



MEMORANDUM

Date: March 17, 2016

To: Carol Johnson
City of Berkeley Planning and Development Department

From: Sujata Srivastava, Alison Nemirow and Flavio Coppola

Subject: Financial Feasibility Analysis: Affordable Housing Impact Fee Levels for New Market-Rate Rental Units

INTRODUCTION

The City of Berkeley retained Strategic Economics to test the financial feasibility of a range of affordable housing impact fee levels for new rental housing units. The City first implemented an affordable housing impact fee for new rental development in 2011, and the fee level is currently \$28,000 per unit. A recent update to the City's Affordable Housing Nexus Study¹ (referred to as "2015 Nexus Study" throughout this memorandum) found that the maximum legally justifiable affordable housing fee that could be charged to new rental housing is \$84,400 per unit. However, the 2015 Nexus Study also found that the maximum justifiable fee of \$84,400 was not financially feasible given current market conditions, and recommended that the City implement a fee level of \$34,000 per rental unit based on the results of the financial feasibility analysis. The 2015 Nexus Study did not demonstrate the financial feasibility of other fee levels.

Strategic Economics tested the financial feasibility of additional fee scenarios on new rental development. The methodology for the financial feasibility analysis is based on a commonly used metric of profitability known as "yield on cost." The remainder of this memorandum describes the key assumptions of the analysis (including the rental housing development prototype), the methodology used to test financial feasibility, and the results of the analysis.

RENTAL HOUSING PROTOTYPE

The assumptions regarding the rental housing prototype are unchanged from the 2015 Nexus Study. As shown in Figure 1, the prototype is a wood-frame building over podium parking with a net residential area of 73,200 square feet. This prototype includes 81 two-bedroom units of 900 square feet, rented at \$3,400 per month each. The prototype also includes 6,000 square feet of retail space located on the ground floor. As described in the 2015 Nexus Study, the prototype is based on typical development patterns in the West Berkeley Commercial (C-W) zoning district, an area in which there has been recent development activity and which has additional development opportunity sites. The prototype meets the development standards

¹ *City of Berkeley Affordable Housing Nexus Study* (Draft), prepared by BAE Urban Economics, March 25, 2015.

called for in the C-W zoning district, including maximum floor area ratio (FAR), height limit, and parking requirements.

Figure 1: Rental Apartment Prototype

Site Size (acres)	1.00
Maximum Floor Area Ratio (FAR) (a)	3
Height Limit (Feet) (a)	50
Number of Floors	4
Residential Units	
Gross Sq Ft Residential	91,480
Less: Common Area Residential	(18,296)
Net Sq Ft for Residential Units	73,184
Average Unit Size (Sq. Ft.)	900
Number of Units	81
Monthly Rent per Unit	\$3,400
Parking for Residential Units	
Parking Ratio (Spaces per Unit) (a)	1.00
Number of Spaces	81
Sq Ft per Space	350
Total Residential Parking (Sq. Ft.)	28,350
Retail Space	
Square Footage	6,000
Parking for Retail Space	
Parking Ratio (per 1,000 sq. ft.) (a)	2.00
Number of Spaces	12
Sq. Ft. per Space	350
Total Retail Parking (Sq. Ft.)	4,200

Notes:

(a) Maximum FAR, height limit, and parking requirements specified for the West Berkeley Commercial (C-W) zoning district.

Source: BAE, 2015.

FEE SCENARIOS

Strategic Economics tested the financial feasibility of six housing impact fee scenarios on the apartment prototype. The first scenario, Scenario 1, is the no fee scenario and is used to understand the financial feasibility of development in the absence of housing impact fees. Scenario 2 is the current affordable housing impact fee charged by the City of Berkeley of \$28,000 per unit. Scenario 3 is the recommended fee level from the 2015 Nexus Study. Scenario 6 is the maximum impact fee that is legally justified by the 2015 Nexus Study. Scenarios 4 and 5 represent the range of potential fee levels between the recommended fee level from the 2015 Nexus Study, and the maximum justified fee. Each fee scenario tested is shown in Figure 2.

Figure 2: Tested Fee Levels

Scenario 1 (No Fee)	\$0
Scenario 2 (Current Fee)	\$28,000
Scenario 3 (2015 Nexus Study Recommended Fee)	\$34,000
Scenario 4	\$45,000
Scenario 5	\$70,000
Scenario 6 (Maximum Fee)	\$84,391

Source: Strategic Economics, 2016.

METHODOLOGY

The financial feasibility of the six fee scenarios was tested using a pro forma model that measures yield on cost (YOC) for the developer or investor. YOC is a measure of developer return that is commonly used to evaluate the financial feasibility of new rental projects. The YOC is calculated by dividing a project's expected net annual operating income at full lease-up² by total development costs (including construction costs, soft costs, and land costs but excluding financing costs). Using YOC as a metric for feasibility allows for a comparison of rates of return among different rental projects, without skewing the results based on the specific financing arrangements (such as the particular combination of debt and equity) that can be highly variable from project to project.³

To establish a reasonable threshold for a developer's rate of return on new rental development projects in Berkeley, Strategic Economics interviewed local developers, reviewed other similar financial analyses in the Bay Area, and reviewed publications on the local and regional real estate market. A common rule of thumb is that the expected YOC for a rental development project should be about 1.5 to 2.0 percentage points higher than the average capitalization rate in the local market.⁴ As shown in Figure 3, the average capitalization rate (cap rate) in the East Bay (Alameda and Contra Costa Counties) was approximately 5.0 percent in 2015. Cap rates are lower in San Francisco, where rents (and therefore expected net operating income) are higher. Local developers reported that Bay Area investors expect yields ranging between 5 and 7 percent, depending on the location. Expectations for returns are higher in the East Bay compared to San Francisco because of the differences in market conditions. Developers also reported that construction costs have escalated rapidly, while rental rate increases have begun to slow. This dynamic is likely to cause investors to have higher expectations of yield in the short- to mid-term.

Based on the research described above, projects with a YOC of at least 6.5 to 7.5 percent were considered financially feasible for the purposes of this analysis. Developments with a YOC of less than 6.5 percent are not financially feasible, while projects with a YOC at the lower end of the threshold (at or just above 6.5 percent) are considered marginally feasible.

² Net operating income at full lease-up is calculated as total rental revenues minus operating costs, assuming a stable vacancy rate (5 percent).

³ Note that the original financial feasibility analysis in the 2015 Nexus Study used developer profit as a percent of cost as the measure of return for both for-sale and rental projects. Yield on cost is more commonly used to measure financial feasibility for rental projects.

⁴ A project's capitalization (or "cap") rate is the ratio of net operating income divided by property value. Real estate brokerage firms typically calculate the market capitalization rate as the average capitalization rate for projects sold in a given period.

The revenue and cost assumptions used in the pro forma analysis remain unchanged from the 2015 Nexus Study report. These assumptions are shown in Figure 4, including assumptions about hard and soft construction costs, land costs, and financing costs, as well as apartment and retail rental and vacancy rates.

Figure 3: Estimated Capitalization Rates for Multi-Family Rental Apartments: Bay Area Markets, 2015

Market	Cap Rate	Source
Alameda County	5.1%	Paragon Real Estate Group, "The San Francisco Apartment Building Market in 2015"
Oakland and Contra Costa County	5.0%	Marcus & Millichap, 2015 National Apartment Report
San Francisco	4.0%	Marcus & Millichap, 2015 National Apartment Report
San Francisco	3.8%	Paragon Real Estate Group, "The San Francisco Apartment Building Market in 2015"

Figure 4: Development Cost and Revenue Assumptions

	Cost/Revenue Assumption	Unit
Costs		
Land Cost	\$110	per square foot
Residential		
Hard Costs	\$215	per square foot
Soft Costs	20%	of hard costs
Impact Fees (excluding affordable housing fee)	\$3,536	per unit
Parking Costs	\$20,000	per space
Retail		
Hard Costs	\$150	per square foot
Soft Costs	20%	of hard costs
Impact Fees (a)	\$0	per square foot
Parking Costs	\$20,000	per space
Financing Costs		
Loan-to-Cost Ratio	70%	of total costs
Interest Rate	6.50%	annual rate
Loan Fees	2%	of loan
Loan Period	18	months
Average Outstanding Balance	60%	of loan
Revenues		
Rental Residential		
Rental Revenue	\$3,400	per unit/month
Vacancy Rate	5%	of revenues
Operating Costs	30%	of revenues
Retail		
Rental Revenue	\$2.25	per sq. ft./month (NNN)
Vacancy Rate	10%	of revenues

(a) Development impact fees are only charged on retail spaces of 7,500 square feet or more.

Source: BAE, 2015.

FINANCIAL FEASIBILITY RESULTS

Figure 5 summarizes the results of the feasibility analysis. Figure 6, below, provides the pro forma analysis for the six fee levels. The feasibility analysis indicates that in the absence of a fee (Scenario 1), development costs for the apartment prototype (before financing) would total \$31.6 million. The expected net operating income (NOI) for the building at lease-up is \$2.29 million a year. The ratio between NOI and development cost before financing is the yield on cost, which is estimated at 7.25 percent with no fee. This YOC falls within the threshold for feasibility in Berkeley, which is between 6.5 and 7.5 percent.

With the addition of a housing impact fee, the financial feasibility results are as follows:

- Scenario 2, the current fee level (\$28,000) brings the YOC to 6.77 percent. This is within the threshold for financial feasibility.
- Scenario 3, the fee level recommended in the 2015 Nexus Study (\$34,000) brings the YOC to 6.67 percent. This is within the threshold for financial feasibility.
- Scenario 4, a fee level of \$45,000, brings the YOC to 6.50 percent. This is the minimum YOC required for financial feasibility, making the project marginally feasible.
- Scenarios 5 and 6, which represent fee levels of \$70,000 and \$84,391, bring the YOC to 6.15 percent and 5.97 percent, respectively. These fee levels are not financially feasible.

Figure 5: Financial Feasibility of Fee Scenarios

Fee Scenario	Fee Level per Unit	Yield on Cost	Feasibility
Scenario 1 (No Fee)	\$0	7.25%	Financially Feasible
Scenario 2 (Current Fee)	\$28,000	6.77%	Financially Feasible
Scenario 3	\$34,000	6.67%	Financially Feasible
Scenario 4	\$45,000	6.50%	Marginally Feasible
Scenario 5	\$70,000	6.15%	Not Financially Feasible
Scenario 6 (Maximum Fee)	\$84,391	5.97%	Not Financially Feasible

Source: Strategic Economics, 2015.

Figure 6: Pro Forma Model Results

	per Housing Unit	Total
Costs		
Land Cost	\$59,156	\$4,791,600
Residential		
Hard Costs	\$242,817	\$19,668,200
Soft Costs	\$48,563	\$3,933,640
Impact Fees (excluding affordable housing fee)	\$3,536	\$286,416
Parking Costs	\$20,000	\$1,620,000
Subtotal	\$314,917	\$25,508,256
Retail		
Hard Costs	N/A	\$900,000
Soft Costs	N/A	\$180,000
Impact Fees	N/A	\$0
Parking Costs	N/A	\$240,000
Subtotal	N/A	\$1,320,000
Total Costs Before Financing and without Affordable Housing Fee	\$390,369	\$31,619,856
Revenues		
Rental Residential		
Gross Rental Revenue	\$40,800	\$3,304,800
Less: Vacancy	-\$2,040	-\$165,240
Less: Operating Costs	-\$12,240	-\$991,440
NOI	\$26,520	\$2,148,120
Retail		
Gross Rental Revenue	N/A	\$162,000
Less: Vacancy	N/A	-\$16,200
NOI	N/A	\$145,800
Total Net Operating Income	\$28,320	\$2,293,920
Fee Level Testing		
	Fee Level per Unit	
Total Project Cost Before Financing		
Scenario 1 (No Fee)	\$0	\$31,619,856
Scenario 2 (Current Fee)	\$28,000	\$33,887,856
Scenario 3	\$34,000	\$34,373,856
Scenario 4	\$45,000	\$35,264,856
Scenario 5	\$70,000	\$37,289,856
Scenario 6 (Maximum Fee)	\$84,391	\$38,455,527
Financing Costs		
Scenario 1 (No Fee)	\$0	\$1,737,511
Scenario 2 (Current Fee)	\$28,000	\$1,862,138
Scenario 3	\$34,000	\$1,888,843
Scenario 4	\$45,000	\$1,937,804
Scenario 5	\$70,000	\$2,049,078
Scenario 6 (Maximum Fee)	\$84,391	\$2,113,131

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Figure 6, cont'd.

Figure 3, cont'd.

	Total	
Total Project Cost with Financing		
Scenario 1 (No Fee)	\$0	\$33,357,367
Scenario 2 (Current Fee)	\$28,000	\$35,749,994
Scenario 3	\$34,000	\$36,262,699
Scenario 4	\$45,000	\$37,202,660
Scenario 5	\$70,000	\$39,338,934
Scenario 6 (Maximum Fee)	\$84,391	\$40,568,658
Yield on Cost (NOI/Total Project Cost Before Financing)		
Scenario 1 (No Fee)	\$0	7.25%
Scenario 2 (Current Fee)	\$28,000	6.77%
Scenario 3	\$34,000	6.67%
Scenario 4	\$45,000	6.50%
Scenario 5	\$70,000	6.15%
Scenario 6 (Maximum Fee)	\$84,391	5.97%

See Figure 4 for development cost and revenue assumptions.

Source: BAE, 2015; Strategic Economics, 2015.