TAC Meeting #2 – Project Update
July 2, 2013

Transit Alternatives Analysis Study of the Route 7 Corridor

Northern Virginia Transportation Commission

Agenda

- Updates from TAC Members
- Route 7 Study Updates
  - Overall project progress
  - Coordination schedule
  - Outreach efforts discussion
  - Economic analysis results (PES)
  - Employee / resident survey results
  - Alternative evaluation framework
- Next Steps
- Discussion

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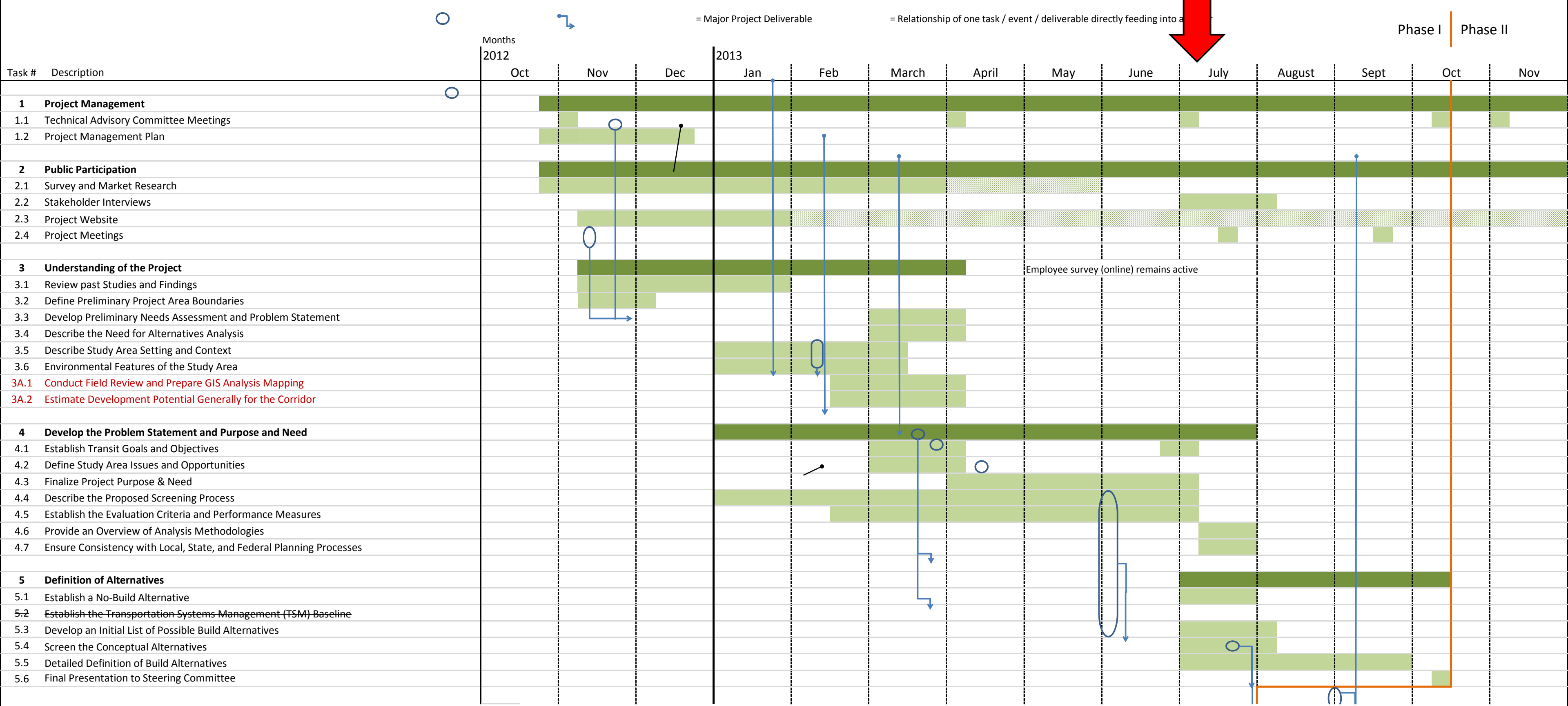
Overview of Meetings

TAC MEETING	MEETING PURPOSE	DATE
#1	Project Kick-Off	November 7, 2012
#2	Project Updates: ✓ Background information on study area ✓ Outreach efforts ✓ Economic development/redevelopment overview ✓ Study goals and objectives (draft)	April 3, 2013
#3	Project Updates: ✓ Economic development report ✓ Employee/resident survey report ✓ Finalize study goals and opportunities & measures of effectiveness ✓ Discuss alternatives evaluation framework	July 2, 2013
#4	Alternatives Evaluation	Mid-September 2013

Project Schedule





OUTREACH EFFORTS

Public Outreach

- Website is active and updated: http://route7corridorstudy.com/

Updates To be Posted After Public Meeting

Public Outreach

- Survey of residents and employees in the corridor (web only) completed.
- Participation at Seven Corners Task Force meetings
- Public meeting date of July 25th scheduled
- Further coordination with NVTC board upcoming
- And…

ECONOMIC DEVELOPMENT

Market Analysis Approach

- Route 7 Corridor and Close-In Northern Virginia
  - Demographic characteristics
  - Employment trends
  - MWCOG projections
  - Development trends
- Individual Land Uses
  - Demand – demographics and trends
  - Competitive supply
  - Corridor’s ability to compete

Demographics

- Growing corridor
- Slowed over the last decade
- Relatively affluent with pockets of lower-income households
- 58% homeowners
- Less than 8% have no cars

Household Types – National Trends

Households
- Families with children
- Households with no children
- Persons living alone

1990s
- 34% with own children
- 66% no children
- 25% living alone

2000
- 31% with own children
- 69% no children
- 26% living alone

2010
- 26% with own children
- 74% no children
- 27% living alone

Increase in people choosing to ***live alone – 36 percent in Route 7 corridor***

Growing households/families with ***no children***

Shifting Households

New generation Y households ***unable to pay*** for housing in hip urban neighborhoods

Generation Y- Born 1982 to 2001- 70 million

Forming households now but slowed by recession

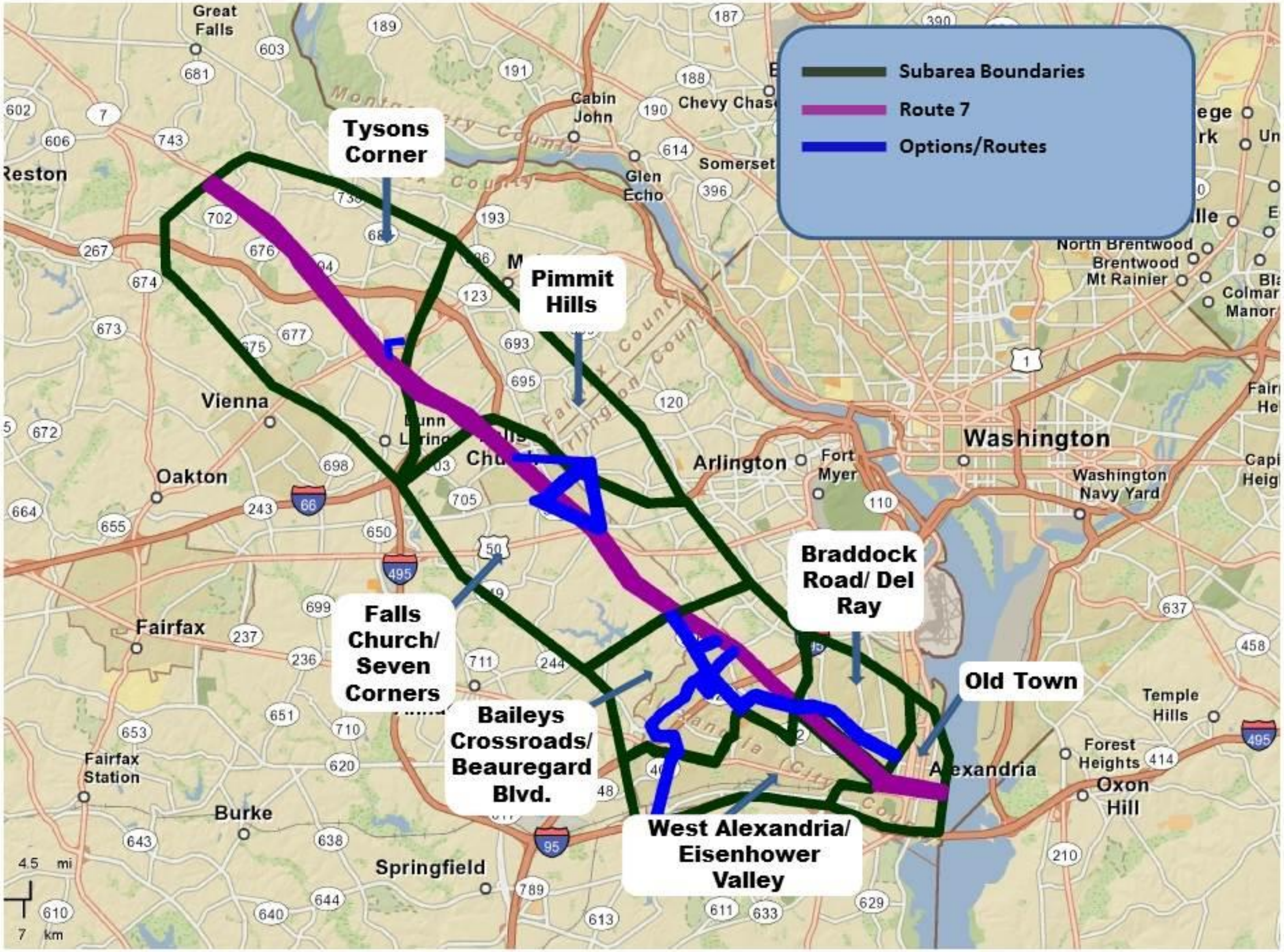
Desire more walkable neighborhood/ easy access to jobs, services and recreation

Generation Y moves in with roommates, rents instead of owns

Employment

- Strong economic engine
- Close-in Northern Virginia added 73,400 jobs from 2002 to 2011
- Despite major job losses in the recession, employment has rebounded and slightly exceeds the 2007 level
- Professional, scientific and technical services and management of companies represent 26% of all jobs

Route 7 Corridor Submarkets



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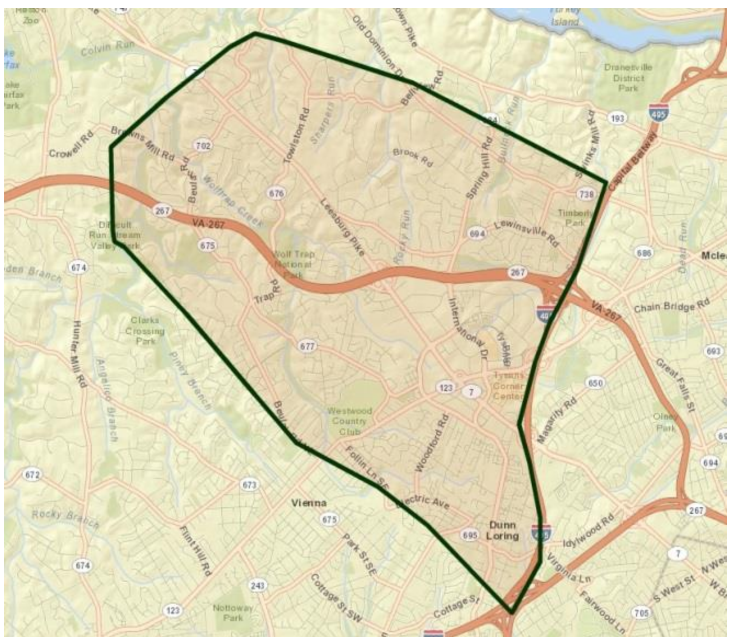
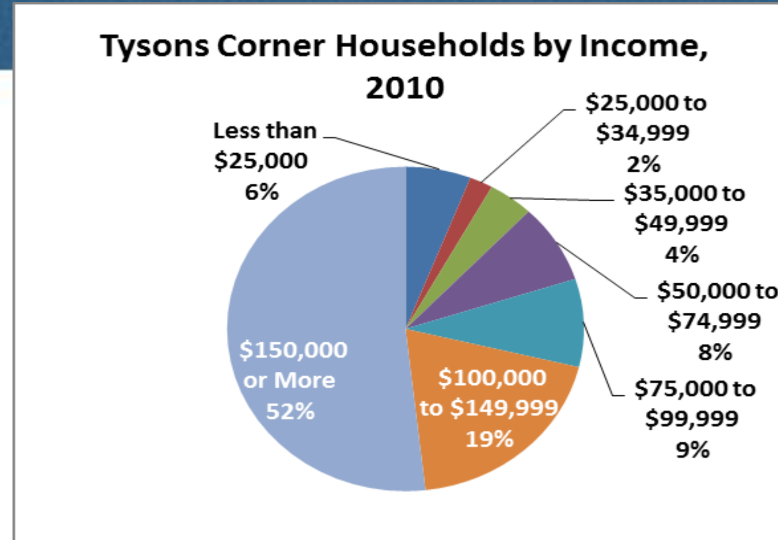
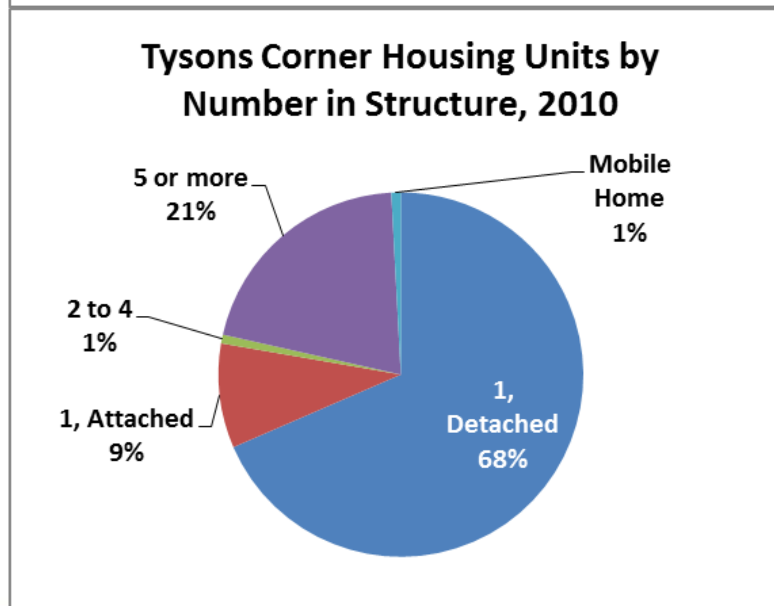
Tysons Corner Submarket

- Median household income of $150,750
- 81% owner households
- Only 12% of housing units built since 2000

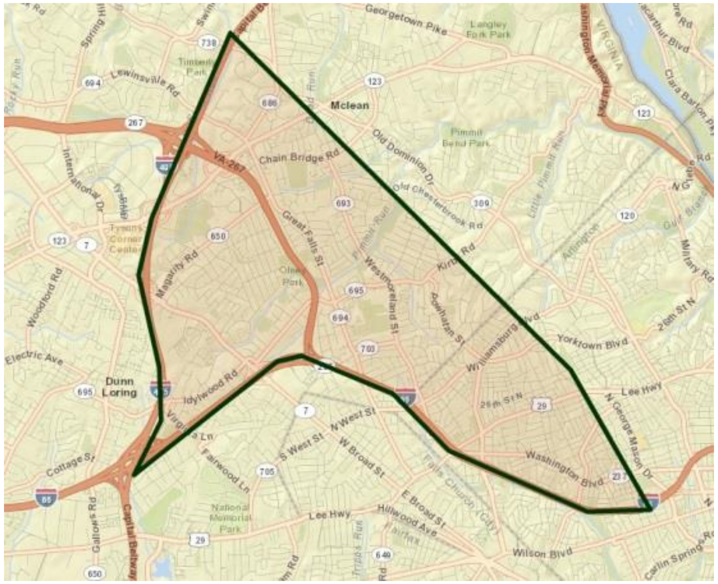






Pimmit Hills Submarket

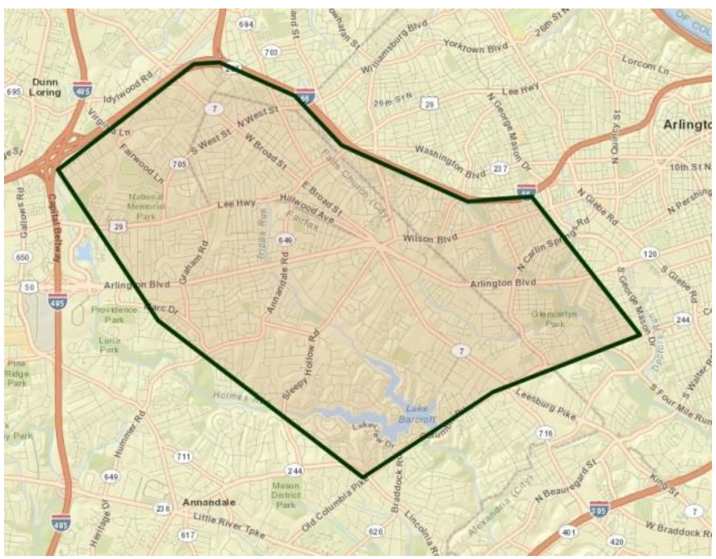
- Median household income of $123,300
- 72% owner households
- 75% of housing stock built before 1980
- Double the Tysons Corner transit usage at 13.6%

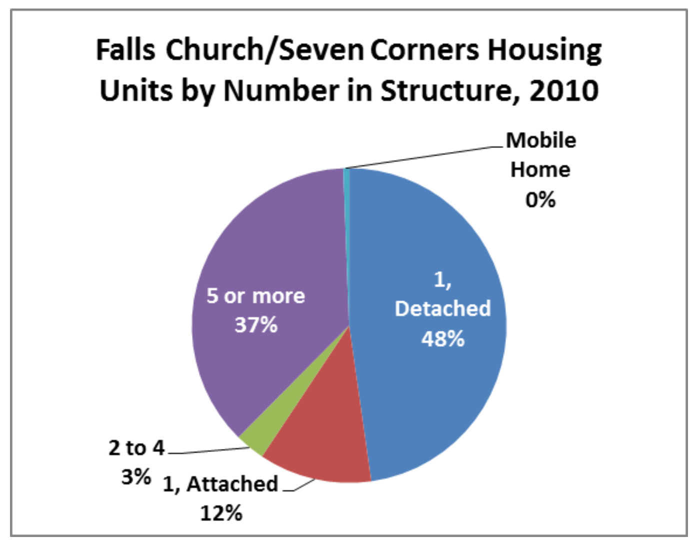


Population and Household Trends					
				2000-2010 Change	
	1990	2000	2010	Number	Percent
Population	56,183	59,044	65,551	6,507	11.0%
Households	22,820	24,420	25,030	610	2.5%

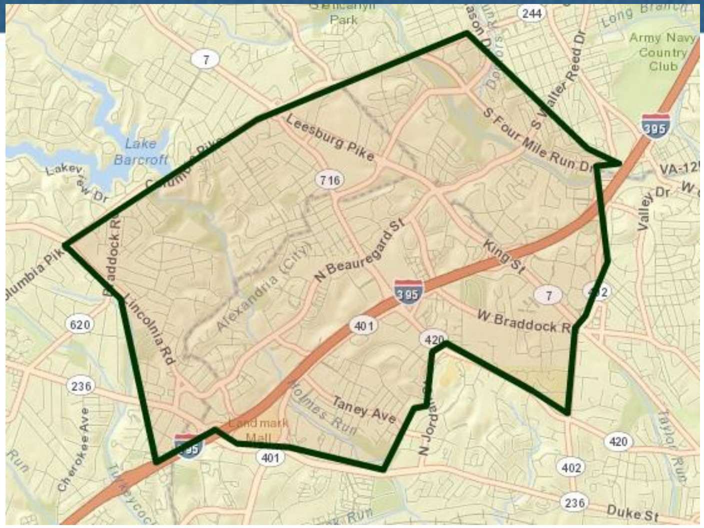
Falls Church/Seven Corners Submarket

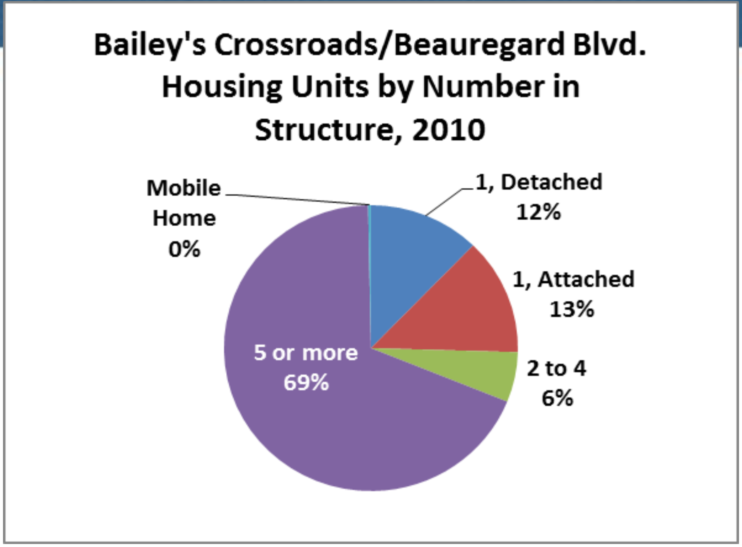
- Median household income of $86,983
- 29% earning less than $50,000
- 39% renter households
- 80% of housing stock built before 1980





Bailey's Crossroads/Beauregard Submarket



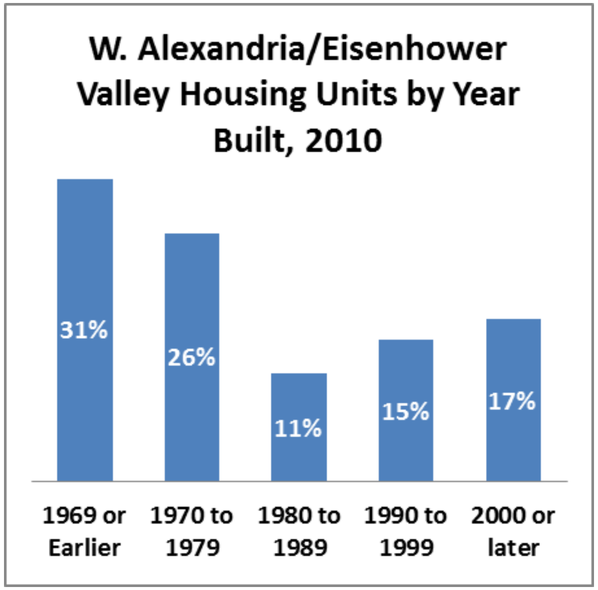


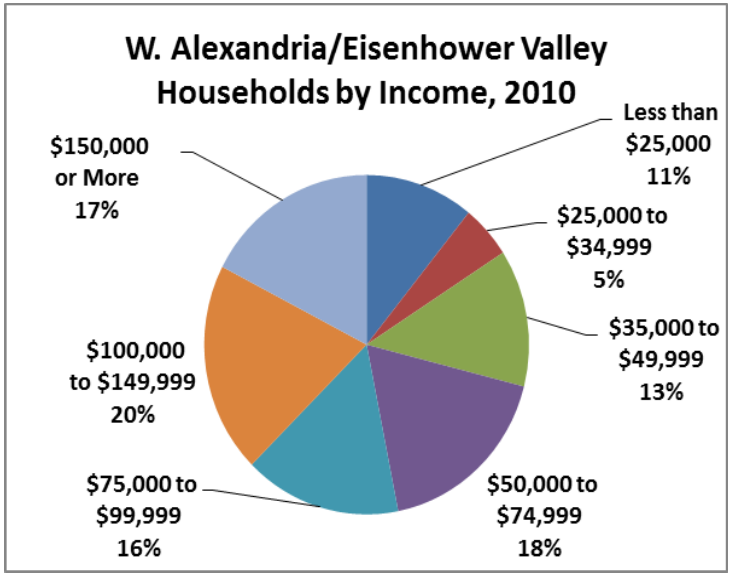
- Median household income of $72,821
- 30% with incomes below $50,000
- 54% renter households
- 3/4 of housing units are multi-family

Transportation, 2010		
Average Household Vehicles		1.4
Means of Transport to Work		
Drive alone		63.9%
Carpool		9.9%
Public transit		19.3%
Walk or bike		3.9%
Work at home		3.0%

West Alexandria/ Eisenhower Valley Submarket

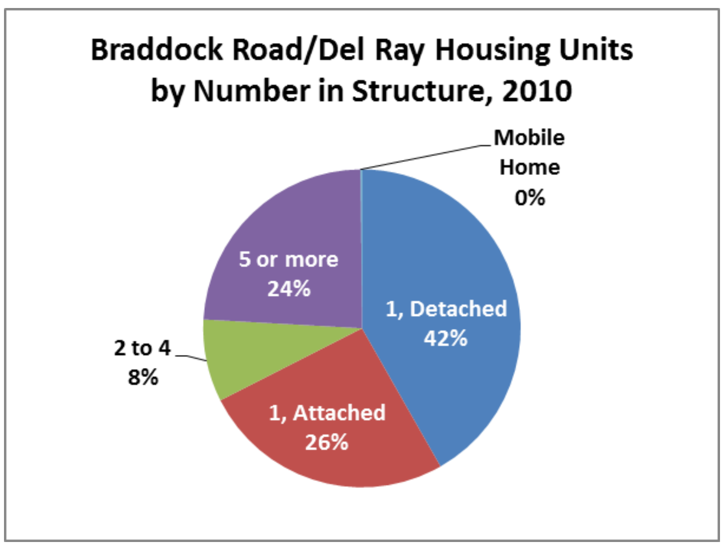
- Median household income of $79,968
- 29% with incomes below $50,000
- Almost one-third of units built since 1990
- One-quarter of residents use transit

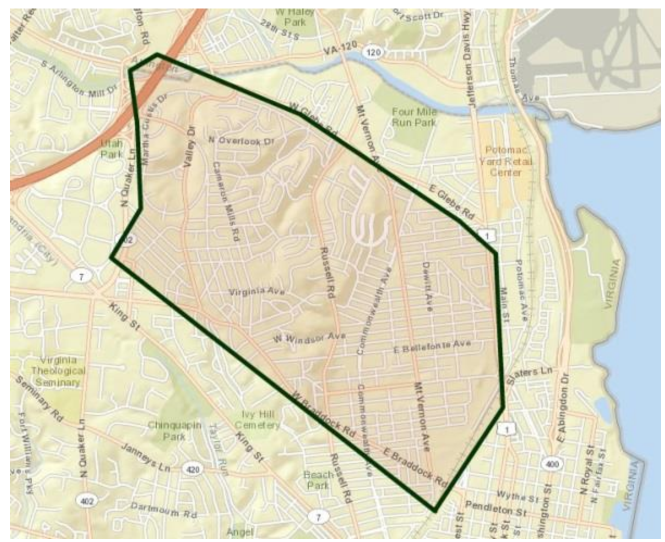




Braddock Road/ Del Ray Submarket

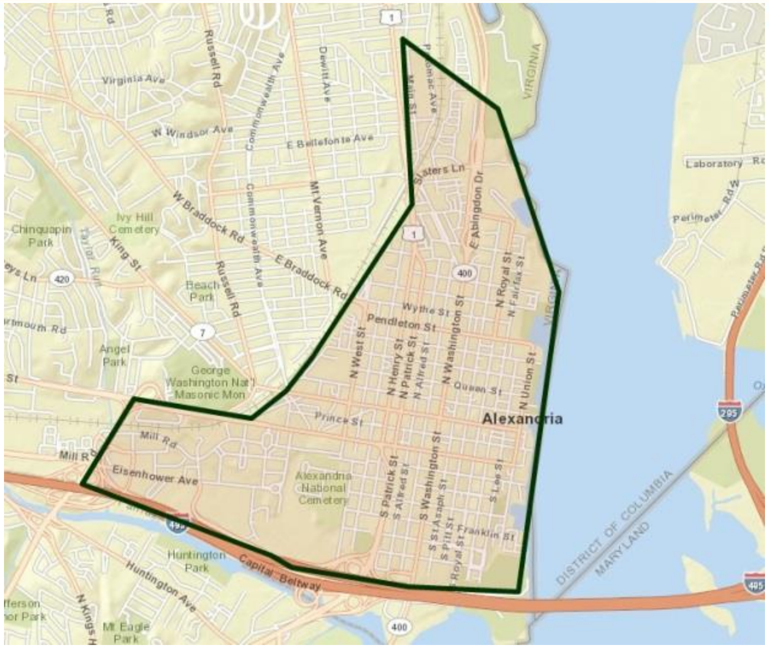
- Median household income of $105,134
- 84% of housing units built before 1970
- More than 37% of the households are persons living alone
- 16% use public transit





Old Town Alexandria Submarket

- Median household income of $108,178
- One-quarter of housing units built since 1990
- Almost even split among single-family and multi-family structures
- 14% use public transit



Population and Household Trends					
				2000-2010 Change	
	1990	2000	2010	Number	Percent
Population	17,764	19,712	21,398	1,686	8.6%
Households	9,451	11,207	10,877	(330)	-2.9%

Shifting Household Growth by Submarket

Infill Development

- Old Town Alexandria
- Falls Church/ Seven Corners
- Pimmit Hills

Major New Development

- Tysons Corner
- Baileys Crossroads/ Beauregard Boulevard
- Braddock Road/ Del Ray
- West Alexandria/ Eisenhower Valley

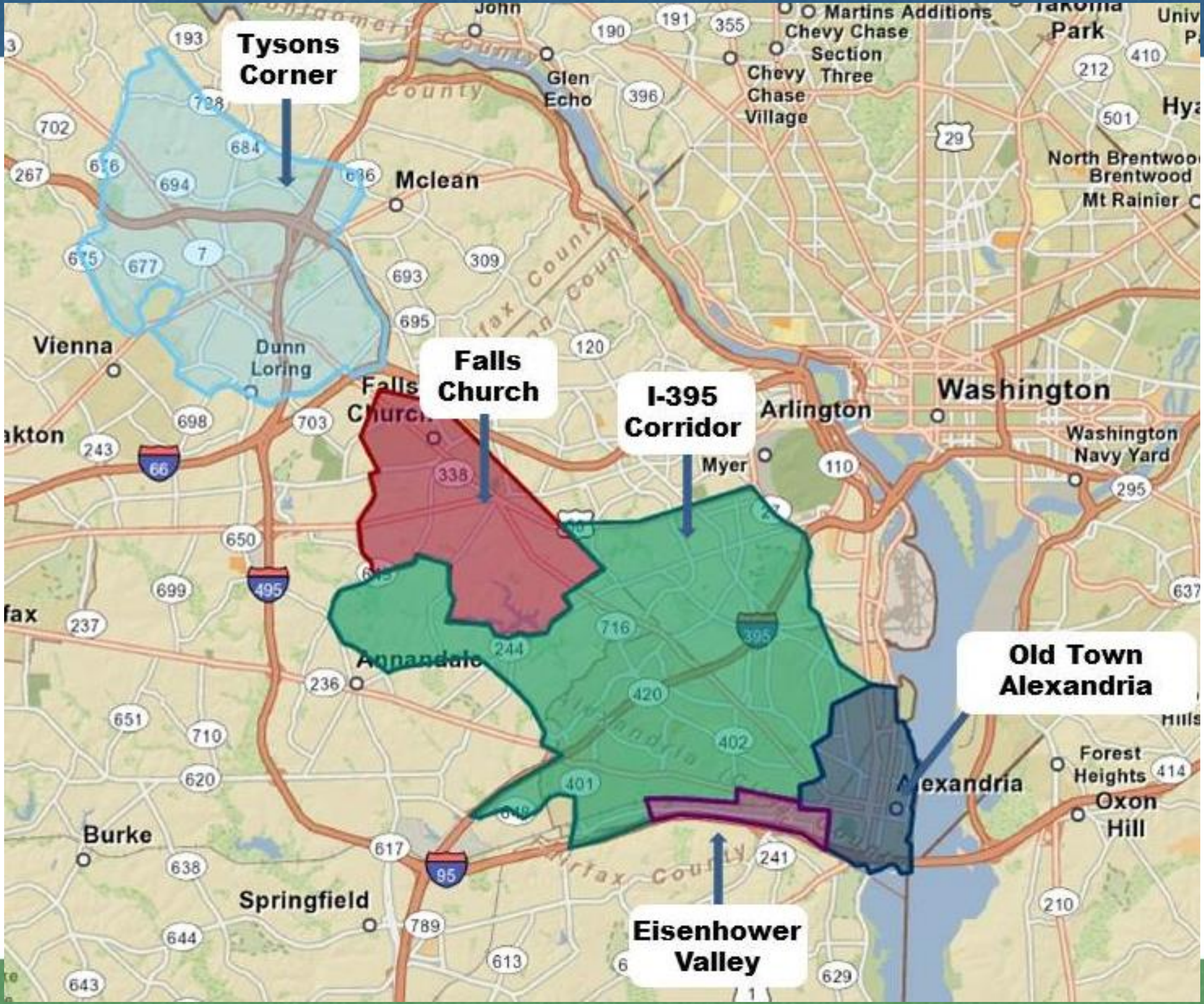
49,200 new housing units by 2040
75 % in multi-family

Commercial Market Shifts - Office



- Office locations compete based on access, proximity to executive housing, visibility, quality of the environment and rents
- Not every location can meet these needs
- Significant new construction has exceeded absorption
- Major impact of BRAC decisions to move Defense operations out of leased space

Commercial - Office Market



Shifting Employment Growth by Submarket

Major New Office

- Tysons Corner
- West Alexandria/ Eisenhower Valley
- Baileys Crossroads/ Beauregard Boulevard
- Old Town Alexandria

Infill/ Neighborhood Office

- Falls Church/ Seven Corners
- Braddock Road/ Del Ray

New office construction may total 17.9 million square feet by 2040

Retail Market

- Shoppers goods
- Neighborhood goods and services
- Food and beverage

Major Shoppers Goods Competition

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Retail Opportunities by Submarket



Grocery Store	Restaurants/ Services
• Tysons Corner • Pimmit Hills • Falls Church/ Seven Corners • Baileys Crossroads/ Beauregard Boulevard • Braddock Road/ Del Ray • Old Town Alexandria	• Tysons Corner • Pimmit Hills • Falls Church/ Seven Corners • Baileys Crossroads/ Beauregard Boulevard • West Alexandria/ Eisenhower Valley • Braddock Road/ Del Ray • Old Town Alexandria

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Lodging Development

- Major hotel clusters
  - Tysons Corner
  - Old Town Alexandria
- Smaller clusters
  - Falls Church
  - Along I-395

Lodging Performance

- 66.3% occupancy in 2012
- $145.33 average daily rate in 2012
- Serving multiple markets
  - Business travelers
  - Conference attendees
  - Tourists and other visitors
- Tysons remake and Metro access should support additional hotels

Development Opportunities



- Multiple projects in the pipeline
- Underutilized properties
  - Aging strip shopping centers
  - Parking lots in higher value locations
- Not enough to be underutilized
- Difficult to justify demolition and rebuilding of well-leased residential or commercial development
  - Need much higher density and rents

Near-Term Redevelopment

- Likely to focus in regional centers with good Metro and roadway access
  - Tysons Corner
  - Old Town/King Street Metro station area
- Also renovation of existing buildings to be more competitive and achieve higher rents

❖ Discussion

EMPLOYMENT / RESIDENT SURVEY

Survey Activity

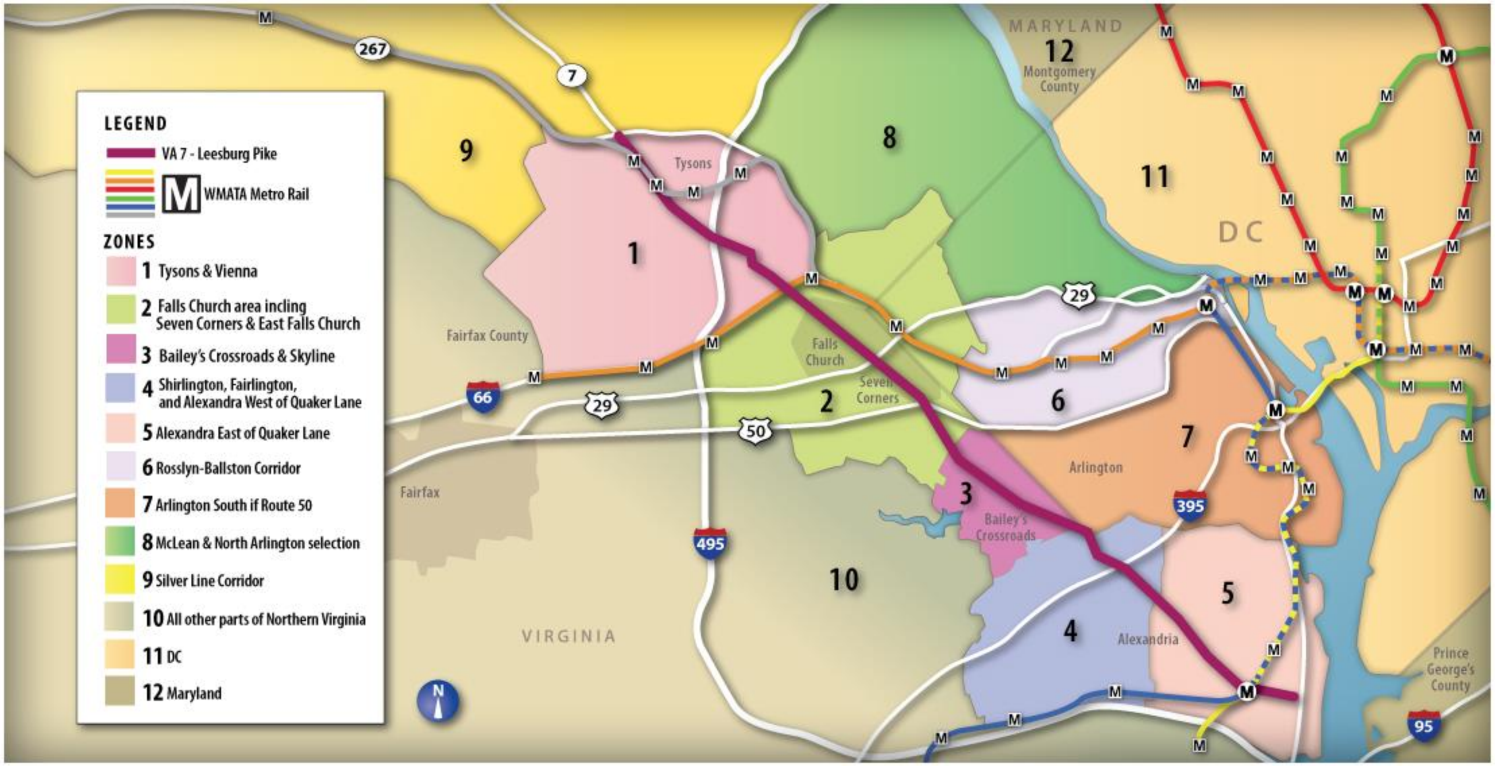
- Survey of residents in March
- Survey of employees in the corridor (web only) ran March-May

Survey Content

- Current travel habits within the greater region, including travel mode choices;
- Concerns about transportation within the corridor;
- Desired travel destinations;
- Perceptions of public transportation;
- Interest in a possible new rapid transit system.

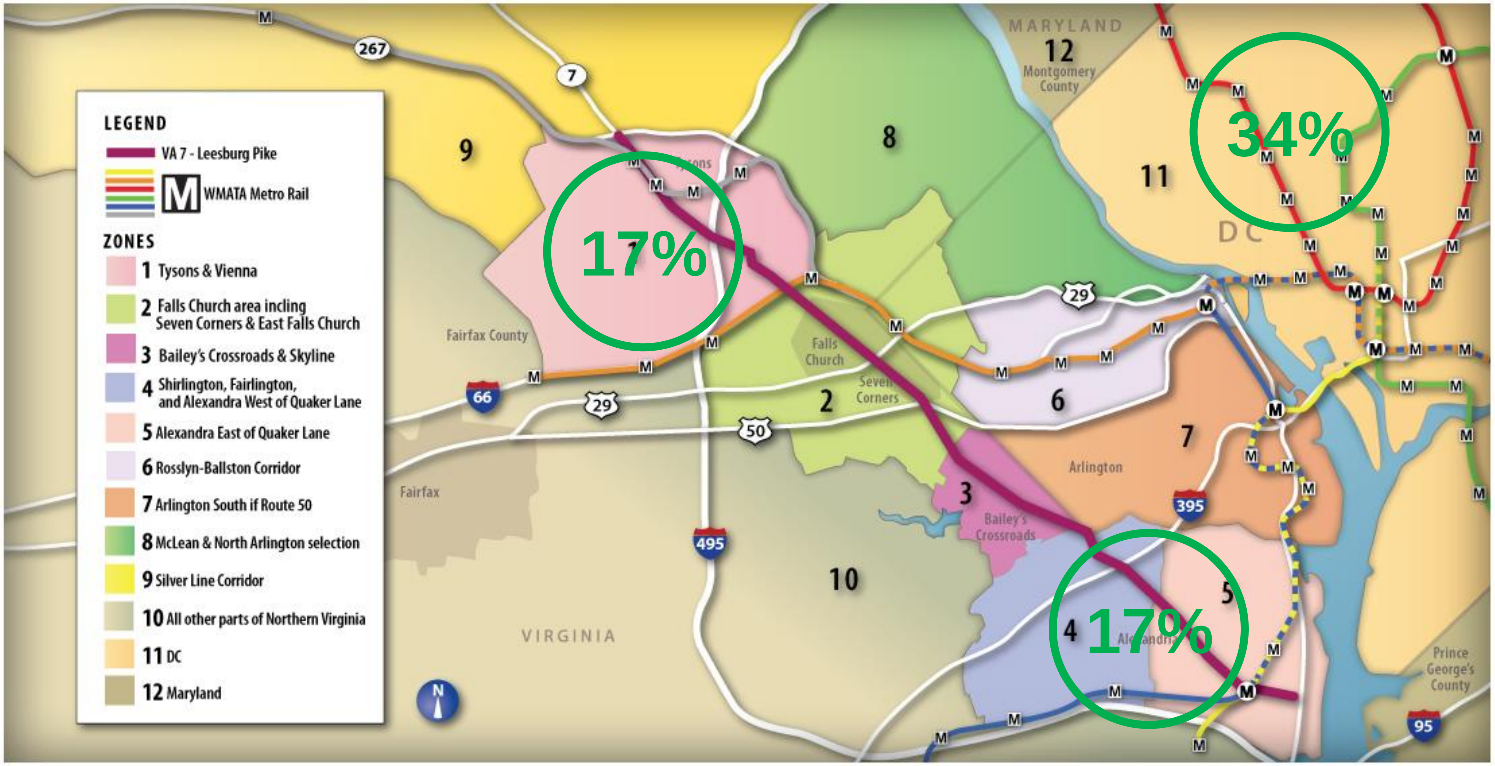
Methodology

Zone of residence, zone of work, other desired destinations



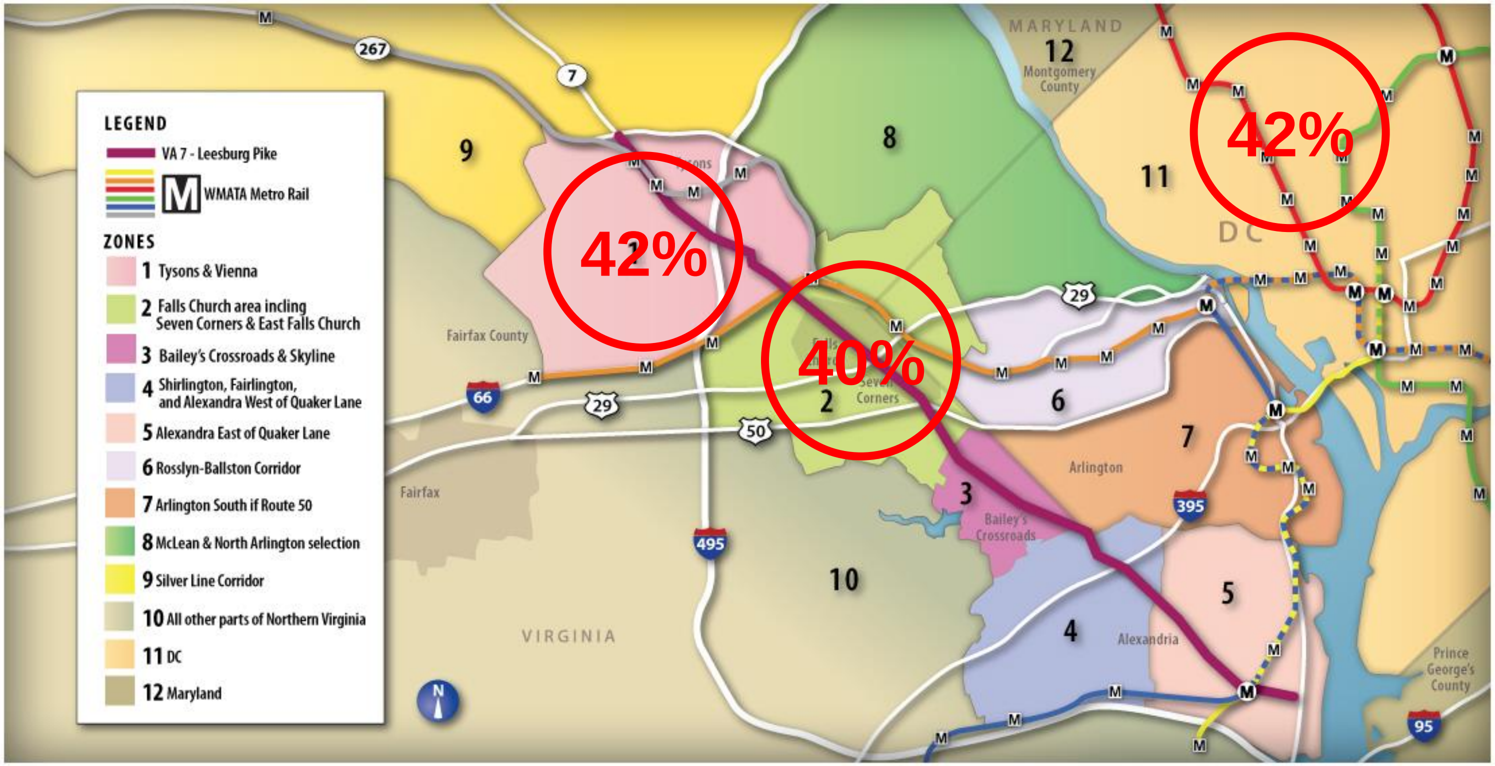
Residents Survey

Current Travel – Most Common Work Locations



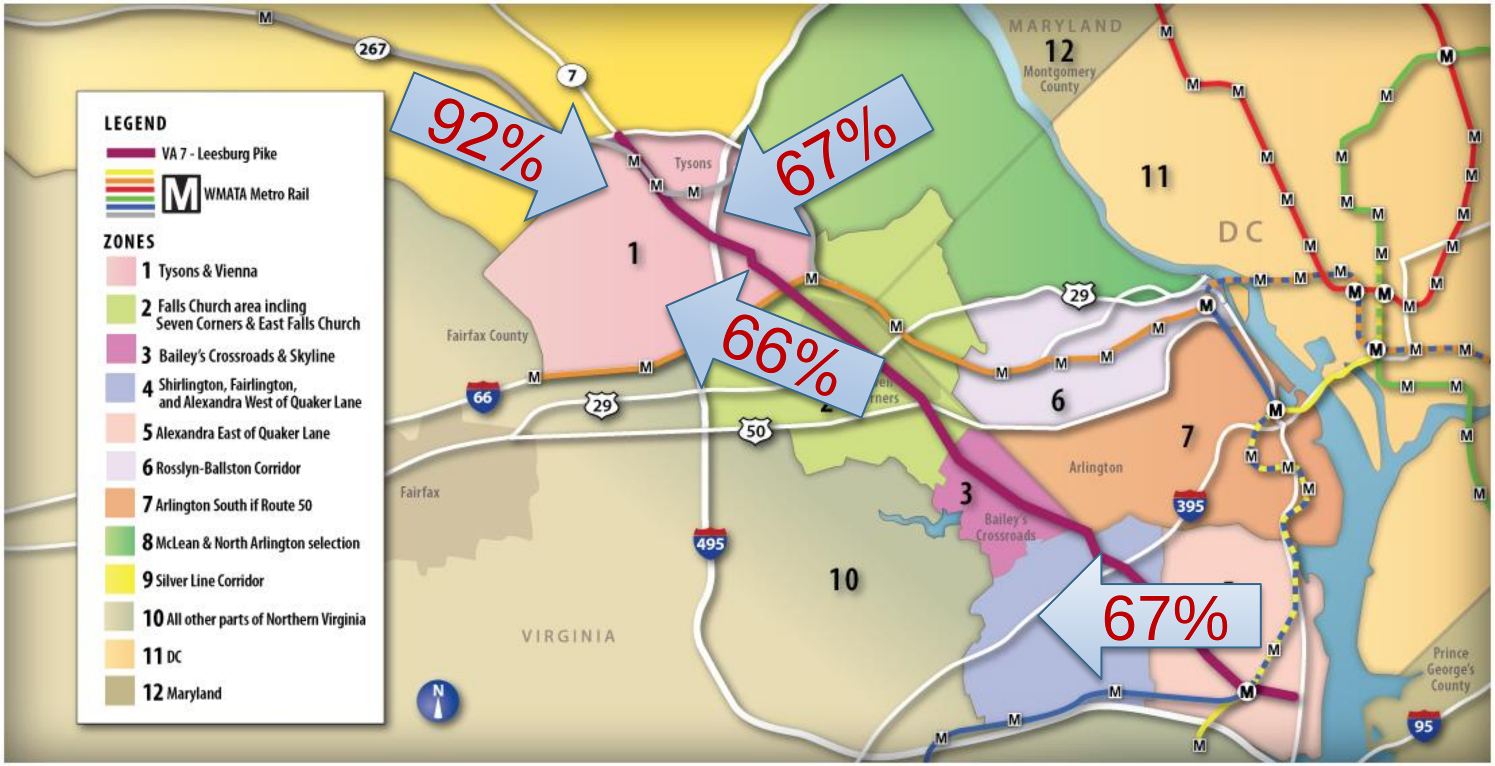
Residents Survey

Current Travel – Most Common Destinations (Work & Non-Work Trips)



Residents Survey

Current Travel – Most Common Zone-to-Zone Trips



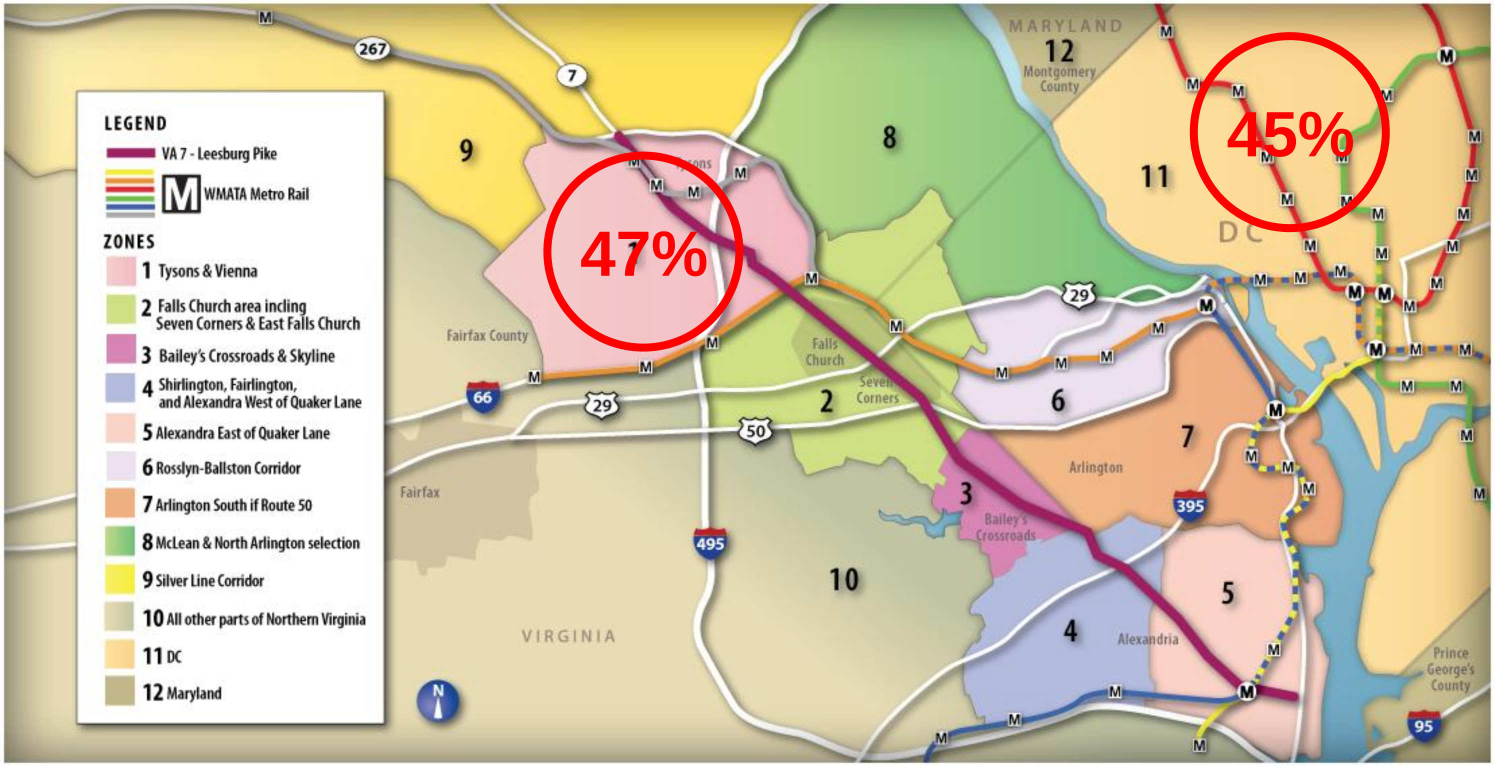
Residents Survey

Modes of Travel

- Work Trips:
  - Automobile: 74%
  - Transit: 37%
  - Transit usage highest for who work in DC/MD (55%) and Falls Church/Seven Corners (42%)
- Non-Work Trips
  - Automobile: 92%
  - Transit: 32%
- 46% report using transit for either work or non-work trips

Residents Survey

Desired Destinations



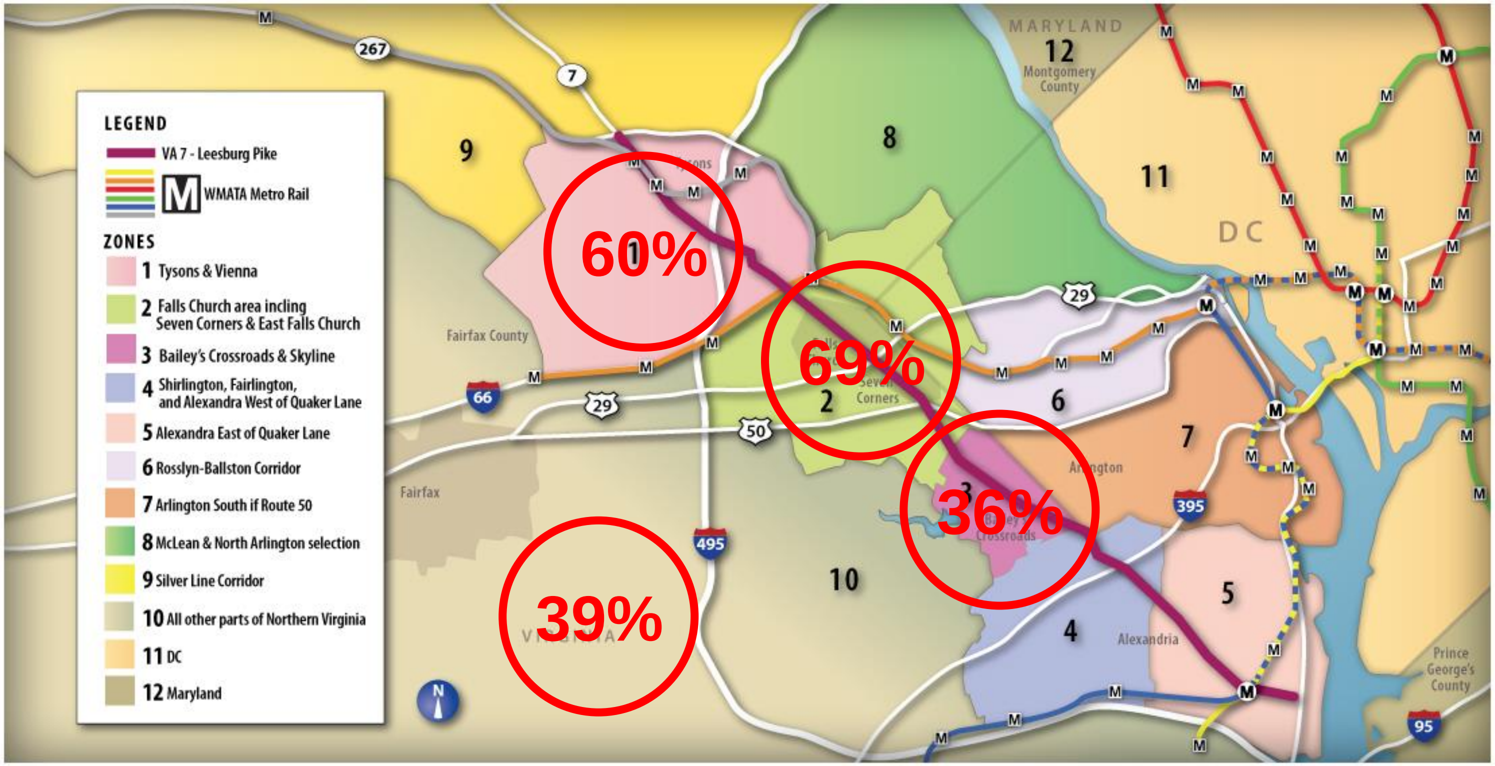
Residents Survey

Perceptions of Rapid Transit

- 57% said they would be interested in the hypothetical new rapid transit system, with current public transportation users being more likely to express interest (70% vs. 43%).
- Reasons for interest in rapid transit:
  - Frequent service (35% of those interested)
  - Travel speed (33%)
- Reasons for lack of interest:
  - Flexibility of driving themselves (25% of those not interested)
  - Do not think the system would be close to their home (21%).

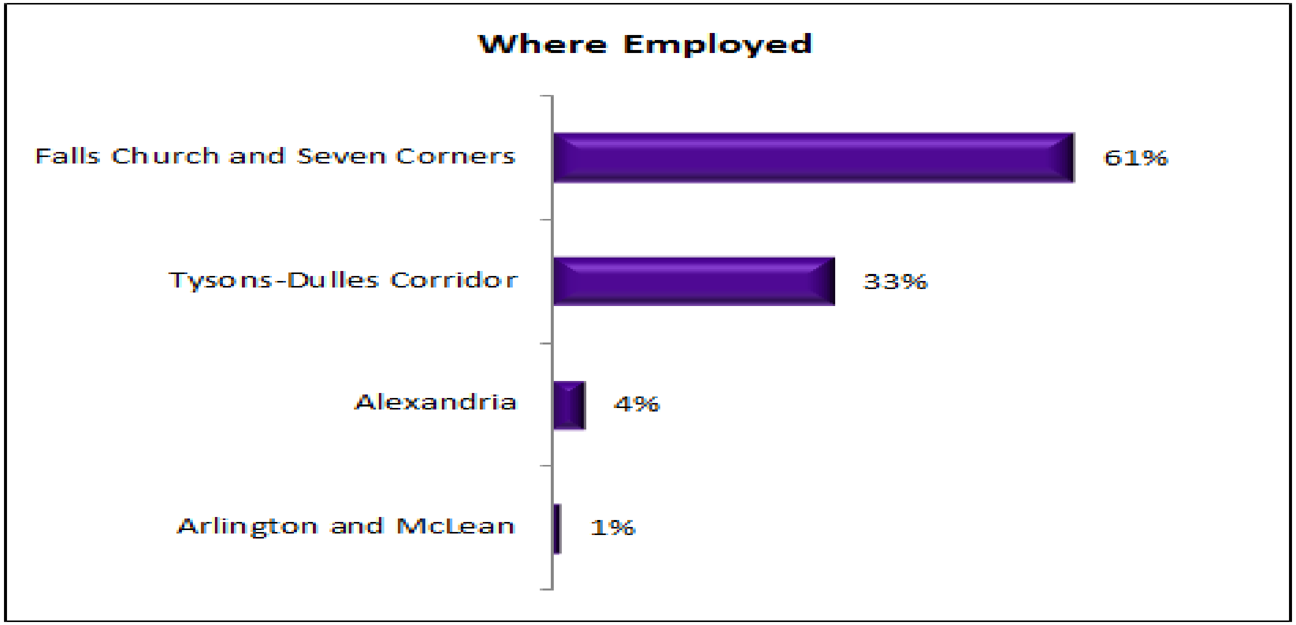
Employee Survey

Current Travel – Most Common Destinations



Employee Survey

Distribution of Responses



Q1. Please tell me in which zone you work.
Base = Total Sample (n=67)

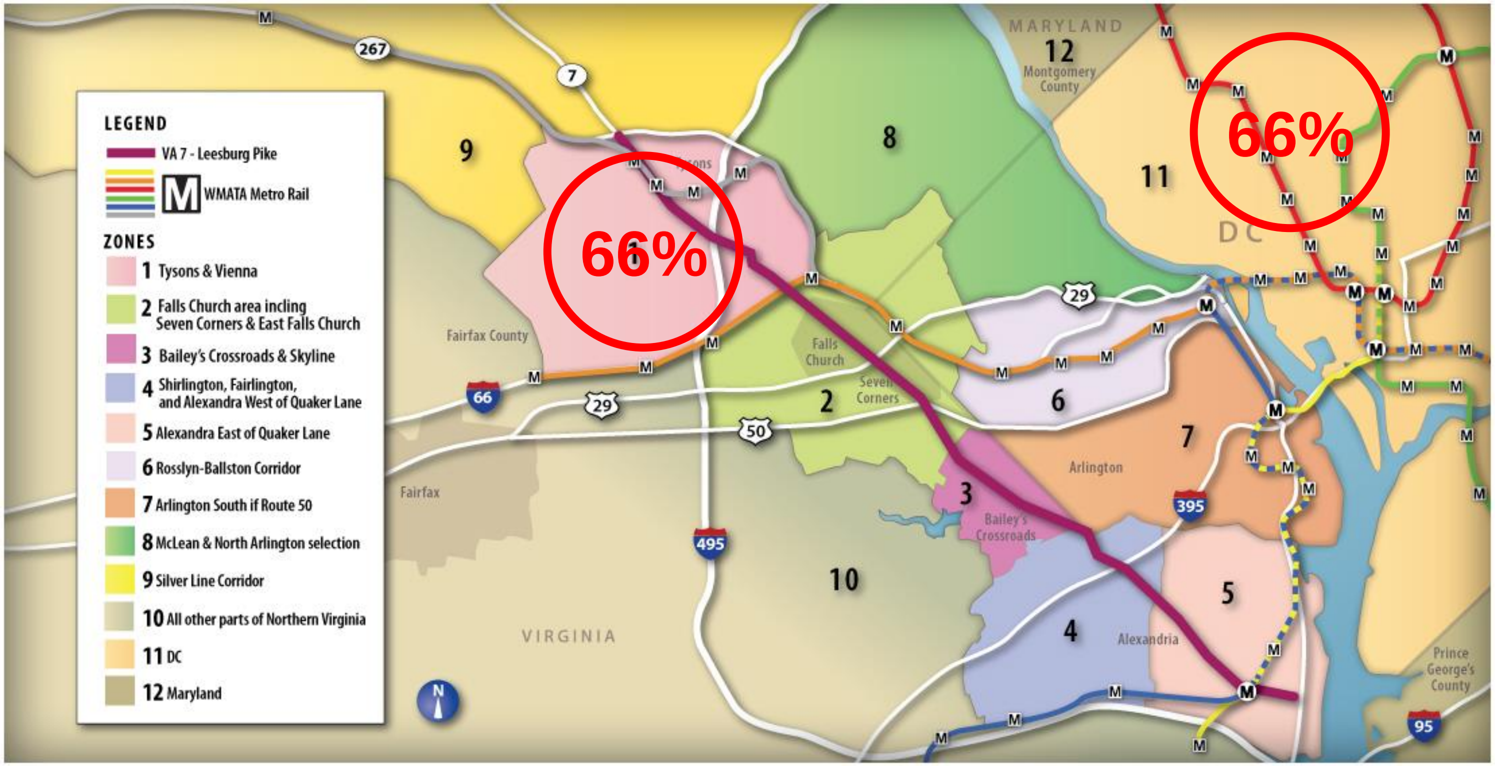
Employee Survey

Modes of Travel

- Work Trips:
  - Automobile: 97%
  - Transit: 9%
- Non-Work Trips
  - Automobile: 97%
  - Transit: 37%
- 93% report availability of free or subsidized parking at work, 67% report availability of transit fare reimbursement.

Employee Survey

Desired Destinations



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Employee Survey

Perceptions of Rapid Transit

- 57% said they would be interested in the hypothetical new rapid transit system, with current public transportation users being more likely to express interest (72% vs. 45%).
- Most interested in finding more convenient ways to travel to
  - Tysons/Vienna (68%)
  - Washington, DC (68%)
  - Alexandria East (42%)

Key observations:

- Strong interest in rapid transit, based on reliability and travel time improvement.
- Desire better access to Tysons & DC.
- Corridor residents' use of transit for commute trips is in line with region, employees in corridor well below it.



EVALUATION FRAMEWORK

Evaluation Perspectives

- Effectiveness – how alternatives address needs of corridor
- Impacts – how alternatives support local policy goals, potential environmental or traffic impact fatal flaws
- Cost-Effectiveness - are costs of alternatives in line with anticipated benefits
- Feasibility – financial and technical feasibility of alternatives
- Equity – how impacts and benefits of alternatives are distributed fairly across population groups

Evaluation Process

Tier 1

- **Pre-Screening (Phase 1)**
  - Has it previously been eliminated?
  - Is it clearly ill-suited to address the need?
  - Does it have an obvious fatal flaw?

Tier 2

- **Initial Screening (Phase 1)**
  - Develop evaluation measures that reflect goals. And objectives.
  - Identify available data to use as screening meausures.
  - Test mode and routing alternatives using evaluation measures.
  - Select “best performing” mode and routing alternatives for detailed evaluation.

Tier 3

- **Refined Alternatives Analysis (Phase 2)**
  - Develop additional, more rigorous evaluation measures.
  - Identify costs, ridership and benefits of alternatives.
  - Test refined alternatives using additional evaluation criteria.
  - Recommend preferred alternative to community.
  - Community makes decision to select Locally Preferred Alternative

Pre-Screening Considerations

- Fatal flaw evaluation
- Input from several sources
  - Previous studies
  - Feedback from stakeholder interviews and public surveys
  - Initial project team observations
- Output – Reasonable modes and routings to advance to Tier 1 screening

Tier 1 Screening Considerations



- Initial application of measures
- Input from several sources
  - Demographic and GIS data
  - Local planning studies and documents
  - Field reconnaissance
  - Stakeholder and public feedback
  - Limited demand forecasting
- 3-tiered rating scheme – High, Medium, Low
- Summary matrix of data and ratings for each measure for each mode/route combination
- No weighing or measures or total numerical scores

Tier 2 Screening Considerations



- Focus of Phase 2 study
- Evaluate short list of combined mode/route alternatives
- Detail sufficient to select LPA
  - Conceptual corridor layouts
  - Conceptual station plans
  - Operating plans
  - O&M costs
  - Environmental scan
  - Ridership projections
  - Financial analysis
  - Cost-benefit assessment
- Comparison to No-Build alternative
- Weighing of measures and scoring of alternatives possible

Summary Matrix Example - Indy Red Line AA

	OBJECTIVES	TIER 1 SCREENING MEASURES	N1	N2	N3	N4	N5	N6
TRANSPORTATION EFFECTIVENESS (CONTINUED)	**Goal 4: Expand the existing IndyGo bus service network to provide more direct, more frequent and faster travel options throughout the region.**							
	Objective 5: Increase the number of transit vehicle miles and vehicle hours	Daily transit VH (six hours peak 10 minute service; 10 hours off-peak 15 minute service)	90	160	170	150	150	200
		Daily transit vehicle miles	1,500	2,600	2,800	2,500	2,500	3,200
	Objective 6: Reduce the percentage of transit trips that require a transfer	Peak HBW trips – zonal based	454	1,285	1,774	1,003	1,124	1,476
		Proximity to IUPUI (miles)	0.25	0.25	0.25	0.57	0.67	0.25
		Proximity to Ivy Tech (miles)	0.00	0.00	0.00	0.20	0.76	0.00
		Proximity to Butler University. (miles)	0.64	0.38	0.88	0.88	0.88	0.88
	Objective 7: Increase the average speed of transit vehicles in revenue service	Ratio of transit travel time to auto travel time	1.9	1.6	1.6	1.4	1.2	1.6
ECONOMIC DEVELOPMENT	**Goal 5: Leverage public investment in transit by providing improved service to established activity centers and areas with economic development potential, thereby replacing a "vicious" cycle of disinvestment with a "virtuous" cycle of investment in support of broader community goals.**							
	Objective 8: Provide convenient and accessible transit service to existing and planned activity centers.	# of sports venues within ¼ mile	3	3	3	1	1	3
		# of libraries within ¼ mile	5	4	6	5	3	6
		# of hospitals within ¼ mile	1	4	3	0	3	0
		# of high schools within ¼ mile	2	1	3	3	2	2
		# of universities/colleges in ¼ mile	2	2	2	1	0	2
		Carmel/Performing Arts Center – ½ mile	No	No	No	No	Yes	Yes
		# of Retail employment clusters	2	2	3	3	3	5
		Convention center within ¼ mile?	Yes	Yes	Yes	Yes	Yes	Yes
		State government center within ¼ mile>	Yes	Yes	Yes	No	No	Yes
		City-county building within ¼ mile?	Yes	Yes	Yes	Yes	Yes	Yes
	Objective 9: Provide convenient and accessible transit service to areas with economic development potential.	TOTAL Summed TOD Score from Greenstreet (certain alignment segments missing from analysis)	2,511	3,542	3,934	1,854	2,747	3,375
		Linear miles within economic development areas	6.4 miles	7.7 miles	11.6 miles	8.6 miles	7.3 miles	11.3 miles

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PRE-SCREENING CONSIDERATIONS

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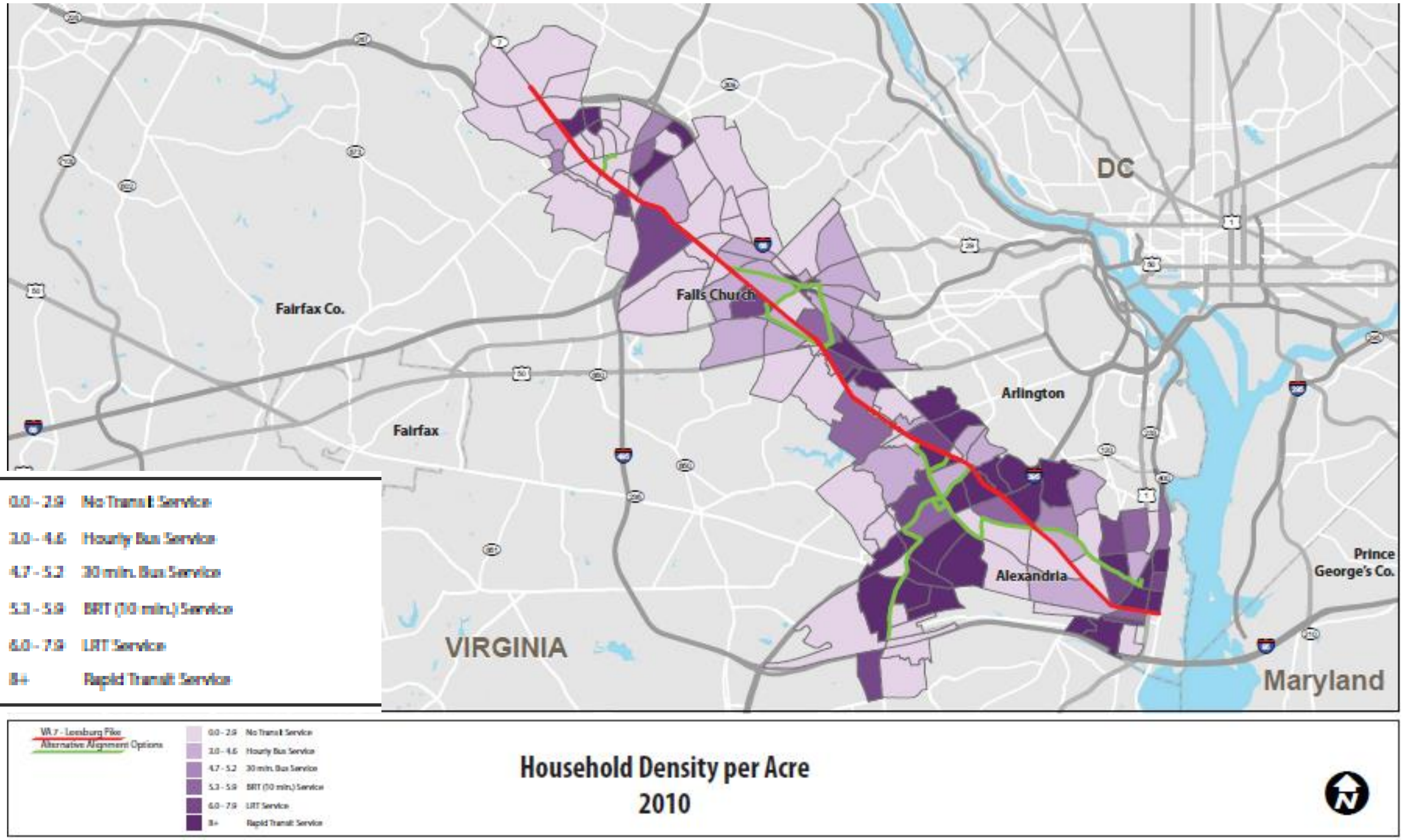
Minimum Development Thresholds Related to Transit Mode

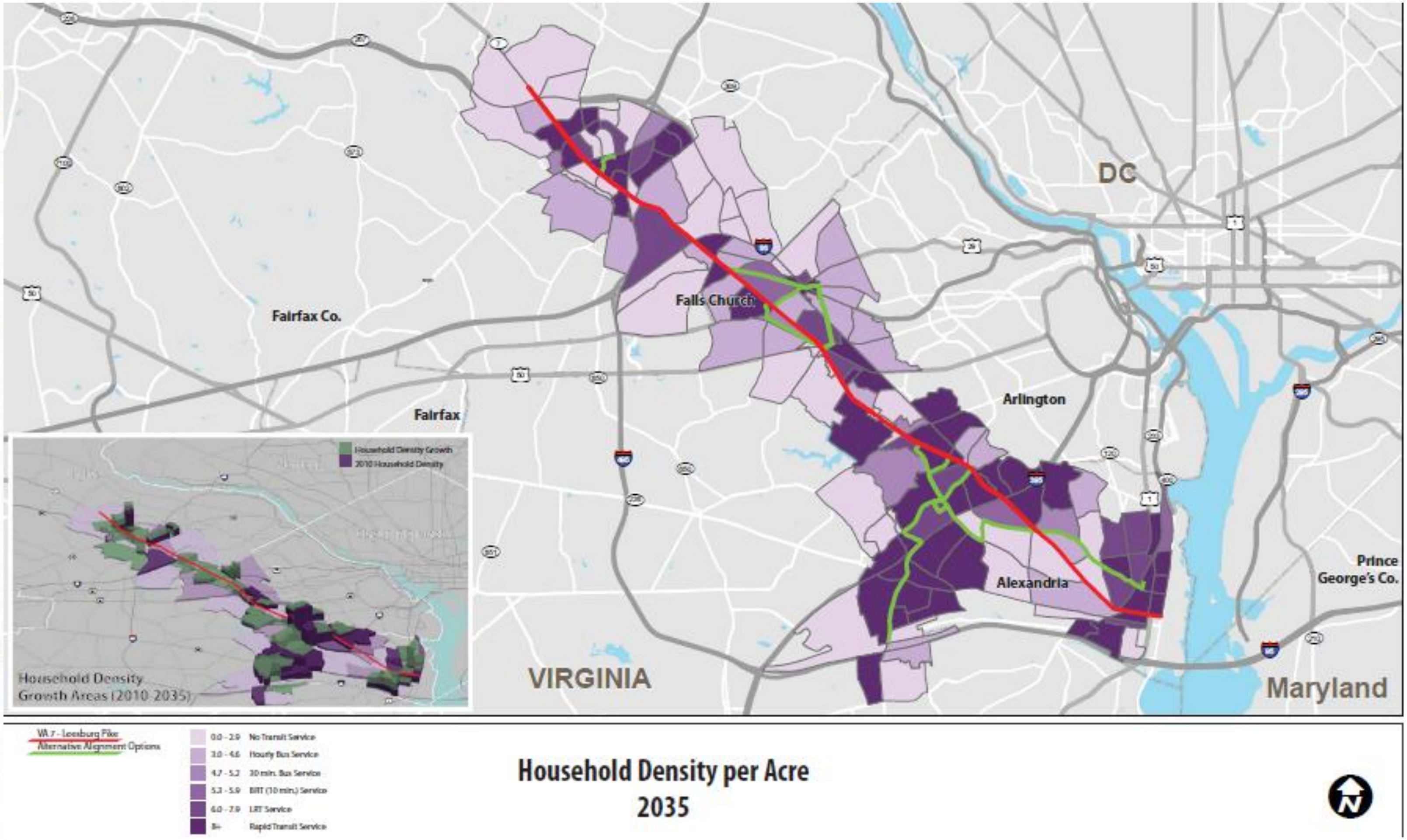
Transit Mode	Population Density (Households Per Gross Acre)	Employment Density (Jobs Per Gross Acre)
No Transit Service	< 3.0	<4.0
Local Bus (60 min.)	=>3.0	=>4.0
Local Bus (30 min.)	=>4.7	=>6.2
Local Bus (10 min.) – Bus Rapid Transit	=>5.3	=>7.0
Light Rail	=>6.0	=>7.9
Heavy Rail	=>8.0	=>10.6

Route 7 Study Area Development Density Related to Minimum Transit Mode



Household Density per Acre
2010

Route 7 Study Area Development Density Related to Minimum Transit Mode



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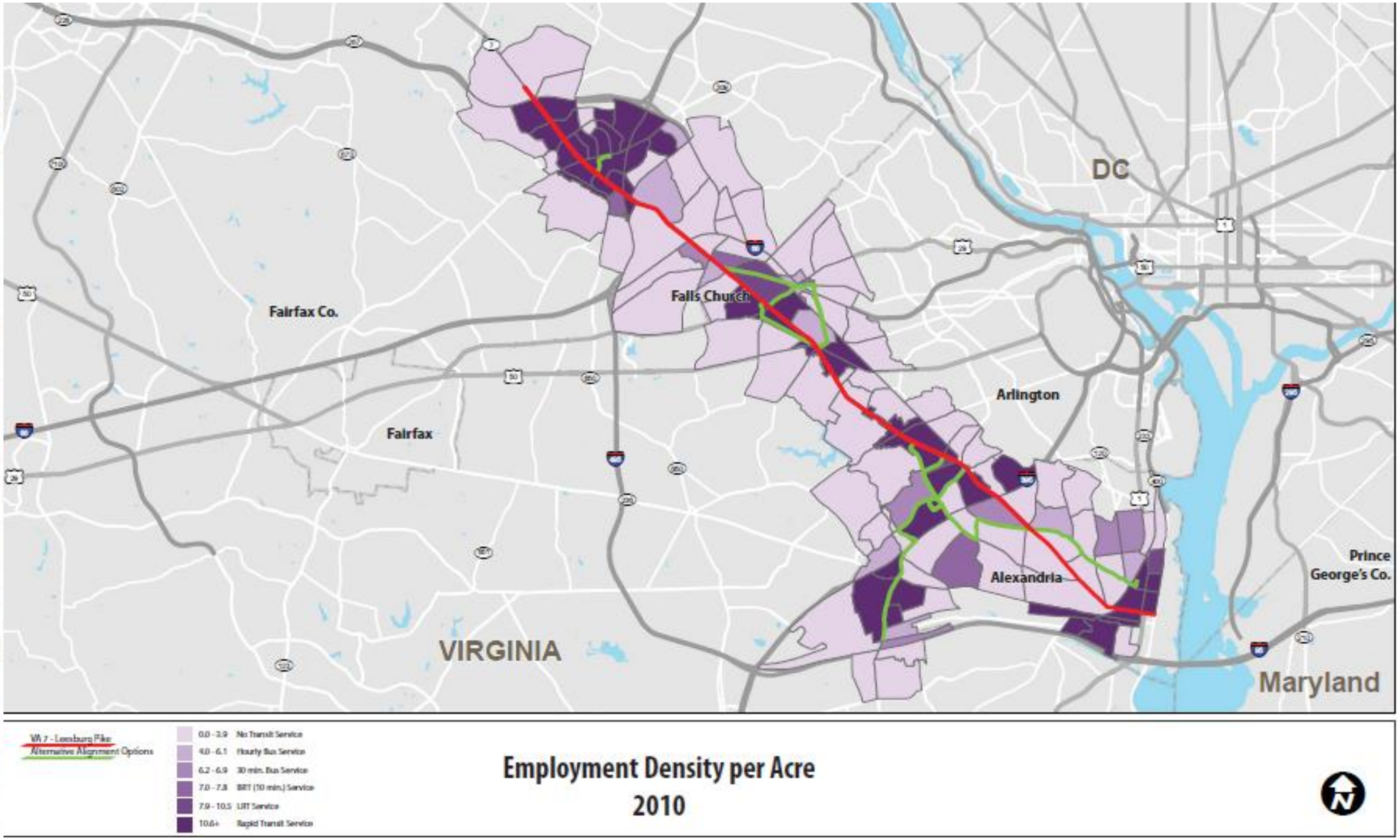

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Route 7 Study Area Development Density Related to Minimum Transit Mode