For your information - attached is the presentation from the June 2, 2009, Planning Commission work session regarding the Potomac Yard Planning Advisory Group and the Metrorail Station Feasibility Work Group. You will be given a compressed version of this presentation for the work session on the same topic scheduled for Tuesday, June 9, but staff thought slides from this longer version would be helpful to review prior to the work session.
Potomac Yard Small Area Plan Update

A hundred years after we are gone and forgotten, those who never heard of us will be living with the results of our actions. - Oliver Wendell Holmes

Planning Commission Work Session
June 2, 2009

Planning Commission Worksession
Potomac Yard

- Update on Potomac Yard Planning Advisory Group
- Overview of Preliminary Results of Transportation Study
- Update on Metrorail Station Feasibility Work Group
Potomac Yard
Existing Retail Center Landbay - F

Total Land Area: 69.07 acres
Existing Development: 590,000 sq. ft.
Permitted Development: 600,000 sq. ft.

Site Constraints and Opportunities
Open Space Opportunities

History - Parkway - Washington Street
Potomac Yard
PYPAG Vision Statement

“The Potomac Yard Planning Advisory Group envisions Potomac Yard as an environmentally and economically sustainable and diverse 21st Century urban, transit-oriented, mixed-use community that is compatible with adjacent neighborhoods. We seek to create a regional destination with diverse built and natural spaces where people want to spend time in a wide variety of pursuits.”

PYPAG - Plan Principles

- Create Potomac Yard as a model of environmental sustainability for its site planning, infrastructure, and buildings.
- Create an economically sustainable development.
- Promote excellence in design with a new standard in architecture, urban design, and materials that creates a compelling and lasting identity.
- Create a vibrant and diverse mixed-use community that provides options for living, working, shopping, recreation, culture, and civic uses for a wide range of incomes and ages.
- Pursue a comprehensive multi-modal approach to transportation based on a highly walkable urban environment, minimal automobile use impact, and a maximum use of existing and new Metro stations.
- Create attractive landscaped streets and a network of usable open spaces and parks with a strong connection to Four Mile Run and the Potomac.
- Provide connections and transitions appropriate to and protective of the character of surrounding neighborhoods.
Framework Streets

A street is a spatial entity and not the residue between buildings.

- Anonymous

Potomac Yard
Framework Streets
Building Height Principles

- Provide transitions appropriate to the character of surrounding neighborhoods *(lower heights at periphery)*
- Provide vibrant and diverse, mixed-use community *(variety of heights)*
- Provide strong connection to Four Mile Run and Potomac
- Minimize impacts on GW Parkway
- Provide density near Metro
- Height of buildings related to width of streets
- Height at strategic and gateway locations

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Framework Plan

Map showing the framework plan for the area with various color-coded zones including:
- Residential
- Hotel
- Office
- Retail
- Parks and Open Space

*Note:* The map indicates locations and uses within the framework plan.
Potomac Yard
Conceptual Massing and Height

Potomac Yard
Future Discussions
- Affordable Housing
- Sustainability—environmental and economic
- Streetscape Improvements – Route 1
- Public Art
- Civic Facilities
- Transportation Amenities
Background – Landbay L

Land Area – Ownership – Features & Constraints

Legend
- GW Middle School & Braddock Fields
- Landbay L
- Landbay M
- Landbay K
- 230 KV Line
- Underground BMP Stormwater Tank

<table>
<thead>
<tr>
<th>Owner</th>
<th>Acres</th>
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<tbody>
<tr>
<td>City of Alexandria</td>
<td>+/- 24</td>
</tr>
<tr>
<td>Potomac Yard Development (PYD)</td>
<td>+/- 12</td>
</tr>
<tr>
<td>Potomac Yard Development (PYD)</td>
<td>+/- 2.5</td>
</tr>
</tbody>
</table>

Total Acreage = +/- 38 Acres

Future Transportation Network

- Metro Station
- Potomac Avenue
- Local Street Network
- Bicycle & Pedestrian Facilities
- US-1 Enhancements
- Transitway
Regional Conditions

- Natural and physical barriers constrain travel options
- Major destinations along Route 1
- Beltway heavily influences traffic conditions along Route 1

Future Transit Corridors
What does this assessment tell us?

- Congestion on US 1 will continue
- Local growth in a constrained network results in:
  - "squeezing out" of regional trips
  - Peak hour spreading (extended duration of congestion)

Study Assumptions

- Development density
- Future transportation network
- Travel mode choice
- General traffic growth
Travel Mode Choice

Scenario Including a New Metro Station
- Auto: 48%
- Transit: 35%
- Pedestrian & Bicycle: 17%

Scenario Not Including a New Metro Station
- Auto: 69%
- Transit: 14%
- Pedestrian & Bicycle: 17%
Existing PM Peak Hour Operations

Existing PM Peak Hour Travel Time and Speeds

<table>
<thead>
<tr>
<th>Location/Direction</th>
<th>Average Travel Speed (mph)</th>
<th>Average Travel Time (in minutes for 1.7 miles*)</th>
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</thead>
<tbody>
<tr>
<td>1. Washington Street Southbound</td>
<td>8.8</td>
<td>11.5</td>
</tr>
<tr>
<td>2. US 1 Northbound (Old Town)</td>
<td>13.0</td>
<td>8.0</td>
</tr>
<tr>
<td>3. US 1 Southbound (Old Town)</td>
<td>5.3</td>
<td>19.0</td>
</tr>
<tr>
<td>4. Duke Street Westbound</td>
<td>14.4</td>
<td>7.0</td>
</tr>
<tr>
<td>5. Duke Street Eastbound</td>
<td>11.6</td>
<td>9.0</td>
</tr>
<tr>
<td>6. US 1 Northbound (PT)</td>
<td>22.3</td>
<td>4.5</td>
</tr>
<tr>
<td>7. US 1 Southbound (PT)</td>
<td>20.9</td>
<td>5.0</td>
</tr>
</tbody>
</table>

* This is the equivalent time required to travel 1.7 miles, which is the same as the length of US 1 from S. Glebe Road to Silver Lake.

PM Peak Hour Travel Speed in Alexandria
US 1 will approach capacity regardless of redevelopment
  - With additional urbanization, more local trips will be carried
  - With less urbanization, more regional through trips will be carried

Planned multimodal improvements can accommodate projected levels of density
  - With new Metro station – additional density can be accommodated
  - Without new Metro station – less new density can be accommodated

Neighborhood streets can be protected
  - Managing intersections
  - Comprehensive neighborhood traffic management strategy

Redevelopment creates opportunity
  - New Metro station
  - Transitway
  - Decreased auto-orientation
  - Amenities
PYPAG and Transportation Subcommittee Consensus Points

- Planning for Potomac Yard should include a Metro
- Generally comfortable with conditions with 2.5 FAR
- The proposed level of delay is acceptable
- Framing of findings in terms of travel time delay is reasonable
- Maximize access to transit corridor
- Manage impacts to protect surrounding neighborhoods

Metrorail Station Location Alternatives

Alt A - Existing Reservation
Alt B - Northern Stations
Alt C - Underground
Alt D - Aerial
Station Design Requirements

- 600 foot long platform (8 car train length)
- 730 feet of level, straight track at the station
- Maximum grade is 4% (4 ft of rise for 100 ft of travel)
- Curved track to accommodate 45 mph train speed
- Redundant elevators for ADA accessibility
- Double cross-over ('x' shaped track) for operational flexibility
- Ancillary space for operational requirement

Summary of Alternatives

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>A</th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
<th>C1</th>
<th>C2</th>
<th>D1</th>
<th>D2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Type</td>
<td>At-grade, side platform</td>
<td>At-grade, side platform</td>
<td>At-grade, side platform</td>
<td>In tunnel, center platform</td>
<td>Aerial, center platform</td>
<td>Aerial, center platform</td>
<td></td>
<td></td>
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<tr>
<td>Approximate development within ¼ mile, million square feet</td>
<td>3.5</td>
<td>Not Viable</td>
<td>5.5</td>
<td>5.5</td>
<td>10.0</td>
<td>Not Viable</td>
<td>9.5</td>
<td>9.5</td>
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<tr>
<td>Approximate development within ½ mile, million square feet</td>
<td>10.0</td>
<td>14.0</td>
<td>14.0</td>
<td>14.5</td>
<td>14.0</td>
<td>14.0</td>
<td></td>
<td></td>
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<tr>
<td>Construction impacts on Metrorail operations</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td></td>
<td></td>
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<tr>
<td>Preliminary estimated capital cost, million 2012 dollars</td>
<td>$140-180</td>
<td>$150-200</td>
<td>$140-180</td>
<td>$410-520</td>
<td>$230-300</td>
<td>$200-260</td>
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</table>

* Does not include potential development for properties west of Route 1
Property Ownership

* City of Alexandria*
* National Park Service*
* Requires more research*

Some of this area yet to be transferred from PYD to City

Site Constraints

Wetlands

Potomac Greens

Park Service

CSX Tracks
FAA Height Restrictions

Approximately 50% of walkshed cannot be developed.
Potential Density – ¼ and ½ mile walksheds

Balancing Issues – Cost vs. Value

- Land Use – Density
- Economic Values
- Accessibility & Ridership
- Transit Corridor Impacts
- Urban Amenities
- Open Space Impacts
- Environmental Sustainability
Potential Density – Within ¼ mile walkshed of Metro Stations

<table>
<thead>
<tr>
<th>Location</th>
<th>Potential Density (approx)</th>
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<tbody>
<tr>
<td>Eisenhower</td>
<td>6,000,000</td>
</tr>
<tr>
<td>Potomac Yard</td>
<td>5,500,000 *</td>
</tr>
<tr>
<td>King St</td>
<td>5,500,000</td>
</tr>
<tr>
<td>Braddock</td>
<td>4,500,000</td>
</tr>
<tr>
<td>Van Dorn</td>
<td>4,000,000</td>
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</tbody>
</table>

Square Feet (approx)

*NOTE: Density estimated from existing zoning & planning efforts subject to change

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Economic Value Added by Metro

- **W-ZHA Analysis** - Metro Impact on Developer Proffer Potential:
  - Residential Rental Value: Increase about $350/unit
  - Condo Value: Increase about $20/sf in residential value
  - Office Value: Avg Increase of approx $10/sf in office value

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Developer Proffer Potential

<table>
<thead>
<tr>
<th>Category</th>
<th>Metro</th>
<th>Non-Metro</th>
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<tbody>
<tr>
<td>Rental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Economic Value Added by Metro

Potential Ridership

- Design
- Uses
- Density
- Walking Distance – Proximity
Accessibility Challenges with Existing & Northern Stations

Cross-Section of Possible Station Design

Potential Access – Alternative B (Northern)
Potential Access – Alternative B (Northern)

Potential Access – Alternative D (Aerial)
Impact / Benefits to Transit Corridor

Development Potential of Lbay F

Station Alternative D2
100% Local Tax + Developers Contributions + Special Assessment

Results
- Size of Funding Gap: $24.1 million
- Break-even Year: Year 2019
- NPV: $182.8 million
Station Alternative D2
Closing the Funding Gap with Upfront Developer Contributions

**Results**
- Size of Funding Gap: $890 thousand
- Breakeven Year: Year 2021
- NPV: $192.2 million

**Comparison of Project Revenues to Costs**

Transportation Master Plan

"The City expects that any amendment to the Potomac Yard/Potomac Greens Small Area Plan which results in an increase in density beyond what is currently approved will include reasonable provisions to address the development and funding of an additional Metrorail Station"