

Potomac Yard Planning Advisory Group (PYPAG)

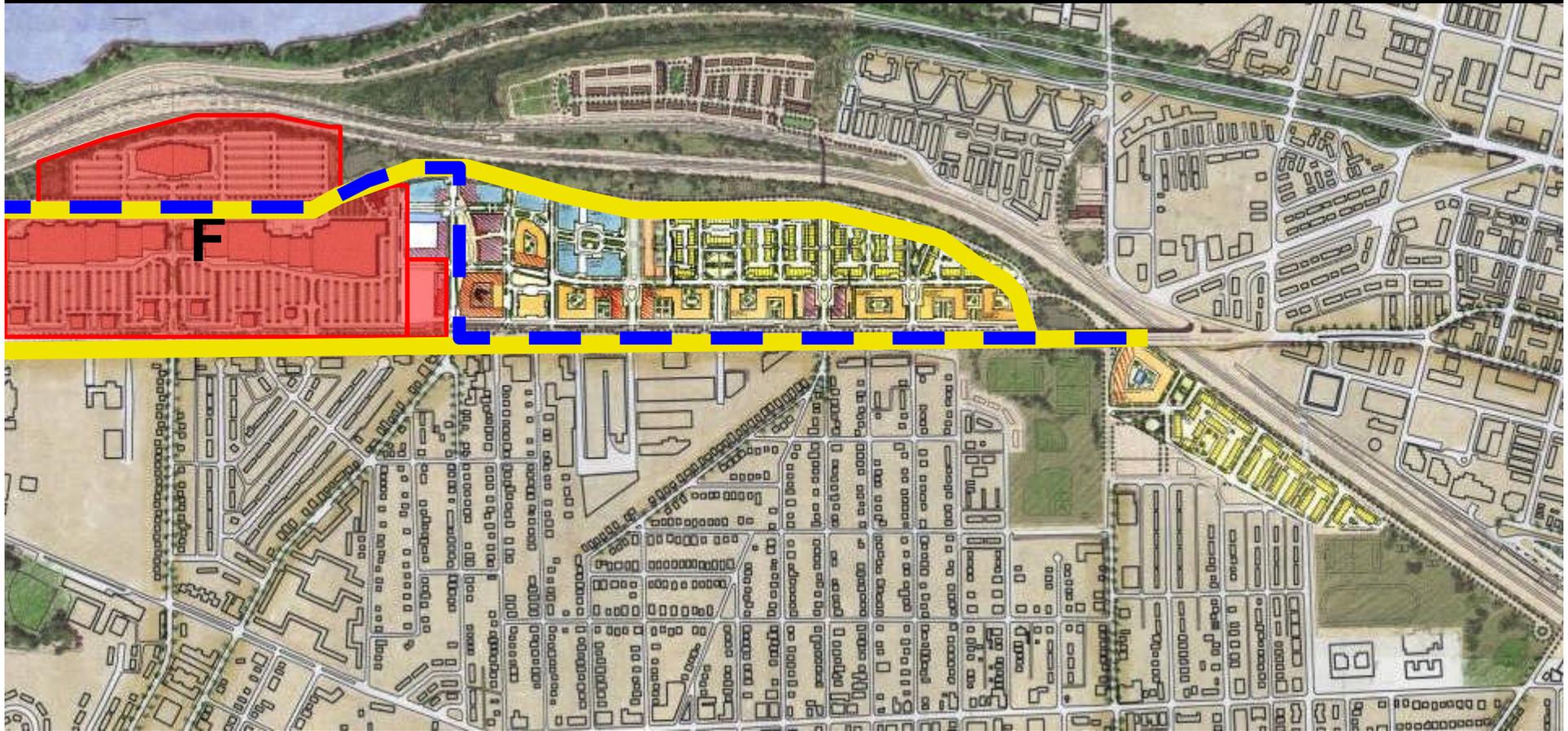
Preliminary Transportation Study Findings

May 21, 2009

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 impact, and 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.**

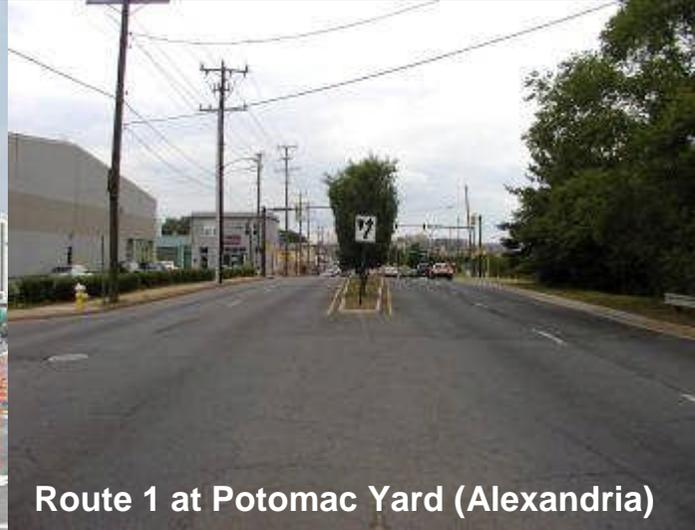
Potomac Yard Context



Policies for Route 1 / Streets



Route 1 at S. Glebe (Arlington)



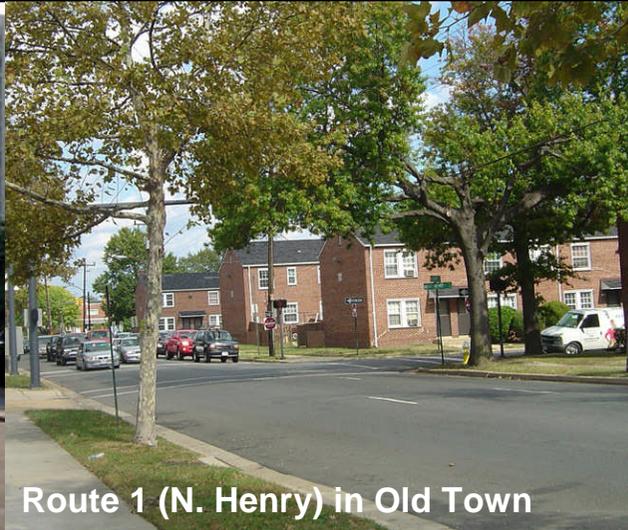
Route 1 at Potomac Yard (Alexandria)



Duke Street at Holland Avenue



Route 1 in Crystal City (Arlington)



Route 1 (N. Henry) in Old Town



Mill Road at Eisenhower Avenue

Urban Amenities



Four Mile Run Restoration Master Plan



Community Open Space – Civic Spaces



Quality Building Design – Uses



High Quality Mix of Building Types and Uses



Transportation Amenities



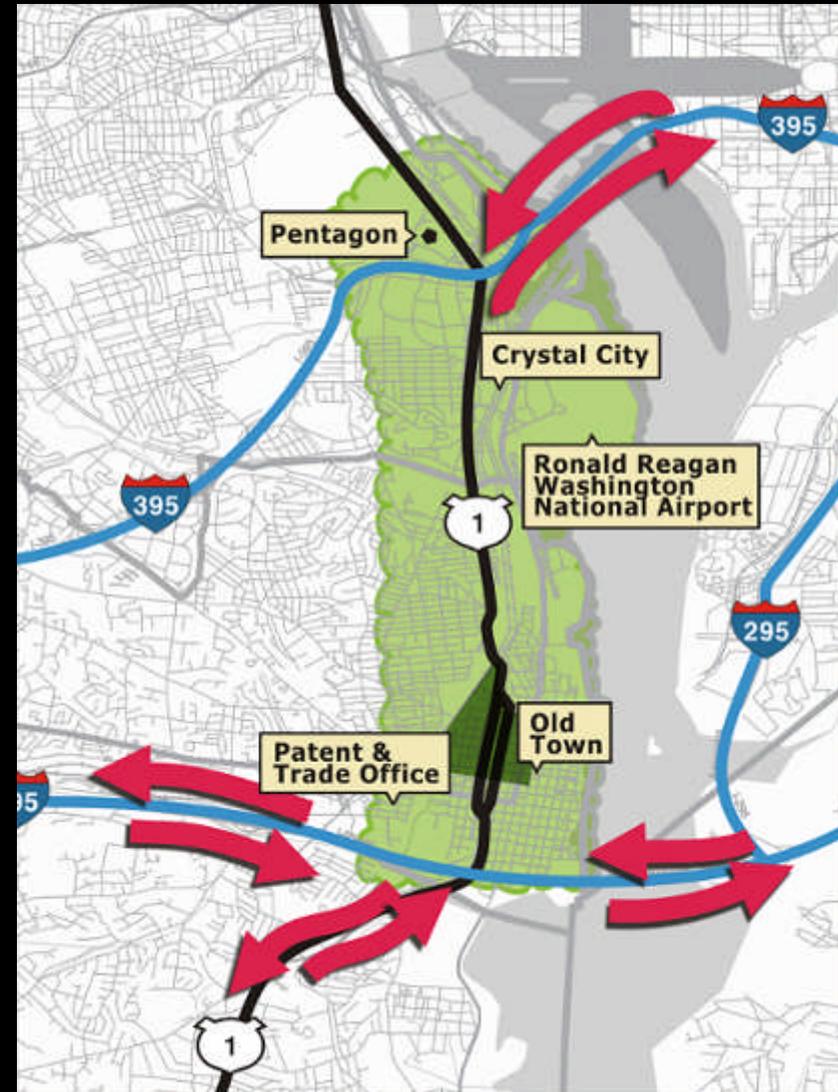
Other Amenities

- Affordable Housing
- Streetscape Improvements – Route 1
- Green Buildings – Sustainability
- Public Art
- Civic Facilities
- Other



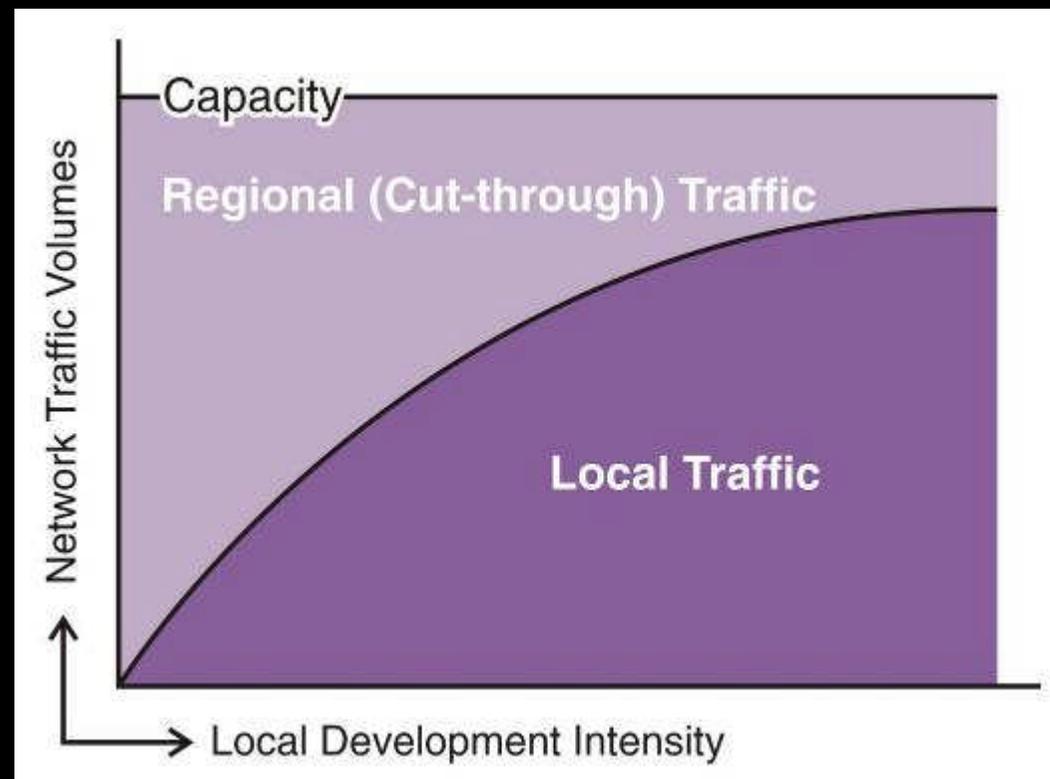
Regional Conditions

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



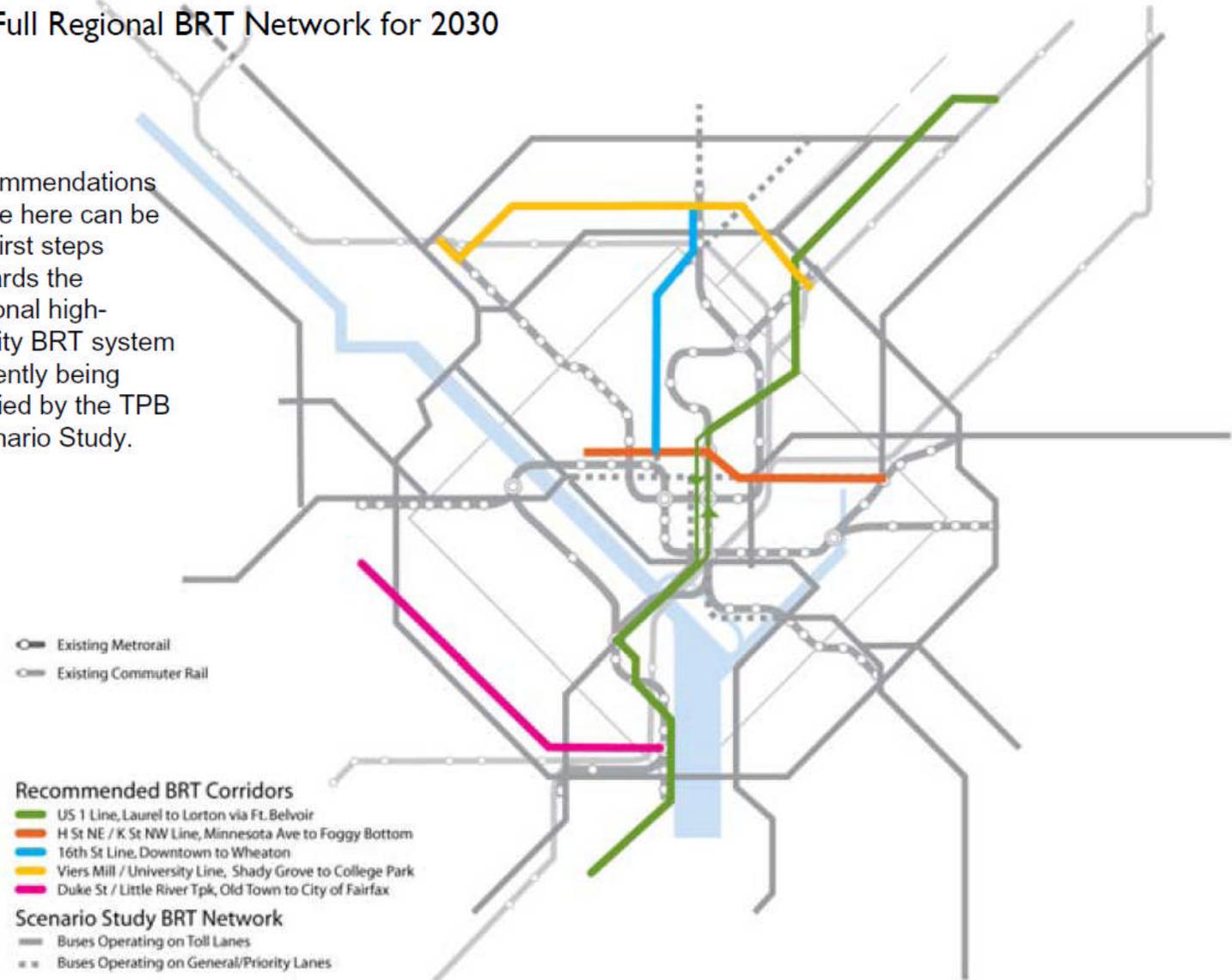
What does this assessment tell us?

- 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)

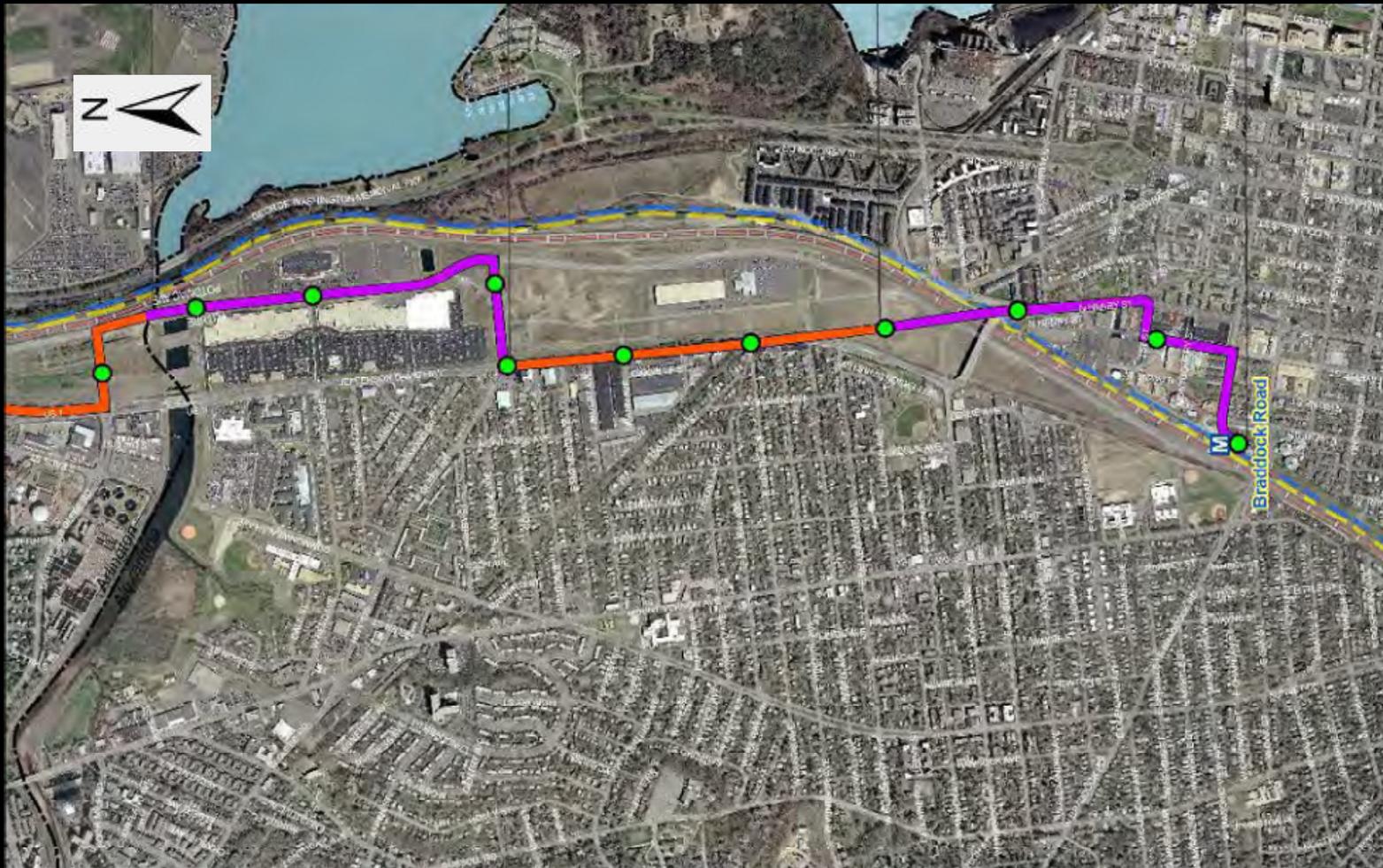


Full Regional BRT Network for 2030

BRT recommendations made here can be the first steps towards the regional high-quality BRT system currently being studied by the TPB Scenario Study.



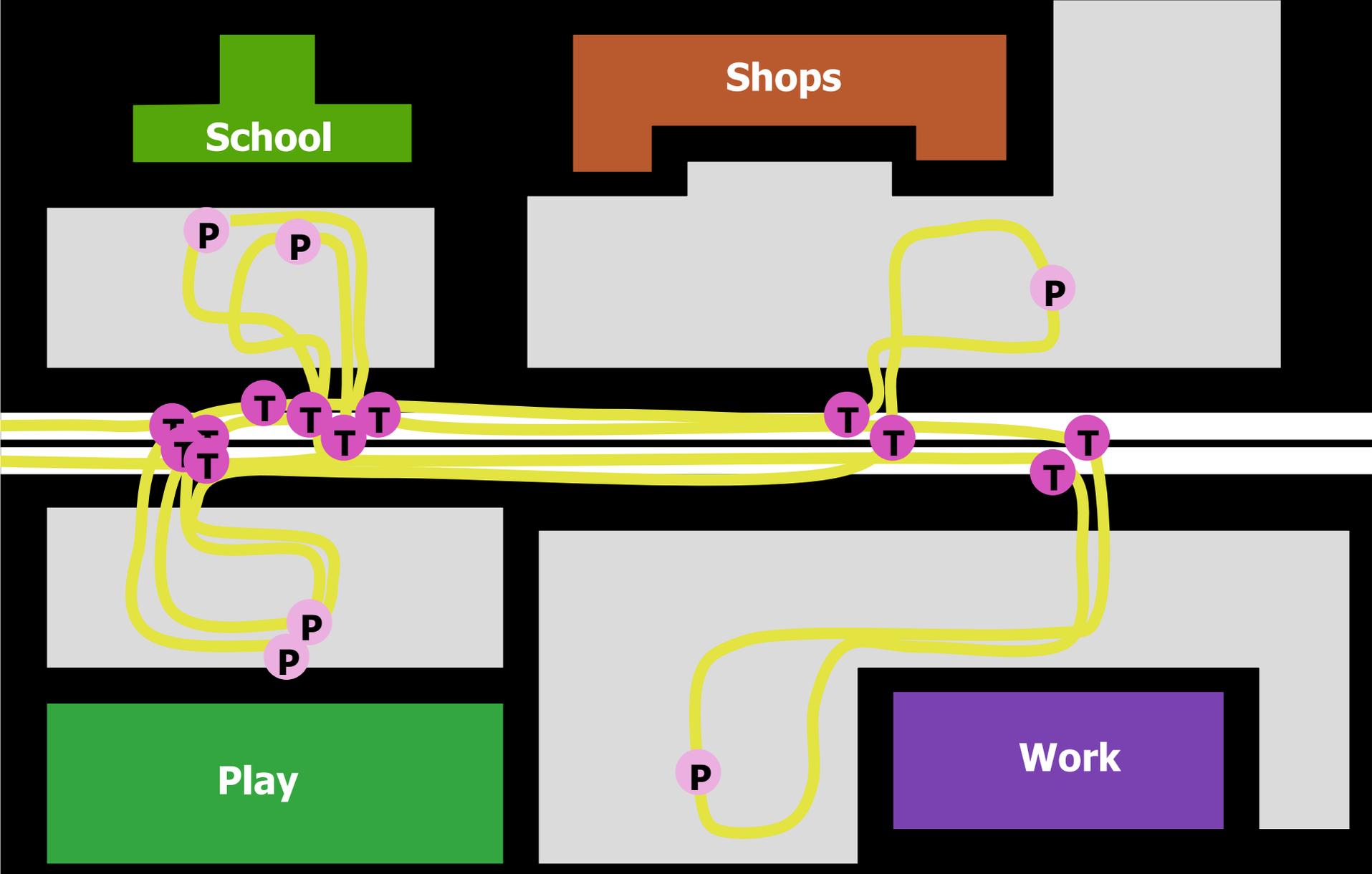
Transit Corridor



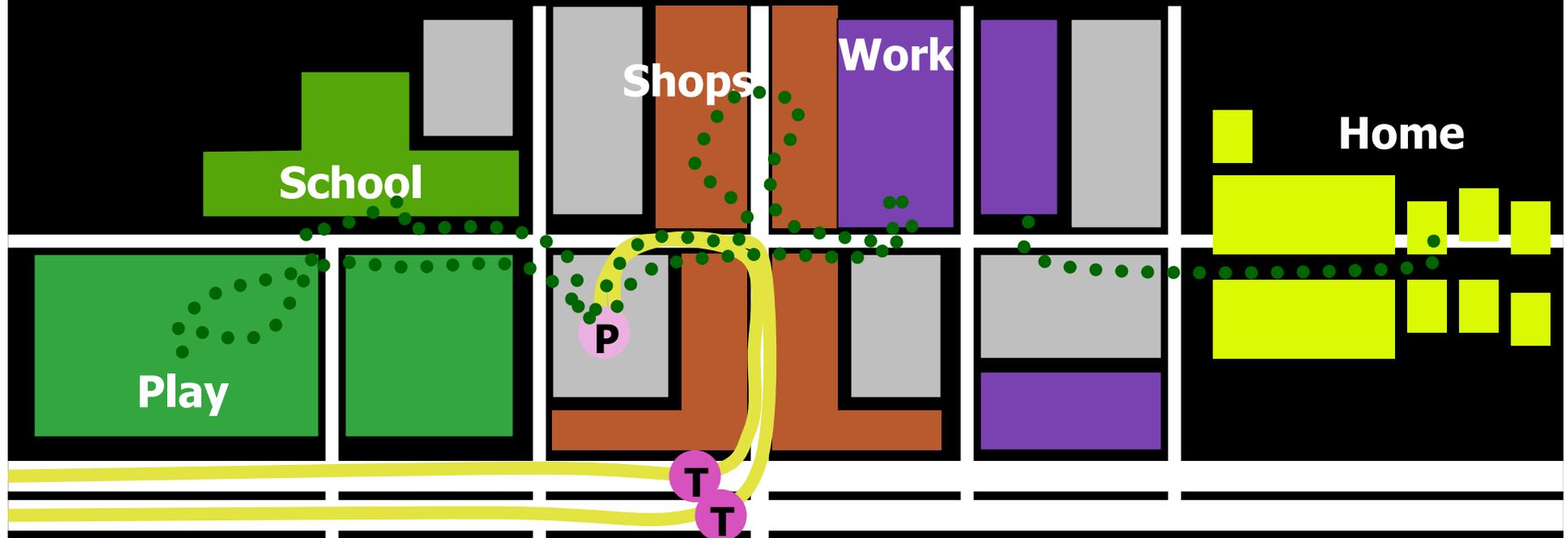
Illustrative Cross-section



Access and Mobility in a Conventional Development Pattern

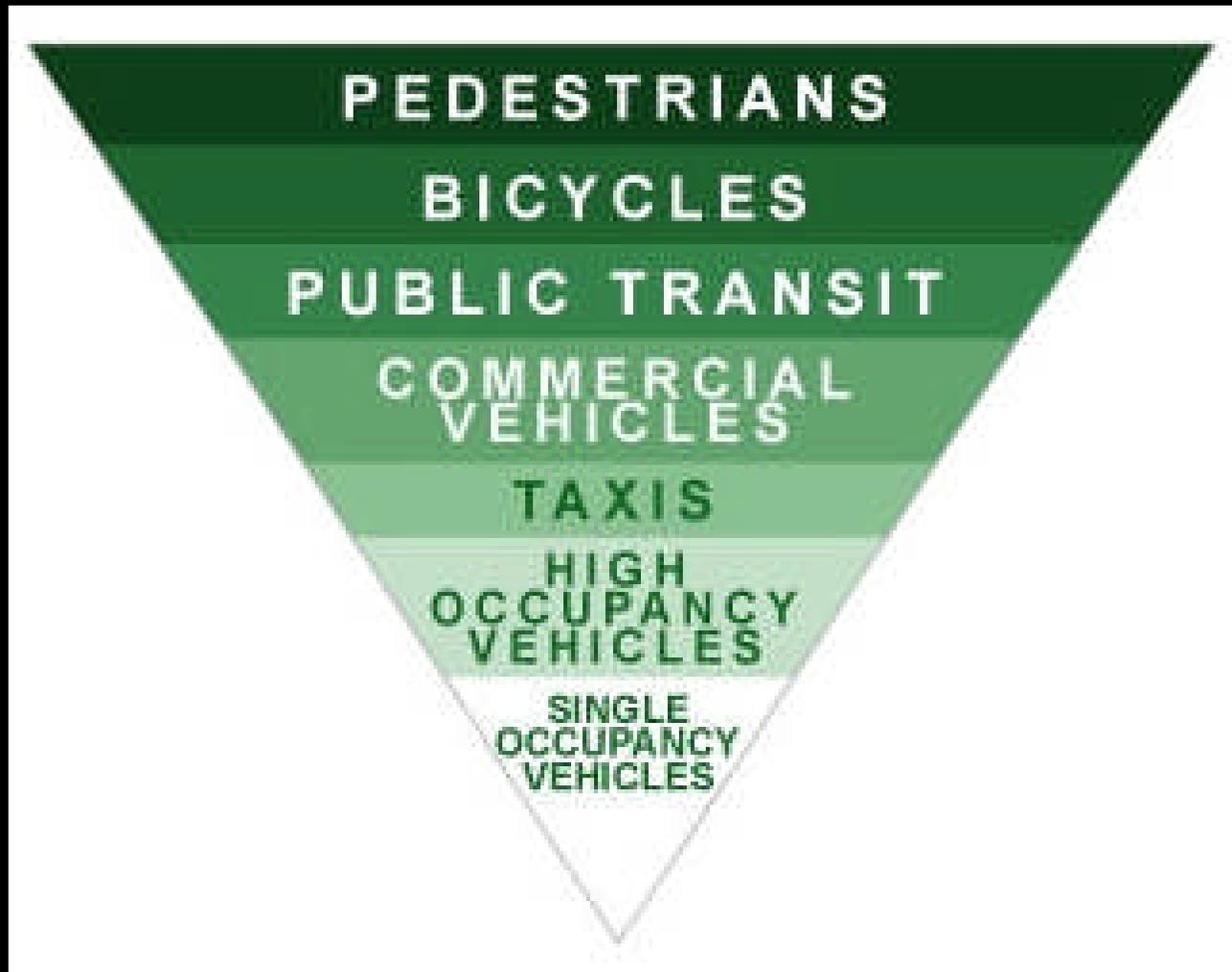


Interconnected Street Pattern with Mixed-Use Development



Results:

- Less parking needed
- Fewer arterial trips
- Less traffic impact
- Fewer vehicle miles traveled
- Less congestion
- More travel choice



Overview

- Assumptions
- Findings
- Summary

Study Assumptions

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

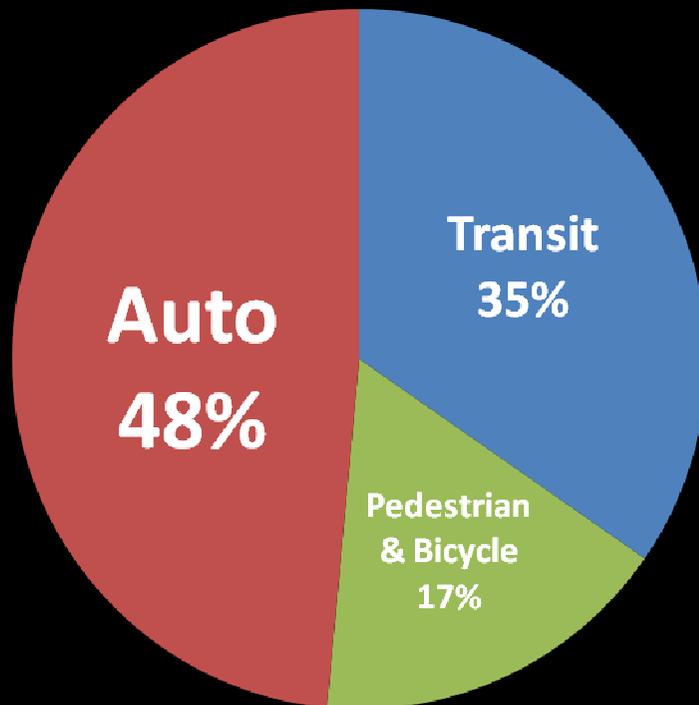
Development Density

<u>Land Use</u>	<u>Landbay F</u>	<u>Landbay L</u>
Office	1,475,000 sf	-
Residential	4,750 dwelling units	1,000 dwelling units
Hotel	400 rooms	-
Retail	1,000,000 sf	10,000 sf

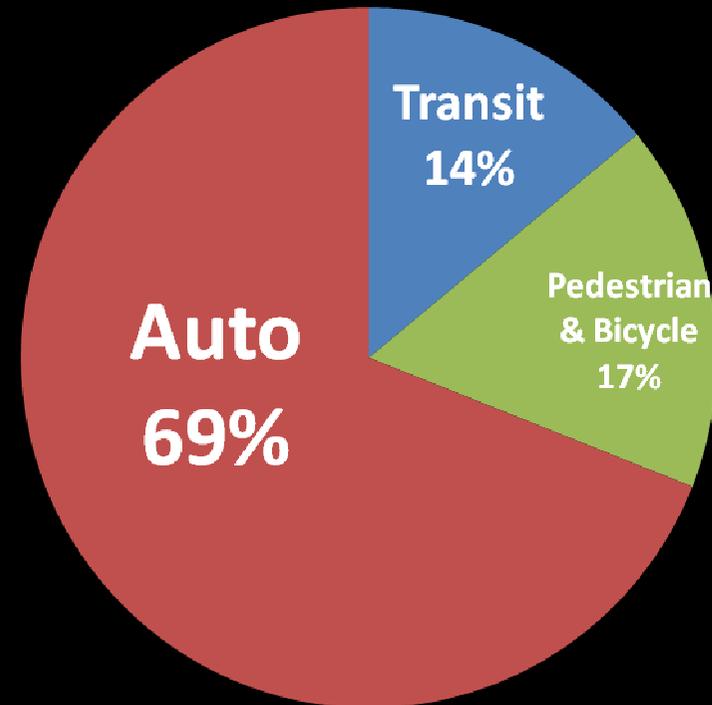


Travel Mode Choice

Scenario Including a New Metro Station



Scenario Not Including a new Metro Station



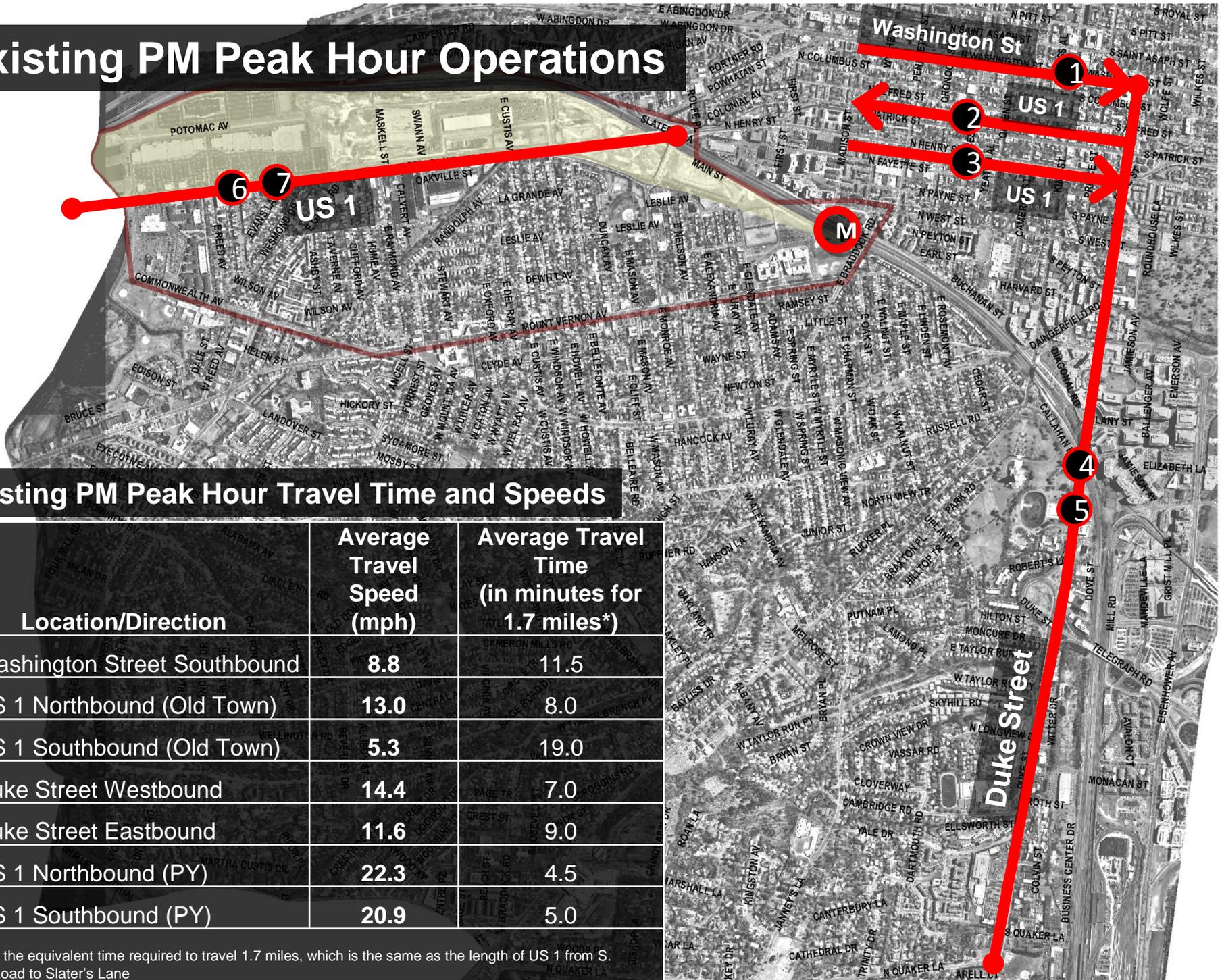
Initial Findings

- Existing conditions
- Future no build conditions
- Future build conditions
 - With Metro station
 - Without Metro station

Existing Conditions

- Some traffic congestion during peak periods
- Auto-oriented development pattern
- Barrier-effect of US 1 for pedestrians, bicycles, and transit
- Limited transit service
- Limited street interconnectivity
- Some pressure on neighborhood streets (cut-through traffic)

Existing PM Peak Hour Operations

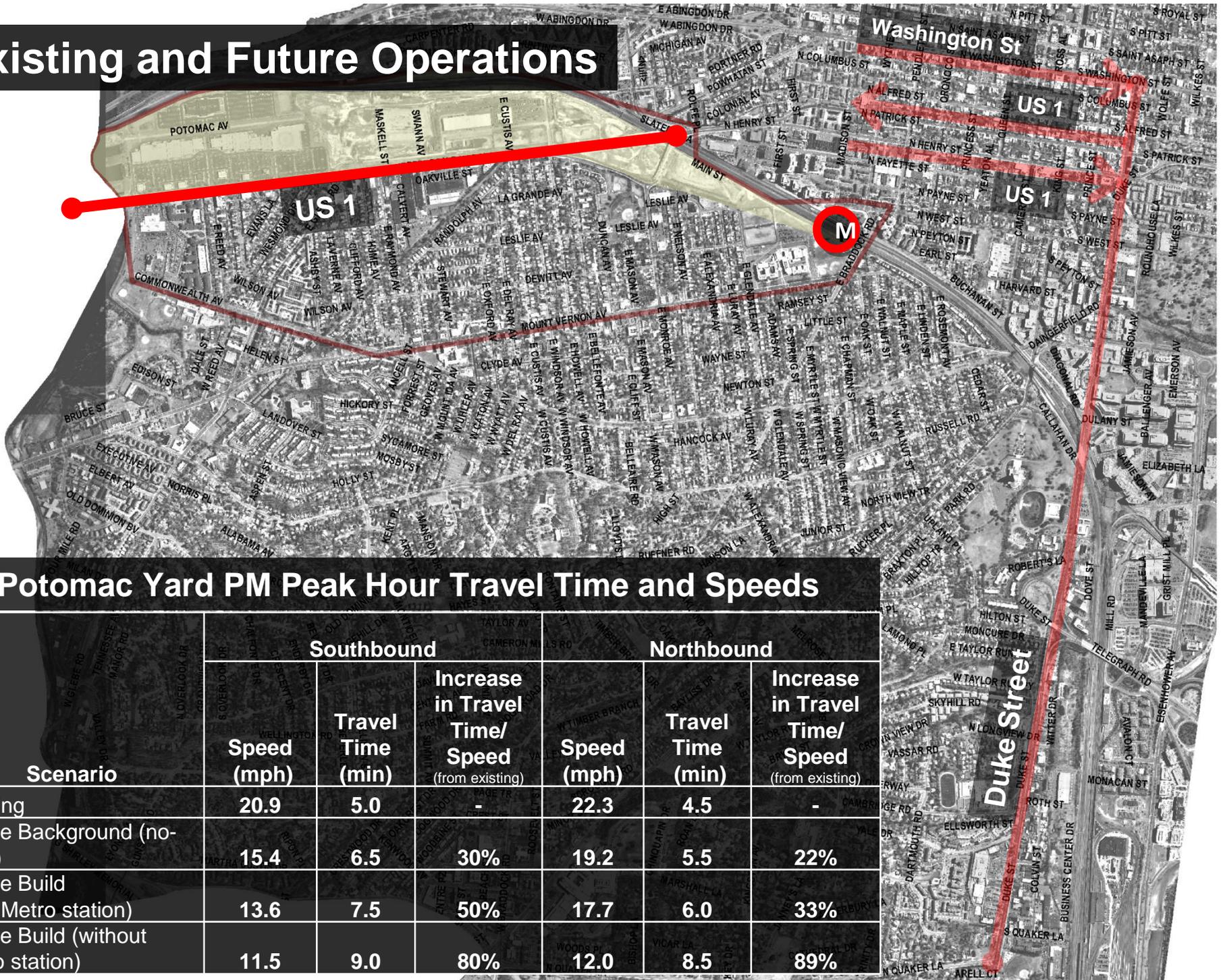


Existing PM Peak Hour Travel Time and Speeds

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

* 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 Slater's Lane

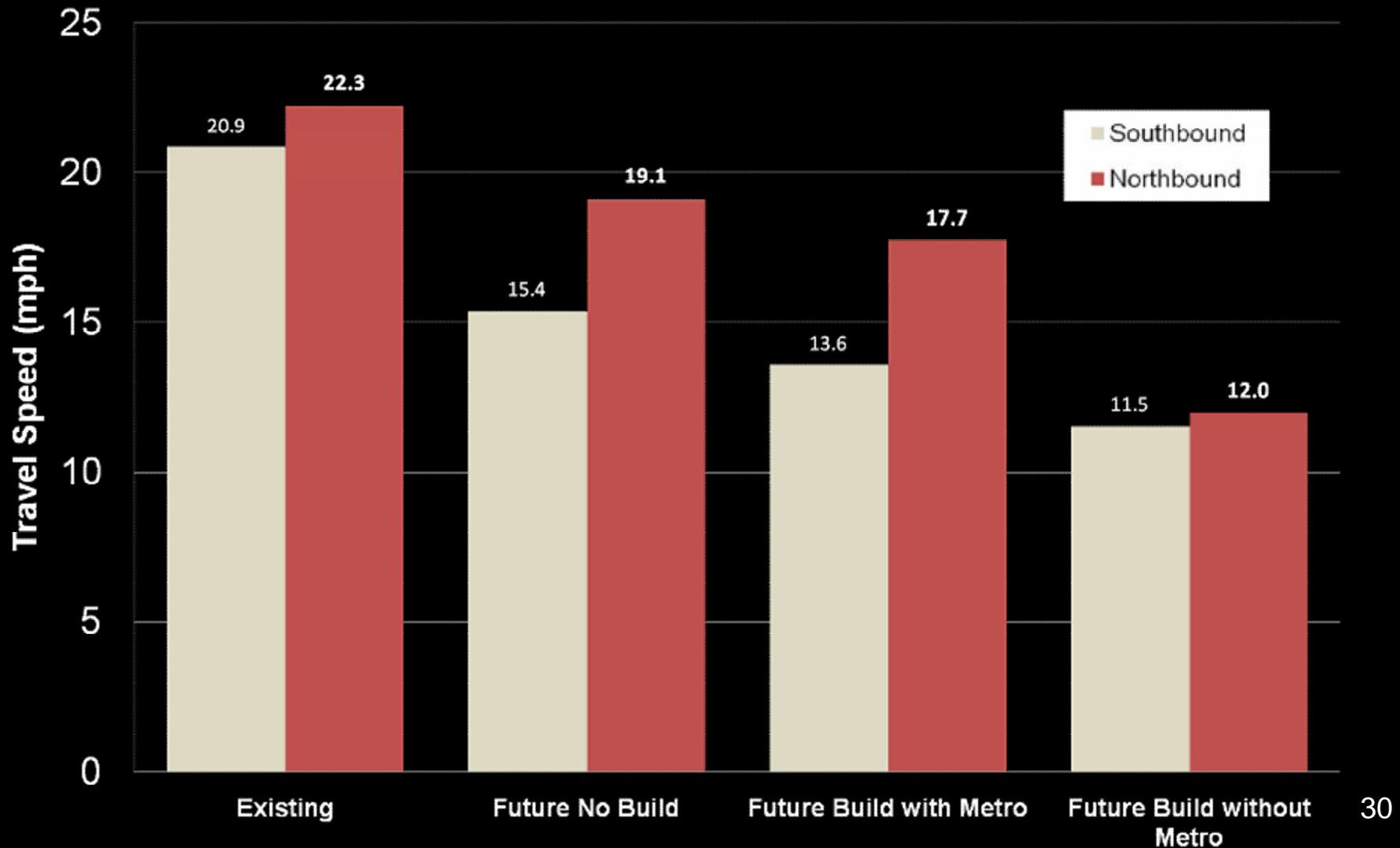
Existing and Future Operations



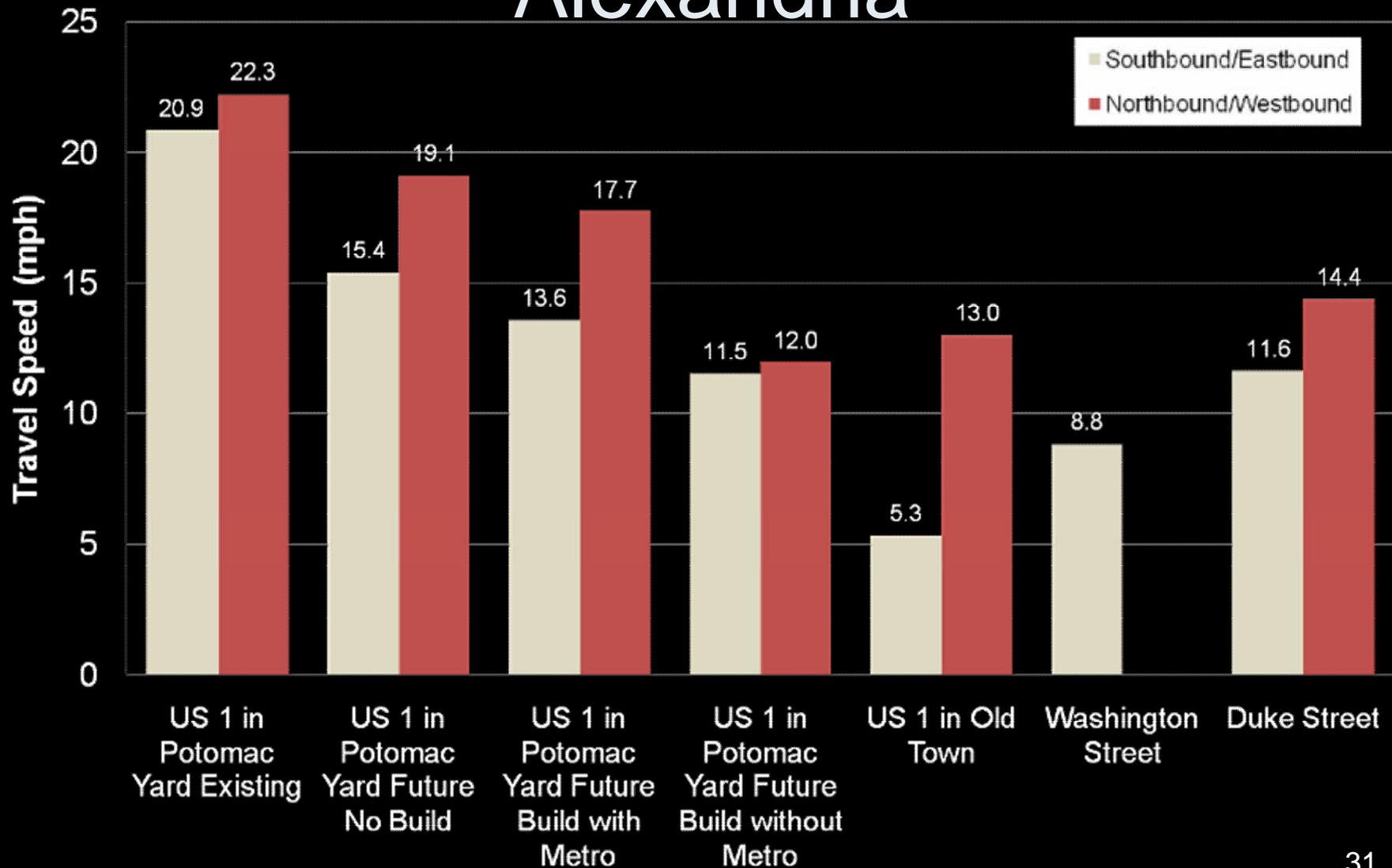
Potomac Yard PM Peak Hour Travel Time and Speeds

Scenario	Southbound			Northbound		
	Speed (mph)	Travel Time (min)	Increase in Travel Time/Speed (from existing)	Speed (mph)	Travel Time (min)	Increase in Travel Time/Speed (from existing)
Existing	20.9	5.0	-	22.3	4.5	-
Future Background (no-build)	15.4	6.5	30%	19.2	5.5	22%
Future Build (with Metro station)	13.6	7.5	50%	17.7	6.0	33%
Future Build (without Metro station)	11.5	9.0	80%	12.0	8.5	89%

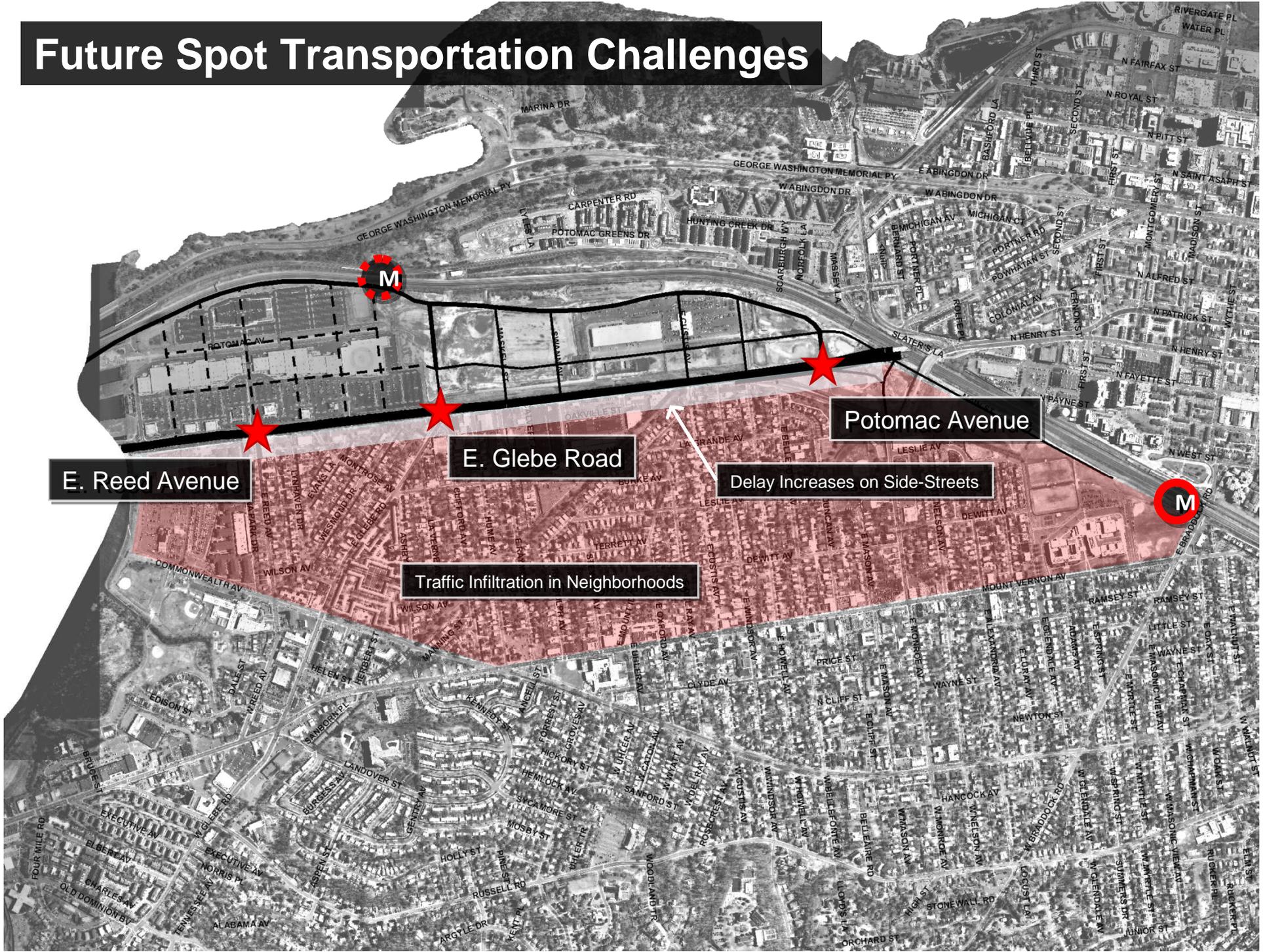
PM Peak Hour Travel Speed on US 1 Along Potomac Yard



PM Peak Hour Travel Speed in Alexandria



Future Spot Transportation Challenges



E. Reed Avenue

E. Glebe Road

Potomac Avenue

Delay Increases on Side-Streets

Traffic Infiltration in Neighborhoods

Summary Points

- 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

Questions for PYPAG

- Does the study reveal conditions that are supportive of the PYPAG principles?
- What do you think of the results?
- Is there anything that is unclear?
- What's missing?
- How can we better manage the urban transportation system and moderate growth, while creating opportunities for urban amenities that benefit neighborhoods and the City?
- How can we get more people to walk, bicycle, and take transit?

PYPAG 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

