Presentation to
Metropolitan Washington Council of Governments
September 20, 2013

COUNTYWIDE TRANSIT CORRIDORS FUNCTIONAL MASTER PLAN

History

- 2008 - Councilmember Marc Elrich recommends a 120-mile BRT network
- August 2011- MCDOT includes a 150-mile network in their feasibility study report
- September 2011 – MNCPPC starts BRT master plan
- May 2012 – Transit task force recommends a 162-mile network

Countywide Transit Corridor Network

Purpose

- Provide an efficient transportation system that will facilitate Bus Rapid Transit (BRT) service that will:
  - enhance mobility and accessibility, and
  - support economic development

Focus

- Determine where rights-of-way should be reserved for transit corridors
  - BRT-only facilities
  - Dedicated bus lanes shared by BRT and local buses

Transportation Modeling

Consultant: Parsons Brinckerhoff using:

- 2040 forecast year
- MWAAII (Metro Wash Alternatives Analysis, same as Purple Line and CCT)
- Land Use Round 8.1
- 2191 traffic zone structure
- Speeds reflecting proposed operating conditions

4 Transportation Modeling Runs

No-Build: ex. transportation network + CLRP

Build 1: 152-mile network of median busways

Build 2: 152-mile network with some dedicated curb lanes achieved via lane-repurposing

Build 2A: 87-mile network with a mix of treatments

Treatment	Build 1	Build 2	Build 2A
Two Way Median	152	140	29
Curb Lanes		12	41
Mixed Traffic			17
Total (miles)	152	152	87

Network and Treatment Considerations

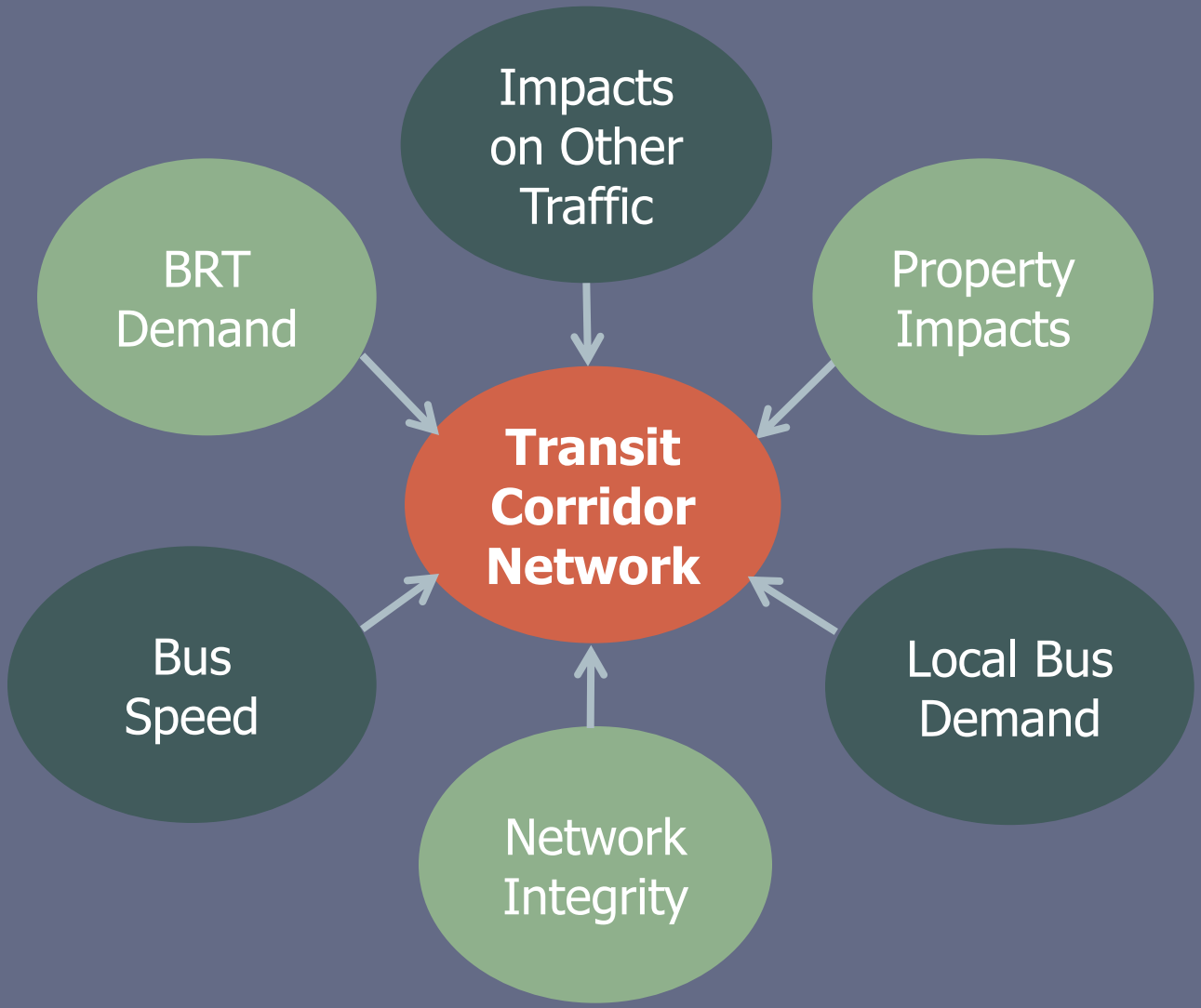
- activity center corridor
- express corridor
- commuter corridor

- >1,600* = median busway
- >1,000* = curb lanes
- <1,000* = mixed traffic

- two-lane median (or side) busway
- one-lane median busway
- curb (or managed) lanes
- mixed traffic

*passengers in the peak hour in the peak direction

Network & Treatment Considerations



Determining Final Corridor Treatment

- Initial modeling included:
  - all median busways treated the same as Light Rail Transit (LRT) to determine maximum ridership
- Treatment thresholds were lowered from the values in the TCQSM to account for:
  - high-level of analysis
  - long time frame
  - model attributes that could increase ridership
- Final treatments in plan were increased on some segments to maintain network integrity
- Implementing agency has flexibility to make final decision

Recommended Transit Corridor Network

Network

- 10 corridors
- 81 miles
- a mix of treatments

Corridors

1. Georgia Avenue North
2. Georgia Avenue South
3. MD355 North
4. MD355 South
5. New Hampshire Ave
6. North Bethesda Twy
7. Randolph Road
8. University Boulevard
9. US29
10. Veirs Mill Road

CCT. Corridor Cities Twy

Lane Repurposing

- Best use of County resources
- We're not going to expand roads inside the Beltway so it's a question as to whether or not we will have BRT.
- The 2040 forecast ridership results have been compared to:
  - auto occupancy rate=1.06
  - lane capacity=800 vehicles per hour (urban) and 1,200 vph (suburban)
  - actual traffic counts where the above lane capacities are exceeded.

  If a person-throughput policy is adopted by the County, the above results would have to be rechecked.

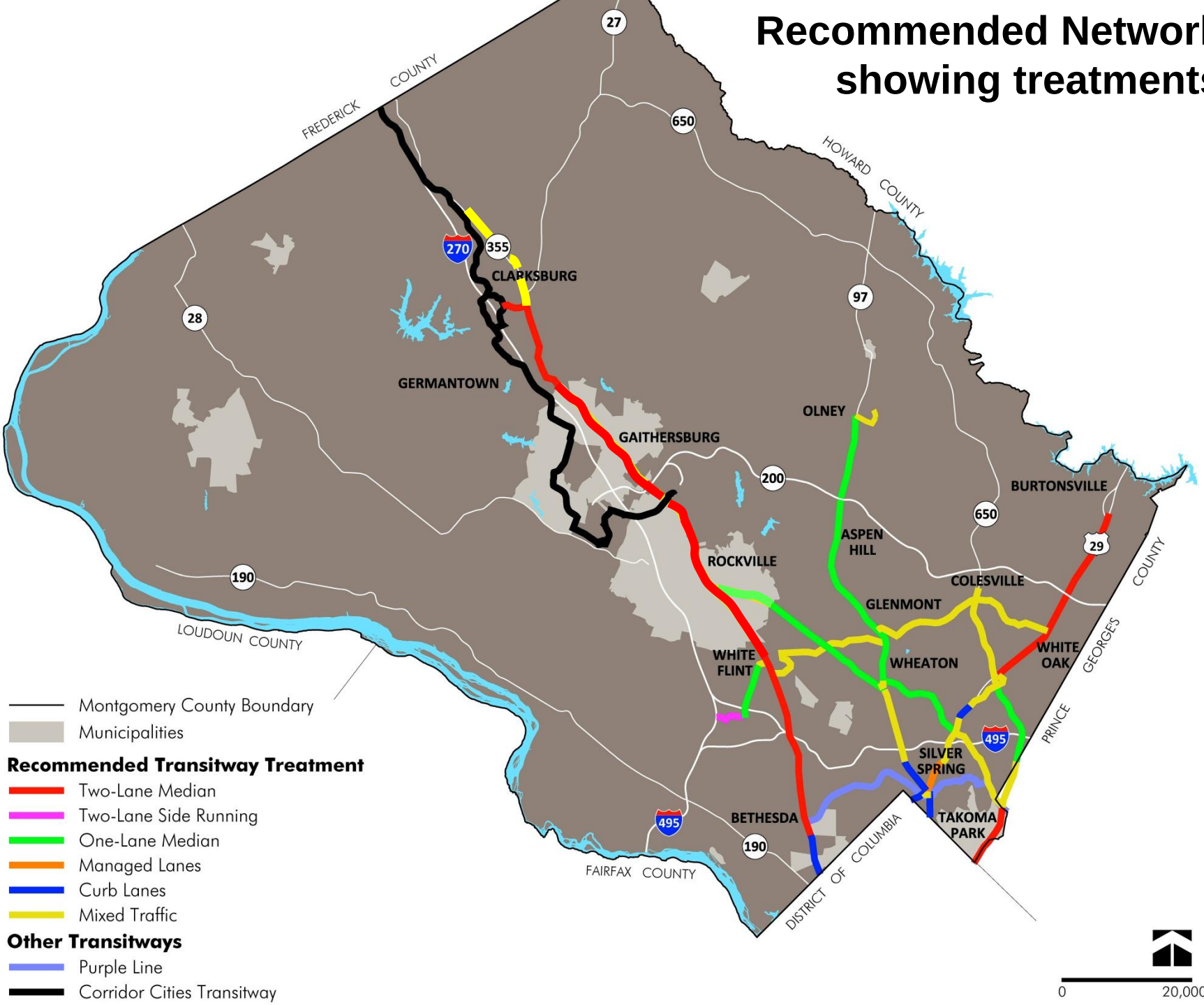
Lane Repurposing

- "Where bus rapid transit would move people most efficiently in a corridor, the dedicated space needed to accommodate transit should be provided"

Lane Repurposing

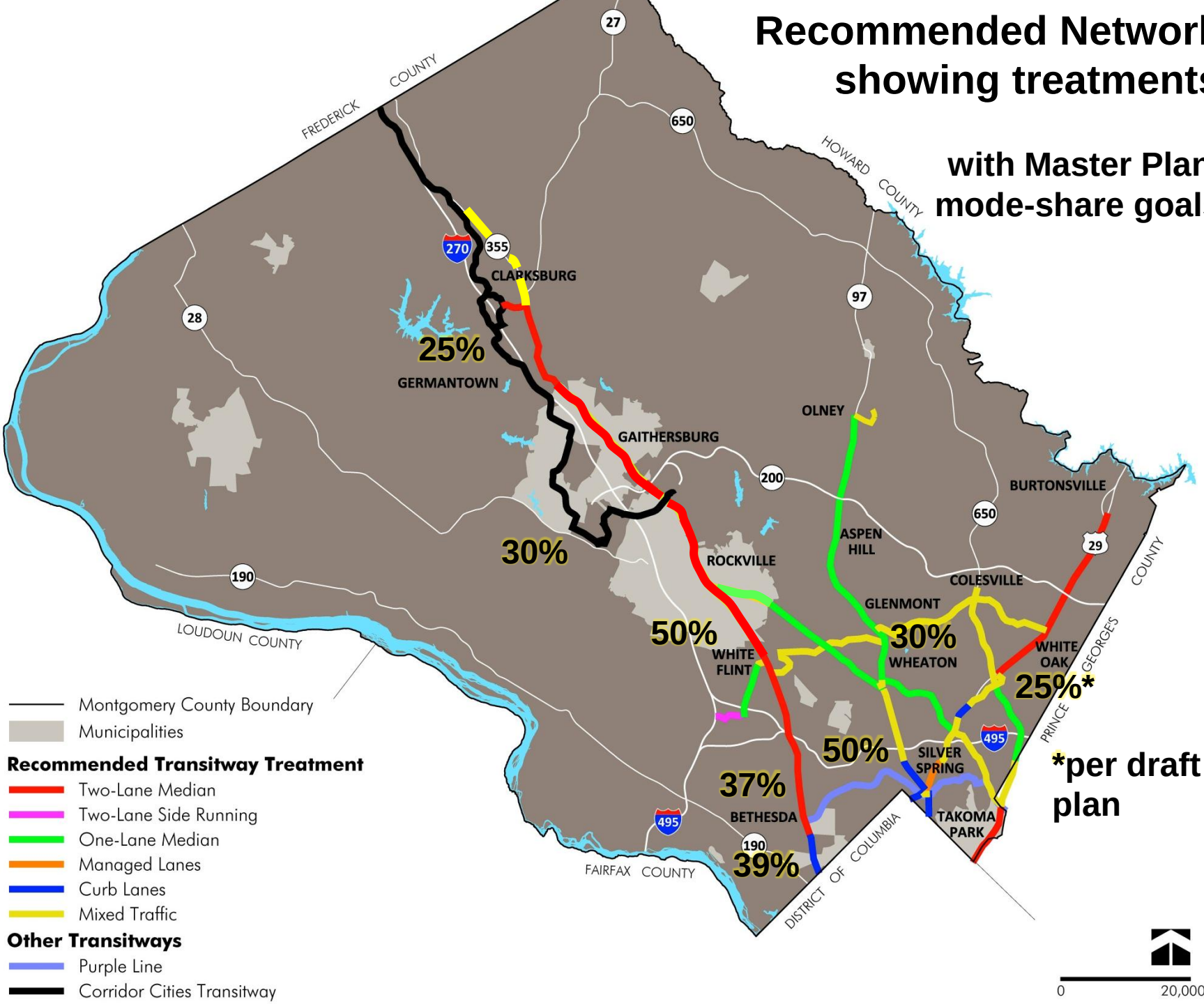
- "More detailed planning will be required during implementation to determine location-specific impacts on traffic in areas where lane-repurposing is recommended."
- "Where lane-repurposing is recommended, a thorough traffic analysis should be performed to identify what transportation improvements could be implemented to mitigate the impacts of lane repurposing, ensuring that the overall operation of the transportation network will operate acceptably."
- "Should additional travel lanes be needed, an Amendment to this Plan or to the appropriate Area master plan should be pursued."

Recommended Network showing treatments



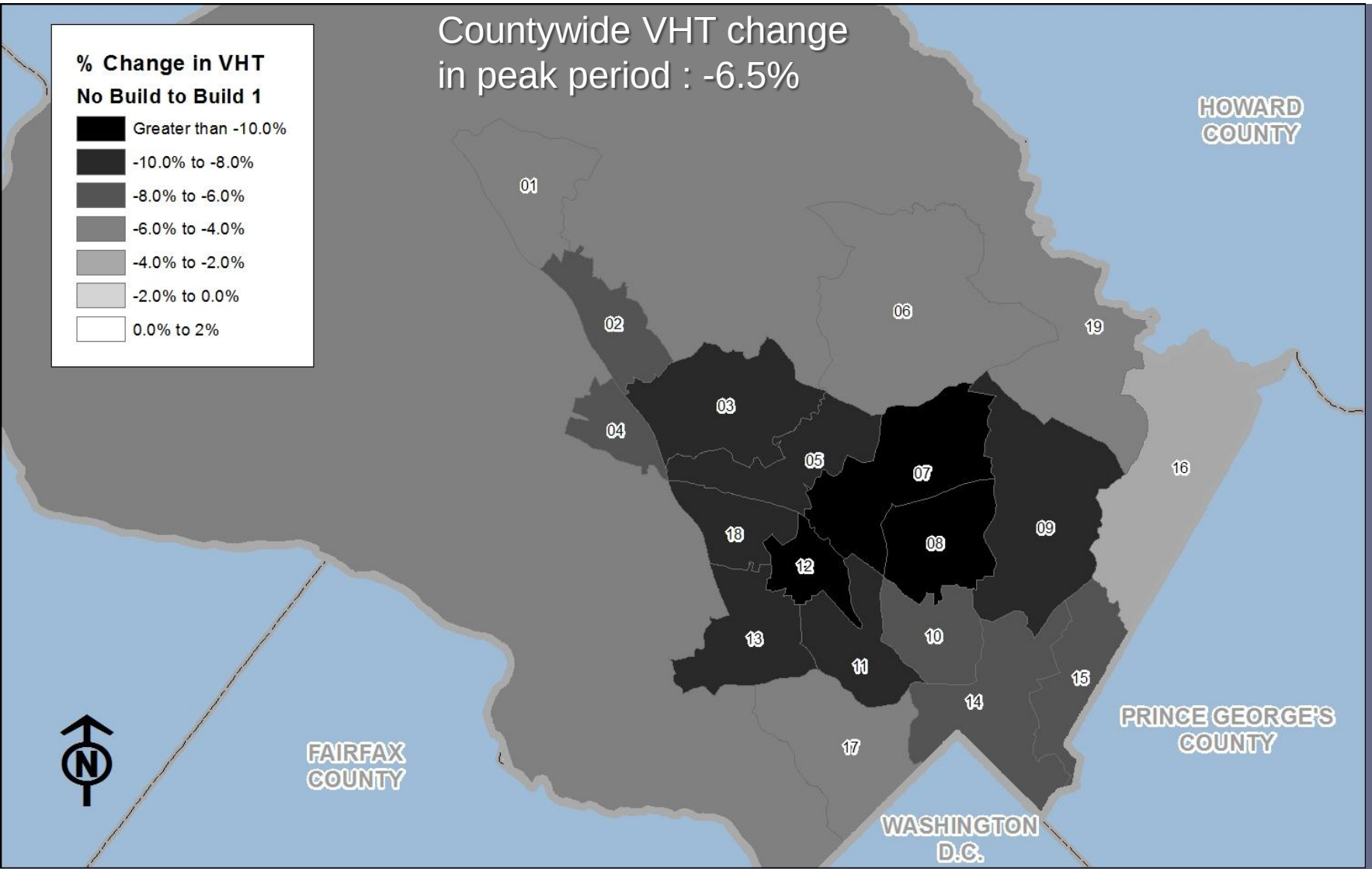
Recommended Network showing treatments

with Master Plan mode-share goals

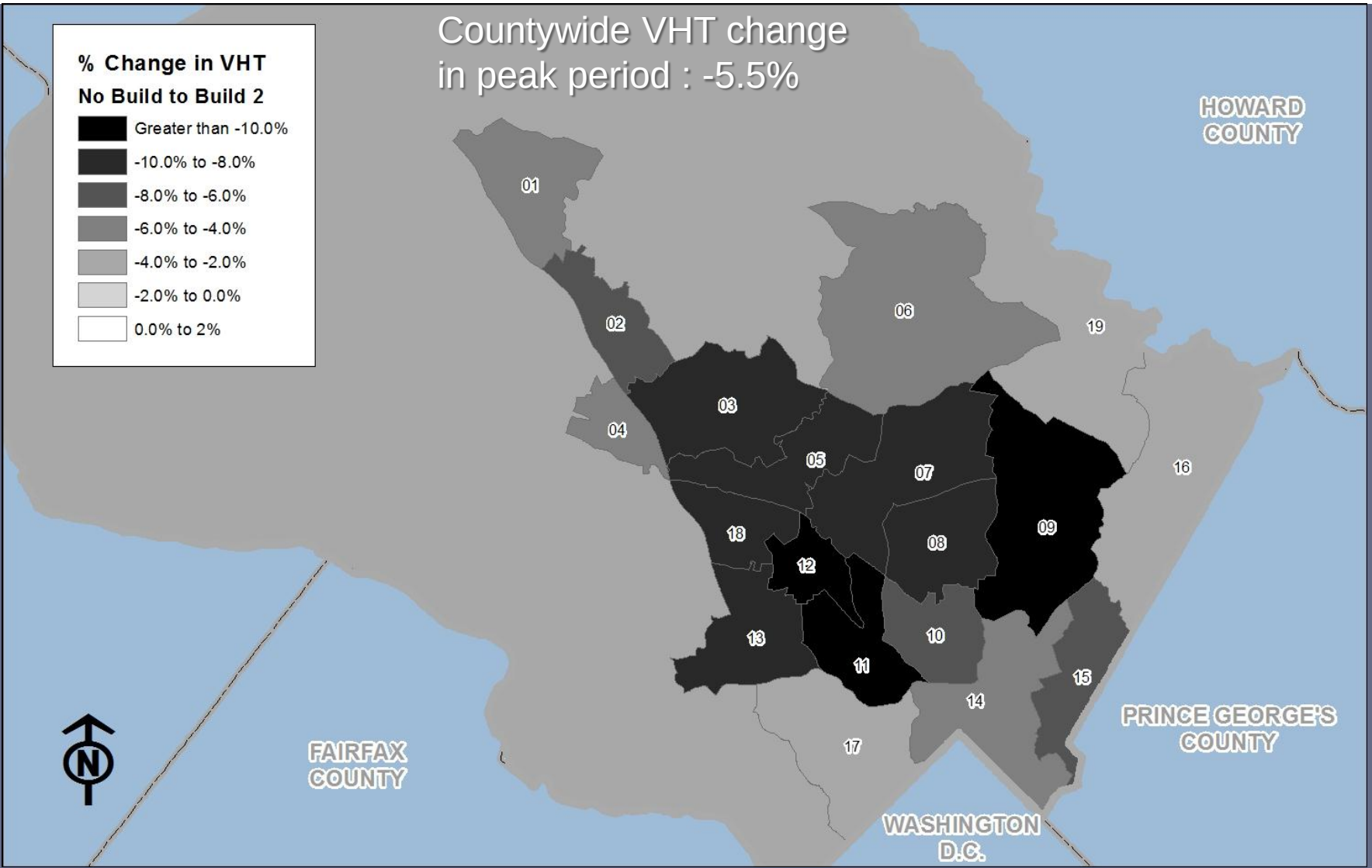


*per draft plan

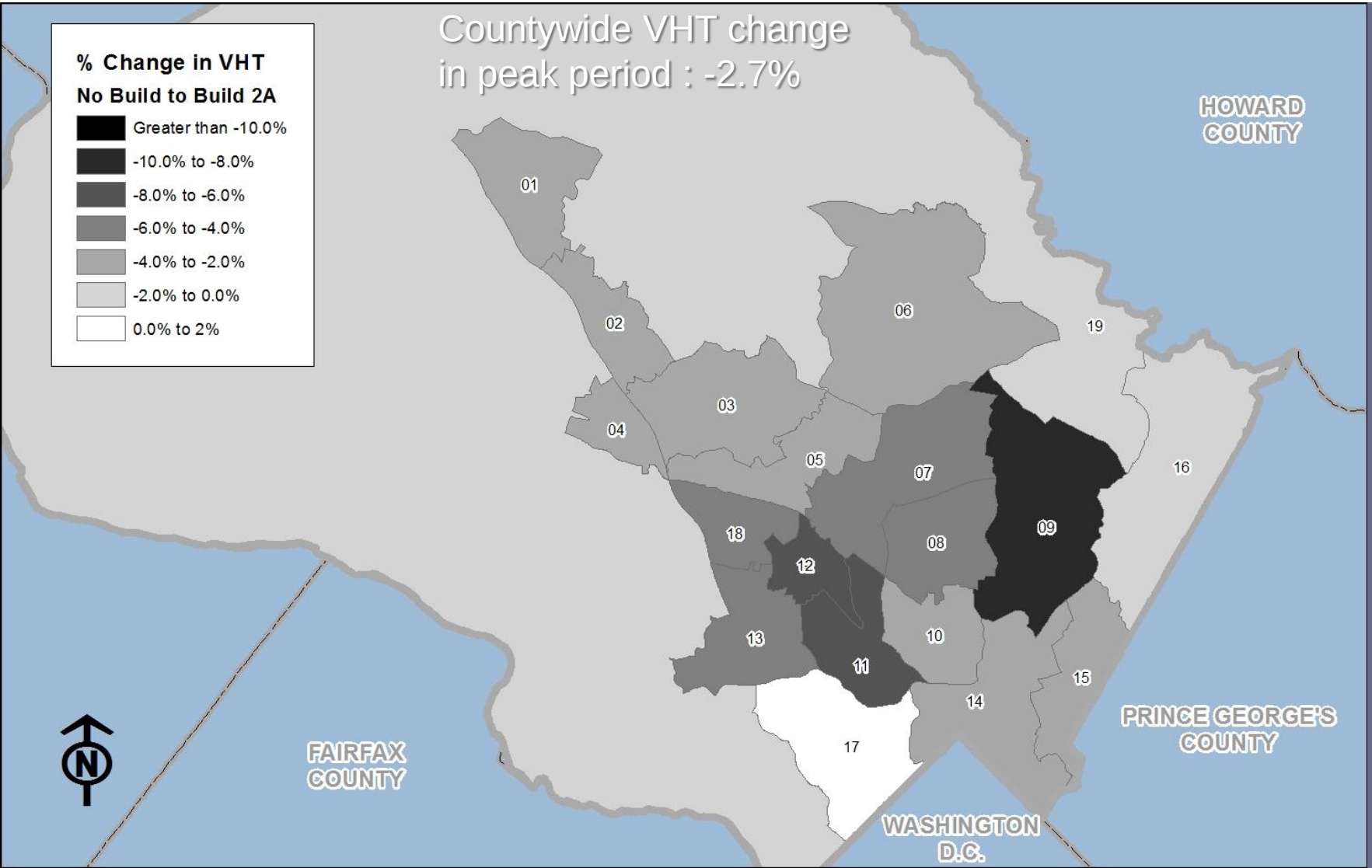
Changes in Vehicle Hours Traveled: No-Build to Build 1



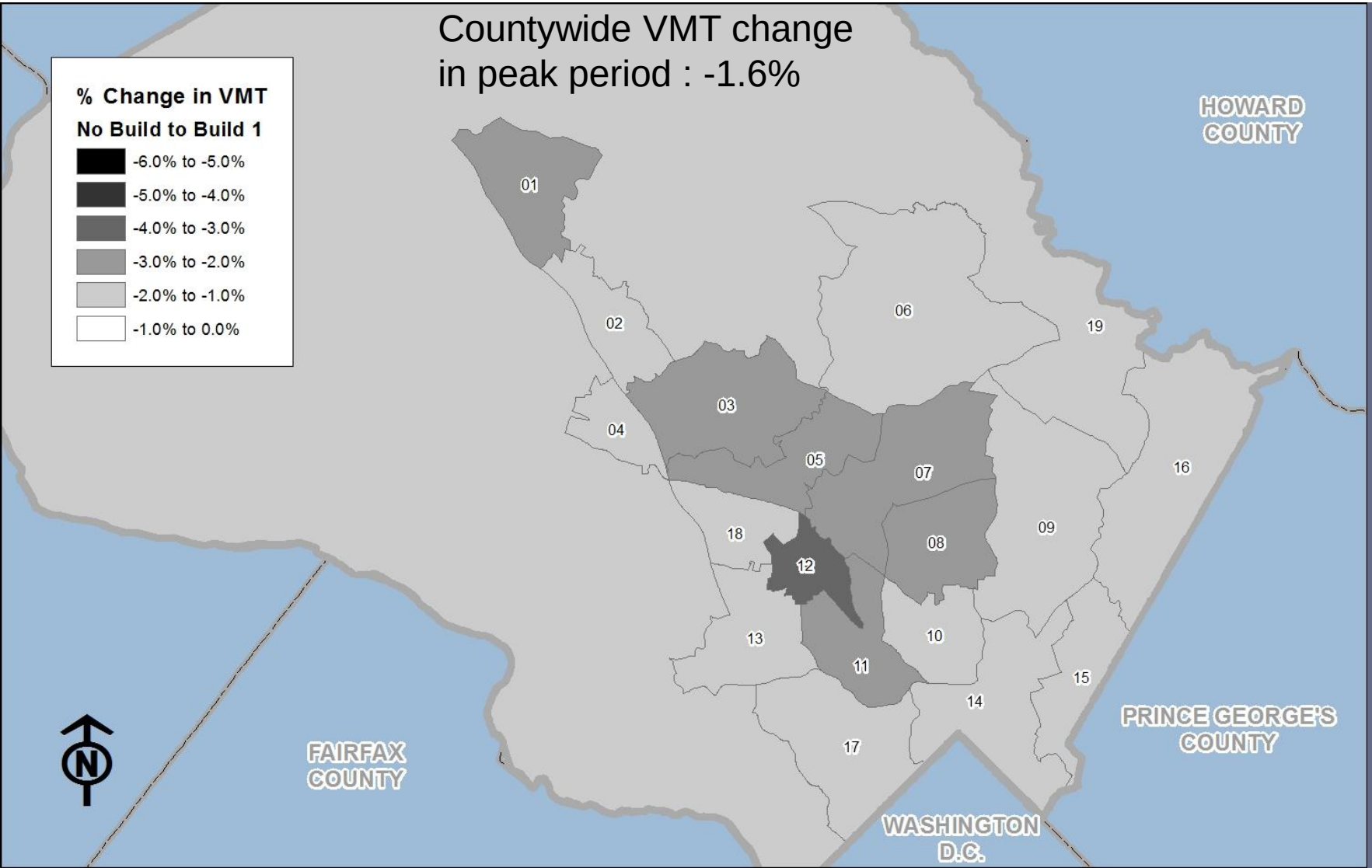
Changes in Vehicle Hours Traveled: No-Build to Build 2



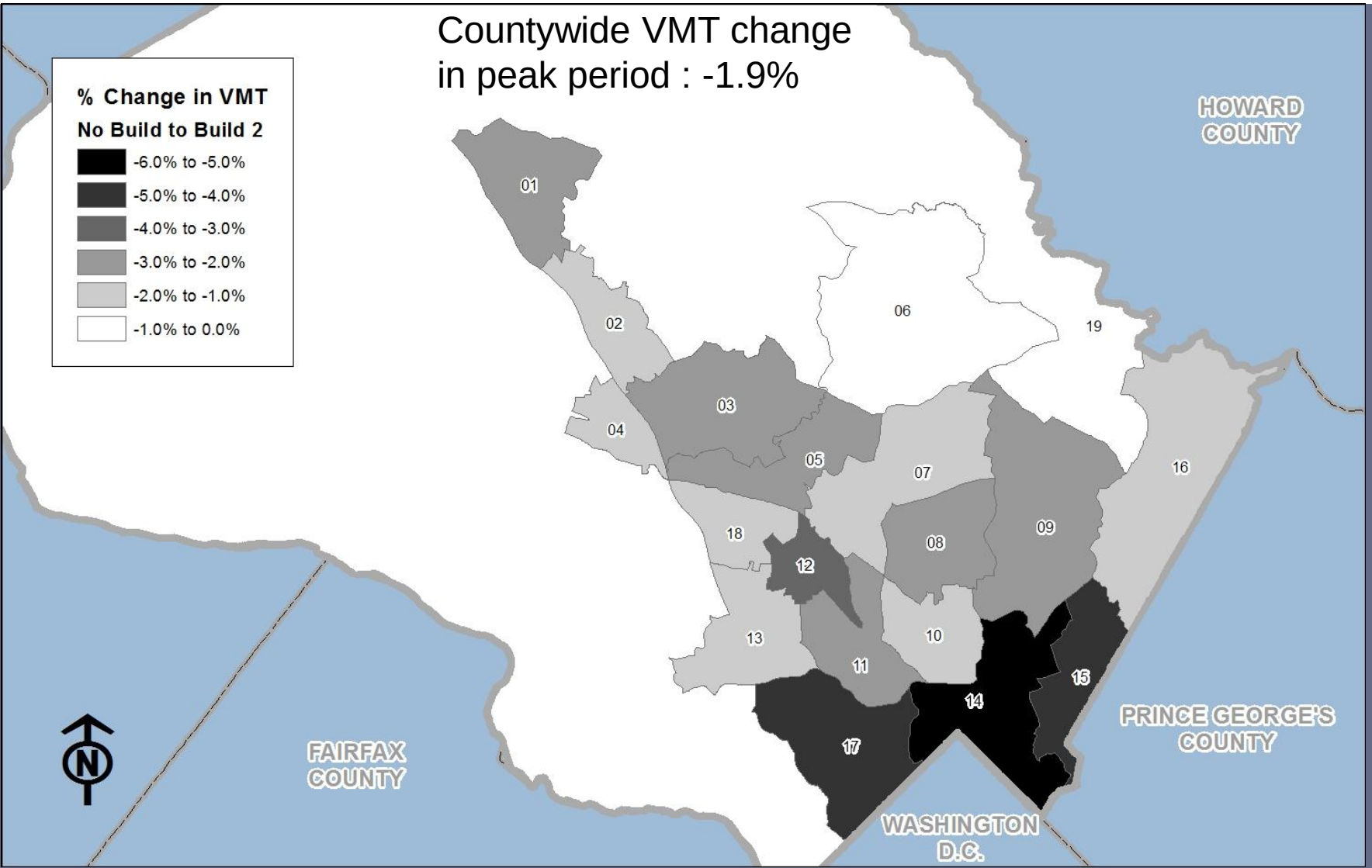
Changes in Vehicle Hours Traveled: No-Build to Build 2A



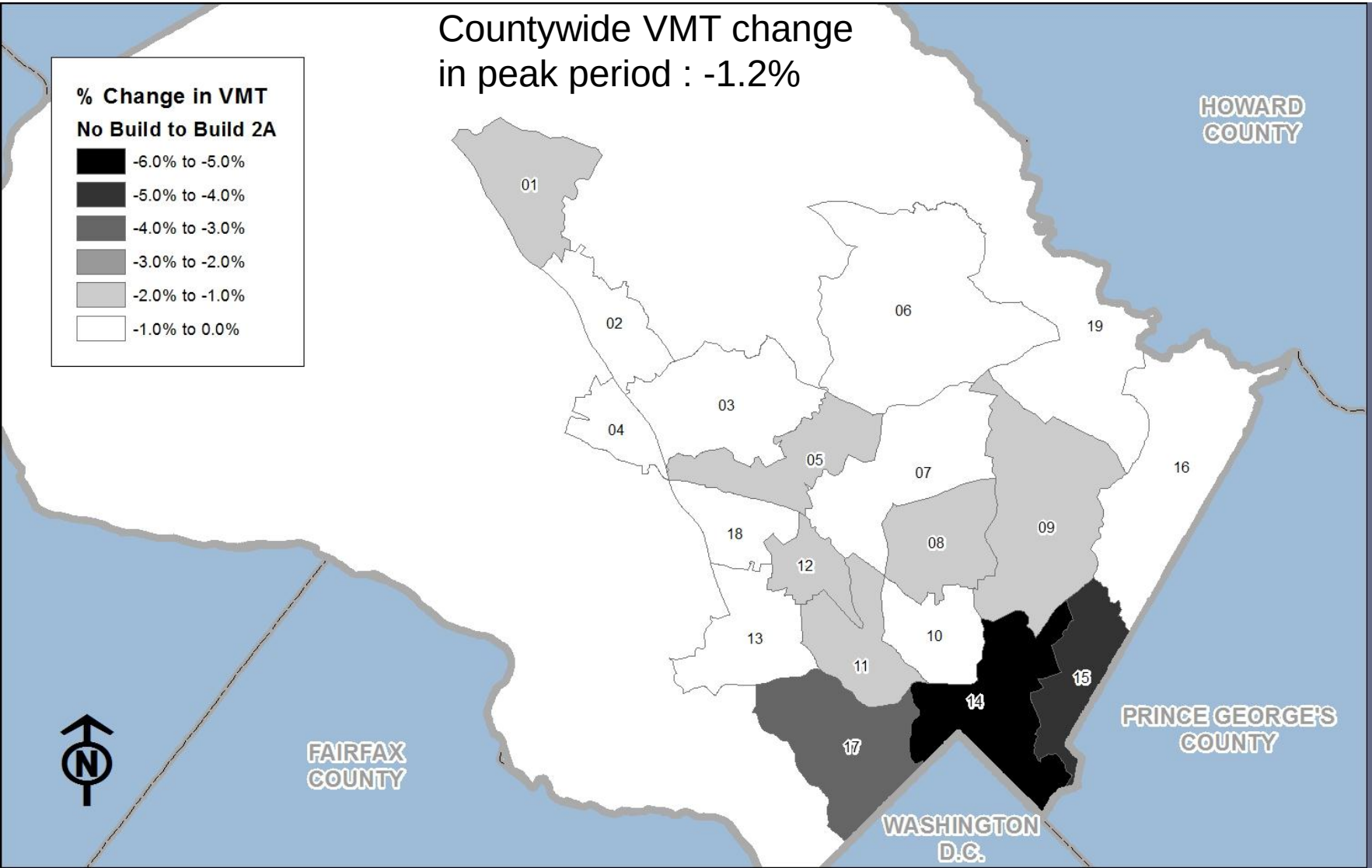
Changes in Vehicle Miles Traveled: No-Build to Build 1



Changes in Vehicle Miles Traveled: No-Build to Build 2



Changes in Vehicle Miles Traveled: No-Build to Build 2A



Daily Benefits Summary

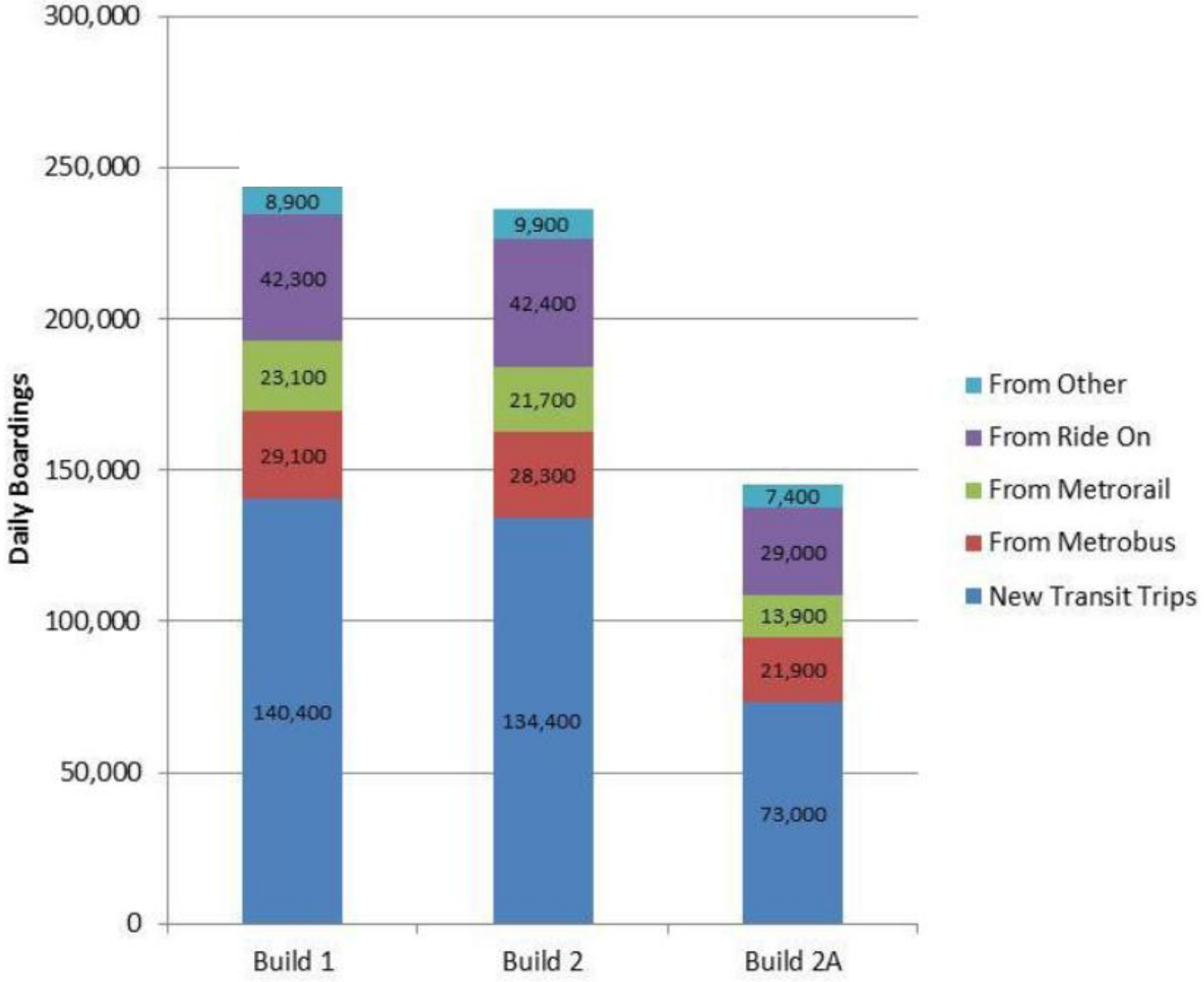
	No Build	Build 1	Build 2	Build 2A
Decrease in Vehicle Miles Traveled (VMT)		**193,800 miles**	**230,600 miles**	**143,100 miles**
Decrease in Vehicle Hours Traveled (VHT)		**69,600 hours**	**58,700 hours**	**28,600 hours**
Transit User Benefits*		**84,333 hours**	**80,789 hours**	**39,856 hours**

*Benefits to all users of the regional transportation network attributable to MC-BRT include a time conversion of other factors including costs, span of service, reliability, passenger amenities, ride quality, number of transfers, and personal safety.

2040 Forecast Daily BRT Ridership

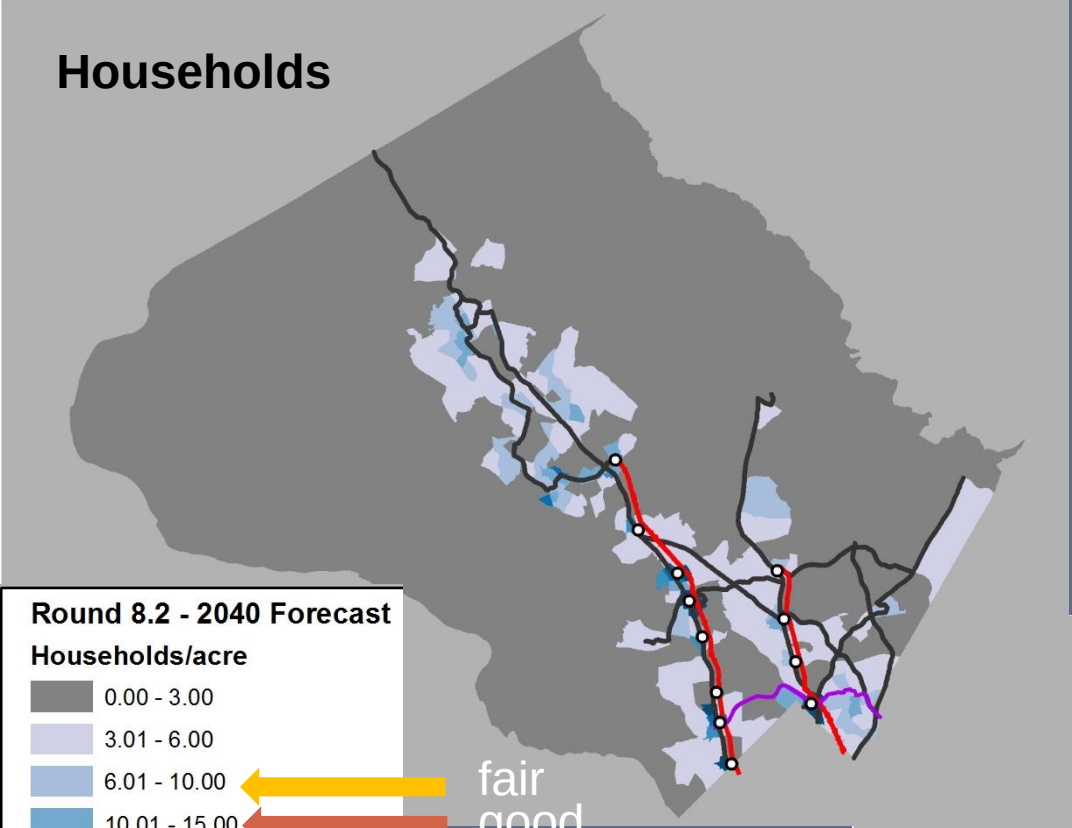
Corridor	Build 1	Build 2	Build 2A
MD 355 South	49k	46k	44k
MD 355 North	34k	32k	22k
Veirs Mill Rd & University Blvd	27k	27k	18k
Georgia Avenue (North & South)	24k	24k	12k
New Hampshire Avenue	22k	21k	10k
US 29	18k	16k	16k
Randolph Road	16k	16k	11k
Rockville-LSC	14k	14k	7k
Old Georgetown Road South	11k	11k	
Old Georgetown Road North	8k	8k	
Muddy Branch Road	8k	8k	
Connecticut Avenue	6k	7k	
ICC	6k	6k	
Norbeck Road	6k	5k	
North Bethesda Transitway	4k	4k	10k
University Blvd-Grosvenor	2k	2k	
Total	**254k**	**247k**	**150k**

Figure 2-1: Source of Unlinked BRT Trips per Weekday in Montgomery County



Households

Recommended Transit Network Compared to 2040 Forecasts

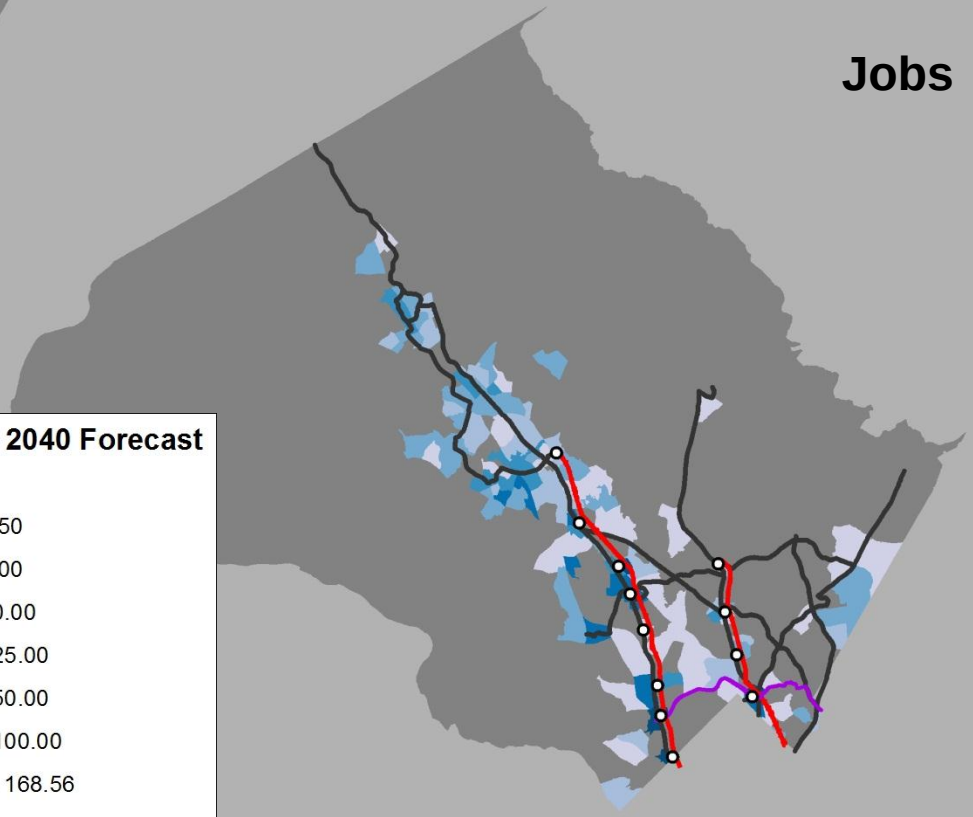


Round 8.2 - 2040 Forecast
Households/acre

- 0.00 - 3.00
- 3.01 - 6.00
- 6.01 - 10.00
- 10.01 - 15.00
- 15.01 - 20.00
- 20.01 - 25.00
- 25.01 - 44.76

fair
good
very good

Jobs

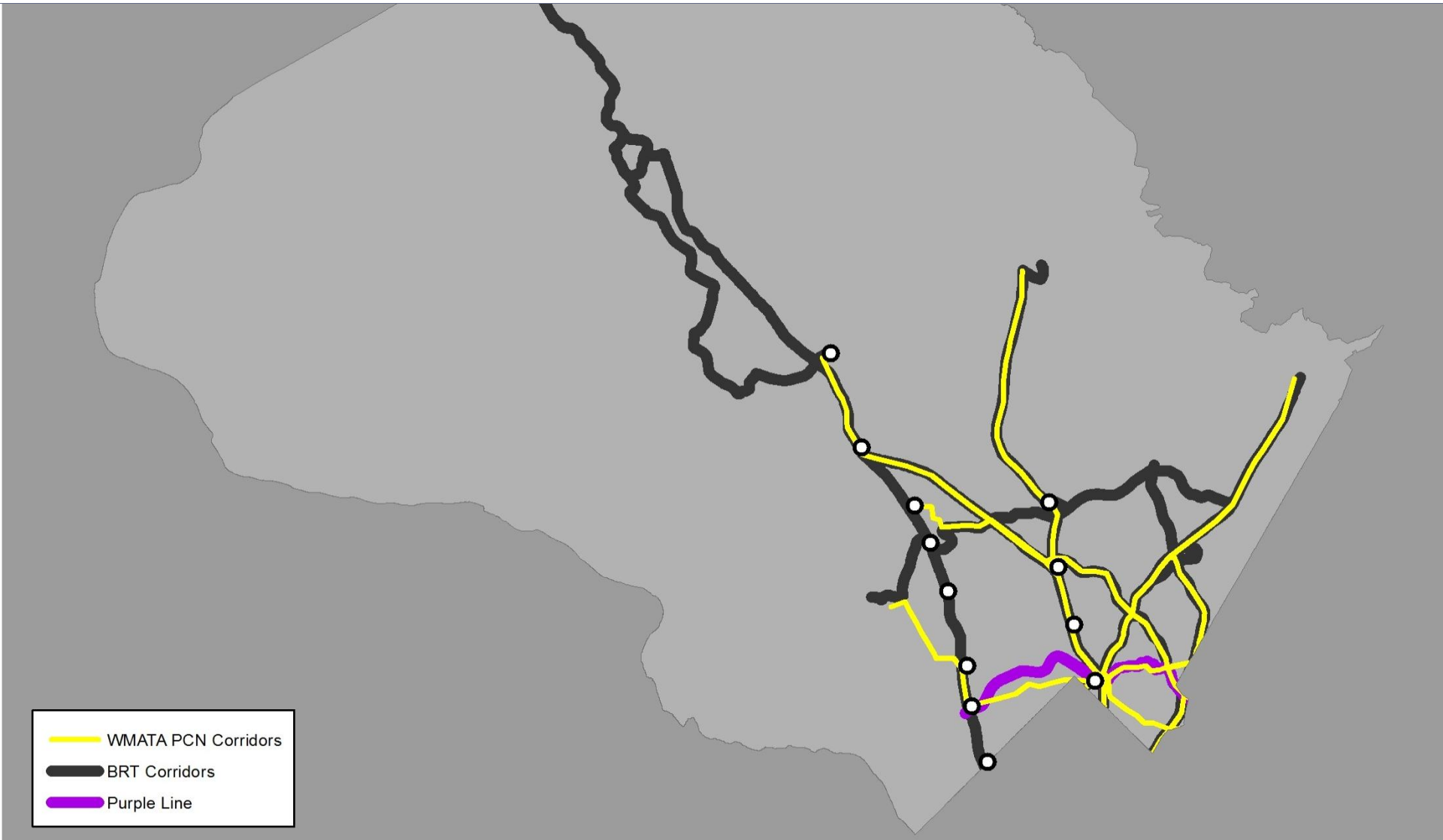


fair
good
very good

Round 8.2 - 2040 Forecast
Jobs/acre

- 0.00 - 2.50
- 2.51 - 5.00
- 5.01 - 10.00
- 10.01 - 25.00
- 25.01 - 50.00
- 50.01 - 100.00
- 100.01 - 168.56

WMATA Priority Corridor Network



Schedule

Schedule

Planning Board Draft

- July 25, 2013 – Planning Board delivered the Planning Board Draft to County Council and County Executive

Council Public Hearings

- September 24 and 26, 2013 – County Council holds public hearings

Council T&E Committee

- October 2013 – Transportation, Infrastructure, Energy, and Environment Committee holds worksessions and makes recommendations to the full Council

Schedule

Full Council

- November-December 2013 – County Council holds worksessions and approves the Master Plan, as amended

Full Planning Commission

- Fall-Winter 2013 – Maryland-National Capital Park and Planning Commission adopts the approved Master Plan

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