EISENHOWER WEST/ LANDMARK VAN DORN IMPLEMENTATION Advisory Group

May 24, 2018
Agenda

- Landmark Mall Update
- Development Economics & Developer Contributions Methodology
- Air Quality Analysis Update
- Sewer Study Analysis Update
- Development Updates
- Questions & Next Steps
Eisenhower West/Landmark Van Dorn Implementation Advisory Group Meeting

May 24, 2018

Landmark Development Update
Howard Hughes Project Team

• Mark Bulmash, Senior Vice President, Development Howard Hughes Corporation
  • mark.bulmash@howardhughes.com
Approved Landmark/Van Dorn Corridor Plan (July 2009)
## Small Area Plan Development Parameters

<table>
<thead>
<tr>
<th>Development Block</th>
<th>Gross Site Area (acres)</th>
<th>Floor Area Ratio Maximum / Minimum</th>
<th>Allowable (Minimum) Gross Floor Area</th>
<th>Land Use</th>
<th>Maximum Height Feet (stories)</th>
<th>Retail Minimum</th>
<th>Residential Maximum (Minimum)</th>
<th>Office Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>West End Town Center</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Landmark Mall</td>
<td>51.48</td>
<td>2.5 (2.23)</td>
<td>5,606,000 (5,000,000)</td>
<td>Regional Town Center</td>
<td>85 - 250 (5-25)</td>
<td>800,000</td>
<td>1,800,000 (1,200,000)</td>
<td>2,500,000</td>
</tr>
</tbody>
</table>
Landmark Ownership

Howard Hughes Corp.

Seritage Growth Properties
Approved DSUP, Interim Plan (June 2015)

Landmark Mall Overview

Potential Outdoor Monitor Location

Potential Outdoor Ice Skating Rink
Current Activities

• Mall Closure
• Temporary Location for Carpenters Shelter
• Sewer Capacity Studies
• Background Traffic Counts for Analysis
• Coordination with Seritage
Next Steps

• Propose Updates to Small Area Plan
• Staff Analysis
• Community Engagement with Ad Hoc Eisenhower West/Landmark Van Dorn Implementation Advisory Group
Questions or Comments?

Jonathan Rak
McGuireWoods LLP
703-712-5411
jrak@mcguirewoods.com
Development Economics & Developer Contributions Methodology
DEVELOPMENT ECONOMICS
AND
DEVELOPMENT CONTRIBUTION CONSIDERATIONS

W-ZHA, LLC

May 24, 2018
AGENDA

• Development Economics Primer

• Important Principles

• Development Contribution Considerations

• Key Takeaways
REAL ESTATE DEVELOPMENT ECONOMICS
Development Economics

For Developers to invest, the project must generate sufficient net operating income to cover development costs and an adequate return on their investment.

Real estate development is relatively illiquid, a mid- to long-term hold, thus high risk.
**Definition: Development Cost**

Construction and soft costs mostly the same Citywide for the same product.

These costs account for 70% of development cost.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Acquisition</td>
<td>$43,000 /Unit</td>
<td>$2,580,000</td>
</tr>
<tr>
<td>Sitework</td>
<td>$850 /Unit</td>
<td>$51,000</td>
</tr>
<tr>
<td>Construction Cost</td>
<td>$160 /Bldg Sq Ft</td>
<td>$9,600,000</td>
</tr>
<tr>
<td>Parking Cost</td>
<td>$30,000 /Space (1.25 /Unit)</td>
<td>$2,250,000</td>
</tr>
<tr>
<td>Soft Costs</td>
<td>20% of Hard Cost</td>
<td>$1,920,000</td>
</tr>
<tr>
<td>Development Cost Net of Financing Cost</td>
<td></td>
<td>$16,401,000</td>
</tr>
<tr>
<td>Financing</td>
<td>80% of Cost Financed</td>
<td>$426,000</td>
</tr>
<tr>
<td>Total Development Cost</td>
<td></td>
<td>$16,827,000 /Sq Ft $280</td>
</tr>
</tbody>
</table>

Source: W-ZHA
**DEFINITION: NET OPERATING INCOME**

Net operating income (NOI) is simply income less operating expenses.

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**Net Operating Income**

60-Unit For-Rent Apartment Building

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Potential Income</td>
<td>$2,125 Rent/Mo</td>
</tr>
<tr>
<td>Less: Vacancy</td>
<td>5%</td>
</tr>
<tr>
<td>Effective Gross Income</td>
<td>$1,453,500</td>
</tr>
<tr>
<td>Other Income</td>
<td>5%</td>
</tr>
<tr>
<td>Total Income</td>
<td>$1,526,175</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>33%</td>
</tr>
<tr>
<td><strong>Net Operating Income</strong></td>
<td><strong>$1,022,537</strong></td>
</tr>
</tbody>
</table>

Source: W-ZHA
**Definition: Investment Return Threshold**

There are many ways to measure investment return.

The most basic indicator of return is *investment yield*.

The investment yield calculation is Net Operating Income/Development Cost.

An adequate investment yield for a prospective project is the current capitalization rate for the real estate asset plus a risk premium.

Year-End 2017 Capitalization Rate for Multi-Family Housing in the Mid-Atlantic Region

→ 3%-6.75%  Avg 5.17%

Alexandria is a hot market will fall on lower end of scale.  *Say 4%*

Risk premium depends on economy, inflation, and project characteristics.

→ Generally, a range of 1.5% - 3%

In our base case location in Alexandria moderate-to low-risk.  *Say 2%*

**Base Case Investment Threshold:** 6%
**Investment Yield: Base Case**

Real estate operations after lease-up ("stabilized operations") satisfy the minimum yield threshold.

### Investment Yield

**60-Unit For-Rent Apartment Building**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value 1</th>
<th>Value 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Operating Income @ Rent /Mo -&gt;</td>
<td>$2,125</td>
<td>$1,022,537</td>
</tr>
<tr>
<td>Divided By Development Cost</td>
<td></td>
<td>$16,827,000</td>
</tr>
</tbody>
</table>

**Investment Yield Stabilized Yr of Operation** 6.1%

**Investment Threshold** -----> 6.0%

Source: W-ZHA
IMPORTANT PRINCIPLES
Real Estate is Hyper-Local – It Is All About Local Market Conditions, Competition, Location, and Amenities

Belle Pre Apts -- Braddock

Modero Tempo Apts -- EW/LVD
## ECONOMICS SUPER-SENSITIVE TO RENT

### Investment Yield

**60-Unit For-Rent Apartment Building**

| Net Operating Income @ Rent /Mo | $2,125 | $1,022,537 |
| Divided By Development Cost | $16,827,000 |

**Investment Yield Stabilized Yr of Operation**

| 6.1% |

*Source: W-ZHA*

### Investment Yield 5% Lower Rent

**60-Unit For-Rent Apartment Building**

| Net Operating Income @ Rent /Mo | $2,025 | $974,418 |
| Divided By Development Cost | $16,827,000 |

**Investment Yield Stabilized Yr of Operation**

| 5.8% |

*Investment Threshold -----* 6.0%
## Economics Sensitive to Perception of Market Risk

### Investment Yield
60-Unit For-Rent Apartment Building

<table>
<thead>
<tr>
<th>Net Operating Income @ Rent /Mo</th>
<th>$2,125</th>
<th>$1,003,060</th>
</tr>
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<tbody>
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<td></td>
<td>$16,827,000</td>
</tr>
</tbody>
</table>

**Investment Yield Stabilized Yr of Operation** 6.0%

**Investment Threshold** ----> 6.0%

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### Investment Yield & Threshold w/ Perceived Market Risk
60-Unit For-Rent Apartment Building

<table>
<thead>
<tr>
<th>Net Operating Income @ Rent /Mo</th>
<th>$2,125</th>
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<td></td>
<td>$16,827,000</td>
</tr>
</tbody>
</table>

**Investment Yield Stabilized Yr of Operation** 6.0%

**Investment Threshold** ----> 6.5%

Source: W-ZHA
Market Drivers

The Regional Economy and Capital Markets – Prospects for growth

Critical Mass or Successful Catalyst Projects in Submarket – Successful major investments reduce the market’s perception of location risk

Transit Investment in Submarket – Metro proven to generate a 10%-15% rent premium for apartments within easy walking distance

Walk/Bike Infrastructure in Submarket – Studies indicate higher walkscore locations achieve higher rents
THE PUBLIC SECTOR’S INFLUENCE ON MARKET

A Plan – Public policy clarity on Submarket’s future function & character

Regulation – Provides standards to insure quality and consistency into the future

Transit Investment (Metro, Eisenhower West Transit Way) – Major public capital investments enhance access and generate value to the Submarket

Private Sector Partner – Facilitates desired investment
DEVELOPER CONTRIBUTIONS PRIMER
**Developer Contribution Analysis, Why?**

To understand the economic implications of rezoning to determine equitable public/private funding of community infrastructure and amenities

To test the economic feasibility of Plans to manage expectations and allow for informed decision-making
ECONOMICS OF REZONING: BASIC CONCEPT

By the stroke of a regulatory pen, property owners can reap new value.

The community should capture some of this value.

<table>
<thead>
<tr>
<th>Basic Concept</th>
<th>Economics of Re-Zoning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Zoning</strong></td>
<td><strong>New Zoning</strong></td>
</tr>
<tr>
<td>Zoning Max # of Units</td>
<td>15</td>
</tr>
<tr>
<td>Market Demand</td>
<td>15</td>
</tr>
<tr>
<td>Land Value /Unit</td>
<td>$40,000</td>
</tr>
<tr>
<td>Market Value</td>
<td>$600,000</td>
</tr>
</tbody>
</table>
**ECONOMICS OF REZONING: KEY CONSIDERATION - MARKET**

Is there is market to absorb re-zoning’s additional density?

<table>
<thead>
<tr>
<th>Market Considerations</th>
<th>Economics of Re-Zoning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Zoning</strong></td>
<td><strong>New Zoning</strong></td>
</tr>
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<tr>
<td>Market Value</td>
<td>$600,000</td>
</tr>
</tbody>
</table>
**ECONOMICS OF REZONING: KEY CONSIDERATION - MARKET**

Is the existing use more lucrative as-is than redeveloped?

<table>
<thead>
<tr>
<th>Value of Existing Land Use Impacts The Value of Re-Zoning</th>
<th>Economics of Re-Zoning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zoning Max # of Units</strong></td>
<td><strong>Existing Zoning</strong></td>
</tr>
<tr>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td><strong>Land Value /Unit</strong></td>
<td>$25,000</td>
</tr>
<tr>
<td><strong>Market Value</strong></td>
<td>$375,000</td>
</tr>
<tr>
<td><strong>Existing Land Value: Strip Shopping Center</strong></td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>
Does the new zoning generate additional development costs?...Parking

**ECONOMICS OF REZONING: KEY CONSIDERATION - ADDITIONAL COSTS**

<table>
<thead>
<tr>
<th></th>
<th>Existing Zoning</th>
<th>New Zoning</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoning Max # of Units</td>
<td>15</td>
<td>55</td>
<td>40</td>
</tr>
<tr>
<td>Parking Cost /Unit</td>
<td>0</td>
<td>($35,000)</td>
<td>($35,000)</td>
</tr>
<tr>
<td>Land Value /Unit</td>
<td>$40,000</td>
<td>$40,000</td>
<td>$40,000</td>
</tr>
<tr>
<td>Market Value</td>
<td>$600,000</td>
<td>$275,000</td>
<td>($325,000)</td>
</tr>
</tbody>
</table>
**ECONOMICS OF REZONING: KEY CONSIDERATION - ADDITIONAL COSTS**

Does the new zoning generate additional development costs?...Land assembly premiums & roads

<table>
<thead>
<tr>
<th></th>
<th>Existing Zoning</th>
<th>New Zoning</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoning Max # of Units</td>
<td>15</td>
<td>55</td>
<td>40</td>
</tr>
<tr>
<td>Land Assemblage/Road Costs</td>
<td>0</td>
<td>($34,000)</td>
<td>($34,000)</td>
</tr>
<tr>
<td>Land Value /Unit</td>
<td>$40,000</td>
<td>$40,000</td>
<td>$40,000</td>
</tr>
<tr>
<td>Market Value</td>
<td>$600,000</td>
<td>$330,000</td>
<td>($270,000)</td>
</tr>
</tbody>
</table>
Key Takeaways
**Key Takeaways**

- Markets are local and they evolve
- Catalytic projects improve investment prospects
- Early projects can have little capacity for developer contributions
- Planning must consider short, middle and long term economics
Air Quality Analysis Update
Update on Air Quality Modeling Study for Eisenhower West Small Area Plan

EW/LVD SAP Advisory Group Meeting
May 24, 2018
Objective: Assess potential air quality impacts from the Covanta and Virginia Paving stack gases on future hi-rise buildings located in the Van Dorn Metro Center as part of the Eisenhower West Small Area Plan.

Preliminary Results:
- No air quality issue was associated with Covanta and Virginia Paving operations under present land uses.
- Additional modeling was needed for proposed buildings for the Van Dorn Metro Center that are above 120 feet high.
  - High nitrogen oxides (NO$_x$) emission limit from Covanta was main concern.
Separate to our modeling, and in response to new regulatory requirements, Covanta submitted a plan to VDEQ that would reduce its emissions using reasonably available technology:

- Proposes a 46% reduction in NO\textsubscript{x} emissions
- **Who pays** is under discussion at Covanta Facility Monitoring Group
Current Modeling Effort (Phase 2)

- Expand modeling to examine all proposed buildings in Eisenhower West & Landmark/Van Dorn Small Area Plans
- Assumes new lower NO\textsubscript{x} permit limit for Covanta
- Modeling both Covanta-Only and combined Covanta/ Virginia Paving scenarios
Covanta-Only Scenario

- Six tall buildings immediately adjacent to Covanta may pose air quality issues if built to maximum heights in plans

- All but one building remains within ranges approved in plan
  - One building 202-267’ to 175.5’***
  - Three buildings 202-267’ to 225’
  - One building 202-267’ to 202.5’
  - One building 195-260’ to 202.5

*** Lower height than approved in Eisenhower West Plan
Buildings having reduced heights indicated by red fonts
### Table 3 AERMOD Predicted Concentrations of Covanta-only Scenario and Comparison to AAQS, Ground Level Receptors

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>Background (µg/m³)</th>
<th>Covanta Only (µg/m³)</th>
<th>Results + Background (µg/m³)</th>
<th>AAQS (µg/m³)</th>
<th>Exceed Standard?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO₂</td>
<td>1hr</td>
<td>---¹</td>
<td>116.4</td>
<td>116</td>
<td>188</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>24.1</td>
<td>6.8</td>
<td>31</td>
<td>100</td>
<td>no</td>
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<tr>
<td>SO₂</td>
<td>1hr</td>
<td>21.7</td>
<td>48.7</td>
<td>70</td>
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<td></td>
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<td>76</td>
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<tr>
<td></td>
<td>24hr</td>
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<td>44</td>
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<tr>
<td></td>
<td>Annual</td>
<td>2.5</td>
<td>5.4</td>
<td>8</td>
<td>79</td>
<td>no</td>
</tr>
<tr>
<td>PM10</td>
<td>24hr</td>
<td>27</td>
<td>13.5</td>
<td>40</td>
<td>150</td>
<td>no</td>
</tr>
<tr>
<td>PM2.5</td>
<td>24hr</td>
<td>18.3</td>
<td>1.6</td>
<td>20</td>
<td>35</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>7.6</td>
<td>0.7</td>
<td>8</td>
<td>12</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes:**
¹ The background 1-hour NO₂ values 98th percentile concentrations for each hour-of-day were used when running AERMOD and therefore already incorporated in the results.

### Table 4 AERMOD Predicted Concentrations of Covanta-only Scenario and Comparison to AAQS, Elevated Receptors

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>Background (µg/m³)</th>
<th>Covanta Only (µg/m³)</th>
<th>Results + Background (µg/m³)</th>
<th>AAQS (µg/m³)</th>
<th>Exceed Standard?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO₂</td>
<td>1hr</td>
<td>---¹</td>
<td>187.0</td>
<td>187</td>
<td>188</td>
<td>no</td>
</tr>
<tr>
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<td>Annual</td>
<td>24.1</td>
<td>5.9</td>
<td>30</td>
<td>100</td>
<td>no</td>
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<tr>
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<td>105.0</td>
<td>139</td>
<td>1,300</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>24hr</td>
<td>14</td>
<td>36.4</td>
<td>50</td>
<td>366</td>
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<td>Annual</td>
<td>2.5</td>
<td>4.7</td>
<td>7</td>
<td>79</td>
<td>no</td>
</tr>
<tr>
<td>PM10</td>
<td>24hr</td>
<td>27</td>
<td>16.1</td>
<td>43</td>
<td>150</td>
<td>no</td>
</tr>
<tr>
<td>PM2.5</td>
<td>24hr</td>
<td>18.3</td>
<td>2.8</td>
<td>21</td>
<td>35</td>
<td>no</td>
</tr>
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<td>0.6</td>
<td>8</td>
<td>12</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes:**
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Next Steps

Refined modeling of the combined Covanta and Virginia Paving scenario needed

• Requesting five-year hourly production rate data from Virginia Paving
• Additional coordination with Virginia Paving needed
Sewer Study Analysis Update
Sanitary Sewer Analysis

• Current study analyzed trunk sewers
  – Fairfax North Backlick Run Sewer
  – Fairfax South Backlick Run Sewer
  – Fairfax Lower Holmes Run Sewer
  – AlexRenew Holmes Run Trunk Sewer
• Existing and future flows (growth)
• Does not include City collector sewers
  – City sewer capacity analysis required as part of DSP/DSUP process
Sanitary Sewer Analysis

Eisenhower West/Landmark Van Dorn

Legend
- Green: Fairfax County Interceptor Sewer
- Blue: AlexRenew Holmes Run Trunk Sewer
- Yellow: City Sewer
- Purple: Eisenhower West
- Orange: Landmark Van Dorn

Map showing the sewer systems in Eisenhower West and Landmark Van Dorn.

May 24, 2018 EW/LVD Implementation Advisory Group Meeting
City Sewersheds – Holmes Run Area is the Largest
Project Progress

• Sanitary Sewer Hydraulic Model
  – Model runs completed
  – Capacity issues identified
  – Infrastructure improvements identified
  – Preliminary cost estimate prepared
  – Progress meetings with AlexRenew and Fairfax County
  – Draft report under development
Model Results Summary

- Fairfax Backlick Run Sewers have sufficient capacity to handle future growth
- Fairfax Lower Holmes Run and AlexRenew Holmes Run Trunk Sewer do not have sufficient capacity
  - Could lead to basement back-ups and sanitary sewer overflows
  - Capacity issues located between City/County Line and Duke Street
Capacity Improvements

• AlexRenew Holmes Run Trunk Sewer
  – Sewer pipe lining recommended from City/County line to N. Van Dorn Street

• Fairfax Lower Holmes Run Sewer
  – Sewer replacement (upsizing) recommended from City/County line to south of Duke Street

• Consistent with past modeling efforts
Capacity Improvements

Sewer Lining

Sewer Upsizing
Capacity Improvements

• Current level planning cost ~ $24M (2018 dollars)
  – AlexRenew sewer lining ~ $4 million
  – Fairfax sewer upsizing ~ $20 million
  – Design has not yet started, cost estimate will be updated
    • Cost estimate between -30% and +50%
• Costs to be *shared* between City and County
  – Project timing and cost share discussions anticipated to begin Summer 2018
Project Schedule

- **Winter 2018**
  - Assessment of existing capacity and flows
  - Assessment of future flows
  - **Identification of capacity constraints**

- **Spring 2018**
  - **Preliminary capacity improvements**
  - **Preliminary cost, timing, funding strategies**

- **Fall 2018**
  - Final findings and report
Development Updates
Questions & Next Meeting

• Implementation AG Meeting #7 (September)
  – Final date and location TBD