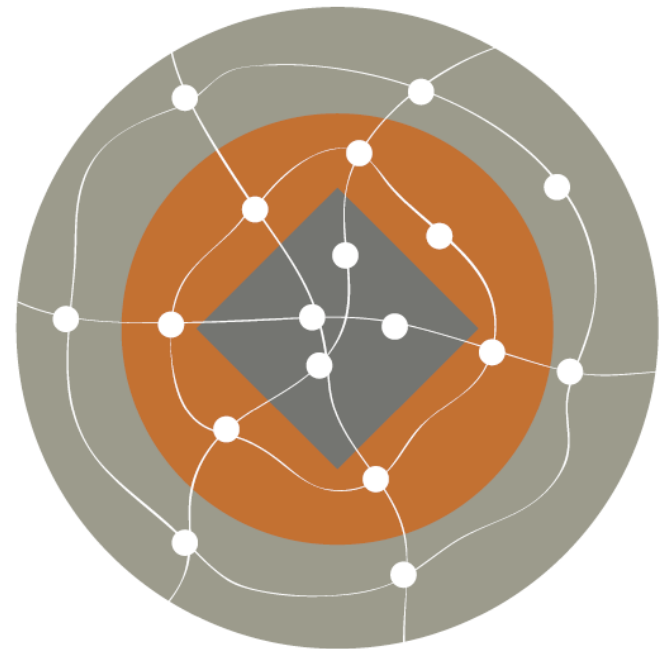


TPB CLRP Aspirations Scenario

Streamlined Variably Priced Lane Network Sensitivity Test

Erin Morrow
Department of Transportation Planning

Presentation to the TPB Technical Committee
September 9, 2011



Outline

CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



1. Review CLRP Aspirations Scenario
2. Two Sensitivity Tests
 - Land Use Sensitivity Test
 - New: “Streamlined” Variably Priced Lane (VPL) Network
3. Results
4. Next Steps

CLRP Aspirations Scenario



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

Land Use Shifts

- Concentrating projected growth in activity centers and existing/planned transit stations
- Consistent review and refinement by planning directors

Regional VPL Network

- Address congestion through pricing of new and/or existing lanes
- Provide alternatives through enhanced transit

Supportive Transit

- Use menu of transit options from past scenarios
- Connect activity centers

Land Use Shifts – Targeted Growth Areas











CLRP Aspirations Scenario

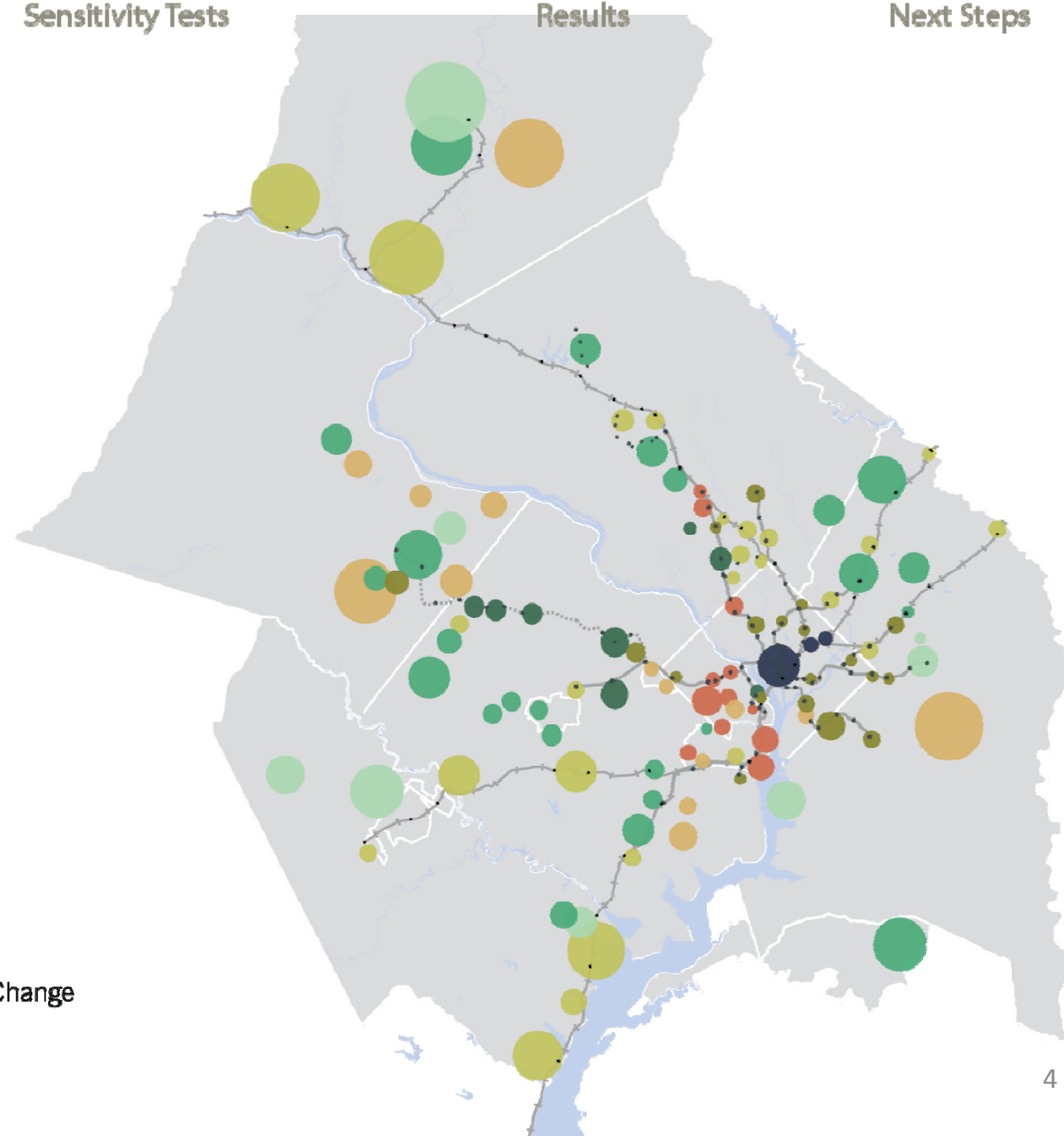
Sensitivity Tests

Results

Next Steps

Types of Growth Areas, Density Goals, and Jobs/Housing Balance Goals

-  **DC Core**
32 jobs and 20 du/acre
3 jobs/household
-  **Mixed Use Center**
20-32 jobs and 10-20 du/acre
2 jobs/household
-  **Employment Center**
14 jobs and 7 du/acre
2 jobs/household
-  **Suburban Employment Center**
10 jobs and 5 du/acre
2 jobs/household
-  **Emerging Employment Center**
5 jobs and 3 du/acre
1.6 jobs/household
-  **MetroRail or Transitway Station Area**
10 jobs and 5 du/acre
2 jobs/household
-  **Commuter Rail Station Area**
3 jobs and 2 du/acre
1.5 jobs/household
-  **Locally Requested Center or Area of No Change**
Goals vary according to specific local staff input.



Land Use Shifts – Summary



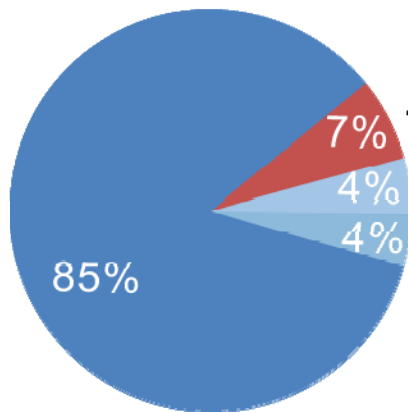
CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

How much did we shift?



7%
of the 2030 jobs
and households
was shifted

15% of 2030 jobs & households is 2015-2030 growth
4% of forecast growth already in “Targeted Growth Areas”
4% of “movable” growth not shifted

Also added growth from outside the region

3.5%
increase in
households

and

1%
increase in
jobs

Network of Variably Priced Lanes

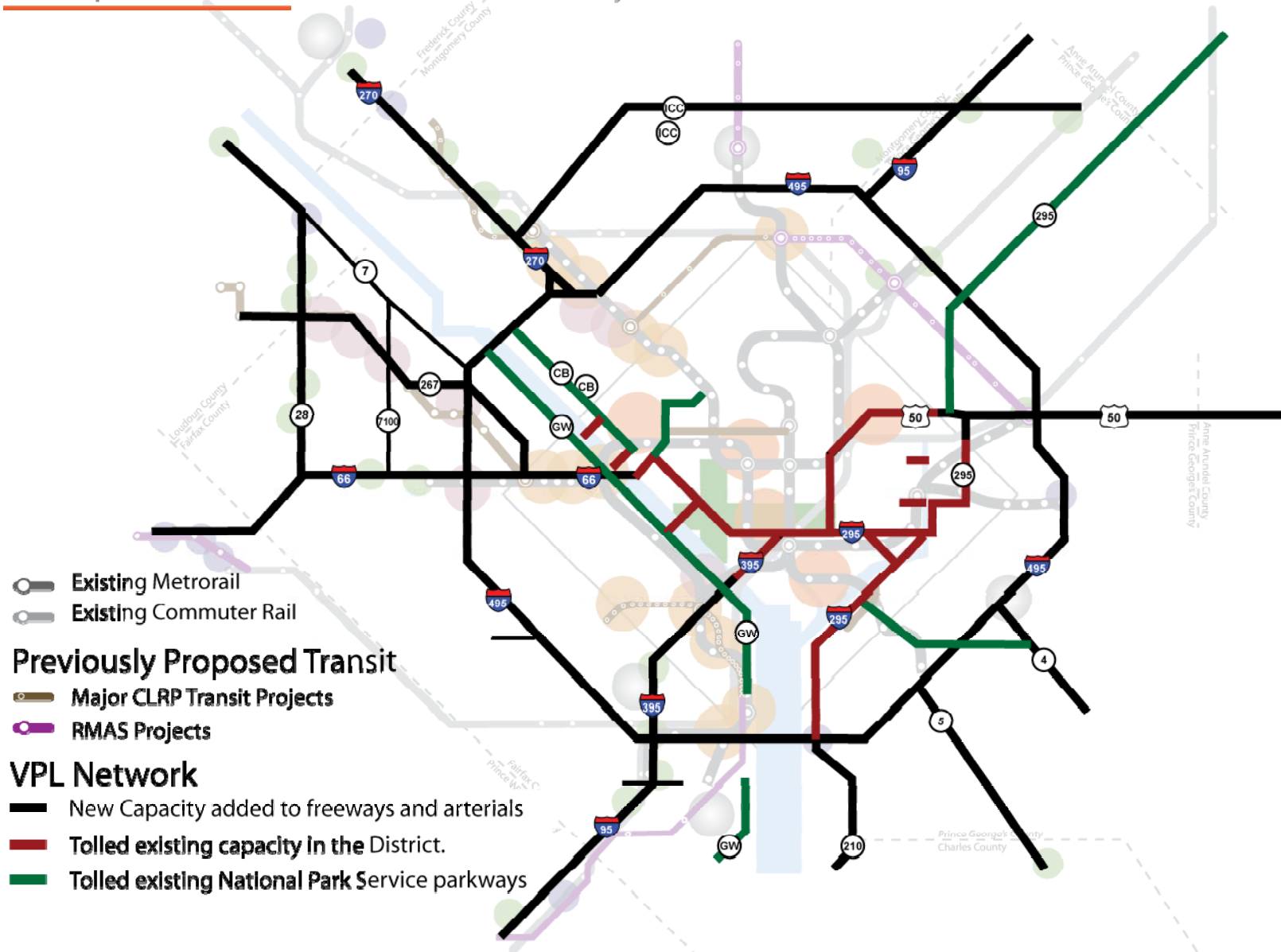


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



Regional Bus Rapid Transit Network

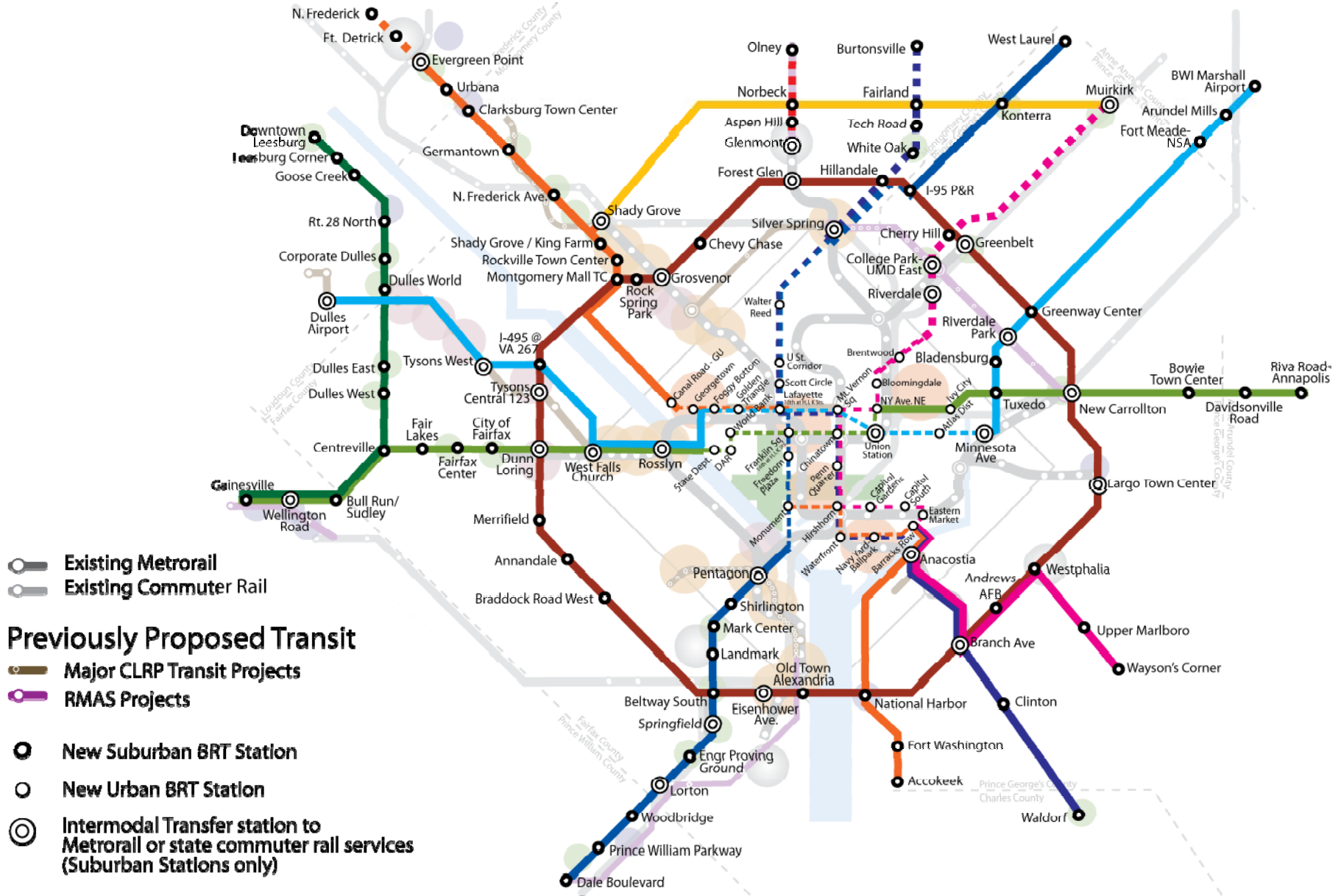


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



Full CLRP Aspirations Scenario



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Presented to the TPB in September 2010
- Significantly reduced regional congestion, and increased transit, non-motorized, and HOV trips over baseline (2008 CLRP + Round 7.2 Land Use)
- Increased regional VMT and average trip lengths
- Revenues cover about 80% of the costs
- Concerns about high cost for construction of extensive VPL network

Land Use Only Sensitivity Test



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Presented to the TPB in September 2010
- Tested CLRP Aspirations land use shifts with adopted CLRP highway and transit projects
- Decreases in VMT, VMT per capita, and average trip length relative to baseline
- Small increases in regional vehicle hours of delay and vehicle hours of travel

New: Streamlined VPL Network Sensitivity Test



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Used CLRP Aspirations land use and transit
- Referred to studies such as the I-270 Multi-modal Corridor Study, the West Side Mobility Study, and the Capital Beltway Study
- Used volume-to-capacity ratio from full scenario model results
- Reduced new lane construction by 30%
- Reduced interchange construction by 33%

Regional Travel Indicators

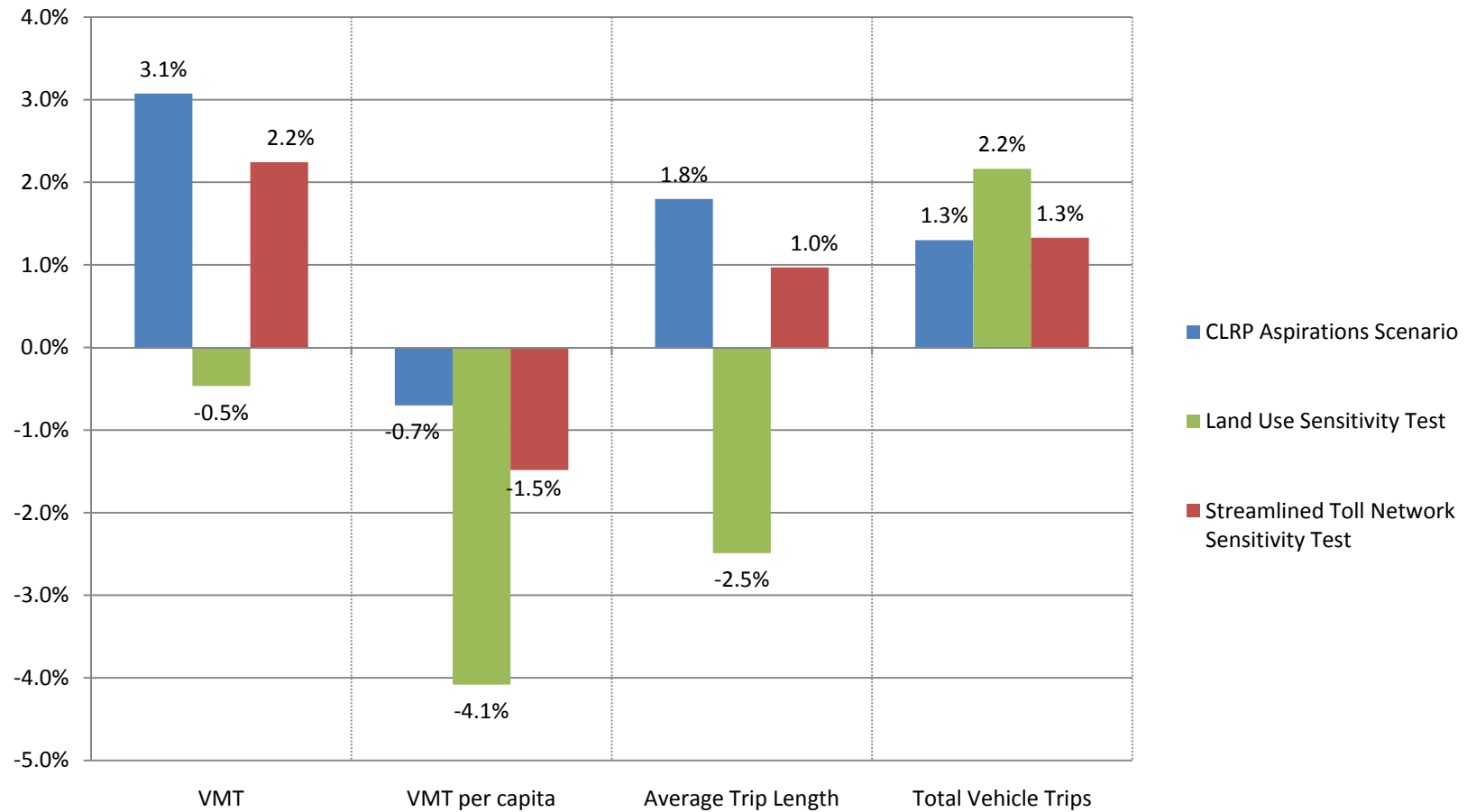


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



Regional Mode Share

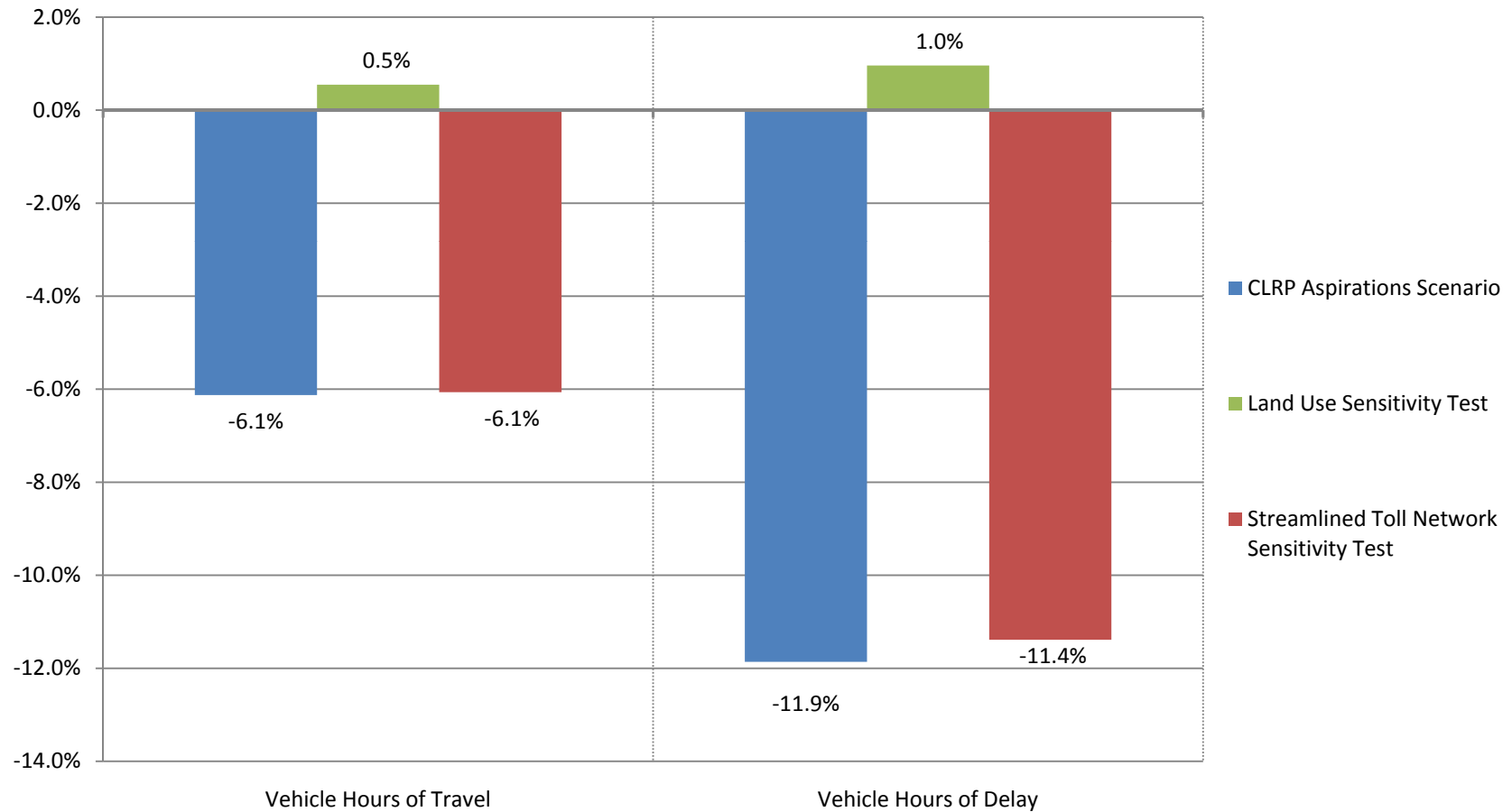


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



Regional Congestion Indicators

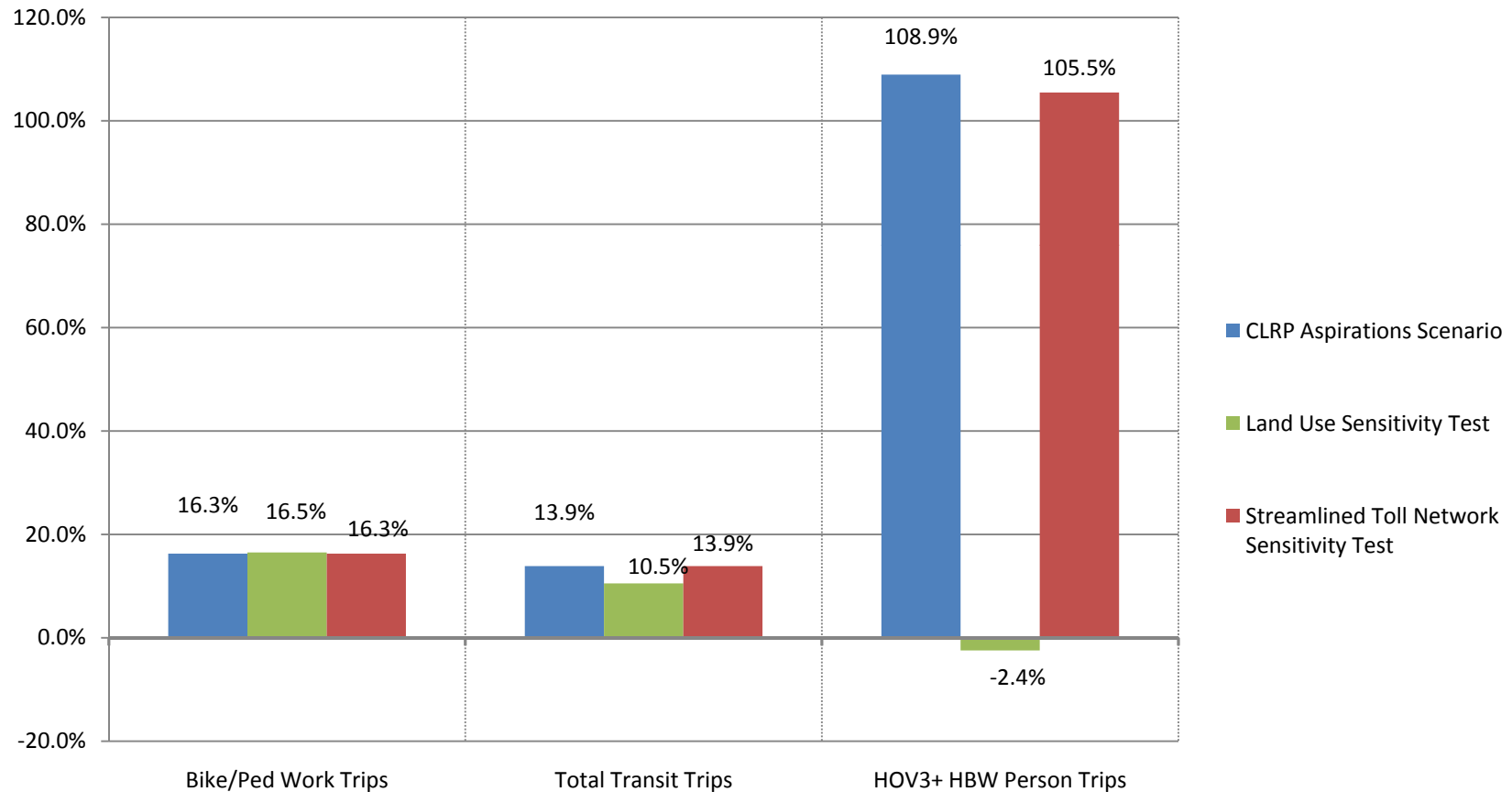


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



Air Quality

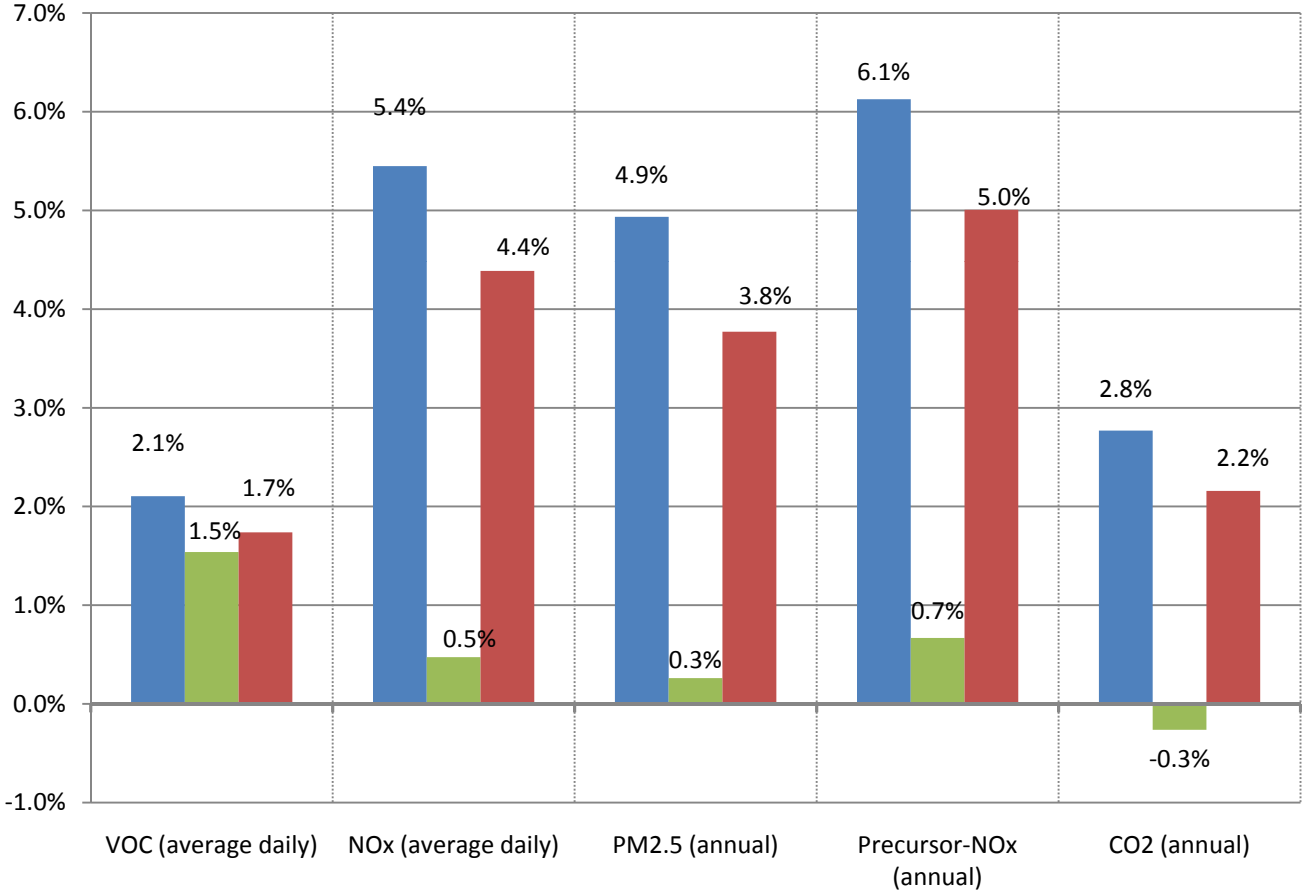


CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps



- CLRP Aspirations Scenario
- Land Use Sensitivity Test
- Streamlined Toll Network Sensitivity Test

Financial Analysis



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

Year 2030 Revenue to Cost Analysis of Full and Streamlined Scenarios (2010\$)

Scenario	Annualized Cost (millions)	Annual Revenue (millions)	Revenue/Cost
Full Scenario	\$ 3,799	\$ 3,082	0.81
Streamlined Scenario	\$ 2,688	\$ 2,997	1.11

Streamlined VPL Network Sensitivity Test



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Significant reductions in regional vehicle hours of delay and vehicle hours of travel similar to the full CLRP Aspirations Scenario
- Financially feasible in that toll revenues cover highway and transit costs, both capital and operating

Next Steps



CLRP Aspirations Scenario

Sensitivity Tests

Results

Next Steps

- Requesting feedback on the technical memorandum from the TPB Technical Committee
- Address comments and present to TPB Technical Committee in October
- Present results of Streamlined VPL Sensitivity Test to the TPB in October or November