## bae urban economics



FINANCIAL FEASIBILITY ANALYSIS baseline financial modeling results

## PRESENTATION OVERVIEW

- Study Overview and Approach
- Residual Land Value (RLV) Overview
- Critical Cost/Revenue Assumptions
- Baseline Feasibility Model Overview
- Questions and Comments
- Next Steps


## STUDY OVERVIEW

## ANALYSIS METHODOLOGY financial feasibility analysis

Create series of pro forma development feasibility models

- Assess Residential Development Cost, broken down by cost components (site preparation, hard costs, soft costs, financing costs, etc.)
- Estimate Rental Revenue or Sale Proceeds, based on various ways to abide by current inclusionary ordinance
- Estimate Value of Development
- Calculate Residual Land Value


## DEVELOPMENT PROTOTYPES PROTOTYPE HEIGHT AND FORM

Central City Prototypes

- 5 Stories
- 7 Stories
- 9 Stories

15 Stories

30 Stories


## Outside CC Prototypes

- 3 Stories
- 4 Stories
- 5 Stories
- 7 Stories
- 13 Stories



## RESIDUAL LAND VALUE APPROACH

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 OVERVIEW- Residual Land Value (RLV) solves for the price at which a developer/investor could purchase a site and still yield a feasible project
- Benefits: Land values vary depending on location, conditions, land use policies, etc.
- Challenges: To understand feasibility of a real project, RLV results must be compared to actual land purchases.


## RESIDUAL LAND VALUE APPROACH development cost overview



## RESIDUAL LAND VALUE APPROACH <br> LAND ACQUISITION OVERVIEW



## RESIDUAL LAND VALUE APPROACH hard cost overview



## residual land value approach soft cost OVERVIEW




## RESIDUAL LAND VALUE APPROACH cITY SERVICE DISTRICT CHARGES




## RESIDUAL LAND VALUE APPROACH construction financing



## RESIDUAL LAND VALUE APPROACH

 DEVELOPER FEE/PROFIT

## RESIDUAL LAND VALUE APPROACH residual land value



## RESIDUAL LAND VALUE APPROACH RESIDUAL LAND VALUE, VISUAL

Hypothetical Example


Development Cost (excl. land purchase) $=\$ 58$ Million

Value of Property to Investors = \$60 Million

Residual Land Value = \$2 Million
Can you buy a $1 / 2$-Acre Site for $\$ 2$ Million?

## CRITICAL COST/REVENUE ASSUMPTIONS

DEVELOPMENT COST ASSUMPTIONS

|  | Low | Medium | High |
| :--- | ---: | ---: | ---: |
|  |  |  | $\$ 235$ |
| Type V Construction | $\$ 220$ | $\$ 235$ | $\$ 260$ |
| Hard Cost per Gross SF | $\$ 385$ | $\$ 406$ | $\$ 440$ |
| Total Cost per Gross SF | $\$ 277,000$ | $\$ 292,000$ | $\$ 317,000$ |

## Type III Construction

| Hard Cost per Gross SF | $\$ 275$ | $\$ 315$ | $\$ 350$ |
| :--- | ---: | ---: | ---: |
| Total Cost per Gross SF | $\$ 456$ | $\$ 510$ | $\$ 556$ |
| Total Cost per Unit | $\$ 309,000$ | $\$ 345,000$ | $\$ 377,000$ |

Type I Construction

| Hard Cost per Gross SF | $\$ 330$ | $\$ 375$ | $\$ 415$ |
| :--- | ---: | ---: | ---: |
| Total Cost per Gross SF | $\$ 507$ | $\$ 565$ | $\$ 617$ |
| Total Cost per Unit | $\$ 341,000$ | $\$ 379,000$ | $\$ 414,000$ |

## RENTAL RATE ASSUMPTIONS

Market Rate Rent/SF Market Rate per Unit
Rents Unit Size High Medium Low High Medium Low

## Central City

| Studio | 450 | \$4.15 | \$3.50 \$3.25 | \$1,868 | \$1,575 | \$1,463 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1BR | 600 | \$3.75 | \$3.25 \$3.00 | \$2,250 | \$1,950 | \$1,800 |
| 2BR | 900 | \$3.25 | \$3.00 \$2.75 | \$2,925 | \$2,700 | \$2,475 |
| 3BR | 1,000 | \$3.25 | \$3.00 \$2.75 | \$3,250 | \$3,000 | \$2,750 |
| Parking (per space) |  |  |  | \$200 | \$150 | \$100 |
| Other Income (Per Unit) |  |  |  | \$80 | \$80 | \$80 |
| Commercial Rent NNN |  |  |  | \$2.50 | \$2.00 | \$1.50 |
| Non-Central City |  |  |  |  |  |  |
| Studio | 450 | \$4.15 | \$3.25 \$2.50 | \$1,868 | \$1,463 | \$1,125 |
| 1BR | 600 | \$3.75 | \$2.50 \$2.00 | \$2,250 | \$1,500 | \$1,200 |
| 2BR | 900 | \$3.25 | \$2.25 \$1.75 | \$2,925 | \$2,025 | \$1,575 |
| 3BR | 1,000 | \$3.25 | \$2.25 \$1.75 | \$3,250 | \$2,250 | \$1,750 |
| Parking (per space) |  |  |  | \$200 | \$50 | \$0 |
| Other Income (Per Unit) |  |  |  | \$80 | \$80 | \$80 |
| Commercial Rent NNN |  |  |  | \$2.25 | \$2.00 | \$1.50 |

## OPERATING COSTS AND PROPERTY VALUATION

## Operating Costs as \% of Revenue

Under 100 Units 32\%

100-200 Units 30\%
200+ Units 28\%

Vacancy Rate 5\%

## Property Valuation/Yield-On-Cost

Market Cap Rate
4.7\%

Developer Spread 1.0\%
Required Yield-on-Cost 5.7\%

## Financing

Construction-Period
Loan-to-Cost (excl land cost) 70.0\%
Loan Fees 1.5\%
Drawdown Factor 60.0\%
Interest rate 6.5\%
Loan Term (months) 18

## SALE PRICES

| Sale Price | Unit Size | Market Rate Sale Price/SF |  |  | Market Rate Sale Price |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | High | Medium | Low | High Medium | Low |
| Central City |  |  |  |  |  |  |
| 1BR | 600 | \$625 | \$500 | \$450 | \$375,000 \$300,000 | \$270,000 |
| 2BR | 900 | \$615 | \$550 | \$475 | \$553,500\$495,000 | \$427,500 |
| 3BR | 1,000 | \$575 | \$500 | \$400 | \$575,000 \$500,000 | \$400,000 |
| Commercia |  |  |  |  | \$2.50 \$2.00 | \$1.50 |
| Non-Central City |  |  |  |  |  |  |
| 1BR | 600 | \$550 | \$425 | \$350 | \$330,000 \$255,000 | \$210,000 |
| 2BR | 900 | \$475 | \$400 | \$300 | \$427,500\$360,000 | \$270,000 |
| 3BR | 1,000 | \$415 | \$375 | \$300 | \$415,000\$375,000 | \$300,000 |
| Commercia |  |  |  |  | \$2.50 \$2.00 | \$1.50 |

## MODEL PREVIEW

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| Assumptions |  |
| :--- | :--- |
| Prototype | CC-1 |
| Development Cost | Medium |
| Revenue | Medium |
| \|H Option | $60 \%$ |
| Location | Central City |
| Construction Type | Type 5 |



## Sources: BAE, 2023

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NEXT STEPS

## NEXT STEPS

- Revise Baseline Pro Formas
- Finalize baseline feasibility
- Initiate Policy Analysis using Feasibility Models
- March $17^{\text {th }}$ Working Group - Present Feasibility

Findings

## DISCUSSION WITH WORKING GROUP

- Input on Cost and Revenue Assumptions
- Questions/Comments on Feasibility Model



## Q Questions and discussion

