



OAKLAND AFFORDABLE HOUSING IMPACT FEE FIVE-YEAR REVIEW

Prepared for
CITY OF OAKLAND

This Report Prepared by
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I. INTRODUCTION AND FINDINGS

AFFORDABLE HOUSING IMPACT FEE

The purpose of this report is to support the findings that the Mitigation Fee Act (Act) requires a local agency to make every five years for each development impact fee that the agency imposes on development projects.¹ This report provides the information and analysis required to make these findings for the City's Affordable Housing Impact Fee.

Section 66001(d)(1) of the Act requires that:

For the fifth fiscal year following the first deposit into the account or fund, and every five years thereafter, the local agency shall make all of the following findings² with respect to that portion of the account or fund remaining unexpended, whether committed or uncommitted.

The City of Oakland adopted an Affordable Housing Impact Fee on May 3, 2016 (Oakland Municipal Code Chapter 15.72; Ordinance No. 13365 C.M.S.). The Affordable Housing Impact Fee is assessed on three types of residential development: multifamily, townhome, and single family. For each development type, fees are further differentiated among three impact fee zones that cover the entire city.

The Affordable Housing Impact Fee was adopted based on the findings of a nexus study (*Oakland Affordable Housing Impact Fee Nexus Analysis*, prepared by Vernazza Wolfe Associates, Inc. and Hausrath Economics Group, March 10, 2016), as required under the California Mitigation Fee Act (California Government Code Section 66000 – 66008). Impact fees for Transportation and Capital Facilities were adopted at the same time.³ The impact fee implementation strategy included consideration of economic constraints: *Economic Feasibility Study for Oakland Impact Fee Program*, prepared by Hausrath Economics Group, April 8, 2016.

The citywide Affordable Housing Impact Fee went into effect for development projects submitting a building permit application on or after September 1, 2016. The impact fee amounts were phased in to allow developers time to incorporate the cost of the impact fee into their project financials, as well as to incentivize developers to accelerate projects to meet the immediate needs for housing production. Since July 1, 2018, impact fee amounts in Zones 1 and 2 have been assessed at the full value of the level determined during the 2016 adoption process. Impact fee amounts in Zone 3 reached the full value determined in the 2016 adoption in July

¹ *California Government Code*, sections 66000 through 66025, specifically section 66001(d).

² The findings (purpose of the fee, reasonable relationship, alternative funding sources, and alternative funding sources timing) are presented later this section.

³ The City of Oakland adopted a Jobs/Housing Impact Fee in 2002 that went into effect for development projects submitting a building permit on or after July 1, 2005.

2020. On September 20, 2021, impact fee amounts were adjusted for inflation by the City Administrator.⁴

FY 2020-21, ending on June 30, 2021, is the end of the fifth fiscal year following the first collection of fees. The findings made below are based on the fee being charged on June 30, 2021 (referred to as the “current” fee schedule in this report), and the ending fund balance in each fee account as of that date. These findings are based in part on the analysis presented in Chapter II of this report that updates the analysis in the original 2016 Nexus Study.⁵

In this report “nexus” is synonymous with the “reasonable relationship” term used in the findings presented below.

AFFORDABLE HOUSING TRUST FUND

Revenue from the Affordable Housing Impact Fee is deposited into the City of Oakland’s Affordable Housing Trust Fund. The Trust Fund also collects funds from the Jobs/Housing Impact Fee and the 25 percent allocation of former redevelopment tax increment funds set aside for affordable housing (i.e., “boomerang funds”). HCD staff are exploring the possibility of separating the various Trust Fund components into separate funds in order to facilitate tracking of commitments and spending from the Impact Fees and boomerang funds.

The Affordable Housing Trust Fund is the primary *local* source of on-going funding to increase, improve, and preserve the supply of affordable housing in Oakland. Through the Trust Fund, fee revenue leverages other federal, state, and county funding sources to produce more affordable units. City funds are intended to partially fill the gap between development costs and funding available from other private and public sources; this local funding commitment is often critical to securing additional gap funding for these projects.

Funds from the Affordable Housing Trust Fund are awarded on a competitive basis to project developers responding to a *Notice of Funding Availability (NOFA)* issued by the City of Oakland Housing and Community Development Department. The most recent NOFA for new construction was issued on November 1, 2021, with applications due on January 7, 2022. The most recent NOFA cycle for which funding awards have been approved by City Council was an April 2020 NOFA, with awards made in July 2020.

All the projects responding to the 2020 NOFA relied on multiple sources of subsidy to cover total development costs. The request for City funding ranged from 6% to 34% of total development cost, averaging 13% of costs. Non-city sources of funding included: Federal Community Development Block Grant, Federal Home Loan Bank of San Francisco Affordable Housing Program, and California Housing and Community Development funds from various programs (Multifamily Housing Program, Infill Infrastructure Grant, Affordable Housing and

⁴ City of Oakland, *Impact Fee Administrative Regulations and Manual: Affordable Housing, Transportation, and Capital Improvements Impact Fees*, updated February 24, 2021. The annual fee adjustment is to be based on the percentage increase from January of the prior year to January of the current year in the building cost index published by Marshall and Swift. (*Impact Fee Administrative Regulations and Manual*, IX.B Annual Fee Adjustment (page 22)).

⁵ Vernazza Wolfe Inc. & Hausrath Economics Group, *Oakland Affordable Housing Impact Fee Nexus Analysis*, March 10, 2016.

Sustainable Communities, No Place Like Home, Housing for a Health California). All projects also depended on equity investments tied to the Low-Income Housing Tax Credit. A number will also rely on a newly formed California Housing Accelerator Fund, created by the State in 2021 to clear a backlog of projects statewide that have State funding awards, but were unable to compete successfully for tax credits in an unusually competitive State funding environment.

FINDING: PURPOSE OF FEE

The local agency shall identify the purpose to which the fee is to be put.

The purpose of the Affordable Housing Impact Fee is to assure that market-rate residential development projects contribute funding to address the increased demand for affordable housing generated by such development projects within the City of Oakland. The Affordable Housing Impact Fee is justified to mitigate the fact that the private development market will not produce housing at a price or rent affordable to new low- and moderate-income worker households in Oakland.

Affordable Housing Impact Fee revenues are deposited in the City of Oakland Affordable Housing Trust Fund. The City uses monies in this trust fund (along with other sources) to provide gap funding on a competitive basis for affordable housing production and preservation in Oakland.

FINDING: REASONABLE RELATIONSHIP

The local agency shall demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

There is a reasonable relationship between the fee and the purpose for which it is charged because (1) the fee is based on the increased demand for affordable housing in Oakland generated by new market-rate residential development in Oakland as documented in *Oakland Affordable Housing Impact Fee Nexus Analysis*, March 10, 2016 and in this five-year update, and (2) the fee is restricted to funding affordable housing production and preservation in Oakland.

A reasonable relationship also exists between the fee and the purpose for which it is charged because the City is applying no more than the maximum legal impact fee amount to development projects. Chapter II provides an updated analysis of the maximum legal Affordable Housing Impact Fee based on 2020 data. As shown in Table 4 in that chapter, the maximum fee is greater than the current adopted fee across all land uses.

FINDING: ALTERNATIVE FUNDING SOURCES

The local agency shall identify all sources and amounts of additional (non-impact fee) funding needed to complete projects to be funded by the Affordable Housing Impact Fee account balance as of the prior fiscal year (June 30, 2021).

The Affordable Housing Impact Fee account had a fund balance of \$17,519,186 as of June 30, 2021.⁶ This amount includes Affordable Housing Impact Fee revenue received as well as accrued interest and investment earnings. A total of \$12,933,909 of impact fee funds are committed to six multifamily rental projects in various stages of pre-development, construction, and completion (see list below). The projects will provide a total of 369 housing units affordable to extremely-low-, very-low-, and low-income households; some units are set aside for homeless and special needs households.⁷

- ◆ Project Status: Pre-development
 - Friendship Senior Rental Housing in the Ralph Bunche neighborhood of West Oakland
 - West Grand & Brush Phase I in the Ralph Bunche neighborhood of West Oakland
 - Longfellow Corner in the Longfellow neighborhood of North Oakland
 - 7th & Campbell in the Prescott neighborhood of West Oakland
- ◆ Project Status: Construction
 - 95th Avenue & International Boulevard in the Elmhurst neighborhood of East Oakland
- ◆ Project Status: Completed / closeout underway
 - Oak Hill Apartments / NOVA in the Pill Hill neighborhood of East Oakland

After accounting for funds committed, \$4,585,277 of the June 30, 2021 fund balance remains uncommitted. The city issued a Notification of Funding Availability for New Construction of Multifamily Affordable Rental Housing in November, 2021. Applications are due January 7, 2022. The city expects to fully commit this remaining fund balance in the project awards anticipated to be forwarded to the City Council for approval in March 2022.⁸

⁶ City of Oakland, *Impact Fee Annual Report for Affordable Housing, Jobs/Housing, Transportation, and Capital Improvements Impact Fees, Fiscal Year Ended June 30, 2021*, December 2021.

⁷ Two projects representing a combined total of 101 affordable units are funded by both Jobs/Housing Impact Fee funds and Affordable Housing Impact Fee Funds. These projects are included in the totals presented in this report.

⁸ City of Oakland Department of Housing and Community Development, *Notice of Funding Availability for New Construction of Multifamily Affordable Rental Housing*, December 2, 2021 (revised). https://cao-94612.s3.amazonaws.com/documents/2021-New-Construction-NOFA-Program-Description_Revised_12.2.21-1.pdf, accessed December 15, 2021.

The six projects that have committed Affordable Housing Impact Fee funding, rely on a variety of local, state, federal, and other funding sources as indicated below:

Friendship Senior Rental Housing	City funds: Jobs/Housing Impact Fee, HOME (Home Investment Partnerships Program: locally administered federal funds), Other City funds (non-impact fee) State funds: Multifamily Housing Program, No Place Like Home, Low Income Housing Tax Credit Other: a combination of private and other funding sources
West Grand & Brush Phase I	City funds: Jobs/Housing Impact Fee, Measure KK Affordable Housing and Infrastructure Bond, Low-Moderate Income Housing Asset Fund County funds: Alameda County Measure A1 Housing Bond State funds: Infill Infrastructure Grant, Multifamily Housing Program, Housing Accelerator Fund Federal funds: Federal Home Loan Bank of San Francisco Affordable Housing Program
Longfellow Corner	City funds: Boomerang ⁹ , Measure KK Affordable Housing and Infrastructure Bond State funds: Affordable Housing and Sustainable Communities, Infill Infrastructure Grant, Low Income Housing Tax Credit Other: a combination of private and other funding sources
7 th & Campbell	City funds: Boomerang ⁹ , Measure KK Affordable Housing and Infrastructure Bond County funds: Alameda County Measure A1 Housing Bond State funds: Transit Oriented Development Housing Program, Housing Accelerator Fund Federal funds: Federal Home Loan Bank of San Francisco Affordable Housing Program Other: a combination of private and other funding sources
95 th & International Boulevard	City funds: Jobs/Housing Impact Fee, Boomerang ⁹ , HOME (Home Investment Partnerships Program: locally administered federal funds), Low-Moderate Income Housing Asset Fund, Redevelopment Successor Agency and Economic and Workforce Development (combination of excess bond funds and land contribution) State funds: Low Income Housing Tax Credit Other: a combination of private and other funding sources
Oak Hill Apartments / NOVA	County funds: Alameda County Measure A1 Housing Bond State funds: Low Income Housing Tax Credit Federal funds: Federal Home Loan Bank of San Francisco Affordable Housing Program Other: a combination of private and other funding sources

⁹ Allocation of former redevelopment tax increment funds (25 percent) set aside for affordable housing.

FINDING: ALTERNATIVE FUNDING TIMING

The local agency shall designate the approximate dates on which additional funding identified in the prior finding is anticipated to complete projects.

HCD staff have provided the following approximate dates for the funding sources identified above for each project.

Friendship Senior Rental Housing	Q4 2022
West Grand & Brush Phase I	Q2 2022
Longfellow Center	Q2 2023
7 th & Campbell	Q1 2021
95 th & International Boulevard	Q2 2021
Oak Hill Apartments / NOVA	Q1 2022

REPORT ORGANIZATION

The Affordable Housing Nexus Analysis Review begins with description of the complete nexus analysis methodology for the Affordable Housing Impact Fee. The review presents updated assumptions and analysis, calculates an updated maximum legal Affordable Housing Impact Fee, and references the 2016 nexus analysis for details of original assumptions and methods when necessary. Not all components of the analysis required quantitative updates as part of this first five-year review.

Two appendices provide detailed tables and text supporting the Affordable Housing Demand Analysis (Appendix A) and the Housing Affordability Gap Analysis (Appendix B).

II. AFFORDABLE HOUSING NEXUS ANALYSIS REVIEW

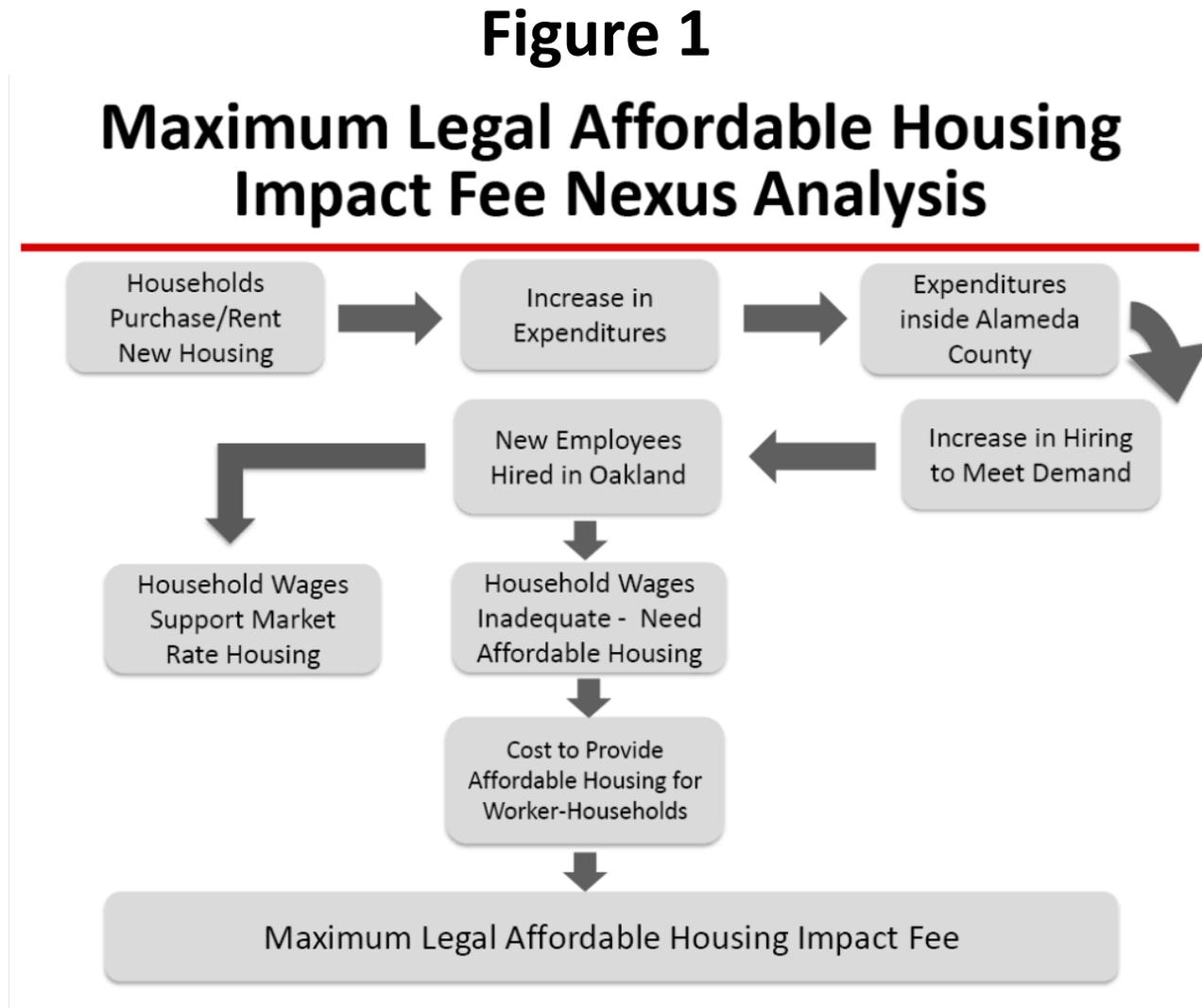
OVERVIEW OF THE NEXUS ANALYSIS

The 2016 *Oakland Affordable Housing Impact Fee Nexus Analysis* and this *Affordable Housing Impact Fee Five-Year Review* establish the link between new market-rate housing in Oakland and the need to subsidize housing affordable to low- and moderate-income worker households. The analysis quantifies the household income and spending of the households moving into new market-rate housing developed in Oakland and then estimates the number of new workers at various wage levels hired in Oakland as a result of this increase in economic activity in the city. Many of the new jobs are lower-wage retail trade and service sector positions. Since many lower-wage households cannot reasonably afford to pay for market rate rental or for-sale housing in Oakland, this results in demand for affordable housing.

The *City of Oakland Housing Element 2015 - 2023* (December 2014), the *Housing and Community Development 2021 – 2023 Housing Strategic Action Plan* (May 2021), *A Roadmap Towards Equity: Housing Solutions for Oakland California* (2015), and numerous other housing policy and planning documents prepared by and for the City of Oakland document the severity of the need for affordable housing in Oakland. In recent years, market-rate housing prices and rents have been increasing at some of the highest rates in the nation. Vacancy rates are low; there is no excess supply of affordable units to accommodate increased demand.

Because there is no excess supply of affordable housing in Oakland, the Affordable Housing Impact Fee assessed on new market-rate residential development is justified to bridge the difference or “gap” between what the new worker households can afford to pay and the costs of developing new housing units for them. This difference is referred to as the “affordability gap.”

Figure 1 presents a diagram of the nexus connection between the development of new market-rate housing in Oakland, the associated demand for additional affordable housing, and the cost to provide that affordable housing in Oakland.



There are two components of the affordable housing nexus analysis. The first component—the **Affordable Housing Demand Analysis**—generates estimates of demand for housing affordable to low- and moderate-income worker households in Oakland as a result of new market-rate residential development in Oakland. The second component—the **Housing Affordability Gap Analysis**—generates estimates of the difference between what those low- and moderate-income worker households can pay for housing and the cost to produce new housing for these households. The maximum legal Affordable Housing Impact Fee is based on the affordable housing demand factors and the affordability gaps for producing affordable housing to meet that demand.

AFFORDABLE HOUSING DEMAND ANALYSIS

The affordable housing demand analysis is conducted in a series of ten steps. The analysis results in quantified affordable housing demand factors for market-rate residential development of types being developed in Oakland.

- Step 1.** Define *prototypes for new market-rate residential development* in Oakland. Seven prototypes span a range of building types and market areas.
- Step 2.** Estimate the *household income distributions* of owner and renter households living in new market-rate residential development in Oakland. These incomes are based on market-rate sales prices and rents and assumptions about the relationship between housing costs and household income.
- Step 3.** After adjustments to gross household incomes to account for the payment of income taxes and savings, compute total *consumer expenditures of buyer and renter households* for each market-rate residential prototype.
- Step 4.** Estimate the number of *new jobs supported by the increase in spending* on services and retail goods. The economic model used in this study to forecast employment impacts generated by the consumer spending of new Oakland households (IMPLAN3) estimates employment impacts by industry for Alameda County, not just the City of Oakland.¹⁰
- Step 5.** Convert estimates of employment impacts by industry to estimates of *employment by occupation* and apply wage percentiles by occupation to generate *worker wage percentile distributions* for each market-rate residential prototype.
- Step 6.** Estimate the *share of Alameda County employment located in Oakland*.
- Step 7.** Estimate *worker household incomes* by number of workers per household and household size for each market-rate residential prototype and assign each household income to an *income category* (Extremely Low, Very Low, Low, Moderate, and Above-Moderate Income) based on City of Oakland 2020 Income Limits.
- Step 8.** For each market-rate residential prototype, allocate the employment impacts in Oakland to households (and thereby to household income category) based on the *distribution of workers by household size and number of workers per household* in the City of Oakland.
- Step 9.** *Aggregate workers by household income category* across distribution by household size and number of workers per household.
- Step 10.** Divide the number of workers by household income category by the *average number of workers per worker-household* for the City of Oakland to generate the estimate of *demand for affordable housing* associated with employment growth generated by household consumer spending for each market-rate residential prototype.

Employment Impacts Associated with New Market-rate Residential Development

Not Updated

Steps 1 through 4 of the Affordable Housing Demand Analysis (listed above) result in estimates of the number of jobs by industry in Alameda County supported by the consumer spending of households occupying new market-rate residential development in Oakland. The IMPLAN3

¹⁰ The multiplier calculations use IMPLAN3, an input-output economic model developed for the national economy that is customized for a regional and county economy as well. It is assumed that buyers of new housing units and renters of new apartment units in the City of Oakland increase demand for goods and services within Alameda County. This demand is based on the projected incomes of these new buyers and renters. IMPLAN3 translates the increased demand to job growth in the various sectors that benefit from that increase in local economic activity.

analysis conducted in 2015 produced these estimates for each of four for-sale prototypes and three rental apartment prototypes defined to be representative of new market-rate housing in Oakland. These prototypes remain broadly representative of new market-rate residential development in the city subject to the adopted Affordable Housing Impact Fee. (See *Oakland Affordable Housing Impact Fee Nexus Analysis*, March 10, 2016, pages 5-7 for more information.)

This first five-year review uses the 2015 IMPLAN3 input-output results for the number of additional jobs by industry associated with each of the Oakland market-rate residential prototypes. This approach was taken for several reasons. The household spending and employment relationships measured by this element of the input-output analysis change slowly over time, and the nexus analysis is meant to be broadly representative of impacts generated over a long planning horizon. By far the most significant change from 2015 conditions impacting the calculation of the maximum legal fee is the increase in residential development costs. A reasonable approach to this five-year update would be to focus solely on updating those cost factors and the housing affordability gap analysis.

However, this five-year review also includes a comprehensive update of the analysis of worker occupations and wages and household incomes—the key factors affecting ability to pay for housing—that are associated with the employment by industry output from the 2015 IMPLAN3 analysis. Consequently, the update presented here for the Affordable Housing Impact Fee is consistent with the approach and methods used in the concurrent review and update of the Jobs/Housing Impact Fee. Importantly, the analysis is now more sensitive to worker households in the lower-wage household income categories.

Updated Estimates of Demand for Affordable Housing Associated with New Market Rate Residential Development

This section sets forth the five-year review updated assumptions and analysis for Steps 5 through 10 of the Affordable Housing Demand Analysis. Detailed tables referenced in the discussion below are presented in **Appendix A: Affordable Housing Demand Analysis**.

As noted above, the **starting point** is IMPLAN3 output¹¹ of industry employment generated in Alameda County for each prototype of new market rate residential development in Oakland—the results of Steps 1 through 4 above. (See **Appendix Table A-1**.)

Occupations by industry and wages by occupation

An intermediate step to generating estimates of worker wages and worker household income is estimates of the occupations of the industry employment supported by new household consumer spending. The first part of **Step 5** applies a matrix of occupations by industry to the industry employment estimates for each market-rate residential prototype. The result is a distribution of employment by occupation supported by the household consumer spending associated with each market-rate residential prototype (**Appendix Table A-2**).

¹¹ See *Oakland Affordable Housing Impact Fee Nexus Analysis*, March 10, 2016, page 11 and Appendix B: IMPLAN Methodology and Induced Jobs and Wages for more information.

The Occupational Employment and Wage Statistics program (a partnership between the State of California Employment Development Department and the U.S. Bureau of Labor Statistics) provides estimates of wages by occupation. Wages are presented as mean annual wages and in annual wage percentiles (25th, 50th, and 75th percentiles) for each occupation. The second part of **Step 5** applies a matrix of wage percentiles by occupation (**Appendix Table A-3**) to the estimates of employment by occupation for each prototype. The result is an estimate of worker wage percentile allocations for each prototype (**Appendix Table A-4**).

Share of Alameda County employment located in Oakland

Only some of the countywide employment estimated by the IMPLAN3 model is located in Oakland. According to the Association of Bay Area Governments (ABAG), 29 percent of total employment in Alameda County is in the City of Oakland, and this share is projected to remain relatively constant through 2040¹². **Step 6** allocates 29 percent of the Alameda County employment supported by new household consumer spending to the City of Oakland.

Worker household incomes and income categories

Using the worker wage percentiles and a matrix referencing both household size and the number of workers per household, **Step 7** generates estimates of worker household incomes by number of workers per household and household size for each market-rate residential prototype. The analysis assumes each worker in a multiple worker household has the same annual wage (**Appendix Tables A-5 through A-11**). For each market-rate residential prototype, each household income in the cells in Appendix Tables A-5 through A-11 is assigned to a household income category (Extremely Low, Very Low, Low, Moderate, and Above-Moderate Income) as defined by 2020 State Income Limits by household size (**Appendix Table A-12**).

Workers by household size and number of workers per household

An estimate of the distribution of workers by household size and number of workers per household is derived from U.S. Census estimates of the number of Oakland households by household size and number of workers per household (**Appendix Table A-13**). Note that the analysis eliminates households that have no workers. **Step 8** allocates each market-rate residential prototype's employment impacts in Oakland by household size and number of workers based on this citywide allocation. Because each cell in the resulting matrix by household size and number of workers per household is associated with a household income (based on worker wages) and an income category (Step 7), the result of Step 8 is a matrix for each market-rate residential prototype of the number of workers in household income categories as defined by 2020 State Income Limits.

Workers by household income categories

Step 9 starts with a matrix of workers by household size and number of workers per household for each market-rate residential prototype. Each cell in that matrix has been assigned to an income category based on 2020 Income Limits (Step 7). **Step 9** aggregates the number of workers in each income category by adding all the cells distributed by household size and number of workers per household assigned to each income category for each market-rate

¹² Association of Bay Area Governments and Metropolitan Transportation Commission, *Projections 2040*, November 2018. Jobs in Oakland account for 29 percent of total employment in Alameda County from 2015 to 2040.

residential prototype. The result is an overall estimate of the number of workers by household income category (Extremely Low, Very Low, Low, Moderate, and Above-Moderate Income).

Workers per worker-household

The final step converts workers to worker households. **Step 10** divides the number of workers by household income category by the average number of workers per worker-household for the City of Oakland (1.67) to generate the estimate of demand for affordable housing associated with employment impacts of new household consumer spending for each market-rate residential prototype. The average number of workers per worker-household is greater than the overall average number of workers per household because the denominator in the calculation excludes households without workers. See **Appendix Table A-14** for the estimate of workers per worker-household.

Table 1 summarizes the Affordable Housing Demand results for each market-rate residential prototype. The numbers of workers and worker households supported by the household spending for each market-rate residential prototype are a function of the number of units in the prototype and the household income and spending characteristics associated with the residents of each prototype. The last row of the table shows how affordable housing demand per market-rate unit varies among the residential development prototypes, ranging from 0.0773 for the for-sale single family prototype (urban) up to 0.1846 for the for-sale single family prototype (hills). Higher density new development represented by townhomes and apartments generates demand in the range of 0.08 up to 0.11 per market-rate unit.

Table 1
Affordable Housing Demand Associated with New Market-rate Residential Development in Oakland:
Number of Additional Workers and Additional Worker Households by Income Category

	For-Sale Single Family Detached		For-Sale Townhomes		Rental Apartments		
	H-1A Urban	H-1B Hills	H-2A Urban	H-2B Hills	H-3 Lower and Mid-Rise	H-4 Mid-Rise	H-5 High-Rise
Units in Market-rate Residential Prototype	20	100	30	30	120	180	220

Number of Additional Workers Living in Oakland by Income Category

Extremely Low Income	-	-	-	-	-	-	-
Very Low Income	0.48	5.19	0.93	1.02	2.95	5.03	7.83
Low Income	0.95	11.93	1.83	2.33	5.77	9.86	15.34
Moderate Income	1.15	13.73	2.22	2.68	6.99	11.94	18.58
Above Moderate Income /a/	2.36	28.12	4.54	5.50	14.31	24.46	38.05
Total	4.94	58.97	9.53	11.53	30.02	51.29	79.80

Number of Additional Worker Households Living in Oakland by Income Category /b/

Extremely Low Income	-	-	-	-	-	-	-
Very Low Income	0.29	3.11	0.56	0.61	1.76	3.01	4.69
Low Income	0.57	7.14	1.10	1.40	3.45	5.90	9.18
Moderate Income	0.69	8.22	1.33	1.61	4.18	7.15	11.12
Above Moderate Income /a/	1.41	16.83	2.72	3.29	8.56	14.63	22.77
Total	2.96	35.29	5.70	6.90	17.96	30.69	47.75
Low- and Moderate-Income Households	1.55	18.46	2.98	3.61	9.40	16.06	24.98

Low- and Moderate-Income Households Per New Market-rate Unit /c/	0.0773	0.1846	0.0994	0.1203	0.0783	0.0892	0.1136
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Note: Detail may not add to total due to independent rounding.

/a/ 120% of area median income and above. Not counted in the affordable housing demand factor.

/b/ Derived by dividing the number of workers in each household income category by the average number of workers per worker-household for the City of Oakland (1.67). See Appendix Table A-14.

/c/ Total demand from low- and moderate-income households divided by the number of units in the market-rate residential prototype.

Source: Hausrath Economics Group based on Tables A-1 – A-14.

Table 2 translates the affordable housing demand results for each market-rate residential prototype to percentage factors indicating the magnitude of affordable housing demand relative to the magnitude of market-rate residential development. Two percentages are shown. The first—the **Maximum Fee Percentage**—divides the affordable housing demand by the number of

market rate units in the prototype. The second—the **Equivalent On-site Percentage**—is lower, representing what the affordable housing demand represents of the total units built if market rate and affordable units were combined on one site.

For example, for Market-Rate Residential Prototype H-5 (High Rise Rental Apartments):

24.98 (affordable unit demand) divided by 220 market-rate units in prototype = 11.4% Maximum Fee Percentage

24.98 (affordable unit demand) divided by 244.98 total units (220 market-rate units + 24.98 on-site affordable units) = 10.2% Maximum Equivalent On-site Percentage¹³

Table 2
Affordable Housing Demand Associated with New Market-rate Development in Oakland:
Magnitude of Affordable Housing Demand Relative to Magnitude of Market-rate Development
Maximum Fee Percentages and Equivalent On-site Percentages

	For-Sale Single Family Detached		For-Sale Townhomes		Rental Apartments		
	H-1A Urban	H-1B Hills	H-2A Urban	H-2B Hills	H-3 Lower and Mid-Rise	H-4 Mid-Rise	H-5 High-Rise
Units in Market-rate Residential Prototype	20	100	30	30	120	180	220

Demand from Extremely Low, Very Low-, Low-, and Moderate-Income Households

Number of Households	1.55	18.46	2.98	3.61	9.40	16.06	24.98
Maximum Fee Percentage /a/	7.7%	18.5%	9.9%	12.0%	7.8%	8.9%	11.4%
Maximum Equivalent On-site Percentage /b/	7.2%	15.6%	9.0%	10.7%	7.3%	8.2%	10.2%

/a/Total demand from low- and moderate-income households divided by total units in market-rate residential prototype.

/b/Total demand from low- and moderate-income households divided by the sum of units in market-rate residential prototype plus the number of on-site low- and moderate-income affordable units. For the purposes of this table, the Equivalent On-Site Percentage is based on the fractional number of affordable households associated with each prototype. The *City of Oakland Impact Fee Administrative Regulations and Manual* (February 24, 2021), states that if there is “an obligation to construct a fractional Affordable Housing Unit, that fractional unit shall either be converted into a fractional AHIF, or shall require an additional Affordable Housing Unit, to be determined at the discretion of the City Administrator.” (Section VI.A.2 On-Site Affordable Housing Option: Required Number of Units).

Source: Hausrath Economics Group based on Table 1.

¹³ The Equivalent On-site Percentage is based on the fractional number of affordable households associated with each market-rate residential prototype. The *City of Oakland Impact Fee Administrative Regulations and Manual* (February 24, 2021), states that if there is “an obligation to construct a fractional Affordable Housing Unit, that fractional unit shall either be converted into a fractional AHIF, or shall require an additional Affordable Housing Unit, to be determined at the discretion of the City Administrator.” (Section VI.A.2 On-Site Affordable Housing Option: Required Number of Units).

HOUSING AFFORDABILITY GAP ANALYSIS

The housing affordability gap is defined as the difference between the development cost supported by what extremely low-, very low-, low-, and moderate-income households can afford to pay for housing and the total cost to produce new housing units for those households. This updated analysis assumes all affordable housing is provided as rental housing, consistent with current practice. This assumption does not preclude the City from using impact fee revenue for ownership as well as rental housing. The housing affordability gap analysis requires the following three steps:

- Step 1.** Estimate affordable rents for households in targeted income groups.
- Step 2.** Estimate development costs of building new housing units targeted to low- and moderate-income households, based on current costs.
- Step 3.** Calculate the difference between the development cost supported by what low- and moderate-income households can afford to pay for housing and the total cost to develop affordable rental units.

Appendix B presents the detailed five-year review assumptions and calculations for the housing affordability gap. **Table 3** summarizes the affordability gap conclusions by household income category.

Table 3
**Weighted Average Housing Affordability Gap per Affordable Unit Built
by Income Category**

Income Category	
Extremely Low-Income (30% AMI)	\$695,430
Very Low-Income (50% AMI)	\$654,043
Low-Income (60% AMI)	\$616,868
Moderate-Income (110% AMI)	\$431,081

Note: The affordability gap represents the difference between what it costs to build affordable housing in Oakland and the development cost supported by what low- and moderate-income households can afford to pay for housing. Housing costs are based on the cost to produce mid-rise affordable multifamily rental housing in Oakland.

The affordability gap amounts in the table are the weighted average across unit sizes (studios up to three-bedroom units). The weighted averages take into account the household size distribution for worker households in Oakland.

Source: Hausrath Economics Group, Table B-4.

MAXIMUM LEGAL AFFORDABLE HOUSING IMPACT FEE

Table 4 combines the results of the affordable housing demand analysis and the housing affordability gap analysis to derive the maximum legal Affordable Housing Impact Fee. The fee per market-rate unit is calculated for each representative market-rate residential prototype. The equivalent fee per square foot of residential floor area is calculated based on the average unit size in each market-rate residential prototype. **Table 4** also compares the maximum fee per unit to the City's current fee schedule, showing that the City is charging less than the maximum.

The calculations are as follows:

- 1) Dividing the affordable housing demand factor by income category for each market-rate residential prototype (from **Table 1**) by the number of units in the prototype results in a demand factor per market-rate unit for each income category.
- 2) Multiplying the weighted average affordability gap by income category (from **Table 3**) by these affordable housing demand factors per market-rate unit results in the affordable housing gap cost by income category per market-rate unit.
- 3) Adding the affordable housing gap costs per market-rate unit across income categories results in the total affordable housing gap cost per market-rate unit for each market-rate residential development prototype.
- 4) The total affordable housing gap cost per market-rate unit (the amount needed to bridge the gap between the costs of developing new affordable housing and what new lower- and moderate-income worker households can afford to pay) is equivalent to the **maximum legal affordable housing impact fee per unit** justified by the nexus analysis (see **Table 4**).
- 5) Dividing the maximum legal affordable housing fee per market-rate unit by the average net residential floor area per unit in each prototype expresses the **maximum legal affordable housing impact fee per square foot of residential floor area** for each market-rate residential development prototype.

Based on this five-year review and consideration of other data and information, the City Council can adopt an Affordable Housing Impact Fee at or below the maximum legal fee amounts identified.

Table 4
Maximum Legal Affordable Housing Impact Fee

	For-Sale Single Family Detached		For-Sale Townhomes		Rental Apartments		
	H-1A Urban	H-1B Hills	H-2A Urban	H-2B Hills	H-3 Lower and Mid-Rise	H-4 Mid-Rise	H-5 High-Rise
Units in Market-rate Residential Prototype	20	100	30	30	120	180	220
Average Unit Size /a/	1,600	3,000	1,340	2,085	760	825	845

Affordable Housing Demand and Affordable Housing Gap Cost by Income Category per Market-rate Unit

Extremely Low Income

Demand Factor per Unit	-	-	-	-	-	-	-
Affordable Housing Gap Cost /b/							

Very Low Income

Demand Factor per Unit	0.0145	0.0311	0.0186	0.0202	0.0147	0.0167	0.0213
Affordable Housing Gap Cost /b/	\$9,484	\$20,321	\$12,198	\$13,242	\$9,605	\$10,943	\$13,930

Low Income

Demand Factor per Unit	0.0284	0.0714	0.0365	0.0465	0.0288	0.0328	0.0417
Affordable Housing Gap Cost /b/	\$17,523	\$44,037	\$22,538	\$28,696	\$17,749	\$20,220	\$25,739

Moderate Income

Demand Factor per Unit	0.0344	0.0822	0.0443	0.0535	0.0348	0.0397	0.0505
Affordable Housing Gap Cost /b/	\$14,832	\$35,418	\$19,077	\$23,080	\$15,023	\$17,115	\$21,786

Total Affordable Housing Gap Cost per Market-Rate Unit /c/

	\$41,839	\$99,776	\$53,813	\$65,018	\$42,377	\$48,278	\$61,455
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Maximum Legal Affordable Housing Impact Fee per Market-Rate Unit

	\$41,839	\$99,776	\$53,813	\$65,018	\$42,377	\$48,278	\$61,455
Current Impact Fee /d/	\$23,000		\$20,000		\$22,000		

Maximum Legal Affordable Housing Impact Fee per Square Foot of Residential Floor Area per Market-rate Unit/e/

	\$26.15	\$33.26	\$40.16	\$31.18	\$55.76	\$58.55	\$72.73
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/a/ Net square feet of residential floor area. For Prototypes H-2A, H-2B, H-3, H-4, and H-5 represents the weighted average across a mix of unit types and sizes. See Table 2 and Table 3 in *City of Oakland Affordable Housing Impact Fee Nexus Analysis*, Vernazza Wolfe Associates, Inc. and Hausrath Economics Group, March 10, 2016.

/b/ Per-unit demand factor multiplied by per-unit affordability gap cost by income category (Table 3).

/c/ The sum of the per-unit affordability gap costs by income category for each prototype.

/d/ Fee schedule in effect on June 30, 2021. The residential fees vary by zone; the highest fee in Zone 1 is shown here.

/e/ Maximum legal impact fee per market rate unit divided by the average net residential floor area per unit in each prototype.

Source: Hausrath Economics Group based on Table 1 and Table 3.

POTENTIAL FOR OVERLAP BETWEEN AFFORDABLE HOUSING IMPACT FEE AND JOBS/HOUSING IMPACT FEE

Both the Affordable Housing Impact Fee and the Jobs/Housing Impact Fee are designed to mitigate the impacts of new development on the need for affordable housing for low- and moderate-income worker households in Oakland. The Affordable Housing Impact Fee presented in this report mitigates the impacts of new *residential* development—impacts attributable to the spending of new households and the new jobs in Oakland supported by that spending. The low- and moderate-income workers in Oakland supported by this household consumer spending are primarily retail and service industry workers, located in retail and other commercial or office space. The Jobs/Housing Impact Fee mitigates the impacts of all types of new *nonresidential* development—impacts attributable to the increase in employment for workers at low- and moderate-income wage levels that are not sufficient to afford market-rate housing in Oakland.

The two fees could overlap, i.e., mitigate the same impact, if each fee were assessed to address the affordable housing needs of the same workers. This is not a likely outcome because most of the affordable housing needs addressed by the Jobs/Housing Impact Fee are not part of the Affordable Housing Impact Fee Nexus. The Affordable Housing Impact Fee Nexus targets local-serving sectors and workers while most of the office, retail/commercial, hotel, institutional, industrial, and warehouse/distribution land uses that are included in the Jobs/Housing Impact Fee Nexus analysis rely on a broader base of economic support than local household consumer spending.

Some of the land uses included in the Jobs/Housing Impact Fee Nexus Analysis could theoretically be supported by the consumer spending demand attributable to new market-rate residential development in Oakland. Examples include retail development, ground floor commercial space for personal services, and office space for medical services or local financial services. Full overlap would occur only if *all* the new retail, commercial, or office space were supported by demand from residents in new residential units.

The potential for overlap can be limited by:

- ◆ Establishing a threshold such as 25,000 square feet below which the Jobs/Housing Impact Fee would not apply. This is currently the case for the Jobs/Housing Impact Fee applicable to office and warehouse/distribution uses.
- ◆ Setting each fee amount such that the combined fees do not exceed the maximums established in the nexus analyses.

**APPENDIX A:
AFFORDABLE HOUSING DEMAND ANALYSIS**

This appendix presents the detailed tables supporting the analytical steps for the affordable housing demand analysis presented in the text.

Table A-1
Summary of Employment Impacts by Industry for Oakland Market-rate Residential Prototypes

Industry (NAICS) /a/	For-Sale Single Family Detached		For-Sale Townhomes		Rental Apartments		
	H-1A Urban	H-1B Hills	H-2A Urban	H-2B Hills	H-3 Lower and Mid-Rise	H-4 Mid-Rise	H-5 High-Rise
Agriculture, Forestry, & Fishing	0.01	0.07	0.01	0.01	0.04	0.06	0.10
Mining and Quarrying	0.00	0.04	0.01	0.01	0.02	0.03	0.05
Utilities	0.01	0.15	0.03	0.03	0.08	0.13	0.21
Construction	0.31	4.16	0.60	0.81	1.90	3.36	5.19
Manufacturing	0.10	1.08	0.18	0.21	0.58	0.97	1.50
Wholesale Trade	0.52	6.43	1.05	1.26	3.24	5.60	8.78
Retail Trade	2.17	26.42	4.38	5.16	13.44	23.21	36.42
Transportation and Warehousing	0.38	4.92	0.76	0.96	2.37	4.16	6.48
Information	0.27	2.91	0.49	0.57	1.59	2.63	4.07
Finance and Insurance	0.91	10.90	1.79	2.13	5.56	9.56	14.95
Real Estate and Rental & Leasing	0.94	9.28	1.57	1.82	5.41	8.51	12.99
Professional, Scientific, & Technical Services	0.67	8.87	1.31	1.73	4.14	7.30	11.31
Management of Companies	0.11	1.24	0.21	0.24	0.66	1.11	1.73
Administration and Support/Waste Management	0.83	9.66	1.57	1.89	4.99	8.45	13.11
Educational Services	0.53	9.02	1.17	1.76	3.53	6.77	10.54
Health Care and Social Assistance	3.46	36.01	6.46	7.04	20.52	33.66	52.44
Arts, Entertainment, and Recreation	0.60	7.36	1.17	1.44	3.67	6.32	9.83
Accommodation and Food Services	2.13	22.50	4.01	4.40	12.62	20.91	32.61
Other Services	1.56	18.08	3.03	3.53	9.49	16.07	25.07
Public Administration	1.52	24.25	3.05	4.74	9.64	18.07	27.80
Total	17.03	203.34	32.86	39.75	103.50	176.87	275.18

Note: Total employment in Alameda County associated with each market-rate residential prototype.

/a/ North American Industry Classification System.

Source: ADE, Inc., 2015 results from IMPLAN3 input-output model.

Table A-2
Summary of Employment Impacts by Occupation for Oakland Market-rate Residential Prototypes

		For-Sale Single Family Detached		For-Sale Townhomes		Rental Apartments		
SOC Code /a/	Occupational Title	H-1A Urban	H-1B Hills	H-2A Urban	H-2B Hills	H-3 Lower and Mid-Rise	H-4 Mid-Rise	H-5 High-Rise
11-0000	Management Occupations	1.0406	12.3560	1.9816	2.4155	6.2991	10.7168	16.6339
13-0000	Business and Financial Operations Occupations	1.0958	13.7739	2.1291	2.6927	6.7118	11.6420	18.0798
15-0000	Computer and Mathematical Occupations	0.4093	5.1853	0.7958	1.0137	2.5090	4.3629	6.7731
17-0000	Architecture and Engineering Occupations	0.1689	2.3405	0.3316	0.4575	1.0477	1.8736	2.8975
19-0000	Life, Physical, and Social Science Occupations	0.1495	2.0484	0.2940	0.4004	0.9265	1.6521	2.5577
21-0000	Community and Social Services Occupations	0.4260	5.1780	0.8194	1.0123	2.5984	4.4474	6.9072
23-0000	Legal Occupations	0.1114	1.5396	0.2184	0.3010	0.6908	1.2335	1.9074
25-0000	Education, Training, and Library Occupations	0.5157	7.7918	1.0800	1.5232	3.3054	6.1047	9.5063
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	0.2501	3.0451	0.4831	0.5953	1,5247	2.6179	4.0690
29-0000	Healthcare Practitioners and Technical Occupations	1.1235	12.2387	2.1212	2.3926	6.7194	11.1677	17.3946
31-0000	Healthcare Support Occupations	1.2820	13.5129	2.4018	2.6417	7.6247	12.5486	19.5519
33-0000	Protective Service Occupations	0.4670	6.6301	0.9189	1.2961	2.9060	5.2368	8.0889
35-0000	Food Preparation and Serving-Related Occupations	2.0159	21.7204	3.8138	4.2462	11.9996	19.9811	31.1560
37-0000	Building and Grounds Cleaning and Maintenance Occupations	0.5033	5.8863	0.9545	1.1507	3.0340	5.1440	7.9849
39-0000	Personal Care and Service Occupations	0.6244	7.5073	1.2092	1.4676	3.8033	6.5132	10.1368
41-0000	Sales and Related Occupations	1.9781	23.4268	3.8825	4.5798	12.1117	20.6541	32.2653
43-0000	Office and Administrative Support Occupations	2.1529	26.0844	4.1545	5.0993	13.1111	22.4832	34.9490
45-0000	Farming, Fishing, and Forestry Occupations	0.0239	0.3066	0.0466	0.0599	0.1467	0.2564	0.3981
47-0000	Construction and Extraction Occupations	0.3014	4.0624	0.5830	0.7942	1.8532	3.2836	5.0719
49-0000	Installation, Maintenance, and Repair Occupations	0.7086	8.3136	1.3440	1.6252	4.2820	7.2512	11.2539
51-0000	Production Occupations	0.3676	4.3875	0.7133	0.8577	2.2389	3.8279	5.9627
53-0000	Transportation and Material Moving Occupations	1.3157	16.0075	2.5813	3.1293	8.0659	13.8719	21.6313
Total all occupations		17.03	203.34	32.86	39.75	103.50	176.87	275.18

Note: Total employment in Alameda County associated with each market-rate residential prototype.

/a/ U.S. Bureau of Labor Statistics, Standard Occupational Classification.

Sources: Hausrath Economics group based on ADE, Inc., 2015 results from IMPLAN3 input-output model and Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment and Wage Statistics Survey, May 2020 OEWS Research Estimates, California.

Table A-3
Mean Annual Wage and Annual Wage Percentiles by Occupation

SOC Code /a/	Occupational Title	2020 Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
11-0000	Management Occupations	\$149,990	\$89,066	\$137,613	\$191,173
13-0000	Business and Financial Operations Occupations	\$92,190	\$62,442	\$83,782	\$112,674
15-0000	Computer and Mathematical Occupations	\$117,687	\$83,470	\$115,378	\$149,302
17-0000	Architecture and Engineering Occupations	\$106,030	\$72,758	\$101,275	\$131,685
19-0000	Life, Physical, and Social Science Occupations	\$98,582	\$67,350	\$94,557	\$125,112
21-0000	Community and Social Service Occupations	\$64,438	\$44,470	\$57,117	\$80,517
23-0000	Legal Occupations	\$136,591	\$69,410	\$108,347	\$184,870
25-0000	Educational Instruction and Library Occupations	\$68,673	\$39,728	\$57,678	\$88,962
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	\$67,681	\$35,110	\$56,909	\$85,758
29-0000	Healthcare Practitioners and Technical Occupations	\$114,681	\$69,202	\$106,912	\$151,445
31-0000	Healthcare Support Occupations	\$37,752	\$28,454	\$32,011	\$42,994
33-0000	Protective Service Occupations	\$68,632	\$35,214	\$51,771	\$99,362
35-0000	Food Preparation and Serving Related Occupations	\$35,310	\$27,893	\$30,971	\$37,586
37-0000	Building and Grounds Cleaning and Maintenance Occupations	\$45,796	\$33,571	\$41,933	\$55,910
39-0000	Personal Care and Service Occupations	\$39,445	\$28,413	\$32,843	\$42,931
41-0000	Sales and Related Occupations	\$52,883	\$30,035	\$37,731	\$58,864
43-0000	Office and Administrative Support Occupations	\$52,467	\$37,690	\$49,462	\$63,461
45-0000	Farming, Fishing, and Forestry Occupations	\$39,327	\$29,702	\$35,131	\$46,613
47-0000	Construction and Extraction Occupations	\$77,160	\$53,227	\$71,053	\$98,134
49-0000	Installation, Maintenance, and Repair Occupations	\$63,957	\$42,869	\$59,488	\$80,038
51-0000	Production Occupations	\$49,781	\$34,050	\$43,805	\$58,302
53-0000	Transportation and Material Moving Occupations	\$46,078	\$31,699	\$39,707	\$53,352
00-0000	Total all occupations	\$70,488	\$34,653	\$53,144	\$88,358

/a/ U.S. Bureau of Labor Statistics, Standard Occupational Classification.

Source: State of California, Employment Development Department, Occupational Employment and Wage Statistics, 2020, for the Oakland-Hayward-Berkeley Metropolitan Division (Alameda and Contra Costa counties).

Table A-4
Worker Wages by Market-rate Residential Prototype

Market-rate Residential Prototype	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
H-1A For Sale Single Family Detached (Urban)	\$66,176	\$43,273	\$58,544	\$81,094
H-1B For Sale Single Family Detached (Hills)	\$66,836	\$43,582	\$59,087	\$82,089
H-2A For Sale Townhomes (Urban)	\$66,176	\$43,243	\$58,506	\$81,099
H-2B For Sale Townhomes (Hills)	\$66,836	\$43,582	\$59,087	\$82,089
H-3 Lower and Mid-Rise Rental Apartments	\$66,254	\$43,299	\$58,595	\$81,210
H-4 Mid-Rise Rental Apartments	\$66,421	\$43,373	\$58,727	\$81,465
H-5 High-Rise Rental Apartments	\$66,379	\$43,348	\$58,684	\$81,404

Note: The prototypes for new market-rate residential development were defined by Hausrath Economics Group and Vernazza Wolfe Associates Inc. in 2015 for use in the original affordable housing impact fee nexus analysis and the economic feasibility analysis of the proposed impact fee program. These prototypes remain broadly representative of new residential development in the city subject to the adopted Affordable Housing Impact Fee. (See *Oakland Affordable Housing Impact Fee Nexus Analysis*, March 10, 2016, pages 5-7 for more information.)

Source: Hausrath Economics Group based on Tables A.2 and Table A.3.

Table A-5
Household Income by Number of Workers per Household and Household Size:
Market-rate Residential Prototype H-1A For-Sale Single Family Detached (Urban)

	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
Worker Wages /a/	\$66,176	\$43,273	\$58,544	\$81,094

Household Income by Number of Workers per Household and Household Size:

Workers per Household	1-person	2-person	3-person	4 or more-person
1 worker				
25th percentile	\$43,273	\$43,273	\$43,273	\$43,273
50th percentile	\$58,544	\$58,544	\$58,544	\$58,544
75th percentile	\$81,094	\$81,094	\$81,094	\$81,094
> 75th percentile /b/	\$81,095	\$81,095	\$81,095	\$81,095
2 workers /c/				
25th percentile		\$86,546	\$86,546	\$86,546
50th percentile		\$117,088	\$117,088	\$117,088
75th percentile		\$162,188	\$162,188	\$162,188
> 75th percentile /b/		\$162,189	\$162,189	\$162,189
3 or more workers /d/				
25th percentile			\$129,819	\$129,819
50th percentile			\$175,632	\$175,632
75th percentile			\$243,282	\$243,282
> 75th percentile /b/			\$243,283	\$243,283

Note: Household income by number of workers per household calculated based on corresponding percentile annual wage for this market-rate residential prototype and the assumption that all workers in multiple worker households have the same annual wage.

Households in the 25th percentile category have household incomes up to the amount indicated in the corresponding cell by household size. Households in the 50th percentile category have household incomes greater than the 25th percentile amount up to the 50th percentile amount. Households in the 75th percentile category have household incomes greater than the 50th percentile amount up to the 75th percentile amount. Households in the greater than 75th percentile category have household incomes at or above the amount indicated in the corresponding cell by household size.

/a/ From Table A-4.

/b/ The greater than 75th percentile is represented by an annual wage / household income just above the 75th percentile annual wage / household income.

/c/ Worker wages multiplied by two workers per household.

/d/ Worker wages multiplied by three workers per household.

Source: Hausrath Economics Group, based on Table A-4, Table A-12, and Table A-13.

Table A-6
Household Income by Number of Workers per Household and Household Size:
Market-rate Residential Prototype H-1B For-Sale Single Family Detached (Hills)

	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
Worker Wages /a/	\$66,836	\$43,582	\$59,087	\$82,089

Household Income by Number of Workers per Household and Household Size:				
Workers per Household	1-person	2-person	3-person	4 or more-person
1 worker				
25th percentile	\$43,582	\$43,582	\$43,582	\$43,582
50th percentile	\$59,087	\$59,087	\$59,087	\$59,087
75th percentile	\$82,089	\$82,089	\$82,089	\$82,089
> 75th percentile /b/	\$82,090	\$82,090	\$82,090	\$82,090
2 workers /c/				
25th percentile		\$87,164	\$87,164	\$87,164
50th percentile		\$118,174	\$118,174	\$118,174
75th percentile		\$164,178	\$164,178	\$164,178
> 75th percentile /b/		\$164,179	\$164,179	\$164,179
3 or more workers /d/				
25th percentile			\$130,746	\$130,746
50th percentile			\$177,261	\$177,261
75th percentile			\$246,267	\$246,267
> 75th percentile /b/			\$246,268	\$246,268

Note: Household income by number of workers per household calculated based on corresponding percentile annual wage for this market-rate residential prototype and the assumption that all workers in multiple worker households have the same annual wage.

Households in the 25th percentile category have household incomes up to the amount indicated in the corresponding cell by household size. Households in the 50th percentile category have household incomes greater than the 25th percentile amount up to the 50th percentile amount. Households in the 75th percentile category have household incomes greater than the 50th percentile amount up to the 75th percentile amount. Households in the greater than 75th percentile category have household incomes at or above the amount indicated in the corresponding cell by household size.

/a/ From Table A-4.

/b/ The greater than 75th percentile is represented by an annual wage / household income just above the 75th percentile annual wage / household income.

/c/ Worker wages multiplied by two workers per household.

/d/ Worker wages multiplied by three workers per household.

Source: Hausrath Economics Group based on Table A-4, Table A-12, and Table A-13.

Table A-7
Household Income by Number of Workers Per Household and Household Size:
Market-rate Residential Prototype H-2A For-Sale Townhomes (Urban)

	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
Worker Wages /a/	\$66,176	\$43,243	\$58,506	\$81,099

Household Income by Number of Workers per Household and Household Size:

Workers per Household	1-person	2-person	3-person	4 or more-person
1 worker				
25th percentile	\$43,243	\$43,243	\$43,243	\$43,243
50th percentile	\$58,506	\$58,506	\$58,506	\$58,506
75th percentile	\$81,099	\$81,099	\$81,099	\$81,099
> 75th percentile /b/	\$81,100	\$81,100	\$81,100	\$81,100
2 workers /c/				
25th percentile		\$86,486	\$86,486	\$86,486
50th percentile		\$117,012	\$117,012	\$117,012
75th percentile		\$162,198	\$162,198	\$162,198
> 75th percentile /b/		\$162,199	\$162,199	\$162,199
3 or more workers /d/				
25th percentile			\$129,729	\$129,729
50th percentile			\$175,518	\$175,518
75th percentile			\$243,297	\$243,297
> 75th percentile /b/			\$243,298	\$243,298

Note: Household income by number of workers per household calculated based on corresponding percentile annual wage for this market-rate residential prototype and the assumption that all workers in multiple worker households have the same annual wage.

Households in the 25th percentile category have household incomes up to the amount indicated in the corresponding cell by household size. Households in the 50th percentile category have household incomes greater than the 25th percentile amount up to the 50th percentile amount. Households in the 75th percentile category have household incomes greater than the 50th percentile amount up to the 75th percentile amount. Households in the greater than 75th percentile category have household incomes at or above the amount indicated in the corresponding cell by household size.

/a/ From Table A-4.

/b/ The greater than 75th percentile is represented by an annual wage / household income just above the 75th percentile annual wage / household income.

/c/ Worker wages multiplied by two workers per household.

/d/ Worker wages multiplied by three workers per household.

Source: Hausrath Economics Group based on Table A-4, Table A-12, and Table A-13.

Table A-8
Household Income by Number of Workers per Household and Household Size:
Market-rate Residential Prototype H-2B For-Sale Townhomes (Hills)

	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
Worker Wages /a/	\$66,836	\$43,582	\$59,087	\$82,089

Household Income by Number of Workers per Household and Household Size:

Workers per Household	1-person	2-person	3-person	4 or more-person
1 worker				
25th percentile	\$43,582	\$43,582	\$43,582	\$43,582
50th percentile	\$59,087	\$59,087	\$59,087	\$59,087
75th percentile	\$82,089	\$82,089	\$82,089	\$82,089
> 75th percentile /b/	\$82,090	\$82,090	\$82,090	\$82,090
2 workers /c/				
25th percentile		\$87,164	\$87,164	\$87,164
50th percentile		\$118,174	\$118,174	\$118,174
75th percentile		\$164,178	\$164,178	\$164,178
> 75th percentile /b/		\$164,179	\$164,179	\$164,179
3 or more workers /d/				
25th percentile			\$130,746	\$130,746
50th percentile			\$177,261	\$177,261
75th percentile			\$246,267	\$246,267
> 75th percentile /b/			\$246,268	\$246,268

Note: Household income by number of workers per household calculated based on corresponding percentile annual wage for this market-rate residential prototype and the assumption that all workers in multiple worker households have the same annual wage.

Households in the 25th percentile category have household incomes up to the amount indicated in the corresponding cell by household size. Households in the 50th percentile category have household incomes greater than the 25th percentile amount up to the 50th percentile amount. Households in the 75th percentile category have household incomes greater than the 50th percentile amount up to the 75th percentile amount. Households in the greater than 75th percentile category have household incomes at or above the amount indicated in the corresponding cell by household size.

/a/ From Table A-4.

/b/ The greater than 75th percentile is represented by an annual wage / household income just above the 75th percentile annual wage / household income.

/c/ Worker wages multiplied by two workers per household.

/d/ Worker wages multiplied by three workers per household.

Source: Hausrath Economics Group based on Table A-4, Table A-12, and Table A-13.

Table A-9
Household Income by Number of Workers per Household and Household Size:
Market-rate Residential Prototype H-3 Lower and Mid-Rise Rental Apartments

	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
Worker Wages /a/	\$66,254	\$43,299	\$58,595	\$81,210

Household Income by Number of Workers per Household and Household Size:

Workers per Household	1-person	2-person	3-person	4 or more-person
1 worker				
25th percentile	\$43,299	\$43,299	\$43,299	\$43,299
50th percentile	\$58,595	\$58,595	\$58,595	\$58,595
75th percentile	\$81,210	\$81,210	\$81,210	\$81,210
> 75th percentile	\$81,211	\$81,211	\$81,211	\$81,211
2 workers /c/				
25th percentile		\$86,598	\$86,598	\$86,598
50th percentile		\$117,190	\$117,190	\$117,190
75th percentile		\$162,420	\$162,420	\$162,420
> 75th percentile		\$162,421	\$162,421	\$162,421
3 or more workers /d/				
25th percentile			\$129,897	\$129,897
50th percentile			\$175,785	\$175,785
75th percentile			\$243,630	\$243,630
> 75th percentile /b/			\$243,631	\$243,631

Note: Household income by number of workers per household calculated based on corresponding percentile annual wage for this market-rate residential prototype and the assumption that all workers in multiple worker households have the same annual wage.

Households in the 25th percentile category have household incomes up to the amount indicated in the corresponding cell by household size. Households in the 50th percentile category have household incomes greater than the 25th percentile amount up to the 50th percentile amount. Households in the 75th percentile category have household incomes greater than the 50th percentile amount up to the 75th percentile amount. Households in the greater than 75th percentile category have household incomes at or above the amount indicated in the corresponding cell by household size.

/a/ From Table A-4.

/b/ The greater than 75th percentile is represented by an annual wage / household income just above the 75th percentile annual wage / household income.

/c/ Worker wages multiplied by two workers per household.

/d/ Worker wages multiplied by three workers per household.

Source: Hausrath Economics Group based on Table A-4, Table A-12, and Table A-13.

Table A-10
Household Income by Number of Workers per Household and Household Size:
Market-rate Residential Prototype H-4 Mid-Rise Rental Apartments

	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
Worker Wages /a/	\$66,421	\$43,373	\$58,727	\$81,465

Household Income by Number of Workers per Household and Household Size:

Workers per Household	1-person	2-person	3-person	4 or more-person
1 worker				
25th percentile	\$43,373	\$43,373	\$43,373	\$43,373
50th percentile	\$58,727	\$58,727	\$58,727	\$58,727
75th percentile	\$81,465	\$81,465	\$81,465	\$81,465
> 75th percentile /b/	\$81,466	\$81,466	\$81,466	\$81,466
2 workers /c/				
25th percentile		\$86,746	\$86,746	\$86,746
50th percentile		\$117,454	\$117,454	\$117,454
75th percentile		\$162,930	\$162,930	\$162,930
> 75th percentile /b/		\$162,931	\$162,931	\$162,931
3 or more workers /d/				
25th percentile			\$130,119	\$130,119
50th percentile			\$176,181	\$176,181
75th percentile			\$244,395	\$244,395
> 75th percentile /b/			\$244,396	\$244,396

Note: Household income by number of workers per household calculated based on corresponding percentile annual wage for this market-rate residential prototype and the assumption that all workers in multiple worker households have the same annual wage.

Households in the 25th percentile category have household incomes up to the amount indicated in the corresponding cell by household size. Households in the 50th percentile category have household incomes greater than the 25th percentile amount up to the 50th percentile amount. Households in the 75th percentile category have household incomes greater than the 50th percentile amount up to the 75th percentile amount. Households in the greater than 75th percentile category have household incomes at or above the amount indicated in the corresponding cell by household size.

/a/ From Table A-4.

/b/ The greater than 75th percentile is represented by an annual wage / household income just above the 75th percentile annual wage / household income.

/c/ Worker wages multiplied by two workers per household.

/d/ Worker wages multiplied by three workers per household.

Source: Hausrath Economics Group based on Table A-4, Table A-12, and Table A-13.

Table A-11
Household Income by Number of Workers per Household and Household Size:
Market-rate Residential Prototype H-5 High-Rise Rental Apartments

	Mean Annual Wage	25th Percentile Annual Wage	50th Percentile (Median) Annual Wage	75th Percentile Annual Wage
Worker Wages /a/	\$66,379	\$43,348	\$58,684	\$81,404

Household Income by Number of Workers per Household and Household Size:

Workers per Household	1-person	2-person	3-person	4 or more-person
1 worker				
25th percentile	\$43,348	\$43,348	\$43,348	\$43,348
50th percentile	\$58,684	\$58,684	\$58,684	\$58,684
75th percentile	\$81,404	\$81,404	\$81,404	\$81,404
> 75th percentile /b/	\$81,405	\$81,405	\$81,405	\$81,405
2 workers /c/				
25th percentile		\$86,696	\$86,696	\$86,696
50th percentile		\$117,368	\$117,368	\$117,368
75th percentile		\$162,808	\$162,808	\$162,808
> 75th percentile /b/		\$162,809	\$162,809	\$162,809
3 or more workers /d/				
25th percentile			\$130,044	\$130,044
50th percentile			\$176,052	\$176,052
75th percentile			\$244,212	\$244,212
> 75th percentile /b/			\$244,213	\$244,213

Note: Household income by number of workers per household calculated based on corresponding percentile annual wage for this market-rate residential prototype and the assumption that all workers in multiple worker households have the same annual wage.

Households in the 25th percentile category have household incomes up to the amount indicated in the corresponding cell by household size. Households in the 50th percentile category have household incomes greater than the 25th percentile amount up to the 50th percentile amount. Households in the 75th percentile category have household incomes greater than the 50th percentile amount up to the 75th percentile amount. Households in the greater than 75th percentile category have household incomes at or above the amount indicated in the corresponding cell by household size.

/a/ From Table A-4.

/b/ The greater than 75th percentile is represented by an annual wage / household income just above the 75th percentile annual wage / household income.

/c/ Worker wages multiplied by two workers per household.

/d/ Worker wages multiplied by three workers per household.

Source: Hausrath Economics Group based on Table A-4, Table A-12, and Table A-13.

Table A-12
2020 Household Income Limits

Income Level	Household Size			
	One Person	Two Person	Three Person	Four Person
Extremely Low Income	\$27,450	\$31,350	\$35,250	\$39,150
Very Low Income	\$45,700	\$52,200	\$58,750	\$65,250
Low Income	\$73,100	\$83,550	\$94,000	\$104,400
Median Income	\$83,450	\$95,350	\$107,300	\$119,200
Moderate Income	\$100,150	\$114,450	\$128,750	\$143,050

Note: The City of Oakland income limits are those published for Alameda County.

Source: State of California Department of Housing and Community Development, State Income Limits for 2020, April 2020.

Table A-13
Workers per Household by Household Size, City of Oakland:
Households and Workers in Households

Number of Households by Number of Workers per Household and Household Size:

Workers per Household	Household Size				Total Households	Percent of Total
	1-person	2-person	3-person	4 or more-person		
1 worker	30,304	15,844	8,366	9,302	63,816	51%
2 workers		24,468	10,556	12,676	47,700	38%
3 or more workers			3,682	9,035	12,717	10%
Total	30,304	40,312	22,604	31,013	124,233	100%
Percent of Total	24%	32%	18%	25%	100%	

Number of Workers by Number of Workers per Household and Household Size:

Workers per Household	Household Size				Total Workers	Percent of Total
	1-person	2-person	3-person	4 or more-person		
1 worker /a/	30,304	15,844	8,366	9,302	63,816	31%
2 workers /b/		48,936	21,112	25,352	95,400	46%
3 or more workers /c/			11,046	37,348	48,394	23%
Total			40,254	72,002	207,610	100%

Distribution of Workers by Number of Workers per Household and Household Size:

Workers per Household	Household Size				Total Workers
	1-person	2-person	3-person	4 or more-person	
1 worker	15%	8%	4%	4%	31%
2 workers		24%	10%	12%	46%
3 or more workers			5%	18%	23%
	15%	31%	20%	35%	100%

Note: Detail may not add to total due to independent rounding.

/a/ Number of households (from row above) multiplied by one worker per household.

/b/ Number of households (from row above) multiplied by two workers per household.

/c/ For 3-person households, number of households (from row above), multiplied by 3. For 4 or more person households, number of households (from row above) multiplied by 3 plus the residual number of workers after controlling for the total of 207,610 workers in worker households. This total is derived by multiplying total households with workers from row above (124,233) by the average number of workers per worker household (1.67) (from Table A-14).

Sources: U.S Census, American Community Survey, 2019 Five-Year Estimates, Detailed Tables: Household Size by Number of Workers Per Household, City of Oakland and Hausrath Economics Group.

Table A-14
Workers per Worker-Household, City of Oakland

Workers with Earnings Living in Oakland /a/	219,380
Households with Earnings /b/	131,276
Workers per Worker-Household	1.67

/a/ Table B08119 Means of Transportation to Work by Workers' Earnings in the Past 12 Months. Earnings are defined as the sum of wage or salary income and net income from self-employment. "Earnings" represent the amount of income received regularly for people 16 years old and over before deductions for personal income taxes, Social Security, bond purchases, union dues, Medicare deductions, etc. An individual with earnings is one who has either wage/salary income or self-employment income, or both.

/b/ Table B19051: Earnings in the Past 12 Months for Households.

Source: U.S Census, American Community Survey, 2019 Five-Year Estimates, Detailed Tables.

APPENDIX B: HOUSING AFFORDABILITY GAP ANALYSIS

The housing affordability gap is defined as the difference between the development cost supported by what extremely low-, very low-, low-, and moderate-income households can afford to pay for housing and the total cost to produce new housing units for those households. This updated analysis assumes all affordable housing is provided as rental housing, consistent with current practice. This assumption does not preclude the City from using impact fee revenue for ownership as well as rental housing. The housing affordability gap analysis requires the following three steps, explained in detail in the subsequent text and tables.

- Step 1.** Estimate affordable rents for households in targeted income groups.
- Step 2.** Estimate development costs of building new housing units targeted to low- and moderate-income households, based on current costs.
- Step 3.** Calculate the difference between the development cost supported by what low- and moderate-income households can afford to pay for housing and the total cost to develop affordable rental units.

ESTIMATING AFFORDABLE RENTS

The first step in the housing affordability gap analysis is estimating the maximum amount that households at the targeted income levels can afford to pay for housing. This updated analysis assumes all affordable housing is provided as rental housing. This analysis uses the definition of “affordable rent” provided in California Health and Safety Code Section 50053 to determine the rent limits for rental housing development projects receiving financial assistance.

Table B-1 presents the unit types and household sizes used in the affordability gap analysis.

Table B-2 provides the assumptions used to determine affordable rent.

Table B-3 presents the rents that households at each income level and household size can afford. Households are assumed to spend 30 percent of gross monthly household income on rent and utilities. The maximum affordable monthly rent calculation deducts a monthly utility cost.

Table B-1
Unit Types and Household Sizes
Used in Affordability Gap Analysis

Unit Type	Household Size
Studio	1 person
1-bedroom	2 persons
2-bedroom	3 persons
3- bedroom	4 persons

Source: Hausrath Economics Group.

Table B-2
Assumptions Used to Determine Affordable Rent Limits by Income
Category for the Affordability Gap Analysis

Income Category	Percent of Area Median Income /a/
Extremely Low-Income	30%
Very Low-Income	50%
Low-Income/b/	60%
Moderate-Income/c/	110%

Note: While the affordable rent limits used in the affordability gap calculations are capped at the percentages indicated in this table, the affordable housing demand analysis includes all households in each income category up to the maximum household income indicated in the State Income Limits.

/a/ Area median income published annually for each county by the State of California Department of Housing and Community Development (State Income Limits). Income limits establish household eligibility for programs and are used to calculate affordable housing costs (affordable prices and rents) for housing financial assistance programs.

Source: State of California Health and Safety Code Section 50053.

Table B-3
Affordable Rent Calculations by Income Level and Unit Type/Size

	Studio	1 BR	2 BR	3 BR
	1	2	3	4
Household Size (Persons per HH)				
Extremely Low Income				
Maximum Annual Household Income at 30% AMI	\$25,035	\$28,605	\$32,190	\$35,760
Maximum Monthly Household Income	\$2,086	\$2,384	\$2,683	\$2,980
Maximum Monthly Housing Cost /a/	\$626	\$715	\$805	\$894
Monthly Utility Deduction /c/	\$87	\$103	\$144	\$182
Maximum Available for Rent /b/	\$539	\$612	\$661	\$712
Very Low Income				
Maximum Annual Household Income at 50% AMI	\$41,725	\$47,675	\$53,650	\$59,600
Maximum Monthly Household Income	\$3,477	\$3,973	\$4,471	\$4,967
Maximum Monthly Housing Cost /a/	\$1,043	\$1,192	\$1,341	\$1,490
Monthly Utility Deduction /c/	\$87	\$103	\$144	\$182
Maximum Available for Rent /b/	\$956	\$1,089	\$1,197	\$1,308
Low Income				
Maximum Annual Household Income at 60% AMI	\$50,070	\$57,120	\$64,380	\$71,520
Maximum Monthly Household Income	\$4,173	\$4,768	\$5,365	\$5,960
Maximum Monthly Housing Cost /a/	\$1,252	\$1,430	\$1,610	\$1,788
Monthly Utility Deduction /c/	\$87	\$103	\$144	\$182
Maximum Available for Rent /b/	\$1,165	\$1,327	\$1,466	\$1,606
Moderate Income				
Maximum Annual Household Income at 110% AMI	\$91,795	\$104,885	\$118,030	\$131,120
Maximum Monthly Household Income	\$7,650	\$8,740	\$9,836	\$10,927
Maximum Monthly Housing Cost /a/	\$2,295	\$2,622	\$2,951	\$3,278
Monthly Utility Deduction /c/	\$87	\$103	\$144	\$182
Maximum Available for Rent /b/	\$2,208	\$2,519	\$2,807	\$3,096

/a/ 30 percent of maximum monthly household income.

/b/ Maximum monthly housing cost minus utility deduction.

/c/ Oakland Housing Authority, "Section 8 Utility & Appliance Allowances for Tenant-Paid Utilities", December 1, 2017.

Sources: Table A-11, Table B-2, Oakland Housing Authority, and Hausrath Economics Group.

AFFORDABLE HOUSING DEVELOPMENT COSTS

The second step in the housing affordability gap analysis is estimating the cost of developing new housing units targeted to low- and moderate-income households. The costs and characteristics used in this analysis are based on development budgets for new construction of mid-rise multifamily affordable rental housing projects under development in Oakland by the affordable rental housing development sector.

Hausrath Economics Group (HEG) reviewed development budgets submitted in response to the August 2019 Notice of Funding Availability (NOFA) for New Construction of Multifamily Affordable Housing. All projects submitted were rental projects. We reviewed a total of seven

development budgets for mid-rise projects ranging from 19 to 181 units. HEG included three projects using conventional construction and not targeted to senior households as the basis for our estimating factors.

All the projects responding to the 2019-2020 NOFA relied on multiple sources of subsidy to cover total development costs. The request for City funding ranged from 6% to 34% of total development cost, averaging 13% of costs. Non-city sources of funding included: Federal Community Development Block Grant, Federal Home Loan Bank of San Francisco Affordable Housing Program, and California Housing and Community Development funds from various programs (Multifamily Housing Program, Infill Infrastructure Grant, Affordable Housing and Sustainable Communities, No Place Like Home, Housing for a Health California). All projects also depended on equity investments tied to the Low-Income Housing Tax Credit.

The project development budgets provided factors for average unit size (square feet) by unit type (number of bedrooms) and unit cost factors for multifamily affordable rental housing development. Based on evaluation of these projects, the average development cost is \$900 per net residential square foot (from a range \$805 to \$1,087 per net residential square foot). A more fine-grained analysis of residential development budgets would reveal that per-square-foot costs are not the same across unit sizes. They are generally higher for smaller units and lower for larger units. It is reasonable for the purposes of this analysis, however, to use a generalized cost factor representing an average across different unit sizes.

CALCULATING THE HOUSING AFFORDABILITY GAP

The final step in the analysis is calculating the housing affordability gap. **Table B-4** shows the housing affordability gap calculations. For each unit type / household size within each income category, the gap is defined as the difference between the per-unit development cost and the supportable debt per unit.

**Table B-4
Housing Affordability Gap Calculations**

Income Level and Unit Type	Unit Size (net square feet)/a/	Maximum Monthly Rent/b/	Annual Rental Income	Net Operating Income/c/	Available for Debt Service/d/	Supportable Debt/e/	Development Costs/f/	Affordability Gap
Extremely Low-Income								
Studio	500	\$539	\$6,468	(\$3,555)	\$0	\$0	\$450,000	\$450,000
1 Bedroom	640	\$612	\$7,344	(\$2,723)	\$0	\$0	\$576,000	\$576,000
2 Bedroom	870	\$661	\$7,932	(\$2,165)	\$0	\$0	\$783,000	\$783,000
3 Bedroom	1,140	\$712	\$8,544	(\$1,583)	\$0	\$0	\$1,026,000	\$1,026,000
Weighted Average Affordability Gap /g/								\$695,430
Very Low-Income								
Studio	500	\$956	\$11,472	\$1,198	\$959	\$15,534	\$450,000	\$434,466
1 Bedroom	640	\$1,089	\$13,068	\$2,715	\$2,172	\$35,188	\$576,000	\$540,812
2 Bedroom	870	\$1,197	\$14,364	\$3,946	\$3,157	\$51,147	\$783,000	\$731,853
3 Bedroom	1,140	\$1,308	\$15,696	\$5,211	\$4,169	\$67,550	\$1,026,000	\$958,450
Weighted Average Affordability Gap /g/								\$654,043
Low-Income								
Studio	500	\$1,165	\$13,980	\$3,581	\$2,865	\$46,418	\$450,000	\$403,582
1 Bedroom	640	\$1,327	\$15,924	\$5,428	\$4,342	\$70,357	\$576,000	\$505,643
2 Bedroom	870	\$1,466	\$17,592	\$7,012	\$5,610	\$90,898	\$783,000	\$692,102
3 Bedroom	1,140	\$1,606	\$19,272	\$8,608	\$6,887	\$111,586	\$1,026,000	\$914,414
Weighted Average Affordability Gap /g/								\$616,868
Moderate-Income								
Studio	500	\$2,208	\$26,496	\$15,471	\$12,377	\$200,544	\$450,000	\$249,456
1 Bedroom	640	\$2,519	\$30,228	\$19,017	\$15,213	\$246,501	\$576,000	\$329,499
2 Bedroom	870	\$2,807	\$33,684	\$22,300	\$17,840	\$289,059	\$783,000	\$493,941
3 Bedroom	1,140	\$3,096	\$37,152	\$25,594	\$20,476	\$331,765	\$1,026,000	\$694,235
Weighted Average Affordability Gap /g/								\$431,081

/a/ Unit sizes based on analysis of projects responding to the 2019-2020 Notice of Funding Availability for New Construction Multifamily Affordable Housing issued by the City of Oakland Housing and Community Development Department.

/b/ Net affordable rents based on 2020 income limits after deducting utility costs. See Table B-3.

/c/ Amount available for debt. Assumes 5% vacancy and collection loss and \$9,700 per unit for operating expenses and reserves (based on applications responses to City of Oakland 2019-2020 Notice of Funding Availability for New Construction Multifamily Affordable Housing).

/d/ Assumes 1.25 Debt Coverage Ratio.

/e/ Assumes 5.38%, 30-year loan. Calculations based on annual payments.

/f/ Cost per unit based on \$900 per net residential square foot to develop mid-rise multifamily affordable housing in Oakland. This assumption is based on analysis of development budgets for projects responding to the 2019-2020 Notice of Funding Availability (NOFA) for New Construction Multifamily Affordable Housing issued by the City of Oakland Housing and Community Development Department. The \$900 per net residential square foot average was applied uniformly across unit square footages and the above Development Costs do not reflect actual costs by unit type / number of bedrooms from the 2019-2020 New Construction NOFA.

/g/ Calculated as the weighted average across unit sizes. The weighted average is based on the distribution of Oakland worker households by household size (Table A-13).

Sources: Hausrath Economics Group based on Table B-3 and development budgets for projects responding to the 2019-2020 Notice of Funding Availability for New Construction Multifamily Affordable Housing issued by the City of Oakland Housing and Community Development Department.

Supportable debt is calculated based on the net operating income generated by an affordable monthly rent (from Table B-3), incorporating assumptions about operating expenses, reserves, vacancy and collection loss, and market-rate mortgage terms. For each income category, the weighted average affordability gap across units ranging from studios to three-bedroom units is based on the distribution of Oakland worker households by household size.