TPB SCENARIO STUDY

Progress on "CLRP Aspirations" & "What Would it Take?" Scenarios

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Presentation to the TPB Scenario Study Task Force

October 15, 2008

The Two New Scenarios

CLRP Aspirations

Draws on past scenarios (5 transportation/land use scenarios and 2 value pricing scenarios) to provide an ambitious yet attainable vision of land use and transportation for the 2010 CLRP update.

What Would it Take?

Starts with CO2 goals (80% below 2005 levels in 2050 and 20% reduction by 2020) and assesses what scales and combinations of interventions will be necessary to achieve the goal.

Land Use Component: Comments Received

From Scenario Study Task Force Member,
Harriet Tregoning, Director, DC Office of Planning

TPB CAC

Planning Directors

Land Use Component: Comments Received

1. **Revisit the definition of activity center** (HT)
   Tie the development of the scenarios more explicitly to the TPB Vision, using a more targeted approach for assigning land-use shifts among activity centers in both scenarios (CAC)

Change of regional activity centers through Planning Directors

In Scenario: can reflect a jobs/housing balance (indicating mixed use) and walkable density within activity centers.

Land Use Component: Comments Received

2. The transportation component for the Aspirations scenario should focus highway and transit accessibility improvements on prioritized activity centers

TPB staff is currently studying the removal of interchanges outside of activity centers

Land Use Component: Comments Received

3. Improve estimates for bicycling and walking trips

Combined bicycle and walk trips are generated for work trips only

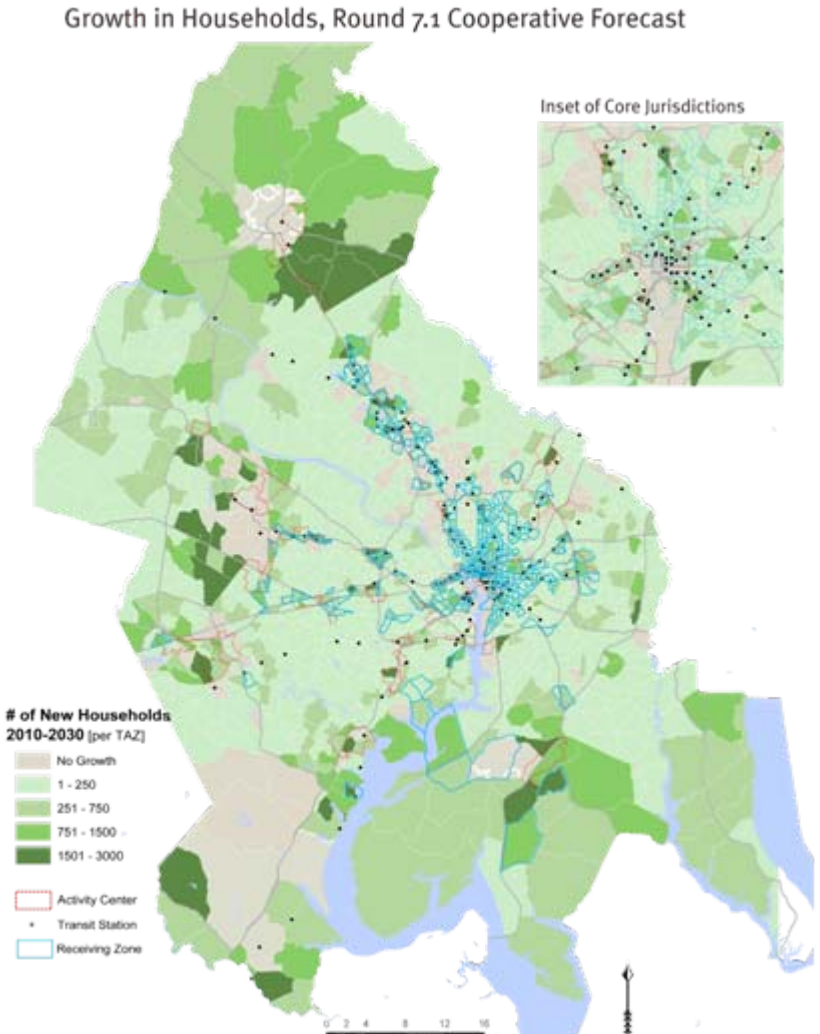
Work trip rates reflect both motorized and non-motorized travel

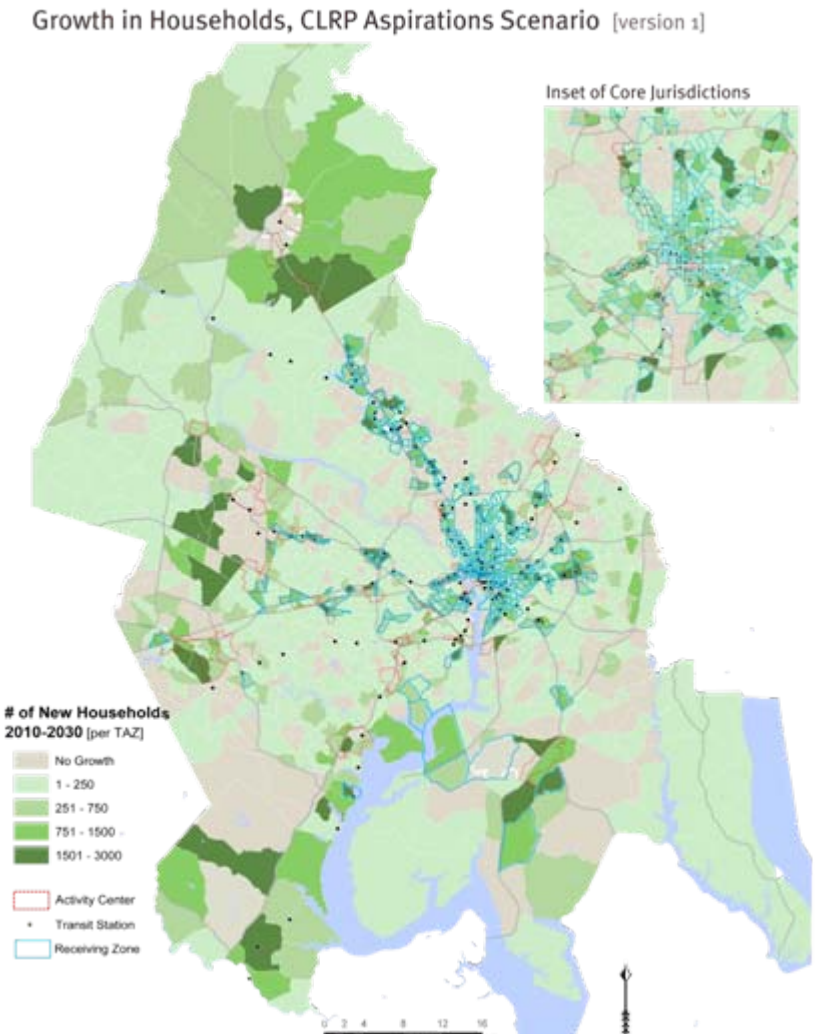
non-motorized trips are included to relate land use mix, density, etc. to the level of walking and bicycling (and its explicit effect on the reduction of motorized work travel)

Model uses area type classifications based on population and employment densities that have associated shares of non-motorized trip productions

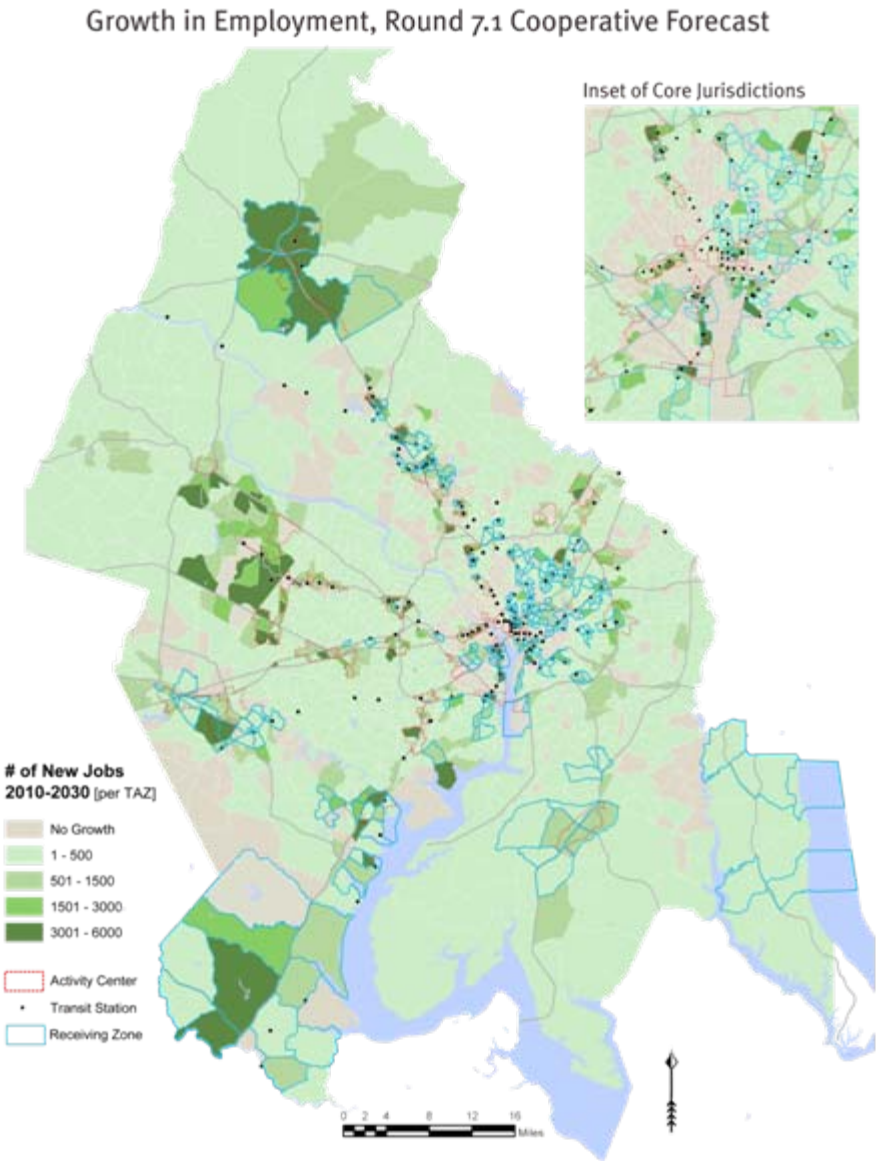
Land Use Component: Comments Received

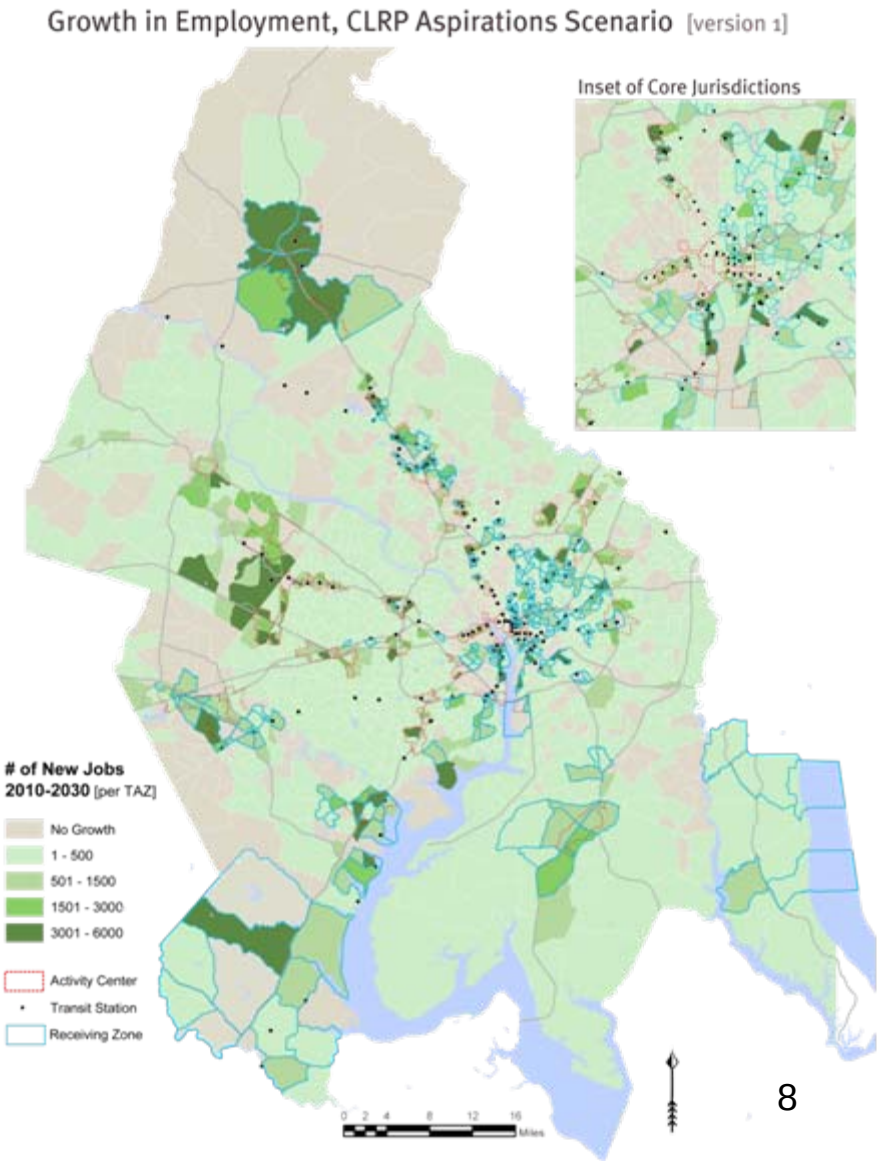
4. More clearly convey revised growth rates for the region in the land use component





Land Use Component: Comments Received





Land Use Component: Comments Received

5. Remove the “Jobs Out” shift from the composite CLRP Aspirations scenario

Arguments made for both omitting and including the Jobs Out scenario

Planning Directors Committee will provide comment on this question to the TPB Scenario Study Task Force.

Land Use Component: Comments Received

6. Investigate an improved model that can better address external factors such as rising gas prices (Both HT and CAC)

Consultant assistance during past 3 years travel demand modeling practices around the country

2 current task orders:

1. Technical memorandum on the treatment of fuel price changes in travel forecasting models.
2. Evaluating an approach to move toward an activity-based travel model over the coming year.

Results expected in late fall.

Land Use Component: Comments Received

7. There should be a clearly articulated interaction between Aspirations and WWIT so that the conclusions from WWIT can be used to further explore options in the Aspirations scenario.

Analysis of the WWIT scenario will be completed before the CLRP Aspirations scenario, at which point, the results of the WWIT scenario can begin informing the analysis of the CLRP Aspirations scenario

Among the results of the comprehensive cost/benefit scenario analysis will be a mix of investments from both scenarios most likely to deliver the maximum net economic value.

Land Use Component: Comments Received

8. Develop the Scenario Study process to support creation of a Financially Unconstrained Transportation Plan of regionally prioritized projects for consideration.

CLRP Aspirations intended to be a de facto unconstrained long range transportation plan to inform CLRP updates

Comprehensive cost-benefit analysis can be used to prioritize the projects within the unconstrained plan

Continued Review by Planning Directors

Questions posed to Planning Directors for answer:

1. Could the TAZ absorb more growth if it is designated as a receiving zone, or shed more growth if it is a donor zone?

2. Are there any projected developments that will be part of the round 7.2 forecast that should be factored into this land use scenario?

3. Are there any TAZs currently designated as a donor or receiving zone that should be the opposite?

4. Are there areas where new activity centers should be located?

Continued Review by Planning Directors

Comments received from Arlington, Loudoun, and Prince George's Counties:

- Shifts should be according to set of principles:
  - 2015-2030 growth moved
  - There should be an explicit goal for the shifts, such as equalizing the jobs/household ratios across the region to the extent possible
  - TAZs with substantial planned mixed use development or unique market conditions should receive no reductions
- Many TAZs have significant changes in the new 7.2 Cooperative Forecast
- Some TAZs have proposed shifts that are either weak or too aggressive
- Some shifts reflect outdated assumptions (i.e. growth reduction proposed for Konterra and Westphalia)

Transportation Component

Questions for consideration by the task force

How will the BRT network provide service to and through the core?

What are the details of the transit level of service on the BRT network?

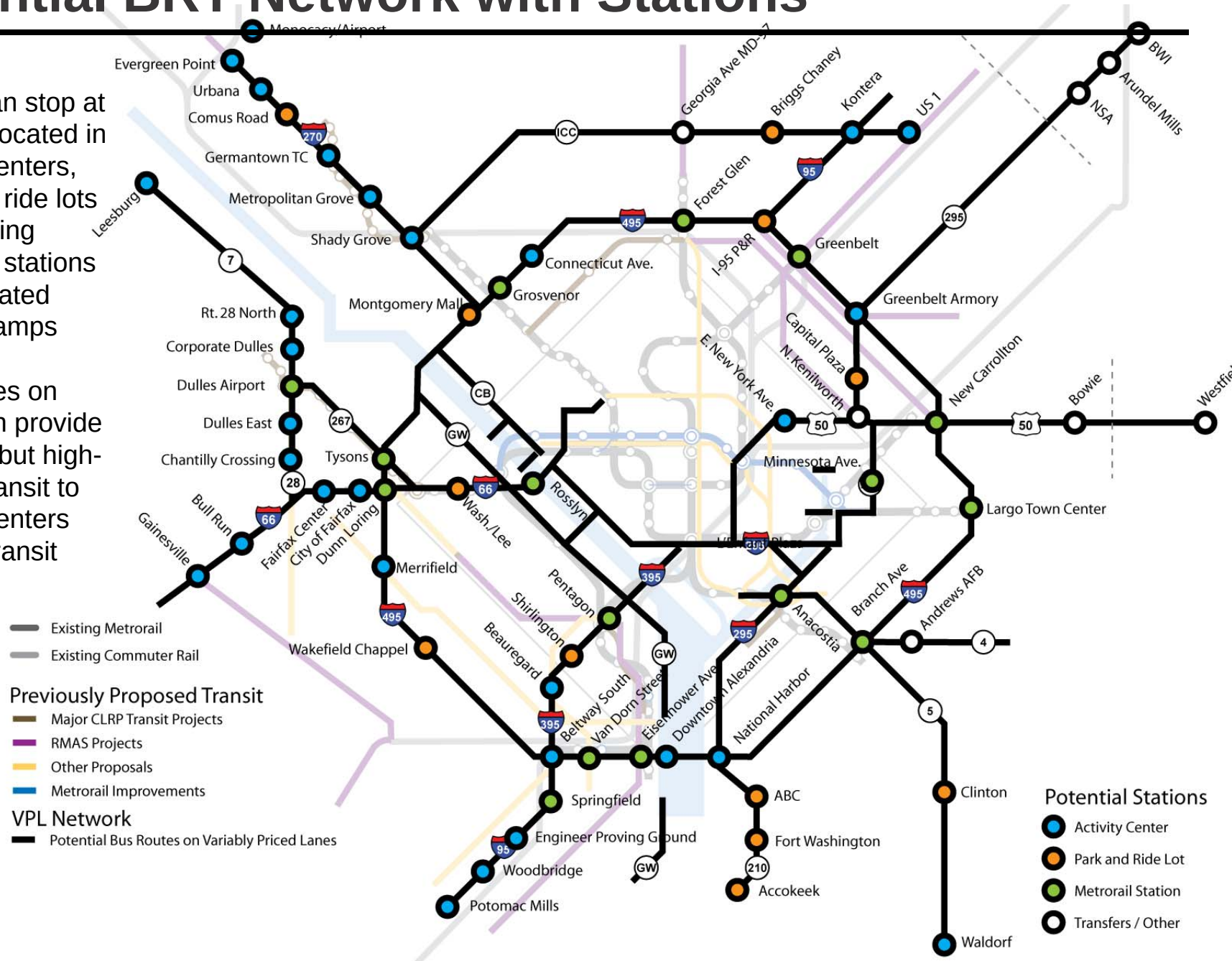
Where should the needed park-and-ride lots be located?

What criteria do we use for including other non-BRT projects in the scenario?

Potential BRT Network with Stations

Buses can stop at stations located in activity centers, park and ride lots and existing Metrorail stations via dedicated access ramps

Bus routes on VPLs can provide low-cost but high-quality transit to activity centers without transit service.



Bus Service on Variably Priced Lanes

- Previous pricing study evaluated regular and express bus service operating on the variably priced lanes
- CLRP Aspirations Scenario to include BRT-like bus stations and technologies at high-demand locations

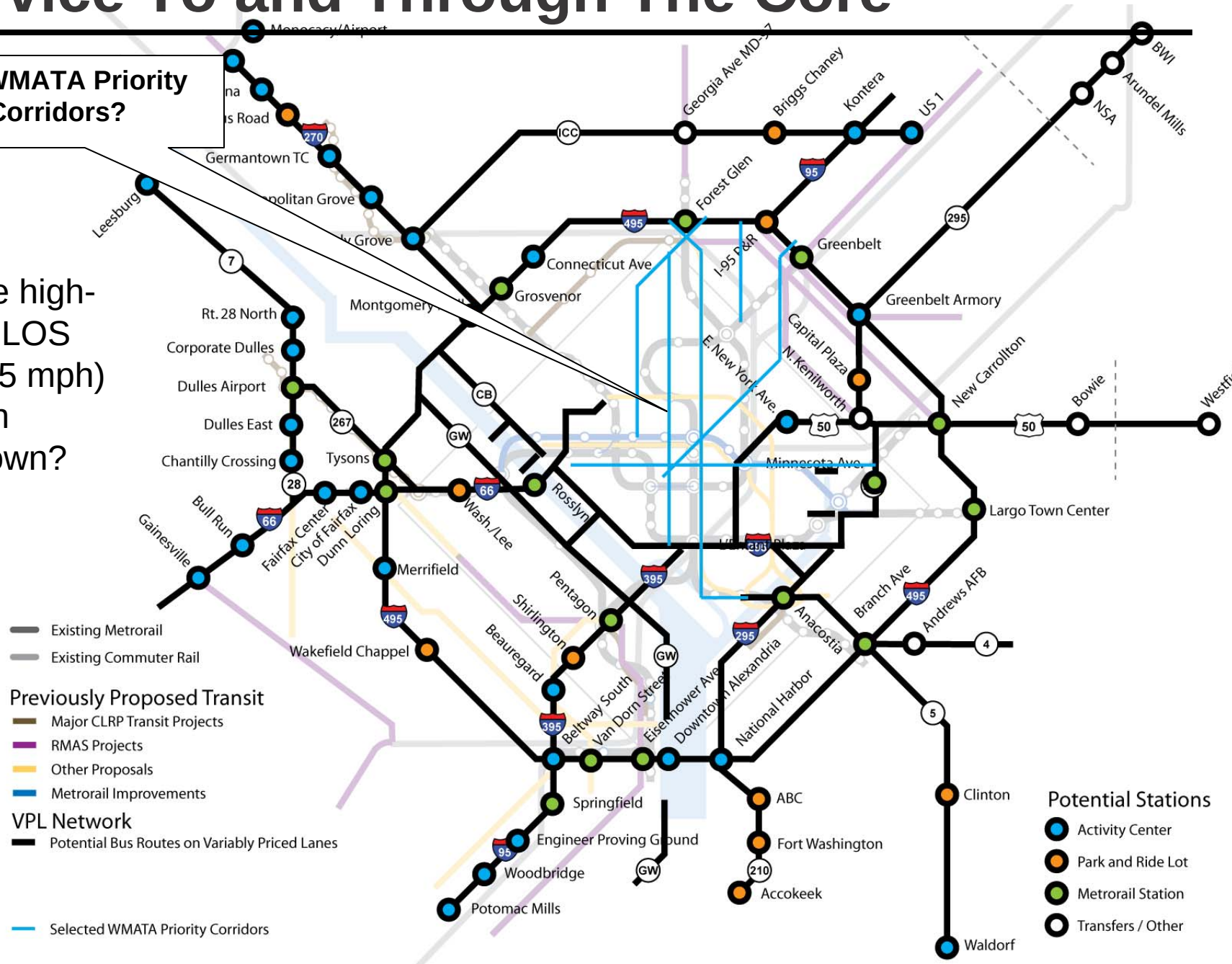
The Shirlington Transit Station, Arlington, VA.

Service To and Through The Core

Service To and Through The Core

Use WMATA Priority Corridors?

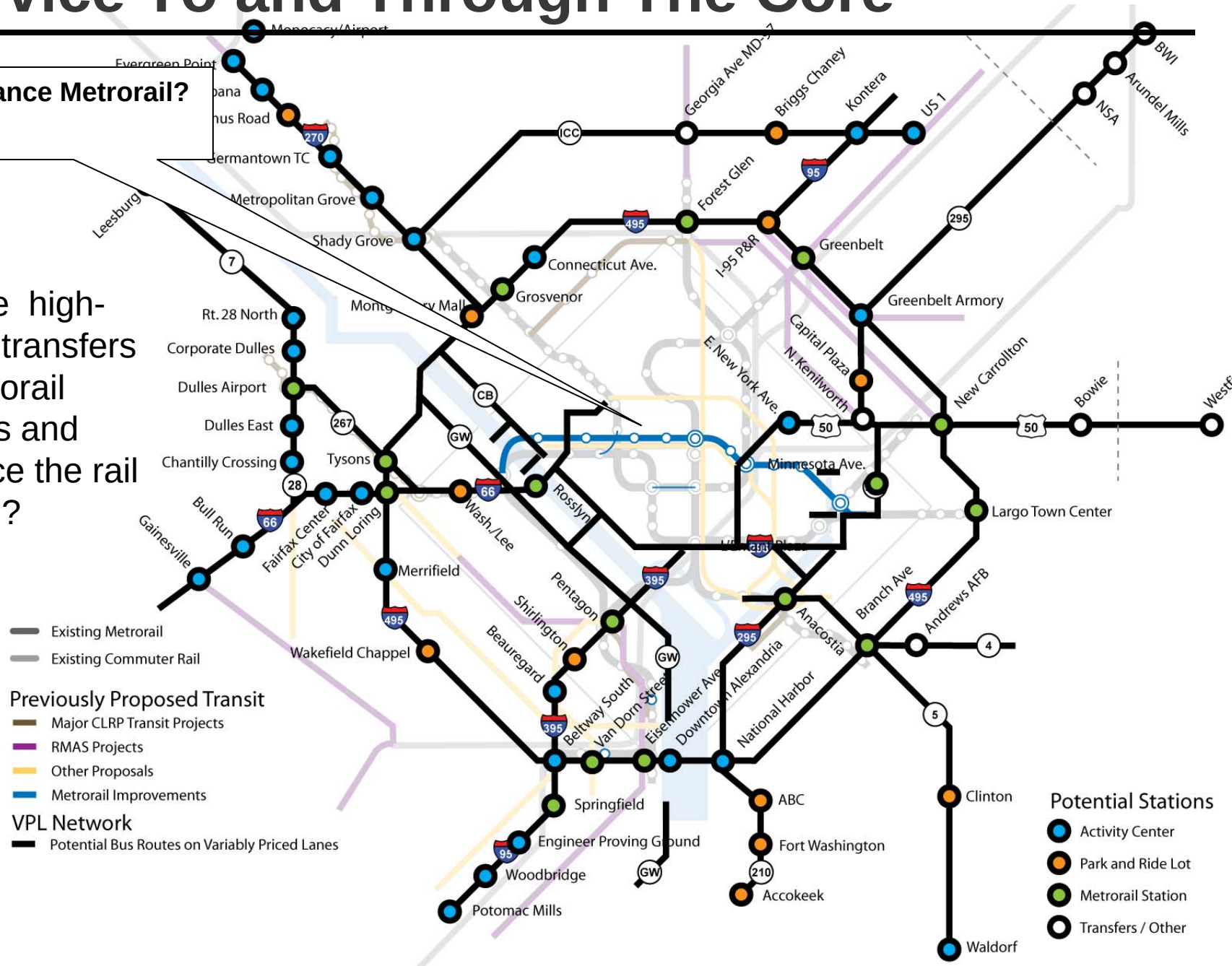
Provide high-quality LOS (avg. 15 mph) through downtown?



Service To and Through The Core

Or Enhance Metrorail?

Provide high-quality transfers at Metrorail stations and enhance the rail system?

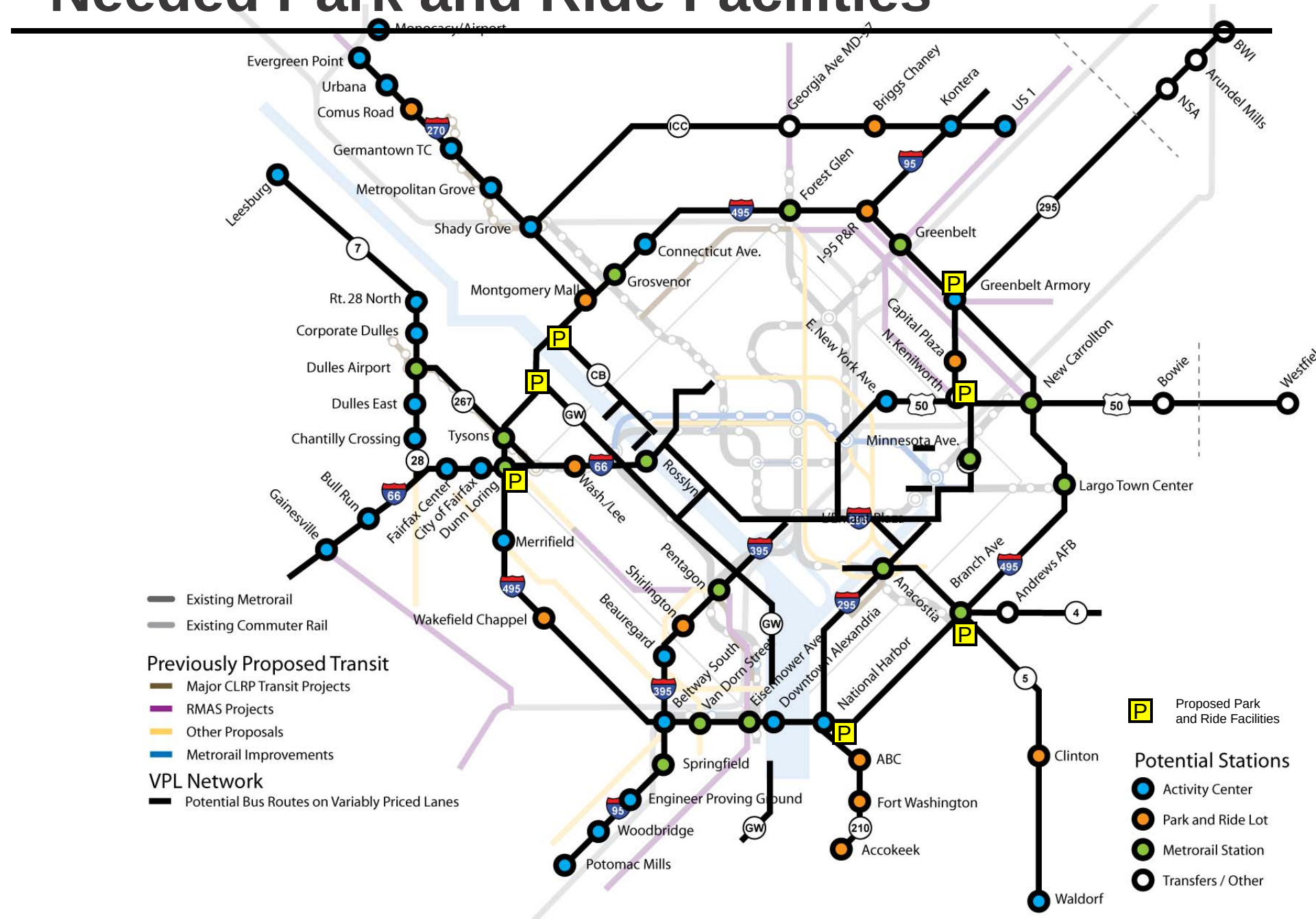


Level of Service of BRT System

What are the details of the transit level of service on the BRT network?

- Suggested LOS for the BRT network is as follows:
  - 15 minute headways during peak periods
  - 30 minute headways during mid-day off-peak and weekends.
  - 45 minute headways during PM off-peak
- Transit on toll lanes will assume 55 MPH travel speed.
- Transit on mixed/priority lanes will assume 15 MPH travel speed.
- Assume off-board payment systems for entire network.
- Assume all-door boarding at all transit stations.
- Assume 60’ articulated vehicles, 5 sets of doors (2 on the left, 3 on the right).

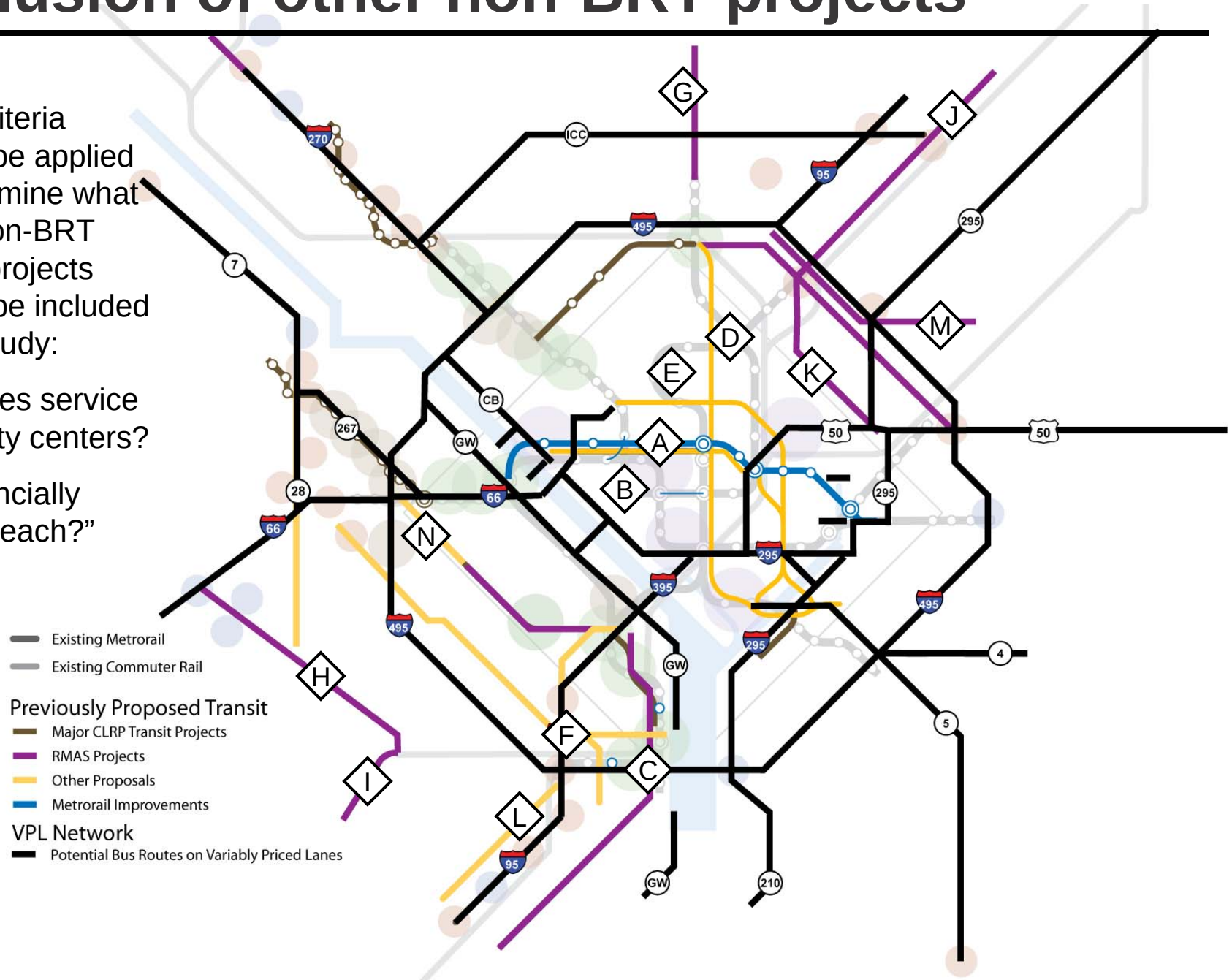
Needed Park and Ride Facilities



Inclusion of other non-BRT projects

What criteria should be applied to determine what other non-BRT transit projects should be included in the study:

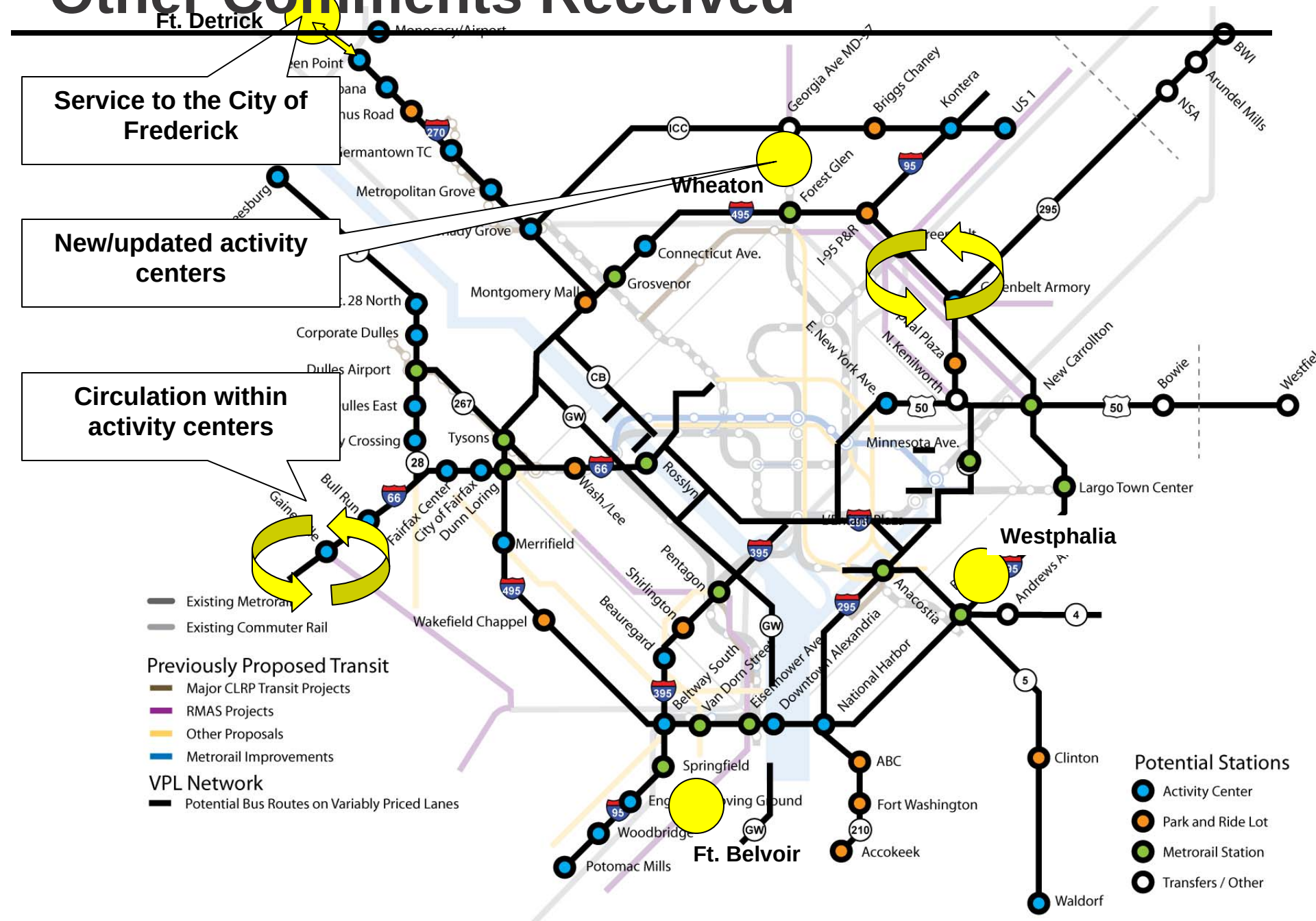
- Provides service to activity centers?
- Is financially "within reach?"



Non-BRT Projects Available for Consideration

Id	Mode	Route Name	Description	Source	Activity Centers	Funding Strategy
A	HRT	New Blue Line	New Blue Line tunnel under M St, new crossing at Rosslyn	WMATA	Georgetown, Downtown Washington	
B	HRT	Pedestrian Tunnels	Pedestrian tunnels between Gallery Place/Chinatown and Metro Center; and Farragut North and Farragut West.	WMATA	Downtown Washington	
C	HRT	Eisenhower Valley Station	Construct a new Metrorail station at Eisenhower Valley	City of Alexandria	Eisenhower Ave.	Local (value capture)
D	LRT	DC Streetcar	Three routes: Georgetown to L'Enfant Plaza, Georgetown to Minnesota Ave, Bolling AFB to Silver Spring	DDOT	Downtown Washington, Monumental Core, Federal Center	
E	BRT	DC BRT	Two routes: Woodley Park to L'Enfant Plaza, Georgetown to Skyland	DDOT	Downtown Washington, Monumental Core, Federal Center	
F	BRT	Alexandria BRT	Two routes: Duke Street and Van Dorn St.	City of Alexandria	Beauregard St., Fairfax Center, Downtown Alexandria	
G	BRT	Georgia Ave Transitway	Glenmont to Olney, connecting to ICC	RMAS	Silver Spring CBD	
H	CRT	VRE Extension	Manassas to Haymarket	RMAS, TA-2030	Innovation, Gainesville	
I	CRT	VRE Extension	Broad Run / Airport to Remington	RMAS, TA-2030		
J	??T	MD Rt. 1 LRT TrnWay	UMD-College Park to Laurel	RMAS	Kontera	
K	??T	MD Rt. 201 LRT TrnWa	Minnesota Avenue Metro to UMD-College Park	RMAS	US 1 Green Line	
L	??T	VA Rt. 1 Transit Way	Pentagon to Joplin / Triangle PNR	RMAS		
M	??T	MD193 Twy	I-95/495 PNR to Glenn Dale via Greenbelt Road	RMAS	US 1 Green Line, Greenbelt	
N	LRT	VA 7 Light rail	Tysons Corner to Baileys Crossroads/Skyline	TA-2030	Bailey's Crossroads/Skyline, Tysons Corner	

Other Comments Received



Next Steps

Solicit further feedback from the Task Force and Regional Bus Subcommittee

Incorporate comments

Code network and begin analysis

Setting up the WWIT Scenario

Goal: To reduce CO2 emissions by 10%, 20% and 80% below 2005 levels in 2012, 2020 and 2050 respectively

3 categories of strategies to reduce mobile CO2 emissions

Fuel Efficiency	Fuel Carbon Intensity	Travel Efficiency
Beyond CAFE standards [currently 35 mpg by 2020]	Alternative fuels (biofuels, hydrogen, electricity) Vehicle technology (hybrid engine technology)	Reduce VMT through changes in land use, travel behavior, prices Reduce congestion Improve operational efficiency

Where are Transportation Emissions Coming From?

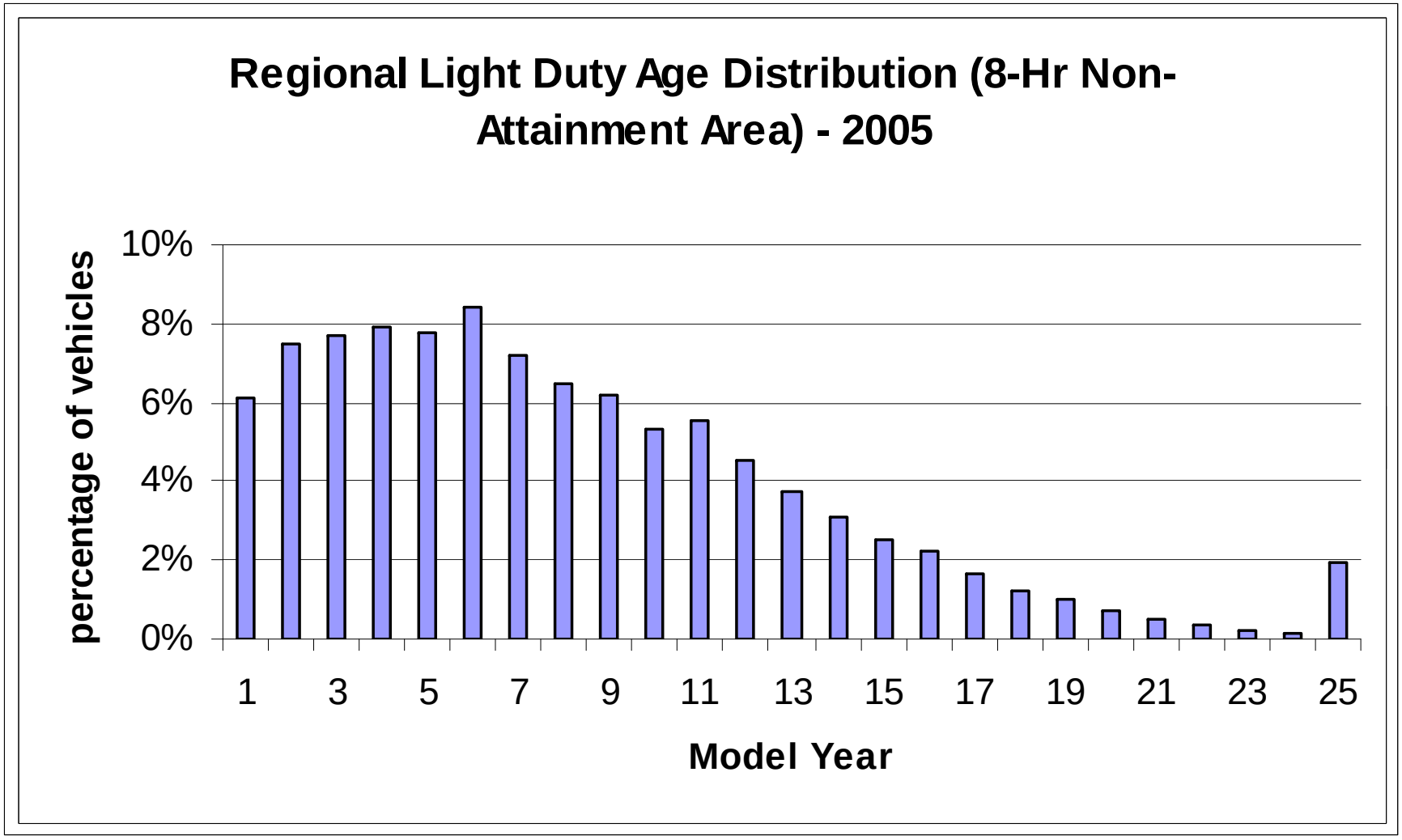
2010 Travel and CO2 Emissions

8-Hour Ozone Non-Attainment Area

	VMT (millions) - Annual	%	CO2 Emissions (Annual Tons)	%
Type I (LDGV,MC,LDDV)	19,059	47%	6,763,503	25%
TYPE II (LDGT1,2,3 & 4 and LDDT)	18,944	46%	15,376,757	57%
Type III (HDGV & HDDV)	2,944	7%	5,043,738	19%
Total	40,948	100%	27,183,998	100%

source: 2007 CLRP

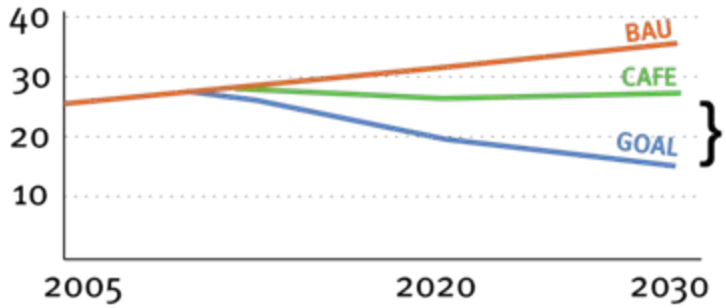
Characteristics of the Region's Vehicle Fleet



Alternative 1

Fuel Efficiency

35 mpg



45% reduction still necessary

Travel Efficiency

VMT

46.3% → **Transit** 645% (transit = **58%** of all 2030 trips)

OR

Behavior Change: Vehicle Trips

36% (all discretionary trips cut/chained) → **Transit** 65% (transit = **23%** of all 2030 trips)

OR

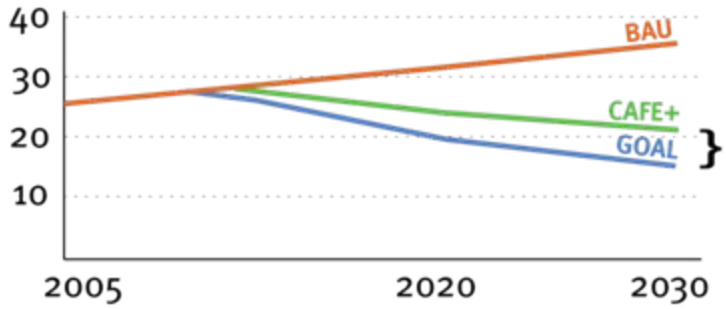
Behavior Change: Vehicle Trips

10% (30% of discretionary trips cut/chained) → **Transit** 471% (transit = **36%** of all 2030 trips)

Alternative 2

Fuel Efficiency

55 mpg



} **28%** reduction still necessary

Travel Efficiency

VMT

↓ 30.6% → **Transit** ↑ 417% (transit = **38%** of all 2030 trips)

OR

Behavior Change: Vehicle Trips

↓ 31% (85% of discretionary trips cut/chained) → **Transit** ↑ 0% (transit = **7%** of all 2030 trips)

OR

Behavior Change: Vehicle Trips

↓ 10% (30% of discretionary trips cut/chained) → **Transit** ↑ 234% (transit = **28%** of all 2030 trips)