CITY OF BOULDER
PLANNING BOARD MEETING AGENDA
DATE: March 4, 2025
TIME: 6:00 PM
PLACE: Hybrid Meeting

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1. **CALL TO ORDER**

2. **PUBLIC PARTICIPATION**

3. **DISCUSSION OF DISPOSITIONS, PLANNING BOARD CALL-UPS/CONTINUATIONS**

4. **PUBLIC HEARING ITEMS**

5. **MATTERS FROM THE PLANNING BOARD, PLANNING DIRECTOR, AND CITY ATTORNEY**

   A. Discussion of findings of a completed Nexus Study on the impact of demolitions of smaller houses and replacement by larger houses, and the impact of significant additions to existing single-family homes. The nexus study is necessary for the city to pursue affordable housing linkage fees tied to the impact of these types of redevelopments.

6. **DEBRIEF MEETING/CALENDAR CHECK**

7. **ADJOURNMENT**

For more information call (303) 441-1880. Board packets are available after 4 p.m. Friday prior to the meeting, online at www.bouldercolorado.gov.

*** * * SEE REVERSED SIDE FOR MEETING GUIDELINES * * ***

CITY OF BOULDER PLANNING BOARD
VIRTUAL AND HYBRID MEETING GUIDELINES

These guidelines apply to electronic meetings and hybrid meetings. Hybrid meetings permit simultaneous in-person and electronic participation.

CALL TO ORDER
The Board must have a quorum (four members present) before the meeting can be called to order.

AGENDA
The Board may rearrange the order of the agenda or delete items for good cause. The Board may not add items requiring public notice.

PUBLIC PARTICIPATION
The public is welcome to address the Board (3 minutes* maximum per speaker) during the Public Participation portion of the meeting regarding any item not scheduled for a public hearing. The only items scheduled for a public hearing are those listed under the category PUBLIC HEARING ITEMS on the Agenda. **Any exhibits introduced into the record must be provided to the Board Secretary for distribution to the Board and admission into the record via email 24 hours prior to the scheduled meeting time**.

DISCUSSION AND STUDY SESSION ITEMS
Discussion and study session items do not require motions of approval or recommendation.

PUBLIC HEARING ITEMS
A Public Hearing item requires a motion and a vote. The general format for hearing of an action item is as follows:

1. Presentations

- Staff presentation (10 minutes maximum*).
- Applicant presentation (15-minute maximum*). Any exhibits introduced into the record at this time must be provided to the Board Secretary by email, no later than 24 hours prior to the scheduled meeting time, for distribution to the Board and admission into the record.
- Planning Board questioning of staff or applicant for information only.

2. Public Hearing

Each speaker will be allowed an oral presentation of up to three minutes*. Three or more people may pool their allotted time so one speaker can speak for five minutes*. To pool time, all the people pooling time must be present in-person in the physical meeting room or present electronically when the spokesperson is called to speak. Speakers with pooled time must identify the people they are pooling time with by first and last name when called upon to speak, so they can be called upon to confirm their presence and willingness to pool their speaking time.

- Speakers should introduce themselves, giving name and address. If officially representing a person, entity, group, homeowners' association, etc., please state that for the record as well.
- The board requests that, prior to offering testimony, the speaker disclose any financial or business relationship with the applicant, the project, or neighbors. This includes any paid compensation. It would also be helpful if the speaker disclosed any membership or affiliation that would affect their testimony.
- Speakers are requested not to repeat items addressed by previous speakers other than to express points of agreement or disagreement. Refrain from reading long documents and summarize comments wherever possible. Documents and other physical evidence must be submitted via email 24 hours prior to the scheduled meeting to become a part of the official record.
- Speakers should address the applicable Land Use Code criteria and, if possible, reference the criteria that the Board uses to decide a case.
- Any exhibits intended to be introduced into the record at the hearing must be emailed to the Secretary for distribution to the Board and admission into the record **24 hours prior to the meeting**.
- Citizens can email correspondence to the Planning Board and staff at boulderplanningboard@bouldercolorado.gov, up to **24 hours prior to the Planning Board meeting**, to be included as a part of the record.
- Applicants under Title 9, B.R.C. 1981, will be provided the opportunity to speak for up to 3 minutes* prior to the close of the public hearing. The board chair may allow additional time.

3. Board Action

- Board motion. Motions may take any number of forms. With regard to a specific development proposal, the motion generally is to either approve the project (with or without conditions), to deny it, or to continue the matter to a date certain (generally in order to obtain additional information).
- Board discussion. This is undertaken entirely by members of the Board. The applicant, members of the public or city staff participate only if called upon by the Chair.
- Board action (the vote). An affirmative vote of at least four members of the Board is required to pass a motion approving any action. If the vote taken results in either a tie, a vote of three to two, or a vote of three to one in favor of approval, the applicant shall be automatically allowed a rehearing upon requesting the same in writing within seven days.

MATTERS FROM THE PLANNING BOARD, DIRECTOR, AND CITY ATTORNEY
Any Planning Board member, the Planning Director, or the City Attorney may introduce before the Board matters which are not included in the formal agenda.

ADJOURNMENT
The Board's goal is that regular meetings adjourn by 10:30 p.m. and that study sessions adjourn by 10:00 p.m. New agenda items will generally not

be commenced after 10:00 p.m.

VIRTUAL MEETINGS
For Virtual Meeting Guidelines, refer to https://bouldercolorado.gov/government/board-commission/planning-board page for the approved Planning Board Participation Rule for Electronic and Hybrid Hearings.

*The Chair may lengthen or shorten the time allotted as appropriate. If the allotted time is exceeded, the Chair may request that the speaker conclude his or her comments

CITY OF BOULDER
PLANNING BOARD AGENDA ITEM

MEETING DATE: March 4, 2025

AGENDA TITLE

Discussion of findings of a completed Nexus Study on the impact of demolitions of smaller houses and replacement by larger houses, and the impact of significant additions to existing single-family homes. The nexus study is necessary for the city to pursue affordable housing linkage fees tied to the impact of these types of redevelopment.

REQUESTING DEPARTMENT / PRESENTERS

Housing & Human Services
Kurt Firnhaber, Director
Jay Sugnet, Housing Senior Manager
Hollie Hendrikson, Housing Policy - Senior Project Manager
Sloane Walbert, Inclusionary Housing Program Manager

OBJECTIVE

1. Staff presentation.
2. Board discussion, including questions of staff and consultant.
3. No official action or recommendation required.

SUMMARY

The purpose of this item is to present the findings of a completed nexus study and solicit direction of the implementation of a possible impact fee on these types of redevelopments. The need to examine demolitions and replacement of single-family homes and/or significant additions was identified as a priority by City Council in 2023. The city selected Gruen Gruen + Associates in October of last year to provide research and analysis services to explore the extent that replacement homes and substantial additions to homes contribute to the need for affordable housing

The completed nexus study analyzes the causal connections, or nexus, between single-family housing teardowns (or significant alterations/expansions) in Boulder and conditions within the local economy and housing market. This type of development is not subject to the city's existing Inclusionary Housing regulations because it is not considered "new" residential development. Thus, these projects are not currently required to contribute toward affordable housing in the community. The findings by the consultant indicate that significant additions to single-family homes generate additional employment (jobs) and create the demand for additional affordable housing. The completed study can be found in **Attachment A**. If directed by City Council, the study can be used to establish the appropriate impact fee level and assess the potential impact of the maximum supportable fees for residential demolition/rebuilding projects.

Purpose Statement

Single family redevelopment in the city often removes a smaller, relatively affordable home and replaces it with a large expensive home. Similarly, substantial additions effectively replace more affordable smaller homes with larger more expensive homes, reducing affordability. This type of development is not subject to the city's existing Inclusionary Housing regulations and are not required to contribute toward affordable housing in the community. An impact fee could address shortcomings in the IH program and would ensure equity in how residential development and additions contribute to affordable housing in the community.

BACKGROUND

Inclusionary Housing

In 2000, Boulder became one of the first communities in the country to adopt Inclusionary Housing (IH) as a strategy to address rising housing prices. The IH program requires all new residential developments to contribute 25% of the total units, or the equivalent, as permanently affordable housing. This program is often referred to as the "workhorse" in Boulder's affordable housing tool kit and has resulted in the development of hundreds of affordable homes directly, and thousands indirectly, through leveraging of cash-in-lieu contributions. The IH program only applies to "new" residential development. Since remaining land appropriate for residential development within the city is limited, it is essential that a reasonable proportion of such land be developed into affordable housing units. This is particularly true because, in the absence of interventions, available land is often developed with large expensive housing, which both reduces

opportunities for more affordable housing and contributes to a general rise in prices for all housing in the community. Replacing one older home with a newer home or making an addition does not utilize land in the city remaining for development. As a result, these scenarios cannot be addressed through the IH program.

The city's land use code allows the IH requirement to be waived for homes in developments with four or fewer units that are demolished and replaced within three years. As a result, almost all newly constructed single-family homes in the city are exempt from affordable housing requirements. In practice, this means that someone who purchases a property with an existing home, regardless of size, does not pay a cash-in-lieu contribution to meet IH requirements. Whereas a person who builds a home on a vacant lot in the city is required to pay a contribution to the city's affordable housing fund at the rate of $15.34 per square foot based on 2025 rates ($53,690 for a 3,500 square foot home).

Trends

Based on the consultant's research, Certificates of Occupancy were issued on 255 new detached single-family homes from 2018 through November 2024, ranging from 33 to 45 units per year. About three-quarters of these new homes are estimated to have replaced smaller existing homes through teardowns. Approximately 150 single-family home additions received Letters of Completion during the same period. For the purposes of the nexus analysis, significant single-family home additions are defined as projects with a recorded construction cost exceeding $250,000 and an above grade living area expansion of more than 500 square feet.

Figure 1: Recently Completed Replacement Home

The number of permits issued (but not necessarily completed) for these types of projects are shown in the table below.

Table 1: Permits Issued New Single-Family Construction and Significant Additions

	Vacant Lot Development (Subject to IH)	Demolitions and Replacements (Waiver to IH)	Significant Additions (over 500 sq. ft.)
2019	4	16	54
2020	6	25	25
2021	9	25	38
2022	11	26	39
2023	8	16	29
2024	12	31	26
TOTAL	**50**	**139**	**211**

It is important to note that a potential impact fee would also apply to residential developments under four units that utilize a waiver to IH. A waiver to IH applies to developments with four or fewer units (attached or detached homes) that are demolished and replaced within three years. These types of development are not common and there were only six residential projects that utilized as least one waiver to IH from 2018 to 2024.

Figure 2: Home with Significant Additions

Figure 3: Home Approved for Demolition and Replacement

Legal Requirements
Impact fees are used in the city to address the impacts of new development. An impact fee must be based on a study that establishes the nexus between the impact of development, amount of the fee, and how the funds will be spent. An impact fee is sometimes referred to as a linkage fee since they attempt to link the production of market-rate real estate to the production of affordable housing.

Nonresidential Impact Fee
In 2015 the city adopted an affordable housing impact fee on new non-residential development. This fee replaced the former Development Excise Tax and Housing Excise Tax, which did not cover the growth-related costs for the services intended. The fees are assessed based on defined rate categories. Funds from the fees are directed into the city's affordable housing fund.

There are currently no affordable housing impact fees tied to residential additions.

Affordable Housing Fund
Funds collected from a possible impact fee would be placed in the city's affordable housing fund. This fund was established in 1997 for the receipt and management of cash-in-lieu contributions made to satisfy affordable housing obligations. The Fund receives cash-in-lieu contributions from residential developments that provide a direct cash contribution in lieu of providing permanently affordable units on-site, providing permanently affordable units off-site within the city, or dedicating vacant land for affordable unit development. Starting in 2013, the fund also receives payments of affordable housing impact fees (described above). Monies received into this fund are restricted solely for the construction, purchase, and maintenance of affordable housing and for the costs of administering programs related to affordable housing.

Funds are used to provide affordable housing in a diversity of housing types, in a variety of affordability ranges, and dispersed throughout the city. Local funding can be leveraged two to three times with state and federal funding. Locally funded projects support a wide

range of desirable outcomes including senior, transitional, and special needs affordable housing.

Past Initiatives
Community conversations and initiatives regarding the replacement of modest more-affordable homes with larger more-expensive homes in residential areas of the city have been ongoing since at least 2008.

- In 2008, the city began the process of creating new development regulations for single-family neighborhoods termed the Compatible Infill Development project. The study and regulations sought *"to address the impact on existing established neighborhoods of new construction and additions that are incompatible in scale and bulk with the character of the neighborhood."* An ordinance was adopted in 2009 implementing new form, bulk and intensity regulations that limited the bulk, mass, and scale of new residential development in low density zoning districts. More information can be found in the Oct. 6, 2009 City Council memo.

- The Large Homes and Lots code change project in 2018 and 2019 stemmed out of concerns about the size of single-family home construction in the city, particularly in North Boulder, and its impact on neighborhood character, diversity of housing types and housing affordability. The goal of the project was to incentivize or require more modestly sized homes in lieu of fewer larger single-family homes. More information can be found in the May 28, 2019 City Council Memo. Later in 2019, an ordinance was prepared to allow duplexes and triplexes more broadly in low density residential areas; however, City Council did not pass the ordinance due to neighborhood opposition at the time.

- The Zoning for Affordable Housing project of 2022-2023 resulted in an ordinance changing the land use code to remove regulatory barriers to affordable or modest-sized housing and create more housing opportunities in the city. Changes were specifically made to the site review process and standards on intensity (e.g., dwelling units per acre, floor area limitations), form and bulk (setbacks), parking, and subdivision standards with a focus on high density residential, commercial, and industrial zones. Refer to the Sep. 21, 2023 City Council memo for more information. This effort has evolved into the Family-Friendly Vibrant Neighborhoods project, which turned the focus back to low and medium density residential area at the request of City Council. An ordinance was recently passed by City Council that permits duplexes more widely along bus corridors throughout the low density residential zones of the city and more housing units in medium density areas. Refer to the Feb. 6, 2025 City Council memo for more information.

ANALYSIS

The research, approach, findings, and recommendations by Gruen Gruen + Associates can be found in **Attachment A**. The data collected shows that new or expanded single-

family homes are valued at significantly higher prices than smaller, older, existing homes, not only due to larger living spaces but for a premium on new construction. Families and individuals purchasing new or expanded homes represent households at a higher income level than the replaced homes. Based on research done by the consultant, higher-income households within a local economy tend to result in an increase in personal consumption and spending. In turn, additional consumption and spending generates additional employment (jobs).

The report uses the estimated increase in jobs to generate an estimate of new workforce households formed, and the number of affordable units required to house them. Based on the scenarios tested, the consultant estimates that these types of projects generate between 0.14 and 0.26 housing units affordable to middle- and low-income households (below 120 percent of the area median income (AMI)). The study's nexus fee calculations on represent the estimated affordable housing needs multiplied by the estimated affordability gap between market rate and affordable housing units (per-unit feasibility gaps). Based on pro-forma analyses, the maximum supportable impact fee ranges from $15 to $23 per square foot, depending on the development scenario. The implementation of a fee in this range would not render these types of developments infeasible to developers.

Based on these findings GG+A recommends the following in implementing a possible impact fee:

- Establishing one per-square-foot fee for all housing demolition and replacements projects under four units, and for significant additions to homes.
- The fee should be no more than $15 per square foot of additional floor area.
- Exemptions for Accessory Dwelling Units and replacement of homes lost or destroyed due to disaster (wildfire, flood, etc.) should be considered.

The report includes a summary of regulations used in other communities to address the demand for additional affordable housing created by these types of projects. The efforts tend to fall into three categories:

1. Impact fee on projects that fall outside an existing IH program (Boulder).
   Denver, Los Angeles, Portland, Santa Cruz, Cupertino, Sacramento, Aspen

2. Impact fee on all residential projects as an alternative to traditional IH programs.
   Oakland, San Miguel County (Telluride area), Pitkin County (Aspen area), Mountain Village (Telluride area)

3. Demolition tax that charges a set fee on the demolition of single-family homes regardless of home size.
   Evanston, Highland Park, Lake Forest

Staff notes that there is not a perfect analog used that matches Boulder's unique regulatory environment and market conditions. However, this research shows that a impact fee of this nature is common and can be legally supported by a nexus study.

QUESTIONS FOR PLANNING BOARD

Staff is requesting direction on the following items:

1. Does Planning Board have any questions on the Gruen Gruen + Associates Nexus Study? Any recommendations?
2. Does the Planning Board have any feedback on the staff's proposed schedule and approach to community engagement?

RACIAL EQUITY AND PROPOSED ENGAGEMENT

In alignment with the city's commitment to racial equity and good public process and engagement, staff prepared a racial equity assessment and public engagement plan, included in **Attachment B**. These will inform staff considerations and the public process in the adoption of an impact fee.

NEXT STEPS/TIMELINE

If directed to pursue an impact fee, staff proposes the following project schedule subject to board and council feedback. Note, the amount of code development would be dependent on the scope of the changes requested.

Apr – May 2025	*Initial Engagement.* Staff will meet informally with stakeholders and affordable housing partners and formally with the Housing Advisory Board, and Technical Advisory Group.
Jun – Jul 2025	*Evaluate Issues.* Policy alternatives and analysis will be shared with the Housing Advisory Board and Affordable Housing Technical Review Group for feedback on options.
Aug – Oct 2025	*Code Development.* Policy and code amendments will be developed and informed by feedback obtained from the community, Housing Advisory Board, Planning Board, and City Council. The amendments would be adopted through a legislative process.

Meetings are scheduled with the Housing Advisory Board on Feb. 26 and City Council on Apr. 3, 2025 to answer questions and receive feedback on the impact fee.

ATTACHMENTS

Attachment A: Consultant Report

Attachment B: Draft Public Engagement Strategy and Racial Equity Analysis

AFFORDABLE HOUSING NEXUS ANALYSIS FOR SIGNIFICANT SINGLE-FAMILY HOME DEMOLITIONS, REPLACEMENTS AND EXPANSIONS IN BOULDER

To

CITY OF BOULDER

From

GRUEN GRUEN + ASSOCIATES
Urban Economists, Market Strategists & Land Use/Public Policy Analysts

February 2025

C1678

AFFORDABLE HOUSING NEXUS ANALYSIS FOR SIGNIFICANT SINGLE-FAMILY HOME DEMOLITIONS, REPLACEMENTS AND EXPANSIONS IN BOULDER

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HIGHLIGHTS AND RECOMMENDATIONS (TEAR-SHEET)

PURPOSE

This nexus report assesses how demolishing smaller single-family homes and replacing them with larger, more expensive homes (or significant additions to existing homes) impacts the need for additional affordable housing in Boulder. This is referred to as a "demand nexus."

DEMAND NEXUS SUMMARY

- Since 2018, Boulder has experienced about 50 -75 single-family home demolitions, replacements, or major home additions (of 500 or more square feet) annually.
- New and expanded homes typically increase in value by $875,000 to $3.5 million.
- The average annual income required to purchase these homes is $200,000 to $640,000 higher than for the smaller homes they replace.
- Higher incomes and local spending among expanded single-family housing occupants contribute to increased workforce demand. Each single-family home replacement or expansion generates approximately 0.75 to 2.25 additional jobs.
- The estimated need for affordable units to house this additional workforce ranges from about 0.15 to 0.45 units per home expansion project.

MAXIMUM NEXUS FEE

- Affordable housing financing gaps: $81,000 (rental) and $141,000 (ownership) per unit.
- Maximum nexus fees: $14,000 to $44,000 per expanded single-family home (about $15–$20 per added square foot of above-ground living area).
- These fees equate to about fourth tenths of one percent (0.4%) to eight tenths of one percent (0.8%) of typical expanded home sale prices.
- Most replacement or expansion projects will remain financially viable even with a maximum fee.

POLICY RECOMMENDATIONS

- Implement one fee of $15-per-square-foot, applied to above-ground living space added on an existing lot.
- Phase in the fee and periodically adjust for economic/market conditions.
- Provide exemptions for: (1) smaller projects resulting in less than 500 net new square feet; (2) Accessory Dwelling Units; and (3) homes destroyed or lost to disaster.
- Estimated annual revenue: $1,200,000 of affordable housing funds.
- The fee for a prototypical larger-lot teardown/replacement in Boulder would be $38,000.

COMPARABLE FEES

- Few municipalities impose fees on single-unit housing projects. Policies that do exist vary significantly in scope, applicability, exemptions, and fee structure.
- Comparable fees in other communities (for a larger-lot teardown in Boulder) would be: $16,000 in Evanston, IL; $20,000 in Portland, OR; $36,000 in Denver, CO; $56,000 in Los Angeles, CA (for "High Cost" market areas); and $181,000 in Aspen, CO.

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CHAPTER I

EXECUTIVE SUMMARY

INTRODUCTION AND PURPOSE

The city of Boulder commissioned Gruen Gruen + Associates (GG+A) to identify and estimate the nexus between the demolition and replacement of smaller existing single-family homes with new, larger, more expensive homes and/or significant additions to the existing homes and the resulting need for affordable housing. Affordable housing needs are defined to include:

(i) Rental units affordable to Low- or Moderate-Income households with incomes below 80 percent of the Area Median Income (AMI); and

(ii) For-sale ownership units affordable to Middle-Income households with incomes ranging from 80 percent to 120 percent of AMI.

Two types of nexus or causal connections may exist between the demolition and replacement of smaller housing units and/or significant additions to existing housing units and the demand for affordable housing in Boulder: one is a "demand" nexus, and the other is a "supply" nexus.

In the context of the nexus study summarized in this report, "demand nexus" means the extent to which expanded single-family homes create the demand for additional affordable housing. "Supply nexus" means the extent to which the demolition of or expansion to existing single-family units result in a direct loss of previously affordable housing units.

The Demand Nexus

The demand nexus works through a chain of economic events that leads to increased demand for affordable housing in Boulder. This chain of linkages begins with the addition of higher-income households that purchase and occupy newer, larger single-family homes either via demolitions and replacements or significant additions to existing single-family structures.

As higher-income households spend a portion of their incomes on goods and services available within Boulder, these expenditures stimulate demand for additional jobs; and as more local employment opportunities become available, an increase in demand for affordable workforce housing occurs. GG+A estimates that each prototypical single-family home replacement or expansion project will generate approximately 0.75 to 2.25 additional jobs within Boulder. About one-half of jobs created are estimated to be held by workers residing in households with annual incomes below 120 percent of the AMI. Such households will be challenged to afford market-rate housing in Boulder.

The Supply Nexus

The construction of new replacement homes on existing single-family lots, as well as the expansion of smaller homes, adds larger and more expensive housing to the market. However, this process also removes comparatively more affordable homes from the housing stock. As a result, a supply nexus emerges, where housing opportunities for lower income households are reduced. The removal of existing single-family units priced below that of a new, larger home, however, does not equate to a direct loss of affordable housing in most instances.

PROTOTYPICAL SCENARIOS

Estimates of the demand nexus are modeled for three prototypical situations that result in expanded single-family homes:

- **Scenarios A and B** described in this study involve demolishing existing single-family homes and replacing them with larger structures. Scenario A reflects an 8,000-square-foot lot where a 1,200-square-foot home is replaced with a 2,800-square-foot home, increasing the floor-area ratio (F.A.R.) from 0.15 to 0.35. Scenario B, on a larger 20,000-square-foot lot, replaces a 2,000-square-foot home with a 4,500-square-foot home, increasing the F.A.R. from 0.10 to 0.23.

- **Scenario C** focuses on a significant home addition rather than demolition. On a 10,000-square-foot lot, a 1,600-square-foot home is expanded by 600 square feet to 2,200 square feet, with the F.A.R. increasing from 0.16 to 0.22.

KEY FINDINGS AND CONCLUSIONS

Overview of Single-Family Housing Prices in Boulder

- New or expanded single-family homes in Boulder command significantly higher prices than smaller, older, existing homes - not only because of their larger living spaces but also due to their newer construction.

- Single-family homes originally built prior to 1980 dominate the resale market in Boulder. These older homes, averaging about 1,600 square feet of above-grade living area[1], sold for an average price of about $1,400,000 or $860 per square foot (Sept 2023-Aug 2024).

- Larger homes in Boulder tend to be newer, with more recently built homes commanding a significant premium per square foot of living space. Detached single-family homes built since 2000, averaging nearly 3,100 square feet in size, sold for approximately $3,200,000 or $1,040 per square foot on average. Newer and larger homes sell on average for about a 20 percent premium to older homes.

Frequency of Single-Family Housing Demolitions, Replacements, and Significant Additions and Their Characteristics

- Certificates of Occupancy for 255 new detached single-family homes were issued from 2018 through November 2024, ranging from 33 to 45 units per year. About three-quarters of these new homes are estimated to have replaced smaller existing homes through teardowns. Single-family teardowns and replacements have been predominately concentrated in North Boulder and Central Boulder over the past five years.

- Two relatively distinct categories of single-family teardown and replacement projects are differentiated in terms of lot size, home size, and home value:

  - On smaller single-family lots (less than 10,000 square feet), the average replacement home size is nearly 2,700 square feet of living area with an average of 3.9 bedrooms. The average 2024 market value is over $2,500,000 with a per square foot living area value of $962. The typical floor-area ratio is about 0.35.

  - For larger lots (greater than 10,000 square feet), the average replacement home size is nearly 3,900 square feet of living area with an average of 4.2 bedrooms. The average 2024 market value is approximately $4,300,000 or $1,086 per square foot of living area. The typical floor-area ratio is about 0.18.

[1] Synonymous with "Gross Living Area" in residential appraisal standards. Livable, above ground square footage is the most valuable part of a single-family home. Throughout this report, all references to home sizes refer to finished above-grade living area (i.e., excluding garages, basements, covered patios).

- The characteristics of existing homes which have been approved or proposed for demolition show a much lower average home size, market value, and floor-area ratio than recent single-family home replacements.

  – For existing homes on lots smaller than 10,000 square feet of land, the average existing home size is about 1,200 square feet of living area with an average 2024 market value of $1,100,000 or $966 per square foot of living area. The floor-area ratio is 0.16 (versus 0.35 for newer home replacements).

  – For existing homes on lots larger than 10,000 square feet of land, the average home size is nearly 2,600 square feet of living area with an average 2024 market value of approximately $2,400,000 or $940 per square foot of living area. The floor-area ratio is 0.10 (versus 0.16 for newer replacement homes).

- An estimated 150 additions of more than 500 square feet, and with a permit valuation exceeding $250,000, were made to existing homes from 2018 through November 2024. These additions are usually new second stories, main-floor enlargements, garage conversions into finished living spaces, and sometimes a combination of all three.

Employment Impacts of Households that Occupy Expanded Single-Family Homes

- Marginal increases in household earnings (income) will tend to result in an increase in personal consumption and spending within a local economy. Additional dollars circulating throughout a local economy generate additional employment (jobs) as sales to both basic and "non-basic" businesses increase.

- For each of the prototypical single-family home expansion scenarios, Table I-1 summarizes the estimated marginal changes in home value, household income, and local employment generated.

TABLE I-1: Marginal Changes in Home Value, Household Income, and Local Employment

	Scenario A: Demolition + Replacement	**Scenario B:** Demolition + Replacement	**Scenario C:** Significant Addition
Estimated Increase in Typical Home Value/Price	$2,000,000	$3,475,000	$870,000
Difference in Required Annual Household Income	$360,000	$640,000	$200,000
Local Employment Impact (# Jobs Generated) [1]	**1.28**	**2.27**	**0.71**

[1] Estimate of total new employment (part-time and full-time jobs) generated in Boulder from additional household income and associated spending.

Source: Gruen Gruen + Associates

- As described in detail in Chapter III, marginal increases in the expected sales prices or home values resulting from the prototypical replacement or expansion projects are estimated to range from a low of $870,000 (for a 600-square-foot home addition) to a high of $3,475,000 (for a larger-lot teardown and replacement with a new 4,500-square-foot home).

- Home price-to-income ratios (ranging from 4.16 to 4.95, as suggested by mortgage lending statistics for Boulder) are used to estimate the annual household income required to purchase existing homes in comparison to the new or expanded homes. The difference in required annual income for each of the three scenarios ranges from $200,000 up to $640,000.

- Based on RIMS II employment multipliers from the U.S. Bureau of Economic Analysis and the estimated net increases in household income associated with each scenario summarized above, the total number of jobs created in Boulder ranges from 0.71 jobs per household (for the home addition scenario) and up to 2.27 jobs per household for the larger sized home demolition and replacement scenario.

- For every 50 single-family home demolitions and replacements or significant additions, which is about the average number of such projects completed in a year, the estimated per-project impacts indicate that an additional 50 to 75 jobs would be created in Boulder.

- Jobs in finance, insurance, and real estate, education and healthcare, retail trade, and leisure and hospitality comprise about three quarters of the added jobs.

Affordable Housing Needs Generated by Additional Employment in Boulder

- Approximately 32 percent of all required workers are expected to live in a Low- or Moderate-Income household, based on the characteristics of labor force participants living within Boulder's primary labor shed. An additional 23 percent of workers are expected to live in a Middle-Income household.

- Workers in certain industries - such as retail trade, leisure and hospitality, other services, and education and healthcare - are more likely to belong to households with incomes below 80 percent of AMI.

- Most workforce households include more than one wage earner. Estimates of household formation reflect an average of 1.37 to 1.88 workers per household, depending upon income level. Two-thirds of new workers are assumed to form or locate their households within Boulder, provided an assumption that housing is available and affordable. One-third are assumed to commute in for employment in Boulder, whether for lifestyle preferences or other economic reasons.

- Table I-2 summarizes the resulting estimates of new workforce households formed in Boulder and the number of affordable units required to house them. Workforce households with incomes above 120 percent of AMI are not assumed to generate any of the need.

TABLE I-2: Affordable Housing Needs Generated Per Project from Added Employment

	Scenario A: Demolition + Replacement	**Scenario B:** Demolition + Replacement	**Scenario C:** Significant Addition
New Workforce Households in Boulder	0.51	0.82	0.28
Affordable Rental Housing Need (# Units) [1]	0.20	0.36	0.11
Affordable Ownership Housing Need (# Units) [2]	0.06	0.11	0.03
Combined Affordable Housing Need (# Units)	**0.26**	**0.47**	**0.14**

[1] Related to Low- and Moderate-Income households (annual income less than 80% AMI).
[2] Related to Middle-Income households (annual income 80-120% AMI).

Source: Gruen Gruen + Associates

- For Scenario A, the smaller-lot home demolition and replacement scenario, an additional 0.51 new workforce households are estimated to result in Boulder with approximately 0.26 affordable housing units required to house households with incomes below 120 percent of AMI. In other words, for every four demolition and replacement projects with characteristics like Scenario A, about one additional affordable housing unit would be needed in Boulder.

- For Scenario B, the larger-lot home demolition and replacement scenario, an additional 0.82 new workforce households are estimated to result in Boulder which generates a need for approximately 0.47 affordable housing units. Thus, for every two larger demolition and replacement projects, about one additional affordable unit would be needed.

- For Scenario C, the addition to an existing home, an additional 0.28 new workforce households are estimated to result in Boulder, generating a need for approximately 0.14 affordable housing units. This suggests that about one additional affordable unit would be needed for every eight (8) significant home addition projects.

Affordable Housing Nexus Fee Calculations

- The average feasibility "gap" between a market-rate unit and affordable unit, weighted with a 20 percent allocation to units at 50 percent of AMI and 80 percent allocation to units at 60 percent of AMI, is estimated to be approximately $81,200 per affordable rental unit.

- On average, the feasibility gap for an ownership unit affordable to 80 percent to 120 percent of AMI is estimated to be approximately $141,200 per unit.

- Table I-3 summarizes the maximum nexus fee calculations which reflect the estimated affordable housing needs (Table I-2 previously) multiplied by the estimated per-unit feasibility gaps.

TABLE I-3: Maximum Affordable Housing Nexus Fee Calculations

	Scenario A	Scenario B	Scenario C
Affordable Housing Needed (# Units)	0.26	0.47	0.14
Average Financial Gap Per-Unit	$94,900	$94,900	$94,900
Maximum Fee Per Expanded Home	$24,600	$43,800	$13,700
Maximum Fee per Square Foot of Added Living Area[1]	**$15**	**$18**	**$23**

[1] For the Scenario A prototype net additional living area of 1,600 square feet is used to calculate a nexus fee per square foot. For the Scenario B prototype net additional living area of 2,500 square feet is used to calculate a nexus fee per square foot. For the Scenario C prototype net addition of approximately 600 square feet of living area is used to calculate a nexus fee per square foot.

Source: Gruen Gruen + Associates

- Under the smaller replacement Scenario A, for every smaller lot demolition of an existing smaller home and replacement with a larger home, the maximum nexus fee is estimated to be approximately $24,600. This equates to a maximum fee of about $15 per square foot of net additional living area.

- Under the larger replacement Scenario B, for every larger lot demolition and home replacement, the maximum nexus fee is estimated to be approximately $43,800. This equates to a maximum fee of about $18 per square foot of net additional living area.

- Under the home addition Scenario C, for every larger significant addition to an existing single-family home, the maximum nexus fee is estimated to be approximately $13,700. This equates to a maximum fee of about $23 per square foot of net additional living area.

Impact of Affordable Housing Nexus Fee on Residential Development Feasibility

- As described in Chapter V, the feasibility of developing each prototypical single-family home replacement or expansion scenario was evaluated with- and without- a nexus fee of $15 per square foot of additional living area.

- Based on the estimates reviewed in this report, the net profit for Scenario A (demolition of a small home on a smaller lot and replacement with a larger unit) is projected to decrease by 8/10ths of one percent (80 basis points), from 14.9 percent ($457,900 per unit) to 14.1 percent ($433,900 per unit), a decline of $24,000.

- For Scenario B (demolition of a home on a larger lot and replacement with a larger unit), net profit is expected to decline by 7/10ths of one percent (70 basis points), from 13.2 percent ($683,300 per unit) to 12.5 percent ($645,800 per unit), a decrease of $37,500.

- In Scenario C (significant home addition), net profit is estimated to decrease by 4/10ths of one percent (40 basis points), from 9.8 percent ($227,000) to 9.4 percent ($218,000), a reduction of $9,000.

- With the demolition fee, considering current and typical development costs and obtainable sales prices for most neighborhoods, the scenarios analyzed are likely to remain financially feasible for most private builders to undertake.

- For perspective, consider that the average profit on single-family home building (nationwide) was estimated to be about $73,000 per home last year, representing an average profit margin equal to 11 percent of sales prices (source: National Association of Home Builders, 2024 cost survey).

AFFORDABLE HOUSING FEE EXAMPLES

- A limited number of municipalities impose fees or exactions on single-unit housing projects. Policies vary significantly in scope, applicability, exemptions, and fee structure. There is no standard analog to what is recommended for Boulder.

- The matrix included in Appendix A provides examples of affordable housing-related taxes and fees that apply to individual single-family home projects in other communities.

POLICY RECOMMENDATIONS

1. Based on the results of this nexus analysis, if Boulder decides to impose a fee, GG+A recommends establishing one per-square-foot fee for all housing demolition and replacements and significant additions. The fee should be no more than $15 per square foot of added space. This fee would be applied to the net increase in above-ground livable space resulting from single-family home demolitions and replacements, or significant expansions/additions. For example:

   a. A new home replacing a demolished structure with 2,000 net additional square feet (relative to the prior home) would incur a maximum fee of $30,000.
   b. A second-story addition of 1,000 square feet would be subject to a maximum fee of $15,000.

   Consideration should be given to phasing in the fee over time. In addition, to provide for potential increases in development and financing costs and lower obtainable sales prices, it would be appropriate to set a demolition fee at less than the maximum amounts indicated from the nexus analysis.

   Table I-4 provides a comparative analysis of the recommended fee to single-family projects in other communities.

TABLE I-4: Fee Comparison for Single-Family Home Replacement and Expansion Scenarios

	Scenario A: Demolition + Replacement	**Scenario B:** Demolition + Replacement	**Scenario C:** Significant Addition
Boulder (Recommended)	*$24,000 ($15/sf)*	*$37,500 ($15/sf)*	*$9,000 ($15/sf)*
Denver, CO (Linkage Fee)	$22,400	$36,000	$17,600
Aspen, CO (Mitigation In-Lieu Fee)	$112,800	$181,300	$24,200
Evanston, IL (Demolition Tax)	$16,380	$16,380	Not Applicable
Los Angeles, CA (Linkage Fee) [1]	$36,048	$56,325	Not Applicable
Portland, OR (Excise Tax)	$11,200	$20,250	$4,600
Santa Cruz, CA (Impact Fee)	$14,000	$67,500	$6,600

[1] Fee estimates shown for "High" cost market areas such as Bel Air, Santa Monica, Brentwood, etc.

Source: Gruen Gruen + Associates

2. Limit the fee to new construction or alteration permits that result in more than 500 square feet of "net new" above-ground living area. The size of a home is the most significant factor linking affordable housing needs in Boulder to modifications of the existing single-family housing stock. Smaller additions of less than 500 square feet are less likely to be associated with increases in the need for affordable housing due to increased demand for lower income workers. Another primary reason for exempting smaller changes in floor area is for administrative efficiency.

3. Moreover, to not discourage the development of another source of comparatively affordable housing, any nexus fee policy should exempt Accessory Dwelling Units. Also consider fee exemptions for the replacement of homes lost or destroyed due to disaster (wildfire, flood, etc.).

4. For clarity and consistency with the original intent of this study, we sometimes use the term "demolition fee" throughout this report. However, it may be more effective to avoid structuring the fee specifically around full or partial home demolitions. While demolitions do represent the most relevant single-family projects, this approach could introduce administrative complexities and encourage homeowners and builders to dispute definitions or calculations of "demolitions" (e.g., if original foundations or walls are retained). Instead, regardless of demolition permit requirements, the fee should function as a nexus-based exaction, applying to any single-family property where the new or expanded home exceeds the previous home's size by more than 500 square feet.

ANNUAL FEE REVENUE ESTIMATE

- As described in Appendix B, based on an analysis of the number of lots/housing units demolished and replaced with larger homes and significant home additions in a typical year in Boulder, the imposition of the recommended fee is projected to provide approximately $1,200,000 in annual funding for affordable housing.

CHAPTER II

WORK COMPLETED, APPROACH, AND OVERVIEW OF HOUSING MARKET CONDITIONS IN BOULDER

WORK COMPLETED

As described more fully below, the frequency, locations, and characteristics of single-family demolitions, their replacements, and major additions were identified. The type of housing unit replacements and additions potentially subject to a demolition fee are defined. An analysis of home sales, assessed values, and permit values was conducted to determine the difference in values between smaller, existing housing units and new housing units constructed to replace the smaller housing units or housing units expanded following purchases of the smaller housing units. The differences in household income between households in existing smaller homes and owners of larger replacement or expanded homes were estimated. The effects of additional income and associated local spending of households living in expanded single-family homes on Boulder's employment base and workforce needs are estimated. The resulting number of new workforce households that could be formed in Boulder if sufficient affordable housing were available is estimated. Feasibility shortfall or "financing gaps" to supply the needed affordable workforce housing are estimated, based on the difference between affordable housing costs at the income limits and prevailing market prices in Boulder for existing housing units. The maximum supportable impact fee is calculated by multiplying the financing gap per-unit by the total affordable housing need for each income level.

APPROACH

The analytical approach and methodology to quantify the Demand Nexus is summarized below.

STEP 1: Analyze Recent Trends in Single-Family Home Changes in Boulder

City permitting data and Boulder County assessment records are used to identify the frequency and locations of single-family home demolitions, their replacements, and other major additions. Lot sizes, home features, and other key attributes of recently built or expanded single-family homes in the Boulder market are reviewed to develop reasonable assumptions about typical replacements and expansions. Current valuations and recent qualified sales transactions (from the Boulder County Assessor) are summarized to assess market values and sales prices before and after typical changes.

STEP 2: Define Significant Single-Family Home Expansions Potentially Subject to Demolition Fee

The Demand Nexus analysis focuses on (i) demolitions and replacements resulting in a net increase of at least 500 square feet of above ground living area and (ii) major home additions exceeding 500 square feet of above ground living area. Because new or significantly expanded and remodeled single-family homes in Boulder currently transact for prices exceeding $1,000 per square foot, and frequently much higher, this minimum threshold roughly equates to a marginal home value increase of about $500,000 or more. Nexus estimates are modeled for three "prototypical" situations that result in expanded single-family homes, including:

TABLE II-1: Prototypical Housing Demolition, Replacement, and Addition Scenarios

	Scenario A: Demolition + Replacement	**Scenario B:** Demolition + Replacement	**Scenario C:** Significant Addition
Single-Family Lot Size	8,000 square feet	20,000 square feet	10,000 square feet
Previous Home Size	1,200 square feet	2,000 square feet	1,600 square feet
*Previous Home F.A.R.**	*0.15*	*0.10*	*0.16*
Expanded Home Size	2,800 square feet	4,500 square feet	2,200 square feet
*Expanded Home F.A.R.**	*0.35*	*0.23*	*0.22*
Net Increase in Home Size	1,600 square feet	2,500 square feet	600 square feet

**Floor-area-ratio expressed in above-ground living area to lot area.*

Sources: City of Boulder, Boulder County Assessor; Gruen Gruen + Associates.

STEP 3: Quantify Property Value and Household Income Changes Resulting from Expanded Homes

To assess the difference in value between existing smaller (and typically older) homes and the housing units constructed in their place or expanded, we reviewed recent single-family home sales data, assessed values, and reported building permit project costs. The analysis focuses on identifying the **marginal increase in value** resulting from demolition and replacement of existing single-family units, or significant additions, that increase the size of the home by at least 500 square feet. The key factors most influencing the marginal increases in value usually include the size of the existing single-family lot and home. GG+A then uses recent mortgage lending data to quantify the marginal household income increase required to purchase significantly expanded single-family homes (relative to previous homes).

STEP 4: Evaluate the Economic Effects of Higher-Income Expanded Home Buyers

This step quantifies how additional local spending of households living in expanded single-family homes are likely to affect Boulder's employment base and workforce needs. Using an economic input-output model (RIMS II multipliers from the U.S. Bureau of Economic Analysis), the analysis estimates the jobs created due to increased demand for goods and services in the local economy from higher-

income owners or larger expanded homes. Because workers employed in different industries often have very different wage and income levels, the employment impacts are identified by industry sector.

STEP 5: Estimate the Resulting Affordable Housing Needs and Financing Gaps

Based on the results of Step 4, the Demand Nexus then quantifies the resulting number of new workforce households that could be formed in Boulder if sufficient affordable housing were available. These estimates rely upon Public Use Microdata Samples (PUMS) from the 2023 American Community Survey for the geographic area corresponding to Boulder's primary labor shed. A conservative adjustment is made for "in-commuting," recognizing that even with sufficient affordable housing inventory, some new workers and their households will form or locate outside the city of Boulder because of lifestyle preferences or commuting efficiencies (among households with multiple workers).

Next, the feasibility shortfall or "financing gaps" to supply the needed affordable workforce housing are estimated, based on the difference between affordable housing costs at the income limits specified below in Table II-2 and prevailing market prices in Boulder for existing housing units:

TABLE II-2: Affordable Housing Prices as Percentage of Area Median Income

	Income Level Range	Average Income Level
Affordable Rental (Low/Moderate Income)	Below 80% AMI	50% - 60% AMI*
Affordable Ownership (Middle Income)	80% - 120% AMI	100% AMI
**Consistent with current Inclusionary Housing (IH) policies, the average affordable rent level is determined with 20% of units at 50% AMI and 80% of units at 60% of AMI.*		
Source: Gruen Gruen + Associates		

STEP 6: Calculate Maximum Impact Fee for Residential Demolitions/Significant Additions

The final step in the Demand Nexus is to calculate the maximum supportable impact fee by multiplying the financing gap per-unit by the total affordable housing need for each income level. The maximum amounts are then expressed as a fee per square foot of expanded living area for each of the three prototypes.

The methodological steps are summarized in Figure II-1.

FIGURE II-1: Methodology Overview

1. Analyze Recent Trends in Single-Family Home Changes in Boulder Market

- Patterns of Change: Identify frequency and locations of demolitions, replacements, and additions.
- Lot and Home Characteristics: Document lot sizes, home features, and other key attributes.
- Pricing Trends: Examine typical differences in sales prices between smaller/older and larger/newer expanded homes.

2. Define Prototypical and 'Significant' Single-Family Home Expansions

- Demolitions and Replacements: Focus on cases with a net increase of 500+ square feet (often much larger).
- Additions: Include major home additions exceeding 500 square feet.

3. Quantify Value and Household Income Changes Resulting from Expanded Homes

- Key Factors: Consider lot size, home size, and age in pricing comparisons.
- Buyer Profiles: Examine characteristics of buyers for higher- and lower-priced homes.
- Income Requirements: Estimate the marginal household income increase required to purchase expanded homes.

4. Evaluate Economic Effects of Higher-Income Expanded Home Buyers

- Local Spending Impacts: Use economic input-output model (RIMS II multipliers) to estimate local job creation from increased demand for goods and services.
- Workforce Implications: Translate additional jobs into new workforce households, categorized by income levels.

5. Estimate Resulting Affordable Housing Needs and Financing Gaps

- Workforce Housing Demand: Quantify the number of new workforce households unable to afford market-rate housing in Boulder.
- Affordability Gaps: Measure the per-unit gap between affordable rents or purchase prices and prevailing market rates.

6. Calculate Maximum Supportable Fee

- Nexus Based Fee: Multiply financing gap per-unit by total housing need by income level.
- Per Square Foot: Convert maximum amounts to a fee per-square-foot of expanded living area.

SINGLE-FAMILY HOUSING PRICES IN CITY OF BOULDER

Table II-3 summarizes recent detached single-family housing sales prices and characteristics in the city of Boulder. Statistics are drawn from the Boulder County Assessor (for qualified sales) and are presented by size of home.

TABLE II-3: Detached Single-Family Housing Sales in City of Boulder by Size of Home[1]

	---------- Home Size (Quartiles)[2] ----------				
	< 1,180 Square Feet	1,180 – 1,669 Square Feet	1,670 – 2,350 Square Feet	> 2,350 Square Feet	Total
Number of Sales Transactions	149	150	150	150	599
Average Sales Price	$958,750	$1,199,770	$1,636,257	$2,547,999	$1,586,741
Average Price Per Square Foot	$951	$845	$816	$821	$842
Minimum Sales Price	$180,400	$233,400	$575,000	$1,050,000	$180,400
Maximum Sales Price	$2,500,000	$2,868,000	$4,650,000	$8,700,000	$8,700,000
Average Home Size[2]	1,009	1,420	2,005	3,103	1,886
Average Number of Bedrooms	3.0	3.4	3.7	4.4	3.7
Average Year Built	1956	1961	1966	1984	1967

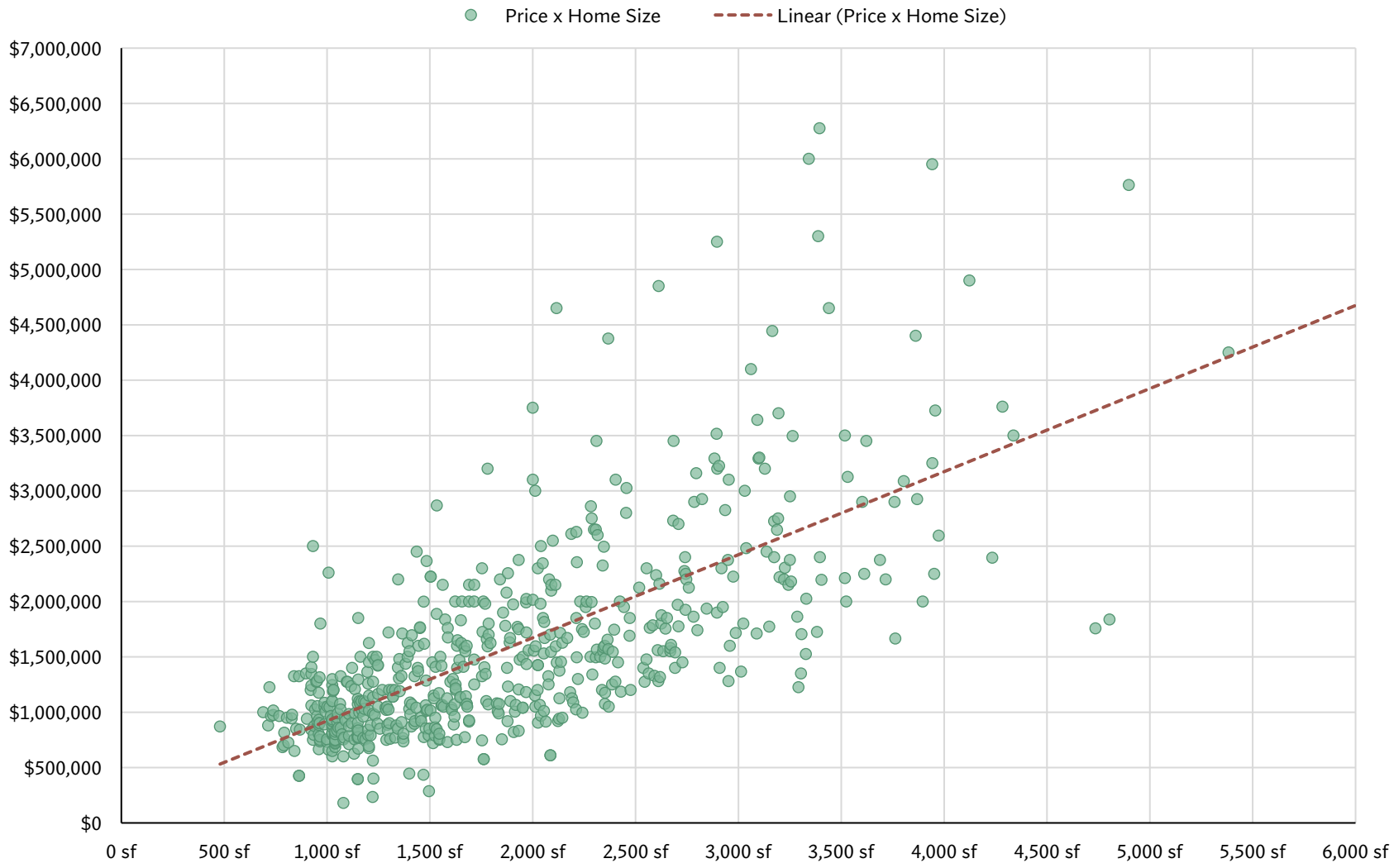
[1] Qualified sales from September 2023 through August 2024.
[2] Above-grade residential living area in finished square feet.

Sources: Boulder County Assessor; Gruen Gruen + Associates.

The total number of sales of 599 over the past year had an average sales price of over $1,586,000 with an average per square foot sales price of $842. The average home size was nearly 1,900 square feet with an average of 3.75 bedrooms. By quartile, the average sales price ranged from $958,750 to $2,547,999 with an average home size ranging from 1,009 to 3,103 square feet.

Figure II-2 includes a plot chart of single-family homes sold in the past year with a linear trend line indicating the typical relationship between home size and sales price.

FIGURE II-2: Recent Single-Family Sales by Home Size and Sales Price



Source: GG+A analysis of qualified sales (Sept 2023 - Aug 2024)

A strong correlation between single-family home size and expected sale prices exists in the Boulder market. Differences in home size alone, however, do not fully capture the value differential between smaller existing homes and larger replacement homes. Many of the largest single-family homes in Boulder also tend to be newer, with more recently built homes commanding a significant premium per square foot of above ground living space.

Table II-4 summarizes the same detached single-family housing sales (September 2023 -August 2024) in Boulder but categorized by the age of the home, according to its original year of construction.

TABLE II-4: Detached Single-Family Housing Sales in City of Boulder by Year Home Built[1]

	Built pre-1960	Built 1960-1979	Built 1980-1999	Built Since 2000
Number of Sales Transactions	189	234	117	59
Average Sales Price	$1,452,913	$1,329,224	$1,508,117	$3,192,693
Average Home Size [2]	1,595	1,636	2,260	3,064
Average Number of Bedrooms	3.3	3.6	3.8	4.6
Average Price Per Square Foot	$911	$812	$667	$1,042

[1] Qualified sales from September 2023 through August 2024.
[2] Above grade residential living area (in finished square feet).

Sources: Boulder County Assessor; Gruen Gruen + Associates.

Single-family homes originally built prior to 1980 dominate the resale market in Boulder, making up approximately 71 percent of qualified sales transactions in the prior 12 months. These older homes sold for an average price of about $1,400,000 or $860 per square foot.

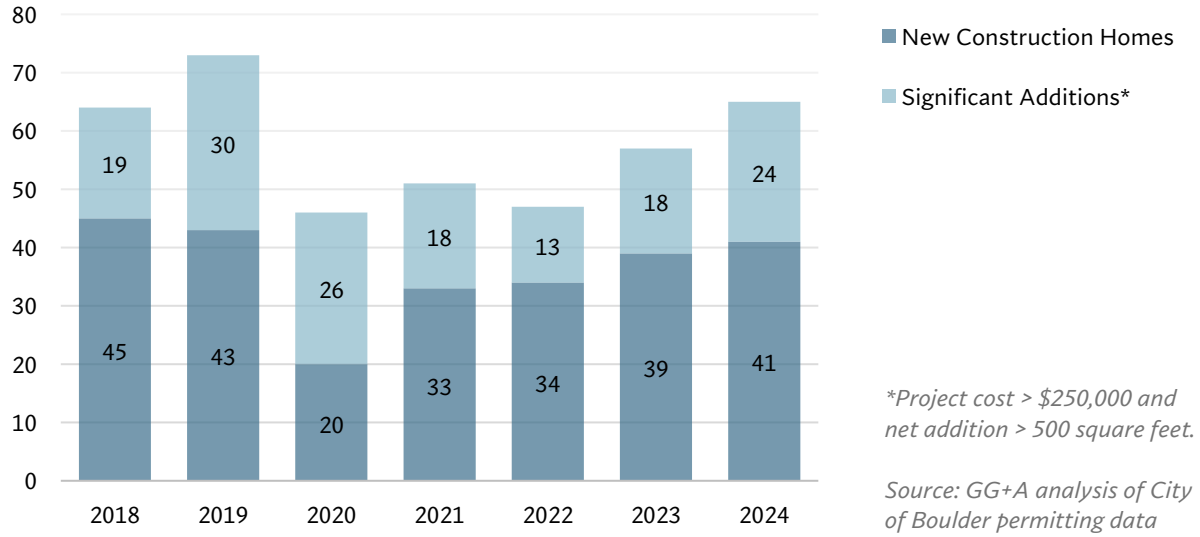
In contrast, detached single-family homes built since 2000, averaging nearly 3,100 square feet, sold for approximately $3,200,000 or $1,040 per square foot on average. This reflects a 21 percent premium, on a per square foot basis, compared to older and smaller homes built prior to 1980. In other words, recent sales confirm that new or expanded single-family homes in Boulder are likely to command significantly higher prices not only because of their larger living spaces but also due to their newer construction.

RECENT TRENDS RELATED TO NEW SINGLE-FAMILY HOME CONSTRUCTION AND SIGNIFICANT ADDITIONS

From 2018 through November 2024, the city issued Certificates of Occupancy for 255 new detached single-family homes. Annual completions of new detached single-family homes ranged from 33 to 45 units, excluding the 2020 Covid 19 pandemic shutdown year. Most of these new homes do not represent net additions to the single-family housing inventory as they often replace smaller existing homes through teardowns.

For purposes of this nexus analysis, significant single-family home additions are defined as projects with a recorded construction cost exceeding $250,000 and an above-grade living area expansion of more than 500 square feet. Based on this definition, GG+A's review of permitting records suggests that approximately 150 such additions received Letters of Completion during the 2018-2024 period. These significant additions are usually new second floors above an existing home footprint ("pop tops"), main-floor enlargements, garage conversions into finished living spaces, and sometimes a combination of all three.

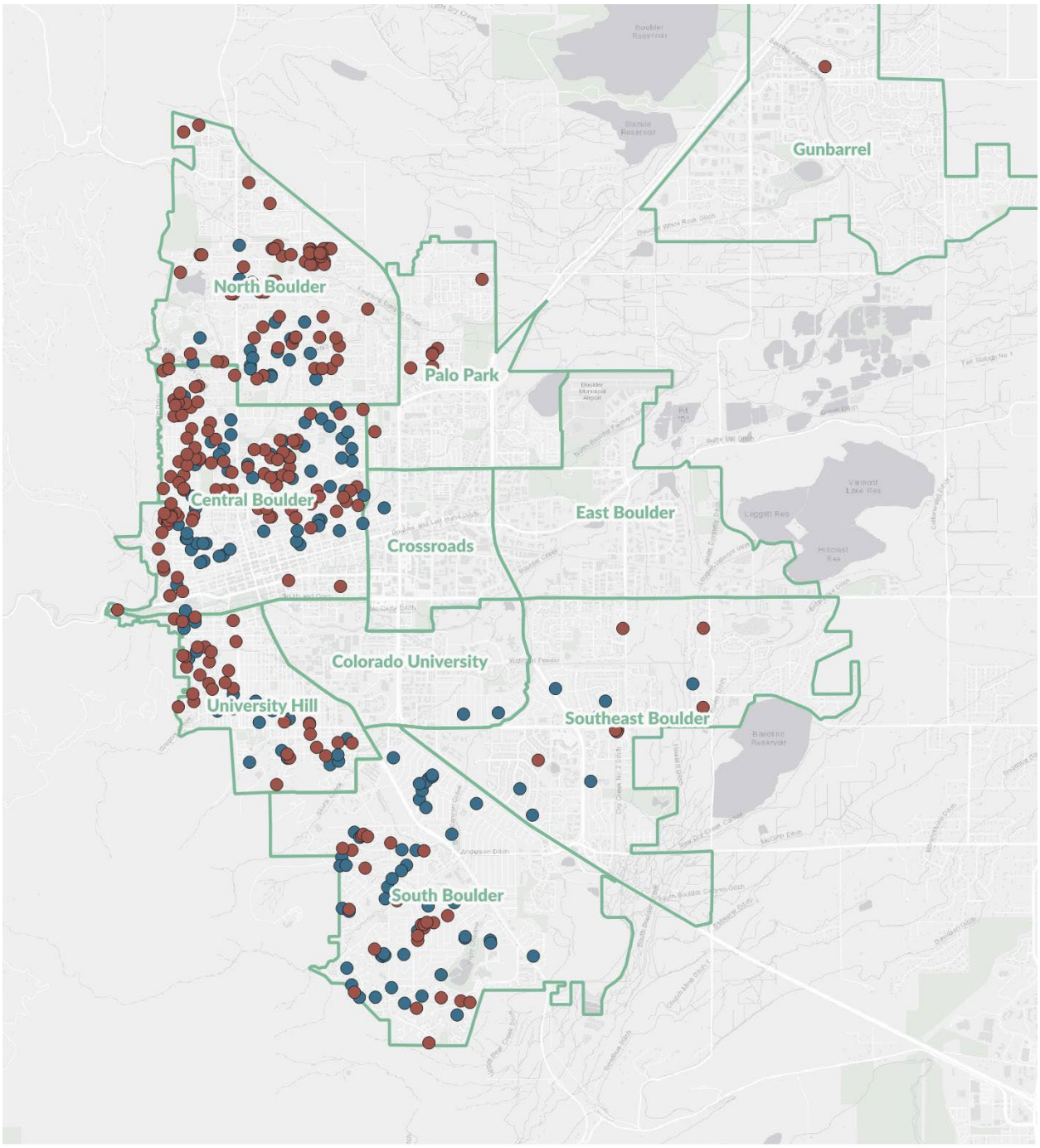
FIGURE II-3: New Single-Family Homes and Significant Additions Completed in Boulder



The permit data indicates that approximately 0.3 to 0.4 percent of Boulder's detached single-family housing stock has been replaced or significantly expanded each year.[2] This housing replacement and expansion activity is predominantly concentrated in Central and North Boulder.

[2] According to 2023 American Community Survey estimates, the city of Boulder contains about 17,500 detached single-family housing units: City of Boulder - B25024 - Units in Structure.

MAP II-1: New Single-Family Homes and Significant Additions Completed (2018-2024)



Central Boulder comprised 40 percent of single-family construction activity and 38 percent of significant home additions from 2018 through November 2024. North Boulder comprised 27 percent of new construction activity and 11 percent of significant additions from 2018 through November 2024. South Boulder comprised 10 percent of new construction activity and 31 percent of significant additions from 2018 through November 2024. University Hill comprised 11 percent of new construction activity and 13 percent of significant additions.

CHARACTERISTICS OF SINGLE-FAMILY HOME DEMOLITIONS AND REPLACEMENTS

Since 2018, Affordable Housing Plan (AHP) review cases and waivers for single-family homes have been tracked alongside demolition permits to quantify the number and location of single-family home teardowns and replacements. According to data provided by city staff, 166 cases have been processed during this period, with an additional 33 cases currently pending (in review or awaiting approval) as of November 2024.

On average, 37 new detached single-family homes have been completed annually since 2018. The volume of AHP review cases and associated demolition permits—both completed and under review—has averaged approximately 29 homes per year. This suggests that single-family teardowns and replacements probably account for about three-quarters of all new single-family construction permitted in Boulder. Other single-family home inventory has been added through infill lots or the redevelopment of non-residential sites, although this is a much smaller source of new home construction.

Table II-5 summarizes the physical characteristics of the new homes resulting from single-family teardowns. This summary includes AHP review cases where existing single-family homes have been demolished and the replacement homes have been completed or substantially completed, according to county assessment records.

TABLE II-5: Characteristics of Recent Single-Family Home Replacements

	Average	Median
Lots < 10,000 Square Feet:		
Lot Size in Square Feet of Land Area	7,630	7,500
Above-Grade Residential Living Area	2,689	2,817
Floor-Area-Ratio[1]	0.35	0.38
Number of Bedrooms	3.9	4.0
2024 Market Value[2]	$2,544,585	$2,461,900
2024 Market Value Per Square Foot[2]	$962	$879
Lots > 10,000 Square Feet:		
Lot Size in Square Feet of Land Area	21,996	17,416
Above-Grade Residential Living Area	3,862	3,621
Floor-Area-Ratio[1]	0.18	0.21
Number of Bedrooms	4.2	4.0
2024 Market Value[2]	$4,321,900	$3,672,100
2024 Market Value Per Square Foot[2]	$1,086	$994

[1] Ratio of above-grade finished living area to land area.
[2] Boulder County Assessor valuation for 2024 tax year. Excludes some homes recorded as built in 2023-2024 for which value not yet reassessed. Assessor values typically lag effective prices in the market.

Sources: Boulder County Assessor; City of Boulder; Gruen Gruen + Associates.

About one-half of all teardowns and replacements are on existing single-family lots smaller or larger than 10,000 square feet of land. Therefore, two relatively distinct categories of single-family teardowns are differentiated in terms of lot size, home size, and home value.

For newer homes on lots smaller than 10,000 square feet, the average home size is nearly 2,700 square feet of living area with an average of 3.9 bedrooms. The average 2024 market value is over $2,500,000 with a per square foot living area value of $962. The floor-area ratio is 0.35.

For newer homes on lots larger than 10,000 square feet of land, the average home size is nearly 3,900 square feet of living area with an average of 4.2 bedrooms. The average 2024 market value is approximately $4,300,000 with a per square foot of living area value of $1,086. The floor-area ratio is 0.18.

Characteristics of Single-Family Homes Planned for Demolition

Table II-6 summarizes characteristics for 33 existing single-family homes that have been proposed or approved for demolition and replacement. These include AFH review cases which are still "In Review" and other homes where projects have received approvals in 2023 or 2024, but demolition and replacement of the homes has not been completed.

TABLE II-6: Characteristics of Proposed or Approved Single-Family Home Demolitions

	Average	Median
Lots < 10,000 Square Feet:		
Lot Size in Square Feet of Land Area	7,584	7,336
Above-Grade Residential Living Area	1,176	1,063
Floor-Area-Ratio[1]	0.16	0.14
Number of Bedrooms	2.9	3.0
Year Built	1955	1959
2024 Market Value[2]	$1,136,414	$1,080,150
2024 Market Value Per Square Foot[2]	$966	$1,016
Lots > 10,000 Square Feet:		
Lot Size in Square Feet of Land Area	26,183	21,882
Above-Grade Residential Living Area	2,577	2,191
Floor-Area-Ratio[1]	0.10	0.10
Number of Bedrooms	3.8	4.0
Year Built	1954	1960
2024 Market Value[2]	$2,428,740	$1,671,500
2024 Market Value Per Square Foot[2]	$942	$763

[1] Ratio of above-grade finished living area to land area.
[2] Boulder County Assessor valuation for 2024 tax year.

Sources: Boulder County Assessor; City of Boulder; Gruen Gruen + Associates.

The characteristics of existing homes which have been approved or proposed for demolition show a much lower average home size, market value, and floor-area ratio than the characteristics of recent single-family home replacements.

For existing homes on lots smaller than 10,000 square feet of land, the average home size is nearly 1,200 square feet of living area with an average of 2.9 bedrooms (versus an average home size of 2,700 square feet of living area for newer replacement homes). The average 2024 market value is $1,100,000 with a per square foot living area value of $966. The floor-area ratio is 0.16 (versus 0.35 for newer home replacements).

For existing homes on lots larger than 10,000 square feet of land, the average home size is nearly 2,600 square feet of living area with an average of 3.8 bedrooms (versus 3,900 square feet of living area for

newer replacement homes). The average 2024 market value is approximately $2,400,000 with a per square foot of living area value of $942. The floor-area ratio is 0.10 (versus 0.16 for newer replacement homes).

CHAPTER III

EMPLOYMENT IMPACTS OF HOUSEHOLDS THAT OCCUPY EXPANDED SINGLE-FAMILY HOMES

INTRODUCTION

Marginal increases in household earnings (income) will tend to result in an increase in personal consumption and spending within a local economy on everything from purchases of retail goods to healthcare services and dining and entertainment. In turn, the effect of the additional dollars circulating throughout a local economy generate additional employment (jobs) as sales to both basic and "non-basic" businesses increase[3]. To a much smaller extent, businesses that export most of their products or services (output) out of Boulder will also benefit from the increase in marginal incomes of residents which purchase larger replacement or expanded homes.

To estimate the effect of increased household income on employment generation from the replacement of or addition to smaller homes with larger homes, this study uses RIMS II multipliers from the Bureau of Economic Analysis to estimate the number of jobs from an economic "event". For purposes of this analysis, the economic "event" is the increase in household income associated with an increase in market value by occupants of new or significantly expanded homes in Boulder. RIMS II final demand employment multipliers are used to calculate the number of jobs by industry sector based on the increase in household income associated with each of the three prototypical expanded home scenarios described in the next section.

PROPERTY VALUE CHANGES RESULTING FROM EXPANDED HOMES DUE TO REPLACEMENTS OR ADDITIONS

Table III-1 summarizes three "prototypical" scenarios of expanded single-family homes. The scenarios are focused on:

(i) demolitions and replacements resulting in a net increase of at least 500 square feet of above ground living area; and

(ii) major home additions exceeding 500 square feet of above ground living area.

Because new or significantly expanded and remodeled single-family homes in Boulder currently transact for prices exceeding $1,000 per square foot, and frequently much higher prices, this minimum threshold roughly equates to a marginal home value increase of about $500,000 or more. The

[3] Basic industries consist of businesses that sell primarily to external customers. Non-basic industries consist of primarily small businesses that sell to local customers, including basic and non-basic businesses. Examples of basic businesses include big manufacturing and mining companies, while non-basic businesses include restaurants, retailers, healthcare, personal service providers, local financial services, and so forth.

scenarios were developed based on the characteristics of recent single-family home replacements and proposed or approved single-family home demolitions described in Tables II-5 and II-6.

TABLE III-1: Prototypical Single-Family Home Expansions and Estimated Value Changes

	Previous Home	Expanded Home	**Net Increase**
Scenario A: Smaller Lot Demolition and Replacement			
Single-Family Lot Size in Square Feet	8,000	8,000	**---**
Home Size in Square Feet[1]	1,200	2,800	**+1,600**
Floor-Area-Ratio	0.150	0.350	**+0.20**
Typical Value Per Square Foot	$900	$1,100	**+$200**
Expected Sales Price	$1,080,000	$3,080,000	**+$2,000,000**
Scenario B: Larger Lot Demolition and Replacement			
Single-Family Lot Size in Square Feet	20,000	20,000	**---**
Home Size in Square Feet[1]	2,000	4,500	**+2,500**
Floor-Area-Ratio	0.100	0.225	**+0.125**
Typical Value Per Square Foot	$850	$1,150	**+$300**
Expected Sales Price	$1,700,000	$5,175,000	**+$3,475,000**
Scenario C: Significant Home Addition and Remodel			
Single-Family Lot Size in Square Feet	10,000	10,000	**---**
Home Size in Square Feet[1]	1,600	2,200	**+600**
Floor-Area-Ratio	0.160	0.220	**+0.06**
Typical Value Per Square Foot	$900	$1,050	**+$150**
Expected Sales Price	$1,440,000	$2,310,000	**+$870,000**

[1] Above-grade finished living area.

Source: Gruen Gruen + Associates

Scenario A shows a change in characteristics of a smaller lot (less than 10,000 square feet of land) home demolition and replacement. Lot size is assumed to be 8,000 square feet of land with the home size increasing from 1,200 to 2,800 square feet of living area, an increase of 1,600 square feet. The floor-area ratio is assumed to increase by 0.20, from 0.15 to 0.35. The home value is assumed to increase by $200 per square foot, from $900 to $1,100 per square foot. Similarly, the total value is assumed to increase by $2,000,000, from $1,080,000 to $3,080,000.

Scenario B shows a change in characteristics of a larger lot (greater than 10,000 square feet of land) home demolition and replacement. Lot size is assumed to be 20,000 square feet of land with the home size increasing from 2,000 to 4,500 square feet of living area, an increase of 2,500 square feet. The floor-area ratio is assumed to increase by 0.125, from 0.10 to 0.225. The home value is assumed to increase by $300 per square foot, from $850 to $1,150 per square foot. Similarly, the total value is assumed to increase by nearly $3,500,000, from $1,700,000 to $5,175,000.

Scenario C shows a change in characteristics of a 10,000 square foot lot home with significant expansion and remodel. The home size is assumed to increase by 600 square feet, from 1,600 to 2,200 square feet of living area. The floor-area ratio is assumed to increase by 0.06, from 0.16 to 0.22. The home value is assumed to increase by $150 per square foot, from $900 to $1,050 per square foot. Similarly, the total value is assumed to increase by $870,000 from $1,440,000 to $2,310,000.

HOUSEHOLD INCOME CHANGES RESULTING FROM EXPANDED HOMES

Table III-2 presents Home Mortgage Disclosure Act data for 2023 single-family home purchase loan originations in City of Boulder census tracts. This data establishes the relationship between (a) home value and (b) household income. The relationship is not linear, as higher priced homes tend to have larger downpayments, so the data is grouped into priced brackets.

TABLE III-2: Originated Home Purchase Loan Statistics[1] for Single-Family Dwellings in City of Boulder Census Tracts

Property Value	Average Applicant Income[2]	Average Property Value	Property Value / Income Ratio	Average Mortgage Loan Amount	Average Loan-to-Value
Less than $1,000,000	$190,208	$627,108	3.30	$453,291	72%
$1,000,000 - $1,499,999	$292,874	$1,218,208	4.16	$764,371	63%
$1,500,000 - $1,999,999	$401,087	$1,679,058	4.19	$1,025,290	61%
$2,000,000 - $2,499,999	$531,892	$2,236,081	4.20	$1,505,811	67%
$2,500,000 and Above	$824,000	$4,077,115	4.95	$2,268,077	56%
Total	**$304,690**	**$1,234,147**	**4.05**	**$785,988**	**64%**

[1] Includes 2023 home purchase loans originated for a primary residence. Excludes about 15% of all home purchase loans which related to a "second residence" or "investment property."
[2] Annual gross (pre-tax) income for mortgage underwriting purposes.

Sources: Federal Financial Institutions Examination Council, Home Mortgage Disclosure Act (HMDA) Data; Gruen Gruen + Associates.

The average loan to value ratio for homes valued at $1,499,999 or less ranges from 63 to 72 percent. The property value to income ratio (i.e., average property value divided by average applicant income) ranges from 3.3 to about 4.2. For homes valued between $1,500,000 and $2,499,999, the average loan to value ratio ranges from 61 to 67 percent. The property value to income ratio rises to about 4.2. For homes valued at $2,500,000 or higher, the average loan to value ratio falls to 56 percent and the average property value to income ratio rises to 4.95.

Table III-3 shows the net increase in household income resulting from the prototypical expanded homes. The price to income ratios shown above in Table III-2 are used to estimate the annual household income of the expected sales price of the previous home and the expanded home in each of the three scenarios.

TABLE III-3: Household Income Changes Resulting from Prototypical Expanded Homes			
	Previous Home	Expanded Home	**Net Increase**
Scenario A: Smaller Lot Demolition + Replacement			
Expected Sales Price	$1,080,000	$3,080,000	
Price-to-Income Ratio	4.16	4.95	
Annual Household Income[1]	$260,000	$620,000	**$360,000**
Scenario B: Larger Lot Demolition + Replacement			
Expected Sales Price	$1,700,000	$5,175,000	
Price-to-Income Ratio	4.19	4.95	
Annual Household Income[1]	$410,000	$1,050,000	**$640,000**
Scenario C: Significant Home Addition			
Expected Sales Price	$1,440,000	$2,310,000	
Price-to-Income Ratio	4.16	4.20	
Annual Household Income[1]	$350,000	$550,000	**$200,000**
[1] Annual income rounded to nearest $10,000.			
Source: Gruen Gruen + Associates			

Based on the estimated increase in the price-to-income ratio for the households purchasing expanded homes to 4.95 from 4.16 for the prototypical smaller lot "Scenario A", the average household income is estimated to increase from $260,000 to $620,000 for a net increase of $360,000.

Given the estimated increase in the price-to-income ratio of 4.19 to 4.95 for the prototypical larger lot demolition and replacement "Scenario B", the average household income is estimated to increase by $640,000 (from $410,000 to $1,050,000).

Based on the estimated smaller increase in the price-to-income ratio for the households purchasing expanded homes to 4.20 from 4.16 for the prototypical significant home addition "Scenario C", the average household income is estimated to increase from $350,000 to $550,000 for a net increase of $200,000.

ESTIMATED EMPLOYMENT IMPACTS BY INDUSTRY SECTOR

Table III-4 summarizes the employment impacts by industry sector in Boulder for each of the three scenarios. The jobs generated by industry sector are derived from the estimated increases in household income shown above in Table III-3. The RIMS II final demand employment multipliers for Boulder County estimate the number of jobs created with each $1,000,000 of earnings (i.e., change in household income). Table C-1 in Appendix C includes the household sector employment multipliers for Boulder County, expressed in terms of jobs (employment) created for each $1,000,000 of household earnings. The estimates assume that 75 percent of the countywide jobs created will occur locally in the city of Boulder.[4]

TABLE III-4: Local Employment[1] Impacts Resulting from Prototypical Expanded Home

Industry Sector	Scenario A # Jobs	Scenario B # Jobs	Scenario C # Jobs
Construction	0.003	0.005	0.002
Manufacturing	0.026	0.046	0.014
Wholesale Trade	0.024	0.042	0.013
Retail Trade	0.199	0.354	0.111
Transportation and Warehousing	0.009	0.016	0.005
Information	0.030	0.053	0.017
Finance, Insurance, and Real Estate	0.369	0.656	0.205
Professional and Business Services	0.084	0.149	0.047
Education and Health Care Services	0.247	0.438	0.137
Leisure and Hospitality	0.180	0.320	0.100
Other/Personal Services	0.082	0.146	0.046
Other[2]	0.027	0.048	0.015
Total Employment	**1.279**	**2.274**	**0.711**

[1] Employment includes part-time and full-time jobs.
[2] Includes unclassified jobs and sectors with small numbers of workers (utilities, natural resources, etc.).

Sources: Bureau of Economic Analysis, RIMS II multipliers; Gruen Gruen + Associates.

Based on the RIMS II employment multipliers and estimated net increase in household income associated with each scenario, the total number of jobs created in Boulder ranges from 0.71 jobs for Scenario C, 1.28 jobs for Scenario A, and 2.27 jobs for Scenario B. Jobs in finance, insurance, and real estate, education and healthcare, retail trade, and leisure and hospitality make up about three quarters of the added jobs in Boulder.

[4] Boulder represents about one-half of the countywide employment base and likely comprises a somewhat higher share of economic output in the county (with a higher concentration of non-basic "export" industries located in the city). Additionally, by definition, most personal consumption and spending of expanded higher-income home occupants will occur directly within the city of Boulder.

CHAPTER IV

AFFORDABLE HOUSING DEMAND NEXUS CALCULATIONS

INTRODUCTION

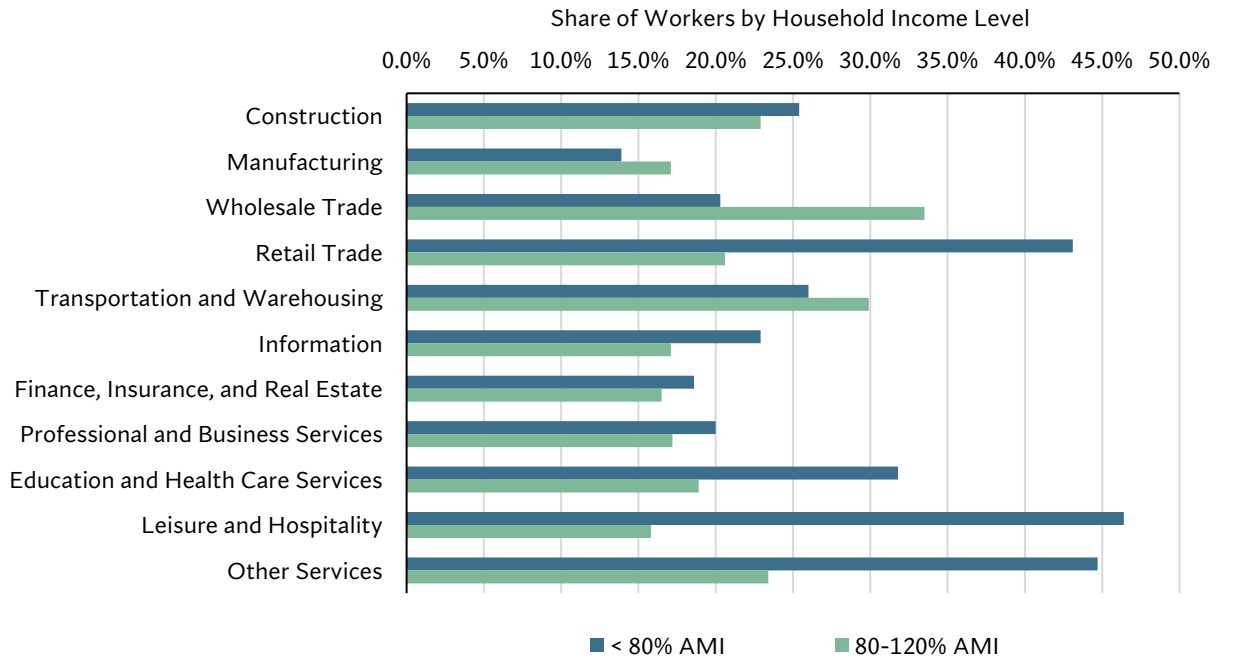
As reviewed in Chapter III, an increase in demand for local goods and services - driven by an increase in household income resulting from purchases of larger replacements or expanded homes in Boulder - will generate additional jobs. This chapter estimates the number of new workforce households formed by these additional workers, based on the distribution of workers by household size and income, as well as the average number of workers per household.

An estimate is then presented of the number of new workforce households unable to afford market-rate housing in Boulder. In addition, an estimate is made of the per-unit financial gap between affordable rents or purchase prices and prevailing market rates.

WORKFORCE HOUSEHOLD FORMATION BY INCOME LEVEL

Table C-2 in Appendix C includes an analysis of workers and workforce households in Boulder's primary labor shed. The household income distribution of workers is summarized by sector of employment. The analysis is based on GG+A analysis of Public Use Microdata Samples ("PUMS" data) from the 2023 American Community Survey. Figure IV-1 illustrates the results of this analysis.

FIGURE IV-1: Distribution of Workers by Industry of Employment and Household Income



Approximately 40 to 45 percent of workers employed in the Retail Trade, Leisure and Hospitality, and Other Services in the local economy live in a Low- or Moderate-Income household (defined as households with incomes below 80 percent of AMI). About 25 percent and 32 percent of workers employed in the Construction and Education and Healthcare sectors, respectively, also live in a Low- or Moderate-Income household.

About 20 to 25 percent of workers employed in the Construction, Retail Trade, Education and Health Care services and Other Services categories live in a Middle-Income household (defined as household incomes from 80 percent to 120 percent of AMI). About 17 percent of workers employed in the Leisure and Hospitality sector live in a Middle-Income household.

Commuting Patterns

According to the 2022 Boulder Valley Employee Survey for Transportation, 34 percent of the surveyed workers both lived and worked in Boulder. Other secondary data including U.S. Census Bureau estimates suggest that a smaller share of workers employed in Boulder also live in the community – about 18 percent as of 2022 estimates. One factor driving these commutation patterns is the imbalance between jobs and housing units in Boulder, an imbalance that a housing nexus fee is intended to help correct.

The nexus analysis assumes that two-thirds of new workers will form or locate their households within Boulder if housing is available and affordable. The remaining one-third of new workers are assumed to commute-in for employment in Boulder, whether for lifestyle preference or other economic reasons.[5]

Workers per Household

Because most workforce households include more than one wage earner, the estimates of household formation reflect an average of 1.37 to 1.88 workers per household. The estimates of average workers per household are drawn from the 2023 PUMS data for workers living in Boulder's primary labor shed. Lower-income households tend to have fewer workers, and vice versa with higher-income households having more employed workers in the household.

[5] Many workers form households with other workers who are often employed in different locations and communities. Analysis by a U.S. Census Bureau economist, for example, found that approximately 41 percent of "dual-earner households" were employed in Census Blocks located more than 10 miles apart, and 18 percent were employed more than 25 miles apart.

Henry R. Hyatt, "Coworking couples and the similar jobs of dual-earner households," Monthly Labor Review, U.S. Bureau of Labor Statistics, November 2019, https://doi.org/10.21916/mlr.2019.23

Table IV-1 summarizes the resulting estimates of new workforce households formed in Boulder, by income level, for each of the prototypical single-family home replacement or additions scenarios.

TABLE IV-1: New Workforce Households by Income Level[1]

	< 60% AMI	60-79.9% AMI	80-119.9% AMI	≥ 120% AMI
Scenario A: Smaller Lot Demolition and Replacement				
Additional Workers	0.269	0.132	0.233	0.627
In-Commuting Factor	33.3%	33.3%	33.3%	33.3%
Workers per Household	1.37	1.48	1.65	1.88
New Workforce Households	**0.131**	**0.059**	**0.094**	**0.222**
Scenario B: Larger Lot Demolition and Replacement				
Additional Workers	0.478	0.234	0.414	1.115
In-Commuting Factor	33.3%	33.3%	33.3%	33.3%
Workers per Household	1.37	1.48	1.65	1.88
New Workforce Households	**0.233**	**0.105**	**0.084**	**0.395**
Scenario C: Significant Home Addition and Remodel				
Additional Workers	0.149	0.073	0.129	0.348
In-Commuting Factor	33.3%	33.3%	33.3%	33.3%
Workers per Household	1.37	1.48	1.65	1.88
New Workforce Households	**0.073**	**0.033**	**0.052**	**0.124**

[1]Excludes share of workers that do not live in a household (group quarters) such as university dormitories.

Sources: Bureau of Economic Analysis, U.S. Census Bureau, 2023 PUMS; Gruen Gruen + Associates.

The distribution of workers by household income does not include the share of workers that do not live in a household (group quarters) such as university dormitories. Scenario A has a projection of a total of 1.261 workers per expanded home. Adjusting this estimate downward by one-third (for in-commuting workers) and then dividing by an average 1.66 workers per household results in an estimate of a total of 0.51 new workforce households per replacement or expanded home.

Scenario B has a projection of a total of 2.241 workers per replacement or expanded home. This results in an estimate of a total of 0.90 new workforce households per expanded home. Scenario C has a projection of total 0.70 workers per expanded home, resulting in an estimate of a total of 0.28 new workforce households per expanded home.

For all three scenarios, about one-third of workforce households are estimated to be Low- or Moderate-Income households with incomes below 80 percent of AMI. Another 19 percent of households are estimated to be Middle-Income households with incomes of 80 to 120 percent of AMI. Forty-four percent of workforce households are estimated to have incomes exceeding 120 percent of AMI.

AFFORDABLE HOUSING FEASIBILITY GAPS

Table IV-2 summarizes the estimated market-rate housing rents and affordable housing rents at 50 and 60 percent of AMI.

TABLE IV-2: Estimated Feasibility Gap for Affordable Rental Housing at 50 to 60 Percent of Area Median Income (AMI)

	50% AMI	60% AMI
Average Market Rent[1]	$1,930	$1,930
2024 Affordable Gross Rent[2]	$1,414	$1,702
Less: Utility Allowance[3]	($53)	($53)
Monthly Affordable Rent	$1,361	$1,649
Annual Difference to Market	($6,825)	($3,366)
Per-Unit Value Differential (Gap)[4]	($136,500)	($67,320)
Average Per Unit Value Differential (Gap)[5]	**($81,156)**	

[1] Based on CoStar Group Inc. summary of average rents in the Boulder apartment market October 2024. Average rent based on a unit mix including 25% studios, 50% 1-bedroom units, and 25% 2-bedroom units.
[2] FY 2024 City of Boulder Income & Rent Limits.
[3] 2024 allowances for natural gas and electric in multi-family units (Metro Denver/Boulder).
[4] Assumes 5% market capitalization rate.
[5] Average based on 20/80 allocation of 50 percent of AMI and 60 percent of AMI.

Sources: CoStar Group, Inc.; City of Boulder; Colorado Division of Housing; Gruen Gruen + Associates.

The difference between the market-rate and affordable rents at 50 percent and 60 percent of AMI is estimated to be $6,825 per year at 50 percent of AMI and $3,366 per year at 60 percent of AMI. The difference is based on an estimate of average monthly market rent of $1,930 and affordable monthly rent of $1,360 at 50 percent of and $1,649 at 60 percent of AMI. Assuming a 5.0 percent capitalization rate or required yield on the purchase of income-producing property, the annual differences equate to an average per-unit value difference between market-rate units and affordable units of $136,500 for a unit at 50 percent of AMI and $67,320 for a unit at 60 percent of AMI.

The average feasibility "gap," weighted with a 20 percent allocation to units at 50 percent of AMI and 80 percent allocation to units at 60 percent of AMI, is estimated to be approximately $81,200 per unit.

Table IV-3 summarizes the estimated market-rate sales prices and affordable sales prices at 80 and 120 percent of AMI.

TABLE IV-3: Estimated Feasibility Gap for Affordable Ownership Housing (Condos/Townhomes) at 80 to 120 Percent of Area Median Income

	80% AMI	120% AMI
Average Market Sales Price[1]	$532,700	$532,700
2024 Income Limit[2]	$96,360	$144,550
Affordable Price/Income Ratio[3]	3.25	3.25
Affordable Sales Price	$313,170	$469,788
Per-Unit Value Differential (Gap)	($219,530)	($62,913)
Average Per Unit Value Differential (Gap)[4]	**($141,221)**	

[1] Average resale price in city of Boulder, September 2023 through August 2024. Excludes detached single-family homes. The average price is based on 50% 1-bedroom units and 50% 2-bedroom units.
[2]Adjusted for household size, assuming 1.5 persons per bedroom.
[3] Ratio assumes 5% downpayment with 30-year loan at 6.9% interest rate. Annual mortgage insurance of 0.5% (of loan) and annual property tax, insurance, and other expenses assumed to be 1.25% of home price.
[4]Average based on 50/50 allocation of 80 percent of AMI and 120 percent of AMI.

Sources: City of Boulder; Boulder County Assessor; Gruen Gruen + Associates.

The difference between the market rate and affordable sales prices at 80 percent and 120 percent of AMI is estimated to be $219,530 at 80 percent of AMI and $62,913 at 120 percent of AMI. The affordable sales price is based on a price-to-income ratio of 3.25 which assumes a purchase price with a downpayment of five percent and a 6.9 percent interest rate on a 30-year loan. On average, the per unit value gap for 80 percent and 120 percent of AMI is $141,221.

ESTIMATES OF THE NEED FOR AFFORDABLE HOUSING UNITS

Table IV-4 summarizes the need for affordable housing units generated by the replacement or additions of existing homes with larger homes. The number of units are shown for households with less than 80 percent of AMI and between 80 and 120 percent of AMI.

TABLE IV-4: New Affordable Housing Units by Income Level[1]

	< 80% AMI	80-120% AMI
Scenario A: Smaller Lot Demolition and Replacement		
New Workforce Households	0.190	0.094
Affordable Allocation[2]	100% rental	60% ownership
Affordable Needs # Units[3]	**0.200**	**0.059**
Scenario B: Larger Lot Demolition and Replacement		
New Workforce Households	0.338	0.167
Affordable Allocation[2]	100% rental	60% ownership
Affordable Needs # Units[3]	**0.356**	**0.106**
Scenario C: Significant Home Addition and Remodel		
New Workforce Households	0.106	0.052
Affordable Allocation[2]	100% rental	60% ownership
Affordable Needs # Units[3]	**0.111**	**0.033**

[1] Excludes new households generated with incomes greater than 120% of AMI.
[2] Based on current housing tenure in the Boulder labor shed for 60% ownership allocation among Middle-Income households with 80-120% of AMI; renters earning above 80% of AMI can afford market rents.
[3] Includes frictional vacancy factor of five percent.

Sources: Bureau of Economic Analysis, U.S. Census Bureau, 2023 PUMS; Gruen Gruen + Associates.

Under Scenario A, for every smaller lot demolition of an existing smaller home and replacement with a larger home, an additional 0.19 new workforce households would be formed in Boulder with incomes below 80 percent of AMI. This would equate to the need for 0.2 rental units at prices affordable to households with incomes below 80 percent of AMI. This housing unit estimate includes a five percent fractional vacancy factor to permit mobility in the housing market. Assuming that 60 percent of middle-income households (80 percent to 120 percent of AMI) live in ownership housing in Boulder, under Scenario A the need for affordable middle-income housing is 0.059 units at prices affordable to households with incomes ranging from 80 percent to 120 percent of AMI.

Under Scenario B for every larger lot demolition of an existing smaller home and replacement with a larger home, an additional 0.338 new workforce households would be formed in Boulder with incomes below 80 percent of AMI. This would equate to the need for about 0.36 rental units at prices affordable to households with incomes below 80 percent of AMI. Again, assuming that 60 percent of middle-income households (80 percent to 120 percent of AMI) live in ownership housing in Boulder, under

Scenario B the need for affordable middle-income housing is 0.106 units at prices affordable to incomes ranging from 80 percent to 120 percent of AMI.

Under Scenario C for every significant addition to a smaller home, an additional 0.106 new workforce households would be formed in Boulder with incomes below 80 percent of AMI. This would equate to the need for about 0.11 rental units at prices affordable to households with incomes below 80 percent of AMI. The need for affordable middle-income housing is 0.033 units at prices affordable to households with incomes ranging from 80 percent to 120 percent of AMI.

MAXIMUM NEXUS FEES

This section presents the calculations of the maximum nexus fees based on the financial gap per unit for each income level relative to the total affordable housing unit need by income level associated with:

(1) demolitions and replacements resulting in a net increase of at least 500 square feet of above ground living area; and

(2) major home additions exceeding 500 square feet of above ground living area.

For the Scenario A prototype in which a smaller lot (8,000 square feet of land) home (of 1,200 square feet of living area) is replaced with a larger home (of 2,800 square feet of living area), the net additional living area of 1,600 square feet is used to calculate a nexus fee per square foot.

For the Scenario B prototype in which a larger lot (20,000 square feet of land) home (of 2,000 square feet of living area) is replaced with a larger home (of 4,500 square feet of living area), the additional net living area of 2,500 square feet is used to calculate a nexus fee per square foot.

For the Scenario C prototype in which an existing home of 1,600 square feet of living area on a 10,000-square-foot lot is expanded to 2,200 square feet of living area, the net addition of 600 square feet is used to calculate a nexus fee per square foot. Table IV-5 summarizes the maximum nexus fee calculations assuming.

TABLE IV-5: Maximum Affordable Nexus Fee Calculations

	Scenario A	Scenario B	Scenario C
Affordable Rental Unit Need, Less Than 80% AMI	0.200	0.356	0.111
Average Financial Gap @ 50% to 60% AMI	$81,156	$81,156	$81,156
Maximum Fee Per Expanded Home	$16,246	$28,881	$9,025
Maximum Fee per Square Foot of Added Living Area[1]	$10.15	$11.55	$15.04
Affordable Ownership Unit Need, 80% to 120% AMI	0.059	0.106	0.033
Average Financial Gap @ 80% to 120% AMI	$141,221	$141,221	$141,221
Maximum Fee Per Expanded Home	$8,398	$14,929	$4,665)
Maximum Fee per Square Foot of Added Living Area[1]	$5.25	$5.97	$7.78
Total Maximum Fee Per Square Foot[1]	**$15.40**	**$17.52**	**$22.82**

[1] For the Scenario A prototype net additional living area of 1,600 square feet is used to calculate a nexus fee per square foot. For the Scenario B prototype net additional living area of 2,500 square feet is used to calculate a nexus fee per square foot. For the Scenario C prototype net addition of 600 square feet of living area is used to calculate a nexus fee per square foot.

Source: Gruen Gruen + Associates

The maximum fee per expanded home is derived by multiplying the average financial gaps by the estimated additional affordable rental and affordable ownership housing needs. Under Scenario A for the demolition of a small home on a small lot and replacement with a larger unit, the maximum fee per unit is approximately $24,600. Dividing by the estimated net living area increase of 1,600 square feet results in a maximum fee of $15.40 per square foot of additional living area. Most of the maximum fee, about two thirds, is attributable to affordable rental housing needs among workforce households generated with incomes below 80 percent of AMI.

Under Scenario B for the demolition of a small home on a larger lot and replaced with a larger unit, the maximum fee per unit is approximately $43,800. Dividing by the estimated net living area increase of 2,500 square feet results in a maximum fee of $17.52 per square foot of additional living area. Again, about two thirds of the maximum nexus fee is attributable to affordable rental housing needs among workforce households generated with incomes below 80 percent of AMI.

Under Scenario C for the addition to a smaller home, the maximum fee per unit is approximately $13,700. Dividing by the estimated net living area increase of 600 square feet results in a maximum fee of $22.82 per square foot of additional living area.

CHAPTER V

NEXUS FEE FEASIBILITY ANALYSIS

INTRODUCTION

Adopting an affordable housing demolition or linkage fee requires consideration of its impact on residential development feasibility. Such a fee represents an additional capital cost that will ultimately affect either consumers (homeowners) or homebuilders. Because the fee can be set at any level between $1 and the maximum nexus-based fee (refer to Table IV-5), it is important to determine a rate that supports policy goals without rendering single-family home replacement and expansion projects financially unviable - an outcome that would (a) result in no housing construction activity and no fee revenue being generated and (b) discourage improvement and maintenance of the single-family housing stock.

This analysis evaluates the impact of an additional fee on the feasibility of single-unit residential projects using a static proforma model developed for prototypical scenarios, including single-family home demolition, replacement, and expansion. In this context, "feasibility" is defined from the perspective of a speculative investor or builder. Such a builder typically purchases an existing single-family lot, constructs a new home (or renovates and expands the existing structure), and aims to sell the property at a price including a reasonable profit margin.

SUMMARY

Table V-1 summarizes the financial effects on returns of the imposition of a $15.00 per square foot demolition fee on speculative single-family housing demolition and replacement and addition projects.

TABLE V-1: Impacts of Demolition Fee on Single-Family Unit Project Feasibility

	Homebuilder Net Profit[1]	Profit Margin[2]
Without Demolition Fee:		
Scenario A - Smaller Lot Demolition and Replacement	$457,900	14.9%
Scenario B - Larger Lot Demolition and Replacement	$683,300	13.2%
Scenario C - Significant Home Addition and Remodel	$227,000	9.8%
With Demolition Fee of $15 Per Additional Square Foot:		
Scenario A - Smaller Lot Demolition and Replacement	$433,900	14.1%
Scenario B - Larger Lot Demolition and Replacement	$645,800	12.5%
Scenario C - Significant Home Addition and Remodel	$218,000	9.4%

[1] Sales revenues less total costs (acquisition, development, permitting, selling expenses).
[2] Net Profit as percent of gross sales price.

Source: Gruen Gruen + Associates

Under the estimates reviewed in this chapter**,** the net profit on the Scenario A demolition of a small home on a small lot and replacement with a larger unit, the estimated profit per unit is estimated to decline by 8/10ths of one percent or 80 basis points from 14.9 percent ($457,900 per unit) to 14.1 percent ($433,900 per unit, a decrease of $24,000).

The net profit on Scenario B larger lot demolition and replacement with a larger unit, the estimated profit per unit is estimated to decline by 7/10ths of one percent or 70 basis points from 13.2 percent ($683,300 per unit) to 12.5 percent ($645,800 per unit).

The net profit on Scenario C (significant home addition) is estimated to decline by 4/10ths of one percent or 40 basis points to 9.4 percent ($218,000), from 9.8 percent ($227,000).

Even with the demolition fee under current typical development costs and obtainable sales prices for most neighborhoods the scenarios analyzed are likely to be financially feasible for private builders to undertake.

DEVELOPMENT COSTS

Cost estimates are based upon interviews with local builders, review of secondary cost data including permit valuations, and analysis of current fee schedules for the city of Boulder. Cost assumptions include the categories and items described below.

Land Acquisition

- Acquisition cost totaling $1,080,000 to $1,700,000 for the three sizes of lots/homes modeled in the demand nexus analysis (ranging in size from an 8,000 to 20,000 square foot lot).

Hard Construction

- Demolition cost of $25 per square foot of existing structure.
- Additional site work cost of $5 per square foot of lot area (driveways, landscaping, etc.).
- Vertical construction cost of $400-$450 per square foot for larger, new homes.
- Vertical construction and remodeling cost of $600 per square foot for smaller home expansions.

Permitting Fees

- Entitlement, plan review, and building permit fees equal to two percent (2%) of hard construction cost.
- City and County use tax of five percent (5%) on construction building materials.
- Capital Facility Impact Fee of about $4,100 to $9,100 per home, based on net square feet added.
- Proposed Demolition (nexus) Fee of $15 per square foot, based on net square feet added.

Other Soft Costs

- Architectural and engineering, professional services (e.g., legal, design), taxes and insurance, general administrative, and warranty reserve costs equal to ten percent (10%) of hard construction costs.
- Construction financing costs equal to three percent (3%) of hard construction costs. This is commensurate with a 50 percent loan-to-cost over 18 months with a 7.5 percent annual interest rate.

Table V-2 summarizes the estimated development costs for the three prototypical development scenarios.

TABLE V-2: Single-Family Home Replacement and Expansion Project Cost Estimates

	Scenario A	Scenario B	Scenario C
Project Type	Teardown and Replacement	Teardown and Replacement	Addition and Remodel
Single-Family Lot Size	8,000 sf	20,000 sf	10,000 sf
Expanded Home Size	2,800 sf	4,500 sf	2,200 sf
Net Increase in Home Size	1,600 sf	2,500 sf	600 sf
Category	Per Unit	Per Unit	Per Unit
Acquisition Cost [1]	$1,080,000	$1,700,000	$1,440,000
Hard Construction Cost	$1,190,000	$2,175,000	$460,000
Permit Fees [2]	$83,493	$139,389	$33,878
Other Soft Cost	$169,375	$307,814	$65,686
Total Development Cost	**$2,522,868**	**$4,322,202**	**$1,999,563**
Per-Square-Foot	$901	$960	$909

[1] Expected sales prices of existing homes. See previous Table III-1.
[2] Includes a Demolition Fee of $15 per square foot of net additional living area.

Source: Gruen Gruen + Associates

For Scenario A, an existing home is estimated to be purchased for $1,080,000 and then fully demolished and replaced with a larger home of 2,800 square feet. Estimated hard construction costs of $1,190,000 plus estimated permit fees of nearly $83,500, and other soft costs of more than $169,000, results in a total estimated development cost of nearly $2,523,000. Total development costs are estimated at $901 per square foot.

For Scenario B, an existing home is estimated to be purchased for $1,700,000 and replaced with a larger home of 4,500 square feet. Estimated hard construction costs of $2,175,000 plus estimated permit fees of nearly $140,000, and other soft costs of more than $307,000, results in a total estimated development cost of $4,322,000. Total development costs are estimated at $960 per square foot.

For Scenario C, an existing home is purchased at $1,440,000 and then expanded with a 600-square-foot addition. The hard construction costs are estimated at $460,000 for the addition and remodeling of the existing home. Additional permit fees and soft costs are estimated at approximately $100,000, indicating a total acquisition and development cost of nearly $2,000,000 or $909 per square foot.

DEVELOPMENT FEASIBILITY ANALYSIS RESULTS

Table V-3 presents a static cost and sales proforma for each of the prototypical home replacement or expansion scenarios.

TABLE V-3: Single-Family Home Replacement and Expansion Project Feasibility Results

	Scenario A	Scenario B	Scenario C
Gross Sales Price	$3,080,000	$5,175,000	$2,310,000
Commissions & Closing Costs (4%)	($123,200)	($207,000)	($92,400)
Net Sale Revenues	**$2,956,800**	**$4,968,000**	**$2,217,600**
Development Costs with Nexus Fee [1]	($2,522,868)	($4,322,202)	($1,999,563)
Builder Net Profit	**$433,932**	**$645,798**	**$218,037**
Profit Margin [2]	*14.1%*	*12.5%*	*9.4%*

[1] Includes proposed fee of $15 per square foot of additional living area.
[2] Percent of Gross Sales Price.

Source: Gruen Gruen + Associates

Sale revenues, net of commissions and closing costs to sell the homes, are estimated to be approximately $2,957,000 for Scenario A, $4,968,000 for Scenario B, and $2,218,000 for Scenario C.

The estimates of total acquisition and development cost including the proposed nexus fee, ranging from about $900 to $960 per square foot or $2,000,000 to $4,322,000 in the aggregate, indicate that a builder/developer's "net profit" on each project would be expected to range from a low of $218,000 to a high of $646,000.

The associated profit margins range from 9.4 up to 14.1 percent of the gross sale prices. For perspective, note that the National Association of Home Builder's recent cost survey[6] indicates an average single-family homebuilding profit margin of 11.0 percent. The aggregate profit per home, however, is significantly lower ($72,971) than estimated to apply to the prototypical home expansion projects in Boulder.

[6] National Association of Home Builders, "Cost of Constructing a Home – 2024 Edition." January 20, 2025: https://www.nahb.org/-/media/NAHB/news-and-economics/docs/housing-economics-plus/special-studies/2025/special-study-cost-of-constructing-a-home-2024-january-2025.pdf?rev=00a42a1ce63b4a22a4dba9bda8af954b

APPENDIX A

AFFORDABLE HOUSING FEE EXAMPLES

A limited number of municipalities impose fees or exactions on single-unit housing projects. Policies vary significantly in scope, applicability, exemptions, and fee structure. The matrix on the following page (Table A-1) provides examples of affordable housing-related taxes and fees that apply to individual single-family home projects in other communities.

Several affluent communities along the north shore of Chicago have enacted a housing "Demolition Tax" to fund affordable housing efforts. These policies impose fixed tax amounts per demolished home, irrespective of project size or cost. A larger, but still small number of communities, including Denver and Aspen, impose affordable housing linkage, impact, or mitigation fees on single-unit residential projects. Many of these municipalities provide exceptions for accessory dwelling units (ADUs) and smaller home expansions. Denver, for example, exempts home additions of less than 400 square feet while Aspen charges lower housing mitigation fees for home expansions that do not exceed thresholds for "demolition." Some communities such as Los Angeles also provide exceptions related to duration of home ownership and the future sale of the property.

Demolition Taxes and Linkage Fees:

- In **Evanston**, **Highland Park**, and **Lake Forest, Illinois**, demolition taxes are imposed when 50 percent or more of single-family structures are demolished. Fees range from $10,000 in Highland Park to $16,380 in Evanston. Exemptions in Highland Park include homes owned continuously for five years before and after demolition.

- **Denver, Colorado** and **Los Angeles, California** impose linkage fees based on the amount of new or additional floor area. Denver sets its current fees from $5 to $8 per total square foot, with exemptions for smaller home additions and involuntary replacements. Los Angeles charges about $10 to $23 per square foot of additional net area, varying for higher- and lower-cost neighborhoods in the city. Homes expanded by less than 1,500 square feet, and those that remain under consistent ownership for at least three years, are exempt.

Impact and Mitigation Fees and Excise Taxes:

- In **Aspen, Colorado**, affordable housing mitigation requirements allow in-lieu fees to be paid on single-family home demolition, replacement, and expansion projects. The policy assigns an employment generation ratio of 0.107 jobs (requiring housing mitigation) for every 1,000 square feet of new construction. For additions to homes where less than 40 percent of the structure is demolished, in-lieu fees are calculated on the "net" increase in floor area. Fee-in-Lieu rates range from about $375,000 to $410,000 per job requiring housing mitigation, translating to fees of about $40 to $44 per total square foot for single-family teardown and replacement projects.

- **Winter Park, Colorado** imposes an affordable housing fee of $3.00 per gross square foot of new residential construction, including additions to existing homes/structures. Discretionary fee waivers are available for "individuals and/or families earning a low to moderate annual income."

- In **Portland, Oregon**, a one percent (1%) excise tax applies to residential building improvements over $100,000, exempting ADUs and emergency-replacement structures.

- **Santa Cruz, California**, uses a tiered fee structure based on the size of homes, ranging from $2.00 to $15.00 per square foot, with exemptions for smaller home additions and ADUs.

- **Cupertino, California**, charges $21.36 per square foot for residential projects that increase floor area, but specifically exempts the "demolition and rebuild of, or an addition to, an existing single-family home."

- **Oakland, California**, applies impact fees of $10,785 to $31,006 per home, depending on zoning, for "net additional" single-family units constructed on a real property parcel.

- **Sacramento, California**, imposes a housing impact fee of $3.56 per square foot, exempting room additions, second units, and owner-built single-unit dwellings.

TABLE A-1: Example Communities with Affordable Housing Taxes or Fees on Single-Unit Residential Projects			
Community	**Name/Type**	**Applicability and Exemptions**	**Current Fee Amounts**
Evanston, Illinois	Demolition Tax	Single-family detached homes when 50 percent or more of structure is demolished.	$16,380 per home
Highland Park, Illinois	Demolition Tax	Residential demolitions when 50 percent or more of structure is demolished; exception if home owned for previous 5 years and subsequent 5 years.	$10,000 per home
Lake Forest, Illinois	Demolition Tax	Single-family detached homes when 50 percent or more of structure is demolished.	$12,000 per home
Denver, Colorado	Affordable Housing Linkage Fee	All residential projects of ≤ 9 units. Exemptions are made for ADU's, existing home additions ≤ 400 square feet, and the "involuntary" replacement of homes lost to disaster, condemnation, etc.	Per-Square-Foot Fees (7/1/25): Home ≤ 1,600 sf: $5.00 Home > 1,600 sf: $8.00
Winter Park, Colorado	Affordable Housing Fee	Any new residential construction project, including additions to existing structures/homes. Lower or moderate income households may apply for waivers.	$3.00 per square foot
Aspen, Colorado	Housing Mitigation In-Lieu Fees	Single-family residential projects that demolish/replace or expand floor area. Projects meeting the definition of "demolitions" pay in-lieu fees based on total new floor area. Smaller additions not considered demolitions pay fees based on net additional floor area. ADUs may be constructed and deed-restricted to satisfy mitigation requirements for single-family homes.	(Mitigation Floor Area / 1,000 sf) x 0.107 Jobs x Fee-In-Lieu ($376,475 to $408,054)
Los Angeles, California	Affordable Housing Linkage Fee	Any single-family residential project resulting in a net increase in floor area > 1,500 square feet. Fees are exempted if home remains under the same ownership for three years (via recorded covenant at building permit). ADU's are also exempt.	$10.02 - $22.53 per square foot, depending on market area
Portland, Oregon	Construction Excise Tax	Excise tax is imposed on residential building improvements valued at $100,000 or more. Exemptions include ADU's, projects valued < $100,000, and housing to replace structures destroyed or damaged by declared state emergency.	1% of permit valuation
Santa Cruz, California (County)	Affordable Housing Impact Fee	Fees apply to ownership residential projects with ≤ 6 units and "net new" square footage of home additions, replacements, and remodels. Projects resulting in < 500 net new square feet, and ADU's < 750 square feet, are exempted.	Per-Square-Foot Fees: Home ≤ 2,000 sf: $2.00 Home 2,000-4,000 sf: $3.00-$10.00 Home > 4,000 sf: $15.00
Cupertino, California	Residential Housing Mitigation Fee	All residential projects (< 5 units) that result in increase of gross floor area. Exemptions include ADU's, replacement of lost/destroyed floor area, and the "demolition and rebuild of, or an addition to, an existing single-family home."	$21.36 per square foot
Oakland, California	Affordable Housing Impact Fee	Applies only to net "additional" single-family units created on a parcel of real property. Additions or expansions to existing homes and ADU's are specifically exempted.	$10,785 - $31,006 per home, depending upon zone
Sacramento, CA	Housing Impact Fee	All single-unit and duplex projects. Exemptions made for room additions, ADUs, and new single-unit dwellings built by owner-occupants on their property.	$3.56 per square foot

APPENDIX B

ANNUAL FEE REVENUE ESTIMATE

Table B-1 presents an estimate of the potential annual affordable housing funding that could result from a demolition (nexus) fee[7] based on the number of demolition and replacements and/or additions to existing homes that have occurred in Boulder over the past five years.

TABLE B-1: Potential Annual Affordable Housing Funding from Demolition Fee Revenues from Single-Family Home Replacements or Expansions

	Nexus-Based Fee
Annual Number of Single-Family Teardowns and Replacements Subject to Fee	30
Approximate Fee Revenue per Project (2,000 net new sf x $15/sf)	$30,000
Annual Fee Revenue	*$900,000*
Annual Number of Significant Single-Family Home Additions Subject to Fee	20
Approximate Fee Revenue per Project (1,000 net new sf x $15/sf)	$15,000
Annual Fee Revenue	*$300,000*
Total Annual Fee Revenue	**$1,200,000**

Source: Gruen Gruen + Associates

Based on an analysis of the number of lots/housing units demolished and replaced with larger homes and homes subject to significant additions reviewed below and in the body of the report, the annual fee estimate reflects 30 single-family teardown and replacement projects and 20 significant additions each year. Assuming in a typical year 30 housing units are demolished and replaced on average with a net increase of 2,000 square feet of living area and assuming a demolition fee of $15 per square foot, annual funding for affordable housing from the demolition fee would total $900,000 (30 multiplied by $30,000).

Assuming 20 housing units are significantly expanded or subject to additions in a typical year of an average increase of 1,000 net square feet of living area and assuming a demolition fee of $15 per square foot, annual funding for affordable housing from the demolition fee would total $300,000. Including both demolition and replacement and additions to existing homes, the imposition of a demolition fee is estimated to provide $1,200,000 in annual funding for affordable housing.

[7] For convenience and clarity, we use the words "demolition fee" even though the fee would also apply to additions to homes.

APPENDIX C

SUPPORTING DATA AND TABLES

TABLE C-1: Household Sector Employment Multipliers for Boulder County	
Industry description	Final Demand Multiplier (Jobs per $1,000,000) [1]
Agriculture, forestry, fishing, and hunting	0.016
Mining	0.001
Utilities	0.006
Construction	0.016
Durable goods manufacturing	0.030
Nondurable goods manufacturing	0.113
Wholesale trade	0.132
Retail trade	0.738
Transportation and warehousing	0.049
Information	0.083
Finance and insurance	0.237
Real estate and rental and leasing	1.050
Professional, scientific, and technical services	0.165
Management of companies and enterprises	0.007
Administrative and waste management services	0.127
Educational services	0.256
Health care and social assistance	0.658
Arts, entertainment, and recreation	0.097
Accommodation	0.054
Food services and drinking places	0.517
Other services	0.304
Households	0.097
TOTAL PER $1,000,000	**4.751**
[1] RIMS II final-demand employment multipliers, Boulder County (2020). Expressed in total full- and part-time jobs per $1,000,000 of household earnings.	
Source: Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II)	

TABLE C-2: Household Income Distribution of Workers in the Boulder Labor Shed by Industry of Employment

	---------- 2023 Household Income [1] ----------					Group
	<60% AMI	60-79.9% AMI	80-99.9% AMI	100-119.9% AMI	≥120% AMI	Quarters[2]
Construction	14.5%	10.9%	9.4%	13.5%	51.7%	0.0%
Manufacturing	10.2%	3.7%	8.6%	8.5%	68.2%	0.7%
Wholesale Trade	8.9%	11.4%	26.0%	7.5%	46.2%	0.0%
Retail Trade	32.8%	10.3%	13.5%	7.1%	34.8%	1.5%
Transportation and Warehousing	12.4%	13.6%	10.6%	19.3%	44.0%	0.0%
Information	15.1%	7.8%	15.6%	1.5%	60.0%	0.0%
Finance, Insurance, and Real Estate	8.2%	10.4%	10.2%	6.3%	64.6%	0.3%
Professional and Business Services	13.5%	6.5%	7.4%	9.8%	62.7%	0.2%
Education and Health Care Services	22.2%	9.6%	8.3%	10.6%	47.0%	2.3%
Leisure and Hospitality	34.8%	11.6%	6.7%	9.1%	34.0%	3.9%
Other Services	31.3%	13.4%	14.3%	9.1%	31.9%	0.0%
Public Administration	7.5%	9.0%	7.2%	22.0%	54.2%	0.0%
Other[3]	29.7%	15.5%	1.5%	4.6%	42.7%	5.9%
TOTAL	**20.2%**	**9.1%**	**9.3%**	**9.7%**	**50.4%**	**1.3%**

[1] Household incomes adjusted for household size and bracketed according to 2023 Boulder County income limits.

[2] Workers that live in Group Quarters (not a household) such as university dormitories.

[3] Includes unclassified jobs and industry sectors with small numbers of workers (utilities, natural resources, etc.).

Sources: U.S. Census Bureau, ACS 1-Year Estimates Public Use Microdata Sample (2023); Gruen Gruen + Associates.

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APPLYING KNOWLEDGE, CREATING RESULTS, ADDING VALUE

Attachment B: Draft Equity and Engagement Plan

Housing and Human Services staff conducted a Rapid Response Equity Assessment and developed a Public Engagement Plan for this Nexus Study. Staff intentionally chose to complete a Rapid Response Equity Assessment, as the scale and size of this potential policy change did not justify the use of the more complex Racial Equity Instrument. The Public Engagement Plan was informed by the city's adopted Engagement Strategic Framework.

Rapid Response Equity Assessment

Boulder seeks a future with equitable access to health, prosperity and fulfillment that is not limited based on a person's race, ethnicity, age, gender, ability, religion, sexuality, or socioeconomic status. This includes meeting community expectations for our core service delivery and ensuring that the root causes of inequities are eliminated through city policies, practices, programs, and financial decisions. City employees are encouraged to use the assessment within their teams who will influence decision-making. The four guiding questions below are applied to underrepresented groups, ensuring equity in decisions across age, race, ethnicity, gender, sexual orientation, socio-economic status and abilities.

1. What is the policy, activity or budget decision that could impact racial equity?

The intent of the proposed policy change is to address shortcomings in the current inclusionary housing program to ensure equity in how residential development and additions contribute to affordable housing in the community.

Single family redevelopment in the city often removes a smaller, relatively affordable home and replaces it with a large expensive home. Similarly, substantial additions effectively replace more affordable smaller homes with larger more expensive homes, reducing affordability. This type of development is not subject to the city's existing Inclusionary Housing regulations and are not required to contribute toward affordable housing in the community.

Current program rules create incentives for demolition of smaller homes, which have typically been more affordable, to rebuild much larger and much more expensive homes. Reducing the number of smaller, more affordable homes in the city contributes to greater economic disparities among residents.

2. Who is or will be negatively impacted by the decision?

The intended goal of this change is to level the playing field for companies and households building or remodeling large homes within the city (current policy applies IH only to newly created housing units). While all policy changes come with unintended consequences, staff has made considerations and exemptions for smaller home remodels, as to not disproportionately impact community members with more modest incomes.

The burden of this policy change will be carried by those entities redeveloping smaller, more affordable homes to larger, expensive homes. However, the fees paid by these entities will directly contribute to the funding of additional affordable homes throughout the community.

3. Who is or will experience benefits?

The City of Boulder actively works to maintain existing affordable housing units and increase the stock of permanently affordable housing. Typically, residents of affordable housing in Boulder are more racially, ethnically, and economically diverse compared to the general population (Affordable Housing Data Dashboard). Offering diverse housing options for all people is a core tenant of the mission of Housing and Human Services. The inclusionary housing policy broadly supports this goal and the desired result of this Nexus Study and any subsequent policy proposal is to continue to support this mission.

The City's Affordable Housing Program currently serves double the percentage of communities of color as compared to the percentage of the whole population, and therefore, it is reasonable to conclude that expanding funding for affordable housing within the City of Boulder will also serve a higher rate of communities of color than the market currently serves.

4. What strategies might mitigate or avoid unintended consequences for people of color?

The intent of this policy proposal is to mitigate unintended consequences of the current inclusionary housing program. The IH program only applies to "new" residential development. Since remaining land appropriate for residential development within the city is limited, it is essential that a reasonable proportion of such land be developed into affordable housing units. This is particularly true because, in the absence of interventions, available land is often developed with large expensive housing, which both reduces opportunities for more affordable housing and contributes to a general rise in prices for all housing in the community. Replacing one older home with a newer home or making an addition does not utilize land in the city remaining for development.

By creating an impact fee or excise tax could address shortcomings in the IH program this change is aiming to ensure equity in how residential development and additions contribute to affordable housing in the community.

Public Engagement Plan

The Inclusionary Housing Program has been in effect for more than two decades with several updates over the years, with the most recent update occurring in 2023. Figure 1 below outlines the nine steps to good community engagement. Step 9 "Reflect and evaluate" has led to this Nexus Study and potential policy change, which aims for the program to apply development fees across several different types of housing development. Below Figure 1, staff lays out the Planning Stage (Steps 1-3) and the Shared Learning Stage (Step 4). Details of the Options and

Decision Phases (Step 5 through 7) are still in progress and will be updated as the project advances.

Figure 1: 9 Steps to Good Engagement, Engagement Strategic Framework (p. 9).

Step 1: Define the issue before embarking.
Desired Outcome: Address shortcomings in the current Inclusionary Housing program to ensure equity in how residential development and redevelopment contribute to affordable housing in the community.

Step 2: Determine who is affected.
Primary Stakeholders: Market-rate housing developers who must meet the Inclusionary Housing requirement.

Important Sources of Input:

1. City of Boulder Technical Advisory Group (HHS)
2. City of Boulder Housing Advisory Board (HHS)
3. City of Boulder Planning Board (PB)

Secondary Sources of Input:

1. Market-rate homeownership developers
2. Housing professionals, including architects, planning consultants, general contractors, lenders, realtors

Step 3. Create a public engagement plan.
Level of Engagement. Based on the technical nature of the desired outcome, the project team proposes the following approach to public engagement.

	Inform	Consult	Involve	Collaborate
Parties	General public	Market-rate homeownership developers Housing professionals City Council Other MI homeownership programs Other city departments with resources	Technical Advisory Group Housing Advisory Board Planning Board	
Participation Goal	Provide with balanced and objective information to assist them in understanding a problem, alternatives, opportunities and/or solutions	Obtain feedback on consultant analysis and recommendations.	Work throughout the process to ensure that concerns and aspirations are consistently understood and considered.	Partner with, in each aspect of decision, including development of alternatives and identification of preferred solution.
Promise	We will keep you informed.	We will keep you informed, listen to you, and acknowledge your concerns and aspirations, and share feedback on how public input influenced the decision. We will seek your feedback on drafts and proposals.	We will work with you to ensure that your concerns and aspirations are reflected in any alternatives and share feedback on how the input influenced the decision.	We will work together with you to formulate solutions and to incorporate your advice and recommendations into the decisions to the maximum extent possible.

Step 4. Share a foundation of knowledge.

The March 4, 2025 Planning Board memo and presentation provided the initial foundation of knowledge of the Nexus Study's findings. Efforts to share knowledge with the community will be ongoing as the project progresses.

Step 5. Identify options.
In progress.

Step 6. Evaluate options.
In progress.

Steps 7. Make a Decision
In progress.

Step 8. Communicate Decision and Rationale
In progress.

Step 9. Reflect and Evaluate
In progress.