

Analysis Steps

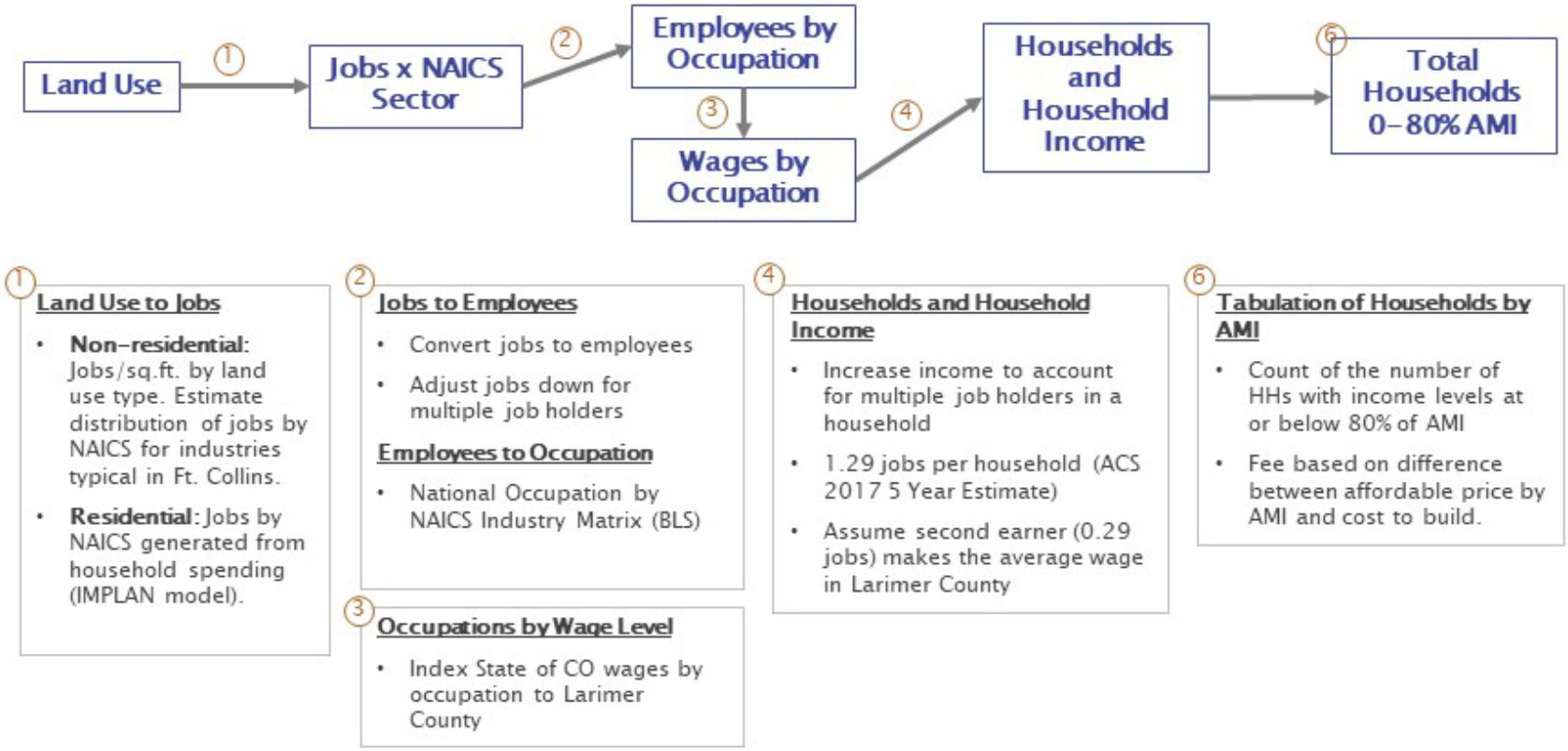
- **Household income –** The first step in the residential nexus analysis is calculating household income. Household income is estimated from the value or rent in the prototype, and the annual income needed to afford that home with 30 percent of household income devoted to rent or mortgage payments, utilities, taxes, and any HOA dues. The IMPLAN model uses specific spending profiles depending on the household income range.
- **Jobs generated by NAICS –** The remaining 70 percent of household income is applied to the IMPLAN model. IMPLAN applies an expenditure profile specific to different household income ranges and estimates the spending and jobs generated in the 20 major industries in the North American Industrial Classification System (NAICS). IMPLAN accounts for savings in its expenditure patterns.
- **Jobs to employees (Multiple job holder adjustment) –** An adjustment is made to acknowledge that many employees have more than one job, such as two part time jobs or a full time and a part time job. So as not to overestimate the number of *employees* generated, the number of jobs is reduced by about 15 percent using a factor of 1.15 jobs per employee.
- **Employees by NAICS to occupation and wages –** The IMPLAN model gives estimates of jobs by NAICS category. Using the average wage by NAICS category would not yield enough detail on the spectrum of wages generated by each land use type to accurately portray household formation and income characteristics. The range of wages and occupations generated by new development is better represented by the 21 Standard Occupational Classifications defined by the Bureau of Labor Statistics (BLS). The National Industry by Occupation Matrix published by the BLS provides the estimated distribution of occupations for each NAICS category. The wages for each occupation in Larimer County are estimated by indexing the wages by occupation and industry in Colorado to the average wage in that industry for Larimer County, as the wage distribution is not available for small MSAs and Counties.
- **Household formation –** Another adjustment is made to account for the fact that many households have more than one earner. This has the effect of raising the income of the employees generated from preceding steps. In Larimer County, there are an average of 1.29 earners per household. In this analysis, the first earner earns the wage generated from the economic impact analysis and allocation to occupations. The "second" 0.29 earners earn the 0.29 multiplied by average wage in the industry of the primary earner.
- **Tabulation of households by AMI Range –** The last step is simply counting the number of households generated in each income range. The City of Fort Collins defines affordable housing as housing affordable at incomes of 80 percent of AMI and below. Households are counted in the 0-30 percent, 30-60 percent, and 60-80 percent of AMI ranges. No households with incomes above 80 percent of AMI are included in the linkage fee analysis.

The only difference in the non-residential analysis is that the number of direct jobs generated by the non-residential square footage is used in place of the jobs estimated from household spending. For example, office space on average employs 3 employees per 1,000 square feet of floor area.

3.1.3 Adopted vs. Maximum Fees

It is advised that communities adopt linkage fees at a discounted level. This provides additional assurance that the fees are not overcompensating for employee generation impacts. This is especially important when both residential and commercial linkage fees are adopted as there is a risk of double counting employees. For example, in a mixed-use development a resident of the residential component of the project could also be working in the commercial portion of the project.

Figure 18 Nexus Analysis Methodology



3.1 Residential Nexus Analysis

This section provides more detail on the specific calculations used in the residential nexus analysis.

3.1.1 Development Prototypes

Six market rate development prototypes were modeled: single family detached housing, townhomes or duplexes, three-story rental housing, five-story rental housing, three-story for-sale condominiums, and five-story for-sale condominiums. The market for condominiums in Fort Collins at these development densities and heights is small, but these were included to allow for the possibility that they could become more common. For IMPLAN, we have modeled 100 units of each prototype to have enough significant figures for analysis and avoid small decimal figures in the results. This does not affect the fee calculation, as the per unit adjustment is made in the last steps.

- **Single Family Detached –** The SFD prototype is modeled on a 1,600 square foot home with a value of $425,000, as shown in **Table 12**. With 30 percent of household income devoted to housing cost, this home generates a household income of $98,250. The total monthly housing costs include mortgage payments, insurance, HOA dues, and property taxes. For 100 units, the total disposable income is $6.88 million which is applied to the IMPLAN model.
- **Townhome/Duplex –** This prototype is 1,200 square feet with a market value of $310,000. Residents of this home would have a household income of at least $73,559, as shown. Total disposable income for 100 units is $5.15 million.
- **3-Story Rental –** The three-story apartment example is comprised of units with an average size of 900 square feet. The monthly rent of $1,620 per month ($1.80 per sq. ft.) equates to a household income of $64,800 per year and total disposable income for 100 units of $4.54 million.
- **5-Story Rental –** The five-story rental prototype is comprised of 800 square foot units with a monthly rent of $1,680 per month ($2.10 per sq. ft.). Five story construction is more costly, and therefore requires higher rents. This type of construction is often a more luxury product compared to three story construction. The implied household income is $67,200, and $4.70 million in disposable income for 100 units.
- **3-Story Condo –** This for-sale housing unit has an average unit size of 1,200 square feet and a market value averaging $312,000. Total disposable income is $5.18 million.
- **5-Story Condo –** Like the five-story rental prototype, the five-story condominium is a higher priced often luxury unit. These are modeled with an average unit size of 1,200 square feet and value of $375,000. This requires an income of at least $87,515 to afford. Total disposable income is $6.13 million.

Table 12 Residential Development Prototypes

Description	Factors		Single Family Detached	Townhome/ Duplex	3 Story Rental	5 Story Rental	3 Story Condo	5 Story Condo
Program			0	0	0	0	0	0
Units			100	100	100	100	100	100
Sq. Ft.			160,000	120,000	90,000	80,000	120,000	120,000
Avg. Unit Sq. Ft.			1,600	1,200	900	800	1,200	1,200
Value			$0	$0	$0	$0	$0	$0
Market Value			$425,000	$310,000	$1,620/mo.	$1,680/mo.	$312,000	$375,000
Rent			NA	NA	$1.80	$2.10	NA	NA
Target Purchase Price								
Mgt. Amt. (less downpayment)	10.0% down pmt		$382,500	$279,000	NA	NA	$280,800	$337,500
Mortgage Interest Rate	5.0% int.		$0	$0	NA	NA	$0	$0
Loan Term	30-year term		$30	$30	NA	NA	$30	$30
Monthly Costs								
Mortgage Payment (Monthly)			$2,053	$1,498	NA	NA	$1,507	$1,812
Insurance	$1,500		$125	$125	NA	NA	$125	$125
Property Tax (mill levy, assess. ratio)	90.000 mills	7.15%	$228	$166	NA	NA	$167	$201
Miscellaneous (e.g. HOA Dues)	$600		$50	$50	NA	NA	$50	$50
Total			**$2,456**	**$1,839**	**$1,620**	**$1,680**	**$1,850**	**$2,188**
HH Income per Unit	**30%**		**$98,250**	**$73,559**	**$64,800**	**$67,200**	**$73,988**	**$87,515**
Total Annual Household Income	**100%**		$9,824,996	$7,355,879	$6,480,000	$6,720,000	$7,398,820	$8,751,467
Total Annual Housing Expenditures	30%		-$2,947,499	-$2,206,764	-$1,944,000	-$2,016,000	-$2,219,646	-$2,625,440
Total Income Less Housing Costs	**70%**		**$6,877,497**	**$5,149,116**	**$4,536,000**	**$4,704,000**	**$5,179,174**	**$6,126,027**

Source: Economic & Planning Systems

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Shifting to the affordable units, the gap for households at 80 percent of AMI or less is based on the cost to construct a typical three-story apartment unit. The affordable monthly rent for a 2.5 person household at 30 to 80 percent of AMI is shown below in **Table 13**. Using a smaller household size of 2.0 or less for apartments would result in a lower qualifying household income and thus a larger gap between revenues (affordable rent) and construction costs, and a higher fee. The HUD area median incomes are used here as they are the income definitions used in most housing qualification processes.

The affordable rents at these AMI levels support unit values ranging from $13,460 per unit at 30 percent of AMI to $182,408 at 80 percent of AMI. With a construction cost estimated at $204,000 per unit, regardless of AMI level, the gap per unit ranges from $190,560 at 30 percent of AMI to $21,612 at 80 percent of AMI as shown.

Table 13 Affordable Price and Gap by Income Range

Description	Factor	AMI		
		30%	50%	80%
HH Income and Housing Expense				
HH Income (2.5-person household)		$22,250	$37,075	$59,300
Affordable Monthly Housing Cost	30%	$556	$927	$1,483
Capitalized Value				
Annual Rent	12 mo.	$6,675	$11,123	$17,790
Vacancy	5.00%	-$334	-$556	-$890
Potential Income		$6,341	$10,566	$16,901
Operating Expenses	-$5,500	-$5,500	-$5,500	-$5,500
Net Operating Income		$841	$5,066	$11,401
Capitalized Value	**6.25%**	**$13,460**	**$81,062**	**$182,408**
Construction Cost per Unit		**$204,020**	**$204,020**	**$204,020**
Gap per Unit		**$190,560**	**$122,958**	**$21,612**

Source: Economic & Planning Systems

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3.1.2 Job, Employee, and Household Generation

This section summarizes the jobs and employees generated by new residential development. The household income generated from the new households in each 100-unit prototype is applied to the IMPLAN model to estimate the jobs supported by the new spending.

The $6.9 million in spending from the single family prototype generates 44 jobs as shown in **Table 14**. The industries with the most jobs include health care, accommodations and food services (mostly restaurants and bars); retail; and other services which includes household services, personal care, and repair and maintenance services. This pattern of job generation is consistent across each prototype. Also, as the price and associated household income for each prototype increases, so does job generation.

Table 14 Jobs by Industry Generated from Household Spending

	Jobs by Land Use (IMPLAN Results)					
Description	Single Family Detached	Townhome/ Duplex	3 Story Rental	5 Story Rental	3 Story Condo	5 Story Condo
Household Income after Housing Costs	$6,877,497	$5,149,116	$4,536,000	$4,704,000	$5,179,174	$6,126,027
Industrial Sectors						
11 Ag, Forestry, Fish & Hunting	0.1	0.1	0.0	0.0	0.1	0.1
21 Mining	0.0	0.0	0.0	0.0	0.0	0.0
22 Utilities	0.1	0.1	0.1	0.1	0.1	0.1
23 Construction	0.4	0.3	0.3	0.3	0.3	0.3
31-33 Manufacturing	0.1	0.1	0.1	0.1	0.1	0.1
42 Wholesale Trade	0.9	0.7	0.6	0.6	0.7	0.8
44-45 Retail trade	7.9	5.9	5.4	5.7	5.9	7.0
48-49 Transportation & Warehousing	1.0	0.8	0.7	0.8	0.8	0.9
51 Information	1.1	0.8	0.7	0.8	0.8	1.0
52 Finance & insurance	2.6	2.0	1.8	1.8	2.0	2.3
53 Real estate & rental	2.6	1.9	1.8	1.9	1.9	2.3
54 Professional- scientific & tech svcs	2.3	1.7	1.4	1.4	1.7	2.0
55 Management of companies	0.2	0.1	0.1	0.1	0.1	0.1
56 Administrative & waste services	2.0	1.5	1.4	1.4	1.5	1.7
61 Educational svcs	1.1	0.8	0.5	0.5	0.8	1.0
62 Health & social services	7.7	5.8	4.6	4.8	5.8	6.8
71 Arts- entertainment & recreation	1.8	1.3	1.4	1.5	1.3	1.5
72 Accomodation & food services	6.9	5.2	5.0	5.2	5.2	6.1
81 Other services	5.0	3.8	3.3	3.4	3.8	4.4
91-99 Government & non NAICs	0.3	0.2	0.3	0.3	0.2	0.3
Total	**44.0**	**33.2**	**29.4**	**30.7**	**33.2**	**38.9**

Source: Economic & Planning Systems

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- **Jobs to Employees –** The next step is to adjust the number of jobs generated to employees generated. In today's economy it is common for people to hold more than one job. Without this adjustment, the analysis would potentially overestimate the affordable housing demand created from jobs. To step down from jobs to employees, jobs are divided by a factor of 1.15 jobs per employee. As shown in **Table 15**, the 44 jobs generated by the single family prototype results in 38.3 employees with the adjustment for multiple jobs holders.
- **Employees by Occupation –** The jobs by NAICS classification are converted to more specific occupation categories to obtain a more detailed distribution of wage levels for the new jobs. Using the average wage for an industry masks the upper and lower wage levels. As noted above, the BLS' National Industry by Occupation Matrix provides the estimated

distribution of occupations for each NAICS category. The wages for each occupation in Larimer County are estimated by indexing the wages by occupation and industry in Colorado to the average wage in that industry for Larimer County, as the wage distribution is not available for small MSAs and Counties.

- **Employees to Households –** The next adjustment for estimating housing demand is to account for multiple earners per household. In other words, one new employee does not equate to demand for one new housing unit. On average, there are 1.29 earners per household in Larimer County. This adjustment takes the 38.3 employees generated from single family development to 29.7 employee-households, and so on for each prototype as shown.

Table 15 Summary of Jobs, Employees, and Occupations Generated

	Single Family Detache	Townhome/ Duplex	3 Story Rental	5 Story Rental	3 Story Condo	5 Story Condo
Total Jobs/100 Units	44.0	33.2	29.4	30.7	33.2	38.9
Employees/100 Units	38.3	28.8	25.5	26.7	28.8	33.8
Households/100 Units	29.7	22.4	19.8	20.7	22.4	26.2
	Top 5 Occupations & Median Wage for Primary Earner					
1	Office and Administrative Support Occupations $26,450	Office and Administrative Support Occupations $26,450	Food Preparation and Serving Related Occupations $19,550	Food Preparation and Serving Related Occupations $19,550	Office and Administrative Support Occupations $26,450	Office and Administrative Support Occupations $26,450
2	Sales and Related Occupations $38,450	Sales and Related Occupations $38,450	Office and Administrative Support Occupations $26,450	Office and Administrative Support Occupations $26,450	Sales and Related Occupations $38,450	Sales and Related Occupations $38,450
3	Food Preparation and Serving Related Occupations $19,550	Food Preparation and Serving Related Occupations $19,550	Sales and Related Occupations $38,450	Sales and Related Occupations $38,450	Food Preparation and Serving Related Occupations $19,550	Food Preparation and Serving Related Occupations $19,550
4	Healthcare Practitioners and Technical $49,350	Healthcare Practitioners and Technical $49,350	Personal Care and Service Occupations $19,550	Personal Care and Service Occupations $19,550	Healthcare Practitioners and Technical $49,350	Healthcare Practitioners and Technical $49,350
5	Personal Care and Service Occupations $19,550	Personal Care and Service Occupations $19,550	Healthcare Practitioners and Technical $49,350	Healthcare Practitioners and Technical $49,350	Personal Care and Service Occupations $19,550	Personal Care and Service Occupations $19,550

Source: Economic & Planning Systems

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- **Wages and Household Income –** The last step in the employee and household generation analysis is to estimate household incomes for the primary and second earners. For the primary earner – the jobs estimate from the IMPLAN analysis – they are assigned the median wage in each occupation. The second 0.29 earners (1.29 earners per household) is assumed to make the average wage for the industry in which the primary earner is employed. This assumption implies that household members, on average, pair according to similar earning potential and socioeconomic characteristics. This is not a second job for an individual but represents a portion of a job to account for the average number of earners per household (1.29).

3.1.3 Households and Target Income Ranges

The last step is to tabulate the employee-households at income levels of 80 percent of AMI or less. For 100 units of single family development, there are 22.2 employee households generated below 80 percent of AMI, as shown in **Table 16**. Of the 29.7 total employee-households generated for that prototype, 74.9 percent are at incomes of 80 percent of AMI or less.

Table 16 Households Generated in Target Income Ranges

	Single Family Detached	Townhome/ Duplex	3 Story Rental	5 Story Rental	3 Story Condo	5 Story Condo
Total Households Generated per 100 Units	**29.7**	**22.4**	**19.8**	**20.7**	**22.4**	**26.2**
Households by Income Range						
Extremely Low (30% of Median)	0.0	0.0	0.0	0.0	0.0	0.0
Very Low (50% of Median)	10.3	7.7	7.0	7.3	7.7	9.1
Low (80% of Median)	12.0	9.0	8.0	8.3	9.0	10.6
Total - Target Income Ranges	**22.2**	**16.7**	**15.0**	**15.6**	**16.7**	**19.6**
Percent of Households Generated	**74.9%**	**74.9%**	**75.6%**	**75.6%**	**74.9%**	**74.9%**
Percent of 100 Units	**22.2%**	**16.7%**	**15.0%**	**15.6%**	**16.7%**	**19.6%**

Source: Economic & Planning Systems

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3.1.4 Residential Linkage Fee Calculation

In this section, the calculation of the residential linkage fee is described.

- **Affordability Gap –** The affordability gap per household and AMI range described earlier in this chapter ranges from $21,612 at 80 percent of AMI to $190,560 at 30 percent of AMI as shown below in **Table 17**. The number of households generated in each AMI category are multiplied by the gap per household to calculate the total affordability gap generated by each prototype. The total gap for single family development is therefore $1.52 million per 100 units, or $15,206 for each new unit of market rate single family housing.
- **Weighted Average –** The residential linkage fee is the weighted average of the gap per unit and the square footage for each prototype unit. The maximum residential linkage fee is **$10.54 per square foot of market rate development**, as shown.

Table 17 Residential Linkage Fee Calculation

		Single Family Detached	Townhome/ Duplex	3 Story Rental	5 Story Rental	3 Story Condo	5 Story Condo	Total / Average
Households by Income Range (per 100 units)	**A**							
Extremely Low (30% of Median)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Very Low (50% of Median)		10.3	7.7	7.0	7.3	7.7	9.1	49.2
Low (80% of Median)		12.0	9.0	8.0	8.3	9.0	10.6	56.8
Total per 100 Units		**22.2**	**16.7**	**15.0**	**15.6**	**16.7**	**19.6**	**106.0**
Per 1.0 Units		0.22	0.17	0.15	0.16	0.17	0.20	0.18
Gap per Household by AMI Range	**B**							
Extremely Low (30% of Median)		$190,560	$190,560	$190,560	$190,560	$190,560	$190,560	
Very Low (50% of Median)		$122,958	$122,958	$122,958	$122,958	$122,958	$122,958	
Low (80% of Median)		$21,612	$21,612	$21,612	$21,612	$21,612	$21,612	
Total Gap								
Extremely Low (30% of Median)	**A X B**	$0	$0	$0	$0	$0	$0	$0
Very Low (50% of Median)		$1,262,164	$951,196	$862,445	$900,776	$951,196	$1,115,826	$6,043,603
Low (80% of Median)		$258,445	$194,770	$171,822	$179,459	$194,770	$228,480	$1,227,745
Total		**$1,520,609**	**$1,145,966**	**$1,034,267**	**$1,080,234**	**$1,145,966**	**$1,344,306**	**$7,271,348**
Gap (Fee) per Unit	**C**	**-$15,206**	**-$11,460**	**-$10,343**	**-$10,802**	**-$11,460**	**-$13,443**	**-$72,713**
Average Prototype Unit Size	**D**	**1,600**	**1,200**	**900**	**800**	**1,200**	**1,200**	**6,900**
Maximum Fee per Sq. Ft.	**C / D**	**$9.50**	**$9.55**	**$11.49**	**$13.50**	**$9.55**	**$11.20**	**$10.54**
Fee per Prototype Unit		**$15,206**	**$11,460**	**$10,343**	**$10,802**	**$11,460**	**$13,443**	**$72,713**

Source: Economic & Planning Systems

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3.2 Non-Residential Linkage Analysis

The non-residential linkage analysis is based on estimates of the direct jobs created in new non-residential development. For brevity, we refer to non-residential development as "commercial" development in some places.

3.2.1 Development Prototypes

The commercial linkage fee is based on five common types of commercial development: office, industrial, restaurant, retail, and hotel. For analysis purposes, an increment of 10,000 square feet per prototype is used, and the fee is calculated per square foot in the last step. The number of employees generated from new development is calculated from space planning factors of gross square feet of building space per employee. As shown in **Table 18**, office development has 3 employees per square foot (1 per 333 square feet) for example. A mid-range hotel is estimated to have 0.50 employees per room, with 100 rooms and approximately 50,000 square feet used in this prototype.

Table 18 Nonresidential Development Prototypes

Description	Building Sq. Ft.	Employee Generation		Employees
Office	10,000 *sq. ft.*	**333**	*sqft/empl*	30
Industrial	10,000 *sq. ft.*	**1,000**	*sqft/empl*	10
Restaurant	10,000 *sq. ft.*	**250**	*sqft/empl*	40
Retail	10,000 *sq. ft.*	**300**	*sqft/empl*	33
Hotel	100 *rooms*	**0.50**	*emp/room*	50

Source: Economic & Planning Systems

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3.2.2 Job, Employee, and Household Generation

The next step is to assign each land use type to a mix of industries to estimate the wage characteristics. Office employment is comprised of a mixture of information, financial, professional, and government services as shown in **Table** 19. Industrial employment is comprised of construction and trades, manufacturing, and transportation and warehousing firms. Restaurants and hotels fall solely in the accommodations and food services sector, and retail development is in the retail trade sector.

Table 19 Conversion of Land Use to Industry Category

Description	Land Use to NAICS Conversion				
	Office	Industrial	Restaurant	Retail	Hotel
Industrial Sectors					
11 Ag, Forestry, Fish & Hunting	0%	0%	0%	0%	0%
21 Mining	0%	0%	0%	0%	0%
22 Utilities	0%	0%	0%	0%	0%
23 Construction	0%	25%	0%	0%	0%
31-33 Manufacturing	0%	25%	0%	0%	0%
42 Wholesale Trade	0%	25%	0%	0%	0%
44-45 Retail trade	0%	0%	0%	100%	0%
48-49 Transportation & Warehousing	0%	25%	0%	0%	0%
51 Information	12%	0%	0%	0%	0%
52 Finance & insurance	11%	0%	0%	0%	0%
53 Real estate & rental	11%	0%	0%	0%	0%
54 Professional- scientific & tech svcs	36%	0%	0%	0%	0%
55 Management of companies	3%	0%	0%	0%	0%
56 Administrative & waste services	0%	0%	0%	0%	0%
61 Educational svcs	0%	0%	0%	0%	0%
62 Health & social services	0%	0%	0%	0%	0%
71 Arts- entertainment & recreation	0%	0%	0%	0%	0%
72 Accomodation & food services	0%	0%	100%	0%	100%
81 Other services	0%	0%	0%	0%	0%
91-99 Government & non NAICs	28%	0%	0%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: LEHD; Economic & Planning Systems

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Next, the direct jobs generated are reduced to account for multiple job holders. A an average of 1.15 jobs per employee is applied, reducing the 30 direct office jobs to 26.1 employees for example, as shown in **Table 20**.

Table 20 Jobs and Employees Generated per 10,000 Sq. Ft.

Description	Jobs by Land Use					Employees by Land Use				
	Office	Industrial	Restaurant	Retail	Hotel	Office	Industrial	Restaurant	Retail	Hotel
Total Jobs	**30.0**	**10.0**	**40.0**	**33.3**	**50.0**	**1.15**	**1.15**	**1.15**	**1.15**	**1.15**
Industrial Sectors										
11 Ag, Forestry, Fish & Hunting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21 Mining	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22 Utilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23 Construction	0.0	2.5	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0
31-33 Manufacturing	0.0	2.5	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0
42 Wholesale Trade	0.0	2.5	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0
44-45 Retail trade	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	29.0	0.0
48-49 Transportation & Warehousing	0.0	2.5	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0
51 Information	3.5	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
52 Finance & insurance	3.4	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
53 Real estate & rental	3.2	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
54 Professional- scientific & tech svcs	10.7	0.0	0.0	0.0	0.0	9.3	0.0	0.0	0.0	0.0
55 Management of companies	1.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
56 Administrative & waste services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61 Educational svcs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62 Health & social services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
71 Arts- entertainment & recreation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72 Accomodation & food services	0.0	0.0	40.0	0.0	50.0	0.0	0.0	34.8	0.0	43.5
81 Other services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91-99 Government & non NAICs	8.3	0.0	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0
Total	**30.0**	**10.0**	**40.0**	**33.3**	**50.0**	**26.1**	**8.7**	**34.8**	**29.0**	**43.5**

Source: LEHD; Economic & Planning Systems

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For estimating wages and household income, the same process is used for commercial development as is used in residential development. The distribution of occupations within each industry is calculated from the National Industry-Occupation Matrix, and the wages for each occupation are applied to the new employees. The multiple-earner per household factor of 1.29 is applied, with the second 0.29 earners making the average wage in the same industry as the first 1.0 primary earners.

Table 21 summarizes the key results of the employment and household generation analysis. The step-down process from jobs to employees to households is shown in the top group of rows. Next, the top five occupations and median wages associated with each land use type are shown below that.

Table 21 Summary of Jobs, Employees, and Occupations Generated

	Office	Industrial	Restaurant	Retail	Hotel (100 Rooms)
Total Jobs/10,000 Sq. Ft.	30.0	10.0	40.0	33.3	50.0
Employees/10,000 Sq. Ft.	26.1	8.7	34.8	29.0	43.5
Households/10,000 Sq. Ft.	20.2	22.4	19.8	20.7	22.4
			Top 5 Occupations & Median Wage for Primary Earner		
Top 5 Occupations					
1	Office and Administrative Support Occupations	Transportation and Material Moving Occupations	Food Preparation and Serving Related Occupations	Sales and Related Occupations	Food Preparation and Serving Related Occupations
	$26,450	$28,500	$19,550	$38,450	$19,550
2	Business and Financial Operations Occupations	Construction and Extraction Occupations	Building and Grounds Cleaning and Maintenance Occupations	Office and Administrative Support Occupations	Building and Grounds Cleaning and Maintenance Occupations
	$47,750	$35,000	$22,600	$26,450	$22,600
3	Computer and Mathematical Occupations	Office and Administrative Support Occupations	Office and Administrative Support Occupations	Transportation and Material Moving Occupations	Office and Administrative Support Occupations
	$53,000	$26,450	$26,450	$28,500	$26,450
4	Management Occupations	Production Occupations	Sales and Related Occupations	Installation, Maintenance, and Repair Occupations	Sales and Related Occupations
	$82,250	$29,200	$38,450	$35,650	$38,450
5	Sales and Related Occupations	Sales and Related Occupations	Management Occupations	Food Preparation and Serving Related Occupations	Management Occupations
	$38,450	$38,450	$82,250	$19,550	$82,250

Source: Economic & Planning Systems

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3.2.3 Households and Target Income Ranges

Last, the number of employee households for each occupation, wage, and household income category are counted by AMI level at or below 80 percent of AMI. As shown in **Table 22**, 10,000 square feet of office development generates 20.2 employee households at 80 percent of AMI or less. Restaurant and retail development generate 27.0 and 22.5 employee households in the target income ranges. Hotel generates 33.7 employee-households per 100 rooms (50,000 square feet) or 6.7 per 10,000 square feet.

Table 22 Households Generated in Target Income Ranges

	Office	Industrial	Restaurant	Retail	Hotel	Total / Avg.
Households by Income Range						
Extremely Low (30% of Median)	0.0	0.0	0.0	0.0	0.0	0.00
Very Low (50% of Median)	0.1	0.0	25.8	0.0	32.3	58.26
Low (80% of Median)	4.9	3.1	1.1	20.8	1.4	31.42
Total - Target Income Ranges	**5.0**	**3.1**	**27.0**	**20.8**	**33.7**	**89.68**
Total Households Generated	**20.2**	**6.7**	**27.0**	**22.5**	**33.7**	**110.12**
Maximum Employment Mitigation Rate	**24.9%**	**46.6%**	**100.0%**	**92.7%**	**100.0%**	**81.4%**

Source: Economic & Planning Systems

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3.2.4 Non-Residential Linkage Fee Calculation

In this section, the calculation of the commercial linkage fee is described.

- **Affordability Gap –** The affordability gap per household and AMI range described earlier in this chapter ranges from $21,612 at 80 percent of AMI to $190,560 at 30 percent of AMI as shown below in **Table 23**. The number of households generated in each AMI category are multiplied by the gap per household to calculate the total affordability gap generated by each prototype. For example, the total gap for retail development is $450,167 for the 10,000 square foot prototype, or $21,612 per employee-household.
- **Fee Calculation –** For commercial space, the individual fees are shown for different land use types below. It is recommended that any adopted commercial fees reflect the variation across land use types. The maximum commercial linkage fees range from just over $2.00 per square foot for retail space to nearly $12.00 per square foot for restaurant space.

Table 23 Non-Residential Linkage Fee Calculation

		Office	Industrial	Restaurant	Retail	Hotel (100 Rooms)	Total / Average
Square Feet or Rooms		10,000	10,000	10,000	10,000	50,000	
Households by Income Range (per 100 units)	**A**						
Extremely Low (30% of Median)		0.00	0.00	0.00	0.00	0.00	0.0
Very Low (50% of Median)		0.15	0.01	25.83	0.00	32.28	58.3
Low (80% of Median)		4.90	3.13	1.14	20.83	1.42	31.4
Total per 100 Units		**5.04**	**3.14**	**26.96**	**20.83**	**33.70**	**89.7**
Gap per Household by AMI Range	**B**						
Extremely Low (30% of Median)		$190,560	$190,560	$190,560	$190,560	$190,560	
Very Low (50% of Median)		$122,958	$122,958	$122,958	$122,958	$122,958	
Low (80% of Median)		$21,612	$21,612	$21,612	$21,612	$21,612	
Total Gap							
Extremely Low (30% of Median)	**A X B**	$0	$0	$0	$0	$0	$0
Very Low (50% of Median)		$17,991	$910	$3,175,517	$0	$3,969,397	$7,163,815
Low (80% of Median)		$105,799	$67,715	$24,577	$450,167	$30,722	$678,980
Total		**$123,790**	**$68,625**	**$3,200,094**	**$450,167**	**$4,000,119**	**$7,842,795**
Gap (Fee) per Employee-Household	**C**	**-$24,553**	**-$21,851**	**-$118,684**	**-$21,612**	**-$118,684**	**-$305,385**
Building Size	**D**	**10,000**	**10,000**	**10,000**	**10,000**	**50,000**	**90,000**
Maximum Fee per Sq. Ft.	**C / D**	**$2.46**	**$2.19**	**$11.87**	**$2.16**	**$2.37**	**$3.39**
Fee per Prototype Building		**$24,553**	**$21,851**	**$118,684**	**$21,612**	**$118,684**	**$305,385**
Max Mitigation Rate		**24.9%**	**46.6%**	**100.0%**	**92.7%**	**100.0%**	

Source: Economic & Planning Systems

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4.0 LINKAGE FEE FEASIBILITY ANALYSIS

One of the considerations in adopting affordable housing linkage fees is their effect on development feasibility, as linkage fees represent an additional cost of development. This Chapter provides an analysis of how linkage fees could affect development feasibility measured as developer profit (revenues over costs) and financial returns.

4.1 Fort Collins Impact Fees

Linkage fees would be an additional fee on top of the existing impact fees that the City charges now. The current residential impact fees applicable to the development prototypes are summarized in **Table 24**. For a single-family home, capital facilities impact fees are $14,125 per unit. Water and sewer tap fees are $15,158 per unit, totaling $29,283. For multifamily units, the total is just over $20,000 per unit comprised of $12,119 for capital facilities and $7,901 for water and sewer tap fees. These are estimates, as project- or building-specific characteristics affect the calculation of water and sewer fees.

Table 24 Residential Impact Fees

Description	Single Family Detached (1,201-1,700 SqFt.)	Townhome/ Duplex (700-1,200 SqFt.)	3 Story Rental	5 Story Rental	3 Story Condo	5 Story Condo
Neighborhood Park	$2,712	$2,483	$2,483	$2,483	$2,483	$2,483
Community Park	3,828	3,506	3,506	3,506	3,506	3,506
Fire	668	614	614	614	614	614
Police	374	344	344	344	344	344
Gen. Gov't	911	834	834	834	834	834
Transportation	5,632	4,338	4,338	4,338	4,338	4,338
Subtotal	**$14,125**	**$12,119**	**$12,119**	**$12,119**	**$12,119**	**$12,119**
Water	$11,515	$5,308	$5,268	$5,268	$5,268	$5,268
Sewer	3,643	1,322	2,633	2,633	2,633	2,633
Subtotal	**$15,158**	**$6,630**	**$7,901**	**$7,901**	**$7,901**	**$7,901**
Total	**$29,283**	**$18,749**	**$20,020**	**$20,020**	**$20,020**	**$20,020**

Source: Economic & Planning Systems

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Impact fees for non-residential development are shown in **Table 25**. Commercial space includes retail, restaurant, hotel, and general-purpose commercial space and the fee is $11.05 per square foot. For office, the impact fee is $8.79 per square foot and $2.62 for industrial and warehouse space.

Table 25 Non-Residential Capital Improvement Expansion Fees

Land Use Type	Unit	Fire	Police	Gen. Gov't	Trans-portation	Total	
Commercial	1,000 sq. ft.	$572	$320	$1,564	$8,594	**$11,050**	**$11.05/SqFt**
Office and Other Services	1,000 sq. ft.	$572	$320	$1,564	$6,331	**$8,787**	**$8.79/SqFt**
Industrial/Warehouse	1,000 sq. ft.	$134	$74	$369	$2,043	**$2,620**	**$2.62/SqFt**

Source: Economic & Planning Systems

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The non-residential development prototypes are estimated to need a ¾ inch meter, which results in a tap fee estimated at $65,000 or $6.50 per square foot as shown in **Table 26**.

Table 26 Water and Sewer Tap Fees

City of Fort Collins	Water	Sewer	Total
Single Family (4,001-5,000 SqFt Lot)	$11,515	$3,643	$15,158
Duplex/Townhome - 2 Units	$10,617	$2,643	$13,260
Average Per Unit	*$5,308*	*$1,322*	*$6,630*
Multifamily	$5,268	$2,633	$7,901
10,000 Sq. Ft. Non-Residential (3/4" meter)	$28,584	$36,422	$65,006
Per sq.ft.	*$2.86*	*$3.64*	*$6.50*

Source: Economic & Planning Systems

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4.2 Residential Feasibility Analysis

The feasibility analysis tests the impact on development financial feasibility of adding linkage fees on top of existing impact fees. Since linkage fees can be adopted at any level from $0 to the maximum fee, a range of adopted fees area tested from 5 percent to 50 percent of the maximum and at the maximum fee. The analysis was done by building a static development proforma for each building type. A static proforma is a simple tool used at the initial project planning stages as a gauge of feasibility.

The first step is evaluating the financial performance of the prototypes without linkage fees but including the existing impact fees. The key development program and cost estimates for each residential prototype are shown below in **Table 27**. With a sale price of $425,000 for a 1,600 square foot home and a cost of $377,283, the builder would earn a 12.6 percent profit, which is in the 10 to 15 percent range rule of thumb. Townhomes would generate a 16.7 percent profit. This higher profit is justified by the smaller market for townhomes. Compared to single family homes, fewer townhomes are sold each year indicating that there is a smaller market for them which equates to higher development risk.

The analysis looked at more affordably priced condominiums at $312,000 to $375,000. At these price points, for-sale condominiums generate roughly 8 to 10 percent profit, which is marginally feasible. Higher prices would generate higher profit, which could mitigate market complexities, such as market or product type risk and timing associated with development and sale of units.

Table 27 Baseline Residential Feasibility Analysis

Description	Unit	Single Family Detached	Townhome/ Duplex	3-Story Rental	5-Story Rental	3-Story Condo	5-Story Condo
Unit Size	Sq. Ft.	1,600	1,200	900	800	1,200	1,200
Land Cost	per unit	$80,000	$55,000	$20,000	$20,000	$25,000	$25,000
Hard Costs	per sqft	$140	$130	$130	$140	$140	$156
Soft Costs & Contingency	per sqft	$28	$30	$23	$25	$28	$39
All Impact Fees	per unit	$29,283	$18,749	$20,020	$20,020	$20,020	$20,020
Total Cost per Unit		$377,283	$265,749	$204,020	$211,020	$288,020	$339,020
Value or NOI		price: $425,000	price: $310,000	NOI: $13,574/yr	NOI: $14,077/yr	price: $312,000	price: $375,000
Sale price per sqft		$266	$258	---	---	$260	$313
Monthly Rent		---	---	$1,620	$1,680	---	---
Profit or Return on Cost		12.6%	16.7%	6.7%	6.7%	8.3%	10.6%

Source: Economic & Planning Systems

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Apartments are income producing assets. The annual income stream is comprised of the return of and return on the developer's investment. A different financial metric is used, return on cost (ROC), which is the net operating income of the property at stabilized occupancy divided by the development cost. In the current market, developers are looking for at least a 6.0 to 8.0 percent return on cost for apartments depending on risk and market factors such as location and market conditions. The prototypes shown here generate a 6.7 percent ROC which is in that range.

4.2.1 Residential Feasibility Results

Given the numerous project-specific factors associated with development feasibility, the results of adding the linkage fees are presented in a range. For rental properties, a ROC hurdle rate of 6.0 to 8.0 percent was used. A hurdle rate is a financial return metric below which an investor would not proceed with a project. Anything below 6.0 percent is judged to be infeasible. In for-sale development, a profit range of 10 to 15 percent was used; anything below 10 percent is judged to be infeasible. For condominiums, the analysis assumes that profit should be higher than 15 percent to reflect the higher risk associated with this product type in the Fort Collins market. Condominiums at the prices shown are marginally feasible before linkage fees.

As a caveat to account for the numerous site-, investor-, and project-specific factors in a real estate project, the term "marginal" is used to indicate where the linkage fees are judged to have a significant impact on a project's financial feasibility. However, some developers and builders may be able to achieve lower development or land costs or more favorable financing terms that would make a project feasible. Some developers and investors have lower return thresholds as well.

- **Single Family Detached –** For single family development, the linkage fees would represent roughly a $2.50 to $5.00 per square foot increase in construction costs. This analysis suggests that feasibility is not substantially affected until approximately 50 percent of the maximum fee, or $5.27 per square foot where the profit is about 10 percent.
- **Townhomes and Duplexes –** This prototype may be able to bear linkage fees up to 50 percent of the maximum, as the profit is still within the higher end of the 10 to 15 percent range at 50 percent of the maximum fee.
- **Condominiums –** Higher prices would be needed for condominiums to be feasible with linkage fees.
- **Apartments –** Linkage fees do not have as much of an impact on apartment feasibility. Up to 50 percent of the maximum fee, the ROC is still estimated to be in the 6.0 to 8.0 percent range.

Table 28 Linkage Fee Impacts on Residential Feasibility

Linkage Fee % of Max		$0.00 0%	$0.53 5%	$1.05 10%	$1.58 15%	$2.11 20%	$2.63 25%	$5.27 50%	$10.54 100%
Return on Cost (Rental)									
3-Story Rental		6.8%	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.5%
5-Story Rental		7.3%	7.3%	7.3%	7.3%	7.3%	7.2%	7.2%	7.0%
Hurdle Rate Analysis	Hurdle Rate ROC								
3-Story Rental	6.0%-8.0%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.
5-Story Rental	6.0%-8.0%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.
Profit (For-Sale)									
Single Family Detached		12.6%	12.4%	12.1%	11.9%	11.6%	11.4%	10.2%	7.8%
Townhome/Duplex		16.7%	16.4%	16.1%	15.8%	15.6%	15.3%	13.9%	11.4%
3-Story Condo		8.3%	8.1%	7.9%	7.6%	7.4%	7.1%	6.0%	3.8%
5-Story Condo		10.6%	10.4%	10.2%	10.0%	9.8%	9.6%	8.6%	6.6%
Hurdle Rate Analysis	Hurdle Rate Profit								
Single Family Detached	10.0%-15.0%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Marginal
Townhome/Duplex	10.0%-15.0%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.
3-Story Condo	12.5%-17.5%	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal
5-Story Condo	12.5%-17.5%	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal	Marginal

Source: Economic & Planning Systems

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4.3 Non-Residential Feasibility Analysis

The non-residential development feasibility analysis also uses a static proforma evaluation. Since commercial development is most often valued on its income stream, like apartments, this analysis also focuses on the return on cost (ROC) metric.

The major inputs for each 10,000 square foot prototype and the 100 room hotel (approx. 50,000 sq. ft.) are summarized in **Table 29**. EPS determined an estimated project ROC hurdle rate from a review of recent income capitalization rates[17] in commercial real estate publications and experience reviewing developer proformas. The selected ROC hurdle rates range from 75 to 125 basis points above the capitalization rates. Again, a hurdle rate is the required return on investment, below which a project would not proceed.

Table 29 Baseline Commercial Feasibility Analysis

Building Type	Hard Costs and GC	Total Cost	Land Cost	Rent (NNN)	Capitalization Rate (Input)	ROC Hurdle Rate (Input)	Proforma ROC (Calculated)
Office	$150/SqFt	$263/SqFt	$15.00/SqFt	$25.00/SqFt	7.75%	8.50%	8.57%
Industrial	$120/SqFt	$147/SqFt	$8.00/SqFt	$12.00/SqFt	5.75%	6.75%	6.97%
Restaurant	$175/SqFt	$218/SqFt	$20.00/SqFt	$25.00/SqFt	7.00%	8.25%	8.12%
Retail	$150/SqFt	$193/SqFt	$20.00/SqFt	$25.00/SqFt	7.00%	8.25%	8.12%
Hotel	$150,000/room	$202,711/room	$18,750/room	$150.00/night	8.00%	9.00%	9.11%

Source: Economic & Planning Systems

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For all but restaurant space, the maximum fees represent a cost increase of less than 2.0 percent. For restaurant space, the maximum fee is a cost increase of approximately 5.5 percent. As a result, the linkage fees have a minimal impact on development feasibility. In Table 30, the feasibility of each prototype is summarized with linkage fees ranging from 0 percent to 75 percent of the maximum, and at the maximum fee supported by the nexus analysis. A range of plus or minus 1.0 percent from the selected hurdle rate was used to gauge feasibility impacts. In no case does the ROC drop below the hurdle rate, suggesting that commercial linkage fees up to about 75 percent of the maximum could be adopted with minimal impact on the market.

[17] The ratio between the income stream and the value of the property, similar to a price-to-earnings ratio for stocks.

Table 30 Linkage Fee Impacts on Commercial Feasibility

% of Max. Fee	0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	50.0%	75.0%	100.0%
Office									
Linkage Fee	$0.00	$0.12	$0.25	$0.37	$0.49	$0.61	$1.23	$1.84	$2.46
% of Max.	0.00%	5.00%	10.00%	15.00%	20.00%	25.00%	50.00%	75.00%	100.00%
Return on Cost	8.57%	8.57%	8.56%	8.56%	8.56%	8.55%	8.53%	8.51%	8.49%
Hurdle Rate Analysis	8.00%-9.00%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.
Industrial									
Linkage Fee	$0.00	$0.11	$0.22	$0.33	$0.44	$0.55	$1.09	$1.64	$2.19
% of Max.	0.00%	5.00%	10.00%	15.00%	20.00%	25.00%	50.00%	75.00%	100.00%
Return on Cost	6.97%	6.97%	6.96%	6.96%	6.95%	6.95%	6.92%	6.90%	6.87%
Hurdle Rate Analysis	8.00%-9.00%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.
Restaurant									
Linkage Fee	$0.00	$0.59	$1.19	$1.78	$2.37	$2.97	$5.93	$8.90	$11.87
% of Max.	0.00%	5.00%	10.00%	15.00%	20.00%	25.00%	50.00%	75.00%	100.00%
Return on Cost	9.82%	9.79%	9.77%	9.74%	9.71%	9.69%	9.56%	9.43%	9.31%
Hurdle Rate Analysis	8.00%-9.00%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.
Retail									
Linkage Fee	$0.00	$0.11	$0.22	$0.32	$0.43	$0.54	$1.08	$1.62	$2.16
% of Max.	0.00%	5.00%	10.00%	15.00%	20.00%	25.00%	50.00%	75.00%	100.00%
Return on Cost	11.09%	11.09%	11.08%	11.07%	11.07%	11.06%	11.03%	11.00%	10.97%
Hurdle Rate Analysis	8.00%-9.00%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.
Hotel									
Linkage Fee	$0.00	$0.12	$0.24	$0.36	$0.47	$0.59	$1.19	$1.78	$2.37
% of Max.	0.00%	5.00%	10.00%	15.00%	20.00%	25.00%	50.00%	75.00%	100.00%
Return on Cost	9.11%	9.10%	9.10%	9.10%	9.10%	9.09%	9.08%	9.07%	9.05%
Hurdle Rate Analysis	8.00%-9.00%	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.	Feas.

Source: Economic & Planning Systems

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4.4 Linkage Fee Revenue Yield

Residential linkage fees could be a meaningful supplement to current affordable housing revenue sources. As shown in **Table 31**, linkage fees at five percent of the maximum could generate nearly three quarters of a million per year during a strong development cycle like the last five to ten years. At 25 to 50 percent of the maximum, revenues are project to be $3.6 to $7.2 million per year.

Table 31 Residential Linkage Fee Revenue Projection

	Percent of Maximum Fee					
	5%	10%	15%	20%	25%	50%
Single Family						
Fee per SqFt	$0.53	$1.05	$1.58	$2.11	$2.63	$5.27
Avg. New Home SqFt	2,500	2,500	2,500	2,500	2,500	2,500
Annual Permits	400	400	400	400	400	400
Annual Revenue	**$530,000**	**$1,050,000**	**$1,580,000**	**$2,110,000**	**$2,630,000**	**$5,270,000**
Multifamily						
Fee per SqFt	$0.53	$1.05	$1.58	$2.11	$2.63	$5.27
Net SqFt/Unit	800	800	800	800	800	800
Annual Permits	450	450	450	450	450	450
Annual Revenue	**$190,000**	**$380,000**	**$570,000**	**$760,000**	**$950,000**	**$1,900,000**
Total	**$720,000**	**$1,430,000**	**$2,150,000**	**$2,870,000**	**$3,580,000**	**$7,170,000**

Source: Economic & Planning Systems

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Currently, there are multiple funding sources in the City for affordable housing. The Affordable Housing Capital Fund, part of the Community Capital Improvement Program, provides $4 Million over 10 years for affordable housing capital needs. From 2021 through 2025, it is estimated to provide $500,000 annually based on sales tax revenue. The Affordable Housing Fund provides $325,000 annually and in 2019 and 2020 received an additional $200,000 from the Keep Fort Collins Great sales tax passed in 2010. The City also distributes federal funds from the Community Development Block Grant and HOME programs. In all, the City typically has between $1.5 to $3.0 million annually to invest in affordable housing now. Even at the 5.0% adoption level, residential linkage fees could add another $720,000 during a strong development cycle. Residential linkage fees could be a meaningful supplement to these funding streams.

Revenue projections for commercial linkage fees are lower than residential development. On an annual average basis, there is less commercial development although individual large projects could have larger revenue impacts. As shown below, commercial linkage fee revenue projections at 50 and 75 percent of the maximum generate between about $75,000 and $110,000 per year.

Table 32 Commercial Linkage Fee Revenue Projections

Land Use	Maximum Fee	5%	10%	25%	50%	75%
Retail						
Fee per SqFt	$2.16	$0.11	$0.22	$0.54	$1.08	$1.62
Annual Construction	15,000	15,000	15,000	15,000	15,000	15,000
Annual Revenue	**$32,418**	**$1,621**	**$3,242**	**$8,105**	**$16,209**	**$24,314**
Office						
Fee per SqFt	$2.46	$0.12	$0.25	$0.61	$1.23	$1.84
Annual Construction	25,000	25,000	25,000	25,000	25,000	25,000
Annual Revenue	**$61,384**	**$3,069**	**$6,138**	**$15,346**	**$30,692**	**$46,038**
Industrial						
Fee per SqFt	$2.19	$0.11	$0.22	$0.55	$1.09	$1.64
Annual Construction	25,000	25,000	25,000	25,000	25,000	25,000
Annual Revenue	**$54,628**	**$2,731**	**$5,463**	**$13,657**	**$27,314**	**$40,971**
Total	**$148,430**	**$7,421**	**$14,843**	**$37,107**	**$74,215**	**$111,322**

Source: Economic & Planning Systems

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4.4.1 Linkage Fee Recommendations

1. Residential linkage fees could be a useful supplemental funding source for affordable housing, with the potential to generate roughly $750,000 per year if adopted at a modest 5.0 percent of the maximum.

In EPS' opinion, linkage fees adopted at 5.0 percent of the maximum which is $0.53 per square foot on residential and $0.11 to $0.12 per square foot on non-residential would have a negligible impact on the market. At the upper end, the proforma testing suggests that the market may be able to bear fees at around 50 percent of the maximum or approximately $5.00 per square foot with a phase-in period. At the 50 percent level, residential linkage fees would generate roughly $7.0 million per year in a strong development cycle. It should be noted that depending on the fee levels, markets can adjust to new fees through a combination of factors such as gradual compression of land values, value engineering, reduced unit sizes, and reduced developer profit. Linkage fees could be a meaningful addition to the current $1.5 to $3.0 million per year the City is able to spend on affordable housing.

2. While commercial linkage fees generate less revenue than residential linkage fees, perhaps $50,000 to $100,000 per year, they could be considered more equitable for both land use categories to share the burden in funding affordable housing.

The commercial linkage fees supported by this analysis are in the $1.00 to $1.25 per square foot range at 50 percent of the maximum and would have a negligible impact on the market. The City could consider adopting residential and non-residential linkage fees in concert with the next capital impact fee update anticipated in 2021 or 2022.

5.0 INCLUSIONARY ZONING FEASIBILITY

The feasibility testing utilizes local market inputs and development prototypes (both existing and prospective) to examine the extent to which a possible inclusionary housing (inclusionary zoning) policy framework (set-asides, affordability levels, incentives, etc.) can be optimized. EPS used a time-series development feasibility pro forma augmented with policy and development scenarios, as well as sensitivities for the purpose of: 1) maximizing the policy's efficiency and effectiveness; and 2) minimizing the negative impacts on development feasibility, measured by a project's internal rate of return (IRR).

This chapter details the major development inputs and assumptions, such as development costs, rent and sales prices, set-asides, area median income (AMI) levels, and summarizes the findings of the scenarios and sensitivity tests.

5.1 Model Structure

5.1.1 Modeling Objectives

The model was built to identify basic feasibility and performance measures of different development prototypes with and without an inclusionary zoning component and to provide a sensitivity analysis regarding how widely those metrics of feasibility change when critical policy assumptions were altered. The secondary function of the model refers to sensitivity testing. Sensitivity tests are conducted on the set-aside proportion, income levels, the in-lieu contribution, the rental incentive, as well as on land values and the amount of density bonus granted a project. Specifically, the model is used to quantitatively identify points of intersection (i.e. optimization) between critical variables:

- **Scenario Performance by Prototype**: The initial layer of the model calculates the financial performance of each development prototype under four scenarios: baseline entitlement (i.e. as is); baseline entitlement with a density bonus; inclusionary zoning requirement plus incentives; alternative payment of cash in-lieu plus incentives.
- **Sensitivity Testing on Inclusionary Zoning Elements**: The next layer of the model examines the impact (on a project's IRR) of different affordability requirements, such as the amount of an affordable housing set-aside requirement (from 0 percent to 100 percent) and level of affordability (between 30 percent AMI and 120 percent AMI) – see discussions beginning on page 89 titled "Affordability and Set-Aside Levels"), the degree of density bonus (between 0 and 100 percent – see discussions beginning on page 99 titled "Density Bonus and Set-Asides"), amount of property tax abatement (between 0 and 100 percent of the difference between pre- and post-development property taxes – see discussions beginning on page 108 titled "Property Tax Abatement"), and cash incentive (between $0 and $300,000 per unit – see discussions beginning on page 85 titled "Per-Unit Cash Incentive").

The objective is to provide a robust set of modeling outputs from which determinations of policy appropriateness can be made.

5.1.2 Prototypes

Interviews with the development community and market research (of existing home sales and rental market data) suggest that the market for residential housing product diversity spans a narrow spectrum – primarily for-sale single-family housing, some duplexes and/or townhomes, and multifamily apartments of approximately five (5) floors. The five prototypes selected for modeling, however, represent a slightly broader spectrum of prototypes to identify how an inclusionary zoning policy framework might impact the feasibility of building forms with different cost structures. Development cost assumptions were primarily sourced through RS Means[18] for consistency. Revenue assumptions for for-sale and rental prototypes were primarily sourced from analysis of MLS data enhanced with some information obtained regarding active or existing local developments.

The model was also built to accommodate both rental and for-sale scenarios along the entire array of prototypes, regardless of whether the tenure format exists currently in the market, e.g. single-family, townhome, 3-, 5-, 10-story condominiums, and 10-story rental.[19] Again, the purpose of modeling the entire spectrum of possible development scenarios is to identify the extent to which different combinations of policy parameters are possible. It should be noted that the density assumptions for the townhomes and higher-density housing prototypes were calibrated with parameters of projects built in central, i.e. more urban, locations of Fort Collins (with the exception of the 10-story prototype). In the case of the 3-story, 5-story, and 10-story prototypes, the implication for the analysis and findings is that modeled land costs would be higher.

- **Single-Family**: this prototype assumes a site of 16.4 acres with 100 units. This equates to a gross density of 6 dwelling units per acre, and an average of 5,000 net square feet per lot, which also equates to a floor area ratio (FAR) of 0.22. Dwelling unit sizes average 1,600 square feet, and the construction type is wood frame.
- **Townhomes**: this prototype assumes a site of 2 acres with 28 two-story dwelling units, equating to a gross density of 14 dwelling units per acre and a FAR of 0.39. Dwelling unit sizes average 1,200 square feet, and the construction type is wood frame.
- **3-Story**: this prototype assumes a site of one (1) acre with 54 units, averaging a gross density of 54 dwelling units per acre (and a FAR of 1.75). This development program is 100 percent surface-parked. Dwelling unit sizes average 1,200 square feet in the for-sale scenario and 900 square feet in the rental scenario. The building has an 85 percent efficiency factor for common areas and mechanicals, and it is estimated that the building would have a floor plate of approximately 25,000 square feet. This building is assumed to be wood-frame construction.
- **5-Story**: this prototype assumes a site of one (1) acre with 190 units, equating to a gross density of 190 dwelling units per acre (and a FAR of 5.13). This development program contains 100 percent structured parking at a cost of $30,000 per space. Dwelling unit sizes average 1,000 square feet in the for-sale scenario and 700 square feet in the rental scenario. The building has an 85 percent efficiency factor for common areas and mechanicals, and it is estimated that the building would have a floor plate of approximately 27,850 square feet.

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18 https://www.rsmeans.com

19 These other tenure formats do, however, exist in other markets in which inclusionary zoning policies have been evaluated or explored.

This building is assumed to be a concrete podium with three (3) to four (4) floors of wood frame construction above.

- **10-Story**: this prototype assumes a site of one (1) acre with 90 units, equating to a gross density of 90 dwelling units per acre (and a FAR of 2.92). This development program is 55 percent surface-parked and has 45 percent structured parking at a cost of $30,000 per space). Dwelling unit sizes average 1,200 square feet in the for-sale scenario and 800 square feet in the rental scenario. The building has an 85 percent efficiency factor for common areas and mechanicals, and it is estimated that the building would have a floor plate of approximately 28,050 square feet. This building is assumed to be steel and concrete construction. It should be noted that only a few examples of this prototype exist currently in the Fort Collins market.

5.1.3 Policy Variables Tested

This feasibility model uses a project's internal rate of return (IRR)[20], which is a standard metric of performance. The objective for evaluating degrees of policy application was to: 1) identify the degree to which they could be adopted; 2) align with the feasibility of a project under current entitlement standards and no affordable housing policy requirement; and 3) align with best practices regarding this policy around the country. The three primary components of the inclusionary zoning policy tested include: the set-aside requirement; affordability levels; and the incentives.

- **Set-Aside**: While it has been common in the past for cities to establish a set-aside that is uniform across construction types, an increasing number of cities have adopted or modified their set-aside structures to vary by construction type or building scale, as well as for-sale versus rental developments. Some cities have also established policies that recognize the nuance of development pressures and needs within specific markets or neighborhoods and established policies that respond with varying degrees of set-aside requirements (affordability requirements and incentives) along these lines. This feasibility analysis was conducted with the possibility that, if inclusionary zoning was determined to be an appropriate policy, the feasibility assessment would have further evaluated this more granular application.
- **Affordability Level**: As with the set-aside requirement, some cities have also structured their income requirements either respond to the geography (e.g. higher income requirements in central business districts or high-cost areas) or to the type of development. The rationale behind structuring appropriate income levels can involve: 1) consideration of where the largest gaps in inventory lie for a community; 2) consideration of where other regulatory or financing tools, such as federal funding, are being placed; and 3) consideration of the community's general goals and perceptions of greatest need. Because the analysis conducted in this project illustrated needs for housing along a spectrum of income levels, and because of the practical limitations of developing housing at lower income levels, the base income levels chosen for evaluation are affordable rental housing at 60 percent AMI and affordable ownership housing at 80 percent of median household income.
- **Bonus Density**: Where sufficient market demand exists, additional density can be valuable, but two shortcomings can commonly arise: 1) that its economic value is inadequate at

20 The IRR is the rate of return that equates the present value of the expected future cashflows to the initial capital invested. Stated differently, it is the discount rate that results in a net present value of zero. For example, the cashflow of a project with an IRR of 10 percent effectively returns the principal (upfront investment) and the equivalent of 10 percent annual interest payments.

offsetting the full scale of an affordability requirement; or 2) that market pressure (demand) is not insufficient, i.e. that there is no demand for the market to develop beyond the level of density allowed by zoning. An additional challenge is that there are prototypes in which additional density thrusts a development into a higher construction cost type (e.g. wood frame construction to steel frame). EPS's model is built to account for the various construction scales at which costs escalate to accommodate different building codes.

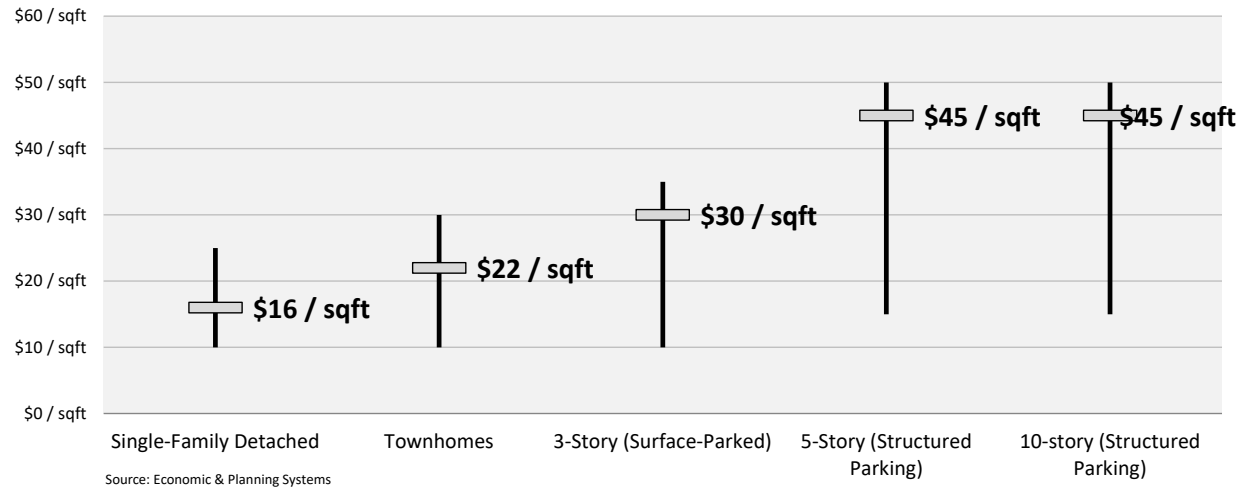
- **Incentives**: It is considered a best practice for communities with inclusionary zoning ordinances to grant some form of incentive to a development meeting the onsite affordability requirements. The most effective incentives in practice include: 1) the density bonus (increased height and/or density); 2) a per-affordable unit cash subsidy or fee waivers; and 3) property tax abatements for rental prototypes. As noted above, this feasibility analysis models varying degrees of additional density (the results of which are discussed beginning on page 99), varying amounts of cash subsidy (the results of which are discussed beginning on page 85), and varying amounts of property tax abatement (the results of which are discussed beginning on page 108).

5.2 Model Assumptions

There are four series of inputs for which this study relied on the input of housing development and industry stakeholders throughout the area, including land costs, vertical development costs, market-rate rent levels and market-rate for-sale prices.

- **Land Costs**: EPS utilized market information from recently-completed market studies, MLS data analysis, and active project information from the development community. **Figure 19** illustrates both general ranges of some of that information, as well as specific inputs used. Inputs used in for-sale prototypes (**Figure 19**) were slightly higher on a per-square-foot of land basis than the rental prototypes (**Figure 20**). It was assumed that land values would be higher in for-sale prototypes to reflect the higher sales price points.

Figure 19 Modeled Land per Square foot Acquisition Costs for For-Sale Development



Source: Economic & Planning Systems

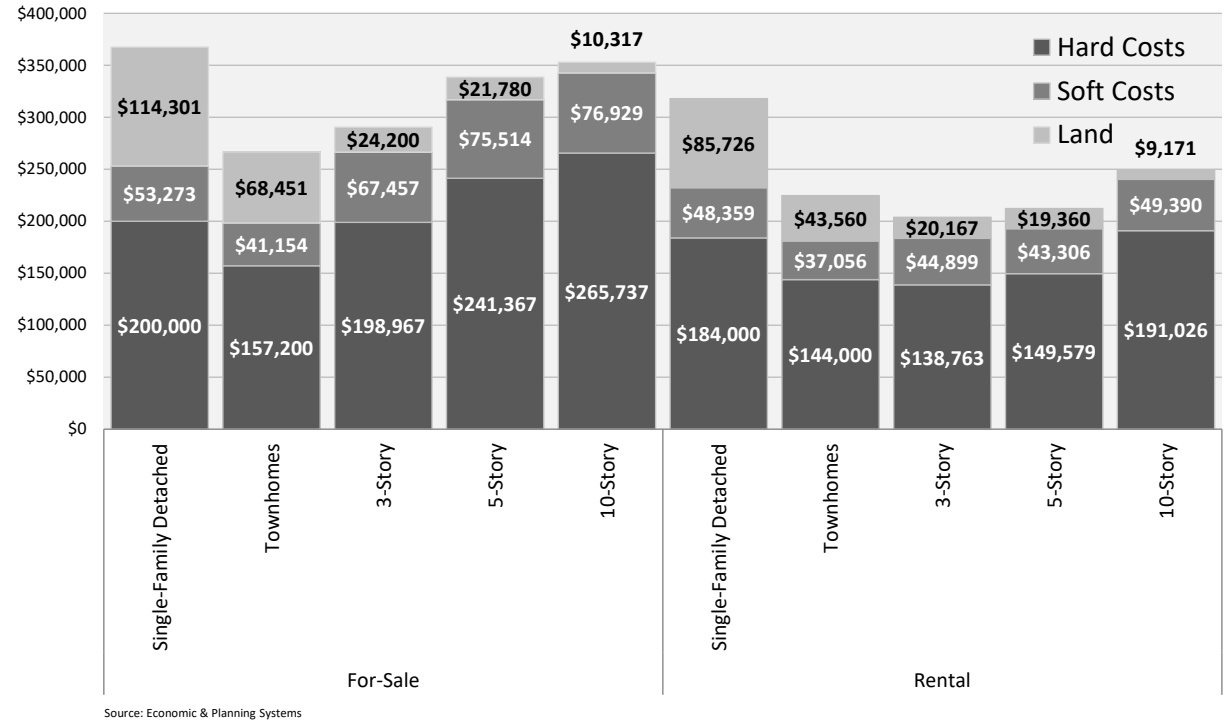
Figure 20 Modeled Land per Square foot Acquisition Costs for Rental Development

Source: Economic & Planning Systems

- **Vertical Development Costs**: **Figure 21** illustrates the per-unit total development cost assumptions (including land). Hard costs include line items such as site work, any grading, infrastructure, materials, and labor on a per-square foot basis. Soft costs include line items such as architectural, engineering, insurance (as well as general liability insurance premiums for condominium developments), legal, construction loan interest carrying costs, etc. on a per-square foot basis. As noted previously, some of the information used to calibrate these inputs originated from information obtained on recently-completed and underway projects. EPS obtained hard cost estimates for the 3-, 5-, and 10-story rental and for-sale prototypes from RS Means. Increases associated with the escalation of hard costs as a result of height increases to a higher-cost building form (such as wood frame to steel or concrete) are built into the model for purposes of estimating the value of the density bonus (see **Figure A52** and **Figure A56** between pages 100 and 104).

  See also the breakdown of the total development costs by component by square foot of gross building area in **Table A36** and **Table A37** on page 70; see **Table A38** and **Table A39** on page 71 for a per-unit development cost breakdown; and see **Table A40** and **Table A41** on page 72 for total development cost breakdowns.

Figure 21 Total Development Costs per Unit



Source: Economic & Planning Systems

- **Rental Rates**: **Figure 22** illustrates the range of per square-foot monthly rental rates for each prototype. Information from existing projects in Fort Collins, as well as building-specific market information from Costar, formed the basis of calibrating specifically the 3- and 5-story rental prototypes. To calibrate rental rates for the single-family, townhome, and 10-story prototypes, EPS applied its understanding of the dynamics of the local rental market, as well as its understanding of how these respective rental rates compare to the 3- and 5-story prototypes in other markets.

Figure 22 Modeled Rental Rate Assumptions

Source: Economic & Planning Systems

- **Sales Prices**: As shown in **Figure 23**, price point inputs were based on existing project information, as well as analysis of the most recent year's MLS data (refer back to **Figure 10** on page 17). Market-rate single-family prototypes were calibrated to $425,000 ($266 per square-foot as shown); townhome prototypes were calibrated to $312,000 ($260 per square-foot); 3-story condominiums were calibrated to $312,000 (also $260 per square-foot)[21]; 5-story condominiums were calibrated to $450,000 ($375 per square-foot); and 10-story condominiums were calibrated to $500,000 ($500 per square-foot). It should be noted that market demand for housing priced above $375 per square-foot does exist, but captures a small portion of the market, which implies slow absorption rate assumptions in the modeling. The feasibility modeling results, however, indicate that (assuming all else being equal) a price point of $500 per square-foot is too low for the 10-story prototype to be feasible in the current market.

Figure 23 Market Rate For-Sale Assumptions

Source: Economic & Planning Systems

[21] It was assumed that there is little difference in construction type between a townhome and a 3-story condominium development; both are wood frame and market research shows that only high-end townhome or 3-story condo developments have higher-cost components, such as elevators. The differentiating factor was that the 3-story condominium was a stacked flat format of the townhome. As such, it was assumed that buyers at the townhome price point would not be inclined to pay more for the stacked flat.

5.3 Financial Performance

5.3.1 Base Entitlement Performance

Following are financial performance measurements of the prototypes under base entitlement. For rental and for-sale projects, the internal rate of return (IRR) was used to measure project performance under current market circumstances. The results also illustrate that certain prototypes would not be feasible even where no inclusionary zoning requirement, incentive, or other associated policy element was applied.

For-Sale Prototypes

The financial performance of for-sale prototypes is illustrated in **Figure 24**. The analysis utilizes price points and respective absorption rates by price point leveraging the analysis of MLS data. As noted previously, since there are few comparables for 3-, 5-, and 10-story condominiums that are absent from Fort Collins' market, EPS applied our understanding of price point and absorption proportionality to these prototypes (refer back to **Figure 10** on page 17 for the analysis of 2019 sales distribution).

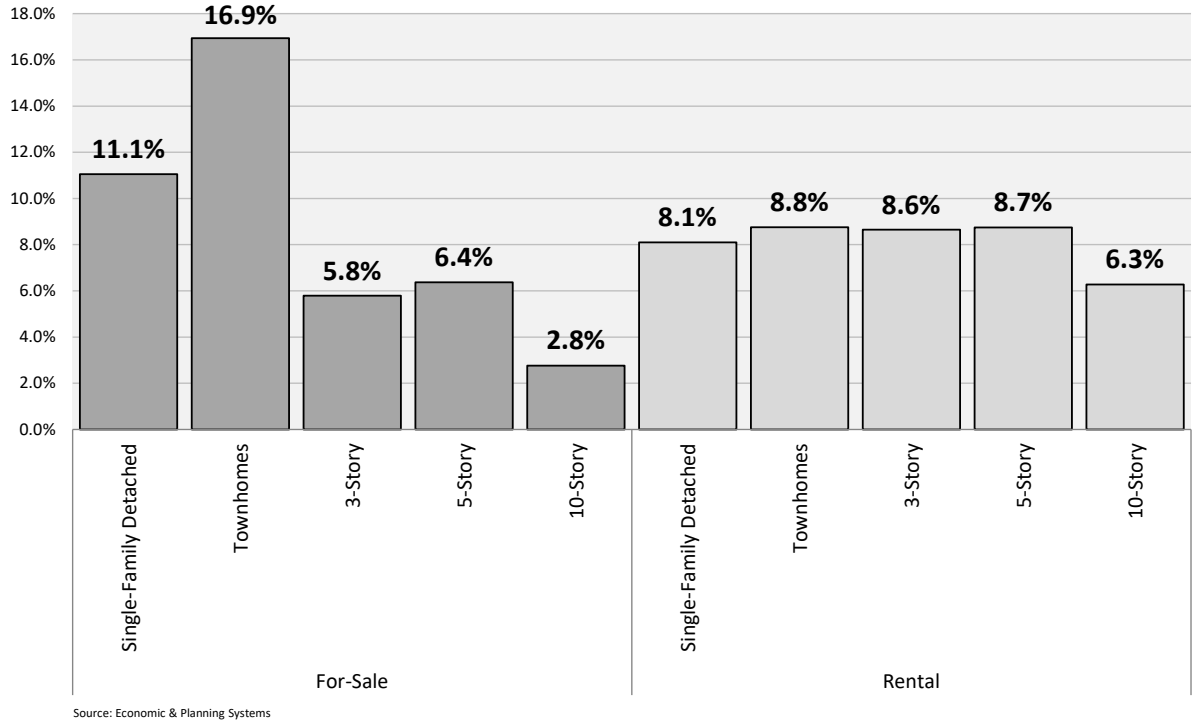
- **Single-Family:** As noted earlier, these units are priced at $266 per square-foot for a unit price of $425,000. The rate of absorption is factored into the model at 5 sales per month, which reflects a 19 percent capture rate of the current for-sale market in Fort Collins priced between $250 and $300 per square-foot based on MLS data analysis. It is estimated that this project could achieve a baseline unleveraged IRR of 11.1 percent.
- **Townhomes**: These units are priced at $260 per square-foot for a unit price of $312,000. The rate of absorption is factored into the model at also 5 units per month, which reflects a 19 percent capture rate of the current for-sale market in Fort Collins priced between $250 and $300 per square-foot based on MLS data analysis. It is estimated that this project could achieve a baseline unleveraged IRR of 16.9 percent.
- **3-Story**: These units are also priced at $260 per square-foot for a unit price of $312,000. The rate of absorption is factored into the model at 2 units per month, lower than the townhome absorption rate to reflect an absence of clarity as to market support for this product type. It is estimated that this project could achieve a baseline unleveraged IRR of 5.8 percent, indicating that adequate market support is not currently present in Fort Collins.
- **5-Story**: These units are priced at $375 per square-foot for a unit price of $450,000. The rate of absorption is factored into the model at 1 unit per month, which reflects a 30 percent capture rate of the current for-sale market in Fort Collins priced between $350 and $400 per square-foot based on MLS data analysis. Also indicative of the inadequate market support for this prototype, it is estimated that this project could achieve a baseline unleveraged IRR of 6.4 percent.
- **10-Story**: These units are priced at $500 per square-foot (a price per square-foot point with only 2 percent of the overall housing sales market) for a unit price of $500,000. The rate of absorption is factored into the model at 1 unit per month, which also reflects a 30 percent capture rate of the current for-sale market in Fort Collins priced above $400 per square-foot based on MLS data analysis. Indicative of the inadequate market support for this prototype, it is estimated that this project could achieve a baseline unleveraged IRR of 2.8 percent.

Rental Projects

The performance of rental prototypes is also characterized in terms of an IRR, though the underlying cash flows differ. Assumptions include annual operations and maintenance (O&M) of the building ($5,500 per year per unit), which includes property taxes for determining the effectiveness of the property tax abatement. Revenues assumptions in these prototypes are modeled with a lease-up period (a project reaches stabilization in year five (5) of the cash flow, at which point it is assumed that a project does not exceed a 95 percent occupancy. Additionally, revenue in the final year modeled (year 15) reflects a reversion, i.e. sale of the project.

- **Single-Family:** While uncommon as an initial development prototype, there is precedent for this type of development nationally. Revenue assumptions are based on a relatively low rental rate per square-foot per month ($1.40 per square-foot or $2,240 per month). This project could achieve an IRR of 8.1 percent.
- **Townhomes**: Revenue assumptions are also based on a relatively low rental rate per square-foot per month ($1.50 per square-foot or $1,800 per month). This project could achieve an IRR of 8.8 percent.
- **3-Story**: Revenue assumptions are based on a rental rate of $1.80 per square-foot per month or $1,620 per month. This project could achieve an IRR of 8.6 percent.
- **5-Story**: Revenue assumptions are based on a rental rate of $2.10 per square-foot per month or $1,680 per month. This project could achieve an IRR of 8.7 percent.
- **10-Story**: There is less precedent for this development prototype in Fort Collins. However, revenue assumptions are based on a slightly higher rental rate of $2.20 per square-foot per month or $1,540 per month for a smaller average unit size. This project could achieve an IRR of 6.3 percent.

Figure 24 Base Entitlement Prototype Internal Rate of Return



Source: Economic & Planning Systems

5.3.2 Scenario Performance

Following are financial performance measurements of the different project prototype scenarios: a) with a density bonus at various degrees and no affordability requirement or incentive – the purpose of this scenario is to illustrate the value (accretive or not) of the density bonus to a project; b) with a density bonus, affordability requirement (range of set-asides and affordability levels) and an incentive (various magnitudes and types); and c) with a density bonus, the payment of an in-lieu contribution to an affordable housing fund for example, and no incentive.

For-Sale Development Scenarios

Table 33 illustrates the maximum IRR achieved through various development scenarios in for-sale projects.

- **Effects of Density Bonus**: In general, for the single-family and townhome prototypes, additional density (if achieved without the acquisition of more land) increases the IRR beyond baseline performance. For the 3- and 10-story prototypes, the IRR remains relatively constant (with rounding). For a 5-story prototype (which utilizes wood frame construction over a concrete podium), however, additional density thrusts the prototype into a costlier construction type, i.e. steel or concrete, which lowers the estimated IRR. Please refer to the discussion of the degree to which this factor (i.e. between 0 and 100 percent) was evaluated beginning on page 99 titled "Density Bonus and Set-Asides”).
- **Effects of Inclusionary Zoning Parameters**: Projects with inclusionary zoning requirements and incentives achieve lower IRRs across prototypes. As shown, the IRRs represent projects with a 20 percent affordability set-aside (at 80 percent AMI) for single-family and townhome prototypes and a 10 percent set-aside (at 80 percent AMI) for 3-, 5-, and 10-story prototypes. Sensitivity testing was used to estimate the optimal amounts of set-aside that could be also achieved while maximizing the IRR as compared to base entitlement. See **Figure A52** through **Figure A56** between pages 100 and 104 for an illustration of this optimization of density bonus, set-aside, and IRR. See also **Figure A37** through **Figure A41** between pages 85 and 88 for an illustration of the sensitivity analysis of per-unit cash subsidy.
- **Effects of Cash In-Lieu Alternative**: Projects that make a cash contribution to an affordable housing fund (for example) in lieu of building affordable units onsite achieve significantly higher financial performance than a project required to meet onsite requirements but not higher financial performance than projects under base entitlement. This assumes, however, that a project is still granted a density bonus, but not a cash incentive.

Table 33 Financial Performance of For-Sale Prototypes

	For-Sale				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-story
Internal Rate of Return					
Base Entitlement	11.1%	16.9%	5.8%	6.4%	2.8%
w/ Density Bonus	12.9%	19.9%	5.8%	3.6%	2.8%
IZ + Onsite Affordability + Incentive	5.4%	12.3%	2.6%	2.1%	1.2%
IZ + CIL	10.9%	16.7%	3.6%	2.9%	2.3%
Profit					
Base Entitlement	$5,754,507	$1,265,435	$1,154,327	$10,020,522	$27,933,379
w/ Density Bonus	$7,511,368	$1,645,946	$1,579,303	$11,230,719	$30,920,653
IZ + Onsite Affordability + Incentive	$3,126,328	$1,354,546	$803,503	$9,438,719	$25,662,453
IZ + CIL	$6,468,507	$1,738,708	$1,073,673	$10,838,204	$29,938,719
Profit Above / Below "Base Entitlement"					
w/ Density Bonus	$1,756,861	$380,511	$424,976	$1,210,197	$2,987,274
IZ + Onsite Affordability + Incentive	-$2,628,179	$89,111	-$350,824	-$581,803	-$2,270,926
IZ + CIL	$713,999	$473,273	-$80,654	$817,682	$2,005,339

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 8 - For-Sale Perf

Rental Development Scenarios

Table 34 illustrates the financial performance of rental prototypes under the four different scenarios. These scenarios assume a reversion or sale of the project in the 15th year from project initiation. It also assumes that a new buyer maintains the affordability requirement. It is important to clarify that this means the financial performance in terms of an estimated return on cost (ROC) would be much higher than a scenario in which a buyer does not maintain the affordability requirement following sale.

In general, these findings illustrate why inclusionary zoning is most effective under rental circumstances. The value of the incentives possible under these prototypes (e.g. the property tax abatement) is far more beneficial to a project's performance than almost any incentive that can be offered to a for-sale prototype.

- **Effects of Density Bonus**: The modeling results indicate that different degrees of density bonus generally have a minimal impact on a prototype's ROC – less so for the 5-story because of the higher-cost construction form being triggered.

- **Effects of Inclusionary Zoning Parameters**: In general, rental projects modeled with inclusionary zoning parameters yielded far better returns than the for-sale counterparts. In fact, the townhome, 3-, 5-, and 10-story prototypes were nearly equivalent to the returns of those projects under base entitlement. Under the rental scenario, however, the property tax abatement is utilized in addition to the density bonus. The returns shown in **Table 34** reflect an incentive in the amount of the difference between the market-rate rents and affordable rents but limited to no more than 50 percent of the difference between pre- and post-development property taxes. As such, IRRs nearly reach base entitlement levels. See **Figure A57** through **Figure A61** between pages 108 and 111 for an illustration of the sensitivity analysis of this element.
- **Effects of Cash In-Lieu Alternative**: Like the effects of a cash in-lieu payment made in a for-sale prototype, projects that make a cash contribution to an affordable housing fund (for example) in lieu of building affordable units onsite achieve financial performance measures generally in line with a project under base entitlement. This also assumes that a project is still granted a density bonus, but not a cash incentive.

Table 34 Financial Performance of Rental Prototypes

	Rental				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-story
Return on Cost					
Base Entitlement	8.1%	8.8%	8.6%	8.7%	6.3%
w/ Density Bonus	8.4%	9.0%	8.9%	8.8%	6.3%
IZ + Onsite Affordability + Incentive	7.0%	8.0%	8.2%	8.7%	6.2%
IZ + CIL	8.1%	9.0%	8.5%	8.7%	6.2%
Net Operating Income					
Base Entitlement	$2,360,525	$497,720	$831,108	$1,456,724	$2,722,884
w/ Density Bonus	$2,596,577	$551,047	$923,453	$1,602,397	$2,995,172
IZ + Onsite Affordability + Incentive	$2,290,876	$508,424	$879,239	$1,585,199	$2,975,184
IZ + CIL	$2,596,577	$568,822	$923,453	$1,618,582	$3,009,503
NOI Above / Below "Base Entitlement"					
w/ Density Bonus	$236,052	$53,327	$92,345	$145,672	$272,288
IZ + Onsite Affordability + Incentive	-$69,649	$10,705	$48,131	$128,475	$252,300
IZ + CIL	$236,052	$71,103	$92,345	$161,858	$286,619

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 9 - Rental Perf

5.4 Sensitivity Testing

Sensitivity testing was completed on major cost and revenue factors that have material impacts on the financial performance of development. The purpose was to maximize the performance of the inclusionary zoning parameters and minimize the negative impacts on feasibility. Analyses were conducted on land value, magnitude of density bonus, affordable housing set-asides, affordability levels, and incentive amounts, such as cash subsidies, tax subsidies, as well as amount and type of in-lieu contribution. The illustration of these sensitivity tests is presented in the **Appendix**.

- **Land value**: This sensitivity test illustrates changes in IRR as a result of changes in a project's land acquisition cost. Generally accounting for 10 to 25 of a project's total development cost, land acquisition costs reflect assumptions of highest and best use and can often be made years in advance of a project's vertical development. As such, the establishment of an inclusionary zoning policy can have an impact on a developer's willingness to pay for land – i.e. that a site's highest and best use either does or does not factor in an affordability requirement. The test evaluated the sensitivity of each prototype's IRR against increments of a single dollar ($1) change per square foot of land acquisition cost. Illustrated in **Figure A27** through **Figure A36** between pages 79 and 84, the results suggest that developers of for-sale projects, with the proposed regulatory structure, would seek to negotiate lower land values to achieve returns on par with anticipated base (pre-regulation) entitlement. Developers of rental projects, with the proposed regulatory and incentive structure, would seek to negotiate only slightly lower land values, if at all.
- **Cash subsidy**: The findings of this sensitivity test confirm that cash incentives in an inclusionary zoning policy cannot practically be set to equal the difference between the market-rate housing sales price and the affordable unit sales price. Illustrated in **Figure A37** through **Figure A41** between pages 85 and 88, this test identifies that the amount of an incentive would be infeasible and impractical for a municipality to subsidize. One consistent finding is that the per-unit cash incentive needs to be higher than the actual gap between the market-rate and affordable unit because additional revenues upfront are necessary to offset the reduced present value of deed-restricted units sold in the future.
- **Income and Supportable Set-Asides in For Sale Prototypes**: Details of the findings in for-sale prototypes are illustrated in **Figure A42** through **Figure A46** between pages 89 and 93, which shows that a uniform set-aside requirement cannot be supported across all development prototypes. The findings, as summarized in **Table 35**, suggest that lower-density prototypes in Fort Collins, e.g. single-family and townhome prototypes, can support an affordability set-aside at 80 percent AMI of approximately five (5) percent while achieving base entitlement financial performance (granting that a project can achieve the higher density without the development of additional land). The findings (also as summarized in **Table 35**) suggest that in Fort Collins, mid- and high-rise projects with an affordability requirement and set-aside cannot achieve the financial performance of base entitlement projects – i.e. no supportable set-aside at any AMI level is feasible. See also **Figure A52** through **Figure A56** between pages 100 and 104 for an illustration of this optimization of density bonus, set-aside, and IRR.

- **Income and Supportable Set-Asides in Rental Prototypes**: The sensitivity analysis illustrates that rental prototypes can achieve a higher level of set-aside than for-sale prototypes. Summarized in **Table 35**, the details of which are illustrated in **Figure A47** through **Figure A51** between pages 94 and 98, the findings indicate that lower-density rental prototypes can support set-asides at 60 percent AMI between eight (8) and 12 percent while achieving an IRR commensurate with base entitlement. Higher-density rental prototypes can support set-asides at 60 percent AMI of four (4) to nine (9) percent. On the for-sale side, the findings indicate that lower-density rental prototypes can support set-asides at 80 percent AMI between four (4) and eight (8) percent while achieving an IRR commensurate with base entitlement. Higher-density for-sale prototypes, however, cannot support set-asides at 80 percent AMI and still achieve base entitlement IRRs.

Table 35 Supportable Set-Asides in For-Sale and Rental Prototypes by AMI

	Single-Family Detached	Townhomes	3-Story (Surface-Parked)	5-Story (Structured Parking)	10-story (Structured Parking)
For-Sale Prototypes					
at 60% AMI	3%	3%	0%	0%	0%
at 80% AMI	4%	6%	0%	0%	0%
at 100% AMI	8%	36%	0%	0%	0%
at 120% AMI	14%	0%	0%	0%	0%
Rental Prototypes					
at 60% AMI	8%	12%	9%	9%	4%
at 80% AMI	9%	15%	9%	8%	2%
at 100% AMI	14%	16%	8%	7%	3%
at 120% AMI	15%	15%	5%	5%	1%

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 7 - Intersect Data

- **Density Bonus and Set-Aside in For-Sale Prototypes**: The findings of this sensitivity analysis, illustrated in **Table A43** and **Table A44** on pages 99 and 105, display supportable affordability set-asides for magnitudes of density bonus ranging between 0 and 100 percent in for-sale prototypes. The series of tables illustrate results of for-sale prototypes with set-asides at 80 percent and 100 percent AMI. The findings suggest that a density bonus in the context of a for-sale prototype has only marginal returns to scale, i.e. that every (1) increment increase in density bonus yields decreasing magnitudes of supportable set-aside. Specifically, the results suggest that the density bonus is marginally effective with single-family prototypes and most effective with townhome prototypes. The findings also suggest that with higher-density prototypes (3- and 5-story projects), only limited amounts of density bonus are positively effective before the additional density pushes a development into a higher-cost construction typology.

- **Density Bonus and Set-Aside in Rental Prototypes**: The findings of this sensitivity analysis, illustrated in **Table A45** through **Table A47** on pages 106 and 107, display supportable affordability set-asides for magnitudes of density bonus ranging between 0 and 100 percent in rental prototypes. The series of tables illustrate results of rental prototypes with set-asides at 60 percent, 80 percent, as well as 100 percent AMI. The findings also suggest that a density bonus in the context of a rental prototype has marginal returns to scale. In addition to suggesting that a density bonus is effective at mitigating the impacts of a set-aside requirement in lower-density prototypes, the results suggest that it is also effective at counterbalancing the set-aside in a 3-story prototype, as well as a set-aside (albeit smaller) in the 5- and 10-story prototypes.
- **Rental Incentive**: The property tax abatement functions in a manner like a tax increment financing district, in which a portion of the incremental increase in property taxes (assessed between pre- and post-development property valuation) are leveraged to support a public use, in this case the provision of affordable housing. This incentive is structured, as noted earlier, effectively as a property tax abatement (or potentially a granting back) on an amount that equaled no more than 50 percent of the difference between pre- and post-development property taxes on an annual basis. The findings illustrated in **Figure A57** through **Figure A61**, suggest that the property tax abatement would need to be in excess of 50 percent of the difference between pre- and post-development property taxes to bring a project's IRR to base entitlement levels.
- **In-Lieu Contribution**: The objective of this sensitivity test is to optimize the amount of the cash in-lieu contribution. Whereas inclusionary zoning policies are typically "units-first" policies and linkage programs typically "fees first" policies, some inclusionary zoning policies in practice are calibrated to favor in-lieu fee collection rather than unit production. The objective of this sensitivity analysis was to identify two thresholds: 1) at which the cash in-lieu payment yields an IRR that equals the base entitlement; and 2) at which the cash in-lieu payment yields an IRR that equals a project with the onsite affordability requirement. The findings, illustrated in **Figure A62** through **Figure A71** between pages 112 and 118, suggest that an optimal in-lieu fee could not be structured high enough in the lower-density prototypes (single-family and townhome prototypes) or the higher-density (5- and 10-story prototypes) to disincent a development from choosing this option over the onsite construction option. It could, however, be structured high enough to incent a 3-story prototype to build units onsite rather than pay the fee in lieu. That is, a fee in-lieu set at 75 percent of the maximum affordable sales price (in a scenario set at 80 percent AMI, this would equate to a fee of $182,000 per unit of affordable housing). Overall, the findings suggest that a fee in-lieu set to 50 percent of the maximum affordable sales price ($121,400 per unit) inherently creates an incentive for developers to pay a fee in-lieu, rather than build units onsite.[22]

22 Research indicates that an IHO does not provide guarantees that a community will get units built in the preferred areas. It has been more common for projects to pay the fee in-lieu, confirmation of the findings of the feasibility analysis in this study.

5.5 Recommendations

5.5.1 Application of an Inclusionary Housing Ordinance

The following are EPS's recommendations following on the analysis of background and housing market conditions, the research, analysis, and modeling of feasibility under numerous policy parameters. They are also grounded in the perspective of having established, as a part of the Housing Affordability Policy Study in 2014, a set of limitations or conditions under which inclusionary zoning could be successful.

5.5.2 Conditions for Successful Implementation of an IHO

As a preface to EPS's recommendations regarding IHO, the following conditions should be acknowledged under which an IHO applied to either for-sale or rental housing could be successful in Fort Collins. As noted, the City has control over some, but not all these conditions, making the likelihood of success a greater challenge.

- **Legal**: Although the feasibility modeling suggests that the incentives available to a rental project are largely sufficient to support the requirements of an IHO (moreover, that it also directly addresses the current, larger need for rental housing – refer back to **Table 10** and **Table 11** on page 29 and 30), the State's current prohibition of rent control creates legal and logistical challenges for communities engaged in this application of the policy.[23]
- **Supply-Side Scarcity**: IHOs are effective where the supply of housing affordable to households earning lower AMI levels (e.g. under 100 percent) is scarce. **Figure 25** and **Figure 26** illustrate how this has not been the case in Fort Collins (in 2013 or in the analysis of 2019 sales). In 2013 (at which time an IHO was not recommended), it was identified that 23 percent of homes sales were affordable to a household earning 100 percent AMI, and 14 percent of sales were affordable to households between 80 and 100 percent AMI.[24] In 2019, the same portion (23 percent) of sales were affordable to a household earning 100 percent AMI, and 13 percent of sales were affordable to households between 80 and 100 percent AMI.

23 In many policies throughout the U.S. inclusionary housing requirements do not or cannot apply to new rental developments. Many states, like Colorado, have statutory prohibitions against "rent control". Nearly two decades ago, the State Supreme Court's "Telluride Decision" prohibited communities from enacting mandatory inclusionary housing ordinances as applied to rental housing. The Colorado State Legislature, however, made limited provisions for housing authorities or similar entities to own and manage deed-restricted affordable housing under HB10-1017, which left room for rental housing to be provided in the context of an inclusionary housing ordinance through voluntary developer agreements. Aspen and Boulder, two of the more prominent examples of communities with such policies, continue to apply their inclusionary housing policies to rental housing projects, although the processes by which these agreements are accomplished require complex legal ownership and operational agreements and are not easily replicable. It also requires substantial administrative support. As noted in the HAPS project, the City of Boulder maintains an IHO for rental housing development that functions only through a legal and administrative process that has to date not been legally challenged. In EPS's work with the City of Boulder on this issue, it was apparent that, although developers attempt to provide units on site, logistical, legal, and even lending issues arose such that made meeting all the requirements extremely difficult.

24 Readers referencing the findings and recommendations in this report and those of the HAPS project from 2013 will note the minor discrepancy in the conclusion that 23 percent (not 22 percent) of sales were affordable to a household earning 100 percent AMI. The difference is due to a more complete year of data, as well as refinement of a few minor underlying inputs to the analysis.

Figure 25 Spectrum of Home Sales and Deed-Restricted Pricing Overlap, 2013

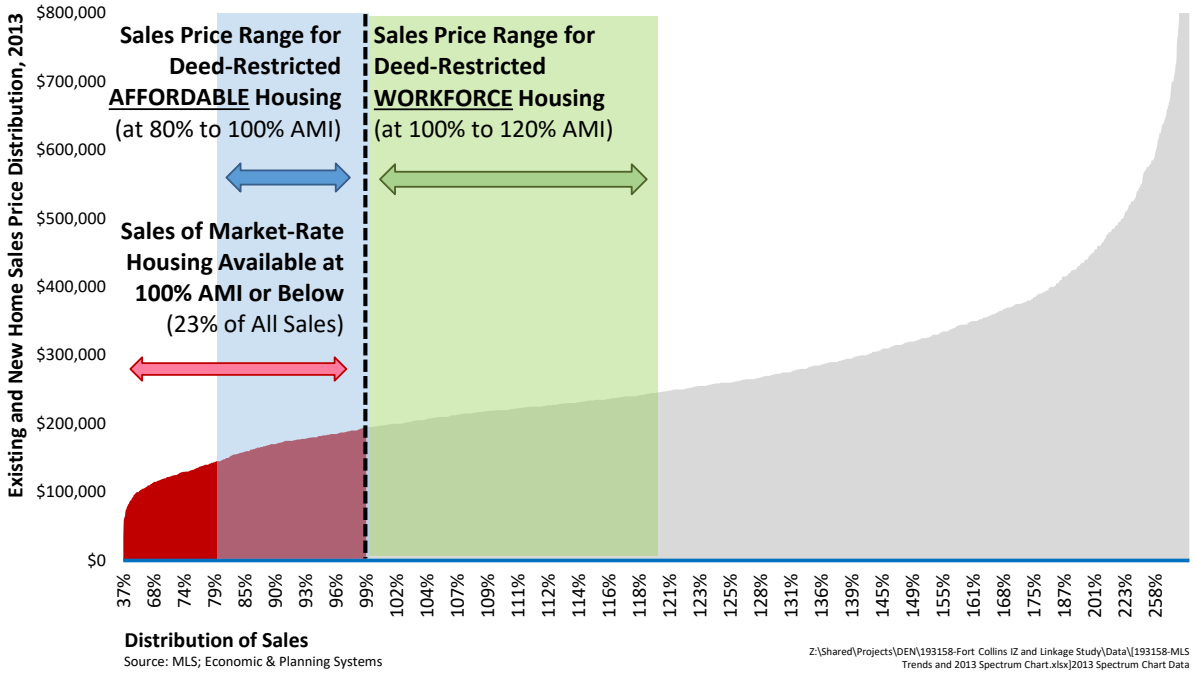
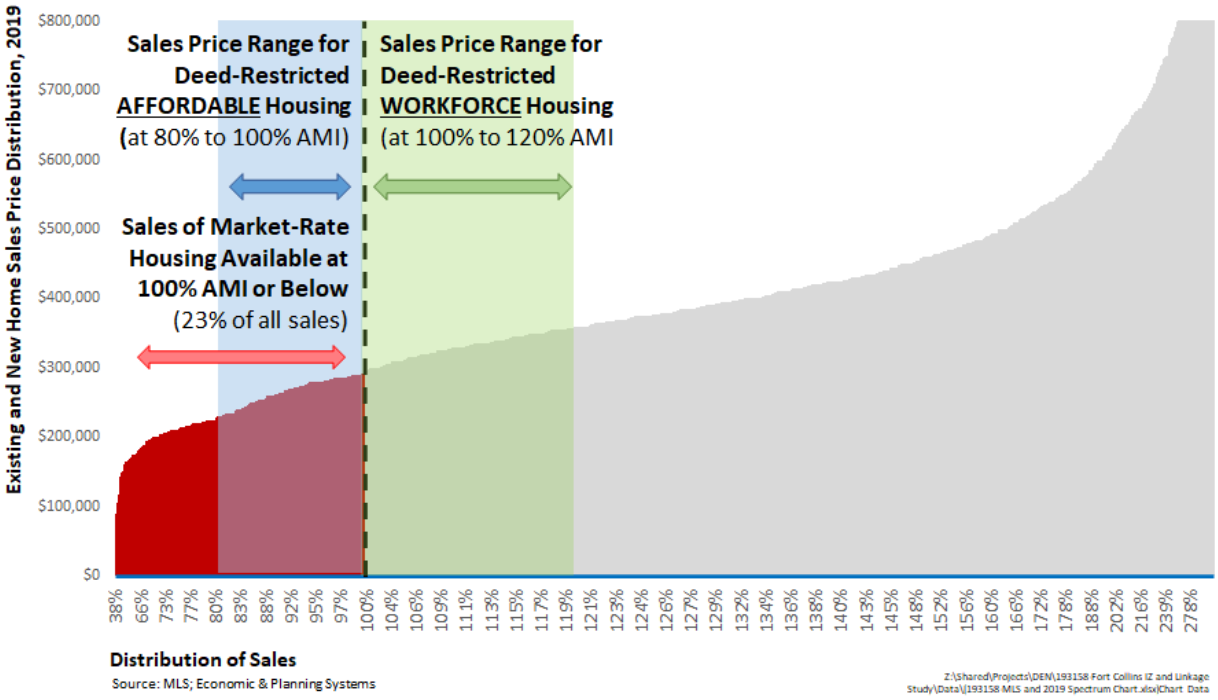


Figure 26 Spectrum of Home Sales and Deed-Restricted Pricing Overlap, 2019



- **Buyer Indifference to Deed Restrictions**: Successful implementation of an IHO requires that end-users (i.e. homebuyers) of affordable units be indifferent to deed restrictions (such as price appreciation caps, shared equity, etc.). For example, in markets like Aspen or San Francisco, wide affordability gaps exist between market-rate and deed-restricted affordable housing price points. Buyers also have no affordable housing alternatives, regardless of quality of housing. In these markets, buyers are comparatively indifferent to the implications of deed restriction on affordable units.
- **Competitive Price Points or Rents**: Relatedly, IHOs are effective tools where there is no overlap in the price points or rents of any market-rate housing and affordable deed-restricted or subsidized housing. Furthermore, the trade area from which potential Fort Collins "buyers" choose housing options extends into the surrounding communities (refer back to the commute shed analysis of **Figure 6** on page 13). As shown in **Figure 15** and **Figure 17** between pages 20 and 22, the analysis of median housing prices and affordability illustrates where potential buyers have a number of comparable and affordable options. Again, markets conducive to IHOs like Aspen and San Francisco are constrained to the point where even the outlying commute shed communities (with relatively short commute times) are also completely unaffordable to households of workers. In communities, such as Fort Collins, the establishment of an IHO potentially encourages buyers to search outside the community for comparably-priced options.
- **Market-Rate Buyer Demand Elasticity**: The counterpart to the "Buyer Indifference to Deed Restrictions" above is that buyers of market-rate units must be indifferent (i.e. have high demand inelasticity) to increases in market-rate price points. National research has demonstrated that IHOs can increase the price of market-rate units in a development between three (3) and five (5) percent to mitigate against the potential revenue lost by selling some units (set-aside) at lower price points (i.e. the affordable units). For example, this feasibility study uses a single-family base entitlement scenario with units priced at $425,000. An increase of five (5) percent would increase those market-rate units to $446,000. The issue this elevates is the price-sensitivity of buyers at certain price ranges. Inevitably, a portion of "middle income" buyers for example that could have afforded a home priced at $425,000 might no longer be able to access that market. In a higher-priced market like Aspen, for example, whether a home is priced at $2.0 million or $2.1 million, does not push out the same portion of buyers (if any).
- **Perception of Density Bonus Value**: This specifically refers to the mechanism of a density bonus as an quid pro quo – i.e. density bonus is granted in proportion to a public benefit provided like affordable housing. The feasibility analysis confirms that a density bonus can be utilized only up to the point where a higher-cost construction type is triggered. This can be a consideration, but for an IHO to be successful, a community's context must satisfy a certain number of preconditions: 1) a density bonus must be perceived to have value to a developer, such that given the option, they take advantage of it; 2) there be no other Land Use Code by which a developer can achieve the same amount of density bonus through other means (e.g. LEED certification); 3) it must also be possible under the Land Use Code; 4) any additional density must be achieved through an increase of density without the purchase of additional land; and 5) there must be sufficient demand for the higher-density product.

5.5.3 Recommendations

1. A mandatory Inclusionary Housing Ordinance is not recommended at this time.

As discussed in the section "Conditions for Successful Implementation of an IHO" beginning on page 70, numerous conditions would need to be satisfied in order for an IHO to be successful in Fort Collins. This includes: legal constraints (i.e. statutory prohibition against rent control); supply-side scarcity; affordable housing buyer indifference to deed restrictions; the absence of competitive price points or rents; market-rate housing buyer demand inelasticity (i.e. indifference to market-rate pricing increases); and a perception from the development community and buyer side that additional density has value and is possible under the City's Land Use Code. If a market cannot meet these preconditions, it is possible that an IHO could: 1) negatively impact land values; 2) diminish a project's feasibility; 3) potentially deter some projects; and 4) result in "cost-shifting", i.e. an increase of market-rate pricing structures if a project did proceed. It is also important to consider the potential yield for this policy, which would apply only to for-sale housing production. As discussed in **Figure 7** on page 14, the average pace of single-family construction in the City was 400 units per year between 2005 and 2019. Assuming even that an additional 100 units of multifamily housing were for-sale condominiums, a 5 to 10 percent set-aside on a total of 500 units per year would yield between 25 and 50 units per year.

2. The City could pilot a rental project incentive policy that leverages the property tax abatement for rental projects.

Findings support this recommendation: 1) the gaps analysis (refer back to **Table 10** and **Table 11** on page 29 and 30) illustrates that the need for affordable rental housing needs is twice as great as the need for deed-restricted affordable ownership housing; 2) the feasibility modeling (refer to the discussion of **Table 34** on page 66) suggests that the density bonus and the property tax incentive are far more effective at replicating a rental project's base entitlement IRR than the density bonus and any other incentive (e.g. per-affordable unit cash subsidy) are at replicating a for-sale project's base entitlement IRR; and 3) the sensitivity tests run on set-asides at various AMI levels (refer to the discussion of **Table 35** on page 68) that affordability set-asides are more supportable in more programmatically meaningful magnitudes in rental prototypes than for-sale prototypes.

Because the statutory prohibition against rent control still stands[25], EPS believes it would be strategic for the City to consider offering an incentive policy that applies to market-rate rental projects. Under such a policy, participation in the policy is not compulsory, but voluntary. That is, developers interested in providing affordable rentals could access a property tax abatement equal to the difference between the market and affordable rents provided in the development up to 50 percent of the difference between the pre- and post-development property taxes. Modeling suggests that 3-, 5-, and 10-story rental prototypes could provide a set-aside of four (4) to nine (9) percent of units at 60 percent AMI and achieve base entitlement IRRs. This policy structure has precedent in other communities, such as: Arlington County (VA), Austin, Asheville, Boston, Cambridge, Chicago, Portland, and Seattle. In some communities, the request for upzoning, change in entitlements, or the request for public financing (in mixed-use projects, for example) triggers such a policy (e.g. Boston, Chicago, and New York).

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25 Senate Bill 225 had been proposed at the beginning of this year's legislative session to repeal the prohibition on rent control. As of April 30th, the bill will not be moving forward this year. https://www.denverpost.com/2019/04/30/rent-control-bill-colorado-senate/

Appendix A:
Supporting Information and Sensitivity Analysis

Development Costs

The following series of tables summarize total development costs for each prototype, including hard and soft construction costs and land acquisition costs.

- **Development Costs per Gross Building Area**: **Table A36** and **Table A37** show the various components of total development cost on a per square-foot basis for all for-sale and rental prototypes. As noted in the main body of the report (see **Figure 19** and **Figure 20** on pages 58 and 59), the hard cost assumptions were sourced using RS Means data.
- **Development Costs per Unit**; **Table A38** and **Table A39** show development costs on a per-unit basis for all for-sale and rental prototypes.
- **Development Costs**: **Table A40** and **Table A41** show total development costs for the entire project for all for-sale and rental prototypes

Table A36 For-Sale Prototype Development Cost Summary per Gross Building Area SQFT

	Development Costs per Square-Foot of Gross Building Area				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-story
Hard Costs	$125 / sqft	$131 / sqft	$141 / sqft	$156 / sqft	$180 / sqft
Soft Costs					
Architectural & Engineering	$7 / sqft	$7 / sqft	$8 / sqft	$9 / sqft	$12 / sqft
Development Fees & Admin.	$4 / sqft	$4 / sqft	$4 / sqft	$5 / sqft	$7 / sqft
Permits, Fees, & Entitlement	$1 / sqft	$1 / sqft	$1 / sqft	$1 / sqft	$2 / sqft
Insurance	$5 / sqft	$5 / sqft	$7 / sqft	$8 / sqft	$9 / sqft
Legal	$2 / sqft	$2 / sqft	$2 / sqft	$2 / sqft	$2 / sqft
Other	$5 / sqft	$5 / sqft	$7 / sqft	$8 / sqft	$9 / sqft
Contingency	$5 / sqft	$5 / sqft	$5 / sqft	$6 / sqft	$7 / sqft
Subtotal Soft	$26 / sqft	$27 / sqft	$38 / sqft	$42 / sqft	$51 / sqft
Financing (Cost of Carry)	$7 / sqft	$7 / sqft	$10 / sqft	$11 / sqft	$12 / sqft
Land	$71 / sqft	$57 / sqft	$17 / sqft	$15 / sqft	$9 / sqft
Total Development Costs	**$230 / sqft**	**$222 / sqft**	**$206 / sqft**	**$224 / sqft**	**$251 / sqft**

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table vii - For-Sale Dev Costs

Table A37 Rental Prototype Development Cost Summary per Gross Building Area SQFT

	Development Costs per Square-Foot of Gross Building Area				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-story
Hard Costs	$115 / sqft	$120 / sqft	$131 / sqft	$139 / sqft	$170 / sqft
Soft Costs					
Architectural & Engineering	$6 / sqft	$7 / sqft	$7 / sqft	$8 / sqft	$11 / sqft
Development Fees & Admin.	$3 / sqft	$4 / sqft	$4 / sqft	$4 / sqft	$6 / sqft
Permits, Fees, & Entitlement	$1 / sqft	$1 / sqft	$1 / sqft	$1 / sqft	$2 / sqft
Insurance	$4 / sqft	$4 / sqft	$5 / sqft	$5 / sqft	$6 / sqft
Legal	$2 / sqft	$2 / sqft	$2 / sqft	$2 / sqft	$2 / sqft
Other	$4 / sqft	$4 / sqft	$5 / sqft	$5 / sqft	$6 / sqft
Contingency	$4 / sqft	$4 / sqft	$5 / sqft	$5 / sqft	$6 / sqft
Subtotal Soft	$24 / sqft	$25 / sqft	$33 / sqft	$35 / sqft	$45 / sqft
Financing (Cost of Carry)	$6 / sqft	$6 / sqft	$9 / sqft	$10 / sqft	$11 / sqft
Land	$54 / sqft	$36 / sqft	$19 / sqft	$21 / sqft	$11 / sqft
Total Development Costs	**$199 / sqft**	**$187 / sqft**	**$192 / sqft**	**$204 / sqft**	**$237 / sqft**

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table viii - Rental Dev Costs

Table A38 For-Sale Prototype Development Cost Summary per Unit

	Development Costs per Unit				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-story
Hard Costs	$200,000	$157,200	$198,967	$241,367	$265,737
Soft Costs					
Architectural & Engineering	$10,860	$8,536	$11,352	$12,569	$13,573
Development Fees & Admin.	$6,033	$4,742	$6,306	$6,983	$8,144
Permits, Fees, & Entitlement	$1,508	$1,186	$1,577	$1,746	$2,036
Insurance	$7,240	$5,690	$10,090	$11,172	$10,858
Legal	$3,017	$2,371	$3,153	$3,491	$2,715
Other	$7,240	$5,690	$10,090	$11,172	$10,858
Contingency	$7,240	$5,690	$7,568	$8,379	$8,144
Subtotal Soft	$43,137	$33,906	$50,136	$55,513	$56,327
Financing (Cost of Carry)	$11,946	$8,671	$14,168	$15,069	$13,711
Land	$114,301	$68,451	$24,200	$21,780	$10,317
Total Development Costs	**$369,385**	**$268,229**	**$287,470**	**$333,729**	**$346,092**

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table ix - FS Costs per Unit

Table A39 Rental Prototype Development Cost Summary per Unit

	Development Costs per Unit				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-story
Hard Costs	$184,000	$144,000	$138,763	$149,579	$191,026
Soft Costs					
Architectural & Engineering	$9,991	$7,819	$7,818	$7,370	$8,862
Development Fees & Admin.	$5,551	$4,344	$4,343	$4,094	$5,317
Permits, Fees, & Entitlement	$1,388	$1,086	$1,086	$1,024	$1,329
Insurance	$6,661	$5,213	$5,212	$4,913	$5,317
Legal	$2,775	$2,172	$2,172	$2,047	$1,772
Other	$6,661	$5,213	$5,212	$4,913	$5,317
Contingency	$6,661	$5,213	$5,212	$4,913	$5,317
Subtotal Soft	$39,686	$31,059	$31,053	$29,275	$33,234
Financing (Cost of Carry)	$10,338	$7,300	$9,937	$9,049	$8,919
Land	$85,726	$43,560	$20,167	$19,360	$9,171
Total Development Costs	**$319,750**	**$225,919**	**$199,920**	**$207,263**	**$242,350**

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table x - Rent Costs per Unit

Table A40 For-Sale Prototype Development Cost Summary

	Development Costs				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-story
Hard Costs	$20,000,000	$4,401,600	$10,744,200	$21,723,000	$50,490,000
Soft Costs					
Architectural & Engineering	$1,085,973	$239,001	$612,981	$1,131,210	$2,578,846
Development Fees & Admin.	$603,318	$132,778	$340,545	$628,450	$1,547,308
Permits, Fees, & Entitlement	$150,830	$33,195	$85,136	$157,113	$386,827
Insurance	$723,982	$159,334	$544,872	$1,005,520	$2,063,077
Legal	$301,659	$66,389	$170,273	$314,225	$515,769
Other	$723,982	$159,334	$544,872	$1,005,520	$2,063,077
Contingency	$723,982	$159,334	$408,654	$754,140	$1,547,308
Subtotal Soft	$4,313,725	$949,365	$2,707,334	$4,996,178	$10,702,212
Financing (Cost of Carry)	$1,194,619	$242,793	$765,067	$1,356,227	$2,605,108
Land	$11,430,144	$1,916,640	$1,306,800	$1,960,200	$1,960,200
Total Development Costs	**$36,938,488**	**$7,510,398**	**$15,523,401**	**$30,035,605**	**$65,757,519**

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table xi - FS Costs

Table A41 Rental Prototype Development Cost Summary

	Development Costs				
	Single-Family Detached	**Townhomes**	**3-Story**	**5-Story**	**10-story**
Hard Costs	$18,400,000	$4,032,000	$7,493,200	$13,462,150	$36,295,000
Soft Costs					
Architectural & Engineering	$999,095	$218,932	$422,152	$663,285	$1,683,861
Development Fees & Admin.	$555,053	$121,629	$234,529	$368,491	$1,010,316
Permits, Fees, & Entitlement	$138,763	$30,407	$58,632	$92,123	$252,579
Insurance	$666,063	$145,955	$281,435	$442,190	$1,010,316
Legal	$277,526	$60,814	$117,264	$184,246	$336,772
Other	$666,063	$145,955	$281,435	$442,190	$1,010,316
Contingency	$666,063	$145,955	$281,435	$442,190	$1,010,316
Subtotal Soft	$3,968,627	$869,647	$1,676,882	$2,634,713	$6,314,478
Financing (Cost of Carry)	$1,033,776	$204,400	$536,578	$814,405	$1,694,593
Land	$8,572,608	$1,219,680	$1,089,000	$1,742,400	$1,742,400
Total Development Costs	**$31,975,012**	**$6,325,727**	**$10,795,660**	**$18,653,668**	**$46,046,471**

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table xii - Rent Costs

Land Acquisition Cost Sensitivity

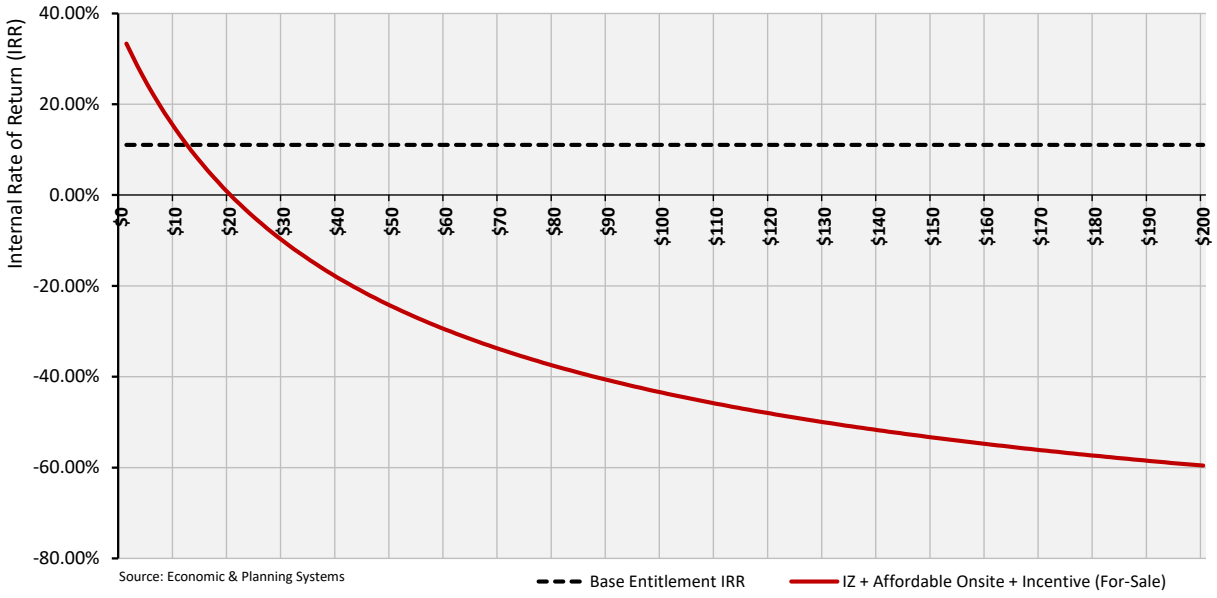
In a land transaction, the developer or purchaser will consider market supply and demand conditions, market price points or rents, absorption or leasing trends, the cost of capital, and site constraints (such as development limitations, remediation costs, liens, etc.), among other things, in estimating supportable land value. In such an analysis, an inclusionary zoning policy is perceived as a cost to development, commensurately lowering supportable land value. This analysis runs values of $1 to $200 per square foot through the model with all other assumption held constant to measure impact to the project's IRR.

For-Sale Prototypes

Single-Family

Analysis suggests that land acquisition costs of $12 per square foot (compared to the input $16 per square-foot) could achieve the same IRR as a project under base entitlement.

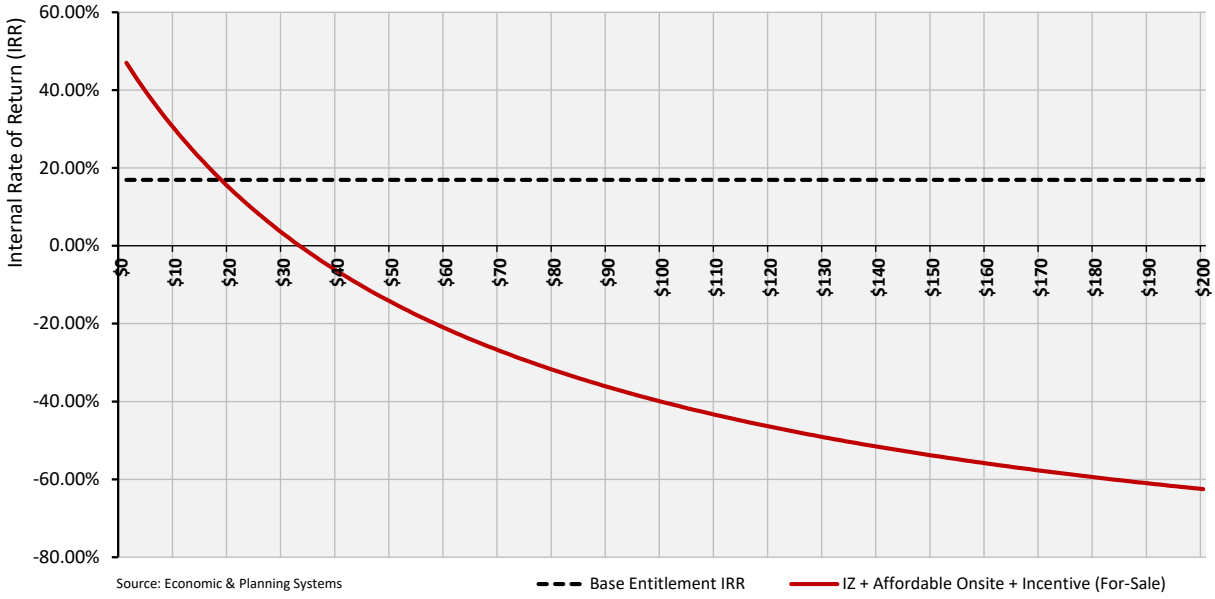
Figure A27 Single-Family For-Sale IRR and Land Value



Townhome

Analysis suggests that land acquisition costs of $19 per square foot (compared to the input $22 per square-foot) could achieve the same IRR as a project under base entitlement.

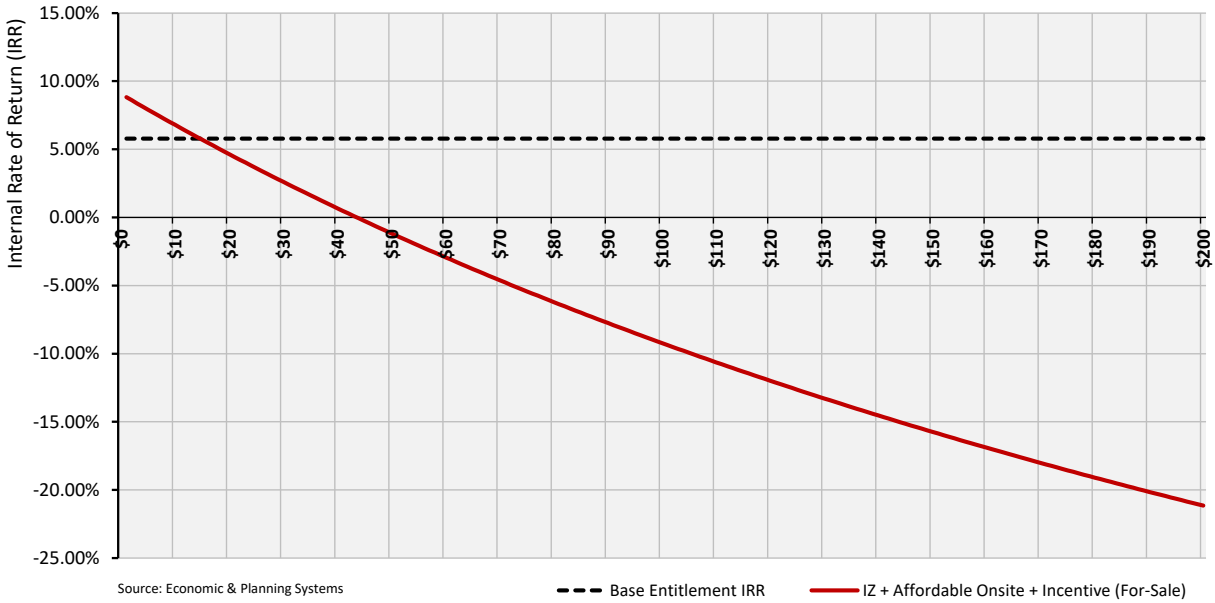
Figure A28 Townhome For-Sale IRR and Land Value



3-Story

Analysis suggests that land acquisition costs of $15 per square foot (compared to the input $30 per square-foot) could achieve the same IRR as a project under base entitlement.

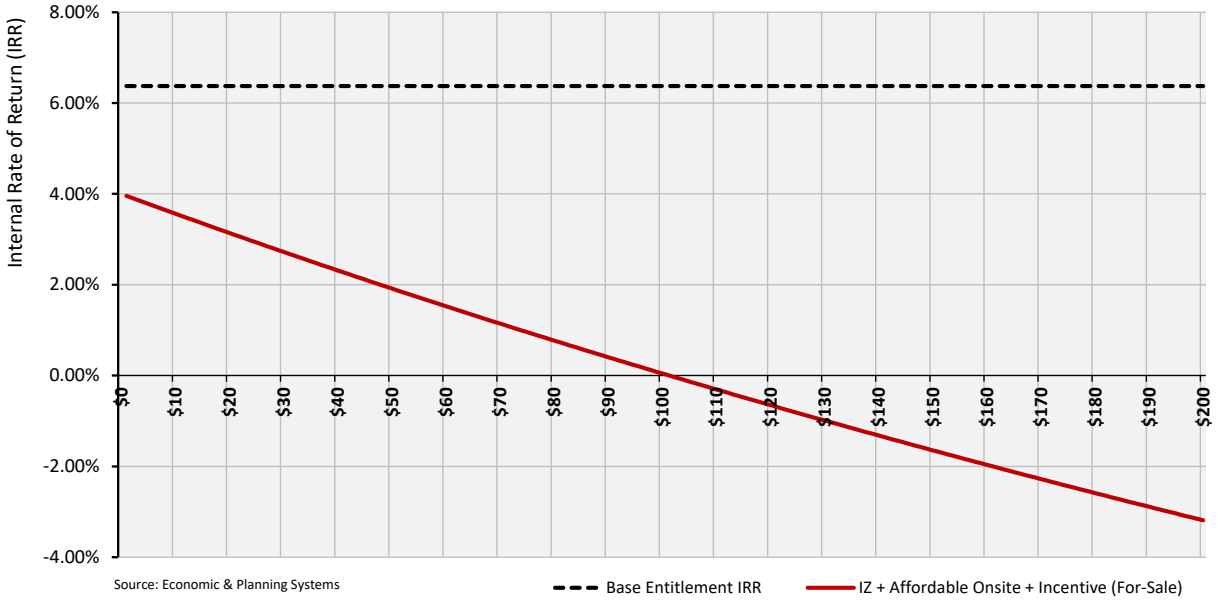
Figure A29 3-Story For-Sale IRR and Land Value



5-Story

This analysis suggests that the land acquisition cost could not be reduced enough to achieve the same IRR as a project under base entitlement.

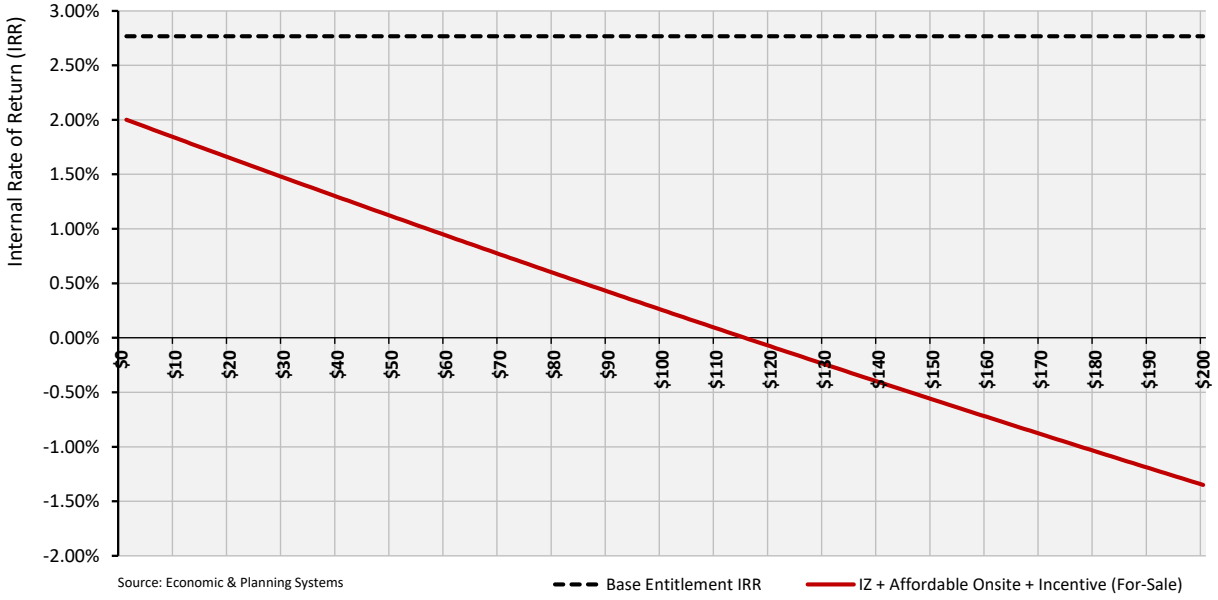
Figure A30 5-Story For-Sale IRR and Land Value



10-Story

This analysis suggests that the land acquisition cost could not be reduced enough to achieve the same IRR as a project under base entitlement.

Figure A31 10-Story For-Sale IRR and Land Value

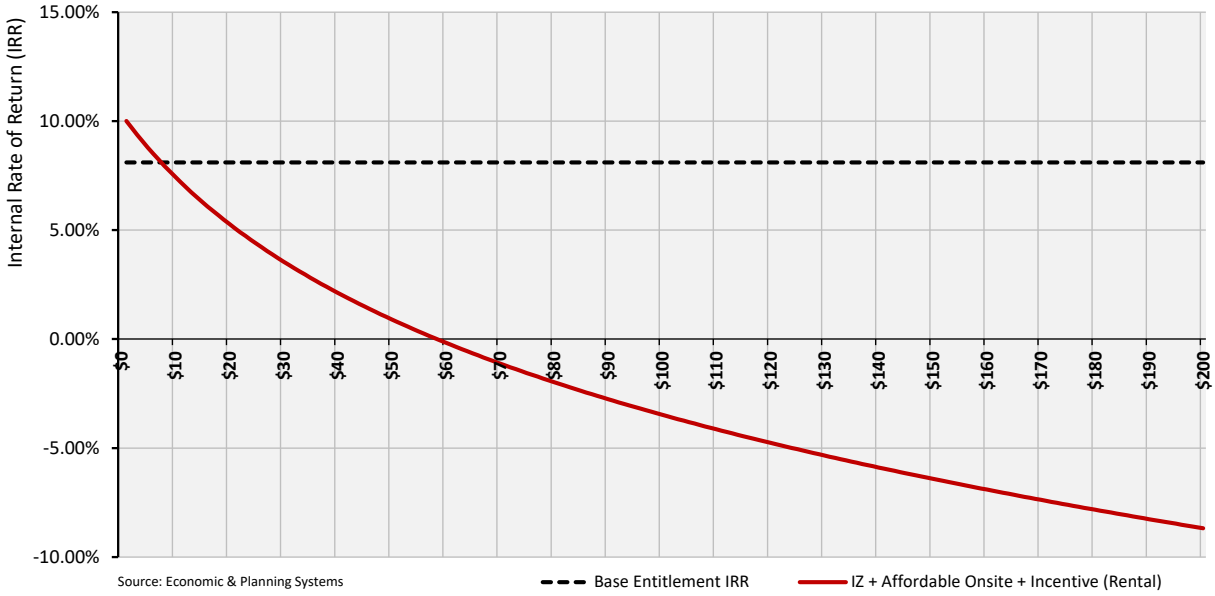


Rental Prototypes

Single-Family

Analysis suggests that land acquisition costs of $8 per square foot (compared to the input $12 per square-foot) could achieve the same IRR as a project under base entitlement.

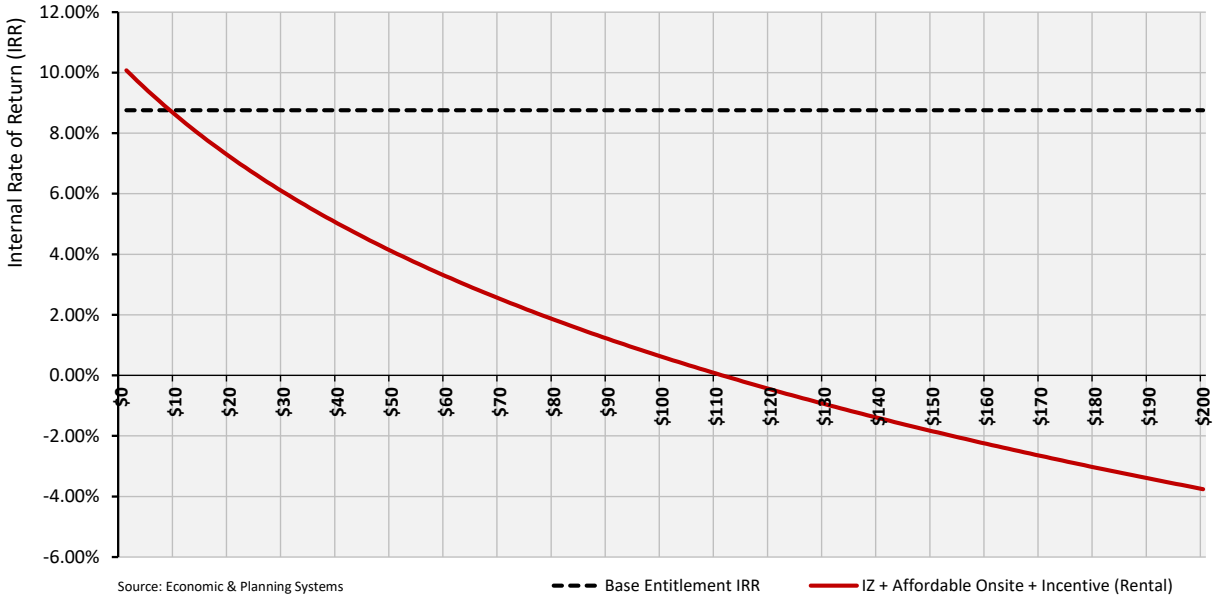
Figure A32 Single-Family Rental IRR and Land Value



Townhome

Analysis suggests that land acquisition costs of $10 per square foot (compared to the input $14 per square-foot) could achieve the same IRR as a project under base entitlement.

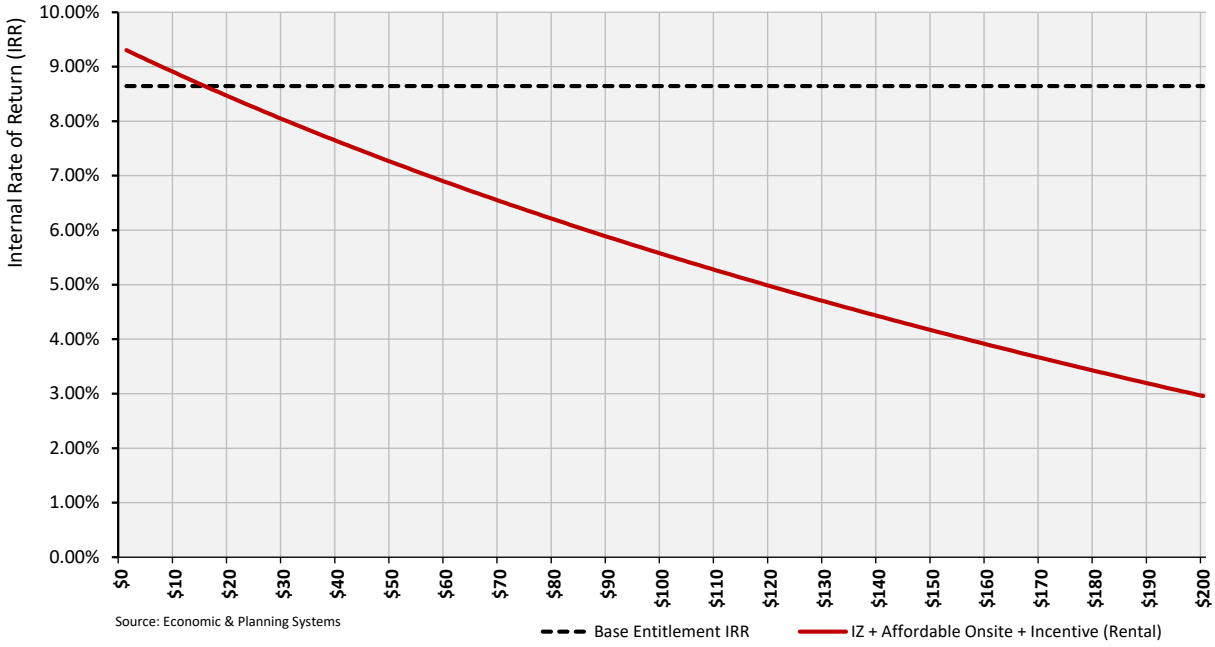
Figure A33 Townhome Rental IRR and Land Value



3-Story

Analysis suggests that land acquisition costs of $13 per square foot (compared to the input $25 per square-foot) could achieve the same IRR as a project under base entitlement.

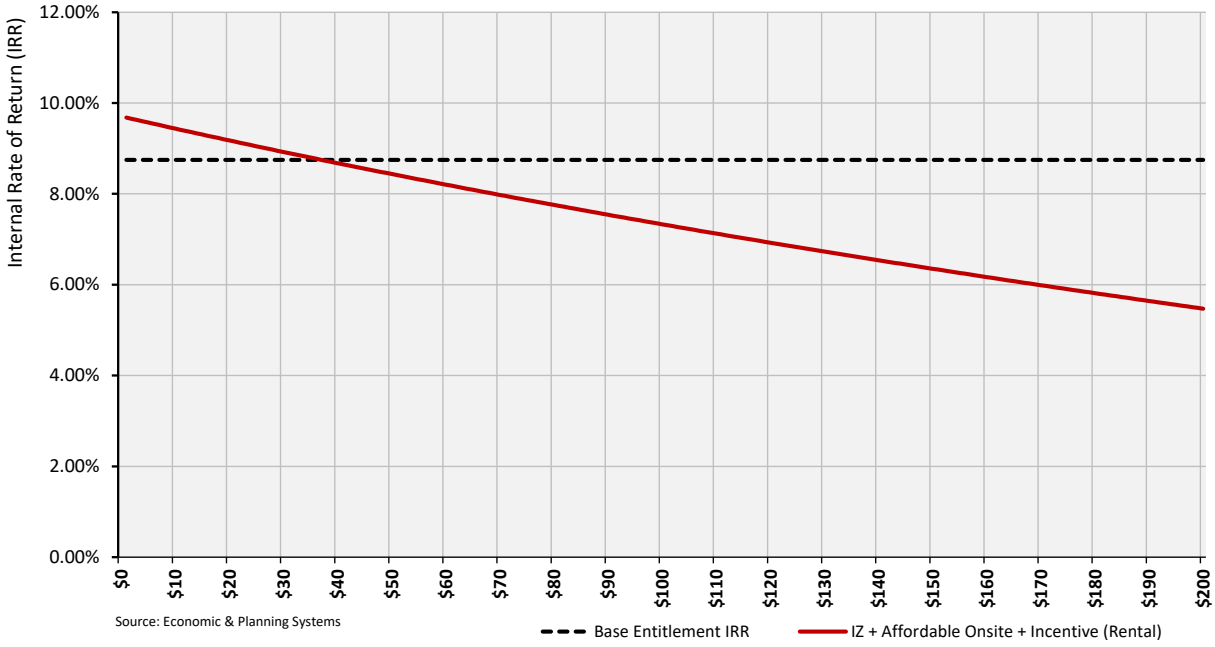
Figure A34 3-Story Rental IRR and Land Value



5-Story

Analysis suggests that land acquisition costs of $38 per square foot (compared to the input $40 per square-foot) could achieve the same IRR as a project under base entitlement.

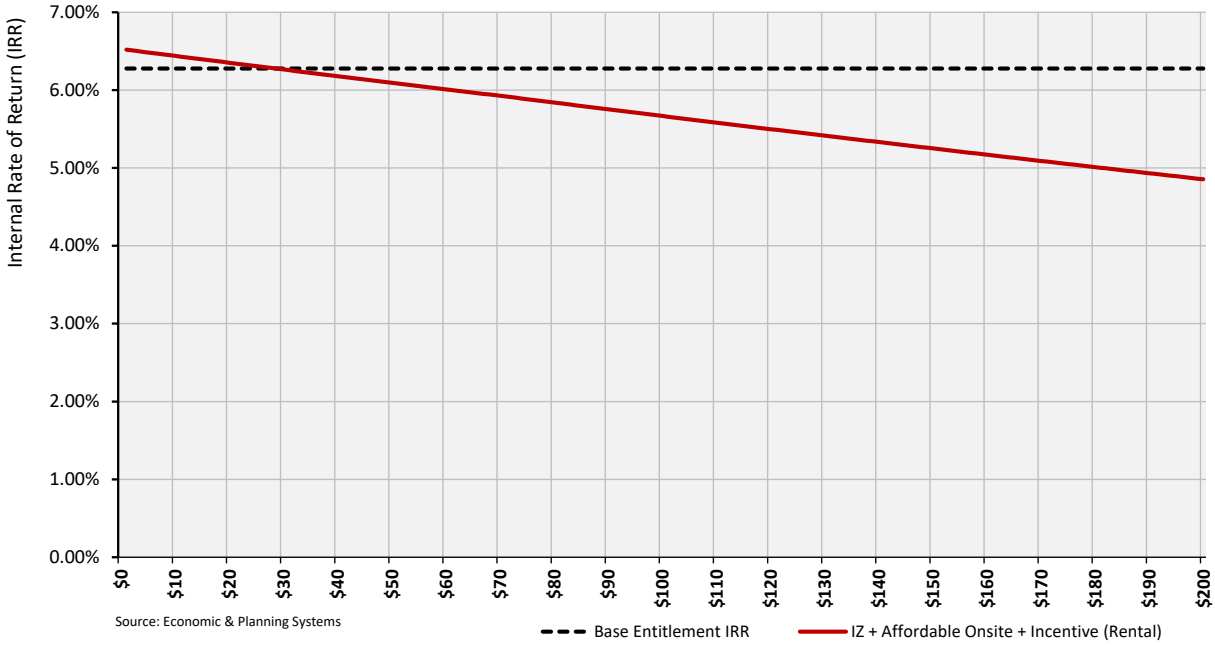
Figure A35 5-Story Rental IRR and Land Value



10-Story

Analysis suggests that land acquisition costs of $30 per square foot (compared to the input $40 per square-foot) could achieve the same IRR as a project under base entitlement.

Figure A36 10-Story Rental IRR and Land Value



Summary

In general, the results suggest that developers of for-sale projects, with the proposed regulatory structure, would seek to negotiate lower land values to achieve returns on par with anticipated base (pre-regulation) entitlement. Developers of rental projects, with the proposed regulatory and incentive structure, would seek to negotiate only slightly lower land values, if at all.

Per-Unit Cash Incentive

The findings of this sensitivity test confirm that cash incentives in an inclusionary zoning policy cannot practically be set to equal the difference between the market-rate housing sales price and the affordable unit sales price. Measurements of IRR were collected under each scenario where the per-unit cash incentive was varied from $0 to $300,000. The findings suggest that (except for a townhome development) an incentive would have to be in excess of the gap between the market-rate and affordable price points to align the IRRs (see **Table A42**). That is, the incentive must be higher than the actual gap between the market-rate and affordable unit because additional revenues upfront are necessary to offset the reduced present value of deed-restricted units sold in the future.

Table A42 For-Sale Project Per-Unit Incentive Needed vs. Actual Gap

	Single-Family Detached	Townhomes	3-Story	5-Story	10-Story
Per-Unit Incentive for For-Sale Development					
Actual Gap	$199,320	$86,200	$86,200	$224,200	$274,200
Per-Unit Incentive Necessary	$244,289	$67,347	$127,590	$895,710	$336,347

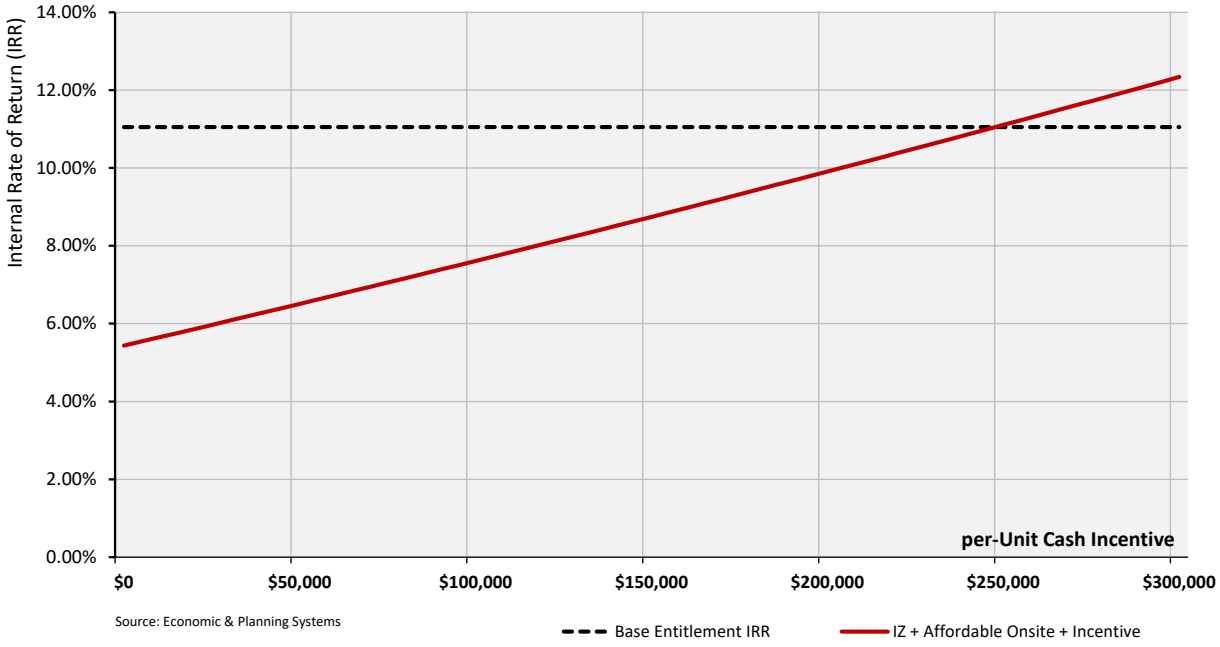
Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 16 - Other Sensitivities

Single-Family

The results of the analysis suggest that the per-unit incentive would need to be approximately $244,000 (whereas the difference between a market-rate and affordable unit is $199,000) to bring the IRRs of these scenarios into alignment.

Figure A37 Single-Family IRR and Cash Incentive

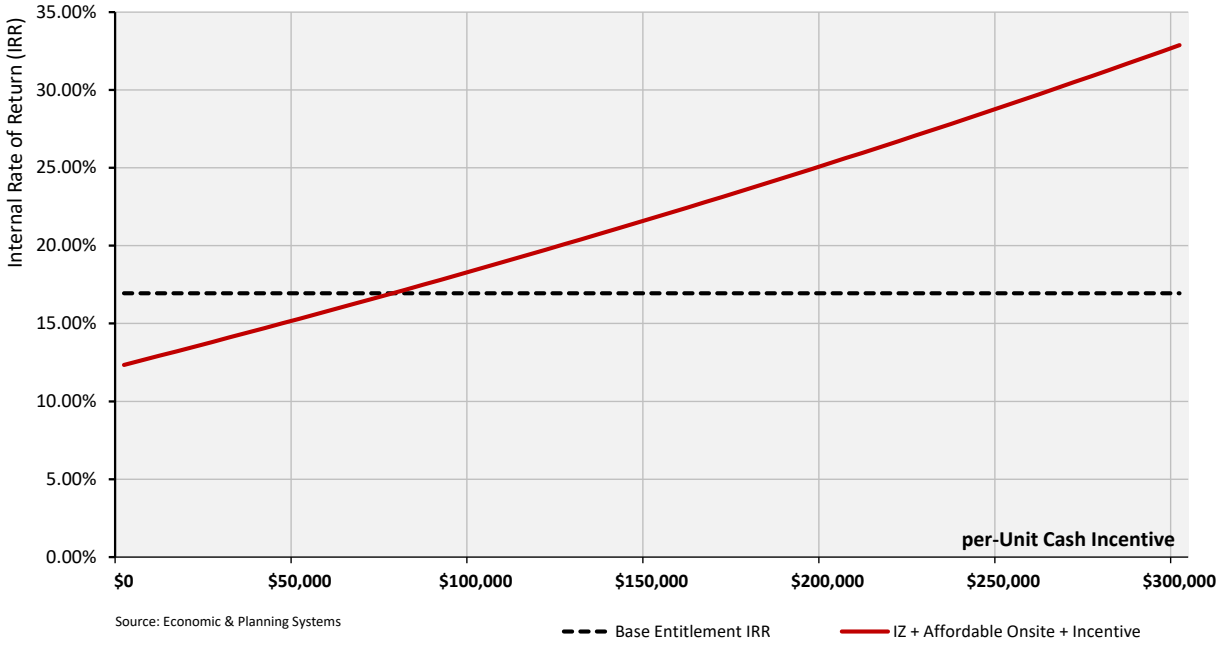


Source: Economic & Planning Systems

Townhome

The results of the analysis suggest that the per-unit incentive could be $67,000 to (compared to the $86,000 difference between a market-rate and affordable unit 000) to bring the IRRs of these scenarios into alignment.

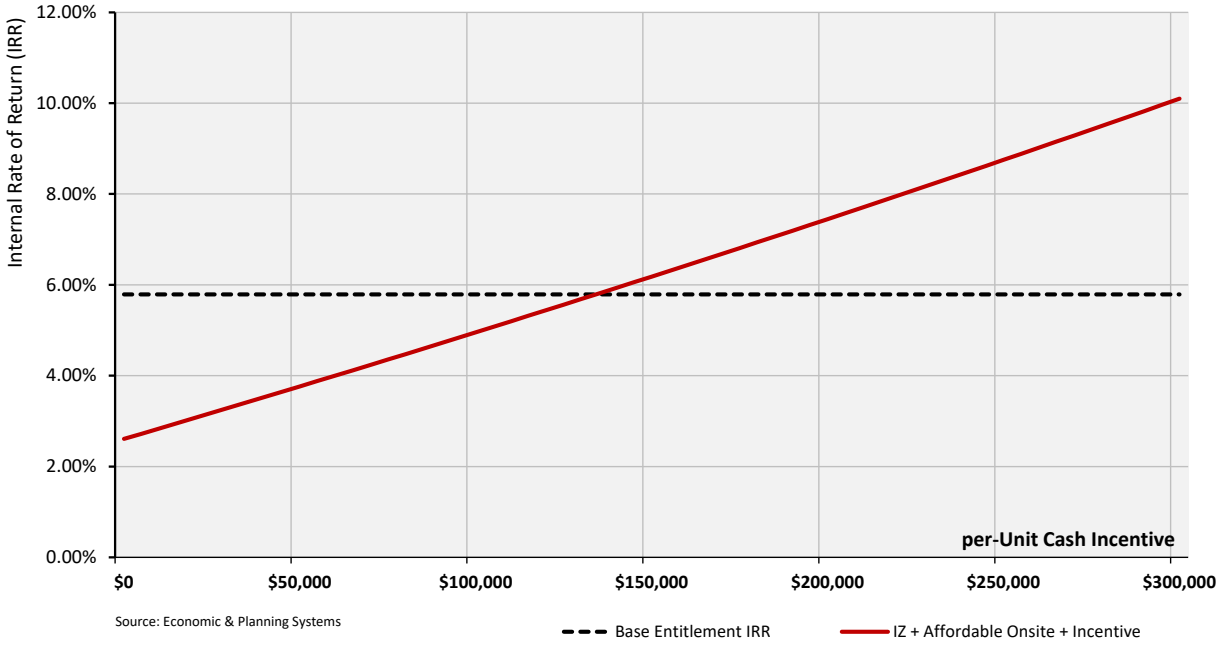
Figure A38 Townhome IRR and Cash Incentive



3-Story

The results of the analysis suggest that the per-unit incentive would need to be approximately $128,000 (whereas the difference between a market-rate and affordable unit is $86,000) to bring the IRRs of these scenarios into alignment.

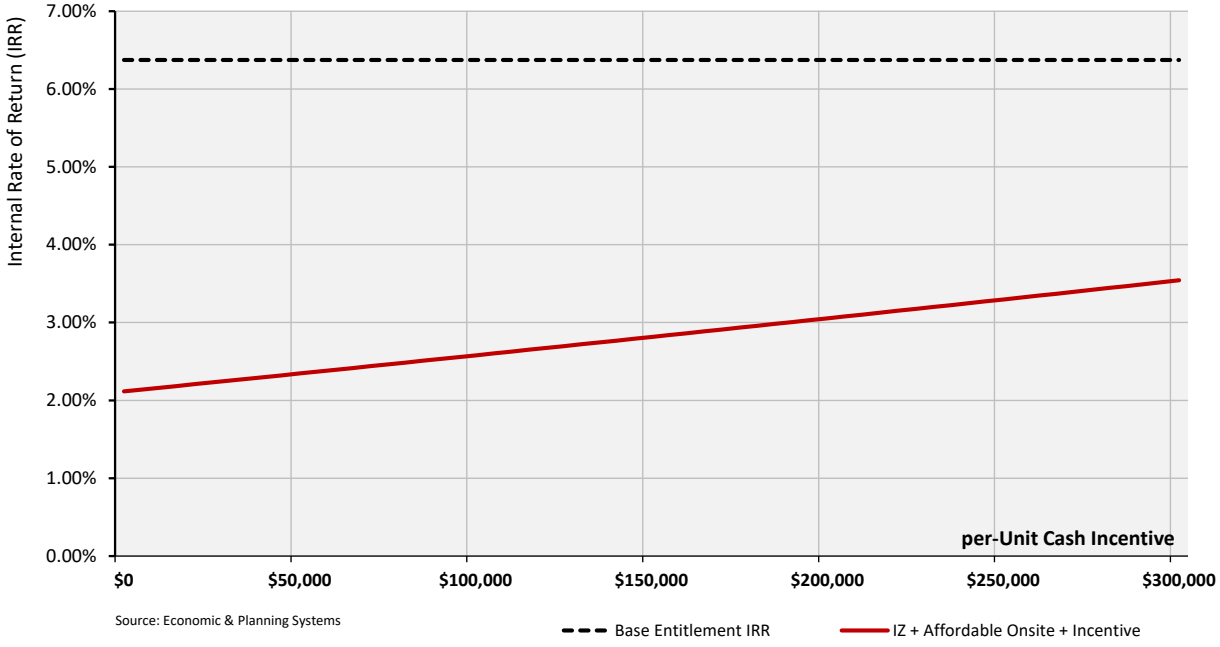
Figure A39 3-Story IRR and Cash Incentive



5-Story

The results of the analysis suggest that the per-unit incentive would need to be approximately $896,000 (whereas the difference between a market-rate and affordable unit is $224,000) to bring the IRRs of these scenarios into alignment.

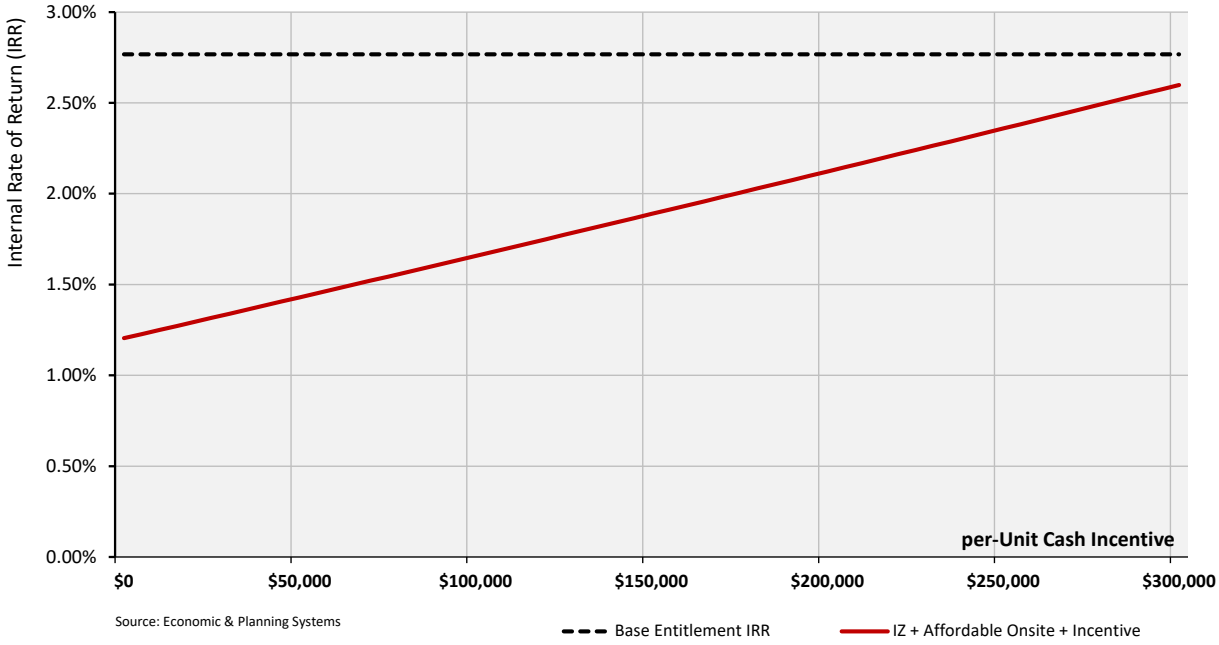
Figure A40 5-Story IRR and Cash Incentive



10-Story

The results of the analysis suggest that the per-unit incentive would need to be approximately $336,000 (whereas the difference between a market-rate and affordable unit is $274,000) to bring the IRRs of these scenarios into alignment.

Figure A41 10-Story IRR and Cash Incentive



Affordability and Set-Aside Levels

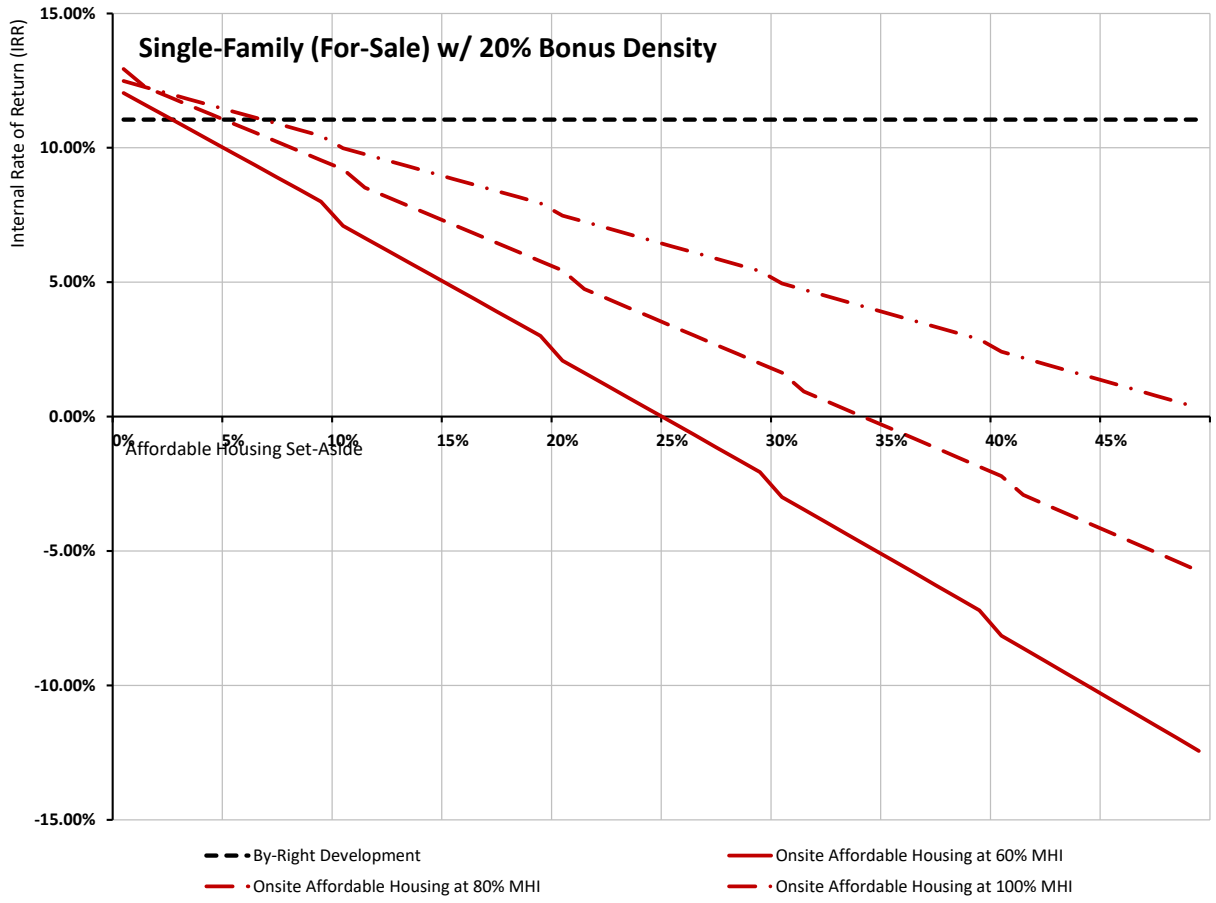
The following sensitivity analysis on affordability (i.e., Area Median Income, AMI) levels is used to identify optimal combinations of affordability and set-aside levels that should be required as a component of an inclusionary zoning policy. For each prototype, an optimal affordable housing set-aside and income level are identified that correspond align with the IRR for each prototype under base entitlement.

For-Sale Single-Family

Figure A42 illustrates that the baseline IRR for this prototype with by-right zoning is 11 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- 60 percent AMI and a 3 percent set-aside
- 80 percent AMI and a 5 percent set-aside
- 100 percent AMI and a 7 percent set-aside

Figure A42 Single-Family For-Sale Performance Sensitivity

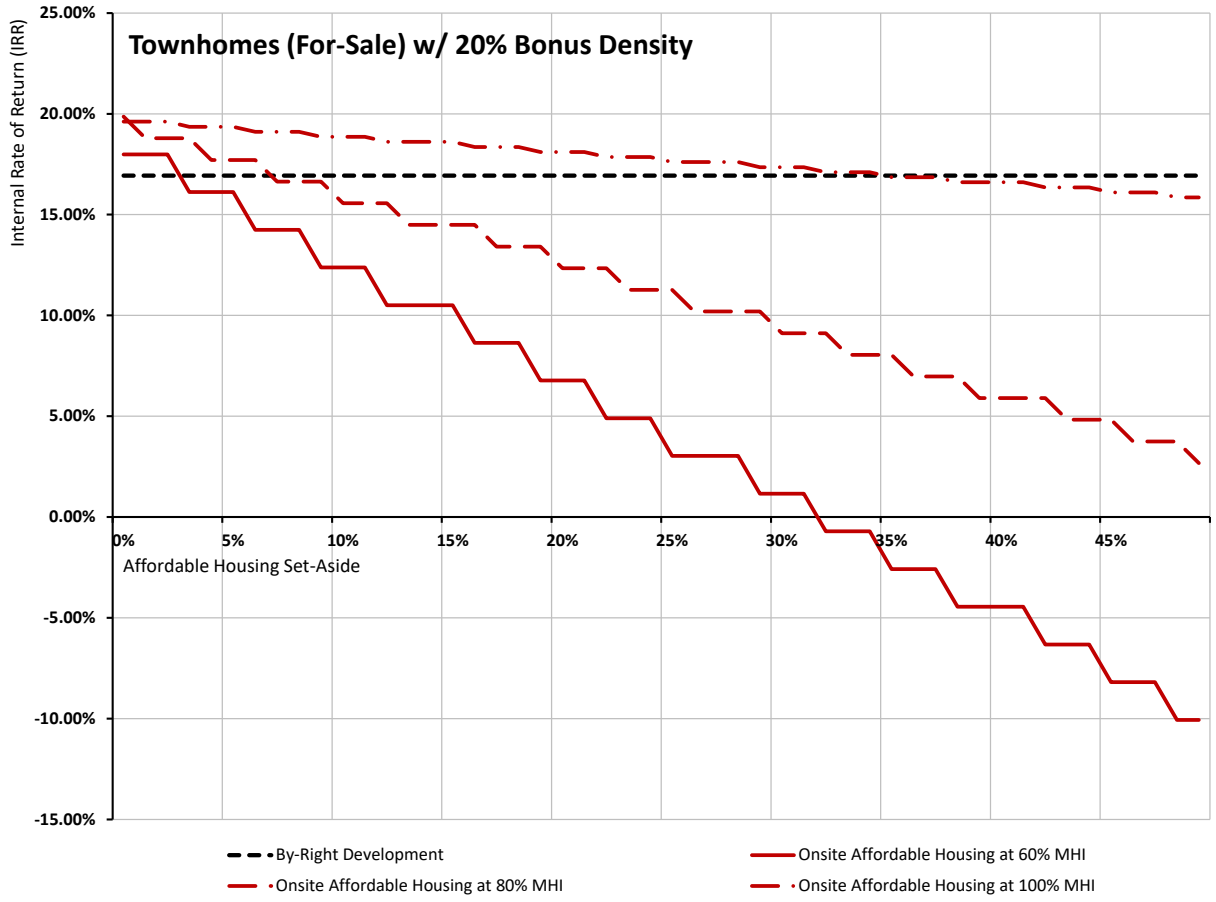


For-Sale Townhomes

Figure A43 illustrates that the baseline IRR for this prototype with by-right zoning is 17 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- 60 percent AMI and a 3 percent set-aside
- 80 percent AMI and a 7 percent set-aside
- 100 percent AMI and a 35 percent set-aside

Figure A43 Townhome For-Sale Performance Sensitivity

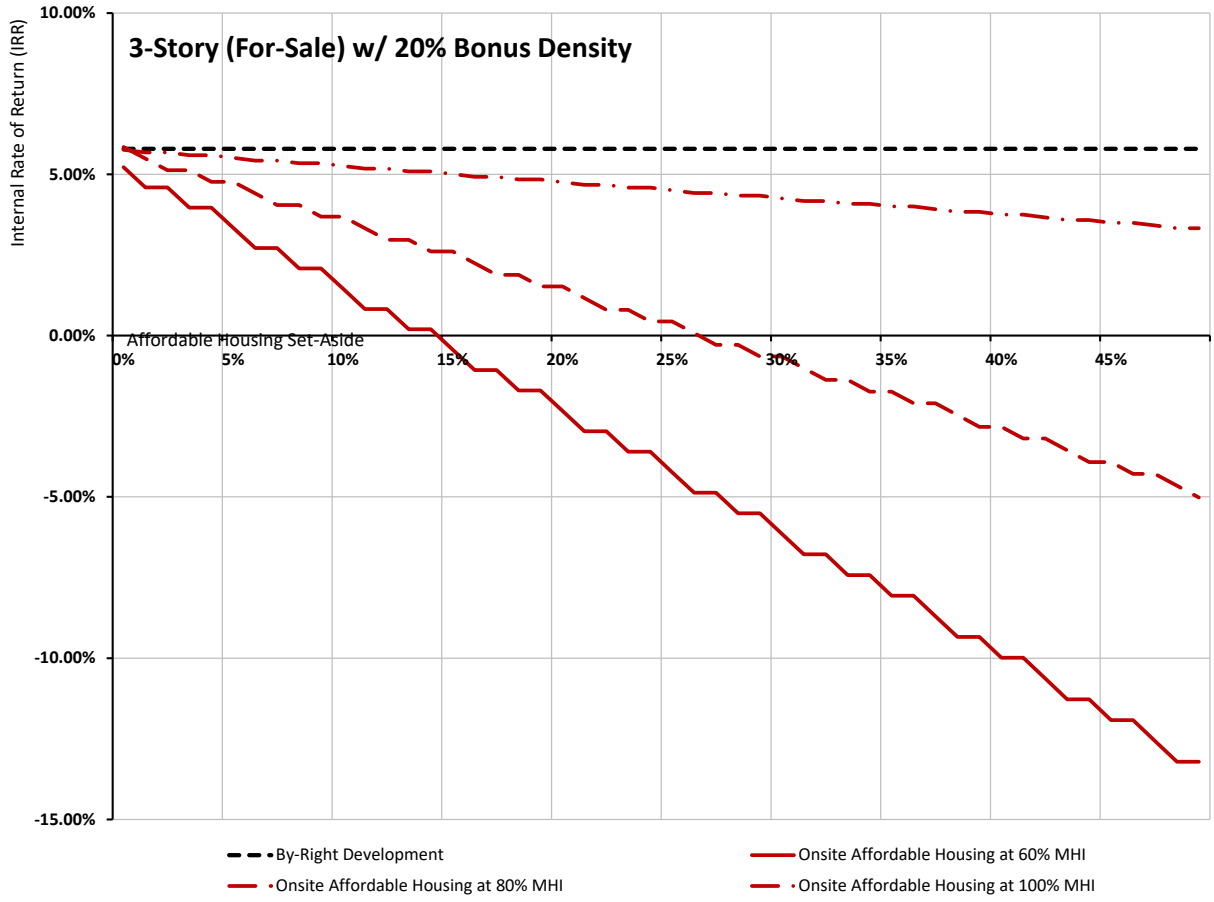


For-Sale 3-Story

Figure A44 illustrates that the baseline IRR for this prototype with by-right zoning is 5.8 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- No optimal level of set-aside at 60 percent AMI
- 80 percent AMI and a 1 percent set-aside
- 100 percent AMI and a 1 percent set-aside

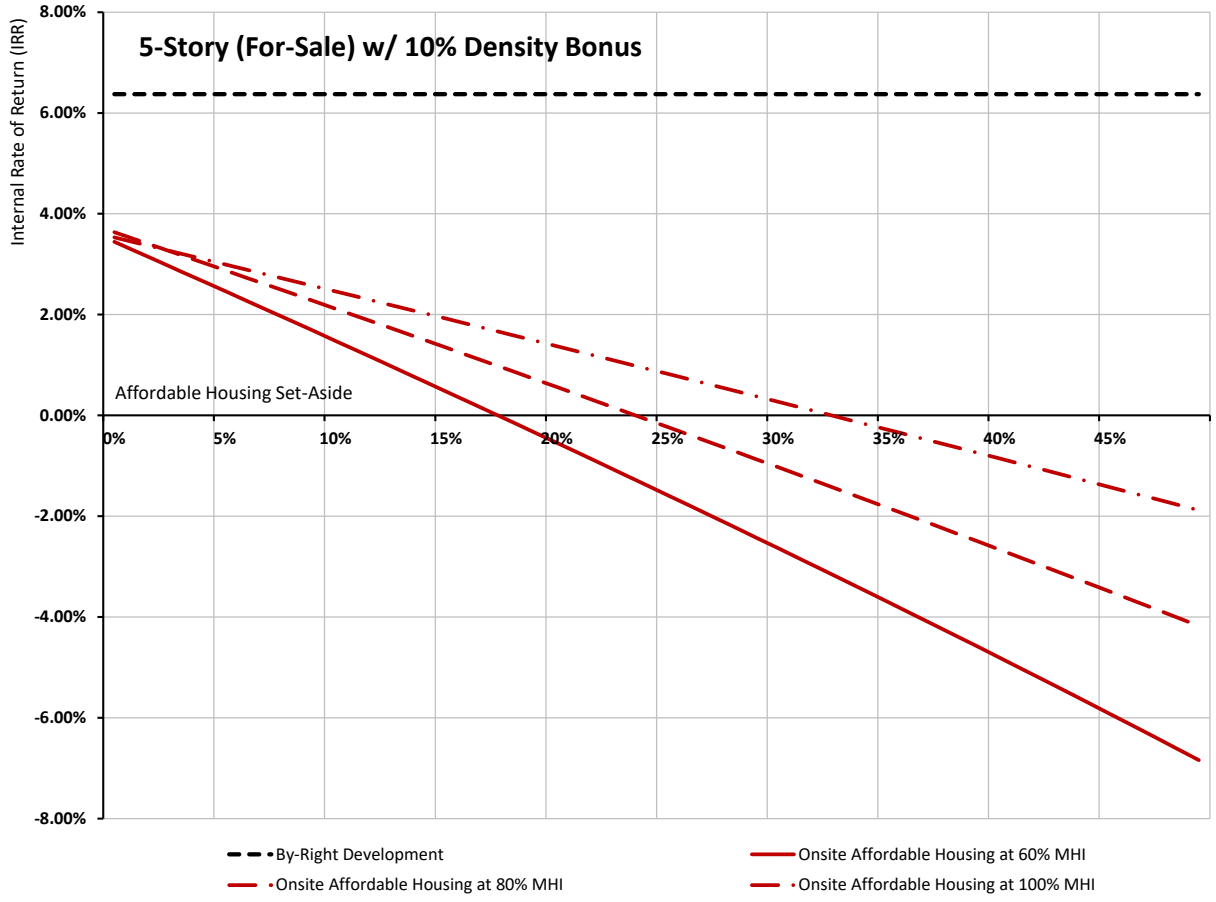
Figure A44 3-Story For-Sale Performance Sensitivity



For-Sale 5-Story

Figure A44 illustrates that with a base entitlement project achieving an IRR of approximately 6.4 percent, there is no combination of affordable housing set-asides and income level that would achieve an IRR equal to or greater than base entitlement IRR.

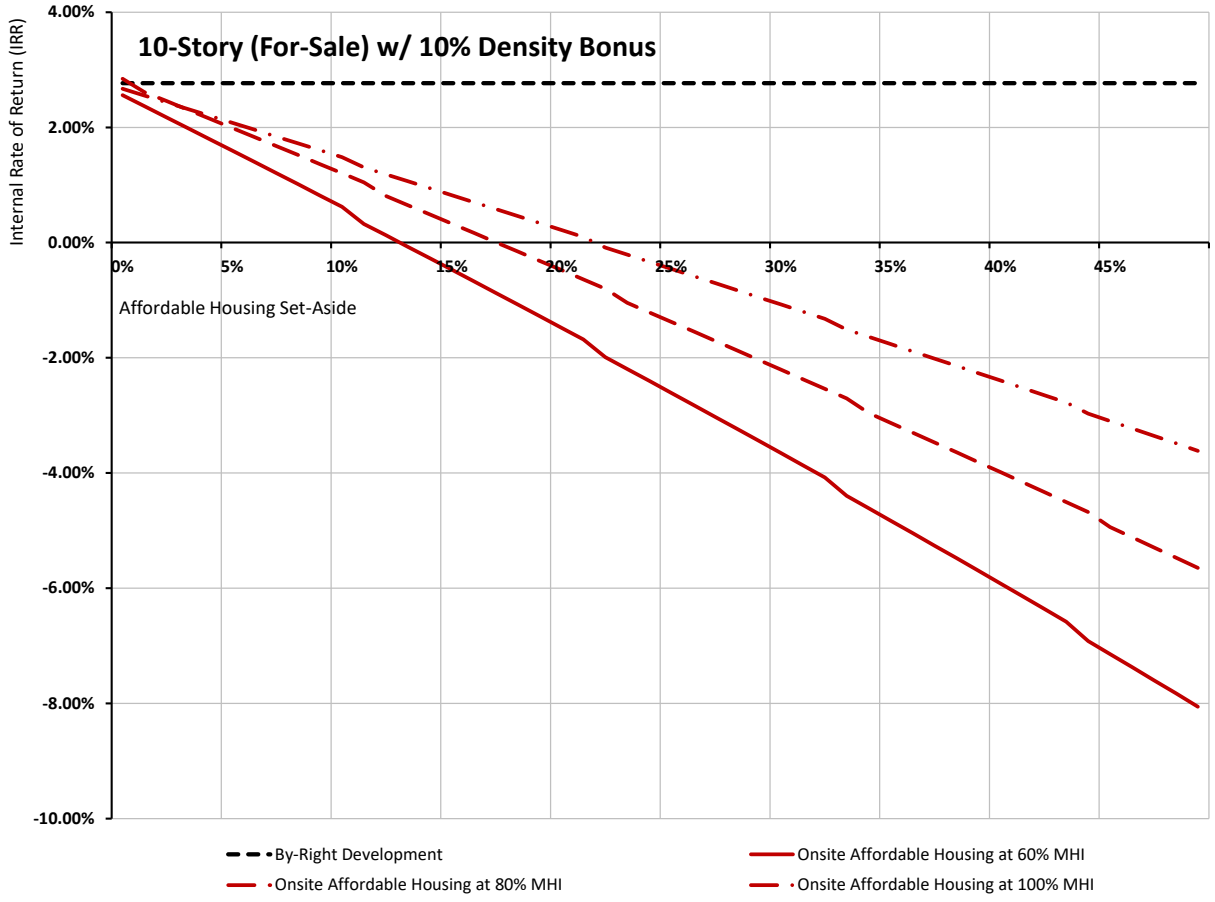
Figure A45 5-Story For-Sale Performance Sensitivity



For-Sale 10-Story

Figure A46 illustrates that with a base entitlement project achieving an IRR of approximately 2.8 percent, there is also no combination of affordable housing set-asides and income level that would achieve an IRR equal to or greater than base entitlement IRR.

Figure A46 10-Story For-Sale Performance Sensitivity

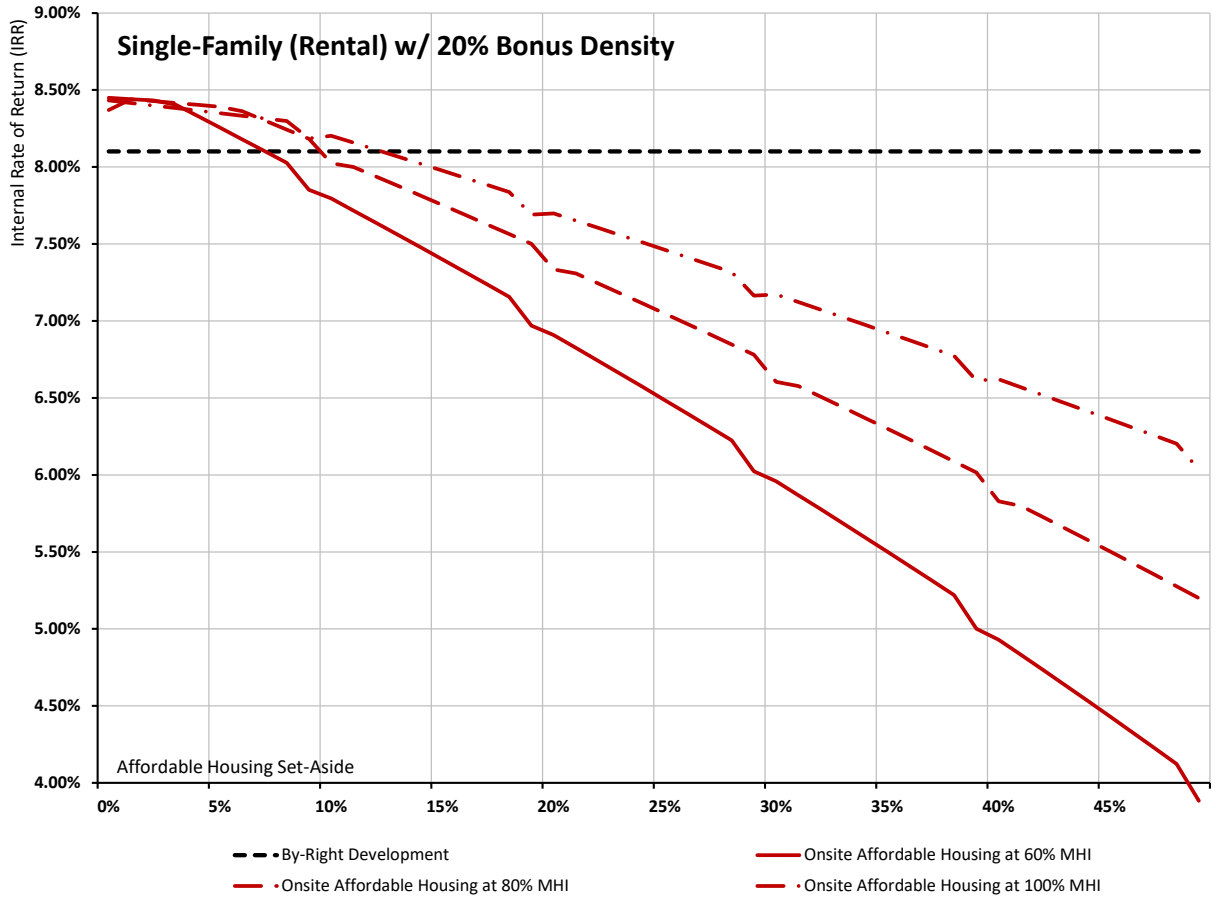


Rental Single-Family

Figure A47 illustrates that the baseline IRR for this prototype with by-right zoning is 8.1 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- 60 percent AMI and a 7 percent set-aside
- 80 percent AMI and a 10 percent set-aside
- 100 percent AMI and a 13 percent set-aside

Figure A47 Single-Family Rental Performance Sensitivity

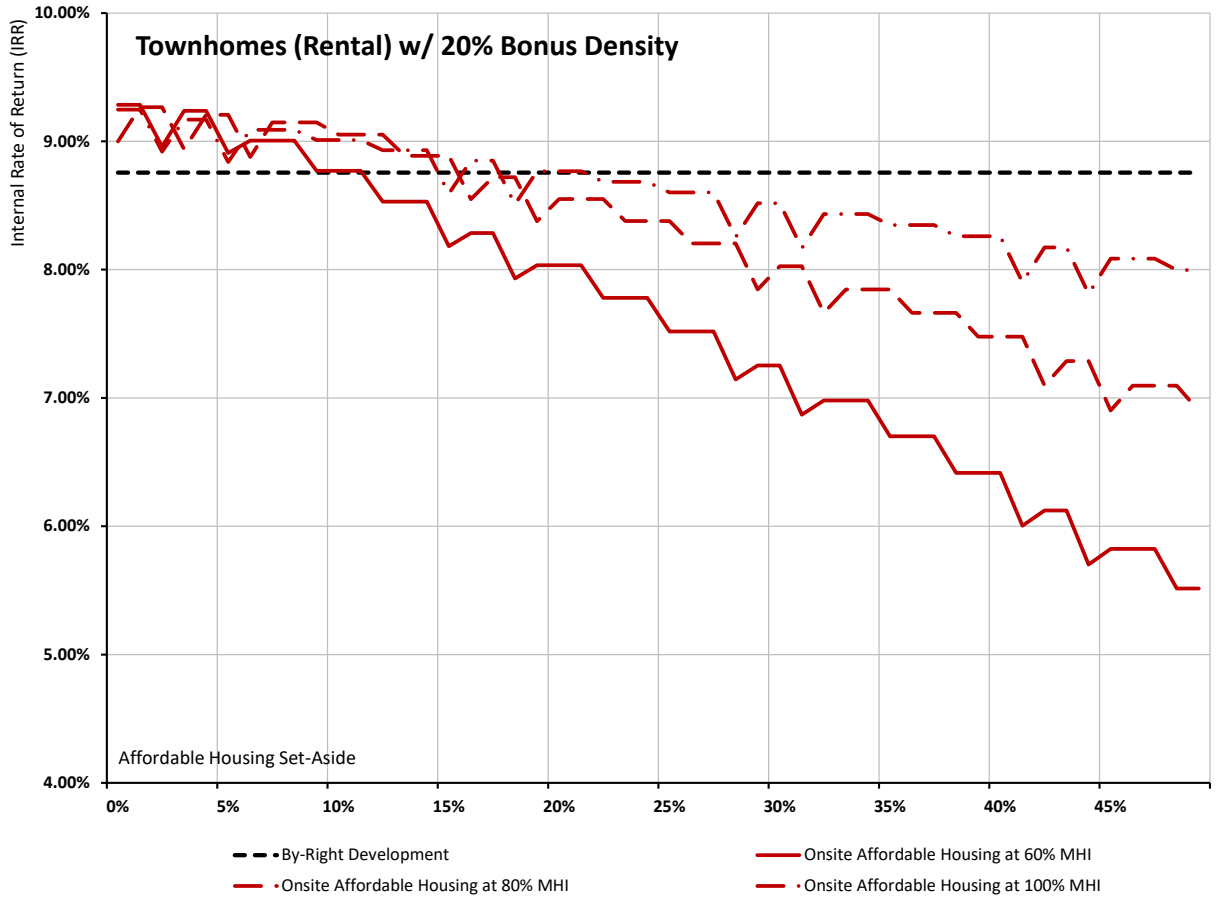


Townhomes

Figure A48 illustrates that the baseline IRR for this prototype with by-right zoning is 8.8 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- 60 percent AMI and a 9 percent set-aside
- 80 percent AMI and a 16 percent set-aside
- 100 percent AMI and an 18 percent set-aside

Figure A48 Townhome Rental Performance Sensitivity

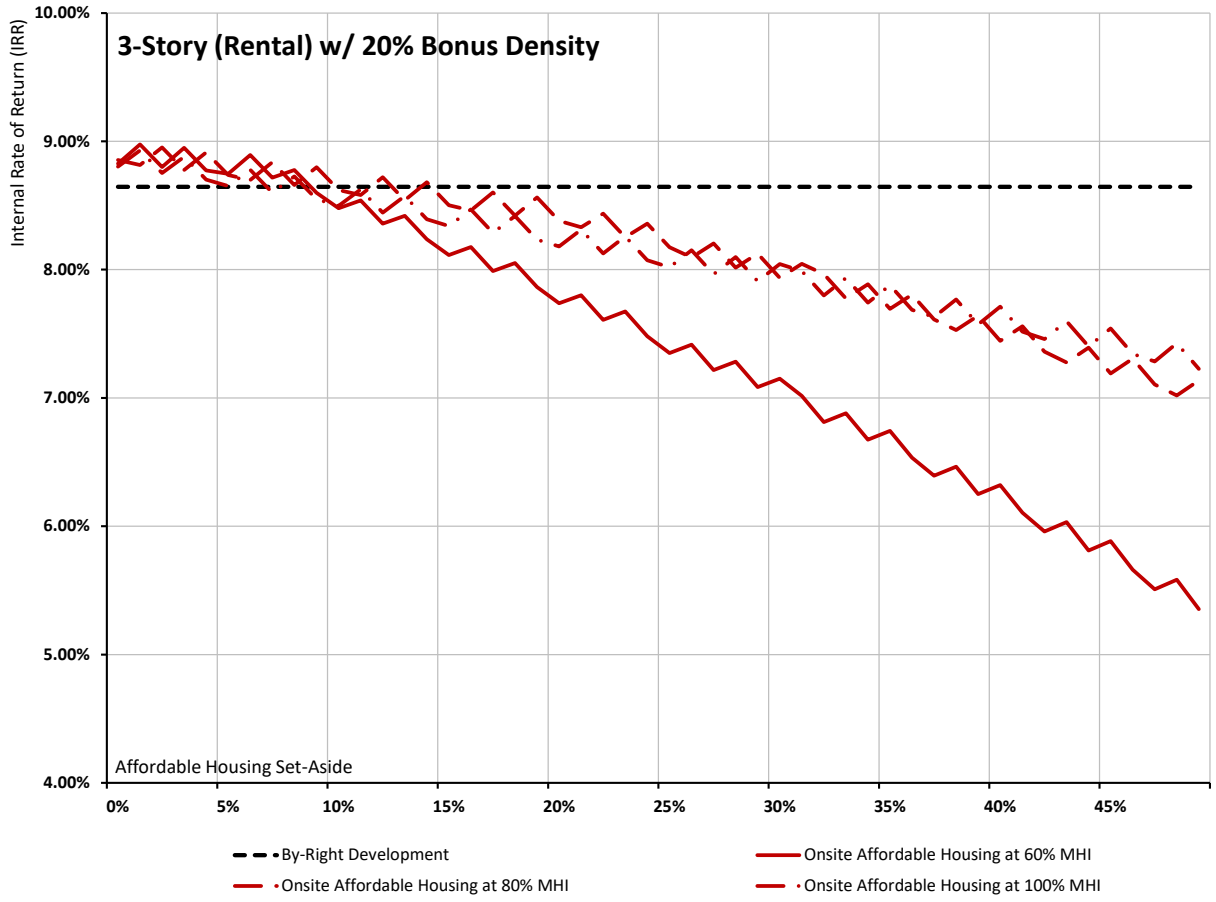


3-Story project

Figure A49 illustrates that the baseline IRR for this prototype with by-right zoning is 8.7 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- 60 percent AMI and a 10 percent set-aside
- 80 percent AMI and a 10 percent set-aside
- 100 percent AMI and a 9 percent set-aside

Figure A49 3-Story Rental Performance Sensitivity

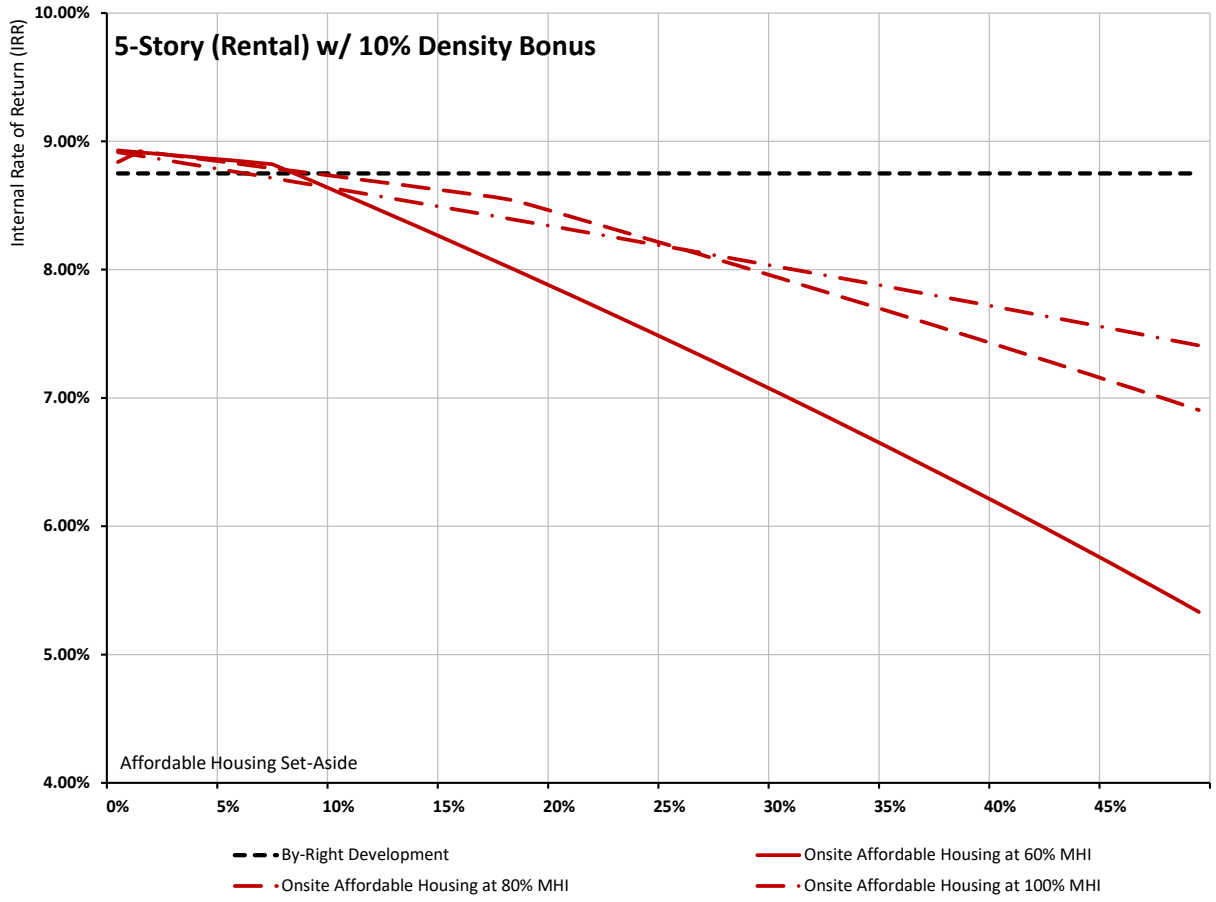


5-Story project

Figure A50 illustrates that the baseline IRR for this prototype with by-right zoning is 8.8 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- 60 percent AMI and an 8 percent set-aside
- 80 percent AMI and a 7 percent set-aside
- 100 percent AMI and a 4 percent set-aside

Figure A50 5-Story Rental Performance Sensitivity



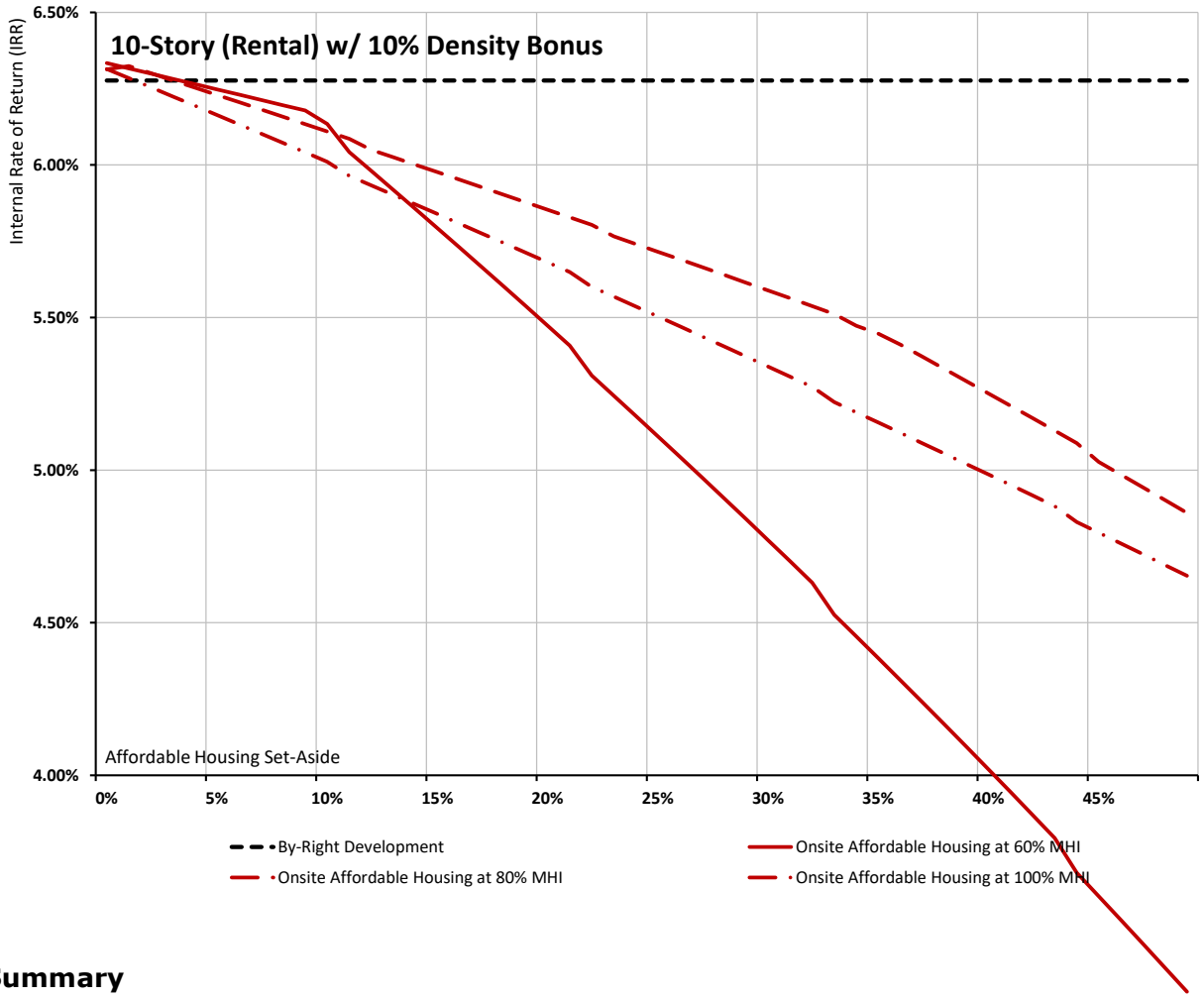
10-Story project

Figure A51 illustrates that the baseline IRR for this prototype with by-right zoning is 6.3 percent. The optimal levels of affordable housing set-aside requirements and income levels are:

- 60 percent AMI and a 4 percent set-aside
- 80 percent AMI and a 3 percent set-aside
- 100 percent AMI and a 1 percent set-aside

It should be noted that the counterintuitive scaling of these supportable set-asides here are also related to the limitation of the rental incentive being capped at no more than 50 percent of the pre- and post-development property taxes.

Figure A51 10-Story Rental Performance Sensitivity



Summary

For-Sale Prototypes

According to the sensitivity analysis, for-sale prototypes generally cannot support substantial deed-restricted affordable or workforce housing *and* maintain the level of profitability estimated under base entitlement. A variety of conditions (i.e., different from those modeled) would have to be present to support set-asides of 10 to 30 percent, as are common among cities in the best practice research. Conditions could be present on a site-by-site basis, though not predictably. As an example, a developer might negotiate a lower land acquisition cost to achieve a level of financial return similar under base entitlement expectations.

Rental Prototypes

Rental projects, on the other hand, can support more substantial set-asides than the for-sale projects. In further sensitivity testing (as described below), the supportable set-aside for this development prototype can be much higher.

Density Bonus and Set-Asides

This analysis uses a matrix of pairings of density bonuses ranging from 0 to 100 percent, and for each level of density bonus, varied the level of set-aside from 0 to 50 percent. As a result, the findings show the impact to a project when its scale with density bonuses crosses the threshold into a different, more expensive, building type.

For-Sale Prototypes

Table A43 illustrates the degrees of supportable set-aside for each prototype when the affordability level is set to 80 percent AMI and the density bonus is varied between 0 and 100 percent of base entitlement. In general, the results demonstrate that only lower-density prototypical for-sale projects can support any magnitude of inclusionary zoning housing requirement. At a 50 percent increase in density, a single-family project could support a 15 percent set-aside and a townhome project could support a 10 percent set-aside. **Figure A52** through **Figure A56** illustrate the granularity of these IRR results from the sensitivity modeling of these density bonus magnitudes and set-aside degrees.

Table A43 80% AMI For-Sale Set-Aside Maximums by Density Bonus Scale

	Set-Aside % Intersect w/ Base Entitlement IRR				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-Story
For-Sale Set-Aside % at:					
10% density bonus	5%	9%	0%	-17%	0%
20% density bonus	9%	16%	1%	-34%	1%
30% density bonus	11%	22%	1%	-33%	1%
40% density bonus	13%	27%	1%	-32%	1%
50% density bonus	15%	32%	-1%	-69%	2%
60% density bonus	16%	36%	-1%	-68%	2%
70% density bonus	17%	39%	-2%	-68%	2%
80% density bonus	19%	43%	-3%	-68%	2%
90% density bonus	19%	45%	-4%	-67%	2%
100% density bonus	19%	48%	-6%	-67%	3%

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 13 - For-Sale Sens

Figure A52 Single-Family Performance, Density Bonus, and Set-Aside Sensitivity

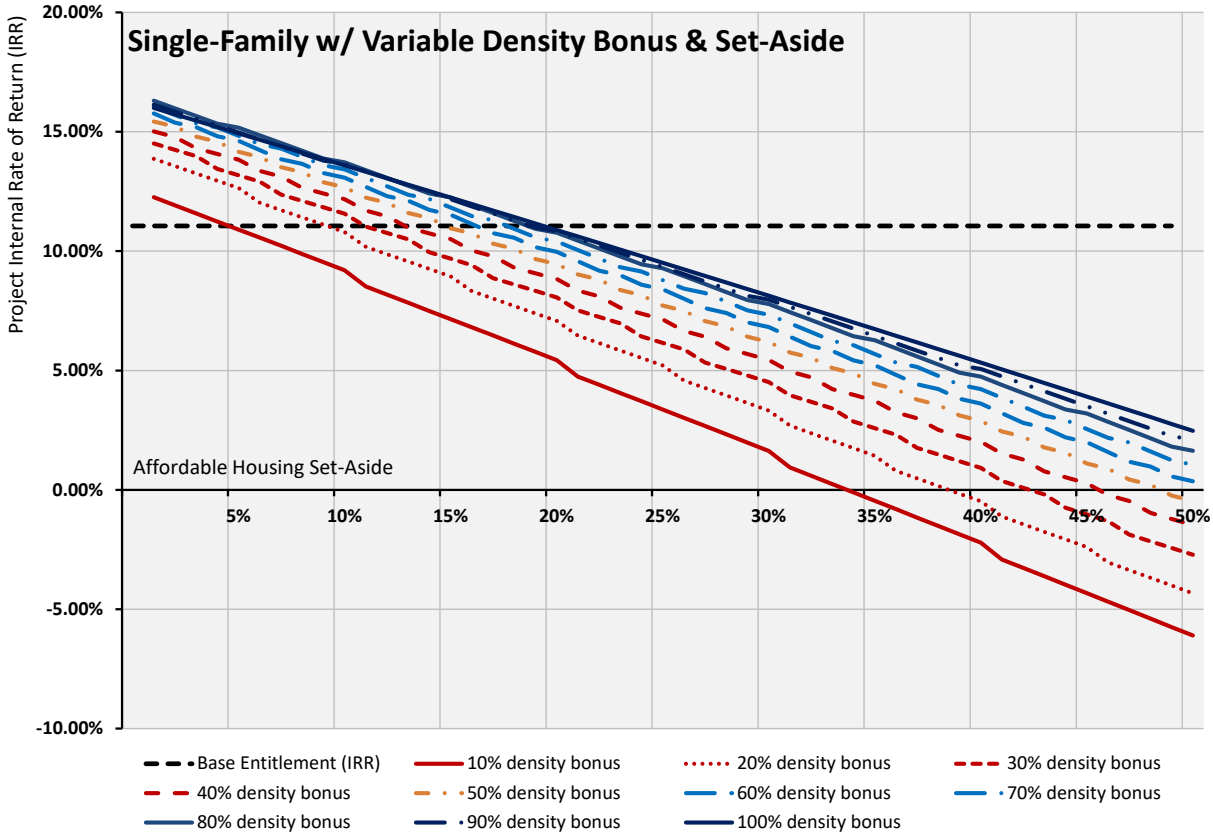


Figure A53 Townhome Performance, Density Bonus, and Set-Aside Sensitivity

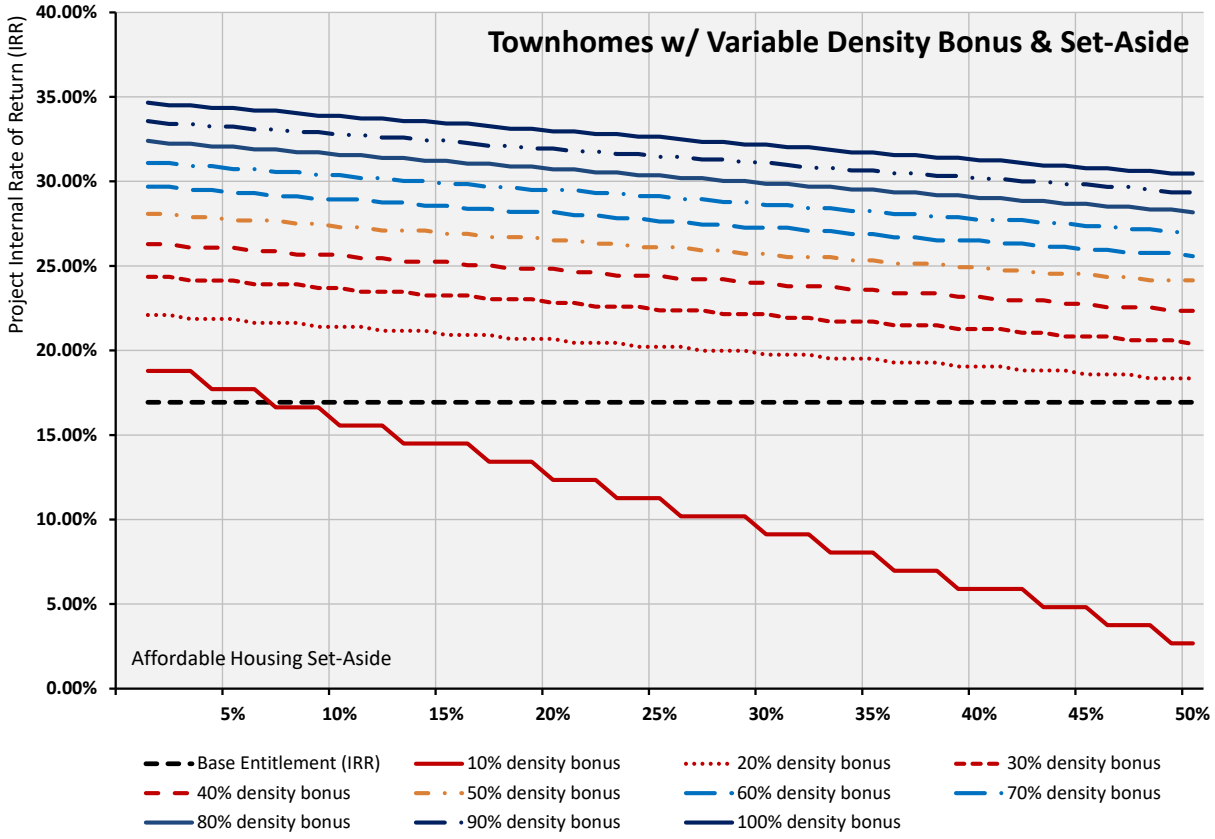


Figure A54 3-Story Performance, Density Bonus, and Set-Aside Sensitivity

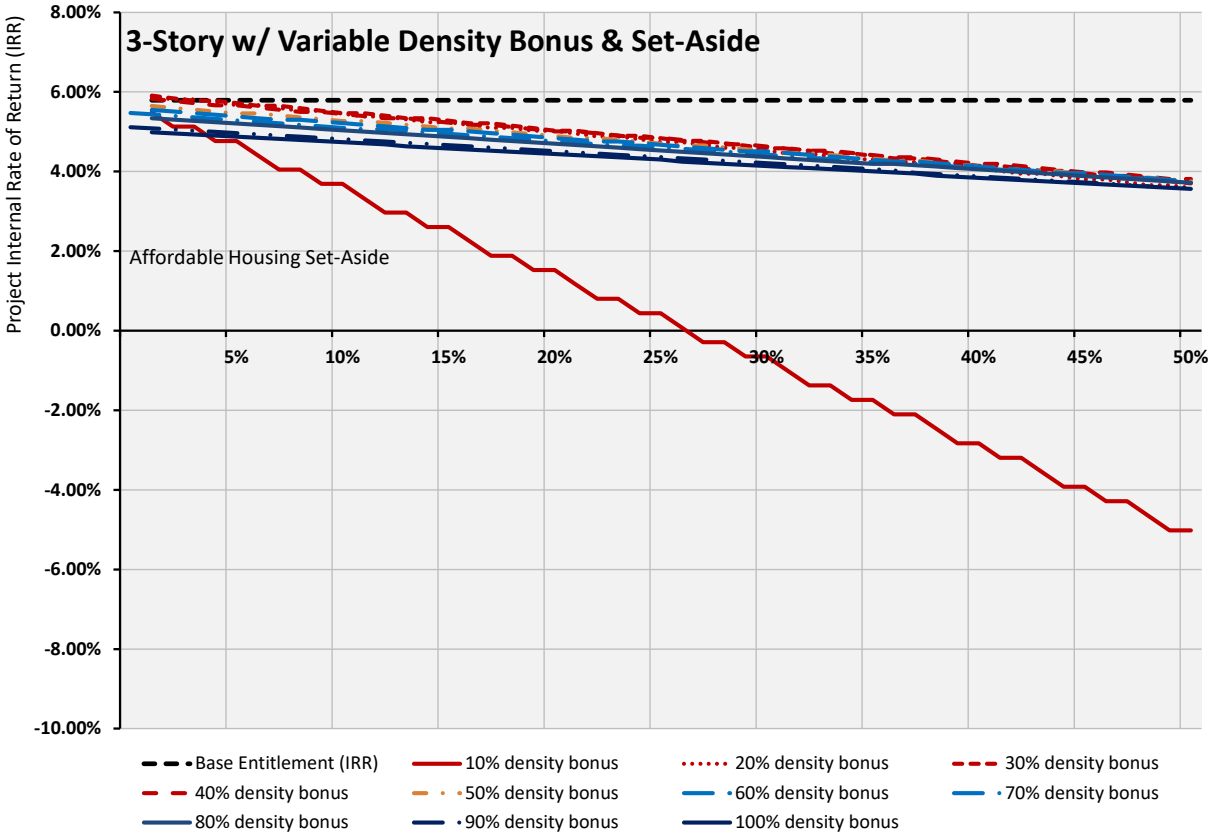


Figure A55 5-Story Performance, Density Bonus, and Set-Aside Sensitivity

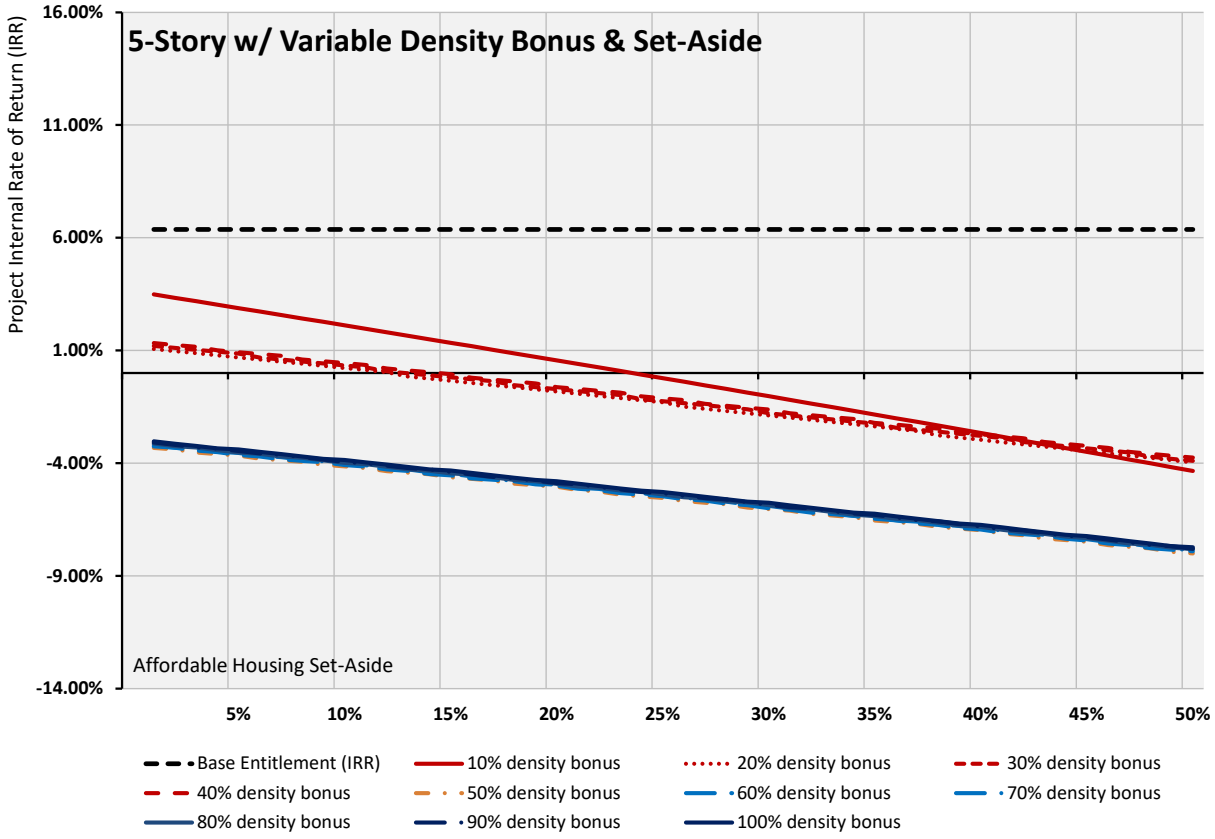


Figure A56 10-Story Performance, Density Bonus, and Set-Aside Sensitivity

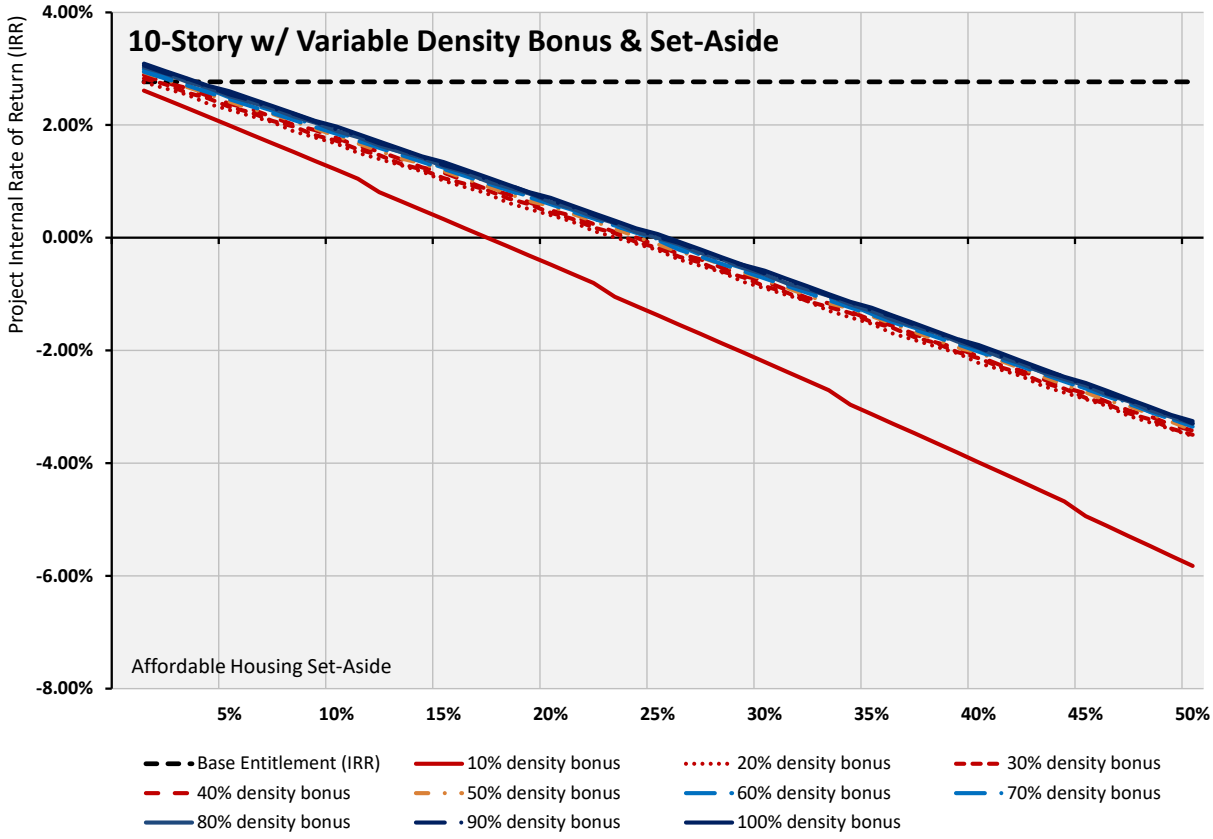


Table A44 illustrates the degrees of supportable set-aside for each development prototype when the affordability level is set to 100 percent AMI and the density bonus is varied between 0 and 100 percent of base entitlement. In general, the results demonstrate that only lower-density prototypical for-sale projects can support any magnitude of inclusionary zoning housing requirement. At a 40 percent increase in density, a single-family project could support a 41 percent set-aside, a townhome project could support a 21 percent set-aside, and a 5-story project could support a 5 percent set-aside.

Table A44 100% AMI For-Sale Set-Aside Maximums by Density Bonus Scale

	Set-Aside % Intersect w/ Base Entitlement IRR				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-Story
For-Sale Set-Aside % at:					
10% density bonus	7%	9%	0%	-17%	0%
20% density bonus	14%	16%	1%	-34%	1%
30% density bonus	17%	22%	1%	-33%	1%
40% density bonus	20%	27%	1%	-32%	1%
50% density bonus	22%	32%	-1%	-69%	2%
60% density bonus	24%	36%	-1%	-68%	2%
70% density bonus	26%	39%	-2%	-68%	2%
80% density bonus	28%	43%	-3%	-68%	2%
90% density bonus	28%	45%	-4%	-67%	2%
100% density bonus	29%	48%	-6%	-67%	3%

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 13 - For-Sale Sens

Rental Prototypes

Table A45 illustrates the findings of the sensitivity analysis of density bonus variation and supportable set-aside when the affordability level is set to 60 percent of AMI. The non-linearity of findings reflects the impacts that additional density has on prototypes of various scale:

- Single-family projects could support between 17 and 33 percent affordability;
- Townhomes could support between 15 and 48 percent affordability;
- 3-story projects could support between 14 and 21 percent affordability;
- 5-story projects could support between 8 and 12 percent affordability; but only when up to 40 percent density is requested
- 10-story projects could support between 2 and 6 percent affordability.

Table A45 60% AMI Rental Set-Aside Maximums by Density Bonus Scale in Rental

	Set-Aside % Intersect w/ Base Entitlement IRR				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-Story
Rental Set-Aside % at:					
10% density bonus	9%	15%	14%	8%	2%
20% density bonus	17%	28%	12%	9%	3%
30% density bonus	19%	34%	13%	11%	4%
40% density bonus	23%	36%	15%	12%	4%
50% density bonus	25%	35%	16%	0%	4%
60% density bonus	28%	39%	19%	0%	5%
70% density bonus	29%	43%	19%	0%	5%
80% density bonus	31%	48%	18%	0%	6%
90% density bonus	33%	49%	21%	0%	6%
100% density bonus	33%	48%	21%	0%	6%

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 12 - Rent Sens 100%

Table A46 illustrates the findings of the sensitivity analysis of density bonus variation and supportable set-aside when the affordability level is set to 80 percent of AMI. The findings illustrate that:

- Single-family projects could support between 9 and 25 percent affordability;
- Townhomes could support between 12 and 19 percent affordability;
- 3-story projects could support between 14 and 21 percent affordability;
- 5-story projects could support between 8 and 12 percent affordability, but only when up to 40 percent density is requested
- 10-story projects could support between 2 and 4 percent affordability.

Table A46 80% AMI Rental Set-Aside Maximums by Density Bonus Scale

	Set-Aside % Intersect w/ Base Entitlement IRR				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-Story
Rental Set-Aside % at:					
10% density bonus	9%	12%	14%	8%	2%
20% density bonus	12%	13%	12%	9%	3%
30% density bonus	15%	14%	13%	11%	4%
40% density bonus	17%	13%	15%	12%	4%
50% density bonus	19%	14%	16%	0%	4%
60% density bonus	20%	17%	19%	0%	5%
70% density bonus	22%	18%	19%	0%	5%
80% density bonus	23%	18%	18%	0%	6%
90% density bonus	24%	19%	21%	0%	6%
100% density bonus	25%	17%	21%	0%	6%

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 12 - Rent Sens 100%

Table A47 illustrates the findings of the sensitivity analysis of density bonus variation and supportable set-aside when the affordability level is set to 100 percent of AMI. The findings illustrate that:

- Single-family projects could support between 13 and 33 percent affordability;
- Townhomes could support between 12 and 19 percent affordability;
- 3-story projects could support between 14 and 21 percent affordability;
- 5-story projects could support between 8 and 12 percent affordability, but only when up to 40 percent density is requested
- 10-story projects could support between 2 and 4 percent affordability.

Table A47 100% AMI Rental Set-Aside Maximums by Density Bonus Scale

	Set-Aside % Intersect w/ Base Entitlement IRR				
	Single-Family Detached	Townhomes	3-Story	5-Story	10-Story
Rental Set-Aside % at:					
10% density bonus	13%	12%	14%	8%	2%
20% density bonus	17%	13%	12%	9%	3%
30% density bonus	19%	14%	13%	11%	4%
40% density bonus	23%	13%	15%	12%	4%
50% density bonus	25%	14%	16%	0%	4%
60% density bonus	28%	17%	19%	0%	5%
70% density bonus	29%	18%	19%	0%	5%
80% density bonus	31%	18%	18%	0%	6%
90% density bonus	33%	19%	21%	0%	6%
100% density bonus	33%	17%	21%	0%	6%

Source: Economic & Planning Systems

Z:\Shared\Projects\DEN\193158-Fort Collins IZ and Linkage Study\Models\[193158 153043-IZ Feasibility Model-022020.xlsm]Table 12 - Rent Sens 100%

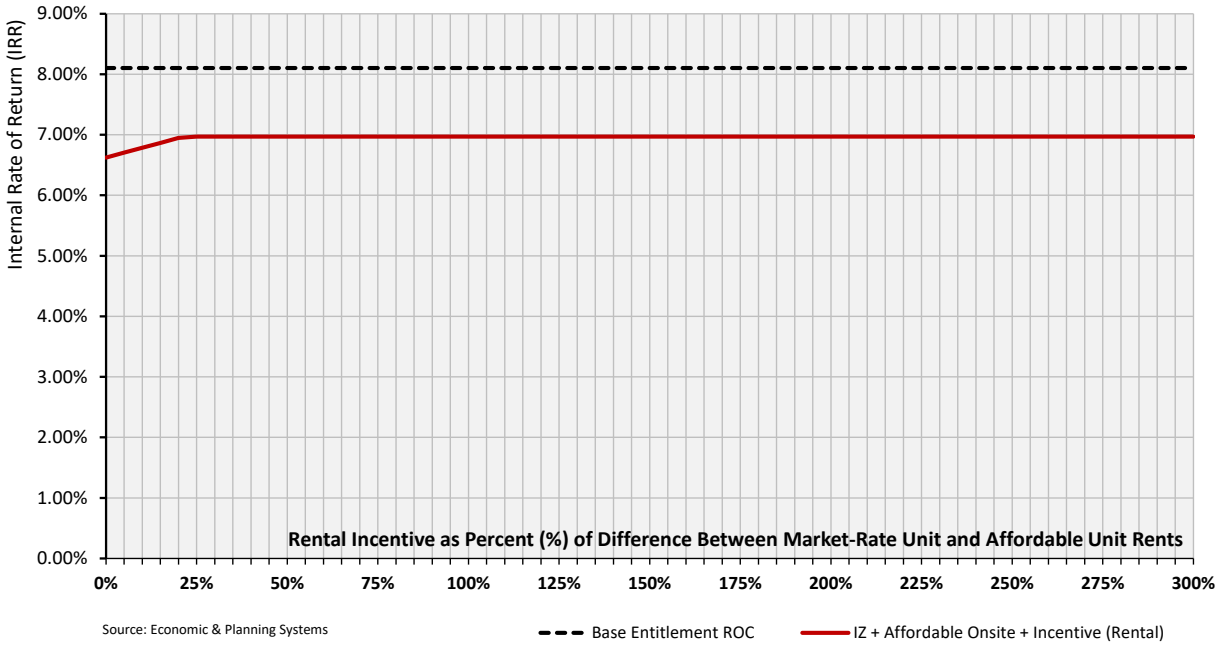
Property Tax Abatement

The findings of this analysis suggest that this incentive is effective at nearly realigning the IRR of rental projects with inclusionary zoning requirements with the IRR of rental projects with base entitlement.

Single-Family

The IRR for a project under base entitlement is approximately 8.1 percent, and a project given the incentive without exceeding the 50 percent limit could achieve an IRR of approximately 7.0 percent. In fact, this IRR is achieved with an abatement equal to approximately 25 percent of the difference between market-rate and affordable rents.

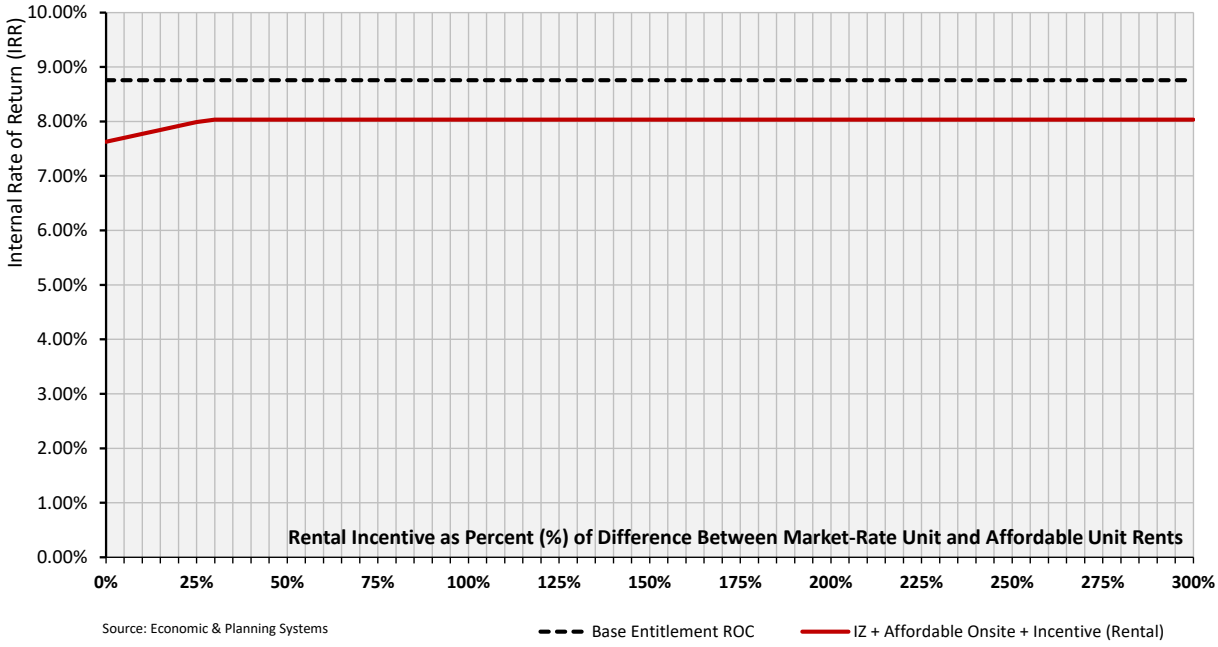
Figure A57 Single-Family IRR and Property Tax Abatement



Townhome

The IRR for a project under base entitlement is approximately 8.8 percent, and a project given the incentive without exceeding the 50 percent limit could achieve an IRR of approximately 8.0 percent. In fact, this IRR is achieved with an abatement equal to approximately 30 percent of the difference between market-rate and affordable rents.

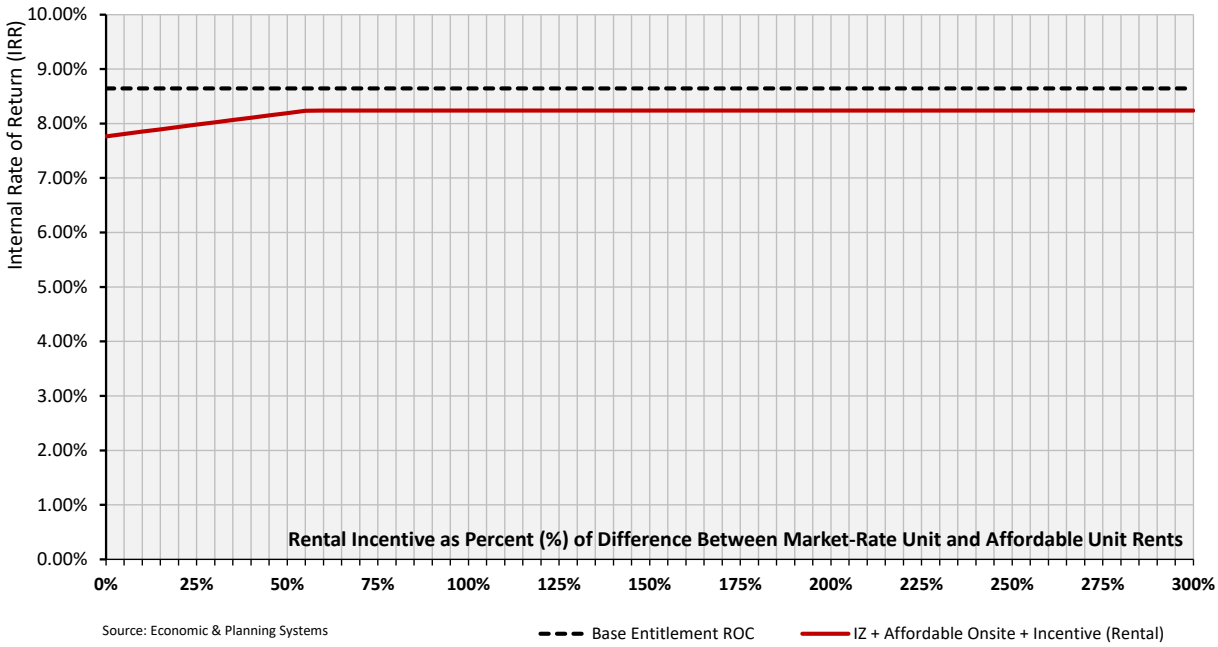
Figure A58 Townhome IRR and Property Tax Abatement



3-Story

The IRR for a project under base entitlement is approximately 8.7 percent, and a project given the incentive without exceeding the 50 percent limit could achieve an IRR of approximately 8.2 percent. The maximum IRR under the inclusionary zoning scenario is achieved, however, with an abatement equal to approximately 60 percent of the difference between market-rate and affordable rents.

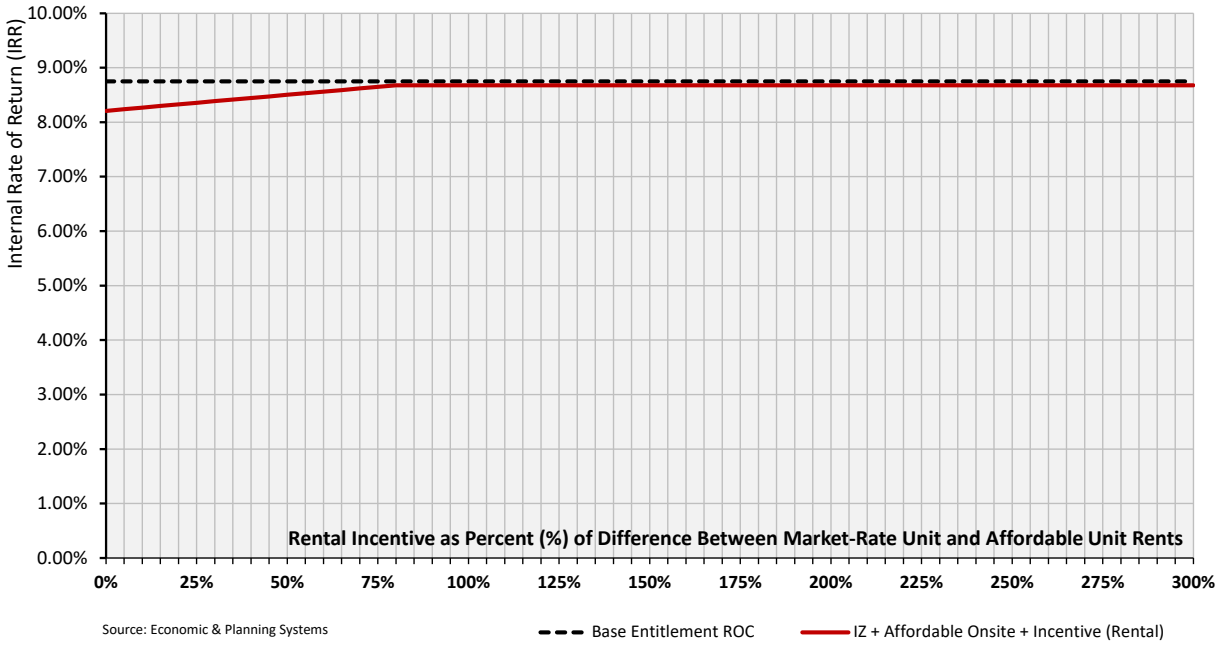
Figure A59 3-Story IRR and Property Tax Abatement



5-Story

The IRR for a project under base entitlement is approximately 8.8 percent, and a project given the incentive without exceeding the 50 percent limit could achieve an IRR of approximately 8.5 percent. The maximum IRR of 8.7 percent under the inclusionary zoning scenario is achieved, however, with an abatement equal to approximately 60 percent of the difference between market-rate and affordable rents.

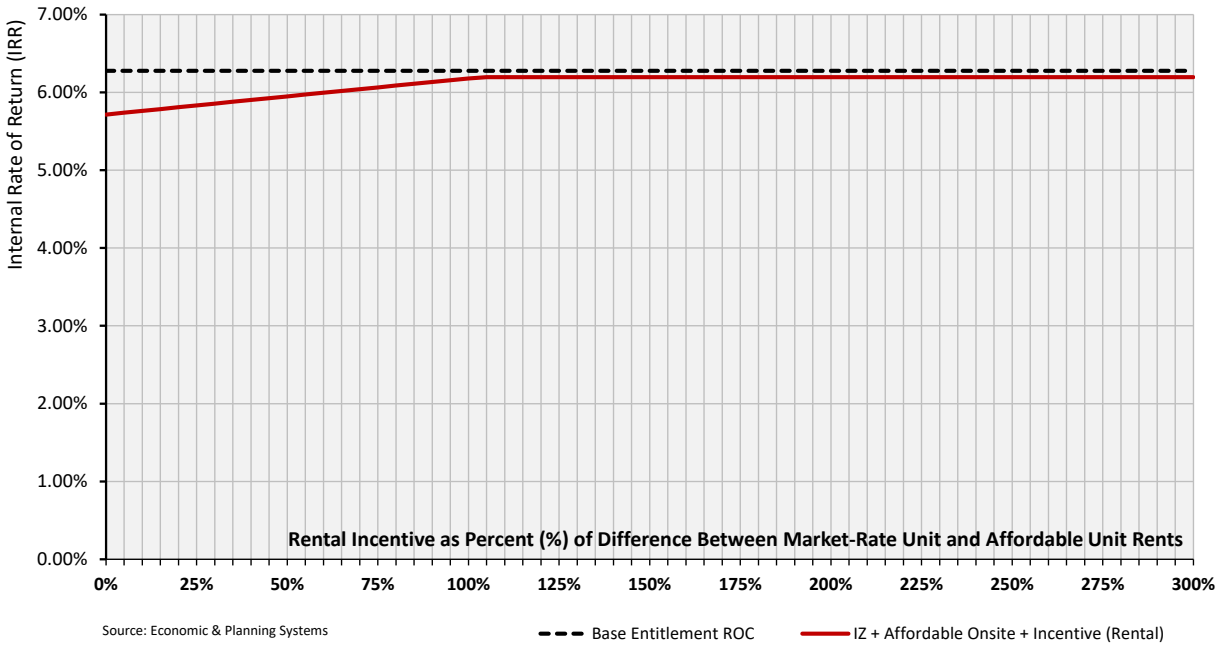
Figure A60 5-Story IRR and Property Tax Abatement



10-Story

The IRR for a project under base entitlement is approximately 6.3 percent, and a project given the incentive without exceeding the 50 percent limit could achieve an IRR of slightly higher than 6.0 percent. The maximum IRR of 6.2 percent under the inclusionary zoning scenario is achieved, however, with an abatement equal to approximately 105 percent of the difference between market-rate and affordable rents.

Figure A61 10-Story IRR and Property Tax Abatement



In-Lieu Contribution as Percent of Affordable Sales Price

As mentioned previously, the objective of an in-lieu contribution is to generate at least an amount of funds that could be used by the City to build a similar magnitude of affordable or workforce housing in a different location. While this amount could be equal to the cost of construction, it should at least be greater than or equal to the anticipated per-unit subsidy or buy-down that the City typically grants a project as gap financing. That is, the funds generated by in-lieu contributions need to be significant enough to provide gap financing to an affordable or workforce housing project that would not have been developed *but for* those funds.

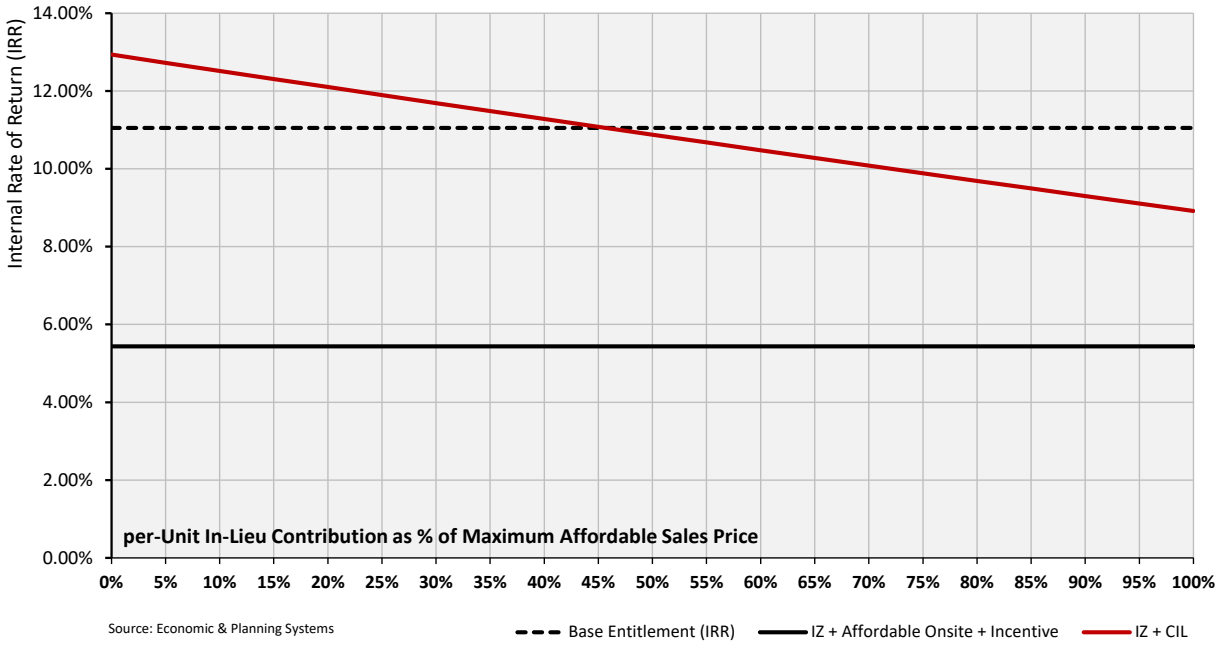
Following are the modeling results of varying the in-lieu contribution amount from 0 to 100 percent of the maximum affordable (deed-restricted) sales price for for-sale projects at 80 percent AMI and rental projects at 60 percent AMI. (As discussed previously, the in-lieu contribution for an affordable rental unit is set equal to the in-lieu contribution of a for-sale unit at the same AMI level.)

For-Sale Prototypes

Single-Family

The results of this test suggest that an in-lieu contribution should be set to no less than 45 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 186 percent would bring the IRR into alignment with the onsite construction option.

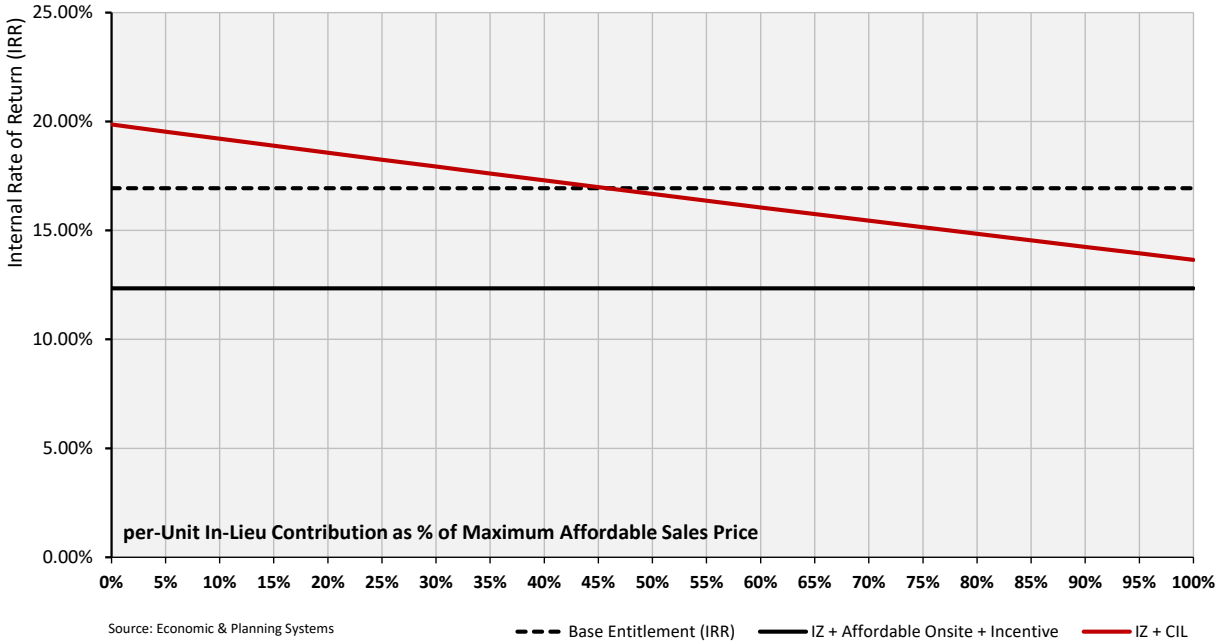
Figure A62 Single-Family For-Sale IRR vs. In-Lieu Contribution



Townhome

The results of this test suggest that an in-lieu contribution should be set to no less than 45 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 121 percent would bring the IRR into alignment with the onsite construction option.

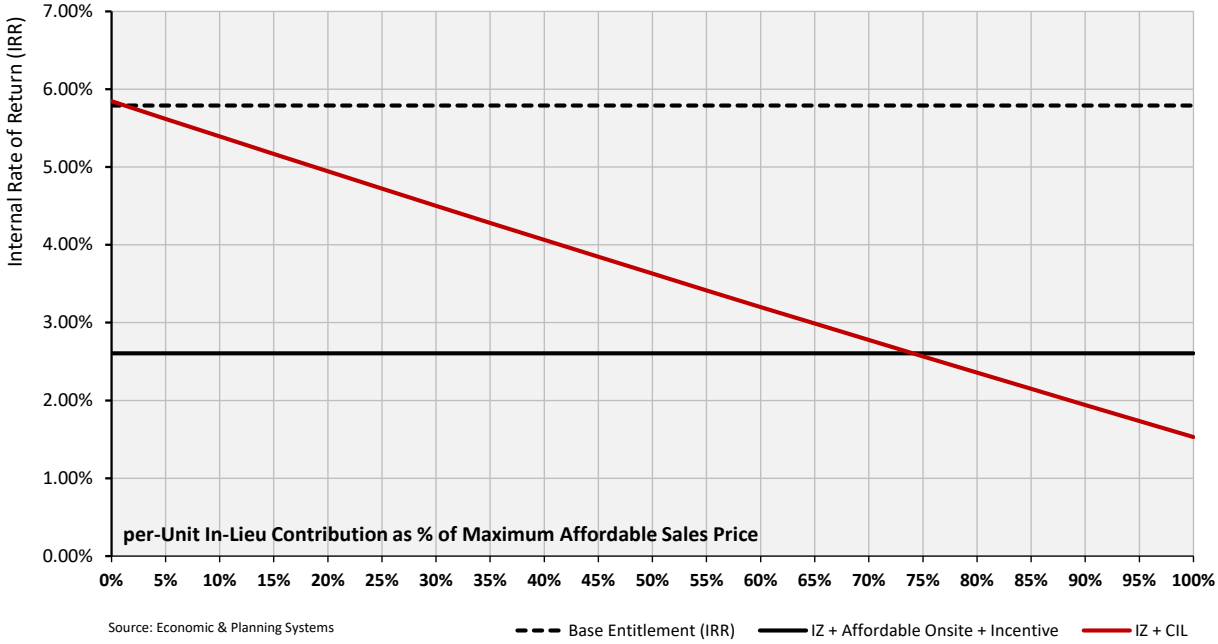
Figure A63 Townhome For-Sale IRR vs. In-Lieu Contribution



3-Story

The results of this test suggest that an in-lieu contribution should be set to no less than approximately 5 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 75 percent would bring the IRR into alignment with the onsite construction option.

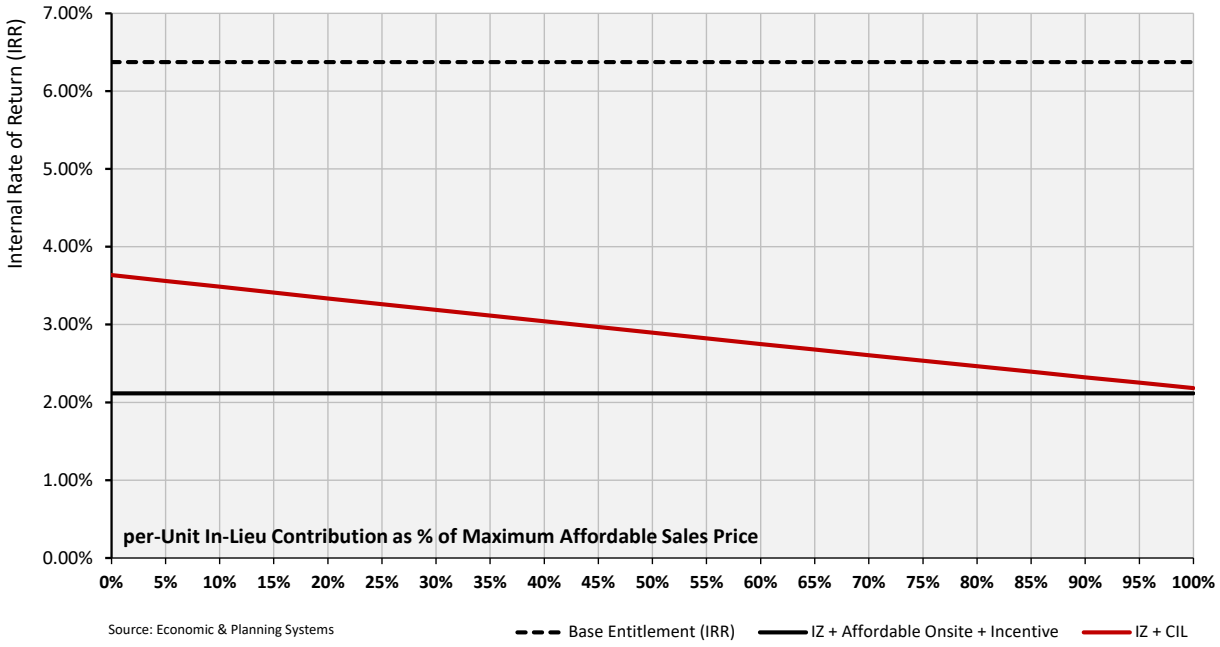
Figure A64 3-Story For-Sale IRR vs. In-Lieu Contribution



5-Story

The results of this test suggest that an in-lieu contribution should be set to no less than 40 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 105 percent would bring the IRR into alignment with the onsite construction option.

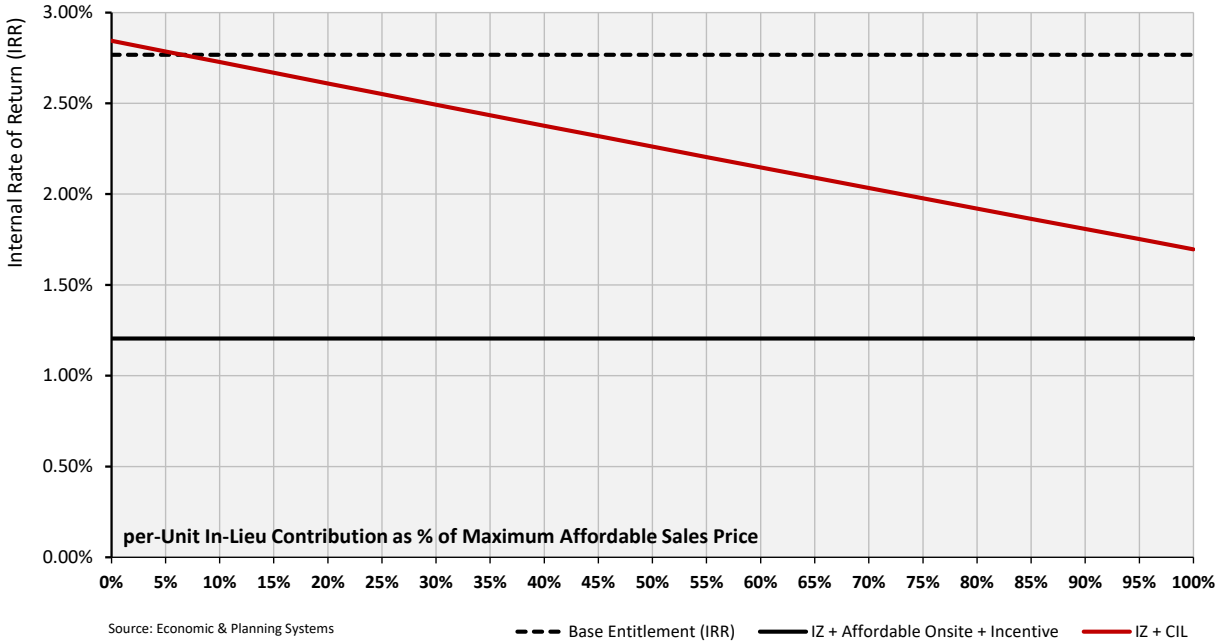
Figure A65 5-Story For-Sale IRR vs. In-Lieu Contribution



10-Story

The results of this test suggest that an in-lieu contribution should be set to no less than 50 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 143 percent would bring the IRR into alignment with the onsite construction option.

Figure A66 10-Story For-Sale IRR vs. In-Lieu Contribution

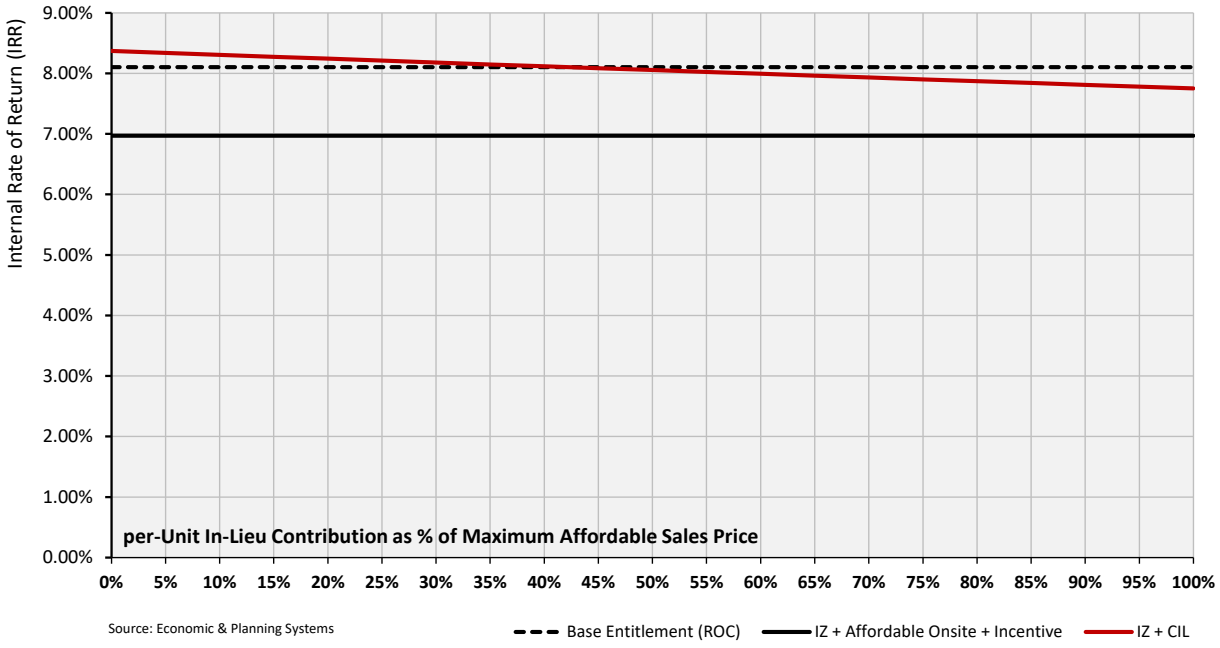


Rental Prototypes

Single-Family

The results of this test suggest that an in-lieu contribution should be set to no less than 20 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 225 percent would bring the IRR into alignment with the onsite construction option.

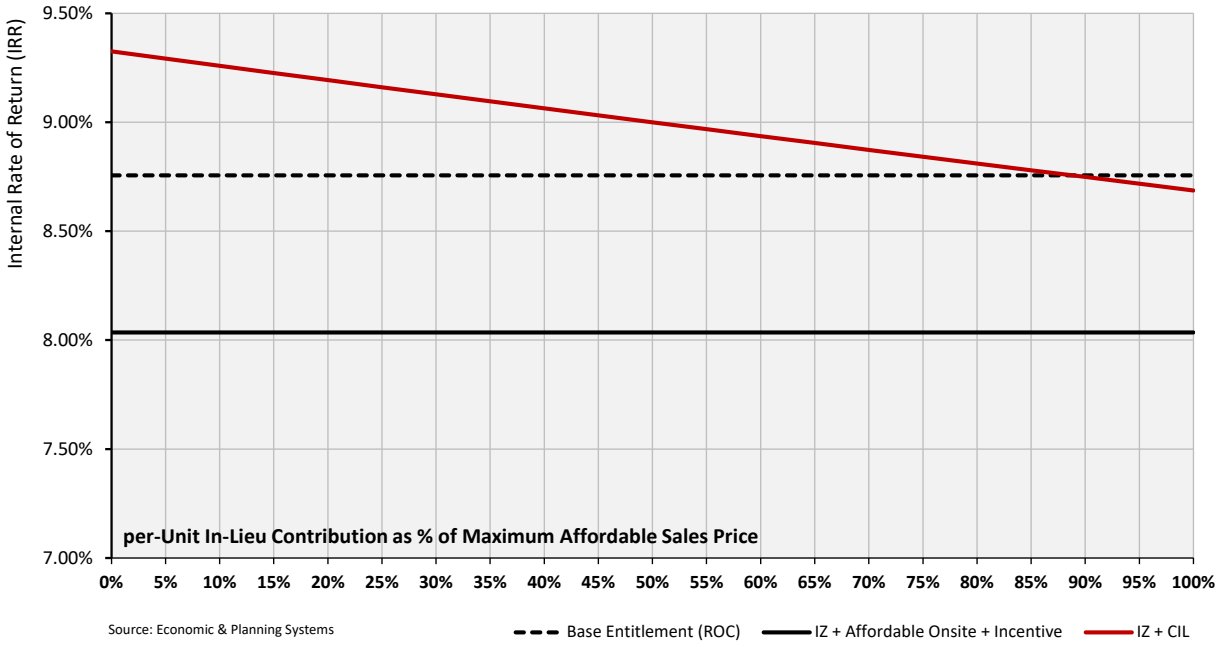
Figure A67 Single-Family Rental IRR vs. In-Lieu Contribution



Townhome

The results of this test suggest that an in-lieu contribution should be set to no less than 25 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 202 percent would bring the IRR into alignment with the onsite construction option.

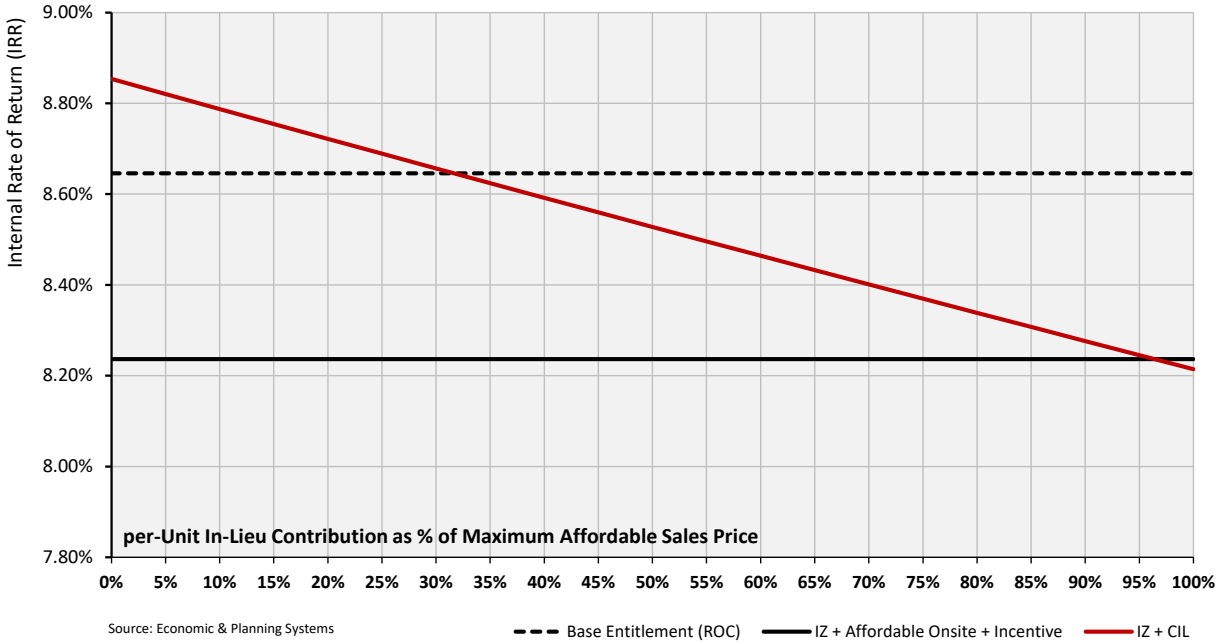
Figure A68 Townhome Rental IRR vs. In-Lieu Contribution



3-Story

The results of this test suggest that an in-lieu contribution should be set to no less than 20 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 96 percent would bring the IRR into alignment with the onsite construction option.

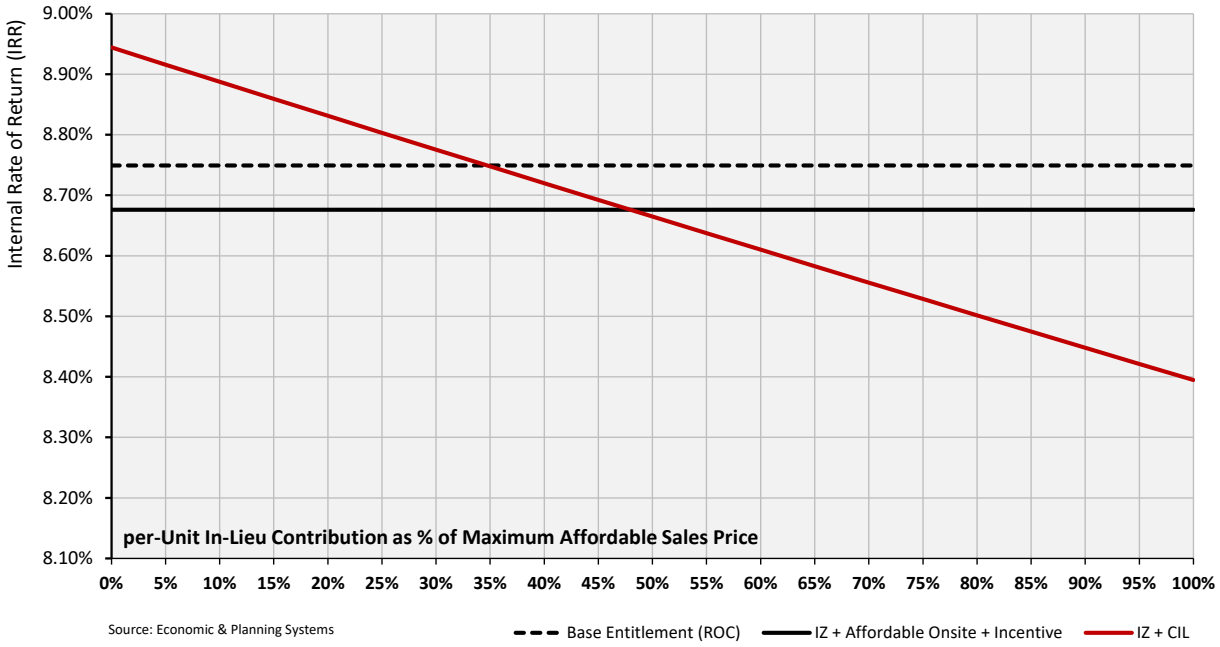
Figure A69 3-Story Rental IRR vs. In-Lieu Contribution



5-Story

The results of this test suggest that an in-lieu contribution should be set to no less than 15 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 49 percent would bring the IRR into alignment with the onsite construction option.

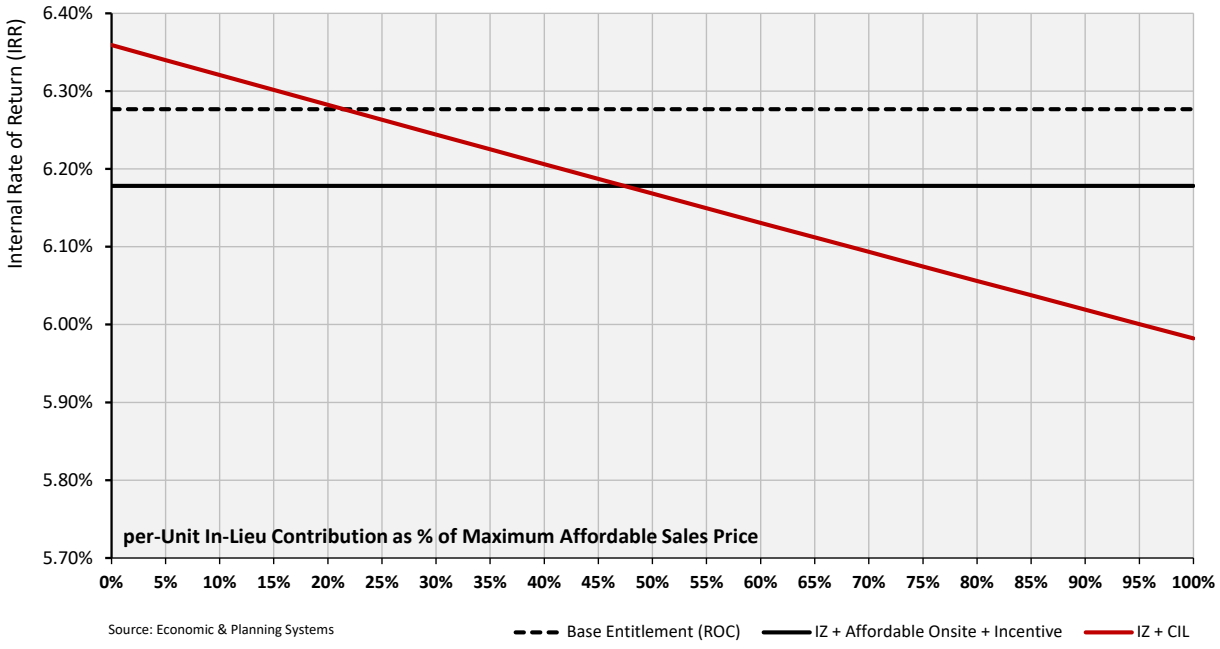
Figure A70 5-Story Rental IRR vs. In-Lieu Contribution



10-Story

The results of this test suggest that an in-lieu contribution should be set to no less than 10 percent, at which point the IRR of a project building affordable units is equal to the IRR of a project making a contribution in-lieu of affordable housing. The test also illustrates that an in-lieu contribution set to approximately 48 percent would bring the IRR into alignment with the onsite construction option.

Figure A71 10-Story Rental IRR vs. In-Lieu Contribution



Appendix B: Advisory Group Survey Responses

Advisory Group Survey

An online survey was fielded to all 37 participants of the Advisory Group at the beginning of February 2020. The survey yielded 21 responses, which are summarized in the following section. Although not a scientific survey, i.e. a statistically significant sample of the full population of potential "stakeholders" in the community, the results represent the complexion of those who participated in the process and those who participated in the survey. The objective of this effort was to gather and document the groups' divergent perspectives on inclusionary zoning and linkage fees as policy tools, gather and document the groups' perspectives on City efforts to address affordable housing needs more broadly, and solicit open-ended responses and commentary. Simultaneously, the objective was to collect feedback from a broad spectrum of the Advisory Group participants on a uniform set of issues and questions.

Questions

The following questions were structured to document perspectives and opinions on different aspects of the two policies City Council requested City staff evaluate. Questions allowed for documentation of: a) perceived advantages; b) perceived disadvantages; c) potential effectiveness or ineffectiveness; d) City role and placement of resources; e) perceived effectiveness of other City efforts to address affordable housing challenges; and f) open-ended commentary.

1. *Please tell us your thoughts on inclusionary zoning.*
    a. *Concerns about inclusionary zoning*
    b. *Potential benefits of inclusionary zoning*
2. *Please tell us your thoughts on an affordable housing impact fee (i.e. residential or commercial linkage fee).*
    a. *Concerns about an impact fee*
    b. *Potential benefits of an impact fee*
3. *Please provide us with any additional thoughts or comments you have on these two policy mechanisms.*
4. *How much influence you think the City DOES HAVE over the following… (answer choices: a great deal, a lot, a moderate amount, a little, none at all)*
    a. *Housing costs*
    b. *Housing availability*
    c. *Lack of acceptance of multifamily development*
    d. *Stagnant household incomes*
    e. *Congestion/traffic*
    f. *Range of available housing types*
    g. *Cost of construction (labor and materials)*
    h. *Cost of construction (fees)*
    i. *Cost of construction (other soft costs, e.g. financing, insurance, etc.)*
    j. *Price of land*
5. *How much influence do you think the City SHOULD HAVE over the following… (answer choices: a great deal, a lot, a moderate amount, a little, none at all)*
    a. *Housing costs*
    b. *Housing availability*
    c. *Lack of acceptance of multifamily development*
    d. *Stagnant household incomes*
    e. *Congestion/traffic*
    f. *Range of available housing types*

   g. *Cost of construction (labor and materials)*
   h. *Cost of construction (fees)*
   i. *Cost of construction (other soft costs, e.g. financing, insurance, etc.)*
   j. *Price of land*
6. *How would you evaluate the effectiveness of the following City policies and incentives? (answer choices: very effective, effective, neutral, not very effective, completely ineffective, N/A – I don't know enough to answer)*
   a. *Fee waivers for units at 30 percent AMI*
   b. *Density bonus*
   c. *Priority processing*
   d. *Deferred fees*
   e. *Use of federal funds (e.g. CDBG, HOME)*
   f. *Land bank program*
   g. *Dedicated sales tax (generated $4 million over 10 years)*
   h. *Manufactured housing preservation and livability*
   i. *Application process for private activity bonds*
   j. *Metro districts*
7. *On a scale of 1 to 10, to what degree should the City use financial resources to address these problems? (1 = do not use financial resources, 10 = direct significant financial resources to solve these problems)*
   a. *Housing costs*
   b. *Housing availability*
   c. *Lack of acceptance of multifamily development*
   d. *Stagnant household incomes*
   e. *Congestion/traffic*
   f. *Range of available housing types*
   g. *Cost of construction (labor and materials)*
   h. *Cost of construction (fees)*
   i. *Cost of construction (other soft costs, e.g. financing, insurance, etc.)*
   j. *Price of land*
8. *How should the City modify its regulatory environment to address these housing problems? (check all that apply)*
   a. *Pull back regulation (it's a part of the problem)*
   b. *Add regulation limiting certain types of development*
   c. *Add regulation incentivizing certain types of development*
   d. *Establish policies to use incentives (e.g. density bonus, lower parking requirements, etc.) to encourage certain types of residential development (e.g. affordable housing))*
   e. *No modification needed*
   f. *Other, please specify*
9. *We are looking specifically at inclusionary zoning and impact/linkage fees in this study, but we know there are many policies we could consider. What other ideas do you think the City should explore?*
   a. *Ideas*
   b. *Who should implement (e.g. City, private sector, etc.)?*
   c. *Potential drawbacks*
   d. *Potential benefits*
10. *We heard that you would like to discuss ideas beyond inclusionary zoning and impact/linkage fees. How would you like to continue those discussions?*
   a. *Schedule a 4th in-person meeting (1.5 to 2 hours)*
   b. *Extend currently-scheduled meetings to 6pm (additional 30 minutes)*

c. Online meeting via Zoom or other platform (1.5 to 2 hours)
d. Staff office hours for one-on-one discussions (online, phone, or in-person)

11. Please provide any additional thoughts or comments you have that might help the City in this study effort.

Responses

The following are verbatim responses from survey respondents.

1. Please tell us your thoughts on inclusionary zoning.

a. Concerns about inclusionary zoning

- Adding costs to attainable housing and implementation since many market rate developers do not know how to work with affordable housing
- It will not substantially increase affordable housing in Northern Colorado and could have a chilling effect on building.
- raises the price of everything
- Places all burden on builders. Will increase the cost of all housing.
- Places additional cost on market rate product furthering the gap between income and affordability
- Very ridged when the economy can change
- That developers will just opt-out of doing the affordable units and fee to opt-out will not be substantial enough to have any impact, that costs will just be moved from the affordable units to the other units increase the cost for other renters and buyers
- Potentially alienates the missing middle- those with AMI over 120%
- Fort Collins leads the region in multi-family and townhomes and these housing types are allowed in most zones. Inclusionary zoning may be appropriate for ski towns but in F.C., effectiveness may be only at the margin.
- IZ does not work. More govt rules and controls damage the people they say they want to help. Deed restrictions create limits on families' ability to grow family wealth.
- Would look to consultant team to assess and present local risks / concerns.
- First it restricts an owner's ability to gain equity. It adds costs to administrate disclose and monitor the deed restrictions. Who will be responsible over the years to watch and monitor those properties? This has been subject to missed sales which did NOT adhere to the restrictions. The horse gets out of the barn how do you put it back?
- Developers are usually allowed to pass on costs for inclusionary zoning to residents
- Research has shown that the long-term cost benefit ratio does not work. There a lot of additional tool that can be used before going down this path.
- Increase in cost to non-affordable housing in specific developments.
- I've heard many people with no dog in the hunt say it does not work.
- Developer loses money on each unit, forcing up cost on other units
- Policies that raise the cost of housing cannot, by definition, improve housing affordability. Although such policy has not actually delivered the promised benefit in communities where it has been adopted, the best possible outcome locks in the maximum number of targeted housing units. In other words, if IZO requires 10% of units at 50% AMI, delivery of affordable units will never exceed 10%. Again, from a pure definitional standpoint, 25% of households have income equal to or less than 50% AMI. To align the math, IZO would need to require 25% of all new units @ 50% AMI. However, the remaining 75% of units would need priced at 120% AMI or higher, leaving 35% of households priced out of the market.

- If there are no options to provide 'naturally' affordable products with existing zoning, the affordable product required may be supplemented with higher prices on the non-affordable product. That is, if it's all the same SF detached product and 20% needs to be affordable, the costs are shifted to the market rate product. 2. In general, inclusionary requirements that do not provide flexibility for developers to meet the requirement in some other way.

b. Potential benefits of inclusionary zoning

- It does create a path to meet City goals
- Might help bring a few more affordable units to the market.
- none
- May create new affordable units.
- I don't see any at this time, as I'm not certain how it would deliver more affordable units to the Market
- A certain number of housing set aside and may provide less investing risk for the private funding area.
- Potentially more units but would like to see research on where this has worked and what mechanisms made it work.
- Enables those earning lower incomes to live in our community
- I.Z. may result in more affordable housing (80% AMI) than if not adopted but again, results may be marginal.
- NONE
- Address increasing divide "us vs them" / NIMBY narrative. One small step to increase mixed income housing opportunities as they create the best environment for optimal child-level outcomes.
- It might net a few units but statistically nationwide has not produced significant numbers of low-cost units
- Ensuring a % of new development that is affordable is the only way to ensure new development is equitable across incomes
- In a very narrow vision inclusionary housing could work help with work force housing.
- Access of underserved populations to neighborhoods they may not otherwise be able to afford.
- Excellent tool for housing equity across all neighborhoods
- Prove it.
- Provides wealth transfer
- Strictly political. Constituents and policy wonks will be left with the impression the City is doing something even though the effect is counterproductive.
- Leveraging second home/luxury home or commercial development to create additional affordable housing

2. Please tell us your thoughts on an affordable housing impact fee (i.e. residential or commercial linkage fee).

a. Concerns about an impact fee

- I think the process of how the fees will translate into housing needs to be defined
- Impact fee is a disincentive to build in Fort Collins.
- raises the price of everything
- Makes new construction shoulder all the burden for a community problem.
- Might prevent enough long-term private investors
- That this will be seen as being a deterrent to economic development, that this will be seen as a "silver bullet" rather than just being one way of increasing resources, that there would need to be a strong communications plan to build buy-in
- Will it detract new businesses from coming here?
- Concerned that the fee may be not broad based enough.
- How does raising a fee to build a product have any chance to make the cost of that product be less?
- Would look to consultant team to assess and present local risks / concerns.
- The fees will raise the prices of all units where an impact fee is accessed to cover the cost. All fees raise prices
- I don't know about this.
- Raises cost burden to middle class citizens, especially the lower tier of the middle class. Also, looking at other cities, adding the fee show little to no positive impact to affordable house, but does show negative impacts to everyone else.
- Increases housing costs across all inventory.
- Developers may take fee in lieu instead of adding affordability - and racial/socio-economic equity to their projects
- How can you charge a fee to the only people delivering housing at all? Adding another fee to home builders or developers is crazy.
- Adds to the overall cost of housing
- Same fundamental disconnect. Raising the cost of development does not create affordability. Commercial linkage is particularly galling as it imposes a disincentive to form or grow employment opportunities. Playing out the argument, a limited number of households will enjoy the benefit of housing they can afford, though suffer higher monthly expense for transportation and childcare with a diminished sense of community.
- Potentially drive up the cost of market rate residential designed for middle income earners.; Can discourage additional commercial development that could provide jobs. Could disproportionately put burden on commercial development where housing costs are driven by other factors such as outside investment.

b. Potential benefits of an impact fee

- The fees can be given to affordable housing developers who have demonstrated success with affordable development
- May potentially provide a funding stream for affordable housing.
- none
- Creates funding for land? Units?
- Spreads the impact among more business sectors
- Increased resources for affordable housing, particularly from those industries where jobs are being created but not at a living wage
- Additional affordable housing!
- Would result in more funding for the Land Bank and other programs.
- Only fills government coffers with more private sector money. Not a market benefit at all.
- Addressing affordable housing challenges will require a range of policy tools and investments - impact fees should be just one important tool among many.
- If they could be used by the city and were not subject to reimbursement from the general fund there might be additional room to give back those fees with waivers for Affordable Housing
- I don't know about this.
- None that I can see.
- Guaranteed funding for affordable housing
- New resources are always needed
- It should only be charged to anyone not providing housing.
- Provides funds for affordable housing
- Strictly political.
- Provides revenue for a dedicated fund that can be used for many activities to create affordable housing.

3. Please provide us with any additional thoughts or comments you have on these two policy mechanisms.

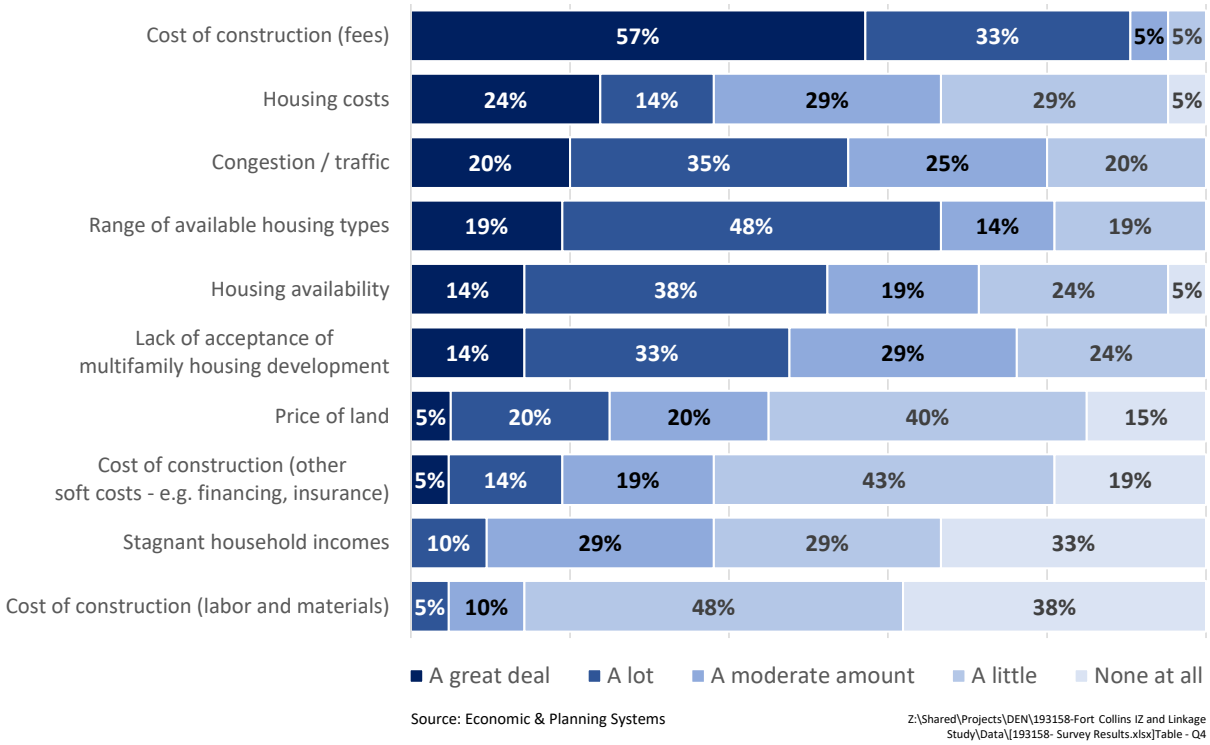
- My biggest concern with inclusionary zoning is its effect on attainable housing. Also, I have experience with developments in other Colorado municipalities with inclusionary zoning. The majority choose cash in lieu since they do not deal with affordable housing regularly. I believe a process to manage those fees into viable affordable housing should be thought out before presentation to the Council.
- Neither option seems to be a good solution for addressing housing affordability.
- Not impressed with this tool.
- Is this the required nexus study for the City to move ahead with either of these approaches?
- I think a whole slate of policies should be introduced, rather that these two being isolated from a more comprehensive plan
- Wouldn't a fee on residential building permits make housing less attainable for the 100% and higher AMI?
- More government rules and regulations will not solve any problem that relies on private sector investment and risk.
- Neither one will get us any closer to the goal of affordable or achievable housing
- What are the options to mandate inclusion of affordable units in new development that don't allow developers to simply increase fees to residents? Can we explore a density bonus or

incentive for contributing to an affordable housing fund? Maybe better not to force market rate developers to develop affordable units, but to limit the number of market rate units that can be developed to maintain equity - 17% of our inventory should be incentivized for affordable development to align with our poverty rate.

- From the data and statistics, the city should not go down the path of inclusionary house or impact fees. Since Boulder has started the change, the cost of a condo has gone from under 300K to over 650K. Impact fees do not work for affordable housing.
- Builders (and lenders) make decisions on where to build geographically. Both proposed mechanisms add to the cost of building in Fort Collins which forces the builders (and lenders) to expect a higher return (or they'd build - or lend - elsewhere geographically). That means they'll only proceed with projects in Fort Collins that include a majority of very high-end homes. The long-term result will be a dearth of projects with middle income housing.
- Council has chosen to focus on treating the symptoms rather than acknowledging the root disease: cost of development. Public policies are treated as benign, worst case, or virtuous in the most academic sense. Just considering energy efficiency standards within building code, the net impact is financially negative. Roughly 90% of a utility provider overhead is fixed. If usage declines, utility rates must escalate to remain solvent - regardless of energy source. So, a resident uses less energy, though over time the energy bill remains static, at best, or increases as producer price inflation manifests.

4. How much influence do you think the City DOES HAVE over the following… (answer choices: a great deal, a lot, a moderate amount, a little, none at all)

Figure B72 Advisory Group: How Much Influence Does City Have on Following



Source: Economic & Planning Systems

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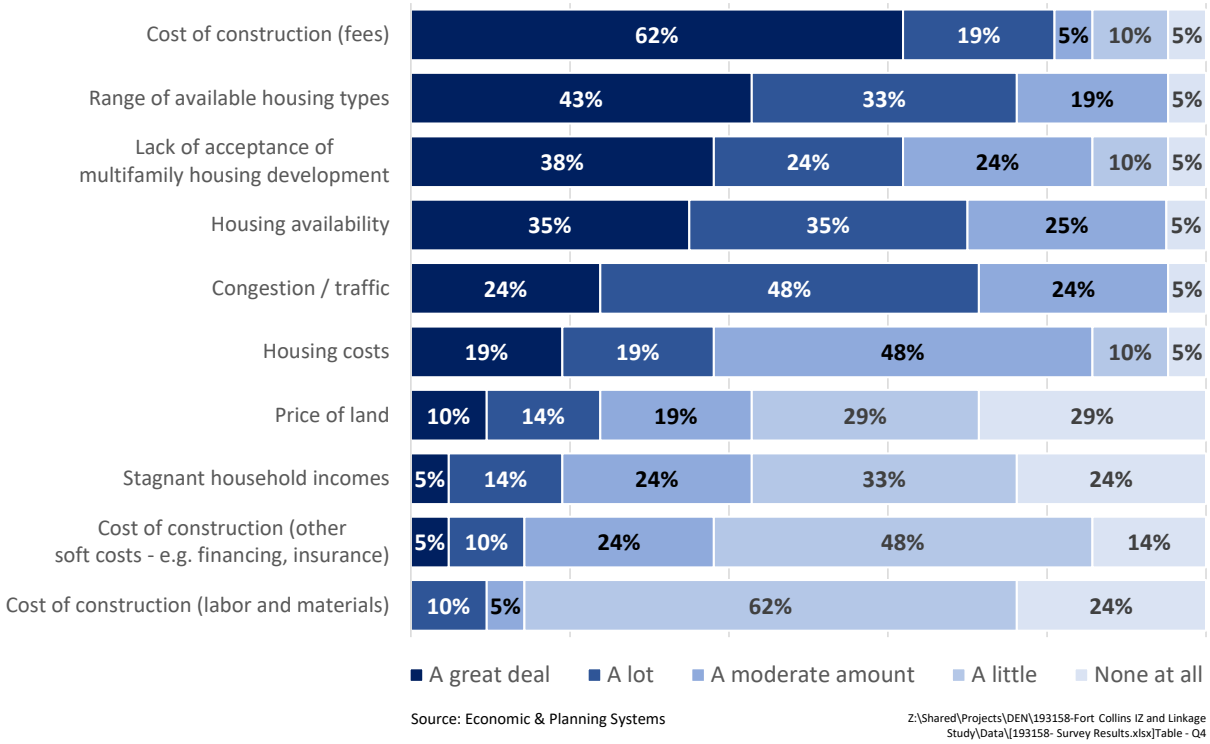
5. How much influence do you think the City SHOULD HAVE over the following… (answer choices: a great deal, a lot, a moderate amount, a little, none at all)

Figure B73 Advisory Group: How Much Influence Should the City Have on Following



Source: Economic & Planning Systems

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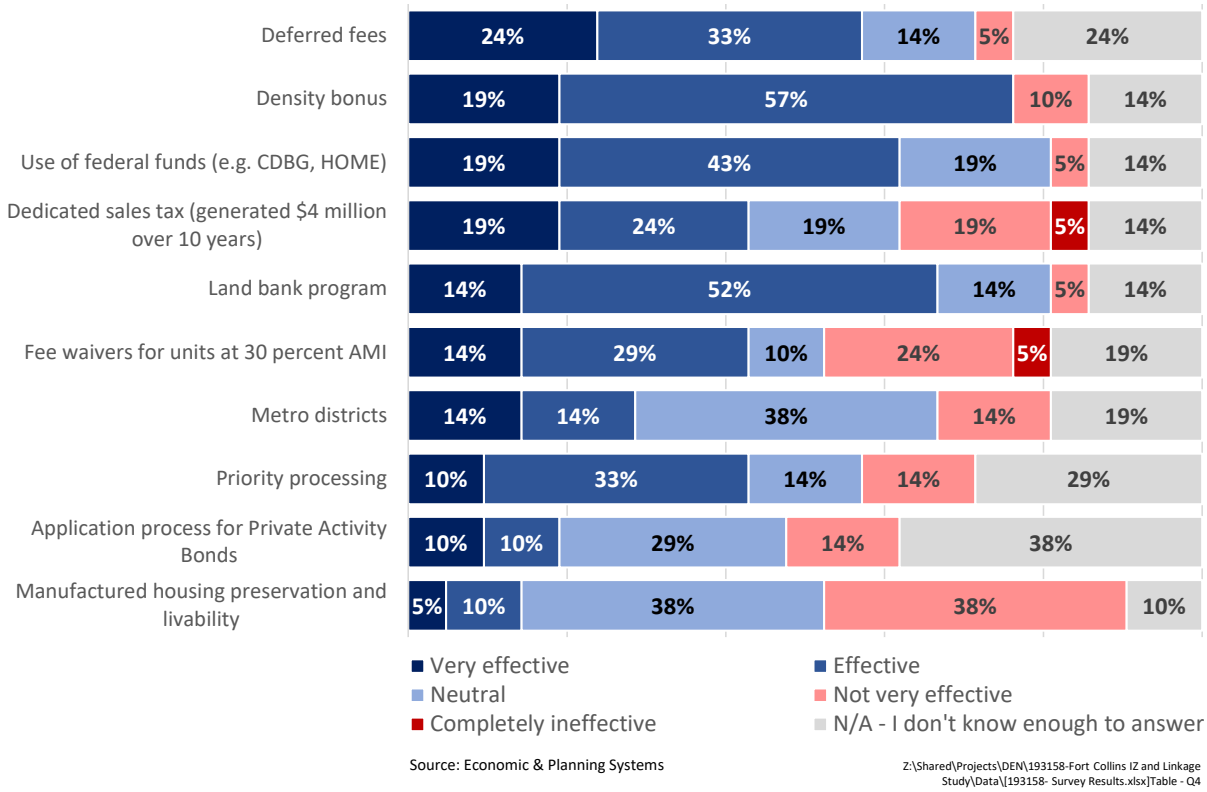
6. How would you evaluate the effectiveness of the following City policies and incentives? (answer choices: very effective, effective, neutral, not very effective, completely ineffective, N/A – I don't know enough to answer)

Figure B74 Advisory Group: Which of the Following City Policies and Incentives are Effective



Source: Economic & Planning Systems

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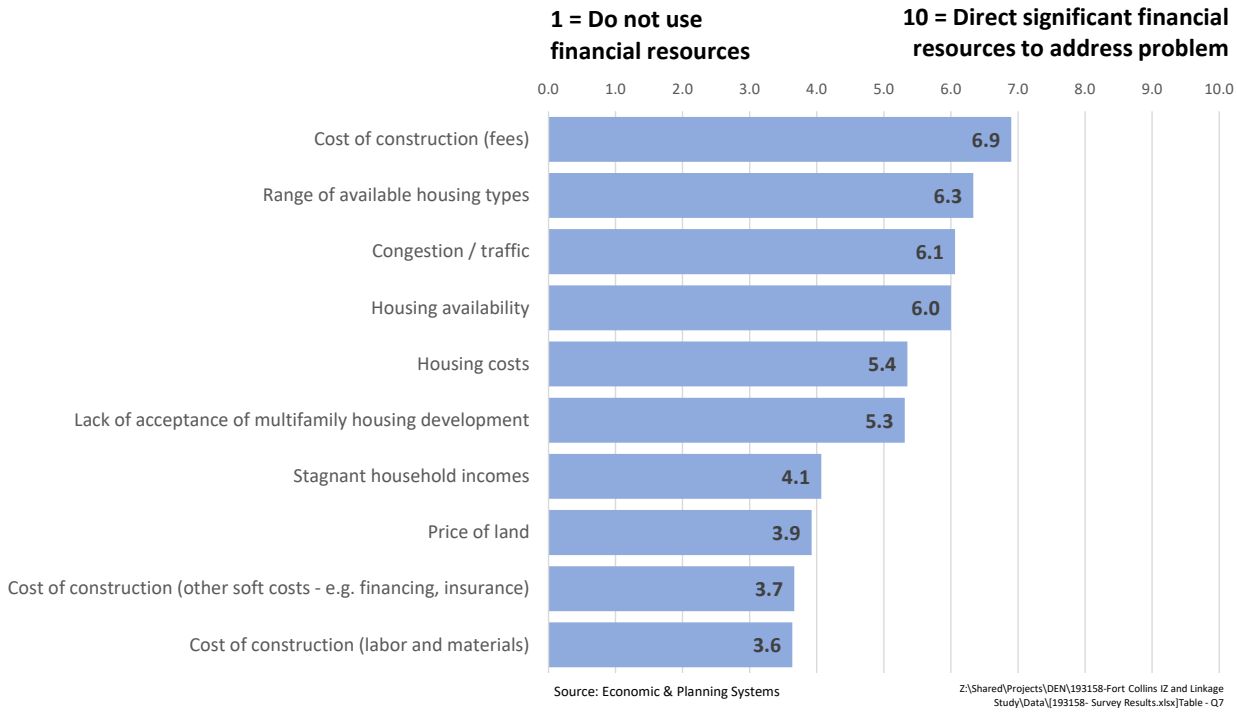
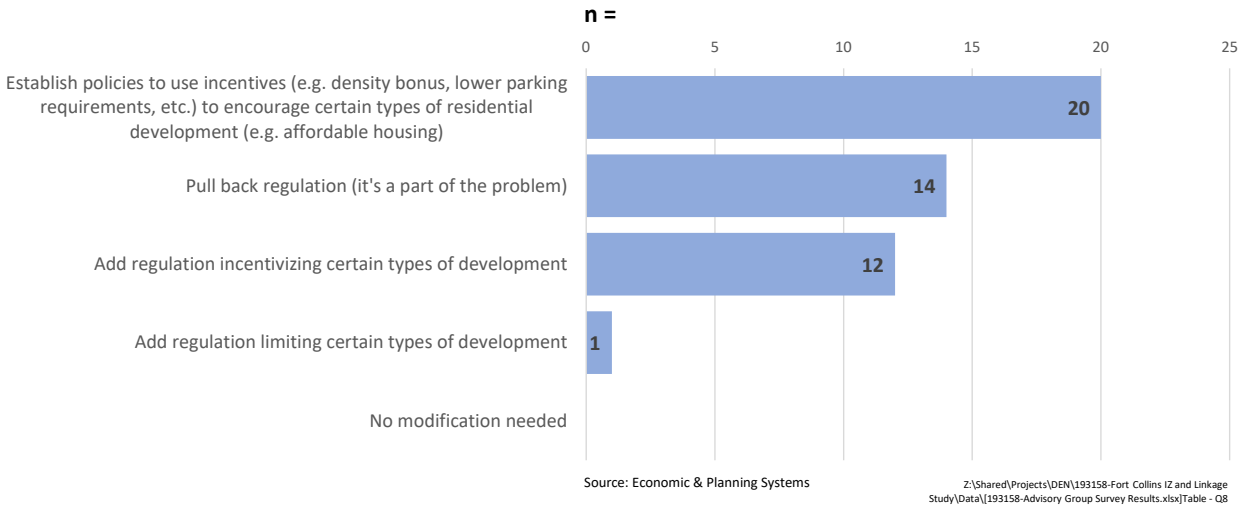
7. On a scale of 1 to 10, to what degree should the City use financial resources to address these problems? (1 = do not use financial resources, 10 = direct significant financial resources to solve these problems)

Figure B75 Advisory Group: To What Degree Should City Use Financial Resources



8. How should the City modify its regulatory environment to address these housing problems? (check all that apply)

Figure B76 Advisory Group: How Should City Modify Regulatory Environment



- Nearly all the land bank land is in the LMN zone which does not promote the density needed for affordable housing viability. Change the code to allow more global exemptions and incentives for affordable housing
- Examine land development codes
- Evaluate all aspects of the homebuilding process. There is no one size fits all solution
- Increase flexibility in "development paying for development" and standards like adding additional landscaping buffers, creating pathways, items that would be nice but are unnecessary and may stall projects even in the concept review stage
- Achieving density in Fort Collins is generally permitted in most zone districts. F.C. issues more multi-family permits than any other city in Larimer and Weld Counties.
- Help subsidize insurance for Condo projects to offset the insane cost to insure due to potential repeal of arbitration and or the new bill introduced to increase the Builders liability for construction defects to 10 years. helping with the cost of that insurance might allow for private builders to get back into the condo building business in the achievable price rage
- reassess water - to avoid requiring more water than necessary
- Pursue 'data-driven' solutions.

9. We are looking specifically at inclusionary zoning and impact/linkage fees in this study, but we know there are many policies we could consider. What other ideas do you think the City should explore?

Ideas	Who should implement?	Potential Drawbacks	Potential Benefits
Relaxed zoning and incentives (limit fees) for affordable housing	City	none	Opens up affordable housing to react to the ever-changing politics of affordable housing financing with more entitlement certainty
City-wide tax	Voters	May be unpopular, but that will tell us how the public feels.	Funds for land, incentives, purchase of existing units
Evaluate the drivers of housing cost and see what opportunities the city can influence	Private Sector	Potential less fee revenue to the City	could infuse more quick-to-market affordable units
N/A	Both City and Private		
Incentives for developers - lower parking & requirements, speed up rezoning process, increase density bonus, offer tax incentives	City	NIMBY against density	More units, market-driven
Mandatory water-friendly landscapes for new developments	City	Not as 'pretty'	Reduce water usage / housing costs
How about a quarter-cent sales tax increase versus building permit fees	City and County	Politically unpopular and would compete with open space sales tax funding.	Would be a broad-based form of revenue generation and not targeted to one aspect of the economy i.e. homebuilders and multi-family builders.
re-examine the "fee-stack" load for affordable	City	?	building affordable may get more attractive
suggestions from last HAP study should be revisited, change occupancy limit to 4 people	City		we already studied it
Restructure of fee stack to incentive smaller homes to be build. Allow for Density Bonus in LMN and MMN to encourage building. City needs to be more flexible on building types	The city should make it easier to build small units and increase density thought out the city.		
Reduced or waived tap fees for affordable housing development	City, water districts		
Adjusting minimum lot sizes and unit sizes - Existing affordable homes are smaller houses on smaller lots on less expensive land	City	None	Market driven development
Zero-based zoning and building code. The City theoretically uses this approach for its bi-annual budget, wherein every expenditure must justify its benefit. Use the same approach for development standards	City	Anarchy	An honest evaluation of trade-offs.

10. Please provide any additional thoughts or comments you have that might help the City in this study effort.

- I feel the mandate for the study is too narrow. The direction was given by Council who are not experts in affordable housing. I think it would benefit the entire City to go back to Council and ask for more time and a broader scope.
- I think this is a slippery slope for the average home buyer. We are not addressing the underlying problems that are driving housing costs up, we are layering additional costs onto units.
- N/A
- I would be concerned if there is any movement to raising the minimum wage to $15.00 / hour like Denver.
- Appears that these ideas have already been "adopted" and this is just looking for data to justify those decisions.
- I will have more to add at the next meeting
- thank you!
- Incentivize the market to build affordable housing through density bonuses, smaller unit sizes, fee deferrals, expediting approvals, tax abatements, etc. Adding fees will result in two types of housing - insufficient affordable units and an excess of high-end luxury units. No one will build middle income housing due to the higher costs.
- Expand the scope beyond two inherently flawed and ineffectual concepts.