LESSONS LEARNED FROM PAST SCENARIO EXERCISES

Lori Zeller
Transportation Planner

TPB Long-Range Plan Task Force
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Agenda Item #2

National Capital Region
Transportation Planning Board

Background

Charge #3 from the March 29 TPB resolution:

> *Charges the Task Force and staff to consider lessons learned from the various alternative scenario exercises conducted by TPB and WMATA staff such as "What Would It Take," "Aspirations," and "Connect Greater Washington."*

Why study past scenario analyses?

- Can spark ideas for projects, policies and programs
- Can give a sense of the approximate outcomes as a result of different combinations of transportation investments and land use policies
- Caveats: each scenario was tested using different models and cooperative forecasts so they cannot be compared apples to apples

Testing projects, policies and programs

- Most TPB scenario analysis has tested combinations of land use and transportation inputs
- Some projects, policies and programs alone have also been examined
- This presentation will provide examples from different methods of approach

Testing projects alone

Phase I Report of LRPTF

All-Build Scenario included 500+ projects on top of CLRP, including many "game-changers" like downtown cordon pricing, tolled and managed lanes throughout the region, Metro 2025, Metro DC Core Loop, and BRT, all at a cost of $70-100 billion

Figure 10: Work Trips - Mode Share

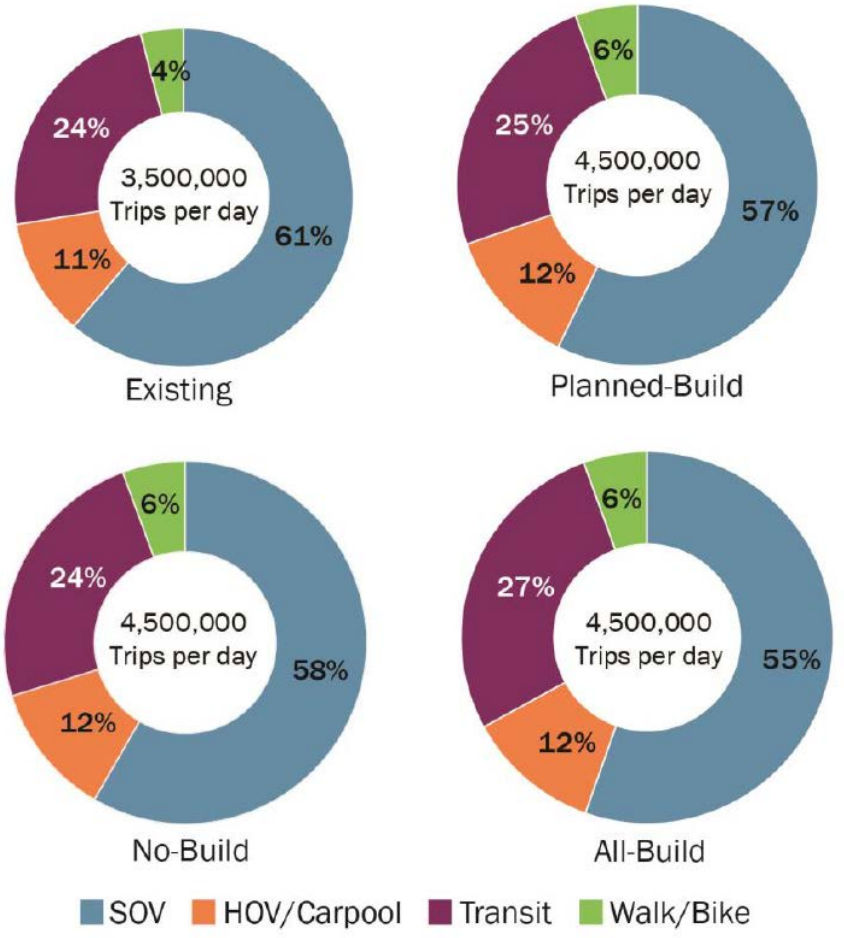
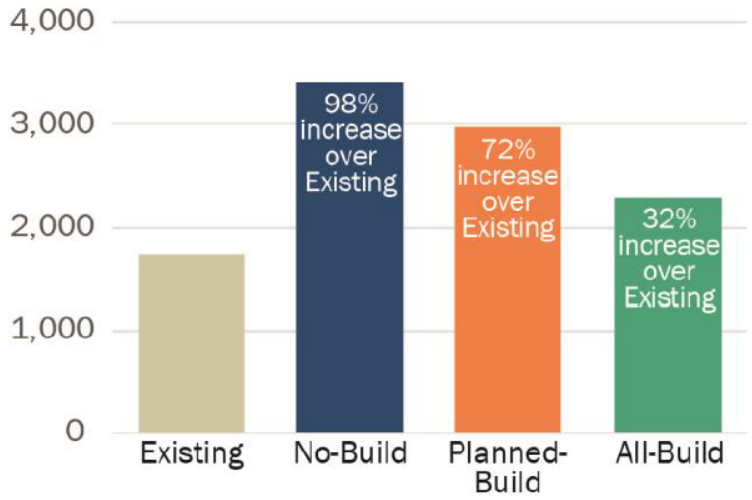


Figure 14: Lane Miles of Congestion (A.M. Peak Hour)



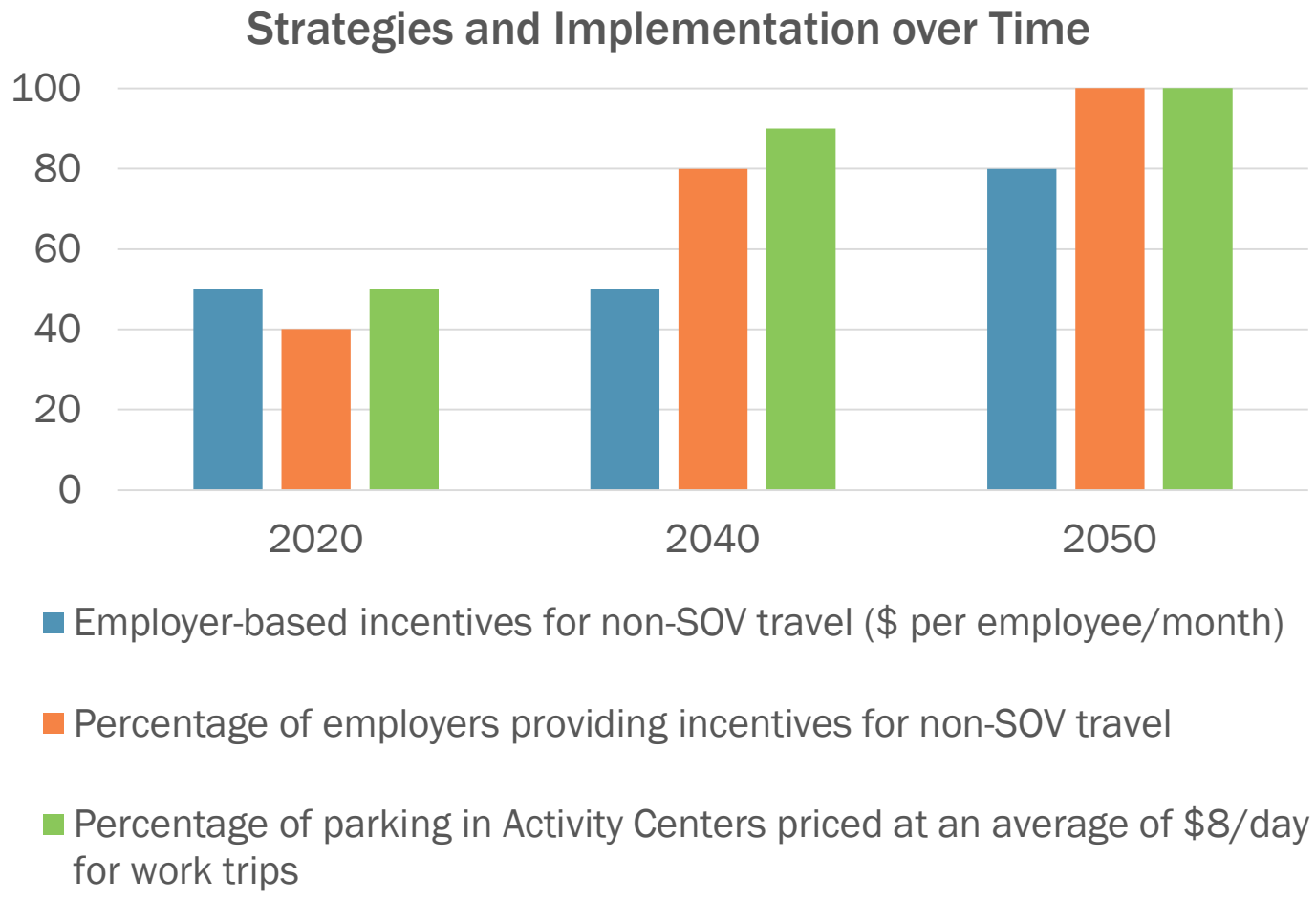
Testing programs alone

- Example from COG/TPB's Multi-Sector Working Group, Final Technical Report: Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region (2016)
- The study examined all sectors of the economy to identify local, regional and state actions to significantly reduce greenhouse gas emissions in accordance with COG's voluntarily adopted goals.
- This example will demonstrate the impact of testing a program
- For this example, see TLU-9: Travel Demand Management

Strategy TLU-9:
Travel Demand Management

- Reduce availability of free parking in Activity Centers by imposing parking impact fees and parking caps, price parking, and encourage park-and-ride usage
- Incentives to encourage carpooling and ridesharing, non-motorized modes of commuting, and telecommuting
- Ordinances that require employers to offer parking cash out and transit benefits

Strategy TLU-9:
Travel Demand Management



Results

(Compared to "2015 Projections from Current Policies")

Table 74. Greenhouse Gas Reductions for TLU-9: Travel Demand Management

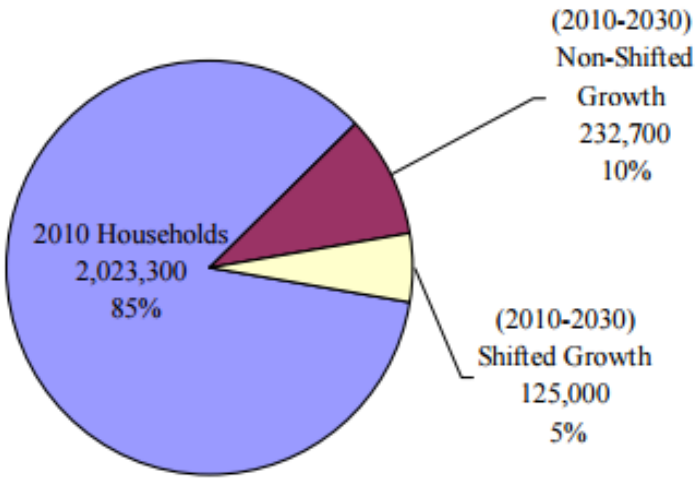
Summary Metric	2020	2040	2050
Vehicle Miles Traveled, passenger vehicles (percent change)	-0.9%	-2.4%	-5.3%
VMT reduced (millions, annually)	329	986	2,173
Transit ridership (percent change)	+2.3%	+7.0%	+38.5%
GHG Reductions ($MMTCO_2e$) – strategy alone	0.13	0.24	0.54

Testing a combination of projects and land use changes

- Example from TPB's Regional Mobility and Accessibility Study (RMAS) (2006)
- All five scenarios use different means to achieve the same objectives of bringing people and jobs closer together, and improving the transportation connections between them
- This is an example that demonstrates the effect of testing land use policies and transportation projects planned in conjunction with each other for mutual support
- For this example, see the Transit-Oriented Development scenario (the last one in RMAS)

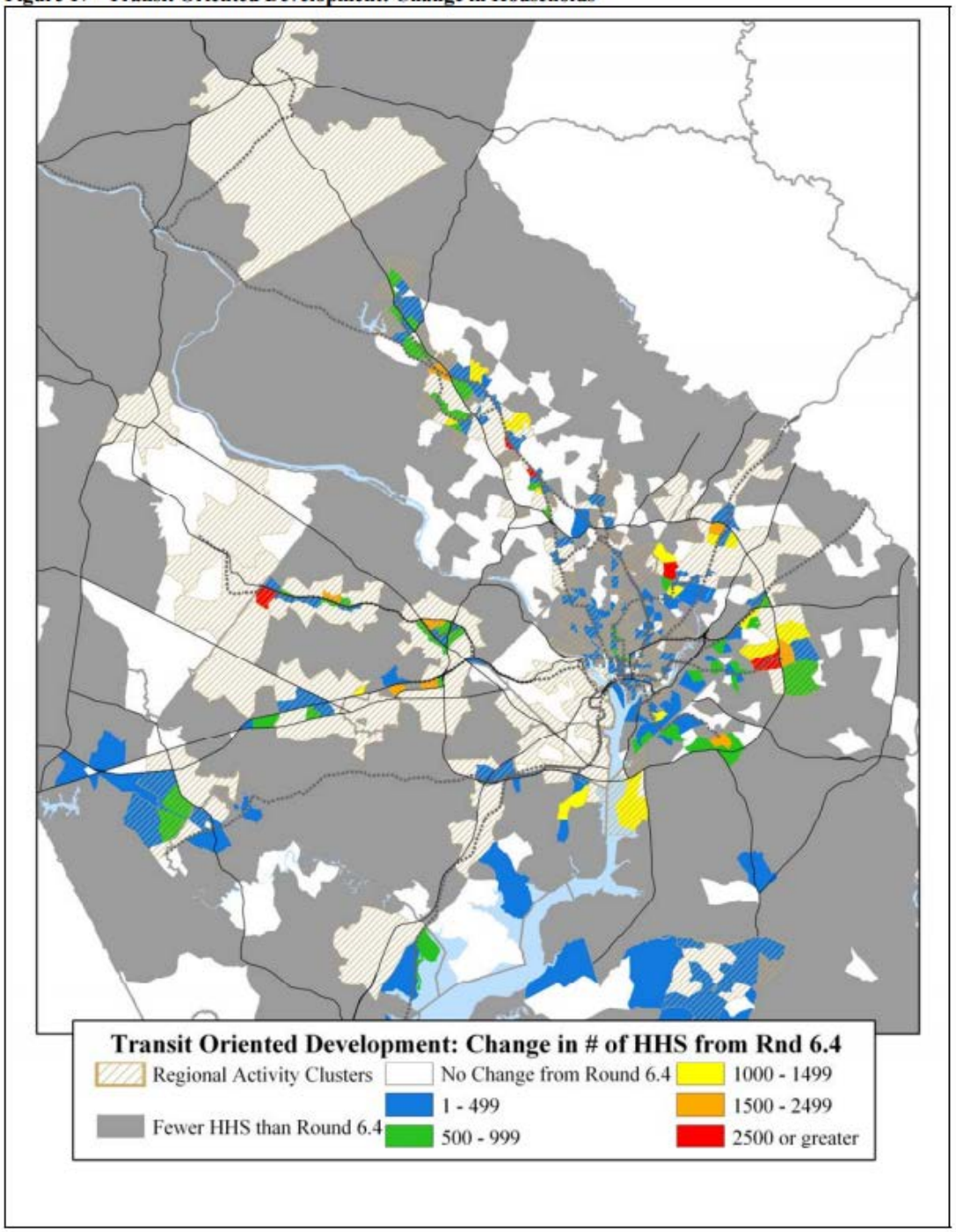
Shifts in Households

2030 Household Growth:
Transit Oriented Development Scenario



Growth was shifted from non-transit areas outside of RACs into areas within ½ mile of current or planned rail stations or transit centers

Figure 17 - Transit Oriented Development: Change in Households



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Shifts in Jobs

2030 Employment Growth:
Transit Oriented Development Scenario

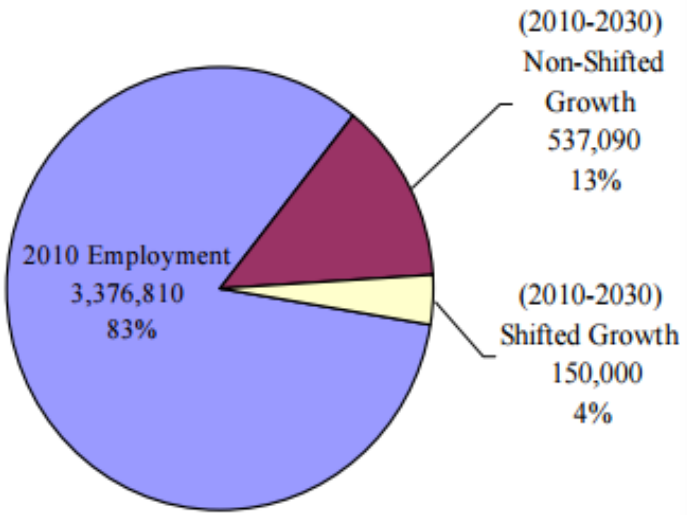

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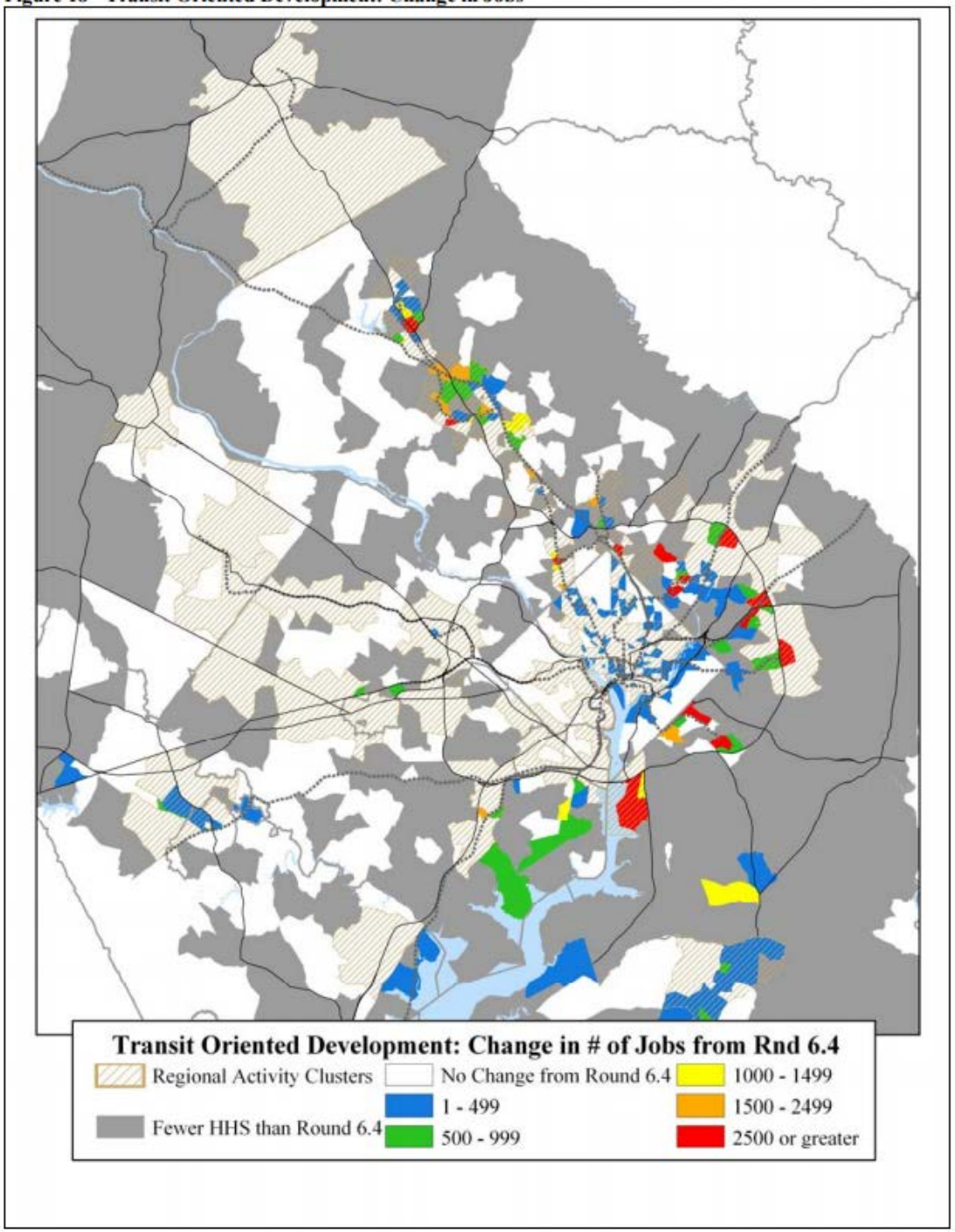
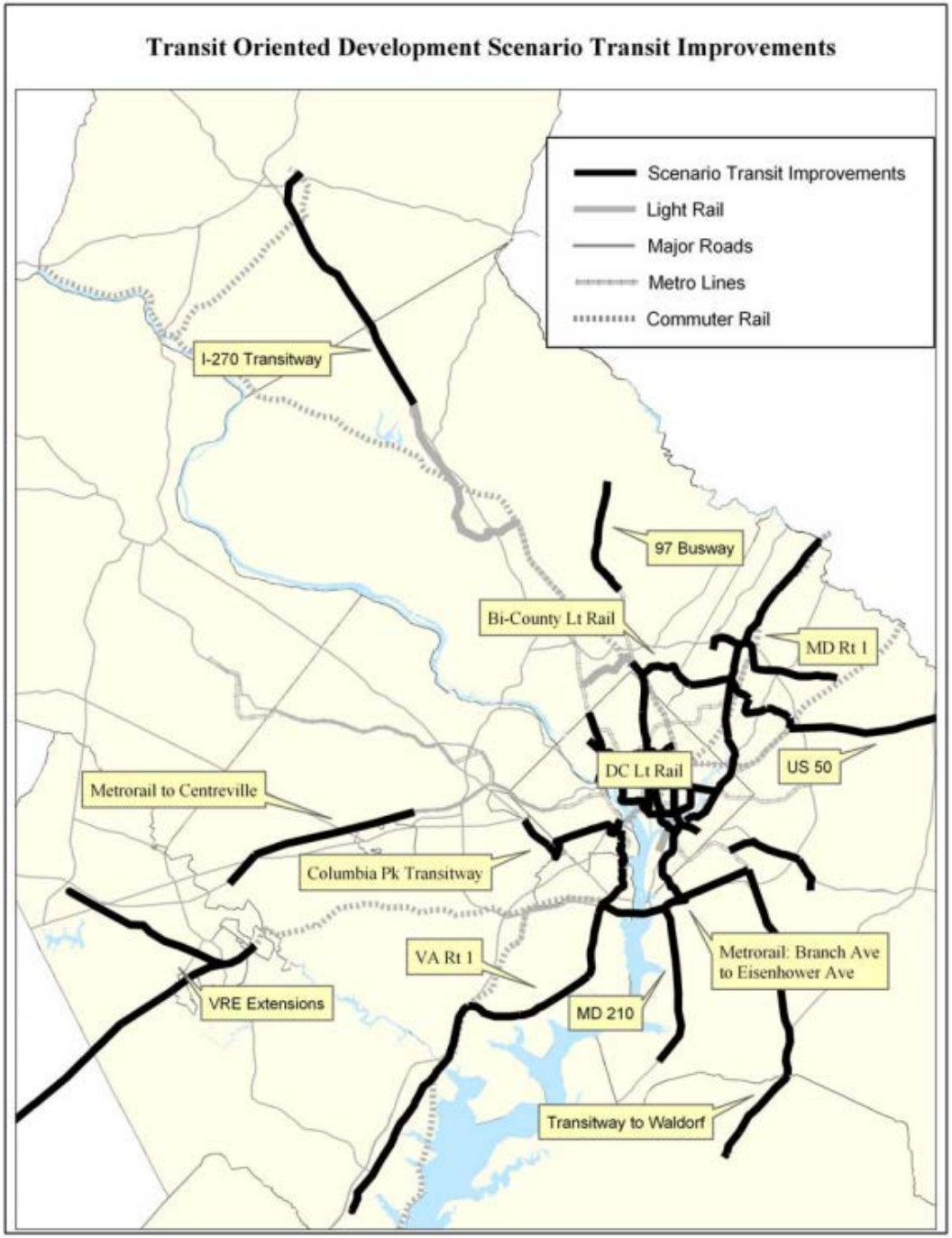
Figure 18 - Transit Oriented Development: Change in Jobs



Transit Improvements

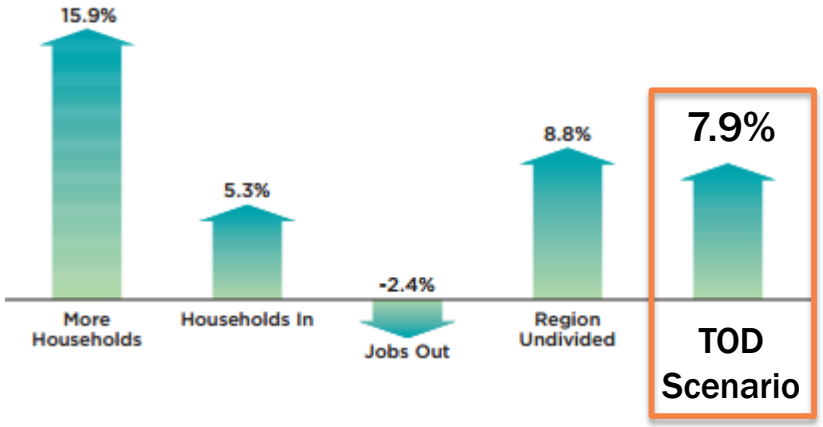
- VRE to Haymarket and Spotsylvania
- Metrorail to Centreville and connection from Branch Ave to Eisenhower Ave
- Lightrail, BRT and transitways throughout DC
- Transitways on Columbia Pike, VA Route 1, MD Route 1, US-50, MD-9

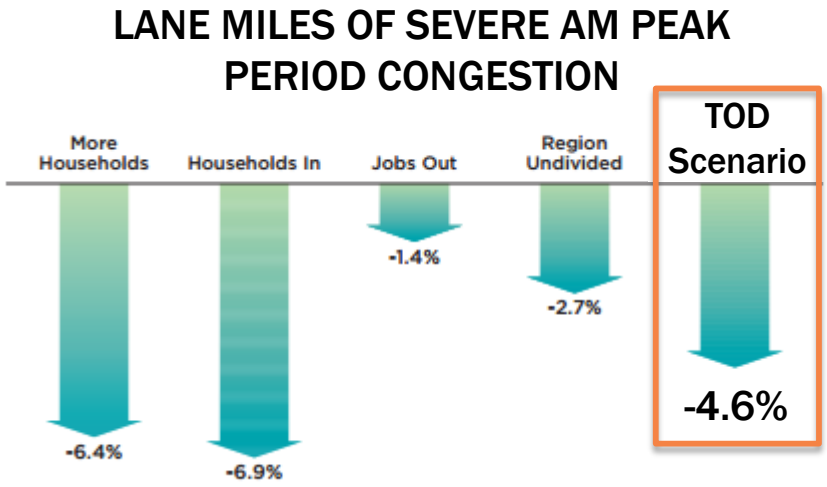
Figure 19 - Transit Oriented Development: Transit Improvements

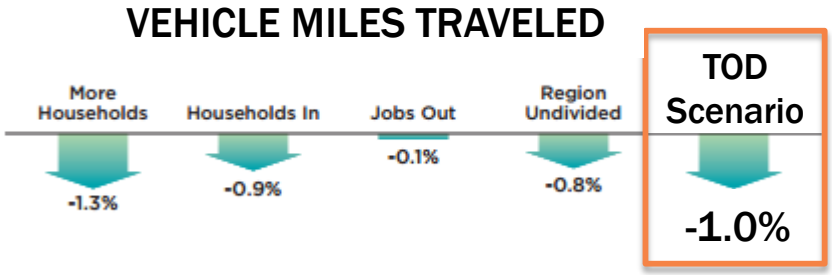


Results

(Compared to baseline forecasts for 2030)







Lori Zeller

Transportation Planner
(202) 962-3290
Lzeller@mwcog.org

mwcog.org/tpb

Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, DC 20002