

# Land Value Capture & Inclusionary Zoning



Lincoln Institute of Land Policy  
Global Symposium on Land Value Capture

August 15-17, 2017



DAVID PAUL ROSEN & ASSOCIATES  
DEVELOPMENT, FINANCE AND POLICY ADVISORS



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### Lincoln Institute of Land Policy Global Symposium on Land Value Capture

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## DRA's Land Value Capture & Inclusionary Housing Practice

Founded in 1980, David Paul Rosen & Associates (DRA) is an internationally recognized public interest consulting firm with offices in the San Francisco Bay Area and Irvine, California. DRA specializes in capital formation strategies for affordable housing, community development and energy efficiency. DRA has a track record of success and innovation in program design, finance, and project development. We have pioneered finance and public policy initiatives in affordable housing, small business, economic development, banking, asset management, insurance, urban planning and renewable energy.

DRA maintains an active transactional advisory practice in affordable housing and energy efficiency with expertise in capital markets, public-private partnerships, debt, equity and credit enhancement. DRA Principals have advised on more than \$9 billion in low income housing finance and project development representing more than 100,000 units. Our clients include federal, state and local government agencies, nonprofit and for-profit developers, corporations, institutional investors, foundations, professional associations and research organizations. We have served in more than 45 U.S. states, 280 jurisdictions, and provided advisory services on four continents.

DRA has served as an advisor to the World Bank, the International Finance Corporation (IFC), Habitat III in Quito, Ecuador, KfW, UN HABITAT, the European Mortgage Federation, the Australian Housing & Urban Research Institute, the Future Cities Collaborative at the University of Sydney, the Lord Mayor's Charitable Foundation of Melbourne and Melbourne University, the International Real Estate Federation (FIABCI), and has presented to the Organization for Economic Cooperation and Development, the International Monetary Fund, La Revue Foncier in Paris, among many other international institutions.

DRA's transactional practice enables us to bring our clients state-of-the-art, private sector standards for credit, collateral, underwriting and pricing of affordable housing, mixed-income housing, and mixed-use development financing. DRA's work is characterized by strategic insight, innovation, and sophisticated analysis of market, economic and financial factors. We apply our interdisciplinary skills to determine the best solutions to the complex problems our clients face.

DRA has conducted more than 50 inclusionary housing analyses and 25 affordable housing nexus analyses, spanning nearly 30 years of practice in this field. Our Principals have decades of experience advising local governments on the feasibility, zoning and design of inclusionary housing programs.



DRA pioneered the pro forma analysis of residential land values, which has become the state-of-the-art in inclusionary housing economic and policy analysis. This approach involves the economic valuation of a variety of incentives that may be offered to developers (e.g., density bonuses, fee waivers, fee deferrals, modifications in design, building and engineering codes and standards, including parking standards, expedited development processing, alternative floor area ratio and site planning reforms, tax exempt and other favorable financing). These incentives are compared against the cost to developers to comply with alternative affordable housing requirements.

DRA has successfully used this methodology in preparation of inclusionary housing economic analyses for scores of large city clients, including Los Angeles, San Diego, Long Beach and San Jose, California; Denver, Colorado; Seattle, Washington; Portland, Oregon; Cambridge, Massachusetts; Phoenix, Arizona; Hawaii and Maui Counties, Hawaii; Sydney and Melbourne, Australia; among many others.

DRA is expert in all aspects of inclusionary housing policy, including set-aside requirements for owner and rental housing, incentives, offsets, alternative compliance options and policy/regulatory matters. We can recommend changes to housing policy that will make it more effective and responsive to changing market conditions. DRA has advised cities on measures such as emergency foreclosure relief programs and the establishment of loss reserves to purchase troubled homes to avoid the loss of restrictive covenants.

The combination of DRA's understanding of inclusionary housing law with our expertise in land use planning, allows our clients to resolve some of the most difficult issues facing housing authorities and communities. Our thorough understanding of U.S. Supreme Court and state statutory requirements, as well as recent court decisions affecting inclusionary housing, have helped municipalities address density bonus law and Health and Safety Code provisions for affordable housing. DRA serves as expert witness to government agencies, defending inclusionary programs against legal challenges.

DRA has vast experience with public advisory processes surrounding the consideration and adoption of housing policies. Virtually all of our inclusionary housing studies have involved public review processes, ranging from a series of meetings with a formal Task Force comprised of representatives from stakeholder interests, to focus group meetings with developers and advocates, to one-on-one interviews with key participants. We are also highly skilled in presenting complex analyses in easily understandable formats for laymen and policymakers in public hearings before planning commissions and city councils. DRA helps its clients ensure a thorough and fair public review and comment process on the research and findings of our economic analysis.





2016 was a year of extraordinary achievement for DRA's clients. Included in this book are summaries of analyses DRA conducted on behalf of:

Portland, Oregon;  
Cambridge, Massachusetts;  
Seattle, Washington;  
Denver, Colorado; and  
Pasadena, California.

Additionally, a decade ago, DRA assisted the City of San Jose, California in adopting a mandatory citywide inclusionary housing ordinance. San Jose's ordinance became the target of important litigation contesting the City's authority to impose zoning requirements for affordable housing on new market-rate residential development. In a landmark case, the U.S. Supreme Court upheld the California Supreme Court's definitive ruling reaffirming the right of municipalities to zone land under their police power in order to promote the general welfare, including the provision of affordable housing.

We are pleased to share the summary of our recent work. We are proud to continue our active leadership in this field, both in the United States and internationally. If we can be of assistance in your efforts to adopt, amend or analyze inclusionary housing, land value capture, development impact fees, tax increment financing, special assessment districts or other zoning code measures designed to promote affordable housing and community benefit, please call upon our Principals:

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# Global Symposium on Land Value Capture

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**Principal DRA**



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# What is Value Capture?

- Public Infrastructure Investments convey value to private landowners
- Zoning Incentives, and Entitlements, convey value to private landowners
- Retain the value conveyed for public benefit



# How is Inclusionary Zoning a Form of Value Capture?

- Capturing value of zoning, incentives and/or entitlements for public benefit (affordable housing)
- Legal basis: police power to promote the general welfare



# Key Elements of an Inclusionary Housing Program

- Mandatory vs. Voluntary
- Set-asides (% affordable units of total units)
- Income targeting (% of Area Median Income)
- Definition of affordable housing expense
- Term of affordability/resale restrictions
- Effective Date



# Key Elements

(Continued)

- Renter vs. owner
- Presence or absence of incentives
- Alternative Compliance Options: On-site vs. off-site new construction vs. in lieu fee
- Applicability: New Construction, Adaptive Reuse, Condominium Conversion
- Thresholds and Exclusions
- Geographic Variation



# Analytic Approach

1. Develop prototypes
2. Gather market/economic data
3. Analyze feasibility
4. Analyze sensitivity of key assumptions and program variables
5. Develop program recommendations



# Uses of Methodology

- Assess financial feasibility of development under various economic conditions
- Evaluate impact of inclusionary zoning by comparing “with program” and “no program” options





# Development Prototypes

Reflect recent and planned developments in the local market, and under current and planned zoning:

- Zoning (density, FAR, use, lot size, lot coverage)
- Construction type (e.g., wood, steel)
- Parking ratio and configuration
- Mix of uses



# Development Prototypes

(Continued)

- Building efficiency (gross to net SF)
- Residential unit bedroom mix
- Residential unit sizes (square feet)
- Quality of finishes, amenities
- Tenure (rental vs. owner)
- Acquisition/rehabilitation of existing housing



# Economic Assumptions

- Rents/sales prices
- Rental vacancies and operating costs
- Development costs
- Land prices
- Capitalization rates
- Threshold rates of return



# Economic Assumptions

May reflect high, medium and low price/cost market areas within the region, if the jurisdiction's market is economically diverse



# Development Incentives

Prototypes can be modeled with and without development incentives such as:

- Density bonus
- Reduced parking requirements
- Property tax exemption, abatement



# Development Incentives

(Continued)

- Unit comparability
  - bedroom count
  - unit square footage
  - view premiums
  - interior finishes



# Feasibility Assessment

Project is feasible if meets threshold return, which varies by:

- Financial measure
- Market area
- Type of development
- Over time



# Land Residual Analysis

Market value of prototype

Less: Total development costs of prototype  
(EXCLUDING land)

Less: Threshold return to the developer

Equals: Residual land value (RLV)

Residual land value is compared to current market land prices, based on recent sales in the market





# Market Value: Rental Prototypes



Rental prototypes (apartment and commercial)  
Calculated at stabilized occupancy



Gross rents less vacancy less operating costs  
Equals: Net operating income (NOI)



NOI divided by capitalization (cap) rate  
Equals: Market value of prototype





# Cap Rates

- Ratio of net operating income (NOI) to sales price exhibited in recent sales in the market
- Tracked by land use and market area over time
- Reflect assessment of risk and future growth potential
- Track historic trends (cycles)



# Land Prices Over Time

- RLV analysis has the advantage of providing land value as outcome
- RLVs can be compared to market land prices for comparable projects/areas over time
- Tracking land values provides insight into speculation, market trends, volatility



# San Jose RLV Analysis: High Rise Condos

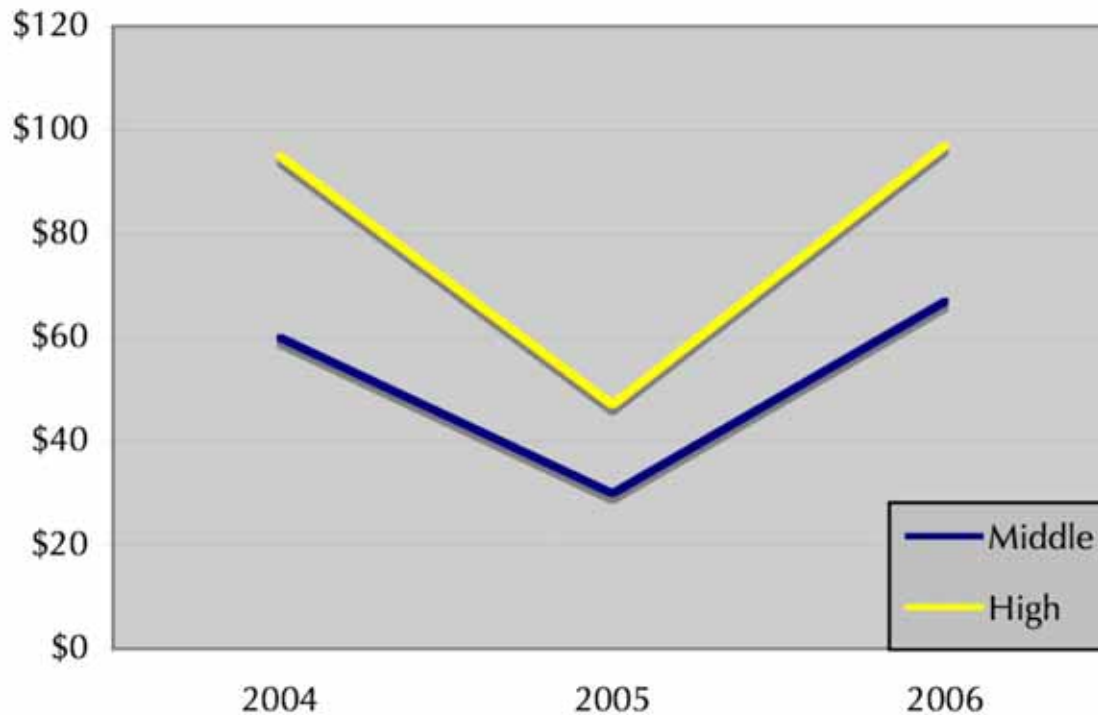


## High Rise Condos:

- Type I, concrete construction
- 100 dwelling units/acre
- 200 units
- 11 stories over subterranean parking



# Change in Land Value: San Jose High Rise Condos



High Trading Range:

- \$47 - \$97 per sq ft
- 106% change

Middle Trading Range:

- \$30 - \$67 per sq ft
- 123% change

Source: San José Residential Land Value Survey Updates, 2003, 2004, 2005 and 2006, San José Department of Housing, David Paul Rosen & Associates



# San Jose RLV Analysis: Single-Family Townhomes

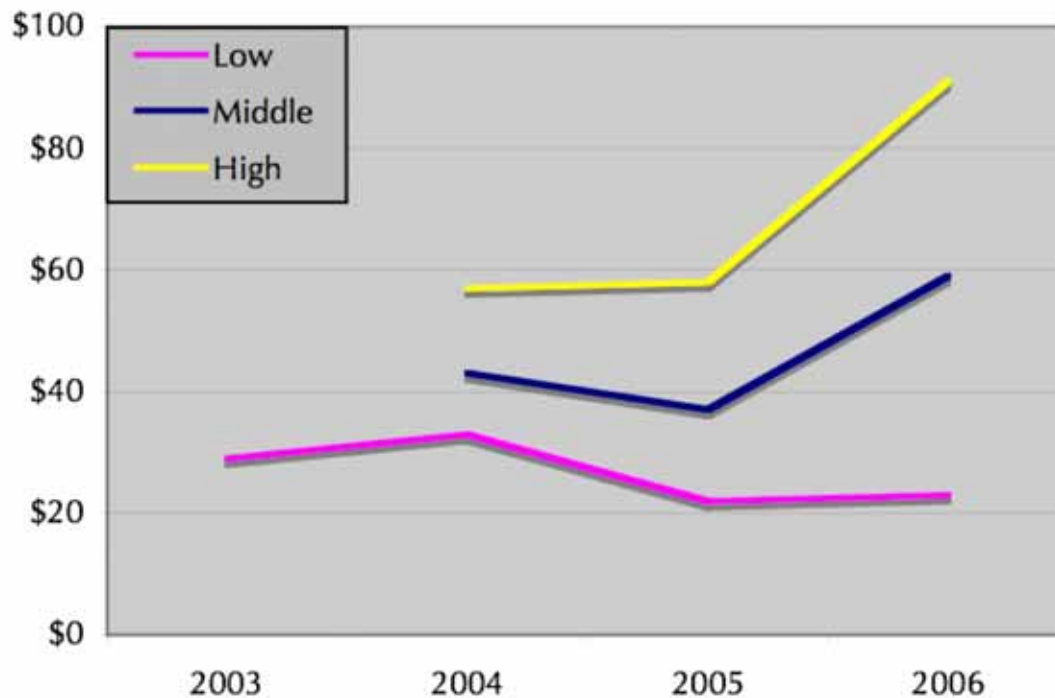


Single Family Townhomes:

- Type V, wood construction
- 17 du/a
- 75 units
- 3 stories with garage parking



# Change in Land Value: San Jose Single-Family Townhomes



Source: San José Residential Land Value Survey Updates, 2003, 2004, 2005 and 2006, San José Department of Housing, David Paul Rosen & Associates

High Trading Range:

- \$57 - \$91 per sq ft
- 60% change

Middle Trading Range:

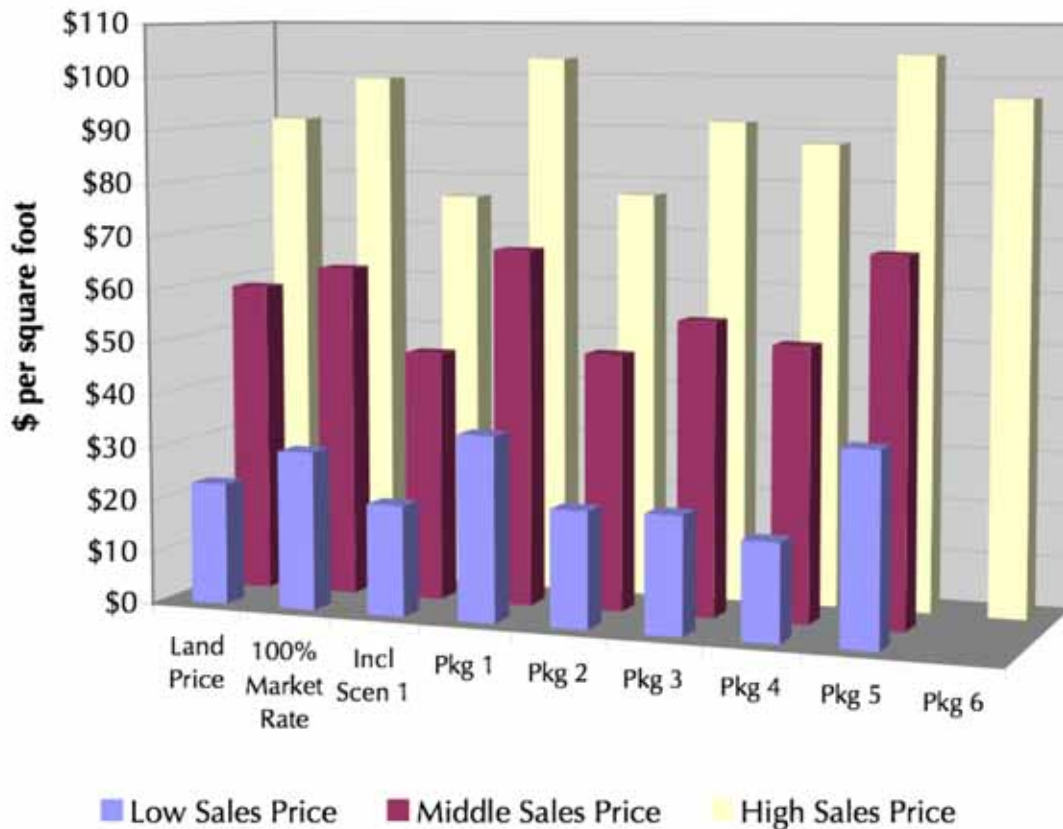
- \$37 - \$59 per sq ft
- 59% change

Low Trading Range:

- \$22 - \$33 per sq ft
- 50% change



# RLV: San Jose Townhomes with Offsets



- Scenario 1: 20% of units affordable at 110% AMI
- Pkg 1: 20% Density Bonus
- Pkg 2: On-Site Alternative Product Type
- Pkg 3: Off-Site Construction, Same Product Type
- Pkg 4: Acquisition / Rehabilitation
- Pkg 5: 20% Density Bonus and Design Modification
- Pkg 6: Off-Site Construction, Alternative Product Type, Design Modification





# Seattle Case Study

- Incentive zoning
- Mandatory IZ implemented as upzoning occurs
  - Urban centers
  - Citywide upon completion of EIR
- Focus on in lieu fee



# Portland Case Study

- Oregon legislative action in 2016 permitting mandatory inclusionary zoning
- Program analyzed through an open and transparent process using Panel of Experts



# Portland Case Study

- Program includes mandatory requirement with incentives for optional deeper affordability
- Program requirements and incentives vary based on zoning/FAR



# Thank You

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## 2. Inclusionary Housing Program Policy Alternatives

Part A: Inclusionary Housing Requirements

Part B: Alternative Compliance

Part C: Offsets

Part D: Renter and Homebuyer Marketing  
and Tenant Selection

Part E: Administration and Compliance

## Inclusionary Housing Program Policy Alternatives

### Part A: Inclusionary Housing Requirements

Issue	Questions	Alternatives		Advantages/Disadvantages
Geographic Applicability	What geographic area should be included?	<ul style="list-style-type: none"> <li>Applies to designated areas in the City</li> </ul>		
	Should there be one policy that applies citywide?	<ul style="list-style-type: none"> <li>Citywide</li> </ul>		
Set aside requirement & level of affordability	What percentage of units within a proposed development should be affordable and to whom?	Number of Units	Income Target	<ul style="list-style-type: none"> <li>High set aside increases number of affordable units produced</li> </ul>
	Should the levels of affordability be different for rental and ownership?	High	Homeownership: Moderate Rental: Moderate to Lower	
	Should the developer be allowed to provide fewer units in exchange for providing family units with more bedrooms?	Medium	Homeownership: Moderate to Median Rental: Lower to Very-Low	



Issue	Questions	Alternatives		Advantages/Disadvantages
	<p>Should set aside and affordability requirements vary by location?</p> <p>Should certain zoning concessions such as increased density trigger increased affordability requirements</p>	<p>Low</p>	<p>Homeownership: Median to Low</p> <p>Rental: Lower to Extremely Low</p>	
			<ul style="list-style-type: none"> <li>Higher set aside and/or affordability requirements in TOD areas</li> </ul>	
<p>Partial Units</p>	<p>What number of units should be required when the percentage requirement results in a partial number?</p>	<ul style="list-style-type: none"> <li>Always round up if there is a fraction, developer can choose to either pay the fraction of the in lieu fee or provide unit</li> </ul>		<ul style="list-style-type: none"> <li>Will result in a greater number of units being produced and/or fees collected</li> </ul>
		<ul style="list-style-type: none"> <li>Round up for any portion of .5 or above, developer can choose to pay the fraction of the in lieu fee or build the additional unit.</li> </ul>		<ul style="list-style-type: none"> <li>Follows the basic rules of math when rounding up or down.</li> <li>Provides developer flexibility and choice on whether to pay a fee or build a unit</li> </ul>
<p>Threshold</p>	<p>What is the minimum number of housing units that the proposed development must build to trigger the affordable requirement?</p>	<ul style="list-style-type: none"> <li>5 units</li> </ul>		<ul style="list-style-type: none"> <li>Project size is too small. Not economically feasible for developer to provide the units</li> </ul>
		<ul style="list-style-type: none"> <li>10 units</li> </ul>		
		<ul style="list-style-type: none"> <li>20 units</li> </ul>		



Issue	Questions	Alternatives		Advantages/Disadvantages
	<p>Other triggering criteria such as zoning relief, increased density, city financing such as TIF.</p> <p>Adaptive reuse</p>	<ul style="list-style-type: none"> <li>50 units</li> </ul>		<ul style="list-style-type: none"> <li>Project size is too large. Will result in less units being produced because many of the sites are in-fill and are therefore smaller.</li> </ul>
Delivery of affordable units	When will the developer be required to deliver the affordable units?	<ul style="list-style-type: none"> <li>Delivered in proportion with market-rate units</li> <li>Delivered before market-rate units</li> <li>Other</li> </ul>		
Term of Affordability	How long should the affordable unit remain affordable?	Rental	Homeownership	<p>Rental</p> <ul style="list-style-type: none"> <li>Longer term of affordability (55 + years) maintains stock of affordable housing.</li> <li>99-years allows for a greater period of affordability.</li> </ul>
		30 years	30 years	
		55 years	45 years	<p>Homeownership</p> <ul style="list-style-type: none"> <li>Longer term of affordability maintains stock of affordable housing.</li> <li>Longer term of affordability decreases ability of homeowner to benefit from increasing equity.</li> </ul>
		99 years or permanent	99 years or permanent	





Issue	Questions	Alternatives	Advantages/Disadvantages
Type of Resale Restriction	How should the affordability of for-sale units be maintained over time	Resale Restriction – Subsequent buyers must be income eligible to purchase the home and the price of the home is controlled by a formula to preserve the affordability.	
		Shared Equity – City recaptures the difference between the market rate price and the affordable price plus a portion of the appreciation upon sale. Funds are used to assist another buyer to purchase a home anywhere in the City.	
Effective date of ordinance	<ul style="list-style-type: none"> <li>When should the ordinance take effect?</li> </ul>	<ul style="list-style-type: none"> <li>Ordinance should take effect (30) days after the final reading and passage of the ordinance</li> </ul>	
		<ul style="list-style-type: none"> <li>Ordinance should take effect (one year) after the final reading and passage of the ordinance</li> </ul>	<ul style="list-style-type: none"> <li>A date certain is administratively easy.</li> <li>A fixed time may not be adequate for the market to recover from the existing economic condition.</li> <li>Long phase in period or delayed effective date results in lower production of affordable units.</li> </ul>



Issue	Questions	Alternatives	Advantages/Disadvantages
		<ul style="list-style-type: none"> <li>Ordinance should take effect when _____ building permits have been issued over a ___ month consecutive period</li> <li>Ordinance should take effect when _____ permits have been issued over a ___ month consecutive period or within ___ months of passage of the ordinance – which ever comes later.</li> </ul>	<ul style="list-style-type: none"> <li>Tying to the production of the building permit allows the market to recover to a certain level before the inclusionary requirement is imposed.</li> </ul>
Grandfathering/Pipeline	<ul style="list-style-type: none"> <li>What developments should be exempted from providing the affordable units because they are too far along the development process</li> <li>Should developments demonstrate that continued progress has been made?</li> </ul>	<ul style="list-style-type: none"> <li>At the time a developer makes an offer to purchase</li> <li>At the time a developer submits a reasonably complete application for a planning permit</li> <li>At the time the developer receives a building permit</li> <li>Continued progress should be made including: a time certain that the approved planning permit should be issued; a time certain that a building permit should be issued</li> </ul>	



Issue	Questions	Alternatives	Advantages/Disadvantages
Pressure Relief Valve	<ul style="list-style-type: none"> <li>• Can developments be relieved of an inclusionary requirement during difficult economic periods?</li> <li>• What is the timing of pressure release value?</li> </ul>	<ul style="list-style-type: none"> <li>• When permits are below _____</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates economic distress in the development community</li> <li>• Difficult to administer</li> <li>• Unpredictable</li> </ul>
	<ul style="list-style-type: none"> <li>• Should the program adjust during a down economy?</li> <li>• How should the pressure release valve be structured?</li> <li>• How would this be defined?</li> </ul>	<ul style="list-style-type: none"> <li>• When the gap between the market price and the affordable price is \$_____ or less for units targeting the lowest AMI.</li> <li>• Only the requirement to restrict the unit should be lifted</li> </ul>	<ul style="list-style-type: none"> <li>• Easier to administer and track</li> <li>• Based on current market conditions</li> <li>• Loss of an affordable unit, City will not be able to count the unit as meeting any affordability goals.</li> </ul>



## Part B: Alternative Compliance

Issue	Questions	Advantages/Disadvantages
On-site		<ul style="list-style-type: none"> <li>Affordable units will be built onsite and dispersed within the new development.</li> <li>Increases choice in location for lower-income households</li> <li>Prevents concentration of incomes and allows for economic integration of developments</li> <li>Can be a financial burden for the developer depending on the type of construction</li> </ul>
Alternatives	<p>Under what circumstances should a developer be allowed to provide an alternative to the on-site affordable housing requirement?</p> <ul style="list-style-type: none"> <li>Should developer be allowed by-right any choice?</li> <li>Should the developer be required to provide more units if an alternative is selected?</li> <li>Should the developer be required to demonstrate a financial hardship or financial infeasibility in order to provide the units off-site?</li> <li>Should the developer show that more affordable units will be built if the alternative is selected?</li> </ul>	<ul style="list-style-type: none"> <li>Alternatives provides maximum flexibility</li> <li>By limiting when the in lieu fee option is allowed, the developer is limited choices and outcome may not be predictable.</li> </ul>



Issue	Questions	Advantages/Disadvantages
Off-site construction	<p>Should the developer be allowed to construct affordable units at another location as an alternative to building the affordable units on-site?</p> <p>Should there be limitations placed as to where the developer is allowed to construct the affordable units?</p> <p>Should there be higher affordable unit set aside requirements when off-site units are provided?</p>	<ul style="list-style-type: none"> <li>• Developer has a burden of proof</li> <li>• Lower cost of compliance to the developer if the land is less expensive</li> <li>• May be able to produce a different type of housing that is better suited to meet the needs of the community needing affordable housing.</li> <li>• Allows for partnerships between market rate and affordable housing developers. Partnership may result in the development of either more units or deeper affordability.</li> <li>• Ensuring that the affordable development is produced at the same time as the market rate development can be difficult to coordinate. Can result in compliance issues.</li> <li>• May lose opportunity for economic integration in the development</li> <li>• Completion of affordable units may be delayed.</li> <li>• Potential neighborhood opposition issues</li> <li>• Potential for clustering of affordable units</li> </ul>



Issue	Questions	Advantages/Disadvantages
In lieu fee	<p>Should the developer be allowed to provide cash payment instead of constructing the required affordable units on-site?</p> <p>Should the in lieu fee option be provided only in certain circumstances?</p> <p>Should the in lieu fee apply citywide or in selected locations?</p> <p>Should the in lieu fee amount vary by location?</p>	<ul style="list-style-type: none"> <li>• Can be easy to administer.</li> <li>• Requiring developers to build affordable units on-site with low density developments may be unfair economic burden-in lieu fee option may be more appropriate.</li> <li>• City can target uses of funds to meet a variety of affordable housing policy goals.</li> <li>• Affordable units may not be constructed in a timely manner.</li> <li>• When affordable units are not provided on-site, City loses opportunity for economic integration.</li> <li>• The responsibility of providing the units is placed on the City to find a new site and a developer to provide the affordable units.</li> <li>• The fee may be insufficient to cover the full cost of producing the affordable unit.</li> </ul>



Issue	Questions	Advantages/Disadvantages
	<p>How should the in lieu fee be calculated?</p> <ul style="list-style-type: none"> <li>• The average amount of the public subsidy required to produce the unit</li> <li>• The cost to construct the unit</li> <li>• Calculated in lieu fee based on:               <ul style="list-style-type: none"> <li>○ Gap-to-cost; or</li> <li>○ Gap-to-price.</li> </ul> </li> <li>• On a square foot or a per-unit basis</li> </ul> <p>How frequently should the city adjust the in lieu fee?</p>	



Issue	Questions	Advantages/Disadvantages
Land Dedication	Should the developer be allowed to provide developable land as an alternative to providing on-site affordable units?	<ul style="list-style-type: none"> <li>• Can result in development of more affordable units with additional subsidies</li> <li>• Allows for partnerships between market rate and affordable housing developers.</li> <li>• No financial impact to the City if the land is donated to an affordable housing developer</li> <li>• Additional subsidies necessary to build affordable units because free land is insufficient to subsidize development of affordable units.</li> <li>• Affordable units not provided on-site. City may lose opportunity for economic integration.</li> <li>• Completion of affordable units may be delayed.</li> <li>• Potential neighborhood opposition issues</li> <li>• Possibility that affordable units may not get built.</li> <li>• City may be responsible for ensuring that the affordable housing development is completed</li> <li>• If land is dedicated to the City, the City will bear costs for holding and disposing of the land</li> </ul>





Issue	Questions	Advantages/Disadvantages
Acquisition/ Rehabilitation & Acquisition	<p>Allows developer to acquire an existing market rate unit and convert it to an affordable unit.</p> <p>Should acquisition/ rehabilitation be included in developer off-sets?</p>	<ul style="list-style-type: none"> <li>• Lower cost of compliance</li> <li>• Can result in development of more affordable units with additional subsidies</li> <li>• Allows for partnerships between market rate and affordable housing developers.</li> <li>• May serve to revitalize neighborhoods.</li> <li>• Improves deteriorated housing stock</li> <li>• Limits which off-sets the developer may use</li> <li>• Affordable units not provided on-site. City may lose opportunity for economic integration.</li> <li>• Completion of affordable units may be delayed.</li> <li>• Potential neighborhood opposition issues.</li> <li>• May encounter relocation issues or existing tenants may be displaced</li> <li>• More difficult to administer because standards will have to be developed regarding what types of units will be accepted</li> <li>• It may be difficult to identify willing sellers of properties.</li> <li>• Does not create new units, thus will not help the City to meet the growing need for affordable housing</li> </ul>
Credit trading for units (credit transfer)	Should developers be allowed to transfer credits of affordable units to other developers?	<ul style="list-style-type: none"> <li>• Provides increased flexibility to developers</li> <li>• Allows developers to work together to build a development that may be larger and therefore more economically feasible to build and manage</li> </ul>



Issue	Questions	Advantages/Disadvantages
Combination	Should the developer be allowed to combine alternatives to meet the affordable requirement?	<ul style="list-style-type: none"> <li>• May reduce the cost of producing the affordable units</li> <li>• Combination provides flexibility for developers. Developers will be able to work with a range of options that will work best for their proposed development.</li> </ul>

**Part C: Offsets**

Issue	Questions	Options	Advantages/Disadvantages
Flexibility with design standards	What flexibility to design standards should developers be allowed to change to off-set the cost of providing the affordable units?	<ul style="list-style-type: none"> <li>Provide a density bonus based upon the percentage set-aside provided by the developer</li> </ul>	<ul style="list-style-type: none"> <li>Can lower the cost of compliance because the developer is allowed to produce additional market rate units.</li> <li>Developers may not seek to increase density</li> <li>May have neighborhood resistance</li> <li>May have a financial impact for the City since more housing units increases the demand for City services.</li> </ul>
		<ul style="list-style-type: none"> <li>Reduced parking</li> </ul>	<ul style="list-style-type: none"> <li>Lowers the cost of producing the units because the cost of providing structured parking is high.</li> <li>No financial impact to the City.</li> <li>Consistent with other funding programs at the state level which provide financial incentives for developments that reduce parking near transit to promote smart growth policies.</li> <li>May have neighborhood resistance</li> </ul>
		<ul style="list-style-type: none"> <li>Lot size requirements</li> <li>Set-backs</li> <li>Landscaping</li> <li>Minimum side yards</li> <li>Floor area ratios</li> </ul>	<ul style="list-style-type: none"> <li>Lowers the cost of producing the affordable units</li> <li>No financial impact on the City.</li> <li>May raise neighborhood concerns</li> </ul>



Issue	Questions	Options	Advantages/Disadvantages
<p>Alternative Design/ Alternative unit type: bedroom mix must be equal &amp; must be functionally equivalent.</p>	<p>Should the developer be allowed to change the exterior of the affordable unit for on-site developments?</p>	<ul style="list-style-type: none"> <li>• Yes</li> </ul>	<ul style="list-style-type: none"> <li>• Lower costs of compliance by reducing per unit construction costs if interior finishes and alternative types of housing is allowed</li> <li>• May work better on some sites than others.</li> <li>• No financial impact for City.</li> <li>• Developers may not want to provide alternative housing product type</li> <li>• If design is different and units clustered then it may be obvious which units are “affordable” which creates clustering and segregation.</li> <li>• Lower costs of compliance by not requiring developer to distribute the affordable units evenly throughout the project, particularly in relation to floors and views</li> </ul>
	<p>Should the developer be allowed to provide alternative interior materials, appliances and/or design for the on-site affordable unit?</p>	<ul style="list-style-type: none"> <li>• No</li> </ul>	
	<p>Should the developer be required to distribute the affordable units evenly throughout the development?</p>		
<p>Deferral of impact fees</p>	<p>Should the developer be allowed to defer the payment of impact fees? Currently these fees are typically due prior to the issuance of the building permit.</p>	<ul style="list-style-type: none"> <li>• Yes, the developer should be allowed to defer the payment of impact fees</li> </ul>	<ul style="list-style-type: none"> <li>• Consistent with current city policy</li> <li>• Easier to administer and enforce</li> <li>• Higher cost to developer</li> </ul>
		<ul style="list-style-type: none"> <li>• No, the developer should not be allowed to defer the payment of the impact fee</li> </ul>	<ul style="list-style-type: none"> <li>• Lowers the cost of development for developer</li> <li>• May be difficult for the city to enforce</li> <li>• Will have a financial impact on the City</li> </ul>



Issue	Questions	Options	Advantages/Disadvantages
Expedited review for developments that include affordable units.	Should the developer who provides affordable units on-site have an expedited review process?	<ul style="list-style-type: none"> <li>No, developers should not be offered expedited review</li> </ul>	<ul style="list-style-type: none"> <li>If all developers provide on-site units then it may be difficult to provide expedited review</li> </ul>
		<ul style="list-style-type: none"> <li>Yes, developers should be offered expedited review</li> </ul>	<ul style="list-style-type: none"> <li>Reduces the cost of providing the unit if the developer saves time and the process is shortened.</li> <li>May result in the need for additional staff to effectively implement to meet timelines.</li> </ul>
Technical Assistance	Should the developer who provides affordable units be provided assistance with the development review process, financing alternatives and assistance in selling/renting the affordable units	<ul style="list-style-type: none"> <li>No</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li>Yes</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
Ability to obtain federal and state financial subsidy.  Ability to obtain locally controlled funds if deeper affordability or more units are provided	Should the developer be allowed to apply for financial subsidies?	<ul style="list-style-type: none"> <li>Yes</li> </ul>	<ul style="list-style-type: none"> <li>Reduces the cost of producing the affordable unit</li> <li>Creates an incentive to deepen the affordability of the units</li> </ul>
		<ul style="list-style-type: none"> <li>No</li> </ul>	<ul style="list-style-type: none"> <li>Competes with affordable developments for limited scarce funds</li> </ul>



Issue	Questions	Options	Advantages/Disadvantages
Property Tax Abatement	What will be the property tax treatment of affordable units?		



**Part D: Renter and Homebuyer Marketing and Tenant Selection**

Issue	Questions	Options	Advantages/Disadvantages
Marketing of rental and ownership units	<p>What will be the respective roles of the city and developers in marketing and outreach?</p> <p>How will marketing and outreach requirements differ between rental and ownership programs?</p>	<ul style="list-style-type: none"> <li>• Have a minimum open marketing period</li> <li>• Advertising requirements</li> <li>• Posing of available units on</li> </ul>	
Renter and homebuyer selection	<ul style="list-style-type: none"> <li>• Will there be a lottery system? If yes, who will administer it?</li> <li>• Will there be a preference system? If yes, what are the preference categories and how will they be ranked?</li> <li>• What will be the content of the renter and homebuyer applications?</li> </ul>	<p>For lottery system:</p> <ul style="list-style-type: none"> <li>• Administration by the city</li> <li>• Administration by developer on a project-by-project basis</li> <li>• On-line enrolment</li> </ul> <p>Preference system options:</p> <ul style="list-style-type: none"> <li>• Residency</li> <li>• Employed in city</li> <li>• Displaced households</li> <li>• Other</li> </ul> <p>Application:</p> <ul style="list-style-type: none"> <li>• Compliance certifications</li> <li>• Income pre-certifications</li> <li>• Documentation evidencing buyer/renter meets preference criteria</li> </ul>	



Issue	Questions	Options	Advantages/Disadvantages
Waitlist policy	<ul style="list-style-type: none"> <li>• Who will manage waitlist?</li> <li>• Will waitlists be project specific?</li> <li>• Other waitlist policies</li> </ul>	<ul style="list-style-type: none"> <li>• Waitlist managed by developer on a project-by-project basis</li> <li>• Waitlist(s) managed by the city</li> <li>• Managed by the developer, but households prequalified by city</li> </ul>	





## Part E: Administration and Compliance

Issue	Questions	Options	Advantages/Disadvantages
Compliance			
Ordinance requirements			
Regulations and guidelines			



Issue	Questions	Options	Advantages/Disadvantages
Administration			
Requirements for obtaining approval from city that a project complies with inclusionary housing program requirements			



Issue	Questions	Options	Advantages/Disadvantages
Administrative flexibility and negotiations			
Program costs and funding			



# Summary of Legal Issues

## 3. Inclusionary Housing and Nexus Requirements for Impact Fees

DRA is one of the nation's leading authorities on inclusionary zoning, nexus and land value capture. DRA has advised more than fifty jurisdictions on the economic analysis, policy and legal issues associated with IZ program design, adoption and implementation, including such complex markets as Los Angeles, San Jose, San Diego, Seattle, Maricopa County and Oakland. DRA has developed sophisticated land residual value models to quantify the feasibility of inclusionary obligations, and the effects of incentives, offsets and alternative compliance provisions.

This memo summarizes legal issues surrounding police powers and nexus law as they pertain to inclusionary housing and in lieu fees. This review summarizes both the federal issue of police power, case law of Nollan and Dolan, and reviews the case and statutory law in California that has limited inclusionary housing ordinances predicated on police powers, as well as the recent Koontz decision as it affects nexus issues and impact fees.

### **Legal Issues Regarding Inclusionary Housing**

Inclusionary housing ordinances rely on the police power of local government to take actions and adopt laws and policies that protect the public's health, safety and welfare. In *Miller v. Board of Public Works* (1925) 195 Cal. 477, the California Supreme Court found that local governments could legitimately employ their police powers to protect the general welfare through enactment of zoning ordinances creating residential zones reserved for single-family housing. Over the years, the courts held the police power to be quite broad, especially in the context of local land use law. Inclusionary zoning represents local government's use of the police power to correct past and continuing disparities to further the general welfare, such as those exacerbated by "exclusionary zoning" practices that excluded affordable housing and contributed to patterns of racial and economic segregation.

Inclusionary ordinances have been challenged as a violation of the prohibition against taking without just compensation in the Fifth Amendment of the United States Constitution and Article I, section 19 of the California Constitution. In *Homebuilders of Northern California v. City of Napa* (2001) 90 Cal. App. 4th 188, the California Court of Appeal found that although the ordinance imposed a significant burden on developers in Napa, it provided significant benefits to the public by substantially advancing a well recognized, legitimate state interest. In addition, the ordinance permitted a developer to appeal for a reduction, adjustment, or complete waiver of the ordinance's requirements. Since the City had the ability to waive the requirements imposed by the ordinance, the ordinance did not, on its face, result in a taking.



More recent court decisions in California have not been favorable to inclusionary housing ordinances as they apply to rental housing. In *Building Industry Association of Central California v. City of Patterson* (2009) 171 Cal. App. 4th 886, the California Court of Appeal concluded that the City's failure to use appropriate methodology consistent with the legal standards generally applicable to development fees rendered its affordable housing in-lieu fees invalid. The court held that the fees were not reasonably related to and limited to the City's costs of addressing adverse public impacts on affordable housing attributable to new development, as required by the legal standards generally applicable to such fees.

Later in 2009, in *Palmer/Sixth Street Properties, L.P. v City of Los Angeles* (2009) 175 Cal. App. 4th 1396, the California Court of Appeal held in favor of the owner/developer, and prohibited the City of Los Angeles from enforcing its inclusionary housing ordinance on the developer's rental housing development. The California Supreme Court has let stand that decision, denying review of the appellate court's ruling. In its ruling, the court held that forcing Palmer to provide affordable housing units at regulated rents conflicts with the right afforded residential landlords under the Costa-Hawkins Act to establish the initial rental rate for a dwelling unit. The Court also held that the proposed in-lieu fee conflicted with the Costa-Hawkins Act, because the fee was based solely on the number of affordable housing units that Palmer must provide under the Specific Plan. However, the court acknowledged that the Costa-Hawkins Act does not apply where the owner has agreed to build affordable housing in consideration for a direct financial contribution or other form of assistance specified in state density bonus law.

As a consequence of Palmer, a jurisdiction cannot impose inclusionary requirements on rental housing unless the jurisdiction provides monetary or other assistance. Instead, the jurisdiction may mitigate the impacts of rental housing on the need for affordable housing by imposing a fee justified by a nexus study.

In *California Building Industry Association (CBIA) v. City of San Jose* (2012) No. 1 10 CV167289, the Santa Clara County Superior Court invalidated the City of San Jose's inclusionary housing ordinance, concluding that the City had failed to provide "a legally sufficient evidentiary showing to demonstrate justification" for the ordinance's exactions of affordable units or in-lieu fees. The judgment also enjoined the City from enforcing or implementing the ordinance. While San Jose did acknowledge the Palmer decision and had suspended its requirements with regards to new rental housing, it had continued to enforce the ordinance for new owner housing.

The City of San Jose appealed the decision in the CBIA case and on June 6, 2013, the Court of Appeal held that inclusionary housing ordinances are valid if they are "reasonably related" to a "legitimate public purpose." The Court found that San Jose's ordinance had been adopted to alleviate the demand for affordable housing by requiring affordable housing in new developments. Therefore, it should be viewed as an exercise of the City's police power, as long as it bears a reasonable relationship to the public welfare. It would be invalid only if arbitrary, discriminatory, without a reasonable relationship to a legitimate public interest, or if the requirement were so high that it constituted a regulatory taking. The Court also held that it was CBIA's burden to establish



that the City's ordinance did not bear a reasonable relationship to the public welfare, not the City's burden to prove the ordinance's validity. This ruling was upheld by the California Supreme Court on June 15, 2016. The [\*\*California Supreme Court's ruling\*\*](#) can be found at the bold link. The CBIA then petitioned the U.S. Supreme Court for review. On February 29, 2016, the high court rejected the petition, rendering the California Supreme Court decision final.

Judge Clarence Thomas concurred with the U.S. Supreme Court's decision to deny the CBIA's petition, but appeared to leave an opening for future challenges. Justice Thomas expressed an interest in extending the "nexus" and "rough proportionality" requirements of *Nollan v. California Coastal Commission* and *Dolan v. City of Tigard* to legislation such as San Jose's inclusionary ordinance, but agreed that *CBIA v. San Jose* did not raise those issues.

The California Supreme Court's decision in the San Jose case allows cities and communities to adopt inclusionary housing ordinances applicable to for-sale housing without completing a nexus study. Communities should include evidence in the record showing that there is a need for affordable housing in the community and that inclusionary requirements will help produce affordable housing. An economic feasibility study may be appropriate to demonstrate that the requirement is reasonable.

The ability of California communities to rely on police power authority for their inclusionary housing in lieu fees was further upheld by the California Court of Appeal for the Second Appellate District in *616 Croft Ave., LLC vs. West Hollywood*. The developer, Croft, argued that the in lieu fees levied against Croft's project were invalid both on their face and as applied to the project because the City did not bear its burden in proving the fees were "reasonably related" to the deleterious public impact caused by Croft's development. The Court's decision, filed September 23, 2016, was that the in lieu fee was a voluntary alternative to providing the units on site and therefore was permissible as long as it did not constitute a physical taking or deprive Croft of a viable economic use of the property. Furthermore, the Court determined that the City's in lieu fee is not an exaction for purposes of the Mitigation Fee Act or a special tax under the California Constitution.

Under California's *Costa Hawkins Act* and *Palmer*, however, California communities cannot impose inclusionary requirements on rental housing. A Rental housing fee should continue to be justified by a nexus study because of the *Palmer* decision. Commercial linkage fees should also be justified by a nexus study, unless the local ordinance would otherwise require the affordable housing to be constructed on site. Many California communities have completed or are undertaking nexus studies in order to impose development impact fees on new rental housing, in place of inclusionary requirements.

Legislation has been introduced in California to permit agencies to apply inclusionary housing to rental housing, most recently in the form of AB 2502 in 2016. In vetoing a similar bill in October 2013, Governor Jerry Brown stated that he "would like the benefit of the Supreme Court's thinking" before acting. However, even though the Court has acted, this legislation did not make it to the Governor's desk in 2016.



## Legal Requirements for Development Impact Fees

Fees on development in California are subject to two overlapping sets of legal requirements, constitutional requirements of nexus and “rough proportionality” under the U. S. Supreme Court cases of *Nollan v. California Coastal Commission* (1987) 483 U. S. 825 and *Dolan v. City of Tigard* (1994) 512 U. S. 374, and California’s statutory “reasonable relationship” requirements under California Government Code sections 66000-66010. Although legally distinct, these two standards are substantively similar and in practice a development fee that satisfies one will almost certainly satisfy both. The California Supreme Court in *Ehrlich v. City of Culver City* (1996) 12 Cal. 4th 854, 867 concluded that the two standards “for all practical purposes, have merged.”

A local government charging a fee must make an affirmative showing that: (1) those who must pay the fee are contributing to the problem which the fee will address; and (2) the amount of the fee is justified by the magnitude of the fee-payer’s contribution to the problem. In designing a fee on new residential or commercial development to assist the provision of affordable housing, there is now likely to be little dispute that such development, by increasing employment, also increases the demand for housing for the added employees, and that market-rate housing development, with no public assistance, will not provide housing affordable for the additional lower-earning employees. The main legal concern is the amount of responsibility for providing housing that is assigned to new development, and thus the appropriate fee level. Non-residential nexus fees have been successfully upheld against legal challenge. DRA is not aware of a legal challenge to a residential nexus fee. DRA’s methodology for calculating residential nexus fees, described below, takes these legal requirements into account.

In *Sterling Park, L.P. v. City of Palo Alto* (“Sterling”), the California Supreme Court ruled in October 2013 that local affordable housing requirements may be challenged under the provisions of California’s Mitigation Fee Act (government code section 66000 etc.). The facts surrounding the Court’s ruling in Sterling centered on the City’s failure to file timely notice to the developer that an affordable housing in-lieu fee was required. The court ruled that the Mitigation Fee Act’s protest provisions would apply if the City’s affordable housing requirement would “divest the developer of money or possessory interest in property.” The court further ruled that these provisions would not apply if the City’s ordinance only restricted how the developer may use the property. In response to the Sterling decision, California jurisdictions are well advised to provide early written notice at the time of approval for any development project regarding fee payments or unit set-aside requirements as a standard condition of approval.

In *Koontz v. St. Johns River Water Management District* (“Koontz”), the U.S. Supreme Court held that the requirements of *Nollan* and *Dolan* for essential nexus and rough proportionality apply even when a jurisdiction denies a permit for development. Further, the Court held in this case that the government’s demand for property from a land use permit applicant must satisfy *Nollan* and *Dolan* requirements, even when the government’s demand is for money only (i.e., an in-lieu fee).

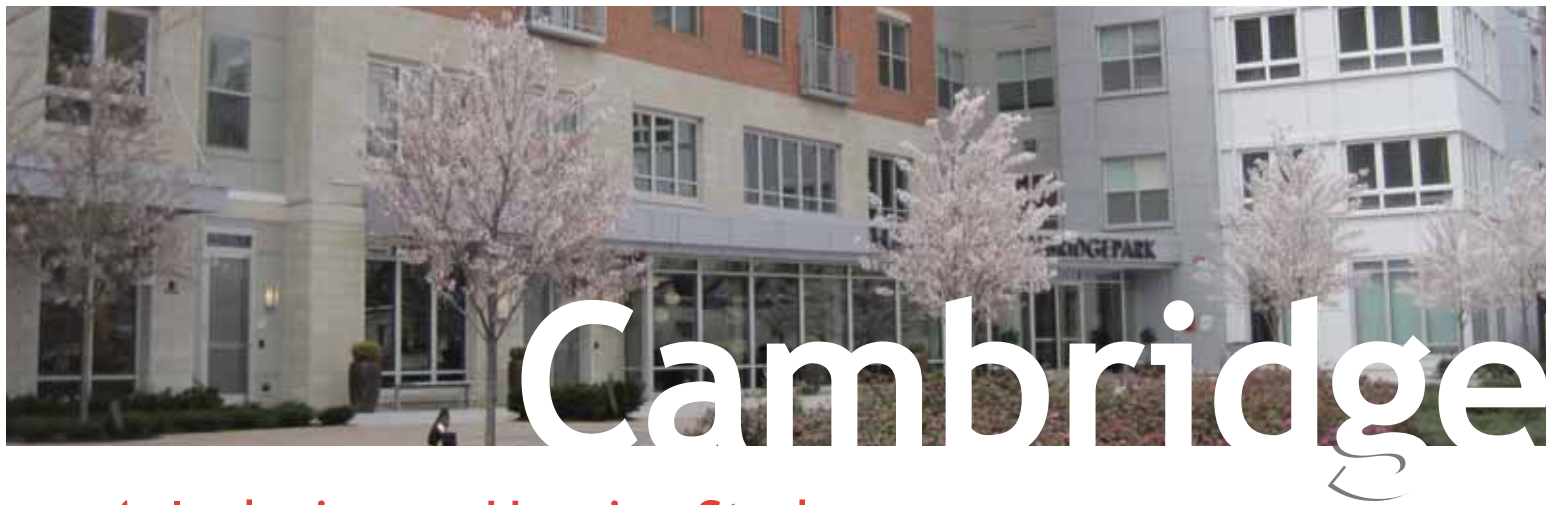
There is some suggestion in *Koontz* that the Court may look more closely at impact fee calculations going forward.



In response to Koontz, it will be important for jurisdictions considering affordable housing impact or nexus fees to:

- Calculate those fees within a quantified nexus methodology of reasonable relationship;
- Measure proposed fees against development feasibility;
- Provide for waivers and/or individual negotiation of fees, in some cases;
- Clearly demarcate any imposition of such fee from a policy of rent control; and
- Conduct a nexus study to support establishment of the fee.





## 4. Inclusionary Housing Study

The City of Cambridge Community Development Department (“City”) retained DRA to prepare a study to evaluate the impact of new market-rate residential development on housing affordability and socio-economic diversity in Cambridge and to recommend changes, if any, to the inclusionary housing provisions of Article 11.200 of the Cambridge Zoning Ordinance (“the Zoning Ordinance” and the City’s Inclusionary Housing Program to better meet the City’s policy goals for the program.

DRA evaluated the City’s current Inclusionary Housing Program (IHP) in three major respects:

1. In terms of housing and demographic changes since the initial inclusionary housing studies were completed for the City in 1997 and 1998;
2. Through an economic analysis that examines the effect of alternative inclusionary housing standards on residential financial feasibility and land values in Cambridge using a series of prototypical housing developments; and
3. In light of best practices in inclusionary housing programs as informed by DRA’s extensive nationwide experience as well as a survey of selected inclusionary housing programs across the country.

The study includes an overview of demographic and residential market conditions in Cambridge, with a focus on trends in market housing prices and rents, housing affordability, household income distribution, housing cost burden, and the affordable housing stock. Using this data, DRA evaluates changes in socioeconomic diversity in the City since 1997.

DRA’s economic analysis evaluates the effect of the City’s current inclusionary housing program, and potential changes to the program, on the financial feasibility of new residential development in Cambridge. DRA worked closely with City staff to develop a series of residential prototypes that represent the types of projects currently being built in Cambridge and reflect current underlying zoning designations in the City. The prototypes include large high- and mid-rise rental housing prototypes as well as smaller low- and mid-rise homeownership and rental developments. These prototypes form the basis of DRA’s economic analysis of the current program and alternative set-aside and income targeting policies. The findings of the analysis will assist the City in evaluating policy options for the inclusionary housing program that will generate affordable housing units to meet needs in the community while being sensitive to current and future real estate market conditions.



## Summary of Key Findings

The City of Cambridge has a population of approximately 109,700 (July 1, 2014) with about 46,000 households, of which 65% are renters and 35% are owners.

Increases in residential market rents and sales prices have outstripped increases in area median income (AMI) in the City of Cambridge since 1997, resulting in a marked reduction in housing affordability, an increase in cost-burdened households, and a decline in the proportion of households in the City with incomes under 100% of AMI.

The City's Inclusionary Housing Program, along with the Cambridge Affordable Housing Trust and other City programs to develop and preserve affordable housing, have succeeded in maintaining the proportion of the restricted affordable housing stock at approximately 15% of total housing units.

As the development of new affordable housing becomes more challenging due to market competition for sites and declining state and federal funding for affordable housing, the Inclusionary Housing Program is contributing an increasing proportion of new affordable units in the City. Thus, the continuation and strengthening of the City's Inclusionary Housing Program is vital to maintaining the affordable housing stock and preserving socioeconomic diversity within the community. As currently configured the Inclusionary Housing Program cannot on its own maintain the existing proportion of affordable housing.

Overall, the analyses demonstrate that there is room for Cambridge to increase its inclusionary standard without rendering housing development economically problematic. The higher the inclusionary housing standard and the deeper the affordability, the greater the impact on the feasibility of residential development. As the City assesses options, these analyses are useful to consider so as not to either discourage development or tilt development in favor of commercial projects.

## Findings of Socioeconomic Diversity Analysis

DRA analyzed trends in market-rate housing rents and sales prices, the affordability of housing, household income distribution, household size and unit bedroom count and the affordable housing stock, to determine how recent market trends and conditions have affected the socioeconomic diversity of Cambridge.

### KEY FINDINGS

*Increases in residential market rents and sales prices have outstripped increases in area median income (AMI) in the City of Cambridge since 1997, resulting in a marked reduction in housing affordability, an increase in cost-burdened households, and a decline in the proportion of households in the City with incomes under 100% of AMI.*

*The City's Inclusionary Housing Program, along with the Cambridge Affordable Housing Trust and other City programs to develop and preserve affordable housing, have succeeded*



*in maintaining the proportion of the restricted affordable housing stock at approximately 15% of total housing units.*

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These findings are based on the following key observations:

1. Between 2007 and 2014, area median income increased a total of 14%, while the median two-bedroom asking rent increased 31%, the average condo sales price increased 33%, and the average single-family sales price increased 45%.
2. Housing affordability has declined markedly in Cambridge since the inception of the inclusionary zoning program. In 1997, the affordable rent at 80% of AMI was almost equal to the median asking market rent, with a ratio of affordable to market rent of 99.3%. By 2000, the percentage declined to 72.1%, and by 2014 the percentage was 63.8%. For owner housing, prices fell modestly during the recession but have increased in recent years and are generally out of reach for households earning less than 100% AMI. The percentage of AMI required to afford the average-priced condo in the City increased from 145% in 2007 to 151% in 2014. The percentage of AMI required to afford the average-priced single-family home increased from 226% in 2007 to 257% in 2014.
3. Households are considered cost-burdened if they pay more than 30% of their gross income on housing, and severely cost-burdened if they pay more than 50% of their income on housing. Housing cost burden has increased in Cambridge over the 2000 to 2011 period. In 2000, approximately 40% of all renter households paid more than 30% of their gross income on housing, and 19% paid more than 50% of their income on housing. The most recently available CHAS data for 2011 show that the percentage of cost-burdened renter households increased to 45%, and 24% were severely cost-burdened. The percentages of cost-burdened households are much higher for households with incomes below 80% AMI. For example, more than 56% of households with incomes between 50% and 80% of AMI paid more than 30% of their income on housing in 2000, rising to 74% in 2011.
4. Based on the most recent demographic data available, between 2000 and 2011 the percentage of total households with incomes below 50% remained relatively stable but the percent of households with incomes between 50% and 100% of AMI declined from 27% to 18%. A decline is seen in both renter and owner households in these income groups, and has likely only accelerated since 2012, given the continued rapid increase in housing costs. Over the same 2000 to 2011 period, the percentage of households with incomes above 120% of AMI increased from 35% to 47%.



5. The affordable housing stock in Cambridge has remained fairly constant at 15% of total housing units since the inception of the City's Inclusionary Housing Program in 1997. However, the percentage of the City's affordable housing stock comprised of inclusionary units has increased from 6% in 2008 to almost 11% in 2014, demonstrating the increased importance of the City's inclusionary zoning program in creating new affordable housing in Cambridge.

The findings of the socioeconomic diversity analysis indicate that households with incomes between 50% and 80% of AMI have been particularly hard hit by changing market conditions. This is demonstrated by the lack of market-rate units affordable to this group, the large increase in cost-burdened households, and the decline in the proportion of households in this income category. These findings support the continued targeting of the inclusionary housing program at the 65% AMI level, particularly for renters. The findings indicate that the 80% to 100% of AMI group is another segment of the population that is being squeezed out by rising housing costs in Cambridge.

DRA also reviewed trends in household size and housing unit bedroom count distribution, to determine whether a change to the inclusionary zoning program to incentivize, or require, the creation of larger family-sized units is warranted. In regard to household size, there appears to be a shift toward two-person renter households relative to both smaller and larger households. Based on available data on bedroom count for the entire housing stock, it is difficult to see any trend towards smaller units emerging. But in the larger new developments there is a trend toward smaller units, resulting in smaller inclusionary units. Additionally, as in many communities, low-income large family housing needs continue to be unmet as market prices for family sized units continue to outstrip income. This may contribute to the perception of increased scarcity of family-sized units.

## Findings of Economic Feasibility Analysis

DRA prepared an economic analysis to assist the City in evaluating potential revisions to its Inclusionary Housing Program for residential development. DRA conducted the economic analysis using seven housing prototypes, developed in conjunction with City staff. These prototypes represent the type of housing developments that have been recently developed and are in the development pipeline in the City.



**KEY FINDINGS**

*Cambridge, within limits, can increase the percentage of units set aside and alter the income targeting of its IHP without rendering market-rate housing economically problematic. The higher the inclusionary housing standard and the deeper the affordability, the greater the impact on the feasibility of residential development. As the City assesses options, these analyses are useful to consider so as not to either discourage development or tilt development in favor of commercial projects.*

The prototypes analyzed include low-, mid- and high-rise residential developments appropriate to a range of current zoning designations in the City. The tenure, number of units and building heights of the prototypes are summarized in Table 1.

**Table 1**  
**Summary of Development Prototypes**  
**Cambridge Inclusionary Housing Study**

<b>Prototype</b>	<b>Tenure</b>	<b>Total Units</b>	<b>Appx. Bldg. Stories</b>	<b>Density (DUs/Acre)</b>
Prototype 1	Rental	300	17	245
Prototype 2	Rental	300	6	115
Prototype 3	Rental	100	5	82
Prototype 4	Rental	25	4	109
Prototype 5	Owner	40	5	73
Prototype 6	Rental	6	2	38
Prototype 7	Owner	6	2	38

Source: City of Cambridge; DRA.

DRA interviewed a number of residential and mixed-use developers active in Cambridge to review the prototypes, revenue, operating cost and development cost assumptions used in the analysis. DRA incorporated comments received from these developers into the analysis.

DRA also consulted with the City’s Assessing Department regarding current cap rates, rates of return on equity, and the ratio of debt to equity on recent residential development projects in the City of Cambridge.

DRA evaluated the economic feasibility of the prototype developments using both Return on Equity (ROE) and Residual Land Value (RLV) analyses. The return on equity approach calculates the value



of a development based on its stabilized income potential and subtracts the costs of development (including land) to determine the net value of the investment, or developer/investor profit. Under the ROE approach, the financial feasibility of the prototypes is measured by the rate of the return on equity that the resulting net investment value (or profit) represents. Land costs are held fixed at an estimated market land price and the economic impact of the program is shown as a change in the dollar amount of the net value of investment in the prototype and as a change in the ROE.

Land residual analysis methodology calculates the value of a development based on its income potential and subtracts the costs of development (excluding land but including an assumed return on equity), to yield the underlying value of the land. An alternative that generates a value to the land that is negative, or well below market land sales prices, is financially problematic.

Both the ROE and RLV analyses calculate the value of rental prototypes at a point in time based on the estimated stabilized net operating income of the prototype.

The economic performance of the prototypes was calculated for the following four set-aside scenarios, which are the same for both the renter and owner prototypes. The prototypes assume the density bonus of market rate units is already incorporated.

Scenario 1: 11.5% of total units at 65% of AMI (typical project under current IHP standards)

Scenario 2: 15% of total units at 65% of AMI plus 5% of units at 100% of AMI.

Scenario 3: 20% of total units at 65% of AMI.

Scenario 4: 20% of total units at 65% of AMI plus 5% of units at 100% of AMI.

DRA also examined 20% set-asides for owners at average AMIs of 75% and 90%.

The analysis was conducted under two alternative capitalization (“cap”) rate assumptions. Based on consultation with the City Assessing Department, current cap rates in Cambridge are approximately 4.00% for projects with 50 units or more and 4.25% for projects with 50 units or less. These current cap rates are at historically low levels. We compare the results of the economic analysis using current historically low cap rates (estimated at 4.0%) to higher rates (assumed at 4.75%). The higher cap rates reflect a prospective economic view. An acceptable ROE is estimated at 8.0% or more.

The results of the analysis are designed to inform the city as it evaluates potential changes to the program and are one among other factors to consider in the public policy decision.

The results of the ROE and RLV analyses are summarized in Table 2 under the low cap rate scenario. The findings are summarized as follows.

Overall, the analyses demonstrate that there is room for Cambridge to expand its inclusionary housing standards without rendering housing development economically problematic. The higher the standards, the greater the impact on the feasibility of residential development. As the City reviews options, these analyses are useful to consider so as not to either discourage development or tilt development in favor of commercial projects.



1. For the rental prototypes under the low cap rate assumption, the ROE for all of the prototypes substantially exceeds the acceptable rate of return threshold of 8% for Scenarios 1, 2 and 3. The ROE also equals or exceeds the threshold under Scenario 4.
2. For the rental prototypes under the higher cap rate assumption, the ROE exceeds the acceptable rate of return for all rental prototypes for 100% market-rate development. Under Scenario 1 (the existing program), the ROE exceeds the acceptable rate of return for Prototypes 2, 3 and 6, and falls slightly below the acceptable rate of return for Prototypes 1 and 4. It also exceeds the acceptable rate of return under Scenarios 2 and 3 for Prototypes 3 and 6. The ROE falls below the acceptable rate of return for all prototypes except Prototype 6 under Scenario 4.
3. For owner Prototype 5, the ROE exceeds the acceptable rate of return for the market-rate development and Scenario 1 (the existing program). It drops slightly below the acceptable rate of return to 7% for Scenarios 2 and 3, and further below the acceptable rate of return under Scenario 4. DRA also examined an owner housing set-aside of 20% at average income levels of 75% and 90% AMI. The ROE meets or exceeds the acceptable rate of return under both of these alternatives.
4. For the small six-unit owner Prototype 7, the ROE exceeds the acceptable rate of return for the 100% market-rate development and all Scenarios examined (assuming one affordable unit, or 17% of total units, in each case).
5. The RLV analysis shows similar results. Those scenarios with ROEs in excess of the acceptable rate of return generate land values in excess of the assumed land sales prices. Those that fall below the acceptable rate of return also generate land values less than the assumed land sales prices, in some cases substantially less.

Regulation and development impact fees on residential development that increase the costs of development, including inclusionary housing standards, will ultimately be passed through to the land owner in the form of reduced land prices. In order for developers to profitably develop new housing, they will bid down land prices to the level that makes development feasible, given market economics and zoning regulations affecting the amount of development that can be built on a particular site. This also depends if the site can be developed with commercial as well as residential uses. Increasing the cost of residential development relative to the cost of commercial development may change the highest and best use in favor of commercial development and prevent the land value from being bid down. In addition, land prices react more quickly to factors that increase land prices, such as increases in rents. Land prices tend to be slower to respond to factors that decrease land prices, including changing market conditions and increased regulation or fees, as owners who purchased recently may be reluctant to take a loss and others may be hesitant to adjust their expectations downward.

Land prices are also volatile in response to economic cycles and factors beyond the control of local government. Land will lose value in higher cap rate environments.

If the residual land value is negative, that indicates that capitalized values are not sufficient to cover the other development costs besides land, and new development will be slowed or halted until



market conditions change. Therefore, very low or negative RLVs such as shown under Scenario 4 for rental Prototypes 1 and 4 with the higher cap rate assumption suggest that development of these project types would not occur until market conditions change.

**Table 2**  
**Summary of Land Residual Analysis Results**  
**Residential Development Prototypes**  
**Low Cap Rate Assumption**

Resid. Cap Rate	
Under 50 Units	4.25%
50 Units or More	4.00%

	Prototype 1	Prototype 2	Prototype 3	Prototype 4	Prototype 5	Prototype 6	Prototype 7
<i>Tenure</i>	<i>Rental</i>	<i>Rental</i>	<i>Rental</i>	<i>Rental</i>	<i>Homeownership</i>	<i>Rental</i>	<i>Homeownership</i>
<i>Residential Units</i>	300	300	100	25	40	6	6
<i>Site Area (SF)</i>	53,269	113,974	53,033	10,026	23,791	6,800	6,800
<i>Residential Net SF</i>	207,750	222,250	79,550	19,550	43,300	6,800	6,800
<i>Total Net SF</i>	207,750	222,250	79,550	19,550	43,300	6,800	6,800
<i>Residential Units</i>	300	300	100	25	40	6	6
<i>Parking Spaces</i>	150	225	88	22	40	6	6
<i>Approximate Building Stories</i>	17	6	5	4	5	2	2
<b>Assumed Land Price</b>							
Per Unit	\$50,000	\$85,000	\$85,000	\$85,000	\$85,000	\$170,000	\$170,000
Per SF	\$282	\$224	\$160	\$212	\$143	\$150	\$150
<b>Number of Inclusionary Units</b>							
Scenario 1: Existing IHO (1)	35	35	12	3	5	1	1
Scenario 2 (2)	60	60	20	5	8	1	1
Scenario 3 (3)	60	60	20	5	8	1	1
Scenario 4 (4)	75	75	25	6	10	1	1
<b>Residual Land Value (RLV)</b>							
<b>Per Square Foot Site Area (5)</b>							
Scenario 1: Existing IHO (1)							
Per Unit	\$145,372	\$155,115	\$254,952	\$162,916	\$134,913	\$329,344	\$306,122
Per SF	\$819	\$408	\$481	\$406	\$227	\$291	\$270
Scenario 2 (2)							
Per Unit	\$110,966	\$136,606	\$216,326	\$142,719	\$101,860	\$329,344	\$306,122
Per SF	\$625	\$360	\$408	\$356	\$171	\$291	\$270
Scenario 3 (3)							
Per Unit	\$101,797	\$122,694	\$202,553	\$126,314	\$96,661	\$326,125	\$306,122
Per SF	\$573	\$323	\$382	\$315	\$163	\$288	\$270
Scenario 4 (4)							
Per Unit	\$69,631	\$107,770	\$178,004	\$110,836	\$77,310	\$328,057	\$306,122
Per SF	\$392	\$284	\$336	\$276	\$130	\$289	\$270
Assumed Return on Equity (6)	8%	8%	8%	8%	8%	8%	8%

- (1) 11.5% of total units at 65% of AMI for renters and owners.
- (2) 15.0% of total units at 65% of AMI plus 5% of units at 100% AMI for renters and owners.
- (3) 20.0% of total units at 65% of AMI for renters and owners.
- (4) 20% of units at 65% of AMI plus 5% of units at 100% of AMI for renters and owners.
- (5) Land residual value per housing unit and per square foot site area.
- (6) Used in land residual analysis.

Source: DRA.





## 5. Affordable Housing Nexus Study

The City of Denver (City) retained David Paul Rosen & Associates (DRA) to prepare a nexus study addressing the relationship between market-rate residential and non-residential development and the need for affordable housing in the City. The nexus analysis estimates the number of low and moderate income households associated with development of new market-rate housing and non-residential development in the City, and calculates the maximum legally justifiable nexus fee by land use, based on the cost to produce housing affordable to these households. The study also examines the potential effect of alternative levels of a nexus fee on the economic feasibility of new residential and non-residential development using a series of residential and non-residential development prototypes.

DRA worked with Residential and Commercial Technical Advisory Groups (TAGs) composed of local Denver area developers and real estate professionals to review and provide input on the development prototypes and economic assumptions used in the analysis.

### Development Prototypes

DRA conducted the nexus fee and economic feasibility analyses using ten residential and non-residential development prototypes developed in conjunction with City staff and the Residential and Commercial Technical Advisory Groups. These prototypes represent the type of projects that have been recently developed and are in the development pipeline in the City.

The prototypes analyzed include high-rise residential and office prototypes limited to the greater Downtown area and low- and mid-rise development prototypes that could be built under current zoning in different market areas across the City. The tenure, number of units and building heights of the prototypes are summarized in Table 1.



<b>Table 1 Summary of Development Prototypes Denver Nexus Housing Study</b>				
<b>Residential Prototypes</b>	<b>Total Hsg. Units</b>	<b>Residential Tenure</b>	<b>Appx. Bldg. Stories</b>	<b>Density (DUs/Acre)</b>
SFD Infill	1	Owner	2 Stories	7
Townhomes	10	Owner	3 Stories	44
12-Story Condominium	232	Owner	12 Stories	233
5-Story Apartment	300	Rental	5 Stories	100
20-Story Apartment	285	Rental	20 Stories	475
<b>Non-Residential Prototypes</b>	<b>Net Bldg. SF</b>		<b>Appx. Bldg. Stories</b>	<b>Density (FAR)</b>
Mid-Rise Office	64,000		5 Stories	2.5
High-Rise Office	128,000		12 Stories	5.0
Hotel	50,000		4 Stories	0.7
Stand-Alone Retail	25,000		1 Story	0.2
Warehouse	250,000		1 Story	0.4
Manufacturing*	100,000		1 Story	0.4

\*Used in nexus analysis only; not analyzed in the economic feasibility analysis.  
Source: City of Denver; DRA.

## Findings of the Nexus Fee Analysis

The nexus fee analysis estimates the number of low and moderate income households associated with development of new market-rate housing and non-residential development in the City, and calculates the maximum legally justifiable nexus fee based on the cost to produce housing affordable to these households. Table 2 summarizes the estimated maximum legally justifiable nexus fees for the residential prototypes and non-residential land uses.

Residential nexus fees were estimated under low-, middle- and high-cost scenarios reflecting the range of estimated home prices and rents for the prototypes. For the low- and mid-rise prototypes, these scenarios represent the range of market conditions found in different areas of the City. For the high-rise prototypes, these scenarios represent an estimated range of assumptions for the Downtown area. The nexus fees in Table 2 reflect the middle-cost scenario.



Prototype	Nexus Fee per Gross Square Foot				Total
	Under 30% AMI	30% to 60% AMI	60% to 80% AMI	80% to 120% AMI	
SFD Infill	\$3.17	\$5.31	\$1.12	\$0.00	\$9.60
Townhomes	\$5.09	\$8.61	\$1.75	\$0.00	\$15.45
12-Story Condominium	\$6.10	\$10.32	\$2.10	\$0.00	\$18.52
5-Story Apartment	\$5.19	\$9.01	\$1.82	\$0.00	\$16.02
20-Story Apartment	\$6.36	\$10.90	\$2.19	\$0.00	\$19.44
Office	\$11.17	\$32.72	\$12.86	\$0.00	\$56.74
Hotel	\$40.85	\$37.20	\$4.97	\$0.00	\$83.02
Stand-Alone Retail	\$63.40	\$46.09	\$9.81	\$0.00	\$119.29
Warehouse	\$6.59	\$17.47	\$4.45	\$0.00	\$28.51
Manufacturing*	\$6.17	\$17.00	\$6.39	\$0.00	\$29.57

<sup>1</sup>For residential prototypes, nexus fees represent the middle-cost scenario.

<sup>2</sup>For primary use listed; some prototypes include ground floor retail.

\*Used in nexus analysis only; not analyzed in economic feasibility analysis.

Source: DRA

## Findings of the Economic Feasibility Analysis

DRA prepared an economic feasibility analysis to assist the City in evaluating the potential impact of a nexus fee on new residential and non-residential development in Denver. DRA conducted the economic analysis using the residential and non-residential development prototypes described above.

As noted above, DRA interviewed a number of residential and mixed-use developers active in Denver and participating in the Residential and Commercial Technical Advisory Groups to review the prototypes, revenue, operating cost and development cost assumptions used in the analysis, as well as target rates of return. DRA incorporated comments received from these developers into the analysis.

DRA evaluated the economic feasibility of the prototype developments using Return on Equity (ROE), Residual Land Value (RLV) and Return on Cost (ROC) approaches. The ROE approach calculates the value of a development based on its stabilized income potential and subtracts the costs of development (including land) to determine the net value of the investment, or developer/



investor profit. Under the ROE approach, the financial feasibility of the prototypes is measured by the rate of the ROE that the resulting net investment value (or profit) represents. Land costs are held fixed at an estimated market land price and the economic impact of the program is shown as a change in the dollar amount of the net value of investment in the prototype and as a change in the ROE.

Residual Land Value analysis methodology calculates the value of a development based on its income potential and subtracts the costs of development (excluding land but including an assumed ROE), to yield the underlying value of the land. An alternative that generates a value to the land that is negative, or well below market land sales prices, is financially problematic.

Return on Cost is calculated by dividing net operating income by total development costs. It does not consider the benefits or risks of financial leverage and does not involve the use of cap rates.

All three approaches calculate the value of rental prototypes (residential and non-residential) at a point in time based on the estimated stabilized net operating income of the prototype.

The analysis was conducted under two alternative capitalization (“cap”) rate assumptions. The lower cap rate alternative is based on the low end of estimated current cap rates in Denver based on input from the TAGs, as well as a review of published cap rate data by land use for Denver. These current cap rates are close to the historically low levels seen in the development boom that has occurred in Denver and many metro areas across the country since the Great Recession. The high cap rate alternative is 50 basis points higher than the low cap rate assumed for each prototype.

The analysis examines the effect of nexus fees ranging from \$1.00 per gross building square foot to \$7.00 per gross square foot. The results of the analysis are designed to inform the city as it evaluates a potential nexus fee and is one among other factors to consider in the public policy decision.

The results of the RLV analysis are summarized for the higher cap rate assumption. The findings are discussed below. Results are shown for all three scenarios (low-, middle- and high-cost), although it is expected that most development in Denver will occur in high-cost areas. Therefore, the discussion below focuses primarily on the high-cost scenario. All references to the ROE and the RLV are based on the results for the high cap rate assumption. Given the relationship between the ROE and RLV calculations, the RLV exceeds the estimated land acquisition cost if the ROE is above the threshold rate of return. Therefore, the discussion focuses on the ROC and ROE measures.



The findings of the economic feasibility analysis are summarized as follows:

1. Returns for all three owner housing prototypes (single-family infill, townhomes and 12-story condos) exceed threshold returns for the ROC and ROE measures (15% and 10%, respectively) and the RLV exceeds estimated current land costs with no nexus fee. The ROC begins to fall below the threshold with a \$5.00 per square foot nexus fee under the low- and middle-cost scenarios and with a \$7.00 per square foot nexus fee under the high-cost scenario. The ROE measure exceeds the threshold and the RLV exceeds estimated land acquisition costs with fee levels up to \$7.00 per square foot at low-, middle- and high-cost scenarios.
2. For the 5-story rental prototype, the ROC measure is below the threshold of 6.5% with no fee and with all levels of the nexus fee tested. Under the high-cost scenario, the ROC declines from 5.79% with no fee to 5.65% with a \$7.00 per square foot nexus fee, a reduction of 2% from the no fee alternative. With a \$2.00 per square foot nexus fee, the ROC is 5.75%, a decline of 0.3% from the no fee baseline. However, the ROE measure exceeds the threshold of 8% and the RLV exceeds estimated land acquisition costs at all fee levels up to \$7.00 under the low-, middle- and high-cost scenarios.
3. For the 20-story rental prototype, the ROC is below the threshold of 6.5% with no fee. Under the high-cost scenario, the ROC declines from 6.24% with no fee to 6.20% with a nexus fee of \$2.00 per square foot and to 6.10% with a nexus fee of \$7.00 per square foot, reductions of 0.6% and 2%, respectively. The ROE measure exceeds the threshold of 8% and the RLV exceeds estimated land costs at all fee levels under low-, middle-, and high-cost scenarios.
4. The 5-story office prototype also does not meet the ROC threshold of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 5.95% with no fee to 5.91% with a \$2.00 nexus fee and to 5.82% with a fee of \$7.00 per square foot, reductions of 0.7% and 2%, respectively. The ROE is also below the threshold of 8% for the low- and middle-cost scenarios. However, under the high-cost scenario, the ROE exceeds the threshold of 8% and the RLV exceeds estimated land acquisition costs at fee levels up to \$7.00 per square foot.
5. Similarly, the 12-story office prototype does not meet the ROC threshold of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 5.93% with no fee to 5.90% with a fee of \$2.00 per square foot and to 5.80% with a fee of \$7.00 per square foot, reductions of 0.5% and 2%, respectively. This prototype performs best under the low-cost and middle-cost scenarios. For the high-rise office prototype, which is expected to be built only in high-cost areas such as the Downtown or Cherry Creek where rents are highest and higher density is allowed, the difference in these scenarios represents a sensitivity analysis of alternative cost and revenue assumptions that reflect specific site locational factors rather than larger geographic market variations. Under the low- and middle-cost scenarios, the ROE exceeds the threshold of 8% at all levels of a nexus fee up to \$7.00 per square foot. Under the high-cost scenario, the ROE falls below the threshold only with the \$7.00 fee.



6. For the 4-story hotel, the ROC exceeds the threshold of 9% only under the high-cost scenario. For this scenario, the ROC stays above the threshold at all fee levels up to \$7.00 per square foot, declining from 9.38% with no fee to 9.33% with a \$2.00 fee and to 9.21% with a \$7.00 fee, reductions of 0.5% and 2%, respectively.
7. The retail prototype does not meet the threshold ROC of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 6.19% with not fee to 6.17% with a \$2.00 per square foot fee and to 6.05% with a \$7.00 per square foot fee, reductions of 0.3% and 2%, respectively. The ROE exceeds the threshold of 8.0% for all fee levels under low-, middle- and high-cost scenarios.
8. The warehouse prototype also does not meet the threshold ROC of 7.5% even without a nexus fee. Under the high-cost scenario, the ROC declines from 6.68% with no fee to 6.58% with a \$2.00 per square foot fee and to 6.37% with a \$7.00 per square foot fee, reductions of 1% and 5%, respectively.

In summary, the analysis indicates that nexus fees up to \$7.00 per square foot have a relatively small effect on returns, with reductions in the ROC generally under 2%, based on the ROC, ROE and RLV measures for the prototypes analyzed. To the extent that fees at the levels analyzed do affect project feasibility, DRA expects that the market will adjust to fees at the moderate levels proposed over time. Regulation and development impact fees on residential development that increase the costs of development, including nexus fees, will ultimately be passed through to the landowner in the form of reduced land prices. In order for developers to profitably develop new projects, they will bid down land prices to the level that makes development feasible, given market economics and zoning regulations affecting the amount of development that can be built on a particular site. Land prices typically react quickly to factors that increase land prices, such as increases in rents and sales prices. Land prices tend to be slower to respond to factors that depress land prices, such as changing market conditions and increased regulation or fees, since owners who purchased the land recently may be reluctant to take a loss and others may be hesitant to adjust their expectations downward.

Land prices are also volatile in response to economic cycles and factors beyond the control of local government. For example, land will lose value in higher cap rate environments. If rates of return are far below target levels, or residual land values are very low or negative with little to no room for downward adjustment, it indicates that capitalized values are not sufficient to cover the other development costs besides land, and new development will be slowed or halted until market conditions change. This will be the case whether the loss in values is due to changing market conditions and cap rates or to governmental fees or regulations.



**Table 3**  
**Summary of Land Residual Analysis Results**  
**High Cap Rate Assumption; High Cost Scenario**

	Single-Family Infill	Owner Townhomes	12-Story Owner	5-Story Rental	20-Story Rental	5-Story Office	12-Story Office	4-Story Hotel	Retail	Warehouse
<i>Tenure</i>	<i>Owner</i>	<i>Owner</i>	<i>Owner</i>	<i>Renter</i>	<i>Renter</i>					
<i>Residential Units</i>	1	10	232	300	285					
<i>Residential Net SF</i>	2,800	20,000	227,250	212,250	230,800	-	-	-	-	-
<i>Site Area (SF)</i>	6,250	10,000	43,560	130,680	26,136	32,000	32,000	89,734	121,968	696,960
<i>Total Net SF</i>	2,800	20,000	243,250	221,550	239,800	64,000	128,000	50,000	25,000	250,000
<i>Parking Spaces</i>	2 Spaces	10 Spaces	292 Spaces	450 Spaces	257 Spaces	163 Spaces	175 Spaces	105 Spaces	83 Spaces	83 Spaces
<i>Approximate Building Stories</i>	2 Stories	3 Stories	12 Stories	5 Stories	20 Stories	5 Stories	12 Stories	4 Stories	1 Stories	1 Stories
<b>Assumed Land Price</b>										
Low Scenario										
Per Unit (or Hotel Room)	\$200,000	\$70,000	\$20,000	\$26,250	\$13,500	N/A	N/A	\$12,000	N/A	N/A
Per SF Site Area	\$32	\$70	\$107	\$60	\$147	\$41	\$81	\$19	\$10	\$7
Middle Scenario										
Per Unit (or Hotel Room)	\$275,000	\$90,000	\$30,000	\$30,000	\$21,000	N/A	N/A	\$15,000	N/A	N/A
Per SF Site Area	\$44	\$90	\$160	\$69	\$229	\$45	\$90	\$24	\$15	\$10
High Scenario										
Per Unit (or Hotel Room)	\$350,000	\$200,000	\$40,000	\$45,000	\$28,500	N/A	\$30	\$20,000	\$0	\$0
Per SF Site Area	\$56	\$200	\$213	\$103	\$311	\$60	\$120	\$32	\$20	\$15
<b>Assumed Cap Rate</b>	N/A	N/A	N/A	5.00%	5.00%	5.50%	5.50%	7.50%	5.50%	6.00%
<b>Resid. Land Value (RLV) Per SF Site Area</b>										
No Fee	\$78.06	\$287.59	\$572.70	\$163.77	\$860.65	\$89.50	\$161.21	\$88.37	\$26.70	\$19.71
Fee of \$1.00 Per GSF	\$77.60	\$285.49	\$565.05	\$161.78	\$848.08	\$86.88	\$155.93	\$87.59	\$26.49	\$19.34
% Change from 100% Market	-1%	-1%	-1%	-1%	-1%	-3%	-3%	-1%	-1%	-2%
Fee of \$2.00 Per GSF	\$77.14	\$283.39	\$557.39	\$159.78	\$835.51	\$84.26	\$150.65	\$86.81	\$26.27	\$18.97
% Change from 100% Market	-1%	-1%	-3%	-2%	-3%	-6%	-7%	-2%	-2%	-4%
Fee of \$3.00 Per GSF	\$76.68	\$281.30	\$549.74	\$157.78	\$822.94	\$81.64	\$145.37	\$86.03	\$26.06	\$18.60
% Change from 100% Market	-2%	-2%	-4%	-4%	-4%	-9%	-10%	-3%	-2%	-6%
Fee of \$5.00 Per GSF	\$75.75	\$277.10	\$534.44	\$153.79	\$797.80	\$76.40	\$134.81	\$84.47	\$25.64	\$17.86
% Change from 100% Market	-3%	-4%	-7%	-6%	-7%	-15%	-16%	-4%	-4%	-9%
Fee of \$7.00 Per GSF	\$74.83	\$272.91	\$519.14	\$149.80	\$772.66	\$71.16	\$124.25	\$82.91	\$25.22	\$17.12
% Change from 100% Market	-4%	-5%	-9%	-9%	-10%	-20%	-23%	-6%	-6%	-13%

Source: DRA.



## 6. Affordable Housing In Lieu Fee Analysis

### Affordability Gap and In Lieu Fee Calculation

The City of Pasadena’s (City) Inclusionary Housing Ordinance (IHO) requires that 15 percent of all newly constructed residential units be sold or rented to low and moderate income households at affordable housing costs, as detailed in Table 1.

<b>Unit Type</b>	<b>Percent of Housing at Percent of AMI</b>	<b>Affordable Housing Cost</b>
Ownership	15% at ≤ 120% Los Angeles County Median Income (AMI) as determined by HUD (“Moderate Income”)	Total housing cost must not exceed 40% of 110% AMI.
Rental	10% at ≤ 80% AMI (“Low Income”) and 5% at ≤ 120% AMI (“Moderate Income”)	<b>Low Income Units:</b> Total housing cost must not exceed 30% of 80% AMI. <b>Moderate Income Units:</b> Total housing cost must not exceed 30% of 120% AMI.

As an alternative compliance option, the IHO allows developers to pay a fee in lieu of constructing new affordable units (“in lieu fee”). The City publishes an in lieu fee schedule that it periodically revises in accordance with changes in the Los Angeles County Area Median Income (AMI) and changes in market prices of newly constructed rental and ownership units in the City. DRA’s analysis determines in lieu fee amounts for rental and condominium housing. To account for local variances in housing market conditions, we have analyzed four rental and four homeownership housing market Sub-Areas (“Rental Sub-Area” and “For-Sale Sub-Area”) within Pasadena, calculating different in lieu fees for each Sub-Area.

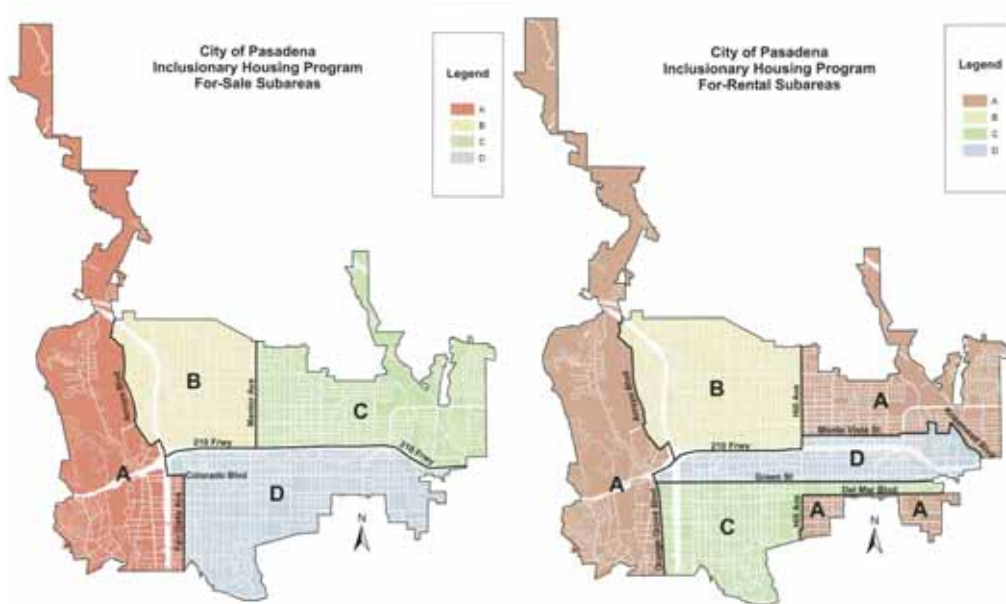
DRA’s calculation of in lieu fees is derived from an affordability gap analysis that looks at the differential between market prices of new housing units (rental and ownership) and the prices low and moderate income households can afford to pay, as determined in accordance with the IHO affordable housing requirements and certain analytical assumptions detailed later in this analysis.



In the first part of the analysis, DRA examines the rental and condominium Sub-Areas within Pasadena and provides a detailed summary of rental and for-sale housing market prices within each Sub-Area. Using information provided in the market survey, we then formulate new construction development prototypes for rental and condominium projects. In the final two sections of this analysis, we present our affordability gap and in lieu fee conclusions by Sub-Area for each of these housing product types.

## Housing Market Sub-Areas

This analysis uses the Rental Sub-Area and For-Sale Sub-Area maps shown below. Each map subdivides the Pasadena housing market into respective rental and for-sale Sub-Areas based on similarities and variations in housing market characteristics. We review market price data for new rental and condominium developments in order to establish market rent and sales prices for each Sub-Area. We then compare these market prices with the affordable rents and sales prices, as determined pursuant to the City’s affordability requirements. This comparison allows DRA to quantify rental and condominium affordability gaps for each Sub-Area, which in turn form the basis for the in lieu fees for each housing product type in each Sub-Area.





## Housing Prototypes

Three housing prototypes were used in this affordability gap and in lieu analysis. These prototypes were developed by DRA based on our market analysis of recently built and proposed rental and condominium projects in the City of Pasadena. For purposes of this analysis, the prototypes serve to establish prototypical unit sizes and the mix of bedroom types for rental and condominium developments.

## Summary of Proposed In Lieu Fees

Table 2 details the in lieu fees calculated for this analysis in comparison to the rates adopted by the City for Fiscal Year 2016.

<b>Table 2 City Of Pasadena In Lieu Fee Schedule</b>			
	<b>Adopted FY 2016 Rate</b>	<b>Proposed Rate</b>	<b>Percent Change</b>
10-49 Rental Units			
Sub-area A	TBD	<b>35.37</b>	NA
Sub-area B	1.14	<b>19.97</b>	1652%
Sub-area C	25.21	<b>32.89</b>	30%
Sub-area D	22.92	<b>35.37</b>	54%
50 + Rental Units			
Sub-area A	TBD	<b>49.12</b>	NA
Sub-area B	1.14	<b>27.74</b>	2333%
Sub-area C	34.39	<b>45.68</b>	33%
Sub-area D	32.1	<b>49.12</b>	53%
10-49 For Sale Units			
Sub-area A	43.56	<b>47.01</b>	8%
Sub-area B	16.04	<b>19.01</b>	19%
Sub-area C	26.36	<b>29.66</b>	13%
Sub-area D	20.63	<b>47.01</b>	128%
50 + For Sale Units			
Sub-area A	60.75	<b>65.30</b>	7%
Sub-area B	21.78	<b>26.40</b>	21%
Sub-area C	36.68	<b>41.20</b>	12%
Sub-area D	28.65	<b>65.30</b>	128%



## Rental Housing Affordability Gap Analysis

The rental housing affordability gap analysis compares estimated rent levels at hypothetical new apartment developments—located in each of the Rental Sub-Areas and based on the rental housing prototype—with the amount low, and moderate income households can afford to pay for rental housing.

As summarized in Table 1, the IHO requires the developer of a rental project with 10 or more dwelling units to set aside 10 percent of the units for low income (80 percent AMI) households and 5 percent for moderate income (120 percent AMI) households.

### Rental Market Sub-Area Analysis

DRA conducted a rental market survey by compiling current rental data for newer studio, one- and two-bedroom rental units at apartment projects constructed since 2001. We identified 4 projects in Sub-Area C and 7 projects in Sub-Area D that meet these criteria. Our survey suggests that little if any new rental development occurred in Sub-Areas A and B since 2001, accordingly we do not provide a gap analysis for these Sub-Areas, but used an alternate methodology as described on page 8. Table 3 summarizes the results of this analysis.

<b>Table 3</b>			
<b>Existing Apartment Rents</b>			
	<b><u>Studio</u></b>	<b><u>1-BR</u></b>	<b><u>2-BR</u></b>
Sub-Area C Average Rent	\$2,022	\$2,148	\$2,893
Sub-Area C Rent/SF	\$2.64	\$2.85	\$2.49
Sub-Area D Average Rent	\$1,981	\$2,232	\$2,780
Sub-Area D Rent/SF	\$3.12	\$2.88	\$2.50

Source: DRA survey of rental properties

Newly constructed rental projects can secure rent premiums relative to existing projects. Accordingly, we apply a 20 percent premium to estimate likely rents for new apartment developments, resulting in the following rents per square foot:

<b>Table 4</b>			
<b>Estimated New Apartment Rents/SF</b>			
	<b><u>Studio</u></b>	<b><u>1-BR</u></b>	<b><u>2-BR</u></b>
Sub-Area C Rent/SF	\$3.16	\$3.42	\$2.99
Sub-Area D Rent/SF	\$3.74	\$3.46	\$3.00



Table 5 presents estimated market-rate rents for new developments based on the rental prototype by multiplying the above rent-per-square foot figures by the unit square footage amounts indicated in the rental housing prototype.

<b>Table 5</b>			
<b>New Apartment Prototype Rents</b>			
	<u>Studio</u>	<u>1-BR</u>	<u>2-BR</u>
Unit Size: Sub-Areas C & D	700 SF	800 SF	1,100 SF
Sub-Area C Projected Rent	\$2,215	\$2,735	\$3,293
Sub-Area D Projected Rent	\$2,619	\$2,765	\$3,302

### Maximum Income and Rents

#### INCOME AND HOUSING COSTS

Using the 2015 HCD median income (effective March 2015) for Los Angeles County of \$64,800 for a family of 4, Table 6 shows current maximum annual household income and monthly rental housing cost for low and moderate income households, adjusted for family size and corresponding unit size. The calculation of maximum housing cost reflects the IHO requirement that no more than 30 percent of annual income be allocated to housing costs.

<b>Table 6</b>					
<b>Maximum Annual Income and Monthly Rental Affordable Housing Cost</b>					
2015 AMI for Family of 4: \$64,800					
<b>Household Size</b>	<b>Unit Type</b>	<u>Low Income (80% AMI)</u>		<u>Moderate Income (120% AMI)</u>	
		<b>Income</b>	<b>Housing Cost</b>	<b>Income</b>	<b>Housing Cost</b>
1 Person	Studio	\$36,288	\$907	\$54,432	\$1,361
2 Persons	1-BR	\$41,472	\$1,037	\$62,208	\$1,555
3 Persons	2-BR	\$46,656	\$1,166	\$69,984	\$1,750

#### UTILITY ALLOWANCES

DRA calculated affordable net rents by subtracting allowances for the utilities paid directly by the tenants from the maximum affordable housing cost. For this calculation, DRA has used 2015 utility allowances published by the Housing Authority of Pasadena, summarized in Table 7 below. These utility allowances assume residents pay for gas heating and water heating, electric cooking, air conditioning, and general electricity. It assumes the landlord pays for trash, water and sewer service.



<b>Table 7</b>	
<b>Utility Allowances</b>	
Housing Authority of Pasadena (2015)	
<b>Unit Type</b>	<b>Monthly Utility Allowance</b>
Studio	\$38
One-Bedroom	\$55
Two-Bedroom	\$70

Assumes residents pay for gas heating and water heating, electric cooking, air conditioning, and general electricity

#### MAXIMUM IHO RENTS

Table 8 summarizes maximum low and moderate income rents based on the assumptions described above in Tables 6 and 7.

<b>Table 8</b>		
<b>IHO Program Maximum Affordable Rents (June 2015)</b>		
<b>Unit Type</b>	<b>Maximum Rent</b>	
	<b>Low Income</b>	<b>Moderate Income</b>
Studio	\$869	\$1,323
1-BR	\$982	\$1,500
2-BR	\$1,096	\$1,680

#### Rental Housing Affordability Gap

Apartment units subject to IHO rent restrictions have less value relative to comparable market-rate units, resulting in an “affordability gap” that can be quantified by calculating the differences in capitalized value between market-rate and affordable units as a result of differences in net operating income (NOI) arising from IHO rent restrictions. This analysis assumes that market-rate units achieve rents indicated in Table 5, and that the affordable rents are at the levels indicated in Table 8. Other key assumptions of the capitalized NOI analysis include:

- Operating expenses before reserves and property taxes of \$3,850 per unit per year;
- Property taxes equal to 1 percent of the value of a unit (and, accordingly, lower for the rent restricted units);
- Replacement reserves of \$350 per unit per year;
- Other income of \$10 per unit per month applied to all units;
- Vacancy rate of 5 percent, applied to all units; and
- Capitalization rate of 6 percent.



Table 9 summarizes the conclusions of the affordability gap analysis.

<b>Table 9</b>		
<b>Rental Housing Affordability Gap by Sub-Area</b>		
Capitalized NOI Valuation		
	<u>Sub-Area C</u>	<u>Sub-Area D</u>
Assumed Cap Rate	6%	6%
<u>Market-Rate</u>		
NOI per Unit	23,302	24,473
Capitalized Value per Unit	388,368	407,878
<u>Moderate Income</u>		
NOI per Unit	11,163	11,163
Capitalized Value per Unit	186,043	186,043
<b>Moderate Income Gap to Market</b>	<b>202,325</b>	<b>221,836</b>
<u>Low Income</u>		
NOI per Unit	6,102	6,102
Capitalized Value per Unit	101,694	101,694
<b>Low Income Gap to Market</b>	<b>286,673</b>	<b>306,184</b>

### In Lieu Fee Calculation

The low and moderate income affordability gap figures in Table 9 serve as the basis for calculating appropriate in lieu fees for Rental Sub-Areas C and D. Table 10 presents these calculations on per-unit and per-square-foot basis. The in lieu fee calculations use the weighted average affordability gap as determined by applying the IHO affordability set-aside requirement of 10 percent low income and 5 percent moderate income. Table 10 also presents in lieu fees for Sub-Areas A and B. Due to the absence of new construction apartment development (and corresponding new construction rents) in these areas, DRA used the following procedures instead of the gap analysis described above for determining rental housing in lieu fees for these Sub-Areas:

- Given the housing market similarities between Sub-Areas A and D, DRA set the apartment in lieu fee for Sub-Area A equal to the Sub-Area D in lieu fee.
- DRA determined the Sub-Area B in lieu fee by calculating the following ratio: Sub-Area B condo in lieu fee divided by Sub-Area C condo in lieu fee. We then multiplied this ratio (0.61) by the rental in lieu fee calculated for Sub-Area C (\$45.68), yielding a rental in lieu fee of \$27.74 for Sub-Area B. In employing this methodology, we assume that the relationship between apartment prices in the two areas, as expressed in terms of a ratio, will be similar to the relationship between condo prices in the two areas.



As indicated in Table 10, the City’s in lieu fee policy calls for a 28 percent reduction in fees for projects with 10-49 units compared to projects with 50 or more units. The assessment of lower fees for smaller projects reflects long-standing City policy and is based on previous analysis conducted by the City.

<b>Table 10</b>				
<b>Rental In Lieu Fee by Sub-Area for Projects with 50 or More Units</b>				
	<b>Sub-Area A</b>	<b>Sub-Area B</b>	<b>Sub-Area C</b>	<b>Sub-Area D</b>
Weighted Average Affordability Gap			\$258,838	\$278,349
In Lieu Fee per Market-rate Unit			\$38,826	\$41,752
In Lieu Fee per Square Foot	\$49.12	\$27.74	\$45.68	\$49.12
<b>Rental In Lieu Fee by Sub-Area for Projects with 10-49 Units</b>				
In Lieu Fee per Square Foot	\$35.37	\$19.97	\$32.89	\$35.37

## Ownership Units Affordability Gap Analysis—Condominiums

### Condominium Market Sub-Area Analysis

DRA surveyed condominium sales of units built and sold between 2009 and 2014, identifying no new projects in Sub-Area A, three projects in Sub-Area B recording

12 sales, five projects in Sub-Area C also with a total of 12 sales, and 12 projects in Sub-Area D with a total of 168 sales.

Due to limited new construction condominium sales activity in Sub-Areas B and C, DRA applied an inflation factor to the specific year that experienced the highest volume of sale activity in these respective Sub-Areas. Specifically, using the condominium market survey, DRA selected a base year for each Sub-Area, which for Sub-Areas B and C was the calendar year during the survey period (2009-2014) in which most sales of newly constructed condominiums occurred. The base year for Sub-Area B was 2013, during which there were 6 sales, and the base year for Sub-Area C was 2011, during which there were 8 sales. DRA determined that the 32 sales in Sub-Area D during 2014 represented an adequate sample size, making it unnecessary to use an alternative base year, even though there were two years during the survey period that experienced more sales (2010 had 47 sales and 2013 had 46 sales). The Inflation factors used to determine average price and average price per square foot in Sub-Areas B and C are based on the rate of change in median condominium sale price in Pasadena as a whole, as reported on the Zillow.com website from the applicable base year through 2014. Accordingly, the inflation factor for Sub-Area D is 1.00 since DRA used 2014 sales data for this Sub-Area.



Table 11 summarizes the conclusions of this analysis.

<b>Table 11 Condominium Market Sales Analysis</b>							
<b>Sub-Area</b>	<b>Base Year</b>	<b>Base Year Sales</b>	<b>Base Year Avg. Sale Price</b>	<b>Base Year Avg. Price/Sq.Ft</b>	<b>Inflated from Base Year to 2014</b>		
					<b>Inflation Factor</b>	<b>Adjusted Avg. Price</b>	<b>Adjusted Avg. Price/Sq.Ft</b>
<b>Sub-Area B</b>	2013	6	\$499,500	\$338.76	<b>110%</b>	\$549,404	<b>\$372.64</b>
<b>Sub-Area C</b>	2011	8	\$843,563	\$326.95	<b>122%</b>	\$1,029,526	<b>\$398.88</b>
<b>Sub-Area D</b>	2014	32	\$1,179,097	\$631.95	<b>100%</b>	\$1,179,097	<b>\$631.95</b>

Using the condominium prototype, we estimated market sales prices for each Sub-Area by multiplying the unit square footage indicated for each bedroom type in the prototype by the adjusted average sale price per square foot (shown in Table 11) for the applicable Sub-Area. Table 12 gives the results of this analysis.

<b>Table 12 Market Price Estimates of New Condominiums Based on Sizes of Prototypes Units</b>			
	<b>1-Bedroom Units</b>	<b>2-Bedroom Units</b>	<b>3-Bedroom Units</b>
Unit Size per Prototype Sub-Areas B & D	710 SF	1,500 SF	1,750 SF
Sub-Area B	\$264,571	\$558,953	\$652,111
Sub-Area D	\$448,686	\$947,929	\$1,105,917
Unit Size per Prototype Sub-Area C	NA	NA	2,616 SF
Sub-Area C	NA	NA	\$1,043,472





## Maximum Income and Sales Prices

### INCOME AND HOUSING COSTS

Using the 2015 median income (effective March 2015) for Los Angeles County of \$64,800 for a family of four, Table 13 indicates current maximum annual household incomes and maximum affordable home purchase prices for moderate income households, adjusted for family size and corresponding unit size. The calculation of maximum affordable sale price reflects the IHO requirement that a household earning 110 percent of AMI allocate no more than 40 percent of annual income toward housing costs. In addition, the calculation includes the following assumptions:

1. Annual property tax equal to 1 percent of the restricted sale price;
2. Other housing expenditures (HOA dues, insurance, maintenance and utilities) of between \$3,600 and \$4,867 per year depending on unit size;
3. 5 percent down payment;
4. A 30-year, fully amortizing loan with an interest rate of 4.48 percent; and
5. Private mortgage insurance (PMI) of .75% of loan balance.

<b>Table 13</b>			
<b>Maximum Annual Income and Affordable Sale Price</b>			
2015 AMI for Family of 4: \$64,800			
<b>Household Size</b>	<b>Unit Type</b>	<b>Moderate Income (120% AMI)</b>	<b>Maximum Affordable Sale Price</b>
2 Person	1-BR	\$62,208	\$263,865
3 Person	2-BR	\$69,984	\$294,880
4 Person	3-BR	\$77,760	\$324,752

Maximum affordable sale price based on 110% AMI.

## Condominium Ownership Affordability Gap

Table 14 details the affordability gap by unit size for each Sub-Area, and then provides the calculation of the average affordability gap for the condominium prototype project assuming a unit distribution of 10 percent 1-bedroom units, 25 percent 2-bedroom units and 65 percent 3-bedroom units.



<b>Table 14</b>			
<b>Condominium Affordability Gap for Moderate Income Households (120% AMI)</b>			
	<b>Sub-Area B</b>	<b>Sub-Area C</b>	<b>Sub-Area D</b>
<b>1-Bedroom Units</b>			
Market Price	\$264,571	NA	\$448,686
Affordable Price	\$264,000	\$264,000	\$264,000
Affordability Gap	(\$19,429)	NA	\$184,686
<b>2-Bedroom Units</b>			
Market Price	\$558,953	NA	\$947,929
Affordable Price	\$295,000	\$295,000	\$295,000
Affordability Gap	\$263,953	NA	\$652,929
<b>3-Bedroom Units</b>			
Market Price	\$652,111	\$1,043,472	\$1,105,917
Affordable Price	\$325,000	\$325,000	\$325,000
Affordability Gap	\$327,111	\$718,472	\$780,917
<b>Weighted Average</b>			
Market Price	\$590,068	\$1,043,472	\$1,000,697
Affordable Price	\$311,000	\$325,000	\$311,000
<b>Affordability Gap</b>	<b>\$278,700</b>	<b>\$718,500</b>	<b>\$689,300</b>

### Condominium In Lieu Fee Calculation

The affordability gap results presented in Table 14 serves as the basis for calculating an appropriate in lieu fee. Table 15, which presents in lieu fees by Sub-Area on both a per-unit and per-square-foot basis, summarizes DRA’s in lieu fee calculation.

Due to the absence of new construction condominium development sales data in Sub-Area A, DRA used the Sub-Area D in lieu fee for Sub-Area A, given the housing market similarities between the two areas.



<b>Table 15</b>				
<b>Condominium In Lieu Fees by Sub-Area Projects with 50 or More Units</b>				
	<b>Sub-Area A</b>	<b>Sub-Area B</b>	<b>Sub-Area C</b>	<b>Sub-Area D</b>
Affordability Gap	\$689,300	\$278,700	\$718,500	\$689,300
In Lieu Fee per Unit	\$103,395	\$41,805	\$107,775	\$103,395
<b><i>In Lieu Fee per Square Foot</i></b>	<b><i>\$65.30</i></b>	<b><i>\$26.40</i></b>	<b><i>\$41.20</i></b>	<b><i>\$65.30</i></b>
<b>Condominium In Lieu Fees by Sub-Area for Projects with 10-49 Units</b>				
In Lieu Fee per Square Foot	<b><i>47.01</i></b>	<b><i>19.01</i></b>	<b><i>29.66</i></b>	<b><i>47.01</i></b>



## 7. Inclusionary Housing Study

The City of Portland Housing Bureau (“City”) retained DRA to prepare a study to evaluate the economic feasibility of establishing an inclusionary housing policy and program for the City of Portland, in compliance with Senate Bill 1533, which was passed into law in March, 2016. Inclusionary housing zoning ordinances and programs require developers to rent or sell a specified percentage of housing units at restricted rents or prices that area affordable to specified income levels. SB 1533 allows Oregon cities and counties to adopt land use regulations establishing affordable rents or sales prices of up to 20 percent of units in a multifamily structure in exchange for one or more developer incentives.

DRA’s economic feasibility study examines the effect of alternative inclusionary housing inclusion rates, or set-asides, on residential financial feasibility and land values in Portland using a series of prototypical housing developments. It also estimates the economic value of various incentives that the City may provide to offset the cost to developers and operators of multifamily housing of including affordable units in their developments.

DRA worked closely with City staff and a Panel of Experts convened for the study to develop a series of residential prototypes that represent the types of projects currently being built in Portland and that reflect current and proposed underlying zoning designations in the City. The prototypes include large high- and mid-rise rental and owner housing prototypes as well as smaller low- and mid-rise rental developments. These prototypes form the basis of DRA’s economic analysis of alternative set-aside and income targeting policies and the value of incentives. DRA also worked with the Panel of Experts to develop a set of economic assumptions on which to base the analysis of set-asides and incentives. These assumptions were specified for low-, middle-, and high-cost/price scenarios that reflect the range of market conditions across the City’s mixed-use zones and the Central City. It is expected that most new development will occur in middle- and high-cost areas. The findings of the analysis will assist the City in evaluating policy options for the inclusionary housing program that will generate affordable housing units to meet needs in the community while being sensitive to current and future real estate market conditions.

### Summary of Key Findings

The City of Portland has a household population of approximately 615,900 (2015 American Community Survey) with about 253,800 households, of which 46% are renters and 54% are owners. In recent years, increases in residential market rents and sales prices have outstripped increases in median family income in the City of Portland, resulting in a marked reduction in housing affordability.



DRA used a Residual Land Value (RLV) analysis approach to evaluate the feasibility of the residential prototypes under current market assumptions and to evaluate the effect of inclusionary housing set-aside requirements. RLV methodology calculates the value of a development based on its income potential and subtracts the costs of development (excluding land but including an assumed return to the developer/investors), to yield the underlying value of the land. The resulting RLV's can be compared to current land prices to assess the feasibility of the development. DRA compared the RLVs from its prototype analysis to estimated current market land prices from the Panel of Experts, as well as to land prices derived from actual transactions by zoning category and FAR over the past ten years based on data provided by the local assessor's office. Key findings of DRA's RLV analysis, focusing on the middle-cost/price scenario, were summarized.

### **Feasibility of Market-Rate Residential Development**

- Assuming 100% market-rate development, the low-rise wood frame (two- to three-story) and mid-rise podium construction (four- to seven-story) prototypes for the Mixed-Use Zones produced RLVs that are generally within the range of recent land values reflected in assessor's land value data for the past several years. The RLV's are also within the range of the Panel of Experts' land value estimates for the low-rise prototypes, but fall below the Panel's estimates for land value in mid-rise Mixed-Use Zones.
- Podium-style construction in the Central City zones generates positive RLVs, but values that in most cases are lower than market land values as estimated from the Panel of Experts' estimates and assessor's data.
- Market-rate development of light gauge steel and steel-concrete concrete structures generates uniformly negative land values.
- Discussion of these results with the Panel of Experts and other Portland developers indicates that construction costs, which have been rising recently in the area's "hot" real estate market, are now stabilizing or even declining. This should help to improve the feasibility of development going forward.

### **Effect of Inclusionary Set-Asides and Incentives**

Based on the analysis of inclusionary set-asides and potential economic/financial incentives, DRA concludes that a mandatory inclusionary housing program requiring 20% of units to be affordable at 80% AMI would not have an overly detrimental effect on new residential development in Portland if the following incentives are also provided:



For Mixed-Use Zones and Central City Zones with an FAR below 5.0:

- A density bonus that meets the parameters provided in new proposals for the Mixed-Use Zones and the Central City.

The density bonus proposed for the Mixed-Use Zones ranges from 1.0 to 2.0 FAR, depending on the specific zone, while that proposed for the Central City equals 3.0.

- 10-year property tax exemption on affordable units or, for high-rise development
- CET exemption on affordable units.
- Exemption of density bonus units from parking requirements (Mixed-Use Zones only).

For higher-density zones with FARs above 5.0, additional incentives are needed due to the higher-cost of construction. These incentives may include:

- 10-year property tax exemption on all residential units; or
- A direct subsidy per affordable unit.

The City also desires to encourage deeper affordability of affordable units down to 60% of AMI, for which there is a greater need in the City. SDC waivers on affordable units are one such incentive that could be provided to encourage deeper income targeting.

Regulation and development impact fees on residential development that increase the costs of development, including inclusionary housing standards, will ultimately be passed through to the land owner in the form of reduced land prices. In order for developers to profitably develop new housing, they will bid down land prices to the level that makes development feasible, given market economics and zoning regulations affecting the amount of development that can be built on a particular site. However, land prices react more quickly to factors that increase land prices, such as increases in rents. Land prices tend to be slower to respond to factors that decrease land prices, including changing market conditions and increased regulation or fees, as owners who purchased recently may be reluctant to take a loss and others may be hesitant to adjust their expectations downward.

Land prices are also volatile in response to economic cycles and factors beyond the control of local government. Land will lose value in the higher cap rate environments.

If the residual land value is negative, that indicates that capitalized values are not sufficient to cover the other development costs besides land, and new development will be halted until market conditions change. Therefore, very low or negative RLVs such as shown for the steel and concrete prototypes suggest that development of these project types would not occur until market conditions change.



## Methodology and Definition of Key Terms

DRA evaluated the economic feasibility of the prototypical developments using a Residual Land Value (RLV) analysis approach. Land residual analysis methodology calculates the value of a development based on its income potential and subtracts the costs of development (excluding land but including an assumed return to the developer/investors), to yield the underlying value of the land. When evaluating alternative land uses, the alternative that generates the highest value to a site is considered its highest and best use. An alternative that generates a value to the land that is negative, or well below market land sales prices, is financially infeasible. The RLV analysis calculates the value of rental prototypes at a point in time based on the estimated stabilized net operating income of the prototype (see definition below).

DRA estimated the “vertical” development costs of each prototype, including site improvements, building and parking construction, and soft costs, based on interviews with developers active in the Portland market and review by the Panel of Experts convened for the study. The developer interviews and Panel of Experts also generated estimated current market land values for each prototype corresponding to the assumed FAR of the prototype.

DRA calculated the net operating income (NOI) from each prototype based on estimated market rents and operating costs for the rental units and condominium sales prices for the owner units. Net operating income for the apartment uses is capitalized at estimated capitalization rates to determine the value of the developed property. Net operating income and net sales income were calculated for the prototypes assuming 100% market-rate units, and under alternative inclusionary housing set-asides and income targets. This allows a comparison of the financial performance of the prototypes under alternative inclusionary housing program options.

Land costs, vertical development costs, revenues and operating costs were estimates under “low-,” “middle-” and “high-” cost/price scenarios. For the prototypes developed to represent the mixed-use zones of the City, the low-, middle- and high scenarios represent the range of market conditions across areas in the City in which development is currently occurring. For the Central City prototypes, the scenarios represent the range of market values for new development in the Central City.

Key terms and assumptions used in this analysis are as follows:

- **Residual land value (RLV):** Land residual analysis calculates the value of a development based on its income potential and subtracts the costs of development and an assumed return on both vertical development costs and the land to yield the underlying value of the land. RLV is generally measured as the dollar value per square foot of site area. For the land residual analysis, feasibility is measured by residual land values that approach or exceed current market land sales prices after deducting development costs and an assumed return of 25% on vertical development costs and land.
- **Cap rate:** A capitalization (or “cap”) rate is the ratio of net operating income to project fair market value, or project sales price, exhibited in the market and reflects the rate of return



required by investors in rental property. Cap rates are tracked by land use and market area based on observed property sales. This analysis uses cap rates to estimate the fair market value of the rental prototypes. Net operating income for the apartment uses is capitalized at an estimated cap rate to determine the estimated fair market value of the developed and stabilized property. The analysis was conducted under two capitalization (“cap”) rate assumptions. Based on consultation with local developers, the Panel of Experts and a review of the assumptions used by the assessor’s office for the City’s existing Multiple-Unit Limited Tax Exemption (MULTE) program, current cap rates in Portland are approximately 4.75% for residential properties. Since cap rates today are near historically low levels, the higher cap rate assumption adds 50 basis points to the lower cap rates for comparison with a prospective economic view.

- **Stabilized net operating income:** During the lease-up period, a rental development will see a gradual increase in occupancy until the development is almost fully occupied and considered stabilized. Even after initial lease-up is completed, the development will experience some level of vacancy on an annual basis as the turnover of existing tenants occurs. For the rental developments, DRA analyzes their net operating income (which equals total possible gross rental income at full occupancy less and assumed vacancy less operating costs) assuming a stabilized vacancy rate of 5% for market-rate units and 3% for affordable units.

## Assumptions

The Portland Housing Bureau convened a Panel of Experts composed of developers, advocates and community representatives to provide input to DRA regarding the formulation of prototypical housing developments and a set of cost and revenue assumptions to be used in the economic feasibility assessment. DRA conducted the economic analysis using 30 housing prototypes developed in conjunction with City staff and the Panel of Experts that approximate housing developments that have been recently developed and are in the development pipeline in the City. These initial assumptions were subsequently reviewed by the Panel of Experts and their input was incorporated into the revised prototypes and assumptions described in this report.

### Development Prototypes

DRA modeled a series prototypes representing different types of residential development that potentially could be built in the City’s mixed-used zones across the City, as well as additional prototypes appropriate for the Central City, based on current zoning and proposed changes under the Comprehensive Plan update that is currently underway in the City.

The 30 housing prototypes used in the economic analysis are summarized below in terms of total housing units, tenure, number of stories, density, FAR, unit bedroom mix, unit sizes, parking requirements and other characteristics.





**Table 1**  
**Housing Prototypes**  
**City of Portland Inclusionary Housing Study**

Prototype	Tenure	Constr. Type	Parking Type	FAR	Site Coverage	Est. Stories	Total Units
MU1	Renter	Wood	Surface	1.5	50%	3	20
MU2	Renter	Wood	Tuck-Under	2.5	85%	4	64
MU3	Renter	Podium	Tuck-Under	4.0	85%	6	106
MU4	Renter	Podium	Underground	3.0	85%	5	78
MU5	Renter	Podium	Underground	5.0	85%	7	143
CC1	Renter	Podium	Underground	4.2	80%	4	112
CC2	Renter	Podium	Underground	4.2	80%	4	119
CC3	Renter	Podium	Underground	5.0	85%	6	143
CC4	Renter	Podium	Underground	5.0	85%	6	149
CC5	Renter	Light Gauge	Underground	7.0	85%	9	209
CC6	Renter	S/C	Underground	18.0	85%	30	532
CC7	Renter	S/C	Underground	12.0	85%	15	352
CC8	Renter	S/C	Underground	18.0	85%	30	537
CC9	Renter	S/C	Underground	12.0	85%	15	358
O1	Owner	Light Gauge	Underground	2.4	80%	3	18
O2	Owner	Light Gauge	Underground	3.9	80%	5	61
O3	Owner	S/C	Underground	5.0	80%	7	78
O4	Owner	S/C	Underground	5.0	80%	6	77
O5	Owner	S/C	Underground	5.0	80%	6	77
O6	Owner	S/C	Underground	6.0	85%	8	103
O7	Owner	S/C	Underground	18.0	85%	30	307
O8	Owner	S/C	Underground	7.0	85%	9	120
CC1A	Renter	S/C	Underground	7.3	80%	9	210
CC3A	Renter	S/C	Underground	8.0	80%	9	232
CC5A	Renter	S/C	Underground	10.0	85%	13	298
CC6A	Renter	S/C	Underground	21.0	85%	35	622
CC9A	Renter	S/C	Underground	15.0	85%	19	441
CC 3:1	Renter	Podium	Tuck-Under	3.0	85%	3	82
CC 6:1	Renter	Podium	Underground	6.0	85%	6	171
CC 9:1	Renter	S/C	Underground	9.0	85%	9	261

Notes: Light Gauge = light gauge steel; S/C = steel and concrete



### Inclusionary Housing Scenarios

DRA compared the financial performance of the prototypes assuming 100% market-rate development with alternative inclusionary housing scenarios providing varying affordable unit set-aside percentages and income targets. DRA analyzed the four inclusionary scenarios developed in conjunction with City staff summarized in Table 2.

<b>Table 2</b> <b>Inclusionary Housing Scenario Set-Aside and Income Targeting Assumptions</b> <b>City of Portland Inclusionary Housing Study</b> <b>2016</b>		
	<b>% of Total Units</b>	<b>Target Percentage of MFI</b>
Alternative 1	10%	80% of MFI
Alternative 2	10%	60% of MFI
Alternative 3	20%	80% of MFI
Alternative 4	20%	80% of MFI

Source: City of Portland; DRA.

### Estimated Prototype Development Costs

DRA estimated vertical development costs for each of the prototypes, including, hard construction costs and soft or indirect costs. Estimated market land values were also estimated, for comparison with calculated residual land values.

DRA worked with the Panel of Experts to develop land and development costs representing current 2016 costs. Development projects coming on line today started construction several months to several years ago, and land and construction costs have increased substantially since that time period. Therefore, vertical construction costs are likely overstated for projects coming on line today. Since the prototypes are intended to reflect projects being completed in today's market, no escalation of rents and operating costs is assumed.

#### LAND PRICES

Current market land prices were estimated for the prototypes based on a review of data from the County Assessor's Office and interviews with the Panel of Experts and local developers. The costs are intended to reflect recent purchases in the market. Land costs are shown on an estimated per housing unit and a per site square foot basis. Since both residential and commercial development is allowed on many sites, especially downtown sites and those with mixed-use zoning, residential



and commercial developers compete for some the same sites. Assessor's data was compiled based on actual transactions by year of sale back to 2010.

The analysis of Assessor's data generated land values through 2015 and the first half of 2016 that are significantly lower than the assumptions developed in conjunction with the Panel of Experts. The data show a significant amount of variability by year and zoning/FAR category, with a general upward trend.

#### HARD CONSTRUCTION COSTS

Hard construction costs, including on-site improvements, building and parking costs, were estimated for the prototypes based on a review of available pro formas, input from the Panel of Experts and individual developer interviews. These data sources confirm that hard construction costs have been rising, in large part because of the relatively "hot" real estate market in Portland, which results in competition for contractors, particularly for high-rise steel and concrete construction, as there are a limited number of companies providing these services. Therefore, these assumptions are considered to overstate hard costs for projects that began construction several years ago and are coming on the market today.

#### SOFT (INDIRECT) DEVELOPMENT COSTS

Soft or indirect costs were estimated based on individual developer interviews and input from the Panel of Experts, as well as on DRA's experience with development nationwide. Soft costs are assumed to include:

- Architectural, engineering and design fees;
- SDC fees;
- Legal and closing costs;
- Taxes and insurance (during the construction period);
- Interest during construction (land and construction loans);
- Financing fees; and
- Marketing and leasing.

Total soft costs are estimated to equal 30% of hard costs.

#### TOTAL DEVELOPMENT COSTS

Total development costs equal the sum of the above categories of development costs. The development cost assumptions used in this analysis and the resulting development cost budgets for each prototype are detailed in Table 4. This table and the rest of the tables referred to in this section are presented at the end of the text.



## **Estimated Market Rents and Sales Prices**

Assumptions were developed under low-, middle-, and high-cost/price scenarios, representing the range of economic conditions across the Central City or the City of Portland, as appropriate for each prototype.

### **APARTMENT RENTS, VACANCY RATES AND OPERATING COSTS**

Estimated rental income is calculated based on an average rent per net square foot that varies by prototype. The net operating income calculations assume a 5% vacancy rate on market-rate rental units and 3% vacancy rate for affordable units. For market-rate units, monthly income includes parking income in addition to the unit rents.

DRA developed per unit stabilized operating costs for the rental properties. Operating costs vary depending upon the level of services and amenities expected with a certain rent level and the property taxes associated with the location of the property. The highest operating costs are for the high-rise properties, which offer a high level of services and amenities and have the highest property taxes because of their high property values.

### **CONDOMINIUM SALES PRICES**

Most recent residential development in Portland has served the rental market. However, DRA also analyzed the effect of inclusionary set-asides on condominium prototypes. Condominium sales prices per net square foot are estimated at \$500 for the low scenario, \$600 for the middle scenario and \$700 for the high scenario. Condominium sales costs are estimated at 5% of gross sales prices.

## **Affordable Rents and Sales Prices**

In order to analyze the impact of inclusionary affordable housing percentages on prototype financial feasibility, DRA calculated affordable monthly net rents for units ranging from studios to three-bedroom units. For the purposes of this analysis, we calculated affordable rents at 30% of gross income, which is assumed to include utilities and any parking charges. Affordable monthly housing expense is adjusted by household size based on an assumed average occupancy of 1 person for a studio and 1.5 persons per bedroom for the larger units. These figures indicate that a family of three at 60 percent of area median income should have to spend no more than \$990 per month for rent plus utilities on a two-bedroom unit based on the 2016 HUD median family income of \$73,300 for the Portland-Vancouver-Hillsboro HMFA.

DRA estimated utility costs for the inclusionary housing units based on utility allowances from the City's website, effective July 1, 2016. For this analysis, DRA assumes tenant-paid utility allowances include electric heating, cooking and water heating, other electric and monthly electric service charges. Natural gas utility allowances are lower than electric.



DRA estimated the net operating income from affordable units by income level at 80% of MFI and 60% of MFI income levels, after deducting a 3% vacancy allowance and the same estimated operating costs as the market-rate units.

For the inclusionary condominium units, DRA estimated the affordable sales price by calculating affordable housing expense at 30% of gross income for mortgage principal and interest, property taxes, homeowner's insurance, HOA dues, and any parking charges.

The affordable mortgage is calculated assuming a mortgage interest rate of 5.25% and a 30-year mortgage term. The affordable sales price equals the affordable mortgage plus a 5% downpayment.

## Economic Incentives

DRA estimated the value of potential economic incentives that the City might offer to help offset the cost to developers and operators of rental housing of incorporating affordable units into their developments. SB 1533 requires cities imposing mandatory inclusionary housing requirements to offer at least one incentive. DRA analyzed the following economic incentives:

- A density bonus;
- A property tax exemption (PTE) on affordable units or on all units in the development;
- A construction excise tax (CET) waiver on affordable units or on all units in the development; and
- System development charge (SDC) waiver on affordable units or on all units in the development.

The assumptions used in estimating the economic value of these incentives are described below.

### Density Bonus

DRA modeled the value of a density bonus by comparing the economic performance, in terms of RLV, of the baseline (pre-bonus) prototype with a second version of the prototype incorporating a density bonus.

For the City's Mixed-Use Zones, the density bonus is established per zone, under proposed revisions to the City's Comprehensive Plan. A series of prototypes for the Mixed-Use Zones were developed to represent the base and the maximum FAR with the bonus to permit pair-wise comparisons for each of the following zones:



**Table 3**

<b>Zone</b>	<b>Base Zone FAR</b>	<b>Maximum FAR with Bonus</b>
CM1	1.5	2.5
CM2	2.5	4.0
CM3	3.0	5.0

For the Central City, an increase in FAR of 3.0 is contemplated as the amount of the density bonus under proposed revisions to the City’s Comprehensive Plan. A series of prototypes for the Central City were developed to represent the base and the maximum FAR with the bonus to permit pair-wise comparisons.

**Property Tax Exemption**

The City’s existing Multiple-Unit Limited Tax Exemption (MULTE) Program provides a 10-year property tax exemption to residential developments of at least ten units in eligible areas if 20% of units are affordable to households earning 60% of MFI (or 80% of MFI when the project’s market rents are equal to or exceed 120% of MFI).

DRA modeled the property tax exemption using the methodology used by the City for the MULTE program. The assessed value of a development equals is calculated by capitalizing the net operating income of the project by a cap rate of 4.75% plus the Assessor’s Add-on of 1.40% (for an Assessor’s Cap Rate of 6.15). The assessed value is multiplied by the applicable Millage Rate and the current year’s Change Property Ratio. For this analysis, the Millage Rate is assumed to equal 0.0223213 for the mixed-use zones and 0.0239888 for the Central City prototypes. The 2015 Change Property Ratio of 0.4917 is used for these calculations.

**CET and SDC Fee Waivers**

DRA estimated the value of CET and SDC fee waivers based on the estimated cost of these fees for each prototype.

CET fees are estimated at 1% of construction valuation, based on the recently adopted ordinance in the City. Construction valuation is estimated using the valuation methods described on the City’s Bureau of Development Services (BDS) website. Construction permit valuation is estimated by applying a per square foot valuation factor by land use and construction type. DRA applied the City’s current valuation schedule for multi-family residential uses, based on the construction type of each prototype.

SDC fees for each prototype are estimated based on the City’s 2016 SDC fee schedule. These estimates include fees for sanitary sewer, storm water, Bureau of Transportation, and parks and recreation. It does not include Water Bureau fees as there is insufficient information on the prototypes’ water meter requirements to estimate water fees.



## Residual Land Value Analysis Results

### Feasibility of Market-Rate Residential Development

- Assuming 100% market-rate development, the low-rise wood frame (two- to three-story) and mid-rise podium construction (four- to seven-story) prototypes for the Mixed-Use Zones produced RLVs that are generally within the range of recent land values reflected in assessor's land value data for the past several years. The RLV's are also within the range of the Panel of Experts' land value estimates for the low-rise prototypes, but fall below the Panel's estimates for land value in mid-rise Mixed-Use Zones.
- Podium-style construction in the Central City zones generates positive RLVs, but values that in most cases are lower than market land values as estimated from the Panel of Experts' estimates and assessor's data.
- Market-rate development of light gauge steel and steel-concrete concrete structures generates uniformly negative land values.
- Discussion of these results with the Panel of Experts and other Portland developers indicates that construction costs, which have been rising recently in the area's "hot" real estate market, are now stabilizing or even declining. This should help to improve the feasibility of development going forward.

### Effect of Inclusionary Set-Asides and Incentives

Based on the analysis of inclusionary set-asides and potential economic/financial incentives, DRA concludes that a mandatory inclusionary housing program requiring 20% of units to be affordable at 80% AMI would not have an overly detrimental effect on new residential development in Portland if the following incentives are also provided:

For Mixed-Use Zones and Central City Zones with an FAR below 5.0:

- A density bonus that meets the parameters provided in new proposals for the Mixed-Use Zones and the Central City.  
The density bonus proposed for the Mixed-Use Zones ranges from 1.0 to 2.0 FAR, depending on the specific zone, while that proposed for the Central City equals 3.0.
- 10-year property tax exemption on affordable units or, for high-rise development
- CET exemption on affordable units.
- Exemption of density bonus units from parking requirements (Mixed-Use Zones only).

For higher-density zones with FARs above 5.0, additional incentives are needed due to the higher-cost of construction. These incentives may include:

- 10-year property tax exemption on all residential units; or
- A direct subsidy per affordable unit.



The City also desires to encourage deeper affordability of affordable units down to 60% of AMI, for which there is a greater need in the City. SDC waivers on affordable units are one such incentive that could be provided to encourage deeper income targeting.

Regulation and development impact fees on residential development that increase the costs of development, including inclusionary housing standards, will ultimately be passed through to the land owner in the form of reduced land prices. In order for developers to profitably develop new housing, they will bid down land prices to the level that makes development feasible, given market economics and zoning regulations affecting the amount of development that can be built on a particular site. However, land prices react more quickly to factors that increase land prices, such as increases in rents. Land prices tend to be slower to respond to factors that decrease land prices, including changing market conditions and increased regulation or fees, as owners who purchased recently may be reluctant to take a loss and others may be hesitant to adjust their expectations downward.

Land prices are also volatile in response to economic cycles and factors beyond the control of local government. Land will lose value in the higher cap rate environments.

If the residual land value is negative, that indicates that capitalized values are not sufficient to cover the other development costs besides land, and new development will be halted until market conditions change. Therefore, very low or negative RLVs such as shown for the steel and concrete prototypes suggest that development of these project types would not occur until market conditions change.

## In-Lieu Fees

If the City desires to encourage the production of units, DRA recommends that the City adopt in lieu fees that equal or exceed, up to statutory limits, the economic equivalent to the developer of providing the unit on site. This fee is approximated by the difference in the capitalized value of the project with no affordable units, and the capitalized value of the project with the affordable housing set-aside and income targeting required under the program. Fees are commonly applied either per housing unit or per gross square feet of residential building area (excluding parking areas).





**Table 4**  
**Residual Land Value Under Inclusionary Housing Alternatives with Incentives**  
**Rental Housing Prototypes**  
**Low Cap Rate Assumption, Middle Cost/Price Scenario**

Zone/Incentives	Constr./ Stab. Period Prototyp (Months) FAR	ESTIMATED LAND		RESIDUAL LAND VALUE PER SF SITE AREA						
		VALUE PER SF (1)		Market Rate	Alt 1: 10% @ 80% MFI	Alt 2: 10% @	Alt 3: 20% @	Alt 4: 20% @		
		Value	Year (2)							
<b>CM1</b>										
<i>Without PTE</i>	MU1	18	1.5	\$46	2014	\$66	\$53	\$42	\$39	\$18
<i>With PTE on Afford. Units</i>	MU1	18	1.5	\$46	2014	\$66	\$58	\$48	\$50	\$28
<i>With PTE on All Units</i>	MU1	18	1.5	\$46	2014	\$66	\$109	\$96	\$93	\$68
<b>CM2</b>										
<i>Without PTE</i>										
No Incentive	MU2	18	2.5	\$93	2014	\$69	\$39	\$20	\$21	-\$11
Density Bonus	MU3	24	4	\$93	2014	\$112	\$54	\$27	-\$11	-\$67
<i>With PTE on Afford. Units</i>										
MULTE Only	MU2	18	2.5	\$93	2014	\$69	\$48	\$29	\$38	\$5
Density Bonus	MU3	24	4	\$93	2014	\$112	\$72	\$44	\$22	-\$37
<i>With PTE on All Units</i>										
MULTE Only	MU2	18	2.5	\$93	2014	\$69	\$126	\$104	\$105	\$67
Density Bonus	MU3	24	4	\$93	2014	\$112	\$229	\$198	\$153	\$86
<b>CM3</b>										
<i>Without MULTE</i>										
No Incentive	MU4	24	3	\$57	2014	\$62	\$14	-\$7	-\$35	-\$78
Density Bonus	MU5	24	5	\$57	2014	\$157	\$59	\$22	-\$50	-\$125
<i>With PTE on Afford. Units</i>										
MULTE Only	MU4	24	3	\$57	2014	\$62	\$27	\$5	-\$11	-\$56
Density Bonus	MU5	24	5	\$57	2014	\$157	\$84	\$46	-\$4	-\$82
<i>With PTE on All Units</i>										
MULTE Only	MU4	24	3	\$57	2014	\$62	\$142	\$117	\$84	\$33
Density Bonus	MU5	24	5	\$57	2014	\$157	\$308	\$265	\$179	\$90
<b>CX</b>										
<i>Without PTE</i>										
No Incentive	CC1	24	4.25	\$148	2014	\$77	\$6	-\$26	-\$56	-\$115
No Retail	CC2	24	4.25	\$148	2014	\$96	\$26	-\$6	-\$46	-\$110
Density Bonus	CC1A	24	7.25	\$148	2014	-\$344	-\$506	-\$562	-\$669	-\$781
Density Bonus and Parking	CC1AP	24	7.25	\$148	2014	-\$202	-\$412	-\$469	-\$625	-\$747
<i>With MULTE on Afford. Units</i>										
No Incentive	CC1	24	4.25	\$148	2014	\$77	\$26	-\$7	-\$18	-\$79
No Retail	CC2	24	4.25	\$148	2014	\$96	\$47	\$15	-\$6	-\$73
Density Bonus	CC1A	24	7.25	\$148	2014	-\$344	-\$466	-\$523	-\$594	-\$711
Density Bonus and Parking	CC1AP	24	7.25	\$148	2014	-\$202	-\$376	-\$433	-\$591	-\$715
<i>With PTE on All Units</i>										
No Incentive	CC1	24	4.25	\$148	2014	\$77	\$207	\$169	\$133	\$62
No Retail	CC2	24	4.25	\$148	2014	\$96	\$239	\$201	\$153	\$76
Density Bonus	CC1A	24	7.25	\$148	2014	-\$344	-\$103	-\$170	-\$296	-\$431
Density Bonus and Parking	CC1AP	24	7.25	\$148	2014	-\$202	-\$48	-\$114	-\$290	-\$430
<b>EX</b>										
<i>Without PTE</i>										
No Incentive	CC3	24	5.00	\$203	2012 (3)	\$168	\$87	\$50	-\$4	-\$79
No Retail	CC4	24	5.00	\$203	2012 (3)	\$186	\$99	\$60	\$3	-\$78
Density Bonus	CC3A	36	8.00	\$220	2013	-\$377	-\$552	-\$614	-\$744	-\$869
Density Bonus and Parking	CC3AP	36	8.00	\$220	2013	-\$384	-\$625	-\$688	-\$880	-\$1,016
<i>With PTE on Afford. Units</i>										
No Incentive	CC3	24	5.00	\$203	2012 (3)	\$168	\$113	\$75	\$44	-\$34
No Retail	CC4	24	5.00	\$203	2012 (3)	\$186	\$126	\$86	\$52	-\$31
Density Bonus	CC3A	36	8.00	\$220	2013	-\$377	-\$508	-\$570	-\$662	-\$793
Density Bonus and Parking	CC3AP	36	8.00	\$220	2013	-\$384	-\$585	-\$648	-\$843	-\$982
<i>With PTE on All Units</i>										
No Incentive	CC3	24	5.00	\$203	2012 (3)	\$168	\$346	\$302	\$237	\$147
No Retail	CC4	24	5.00	\$203	2012 (3)	\$186	\$367	\$320	\$252	\$155
Density Bonus	CC3A	36	8.00	\$220	2013	-\$377	-\$106	-\$179	-\$334	-\$486
Density Bonus and Parking	CC3AP	36	8.00	\$220	2013	-\$384	-\$223	-\$295	-\$511	-\$669



Zone/Incentives	Prototypi	Constr./ Stab. Period		ESTIMATED LAND VALUE PER SF (1)		RESIDUAL LAND VALUE PER SF SITE AREA				
		(Months)	FAR	Value	Year (2)	Market Rate	Alt 1: 10% @ 80% MFI	Alt 2: 10% @	Alt 3: 20% @	Alt 4: 20% @
<b>RX #1 (80% Lot Coverage)</b>										
<i>Without PTE</i>										
No Retail	CC5	36	7.00	\$218	2013	-\$138	-\$300	-\$356	-\$462	-\$574
Density Bonus (No Retail)	CC5A	36	10.00	\$218	2013	-\$435	-\$665	-\$745	-\$903	-\$1,064
Density Bonus and Parking	CC5AP	36	10.00	\$218	2013	-\$458	-\$770	-\$852	-\$1,093	-\$1,267
<i>With PTE on Afford. Units</i>										
No Retail	CC5	36	7.00	\$218	2014	-\$138	-\$260	-\$317	-\$389	-\$505
Density Bonus (No Retail)	CC5A	36	10.00	\$218	2014	-\$435	-\$608	-\$690	-\$798	-\$965
Density Bonus and Parking	CC5AP	36	10.00	\$218	2014	-\$458	-\$718	-\$801	-\$1,045	-\$1,222
<i>With PTE on All Units</i>										
No Retail	CC5	36	7.00	\$218	2014	-\$138	\$100	\$33	-\$94	-\$229
Density Bonus (No Retail)	CC5A	36	10.00	\$218	2014	-\$435	-\$92	-\$188	-\$376	-\$569
Density Bonus and Parking	CC5AP	36	10.00	\$218	2014	-\$458	-\$253	-\$348	-\$618	-\$818
<b>RX #2 (60% Lot Coverage)</b>										
<i>Without PTE</i>										
No Incentive	CC6	36	18.00	\$218	2013	-\$805	-\$1,209	-\$1,350	-\$1,640	-\$1,926
Density Bonus	CC6A	36	21.00	\$218	2013	-\$937	-\$1,408	-\$1,574	-\$1,897	-\$2,229
Density Bonus and Parking	CC6AP	36	21.00	\$218	2013	-\$973	-\$1,631	-\$1,799	-\$2,316	-\$2,676
<i>With PTE on Afford. Units</i>										
No Incentive	CC6	36	18.00	\$218	2013	-\$805	-\$1,106	-\$1,251	-\$1,452	-\$1,750
Density Bonus	CC6A	36	21.00	\$218	2013	-\$937	-\$1,289	-\$1,457	-\$1,677	-\$2,022
Density Bonus and Parking	CC6AP	36	21.00	\$218	2013	-\$973	-\$1,523	-\$1,694	-\$2,217	-\$2,582
<i>With PTE on All Units</i>										
No Incentive	CC6	36	18.00	\$218	2013	-\$805	-\$185	-\$354	-\$700	-\$1,044
Density Bonus	CC6A	36	21.00	\$218	2013	-\$937	-\$212	-\$409	-\$795	-\$1,193
Density Bonus and Parking	CC6AP	36	21.00	\$218	2013	-\$973	-\$553	-\$747	-\$1,324	-\$1,739
<b>RX #3</b>										
<i>Without PTE</i>	CC7	36	12.00	\$218	2013	-\$551	-\$830	-\$927	-\$1,096	-\$1,283
<i>With PTE on Afford. Units</i>	CC7	36	12.00	\$218	2013	-\$551	-\$763	-\$861	-\$972	-\$1,166
<i>With PTE on All Units</i>	CC7	36	12.00	\$218	2013	-\$551	-\$156	-\$271	-\$473	-\$698
<b>RH #1</b>										
<i>Without PTE</i>	CC8	36	18.00	\$218	2013	-\$790	-\$1,199	-\$1,343	-\$1,634	-\$1,923
<i>With PTE on Afford. Units</i>	CC8	36	18.00	\$218	2013	-\$790	-\$1,096	-\$1,243	-\$1,445	-\$1,745
<i>With PTE on All Units</i>	CC8	36	18.00	\$218	2013	-\$790	-\$167	-\$339	-\$686	-\$1,033
<b>RH #2</b>										
<i>Without PTE</i>										
No Incentive	CC9	36	12.00	\$218	2013	-\$523	-\$802	-\$899	-\$1,081	-\$1,274
Density Bonus	CC9A	36	15.00	\$218	2013	-\$682	-\$1,013	-\$1,130	-\$1,369	-\$1,604
Density Bonus and Parking	CC9AP	36	15.00	\$218	2013	-\$709	-\$1,177	-\$1,297	-\$1,666	-\$1,921
<i>With PTE on Afford. Units</i>										
No Retail	CC9	36	12.00	\$218	2013	-\$523	-\$734	-\$832	-\$955	-\$1,155
Density Bonus	CC9A	36	15.00	\$218	2013	-\$682	-\$928	-\$1,048	-\$1,213	-\$1,458
Density Bonus and Parking	CC9AP	36	15.00	\$218	2013	-\$709	-\$1,101	-\$1,222	-\$1,596	-\$1,855
<i>With PTE on All Units</i>										
No Retail	CC9	36	12.00	\$218	2013	-\$523	-\$115	-\$230	-\$447	-\$678
Density Bonus	CC9A	36	15.00	\$218	2013	-\$682	-\$164	-\$303	-\$588	-\$871
Density Bonus and Parking	CC9AP	36	15.00	\$218	2013	-\$709	-\$412	-\$550	-\$963	-\$1,258
<b>CC 3:1 FAR</b>										
No PTE	CC 3:1	24	3.00	\$148	2014	\$189	\$140	\$119	\$84	\$38
Aff PTE	CC 3:1	24	3.00	\$148	2014	\$189	\$155	\$133	\$111	\$64
100% PTE	CC 3:1	24	3.00	\$148	2014	\$189	\$288	\$262	\$221	\$166
<b>CC 6:1 FAR</b>										
No PTE	CC 6:1	24	6.00	\$180	2014	\$203	\$93	\$44	-\$1	-\$91
Aff PTE	CC 6:1	24	6.00	\$180	2014	\$203	\$123	\$74	\$57	-\$37
100% PTE	CC 6:1	24	6.00	\$180	2014	\$203	\$400	\$343	\$289	\$180
<b>CC 9:1 FAR</b>										
No PTE	CC 9:1	36	9.00	\$135	2013	-\$427	-\$629	-\$699	-\$829	-\$967
Aff PTE	CC 9:1	36	9.00	\$135	2013	-\$427	-\$579	-\$650	-\$736	-\$880
100% PTE	CC 9:1	36	9.00	\$135	2013	-\$427	-\$127	-\$211	-\$365	-\$532

Notes: PTE = Property Tax Exemption. MULTE = Multifamily Tax Exemption Program.

- 1) Average price according to analysis of assessor's data by zone for Mixed-Use (MU) prototypes and by FAR for Central City (CC) prototypes.
- 2) Year of data used corresponds to approximate date construction would have begun for prototypical projects reaching stabilization in 2016.
- 3) Insufficient data for 5.0 FAR available in 2013 and 2014 so 2012 data used.

Sources: City of Portland; DRA.



## 8. Affordable Housing Incentive Program Economic Analysis

In May 2013, the Seattle City Council adopted Resolution 31444, which sets out a work program for reviewing and potentially revising the current affordable housing incentive program and reviewing best practices for affordable housing production and preservation. Review of national best practices was conducted by Otak and Peninger Consulting.

Pursuant to Resolution 31444, the City of Seattle retained DRA to conduct an economic analysis and advise the City on revision and potential expansion of its affordable housing incentive programs for commercial and residential development, currently in place in the Downtown and South Lake Union Urban Centers and other areas of the City that have been upzoned since 2006. The City's current programs provide developers with bonus floor area in exchange for the provision of housing for households with incomes up to 80% of Area Median Income (AMI) for rental housing and up to 100% of AMI for homeownership housing. The payment of a fee in lieu of providing units is allowed in some areas, including the Downtown and South Lake Union (SLU) Urban Centers. For commercial projects in the Downtown and SLU areas and residential development in SLU the program imposes other requirements, including the purchase of transfer of development rights (TDR) and, for commercial development only, payment of a childcare fee.

DRA worked closely with City staff to develop twelve residential and commercial office development prototypes that reflect current underlying zoning designations in the City. Each prototype is examined in a base case "no incentive" version that reflects the requirements of the underlying zoning, and a "with incentive" version that reflects the additional bonus floor area and other guidelines associated with the incentive program. The prototypes include mid- and high-rise residential and office prototypes appropriate to zoning designations in the Downtown and South Lake Union areas of the City. They also include low- and mid-rise prototypes consistent with zoning designations found in areas surrounding the Downtown and in target Urban Centers and Villages. These 24 prototypes form the basis of DRA's economic analysis of the current incentive program and alternative policies, and were examined under several economic scenarios. The findings of the analysis will assist the City in evaluating alternative policy options for the incentive programs that will generate affordable housing and/or in lieu fees while being sensitive to current and future real estate market conditions.

As part of the assignment, DRA prepared a market subarea analysis that examined residential apartment, residential condominium and commercial market conditions in target geographies in



and around Downtown Seattle. The market analysis was used to assist in developing assumptions on rents and sales prices for the development prototypes. In addition to formulating assumptions for the Downtown and South Lake Union prototypes, DRA used the findings of this analysis to develop “low,” “middle” and “high” scenarios reflecting the range of rents and land costs encountered in the target areas outside of Downtown and South Lake Union. The six low- and mid-rise prototypes representing these target areas were analyzed under these “low,” “middle” and “high” scenarios.

DRA also worked closely with a Technical Advisory Committee (TAC) comprised of local developers and City staff to review the assumptions and methodology used in the analysis. DRA facilitated three meetings with the TAC to obtain their input on review materials provided to members in advance of each meeting. At the first meeting, DRA reviewed the first draft of the prototypes. At the second meeting, DRA reviewed revised prototypes and preliminary development cost and revenue assumptions. The preliminary economic analysis was reviewed at the third and final meeting. DRA incorporated comments received at each meeting into subsequent materials.

## Program Option Scenarios for Analysis

Program options for analysis in this report were provided by the City of Seattle based on input from the Affordable Housing Incentive Program consulting team. The program option scenarios analyzed in this report are summarized in Table 1 on the next page.



<p align="center"><b>Table 1</b> <b>Affordable Housing Incentive Program</b> <b>Options for Analysis</b></p>			
<b>Variables</b>	<b>% Set Aside for Residential Development</b>	<b>Affordability Levels</b>	<b>In lieu Fee Payment (Per GSF of Bonus Floor Area)</b>
<b>Current Program: Continuation of Existing Program</b>	14% of bonus GFA (works out to about 5% of units in bldg. fully utilizing bonus Downtown and in SLU)	<ul style="list-style-type: none"> <li>▪ 80% AMI Rental</li> <li>▪ 100% AMI Ownership</li> </ul>	<ul style="list-style-type: none"> <li>▪ Residential Downtown/ SLU = \$21.68</li> <li>▪ Residential Elsewhere = \$15.15</li> <li>▪ Commercial Downtown/ SLU = \$24.95</li> </ul>
<p><b>Scenario 1: Residential - Same % Set-aside with Fee Set at Actual Gap Cost</b></p> <p><b>Commercial – Inflation Adjusted 2001 Nexus Gap Cost</b></p>	14% of bonused GFA (works out to about 5% of units in bldg. fully utilizing bonus downtown and in SLU)	<ul style="list-style-type: none"> <li>▪ 80% AMI Rental</li> <li>▪ 100% AMI Ownership</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fee Equals Estimated Gap Cost from Analysis</li> <li>▪ Commercial: Downtown / SLU = \$40.00</li> </ul>
<b>Scenario 2: Residential - Increased % Set Aside with Fee Set at Actual Gap Cost</b>	Set aside % = approximately 10% of units in development fully utilizing bonus floor area	<ul style="list-style-type: none"> <li>▪ 80% AMI Rental</li> <li>▪ 100% AMI Ownership</li> </ul>	

**Gap cost** = the subsidy needed to make market-rate housing affordable to low-income households.  
Source: City of Seattle; DRA



## Summary of Recent Market Trends and Conditions

The Seattle/Tacoma economy added 39,300 jobs in 2013, an increase of 2.3%, down slightly from 2.5% in 2012.

Seattle's strong job growth and income growth has fueled a substantial amount of new apartment supply over the past few years. The Seattle-Bellevue-Everett Metropolitan Division (MD), composed of King and Snohomish Counties, is expected to see approximately 8,000 new units come on line in 2014, followed by almost as many again in 2015. In 2013, over 6,200 new units were absorbed, with 72% of those units (4,500) located in the Seattle submarket.

According to the REALFACTS database of Seattle properties, the average asking rent increased 8.2% from the fourth quarter of 2011 to the fourth quarter of 2012, and then another 9.7% by the fourth quarter of 2013. As more new supply enters the market over the coming years, the pace of rent increases is expected to slow. In its 2014 forecast published in January, 2014 Hendricks Berkadia projects an increase in average asking rents of 2.8% in the Seattle-Tacoma metro area by the end of 2014 and 2.3% in 2015. The Downtown/Capitol Hill/Queen Ann submarket is expected to lead all subareas in the metro area in rent increases.

The growth of Amazon.com has had an undeniable effect on the Downtown and South Lake Union apartment markets. Amazon occupies over 3 million square feet of office space and employs about 18,000 people in the Downtown area. Construction has started on the first phase of a three-phase development project that will double the amount of Amazon's office space and employees. Amazon's growth will particularly impact the SLU, Downtown, Capitol Hill and Queen Anne neighborhoods.

Seattle's growth is bringing institutional and international investment to the Seattle landscape, which has provided further competition to purchase development sites and has increased upward pressure on land prices. International money may have more liberal underwriting standards than many U.S. investors and lenders, leading to the financing of more projects based on speculation of continued increases in rents.

Interest in the condo market appears to be picking up but is generally still in the "talking" phase. From January 2013 through December 2013, the average sale price for condos in King County increased by 17.5%, while sales increased by 22%. With continued employment growth and increases in rents and single-family home prices, condo development will at some point become feasible again on a more widespread basis.

## Economic Analysis Scenarios

DRA worked closely with the Technical Advisory Committee (TAC) to develop assumptions for the analysis. Both costs and rents have been rising in the past several years. Construction costs are rising in large part because of the "hot" market in recent years. The analyses in this report calculate the value of rental prototypes (residential and commercial) at a point in time based on the estimated



stabilized net operating income of the prototype upon lease-up and stabilization. Projects beginning construction now will not reach this stabilization point until several years from now.

**Version A:** Version A is intended to represent estimated economic conditions for new projects ready to begin construction in the current market. It uses estimated current construction costs for projects bidding construction contracts recently or currently. It escalates apartment rents at an estimated increase of 5.2% from now until the project is leased up, based on the Hendricks Bercadia forecast through year-end 2015. Apartment operating costs are escalated at 6.0%. Version A escalates office rents by approximately 9.4% until stabilization based on input from the TAC, and condo prices by 5% in a roughly parallel increase to apartment rents. Land prices for the Downtown and South Lake Union prototypes in Version A are slightly lower than the estimated current asking/sales prices reflected in Version B, assuming the sites were purchased a year or more ago.

**Version B:** Version B is intended to represent the underwriting standards of many lenders and investors that require use of current rents. It assumes current land purchase prices and construction costs, and current average contract rents for recently built and leased up apartments developments. Apartment operating costs are not escalated. Using current rents and prices doesn't account for the potential for rents to rise by the time projects starting construction now are completed and leasing up, but may be required in underwriting by lenders and investors since future increases are uncertain and speculative. This set of assumptions was most strongly supported by members of the TAC.

**Version C:** Version C uses the same land prices for the Downtown and South Lake Union prototypes as Version B. It increases apartment rents by 9% from now until the project is leased up, a rate that is higher than Version A but approximately one-half of the historical growth in the last two years. Apartment operating costs are increased by 6.0%. Commercial office rents are escalated by 18.7% from estimated current rents, again based on input from the TAC, and condo prices by 7%, a rate slightly lower than the assumed increase in apartment rents.

DRA also used a range of capitalization rates ("cap rates") in the analysis. Current cap rates for residential development are estimated to be in the 4.00% to 4.50% range, and are historically low as they have been for the last several years. Cap rates in Seattle are projected by CBRE to remain at current levels for at least the next six months. However, lenders and investors underwriting new projects may require higher cap rates because of the potential of future increases. DRA used 4.25% as the "lower" cap rate for the rental residential analysis and 5.00% for the "higher" cap rate scenario. Use of the 5.00% cap rate was most strongly supported by member of the TAC.

For office development, current cap rates are estimated in the 5.00% range, while underwriting new projects again may require a higher cap rate. For the office prototypes, DRA used 5.00% as the "lower" cap rate for the rental residential analysis and 5.50% for the "higher" cap rate scenario.

Cap rate assumptions are based on input from the TAC, local appraisers, and published reports from CBRE and Realty Rates for the Seattle area. The results of the Return on Equity (ROE) and Residual Land Value (RLV) analysis are quite sensitive to the cap rate used. Since the value of the ownership prototypes is based on estimated sales prices, rather than capitalized net operating income, cap rates are irrelevant to the analysis of the condominium prototypes.



<b>Table 2</b> <b>Economic Scenarios</b> <b>Seattle Affordable Housing Incentive Program Economic Analysis</b>			
	<b>Version A</b>	<b>Version B</b>	<b>Version C</b>
<b>Apartment Rents and Operating Costs</b>	Estimated escalation of rents by 5.2% for 2014 through 2015 based on Hendricks Berkadia; operating costs escalated 6.0%	Estimated average monthly contract rents for recently leased up properties; no escalation in operating costs	Estimated escalation of rents by 9%, approximately one-half of the historical growth in last two years; operating costs escalated 6%
By Prototype:			
Downtown 1A	\$3.42/SF	\$3.25/SF	\$3.54/SF
Downtown 1B	\$3.31/SF	\$3.20/SF	\$3.43/SF
SLU 4A	\$3.37/SF	\$3.20/SF	\$3.48/SF
SLU 4B	\$3.00/SF	\$2.85/SF	\$3.11/SF
Low-Rise/Mid-Rise			
Low:	\$2.42/SF	\$2.30/SF	\$2.51/SF
Medium:	\$2.74/SF	\$2.60/SF	\$2.83/SF
High	\$3.00/SF	\$2.85/SF	\$3.11/SF
<b>Office Rents</b>	Estimated escalation of rents by 9.4%	Estimated average monthly contract rents for recently leased up properties	Estimated escalation of rents by 18.7%
By Prototype:			
Downtown 3A/B	\$35/SF	\$32/SF	\$38/SF
SLU 3A/B	\$35/SF	\$32/SF	\$38/SF
<b>Condo Prices</b>	Estimated escalation of prices by 5%.	Estimated current prices.	Estimated escalation of prices by 7%.
<b>Land Costs</b>	Land price of \$800 per SF in Downtown and \$375 per SF in SLU	Land price of \$850 per SF in Downtown and \$400 per SF in SLU	Land price of \$850 per SF in Downtown and \$400 per SF in SLU
<b>Construction Costs</b>	Estimated costs for projects beginning construction in the next several months	Estimated costs for projects beginning construction in the next several months	Estimated costs for projects beginning construction in the next several months

Source: DRA





## Summary of Findings from the Economic Analysis

### Definition of Key Terms

The findings of the analysis with respect to the financial feasibility of the prototypes and the impact of program options on financial feasibility based on the economic assumptions used in this analysis are summarized below. General findings are followed by specific findings for the prototypes.

As described further in the Economic Analysis and Methodology Section of this report, project feasibility was measured using both a Return on Equity (ROE) analysis and land residual analysis. For the ROE analysis, feasibility threshold returns are estimated at 6% to 8% for the apartment prototypes and 10% to 12% for the commercial office prototypes. For the land residual analysis, feasibility is measured by residual land values that approach or exceed current market land sales prices. Key terms used in this analysis are defined as follows:

**Return on Equity (ROE):** For the purposes of this analysis, ROE is measured as net project value (capitalized net operating income for the rental/commercial prototypes or net sales proceeds for the condo prototypes, less total development costs), averaged over the estimated term of the equity investment, divided by the total amount of the equity investment. Equity is assumed to finance 40% of total development costs, including both developer equity and investor equity.

**Residual land value (RLV):** Land residual analysis calculates the value of a development based on its income potential and subtracts the costs of development and developer profit to yield the underlying value of the land. When evaluating alternative land uses, the alternative that generates the highest value to a site is considered its highest and best use. An alternative that generates a value to the land that is negative, or well below market land sales prices, is financially infeasible. RLV is generally measured as the dollar value per square foot of site area. In this analysis, we also calculate RLV per square foot of bonus gross floor area, where noted.

**Cap rate:** A capitalization (or “cap”) rate is the ratio of net operating income to project fair market value, or project sales price, exhibited in the market and reflects the rate of return required by investors in rental property. Cap rates are tracked by land use and market area based on observed property sales. This analysis uses cap rates to estimate the fair market value of the prototypes that involve rents or leases (residential apartment and commercial office). Net operating income for the apartment and office uses is capitalized at estimated cap rates to determine the estimated fair market value of the developed property.

**Net project value:** For this analysis, net project value is calculated by subtracting total project development costs from the capitalized market value of the prototype (or total combined unit sales prices for the condominium prototypes). Net project value represents the gross return to the developer and equity investor, above the base level of developer overhead assumed in the development costs.



## General Market Findings

### APARTMENT MARKET

- A high level of apartment demand is being generated by employment growth in the Seattle/Tacoma Metro Area, with a high capture of employment growth and demand in the Seattle apartment market, particularly the Downtown and South Lake Union areas.
- The high level of apartment demand has led to a substantial increase in the apartment supply, including projects that are already leased up and stabilized and many others currently in the construction pipeline.
- Land prices have been bid up to peak prices.
- Construction and development costs are rising due to an increase in some materials costs and the higher costs general contractors are able to command because of high demand in the “hot” real estate market.
- Rents have been rising rapidly because of high demand but rent increases are expected to slow as the large influx of new supply enters the market over the next few years.
- The combination of higher land and construction costs and slowing rent increases is making it more difficult for new projects to “pencil” based on underwriting assumptions used by lenders and investors who typically require use of current rents and development costs and higher cap rates in their underwriting.

### COMMERCIAL OFFICE MARKET

- Employment growth and demand in the Seattle metro area and high capture by City of Seattle submarkets will fuel additional demand for office space in the Downtown and South Lake Union areas.
- Office vacancy rates have been declining since 2012, reaching their lowest level since 2009 and providing some upward pressure on rents. According to Reis Reports, the vacancy rate in the Downtown is projected to decline slightly from 13.6% in the fourth quarter of 2013 to 13.5% by year-end 2014. The average asking rent is projected to increase to \$33.34, up from \$32.09 in the fourth quarter of 2013.
- Since zoning in the Downtown and South Lake Union areas allows both residential and commercial land uses, commercial developers and apartment developers must compete for the same sites. Land prices have been bid up to peak prices due to strong apartment demand and construction.
- As for apartments, construction and development costs are rising due to an increase in some materials costs and the higher costs general contractors are able to command because of high demand in the “hot” real estate market, leading to decreased financial feasibility of new office development based on current rents.



## RESIDENTIAL CONDOMINIUM MARKET

- The condo market has not rebounded since the Great Recession, and in most areas condo prices do not yet support new construction.
- Warranty and liability issues continue to plague the condo market.
- As home prices and apartment rents continue to rise, condominium prices will rise and new construction will become feasible again.
- Even where condominium prices are at levels that may support new construction, there may be insufficient demand to support large condominium developments at this time.

### **Comparison of In Lieu Fees and the Cost of Performance Options**

- As evidenced from the results in Table 9, the estimated cost of the performance option under the current program substantially exceeds the current in lieu fee for all of the Downtown and South Lake Union prototypes, suggesting that development using the incentive program in these areas will virtually always select the in lieu fee option over the on-site performance option. To encourage on-site performance, the in lieu fee would need to be raised substantially.
- For the low and mid-rise rental housing prototypes, the estimated cost of the performance option under the current program also exceeds the current in lieu fee, though at a smaller margin than for the Downtown and South Lake Union prototypes. This suggests that most apartment developments using the incentive program in these areas would also select the in lieu fee over the performance option, if it were available to them.
- Because of the higher target income level of the current program, the reverse is true for the low and mid-rise condominium housing prototypes. For these prototypes, the estimated cost of the performance option is lower than the in lieu fee. This suggests that most condominium developments using the incentive program in these areas would select, and are not disadvantaged by, the current performance requirement. The performance cost is lowest under the “low” scenario, where affordable condominium prices are nearly equal to estimated market prices, and the performance cost is at or near zero for some prototypes.
- Table 9 compares in lieu fees with the cost of performance options using Version A economic assumptions. While the performance option costs for the rental prototypes vary slightly under Version B and Version C assumptions, these results and conclusions hold true for all three economic scenarios.

### **Estimated Value of the Incentive**

- As shown in Tables 10, 11, 16, and 17, for most prototypes the estimated value of the incentive does not exceed the cost of the in lieu fee payment under the current program. This suggests that the incentive program will not result in most projects making use of the incentive, thereby limiting the production of both affordable units and in lieu fee revenue for affordable housing under the program.



- For the downtown rental prototype, the value of the incentive is approximately break-even after the payment of the current in lieu fee, but is negative after the current performance option (Scenario 1) and the 10% performance requirement (Scenario 2).
- One major exception is the downtown condominium prototype, which produces a significant positive value of the incentive after payment of the current in lieu fee and current performance option (Scenario 1), but is negative after the 10% performance requirement (Scenario 2).
- The incentive increases the feasibility of the Downtown commercial prototype, which generates a negative ROE without the incentive but a slightly positive ROE after use of the incentive, assuming either payment of the current in lieu fee or the higher \$40 in lieu fee in Scenario 1. However, none of the prototypes reach threshold feasibility.
- For the low- and mid-rise prototypes, there are a few instances in which the incentive generates a positive value assuming payment of the in lieu fee or under the Scenario 1 performance option.

### **Impact of the Program on Prototype Financial Feasibility**

- The findings of the financial feasibility analysis are mixed, depending on the economic scenario and cap rate assumption used, as described below. In general, using the lower cap rates and the Version A economic assumptions, there is some room to raise the in lieu fee to approximate the performance cost of Scenario 1, but in very few cases do the prototypes remain feasible under the higher performance cost of Scenario 2. Using the higher cap rates and the Version B economic assumptions, nearly all the prototypes fail to reach threshold levels of feasibility based on the ROE or RLV analyses. The only exceptions are the Low to Mid-Rise Prototype 7 and 4- to 6-Story Prototype 9 rental prototypes under the low rent/cost assumptions.

## **Findings By Prototype**

### **Downtown High-Rise Apartments, Prototypes 1A, 1B**

- Under Version A economic assumptions and the lower cap rate, the Downtown apartment prototype falls slightly short of meeting feasibility thresholds.
- Under these same assumptions the Downtown apartment prototype with the incentive meets feasibility threshold only without program costs, falling slightly short again assuming payment of the current in lieu fee.
- Returns drop well below the feasibility thresholds for the prototype with the incentive assuming the performance options in Scenarios 1 and 2.
- Under Version B assumptions and/or higher cap rate, the prototype with the incentive does not meet feasibility thresholds, even before consideration of program costs.
- Using the higher rent assumptions in Version C and the lower cap rate, the prototype with the incentive meets feasibility thresholds assuming in lieu fee payment or Scenario 1 performance option, but not under the higher Scenario 2 performance requirement.



### **Downtown High-Rise Condos, Prototypes 2A, 2B**

- Under Version A economic assumptions, the Downtown high-rise apartment prototypes meet threshold feasibility assuming payment of the current in lieu fee or the Scenario 1 performance option.
- Returns drop below the feasibility thresholds under the performance options in Scenario 2, at the 10% on-site performance requirement.
- The same is true under the Version B and the Version C economic assumptions.

### **Downtown Commercial Development, Prototypes 3A, 3B**

- Under the Version A economic assumptions and lower cap rate, the Downtown commercial prototype is not feasible without the incentive. Returns improve but remain below thresholds with the incentive.
- Under the Version B economic assumptions and/or higher cap rate the prototype is not feasible.
- Under the higher Version C commercial rents the commercial prototype is not feasible without the incentive but almost reaches threshold feasibility with the incentive assuming payment of the current in lieu fee.

### **South Lake Union Mid-Rise and High-Rise Apartment Development, Prototypes 4A, 4B**

- The South Lake Union mid-rise prototype without the incentive (Prototype 4B) generates the highest returns of the prototypes examined, due to the relatively high rents and lower development costs of this prototype compared to the high-rise prototypes.
- Using the 4.25% cap rate and Version A economic assumptions, the prototype with the incentive meets feasibility thresholds under the in lieu fee and both performance options in Scenarios 1 and 2.
- Under Version B of the economic assumptions, the prototype meets threshold feasibility with payment of the in lieu fee, falls just short of the threshold under the Scenario 1 performance option, and is well below the threshold under the Scenario 2 performance option.
- At the 5.00% cap rate, the prototype is only feasible under Version A or Version C economic assumptions without the incentive.
- While development of the SLU rental prototype with the incentive appears feasible under the lower cap rate assumption, the prototype without the incentive is even more profitable based on the economic conditions modeled in this analysis.



### **South Lake Union Condo Development, Prototypes 5A, 5B**

- The SLU condo prototype barely reaches the feasibility threshold under Version A economic assumptions without the incentive. It falls below the threshold with the incentive.
- The prototype falls below threshold feasibility under Version B economic assumptions.
- Under Version C economic assumptions, the prototype is feasible without the incentive, and with the incentive assuming payment of the in lieu fee or the Scenario 1 performance option. However, it performs better without the incentive than with the incentive.

### **South Lake Union Commercial Development, Prototypes 6A, 6B**

- Findings for the South Lake Union commercial prototype parallel those for the Downtown commercial prototype.
- Under the Version A economic assumptions and lower cap rate, the South Lake Union commercial prototype is not feasible without the incentive. Returns improve but remain below thresholds with the incentive.
- Only under the higher Version C commercial rents do returns exceed thresholds, assuming payment of the current in lieu fee or the higher Scenario 2 in lieu fee.

### **Low- and Mid-Rise Apartment Development (Prototypes 7, 9, 11)**

- Under the Version A economic assumptions and 4.25% cap rate, rates of return for the low-rise and mid-rise prototypes without the incentive generally exceed threshold returns for the low, middle and high scenarios.
- Under Version A, returns for the prototypes with the incentive also exceed thresholds for almost all of the rental prototypes after payment of the in lieu fee or the performance option under Scenarios 1 and 2. The exception is Prototype 11 (6 stories to 7 stories), which drops below feasibility thresholds in some cases assuming the higher Scenario 2 performance requirement, because this prototype offers the smallest incentive in terms of bonus floor area.
- Under Version B and C economic assumptions and the 4.25% cap rate, rates of return exceed threshold rates for the low, middle and high scenarios for many of the prototypes and program options. These prototypes fall below feasibility thresholds at the 5.00% cap rate even under Version C economic assumptions.

### **Low- and Mid-Rise Condo Development (Prototypes 8, 10, 12)**

- The Low- and Mid-Rise condo prototypes fail to meet feasibility thresholds under Versions A, B and C of the economic assumptions, indicating that sales prices will need to rise before widespread condominium developments occurs in these zones.



## Conclusions

Based on the findings of the economic analysis, DRA draws the following conclusions regarding the economics of the City of Seattle's current Affordable Housing Incentive Program and its impact on development financial feasibility:

1. The estimated cost of the performance option under the current program substantially exceeds the current in lieu fee for all of the Downtown and South Lake Union prototypes and all of the Low and Mid-Rise rental prototypes, suggesting that these developments, to the extent they use the incentive program, will virtually always select the in lieu fee option over the on-site performance option. To encourage on-site performance, the in lieu fee would need to be raised substantially.
2. The incentives offered under the current program provide insufficient quantifiable economic value in most cases to stimulate developers to use the program, even when allowed to comply through payment of the current in lieu fee. These conclusions are borne out by the fact that the program has not been widely used. DRA concludes that the program will result in limited production of either affordable units or in lieu fee revenue for affordable housing. This is consistent with DRA's 20 years of experience with voluntary programs, which usually fail to provide adequate incentives for developer participation and fall short of affordable housing production goals and expectations.
3. The economic analysis shows mixed results in terms of project feasibility, with prototypes generally reaching feasibility thresholds only under Version A or C economic assumptions and the lower cap rates. Under Version B (current underwriting) assumptions and the higher cap rate, virtually all of the prototypes fail to meet feasibility thresholds. These findings highlight the sensitivity of development to current economic conditions and short-term trends.
4. However, even under the economic assumptions and cap rates that generate returns below feasibility thresholds, the economic impact of the current in lieu fee on prototypes with the incentive is approximately a 1% to 2% reduction in ROE compared to the "no program" option. The effect of the current 5% performance option (Scenario 1) is approximately a 1% to 3% reduction in ROE compared to the "no program" option. These results suggest that program requirements will only impact the feasibility of projects at the margin. In contrast, the change in the cap rate from 4.25% to 5.00% generates wide swings in the ROE, sometimes changing the project from threshold feasibility to a negative ROE, indicating that it has a much more material impact on project feasibility than program requirements.
5. Based on DRA's 20 years of experience with inclusionary housing and similar programs across the U.S. that require the inclusion of affordable units and/or payment of a fee, the Seattle Affordable Housing Incentive Program's current 5% on-site performance requirement and substantially less costly in lieu fee is a modest requirement that will not have a long-term impact on development feasibility.



**Table 3**  
**Land Residual Analysis, Incentive Program Requirements**  
**Downtown and South Lake Union Residential Prototypes**  
**Lower Cap Rates Version A**

	Downtown High-Rise				South Lake Union			
	Residential Rental		Residential Ownership		Residential Rental		Residential Ownership	
	Prototype 1A With Incentive	Prototype 1B No Incentive	Prototype 2A With Incentive	Prototype 2B No Incentive	Prototype 4A With Incentive	Prototype 4B No Incentive	Prototype 5A With Incentive	Prototype 5B No Incentive
Site Area (SF)	15,000	15,000	15,000	15,000	21,000	21,000	21,000	21,000
Retail Net SF	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Office Net SF	-	-	-	-	-	-	-	-
Residential Net SF	308,900	194,900	283,900	174,900	202,900	89,900	184,900	79,900
Total Net SF	311,000	197,000	286,000	177,000	205,000	92,000	187,000	82,000
Residential Units	426	269	344	212	280	124	218	94
Approximate Building Stories	40	24	40	24	24	7	24	7
Bonus Gross Floor Area (GSF)	148,200		142,200		146,250		136,250	
Total Annual NOI, Rental Uses	\$7,613,197	\$4,732,241			\$5,287,569	\$2,144,626		
NOI Per NSF	\$24.48	\$24.02			\$25.79	\$23.31		
Cap Rate	4.25%	4.25%			4.25%	4.25%		
Capitalized Value, Rental Uses	\$179,134,052	\$111,346,842			\$124,413,384	\$50,461,798		
Net Condo Sales Proceeds			\$209,789,213	\$123,116,438			\$118,191,281	\$42,887,513
<b>Total Market Value</b>	<b>\$179,134,052</b>	<b>\$111,346,842</b>	<b>\$209,789,213</b>	<b>\$123,116,438</b>	<b>\$124,413,384</b>	<b>\$50,461,798</b>	<b>\$118,191,281</b>	<b>\$42,887,513</b>
Total Value Per NSF	\$576	\$565	\$734	\$696	\$607	\$548	\$632	\$523
<b>Less: Total Deve. Cost, Excl. Land</b>	<b>\$151,370,745</b>	<b>\$91,879,373</b>	<b>\$166,074,631</b>	<b>\$98,138,186</b>	<b>\$96,852,058</b>	<b>\$30,252,869</b>	<b>\$103,458,368</b>	<b>\$31,134,908</b>
Total Development Cost Per NSF	\$487	\$466	\$581	\$554	\$472	\$329	\$553	\$380
<b>Less: Assumed Return on Equity at 6%</b>	<b>\$15,611,591.47</b>	<b>\$9,900,420</b>	<b>\$17,023,165</b>	<b>\$10,501,266</b>	<b>\$10,053,798</b>	<b>\$3,660,275</b>	<b>\$10,688,003</b>	<b>\$3,744,951</b>
<b>Residual Land Value</b>								
<b>Before Program Costs</b>	<b>\$12,151,716</b>	<b>\$9,567,050</b>	<b>\$26,691,417</b>	<b>\$14,476,986</b>	<b>\$17,507,528</b>	<b>\$16,548,653</b>	<b>\$4,044,910</b>	<b>\$8,007,653</b>
Resid. Value/SF Site Area	\$810.11	\$637.80	\$1,779.43	\$965.13	\$833.69	\$788.03	\$192.61	\$381.32
Resid. Value/Dwelling Unit	\$28,525	\$35,565	\$77,591	\$68,288	\$62,527	\$133,457	\$18,555	\$85,188
Resid. Value/SF Bonus GFA	\$82.00		\$187.70		\$119.71		\$29.69	
<b>Less: Cost of Bonus Program</b>								
1. Current In-Lieu Fee	\$3,212,976		\$3,082,896		\$2,975,628		\$2,753,340	
2. Gap Cost Scenario 1 (1)	\$7,549,604		\$4,923,432		\$5,403,749		\$3,454,575	
3. Gap Cost Scenario 2: 10% Units	\$14,756,045		\$8,810,352		\$10,415,536		\$6,422,865	
<b>Residual Land Value</b>								
<b>After Program Costs</b>								
1. Current In-Lieu Fee	\$8,938,740		\$23,608,521		\$14,531,900		\$1,291,570	
Resid. Value/SF Site Area	\$596		\$1,574		\$692		\$62	
Resid. Value/SF Bonus GFA	\$60.32		\$166.02		\$99.36		\$9.48	
2. Gap Cost Scenario 1 (1)	\$4,602,111		\$21,767,985		\$12,103,779		\$590,335	
Resid. Value/SF Site Area	\$307		\$1,451		\$576		\$28	
Resid. Value/SF Bonus GFA	\$31.05		\$153.08		\$82.76		\$4.33	
3. Gap Cost Scenario 2: 10% Units	(\$2,604,329)		\$17,881,065		\$7,091,991		(\$2,377,955)	
Resid. Value/SF Site Area	(\$174)		\$1,192		\$338		(\$113)	
Resid. Value/SF Bonus GFA	(\$17.57)		\$125.75		\$48.49		(\$17.45)	

(1) Equals estimated affordability gap for current housing set-asides for residential of 14% of gross floor area (about 5% of units).  
(2) Gap cost for 10% affordable units for residential (plus TDR as applicable).

Source: DRA.





## 9. Inclusionary Housing Analysis

*DRA has included below the summary of our analysis for the City of San Jose, completed in 2008. In 2016, the U.S. Supreme Court upheld the findings of the California Supreme Court in *CBIA vs. City of San Jose*. The landmark ruling affirmed the police power of municipalities in California to use zoning to promote affordable housing development. This case is reviewed in Section 1: Summary of Legal Issues of this book.*

### What is Inclusionary Housing?

Inclusionary housing programs require residential developers to provide a percentage of total units in projects over a specified size at below market rents or sales prices in conjunction with the market-rate units in the project. Over 170 jurisdictions in California have adopted inclusionary housing programs to increase the production of housing affordable to very low, low and/or moderate income households.

Inclusionary housing imposes a prospective cost on development that can be partially to completely offset with economic incentives and alternative compliance options. The City of San Jose Department of Housing commissioned David Paul Rosen & Associates (DRA) to conduct an analysis that measures the economic effect on developers of complying with alternative inclusionary requirements and the potential value of incentive “packages” that may be offered to offset the costs of the inclusionary requirements. This analysis will assist the City Council in making informed decisions regarding a potential inclusionary housing policy for San Jose.

### Approach and Methodology

DRA analyzed the potential impact of alternative inclusionary housing requirements and incentives based on how housing currently gets built in San Jose. The current cost to build market-rate housing in San Jose was carefully developed and analyzed through collaboration with the Department of Housing, The Department of Planning, Building and Code Enforcement, a series of interviews with developers familiar with residential development in the City, a review of pro formas and budgets of current Department of Housing and Redevelopment Agency projects, RS Means construction cost estimates and a series of public meetings with San Jose stakeholders. This process allowed the public to review the development cost assumptions and provide feedback, which was then incorporated into the analysis. This process produced the development prototypes, cost assumptions and incentives used in this study.



Five housing prototypes were developed to represent the type of housing currently being built and likely to be built in the near term in San Jose, in order to analyze the effect of inclusionary requirements on the City’s current development. Four of these prototypes represent ownership housing projects and one represents a rental project. The prototypes’ product type, density (expressed as dwelling units per acre or du/a) and unit count are:

- Owner Prototype 1 – High Rise Condos over subterranean parking, 100 du/a, 200 units total
- Owner Prototype 2 – Stacked Flat Condos over podium parking, 55 du/a, 157 units total
- Owner Prototype 3 – Townhomes with garage parking, 17 du/a, 75 units total
- Owner Prototype 4 – Single Family Detached Homes with garage parking, 9 du/a, 45 units total
- Renter Prototype 1 – Stacked Flat Apartments over podium parking, 55 du/a, 157 units total

In collaboration with City staff, DRA developed alternative set-aside scenarios representing a range of potential inclusionary requirements. The different scenarios vary in total percentage of inclusionary units required and the required affordability of those units. The set-aside scenarios for the renter and owner prototypes are presented in **Table E-1**.

<b>Table E-1 Inclusionary Scenario Alternatives San José Inclusionary Housing Analysis</b>			
Affordability Set-Aside Scenario	Affordable Units as a % of Total Units	Income Limit (% Area Median Income)	Affordable Housing Cost (% Gross Income)
<b>RENTAL PROTOTYPE:</b>			
Scenario 1	8%	50% AMI	30% of 50% AMI
	12%	80% AMI	30% of 60% AMI
Scenario 2	5%	50% AMI	30% of 50% AMI
	10%	80% AMI	30% of 60% AMI
Scenario 3	5%	35% AMI	30% of 35% AMI
	5%	50% AMI	30% of 50% AMI
<b>OWNER PROTOTYPES:</b>			
Scenario 1	20%	120% AMI	35% of 110% AMI
Scenario 2	5%	90% AMI	30% of 90% AMI
	10%	120% AMI	35% of 110% AMI
Scenario 3	5%	80% AMI	30% of 70% AMI
	5%	90% AMI	30% of 90% AMI



## Defining “Affordable” Housing

This study uses income limits and affordability standards, as defined by the United States Department of Housing and Urban Development (HUD) and the California Department of Housing and Community Development. HUD income limits and affordable housing costs are expressed as a percentage of area median income (AMI). Santa Clara County’s area median income, as defined by HUD, was \$105,500 for a family of four at the time this study was conducted.

For renters, affordable housing cost, including rent plus utilities, is defined as 30 percent of household income, adjusted for household size. Household income is expressed as a percentage of AMI. For owners, affordable housing cost, including principal and interest, loan insurance (PMI), property taxes, fire and casualty insurance, utilities and homeowner association fees, is defined as 30 and 35 percent of household income, adjusted for household size, for low and moderate income households, respectively. Household size adjustments are made using the occupancy standard of one person per bedroom plus one, per the California Health and Safety Code.

## Measuring the Effect of Inclusionary Requirements

This study takes care to measure the economic effect of potential inclusionary requirements on residential development by first calculating the affordability cost of the various set-aside scenarios studied. The affordability cost is calculated as the total development cost of the affordable units less the income generated from selling or renting those units at the appropriate affordable sale price or rent. The cost savings represented by the various incentive packages studied are then analyzed against the affordability costs.

A land residual analysis is also employed in this study to examine the effects of the potential inclusionary requirements on residential development. Land residual analysis is commonly used by real estate developers, lenders and investors to evaluate development financial feasibility and select among alternative uses for a piece of property. The land residual methodology calculates the value of a development based on its income potential and subtracts the costs of development and developer profit to yield the underlying value of the land. An alternative land use that generates a negative land value is not financially feasible. Similarly, an alternative use which generates a land value lower than the land seller is willing to accept is infeasible. Recent land sales (“market comparables”) provide an indication of the range of land prices sellers may accept. As is evident in the market comparables of land sales in San Jose over the past four years, the range of land prices that sellers accept is wide, with prices fluctuating year to year.

Land residual analysis is the most realistic way to view the potential effect of inclusionary requirements on residential development in the City of San Jose. Developers and landlords already charge the maximum rents and sales prices the market will bear. Therefore, any increase in development costs resulting from government regulation, or other factors, will ultimately impact the price of land and/or profits to developers and owners, and cannot be passed on to the consumer. A reduction in developer profit margins does not necessarily render a project infeasible. Developers typically have



a “threshold” profit and overhead requirements. These requirements are built into the development costs in this analysis.

Tables E-2, E-3 and E-4 illustrate the feasibility of the prototypes and inclusionary scenarios examined in this study, under high, middle and low sales price/rent assumptions, respectively. A check-mark indicates that the prototype is “feasible,” or that the residual land value of the prototype falls within the recent range of land prices for that product type. When an inclusionary scenario is marked as feasible, the prototype’s residual land value, assuming the development complies with the inclusionary scenario’s affordability requirements and, in some cases, takes advantage of the economic benefits of one offset package, falls within the range of land prices. This means that the price the developer could offer for the land, given the inclusionary requirement and the sales price/rent assumptions, would likely be accepted by the land seller and the development would proceed.

An “X” indicates that the prototype is “infeasible” under the given inclusionary scenario, or that the prototype’s residual land value, assuming compliance with the affordable unit set-aside requirements of that scenario, falls below the recent range of land prices for that product type. In this case, the development would likely not move forward, as the amount the developer could pay for the land would fall below what the land seller would likely accept.

In some cases, a prototype is infeasible as an entirely market rate development. This means that the prototype’s residual land value assuming market rate sales prices or rents falls below the recent range of land prices for that product type. In other words, the amount the developer could pay for the land in those situations, given the expected revenue from renting or selling the units on the market, would likely be less than the land seller would be willing to accept. These occurrences are marked in Tables E-2, E-3 and E-4 as “N/A.” When a prototype is infeasible as a market rate development, the residual land values of that prototype under the three inclusionary scenarios are not examined and are also marked as “N/A.”

As is apparent in the tables below, when the prototypes are feasible as market rate developments, they are all, with one exception, also feasible under all three inclusionary scenarios. Only Renter Prototype 1 under Inclusionary Scenario 2 and high rent assumptions, is infeasible. In this case, none of the offset packages studied make this prototype feasible. All other prototypes and inclusionary scenarios are feasible assuming up to one offset package. The three cases in which the prototype is infeasible as a market rate development suggest that these product types are either not currently being built for the given price range assumed or are being built speculatively, on the assumption that prices will rise in the future.

In some market climates, developers are willing to build, and lenders and investors are willing to finance, a development based on a “future value.” One example of such “speculative” development is constructing apartments that may later be sold as condominiums, or where market rents are expected to rise significantly in the future.

**Table E-2  
Inclusionary Housing Economic Feasibility  
High Market Sales Prices/Rents**

	100% Market Rate	Inclusionary Scenario 1	Inclusionary Scenario 2	Inclusionary Scenario 3
<b>Owner Prototype 1: High Rise</b>	✓	✓	✓	✓
<b>Owner Prototype 2: Stacked Flat</b>	✓	✓	✓	✓
<b>Owner Prototype 3: Townhomes</b>	✓	✓	✓	✓
<b>Owner Prototype 4: Single Family Detached</b>	✓	✓	✓	✓
<b>Renter Prototype 1: Stacked Flat</b>	✓	✓	X	✓

✓ indicates that prototype is feasible as a 100 percent market rate development or with the given inclusionary scenario and up to one offset.

X indicates that prototype is infeasible.

**Table E-3  
Inclusionary Housing Economic Feasibility  
Middle Market Sales Prices/Rents**

	<b>100% Market Rate</b>	<b>Inclusionary Scenario 1</b>	<b>Inclusionary Scenario 2</b>	<b>Inclusionary Scenario 3</b>
<b>Owner Prototype 1: High Rise</b>	✓	✓	✓	✓
<b>Owner Prototype 2: Stacked Flat</b>	✓	✓	✓	✓
<b>Owner Prototype 3: Townhomes</b>	✓	✓	✓	✓
<b>Owner Prototype 4: Single Family Detached</b>	✓	✓	✓	✓
<b>Renter Prototype 1: Stacked Flat<sup>1</sup></b>	X	N/A	N/A	N/A

✓ indicates that prototype is feasible as a 100 percent market rate development or with the given inclusionary scenario and up to one offset.

X indicates that prototype is infeasible.

<sup>1</sup> When the prototype is infeasible as a 100 percent market rate development, feasibility results for inclusionary scenarios are not shown.

**Table E-4  
Inclusionary Housing Economic Feasibility  
Low Market Sales Prices/Rents**

	<b>100% Market Rate</b>	<b>Inclusionary Scenario 1</b>	<b>Inclusionary Scenario 2</b>	<b>Inclusionary Scenario 3</b>
<b>Owner Prototype 1: High Rise<sup>1</sup></b>	N/A	N/A	N/A	N/A
<b>Owner Prototype 2: Stacked Flat<sup>2</sup></b>	<b>X</b>	N/A	N/A	N/A
<b>Owner Prototype 3: Townhomes</b>	✓	✓	✓	✓
<b>Owner Prototype 4: Single Family Detached</b>	✓	✓	✓	✓
<b>Renter Prototype 1: Stacked Flat<sup>2</sup></b>	<b>X</b>	N/A	N/A	N/A

✓ indicates that prototype is feasible as a 100 percent market rate development or with the given inclusionary scenario and up to one offset.

**X** indicates that prototype is infeasible.

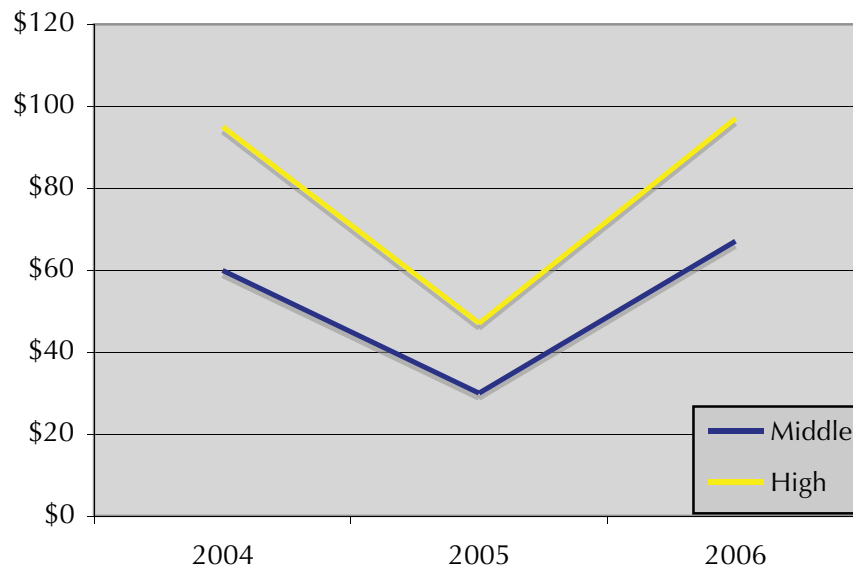
<sup>1</sup> Owner Prototype 1 was not studied under low market sales price assumptions.

<sup>2</sup> When the prototype is infeasible as a 100 percent market rate development, feasibility results for inclusionary scenarios are not shown.

## Low, Middle, and High Rent/Sales Price and Land Value Scenarios

Residential land sales prices vary widely in different locations in San Jose. The land prices are tied to the market rents and/or sales prices in different market areas of the City. DRA analyzed actual land sales prices reported in the San Jose Residential Land Value Survey, as well as land sales reported in a recent land appraisal commissioned by the City’s Housing Department.

**Figure E-1**  
**Land Costs per Square Foot**  
**Owner 1 - High Rise**



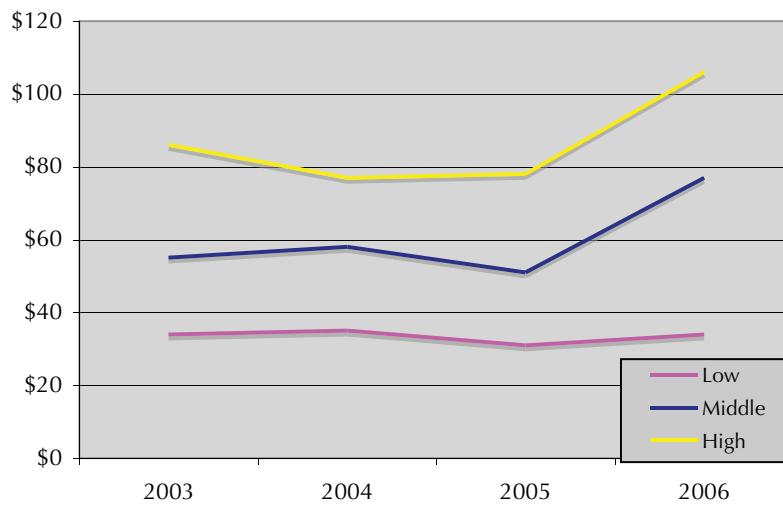
The market land sales comparables were divided into categories by the sites’ intended product types, represented by the sites’ intended residential densities. These sales were then divided into thirds based on price per square foot of site area to represent “low,” “middle,” and “high” land price ranges in the City. For the rental land residual analysis, DRA used low, middle and high average rent data from a survey of current rents in market rate developments around the City to calculate rents for the low, middle and high rent/land values scenarios. Similarly, for the owner land residual analysis, DRA used low, middle and high average sales prices of attached (including stacked flat and townhome units) and detached units (Source: First American Title Company) and low, middle and high average current asking prices for high rise units. These were used to calculate land residual values for the low, middle and high sales price scenarios.

The low, middle and high average land prices per square foot in San Jose over the four-year period examined in this study show wide fluctuation. The widest range in land price over the four years

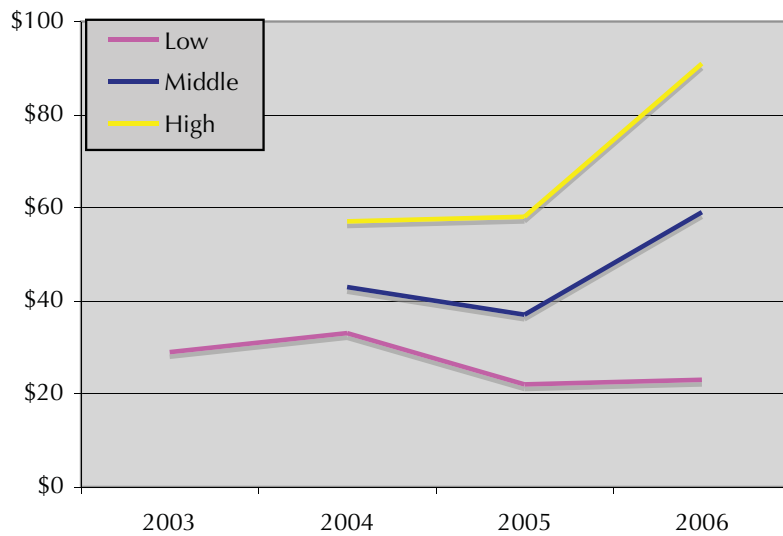


was seen in middle-cost land intended for high rise development, where the difference between the lowest average price and the highest average price in this period represents a 123 percent change, as shown in Figure E-1. The narrowest range of land price was seen in low-cost land intended for stacked flat owner or renter units, with a range of only 13 percent, illustrated in Figure E-2.

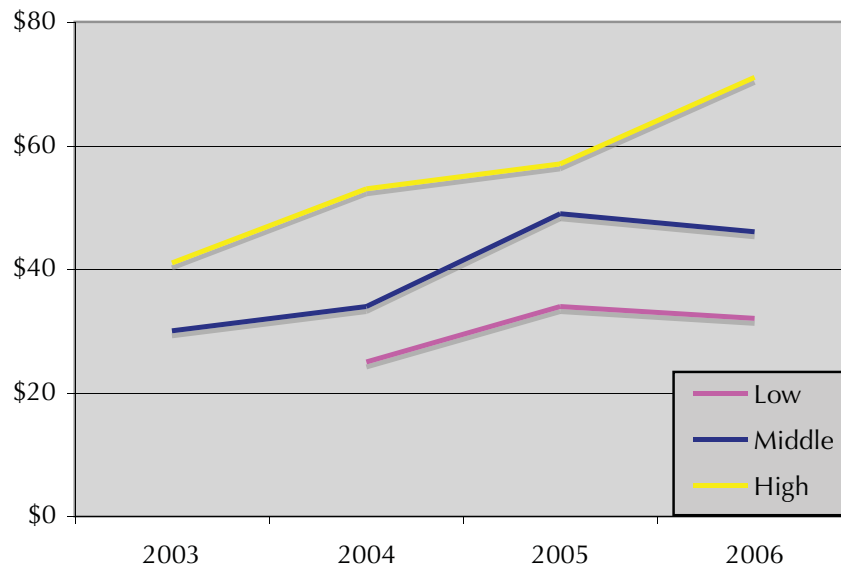
**Figure E-2**  
**Land Costs per Square Foot**  
**Owner 2 - Stacked Flat**



**Figure E-3**  
**Land Costs per Square Foot**  
**Owner 3 - Townhome**



**Figure E-4**  
**Land Costs per Square Foot**  
**Owner 4 - Single Family Detached**



On average, the trading range of land in San Jose between was 63 percent, meaning that the average highest land price in this period was 63 percent higher than the average lowest land price. By contrast, inflation over this same time period was 13 percent. Figure E-3 illustrates the trading range of land intended for townhomes, which ranged an average of 56 percent in the years studied. Figure E-4 illustrates the trading range of land intended for single family homes, which experienced a 58 percent range in the years studied.

It is important to view the effects of potential inclusionary requirements on the value of land in San Jose within the context of the wide trading range of land. A government action or regulation that affects the residual value of land without causing the land value to fall below its normal trading range is feasible. One that affects land value to such an extent that it falls below the normal trading range can have detrimental effects on future development. This study, then, presents the residual land value of the five development prototypes studied under the three inclusionary scenarios explained above. The residual land values are calculated as the project's total revenue less its costs, inclusive of developer profit and overhead. When one of these scenarios causes the residual land value to fall outside of that prototypes' trading range of land price, DRA examined the economic effects of different "packages" of potential offsets and incentives offered to the developer. The packages represent a range of tools the City of San Jose can use to offset the effects of inclusionary



requirements on developments when those effects may be detrimental to the feasibility of a development. The offset packages studied are:

Package 1: Density bonus;

Package 2: On-site, alternative product type;

Package 3: Off-site compliance, same product type;

Package 4: Density bonus and affordable unit design modification;

Package 5: Acquisition / Rehabilitation; and,

Package 6: Off-site compliance, alternative product type and affordable unit design modification.

Development in San Jose is not currently subject to maximum density requirements, thus developers currently build to the optimum density given the limitations of their product type and the housing market. A density bonus policy in this development environment is therefore irrelevant. However, DRA examined the effects of a density bonus, assuming the bonus provides an increase in the prototypes' original densities as an incentive for including affordable units in the development.

## Findings - Owner Prototypes

Figure E-5 illustrates the land residual values for Owner Prototype 1 under all three inclusionary scenarios and assuming middle and high market sales prices. Figure E-6 illustrates the land residual analysis findings for Owner Prototype 2 under all inclusionary scenarios. Figures E-7 and E-8 similarly present the findings for Owner Prototypes 3 and 4, respectively.

### Inclusionary Scenario 1

All owner prototypes remain feasible assuming high unit sales prices for the market rate units.

All owner prototypes, with the exception of Owner 1 – High Rise Condos, remain feasible assuming middle market sales prices. Owner 1 is rendered feasible with alternative compliance package 4, where inclusionary requirements are met through acquisition and rehabilitation of existing rental units. The residual land values of Owner 1, assuming middle market sales prices and inclusionary scenario 1 with offset packages, are illustrated in Figure E-9.

Under low market sales price assumptions, Owner 2 – Stacked Flat Condos, is not feasible as a 100 percent market rate project. No alternative compliance option renders this prototype feasible. This suggests that developers are not developing this product in low sales price market areas within the City. Owner 3 and 4 – Townhomes and Single Family Detached Homes, are feasible assuming low market sales prices. The residual land values with no offset packages for Owner 3 and 4 fall at the low end, but within, the trading range of land prices. The most valuable offset packages for these prototypes are: package 1, density bonus; package 5, density bonus and design modification and package 3, off-site construction of the same product type.

**Figure E-5**  
**Residual Land Value**  
**Owner 1 - High Rise Condos**



Inclusionary Scenario 1: 20% of units affordable at 110% AMI.  
 Inclusionary Scenario 2: 5% of units affordable at 90% AMI and 10% at 110% AMI.  
 Inclusionary Scenario 3: 5% of units affordable at 70% AMI and 5% at 90% AMI.

### Inclusionary Scenario 2

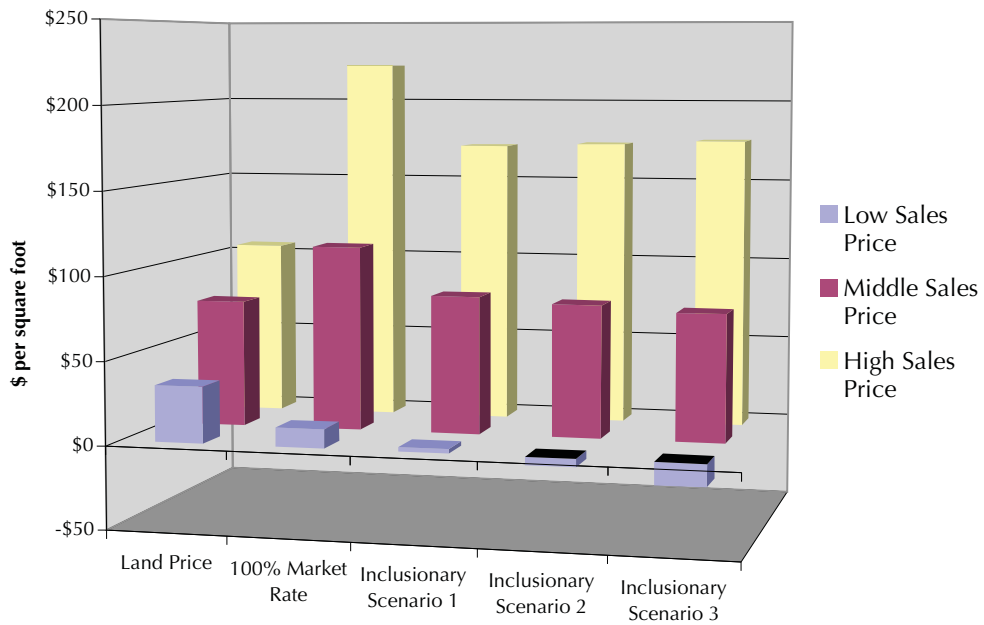
All owner prototypes remain feasible assuming high unit sales prices for the market rate units.

All owner prototypes, with the exception of Owner 1 – High Rise Condos, remain feasible assuming middle market sales prices. Owner 1 is rendered feasible with alternative compliance package 4, where inclusionary requirements are met through acquisition and rehabilitation of existing rental units.

Under low market sales price assumptions, Owner 2 – Stacked Flat Condos, is not feasible as a 100 percent market rate project. No alternative compliance option renders this prototype feasible. This suggests that developers are not developing this product in low sales price market areas within the City. Owner 3 and 4 – Townhomes and Single Family Detached Homes, are feasible assuming low market sales prices. The residual land values with no offset packages for Owner 3 and 4 fall at the low end, but within, the trading range of land prices. All alternative compliance packages, with the exception of off-site construction of the same product type, increase residual land values for these prototypes.

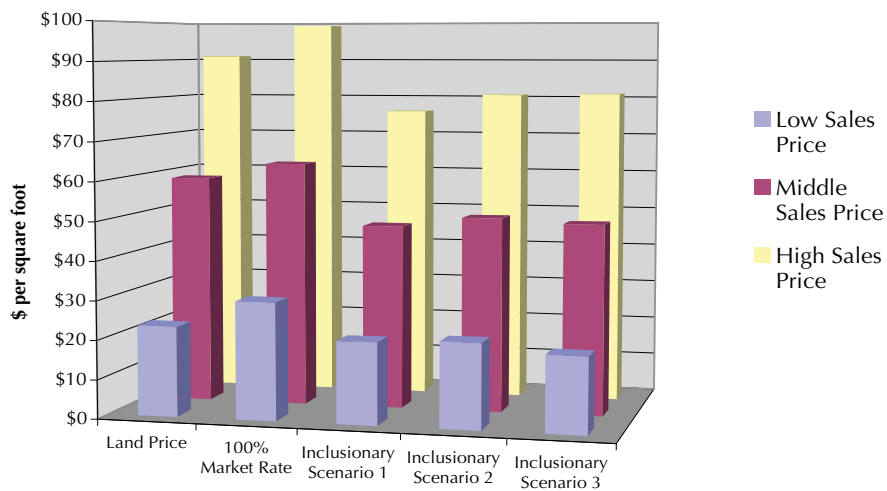
**Figure E-6**

**Residual Land Value  
Owner 2 - Stacked Flat Condo**



**Figure E-7**

**Residual Land Value  
Owner 3 - Townhomes**



Inclusionary Scenario 1: 20% of units affordable at 110% AMI.

Inclusionary Scenario 2: 5% of units affordable at 90% AMI and 10% at 110% AMI.

Inclusionary Scenario 3: 5% of units affordable at 70% AMI and 5% at 90% AMI.

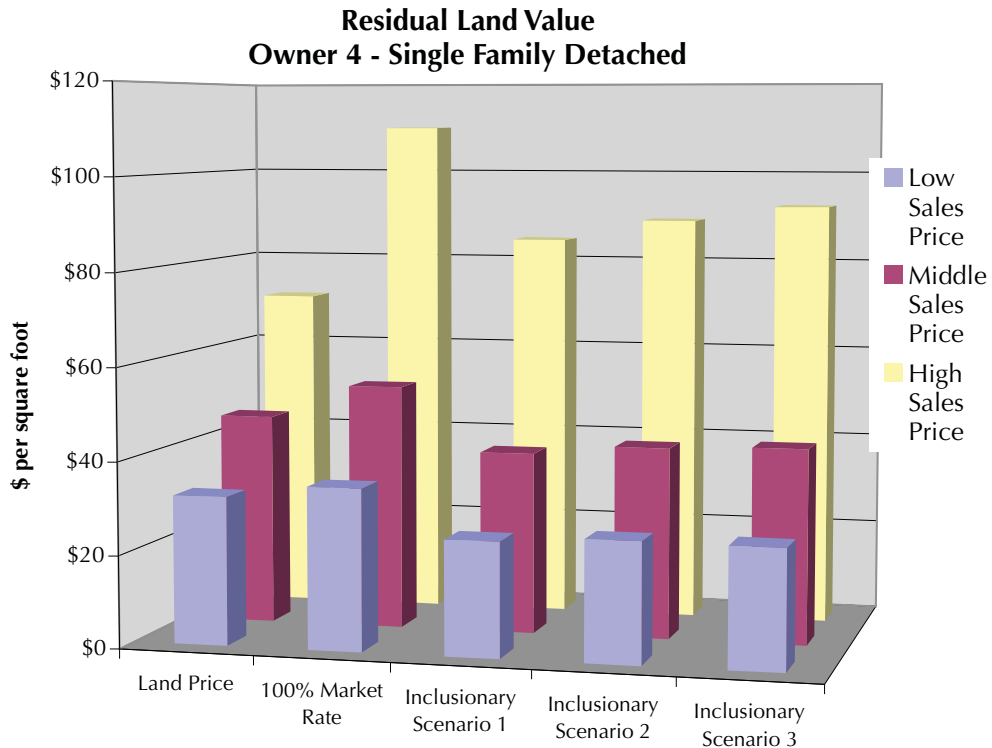
Inclusionary Scenario 3

All owner prototypes remain feasible assuming high unit sales prices for the market rate units.

All owner prototypes remain feasible assuming middle unit sales prices for the market rate units.

Under low market sales price assumptions, Owner 2 – Stacked Flat Condos, is not feasible as a 100 percent market rate project. No alternative compliance option renders this prototype feasible. This suggests that developers are not developing this product in low sales price market areas within the City. Owner 3 – Townhomes, is infeasible assuming low market sales prices and inclusionary scenario 3. All alternative packages, with the exception of package 4, off-site construction of the same product type, render the prototype feasible. Owner 4 – Single Family Detached Homes, is feasible assuming low market sales prices.

**Figure E-8**



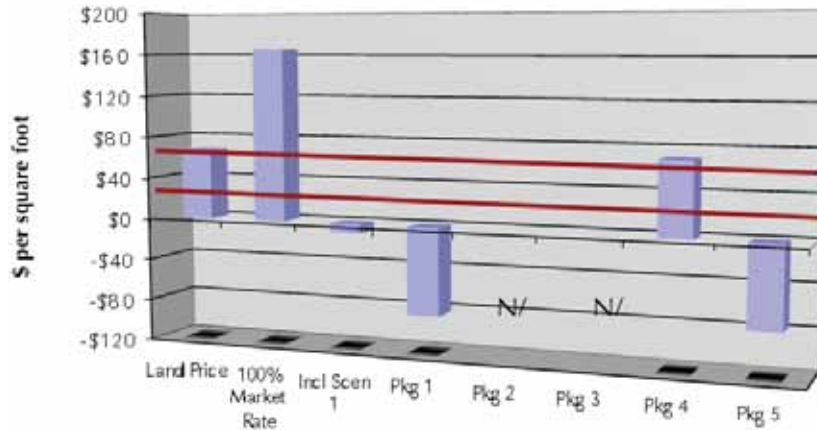
Inclusionary Scenario 1: 20% of units affordable at 110% AMI.

Inclusionary Scenario 2: 5% of units affordable at 90% AMI and 10% at 110% AMI.

Inclusionary Scenario 3: 5% of units affordable at 70% AMI and 5% at 90% AMI.

**Figure E-9**

**Residual Land Value  
Owner 1 - High Rise Condos, Middle Sales Price  
Inclusionary Scenario 1 with Offset Packages**



Scenario 1: 20% of units affordable at 110% AMI.  
Density Bonus  
Alternative Product Type – N/A  
Alternative Construction, Same Product Type – N/A  
Rehabilitation/Rehabilitation  
Density Bonus and Design Modification  
Development range of land, 2003 – 2006.

## Findings - Renter Prototypes

The land residual analysis findings for the renter prototype, under all inclusionary scenarios and market rent assumptions, are presented in Figure E-10.

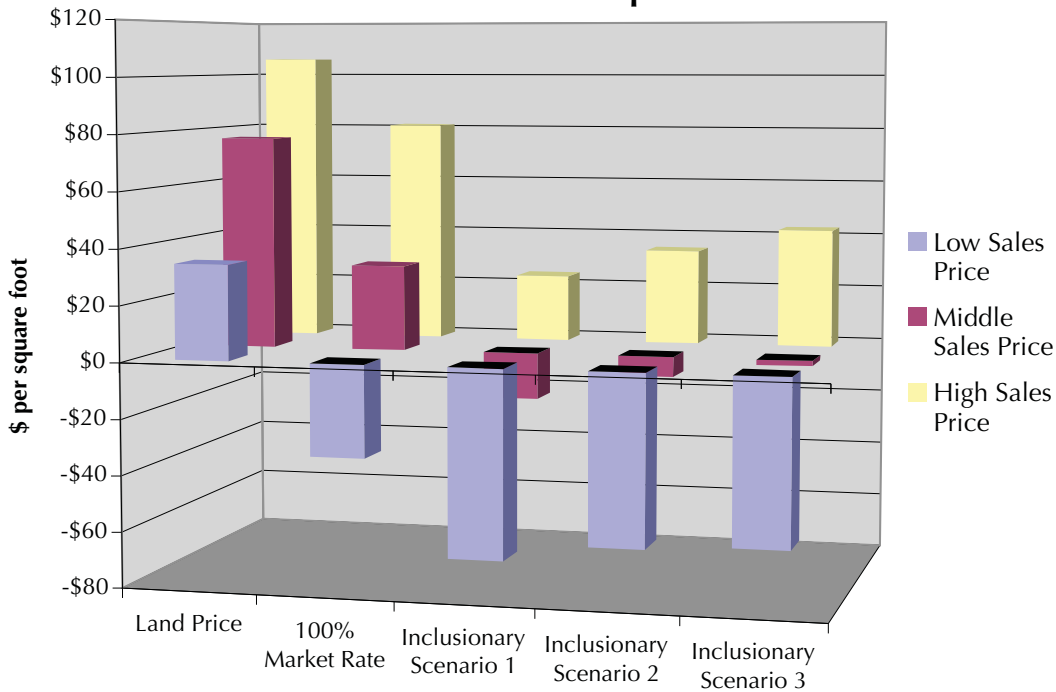
The renter prototype is infeasible as a 100 percent market rate development when assuming low and middle rents.

With high rents, the renter prototype is feasible as a market rate project, but infeasible under all three inclusionary scenarios.

The findings suggest that development of renter housing is speculative in San Jose at this time. Developers building rental housing are doing so on the assumption of luxury rents and/or that rents will increase in the future. This is consistent with the finding that there has been very little market-rate rental development in San Jose in the last several years. However, there currently are permits pending for rental developments in North San Jose. Therefore, this study analyzes one point in time of a very volatile rental housing market.

Figure E-10

**Residual Land Value per Square Foot  
Renter 1 - Stacked Flat Apartments**



Inclusionary Scenario 1: 8% of units affordable at 50% AMI and 12% at 60% AMI.  
 Inclusionary Scenario 2: 5% of units affordable at 50% AMI and 10% at 60% AMI.  
 Inclusionary Scenario 3: 5% of units affordable at 35% AMI and 5% at 50% AMI.

Inclusionary Scenario 1

The renter prototype is infeasible assuming low and middle market rents and inclusionary scenario 1.

With high rent assumptions, the renter prototype is feasible with inclusionary scenario 1 and alternative compliance package 1, 50 percent density bonus or package 5, 50 percent density bonus and design modification.

Inclusionary Scenario 2

The renter prototype is infeasible assuming low, middle and high market rents and inclusionary scenario 2. No alternative compliance packages render the prototype feasible.

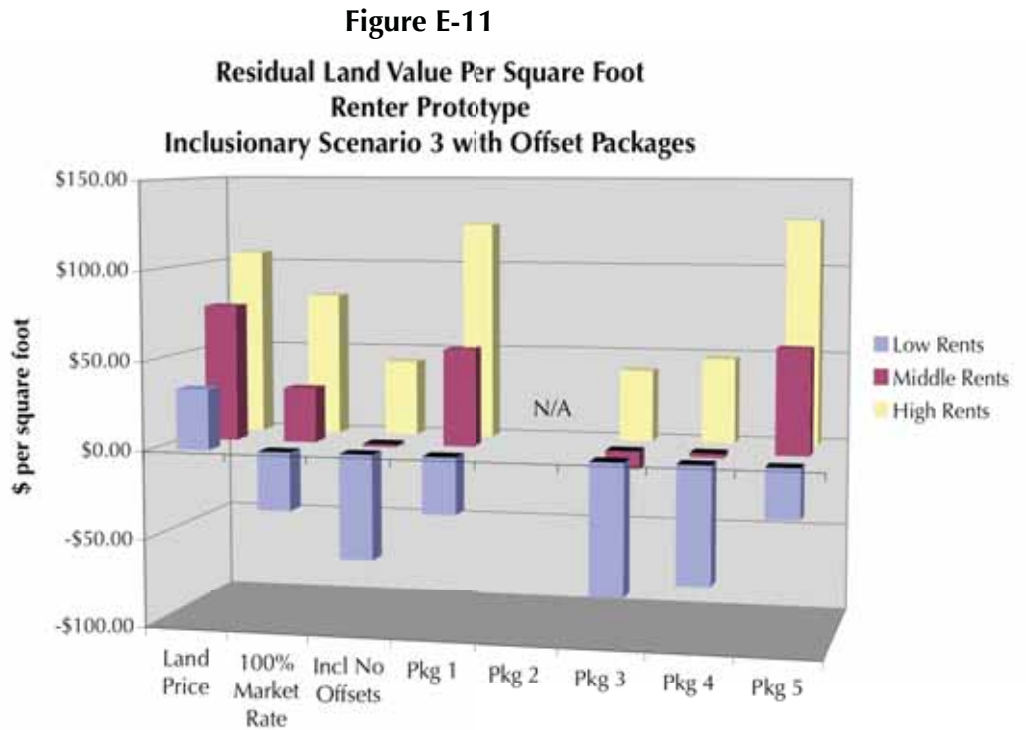
Inclusionary Scenario 3



The renter prototype is infeasible assuming low, middle and high market rents and inclusionary scenario 3.

With middle or high rent assumptions, the renter prototype is rendered feasible with inclusionary scenario 3 and alternative compliance package 1, 50 percent density bonus or package 5, 50 percent density bonus and design modification.

The land residual values for the renter prototype under inclusionary scenario 3 with offset packages are presented in Figure E-11.



Inclusionary Scenario 3: 5% of units affordable at 35% AMI and 5% at 50% AMI.

Pkg 1: 50% Density Bonus

Pkg 2: N/A

Pkg 3: Off-Site New Construction

Pkg 4: Acquisition/Rehabilitation

Pkg 5: 50% Density Bonus and Design Modification

Pkg 6: N/A



# Tax Increment Financing: Public/Private Financing for Low Income Housing and Infrastructure

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**Global Symposium on Land Value Capture**

**Lincoln Institute of Land Policy**

August 15-17, 2017

**David Rosen, PhD**

**Principal DRA**



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# What is Redevelopment?

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- Tool to Remediate Blight
- Economic Development and Affordable Housing
- Ability to Enter into Public Private Partnerships
- Agencies Are Separate from Cities
- Agency Debt Has No Pledge of City Funds
- Financing Flexibility

Source: Orrick, De La Rosa & Co.



# What is Tax Increment?

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- Tax Increment is “the increase in the property taxes within the redevelopment project area that results from increases in assessed value over the base year assessed value”
- Tax Increment is a Redistribution of Property Tax from Other Taxing Agencies
- No New Taxes
- Primary Funding Source Used by Redevelopment Agencies is Tax Increment

Source: Orrick, De La Rosa & Co.



# Growth in Tax Increment

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Tax Increments Come Only from Increase in Assessed Value:

- New Construction
- Major Rehabilitation
- Infill Construction
- Reassessment Upon Sale of Property
- Other Conventional Reassessment

Source: Orrick, De La Rosa & Co.



# Tax Increment Financing

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- Predictable
- Long Term
- Support Dependably Secure, Prudent Debt

Source: Piper Jaffrey & Co.; Kenton Futures

The logo for DRA, consisting of the letters 'DRA' in white serif font on a red square background.

# No Agency Direct Control to Increase Revenues

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- No Ability to Change Tax Rates
- No Ability to Reallocate Resources as in General Fund Debt
- No Ability to Raise Taxes or Revenues

Source: Orrick, De La Rosa & Co.

# Key Financial Factors for Project Area Credit

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- Diversity of Land Uses
- Diversity of Property Ownership
- Diversity of Overall Assessed Value
- Size of Project Area
- Historic Assessed Value Trends
- Revenue Sharing Agreements (Pass Throughs)

Source: Orrick, De La Rosa & Co.



# Overview of Tax Increment Bonds

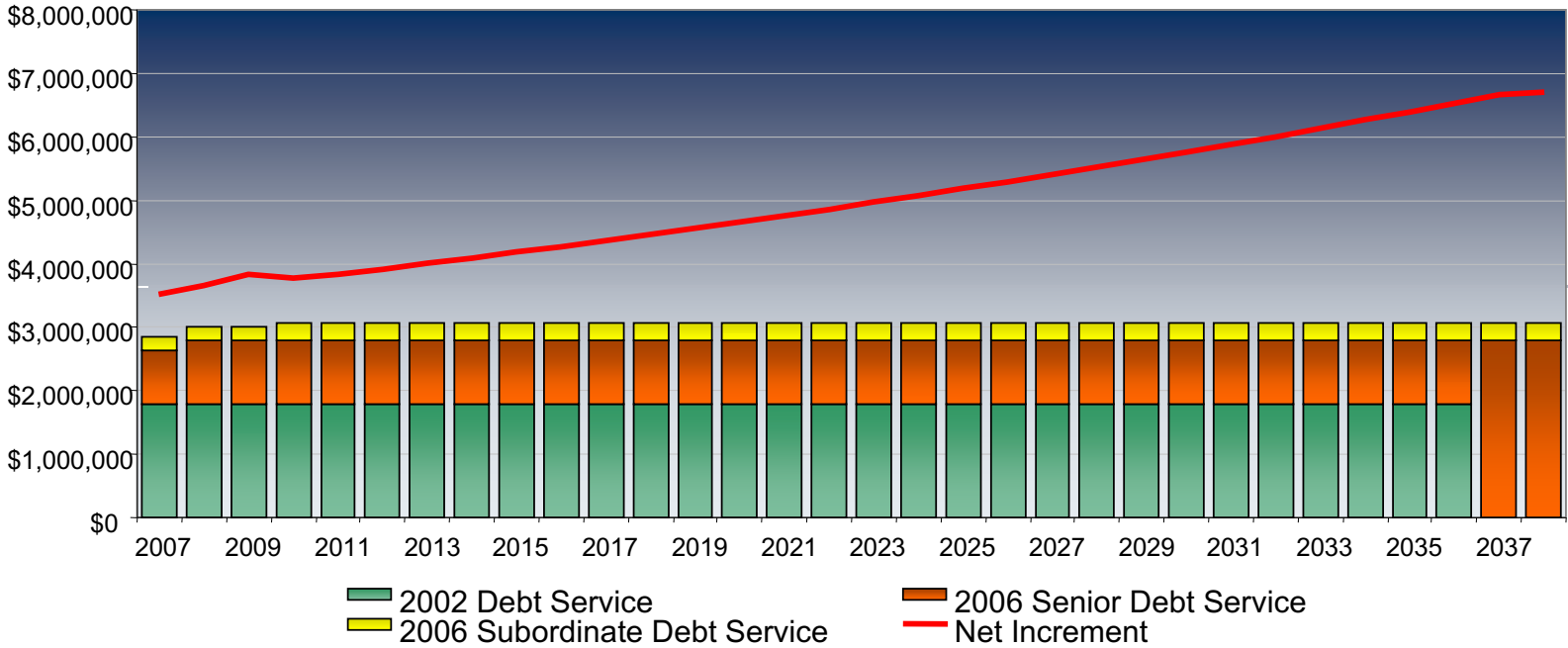
- A Long-Term Debt Secured Solely by Tax Increment Revenues
- Major Advantage is the Ability to Pledge Future Tax Increment
- Bond Proceeds Are Used to Revitalize Blighted Areas, Promote Affordable Housing and Economic Growth
- City's General Fund Not Liable for Repayment

Source: Piper Jaffrey & Co.; Kenton Futures





# Tax Increment Bond Capacity/Structure Illustrated



Source: Orrick, Stone & Youngberg

Tax Increment Financing: Public/Private Financing for Low Income Housing and Infrastructure



# Thank You

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