

2016 CLRP AMENDMENT

Performance Analysis of the Draft 2016 CLRP Amendment

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MWAQC Technical Advisory Committee
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What is the Constrained Long-Range Plan (CLRP)?

The CLRP identifies regionally significant transportation projects and programs that are expected to be funded between now and 2040

- Over 500 projects, ranging from simple landscaping projects to billion-dollar highway and transit projects
- Full funding to keep the region's highway and transit systems in a state of good repair
- Programs that aim to make the transportation system in Metropolitan Washington better and more efficient

The Performance Analysis of the CLRP compares the region's transportation system between now and 2040.

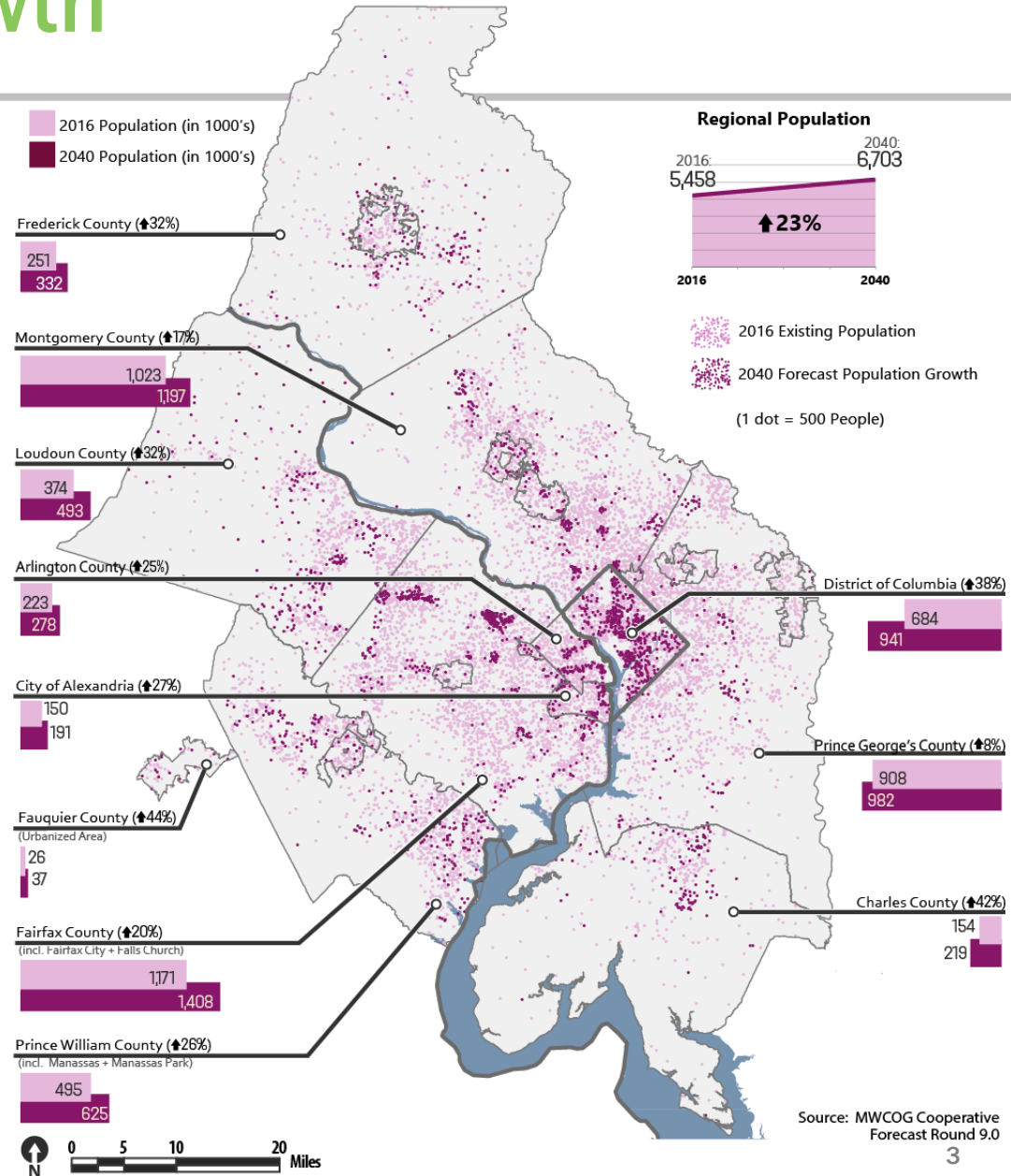
For a complete listing of projects and programs in the CLRP, visit:

<http://www.mwcog.org/clrp/>



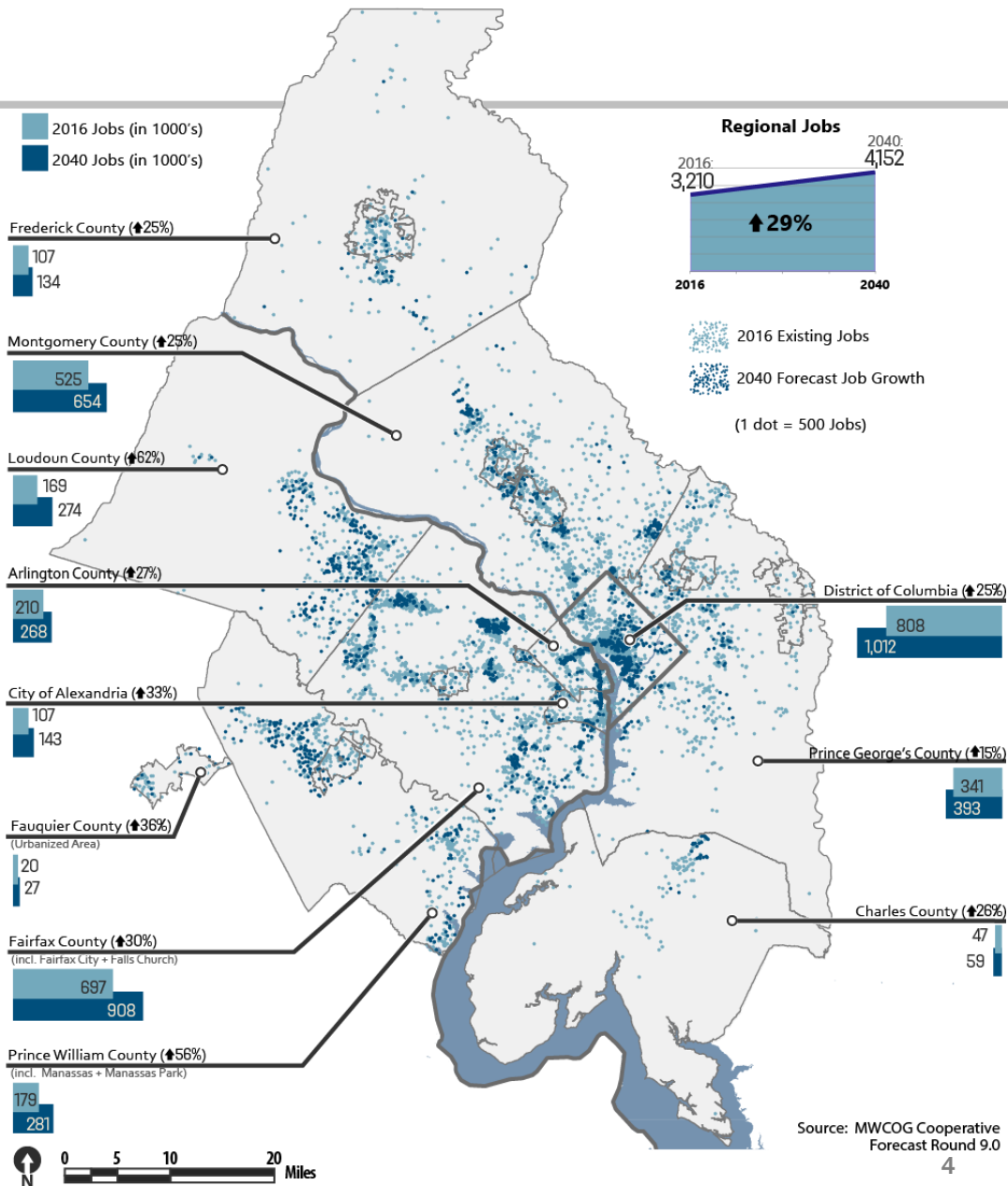
Population Growth

- By 2040, the region is expected to grow by 23% to over 6.7 million people, an increase of 1.2 million people.
- The region's outer suburban jurisdictions are expected to see the highest rates of growth, while the inner suburban jurisdictions and regional core will continue to be home to the most population.
- The majority of new residents are expected to live in denser population centers throughout the region.



Job Growth

- By 2040, the regional jobs are expected to grow by 29% to over 4.1 million jobs. This is an increase of 940,000 new jobs.
- The fastest rates of job growth are expected in the outer jurisdictions of Virginia, while the inner suburban jurisdictions and regional core will continue to be home to the greater number of jobs.
- More new jobs will locate on the western side of the region, and the majority of all new jobs are expected to be in denser population centers throughout the region.



Source: MWCOG Cooperative Forecast Round 9.0
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How does the CLRP advance the TPB's Regional Transportation Priorities Plan (RTPP)?



RTPP - Purpose

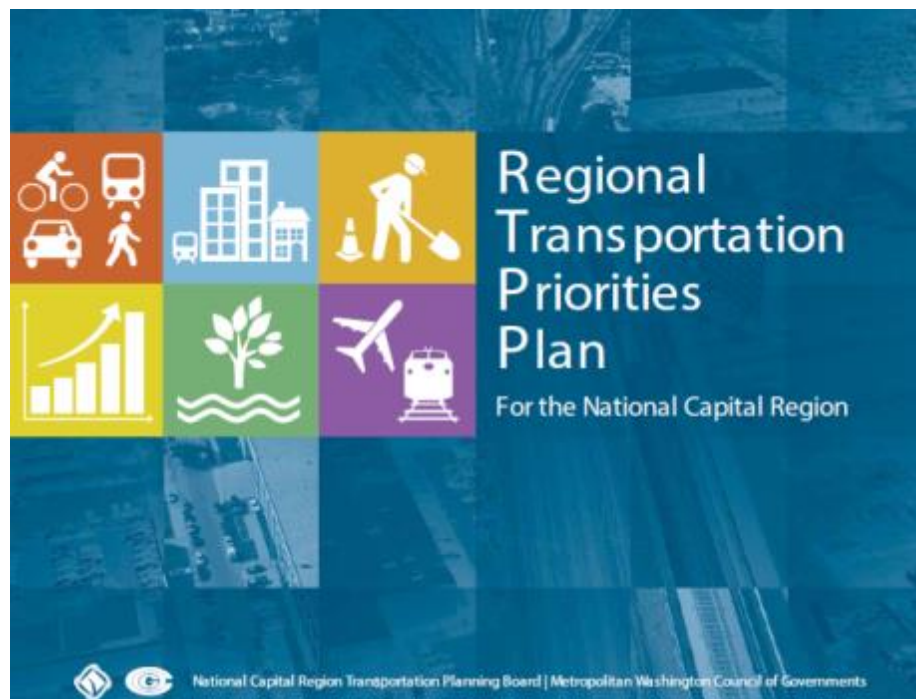


The Regional Transportation Priorities Plan aims to identify strategies with the greatest potential to respond to our most significant transportation challenges.



The CLRP addresses key strategies from the RTPP

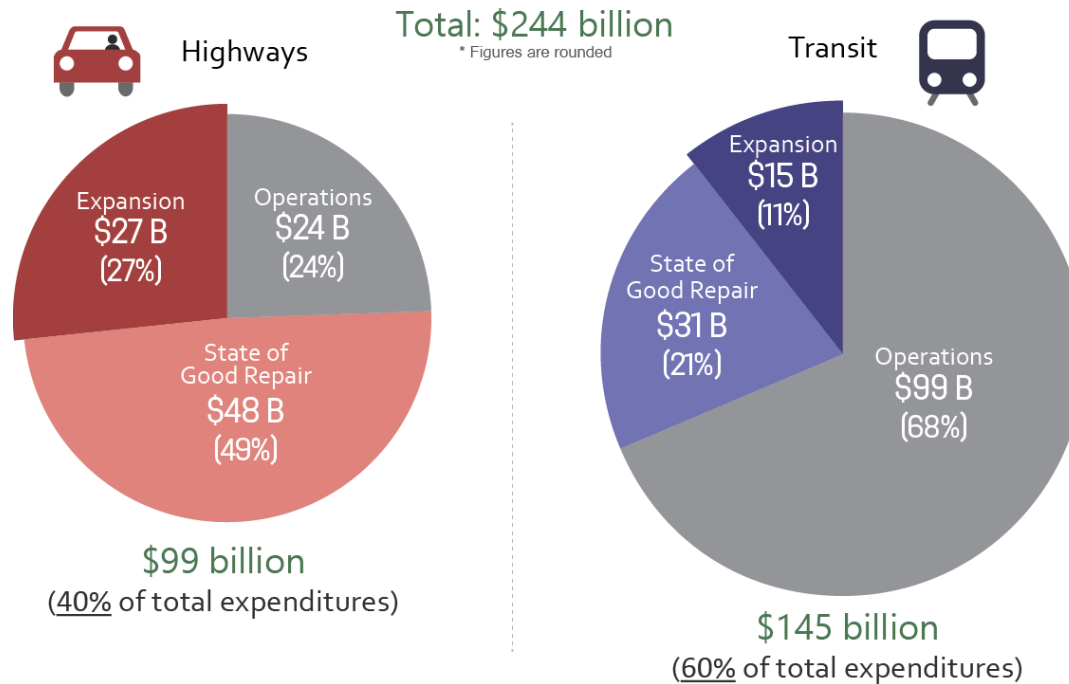
- Maintenance
- Transit Improvements
- Targeted Congestion Relief
- Activity Centers



CLRP Commitment to Maintenance

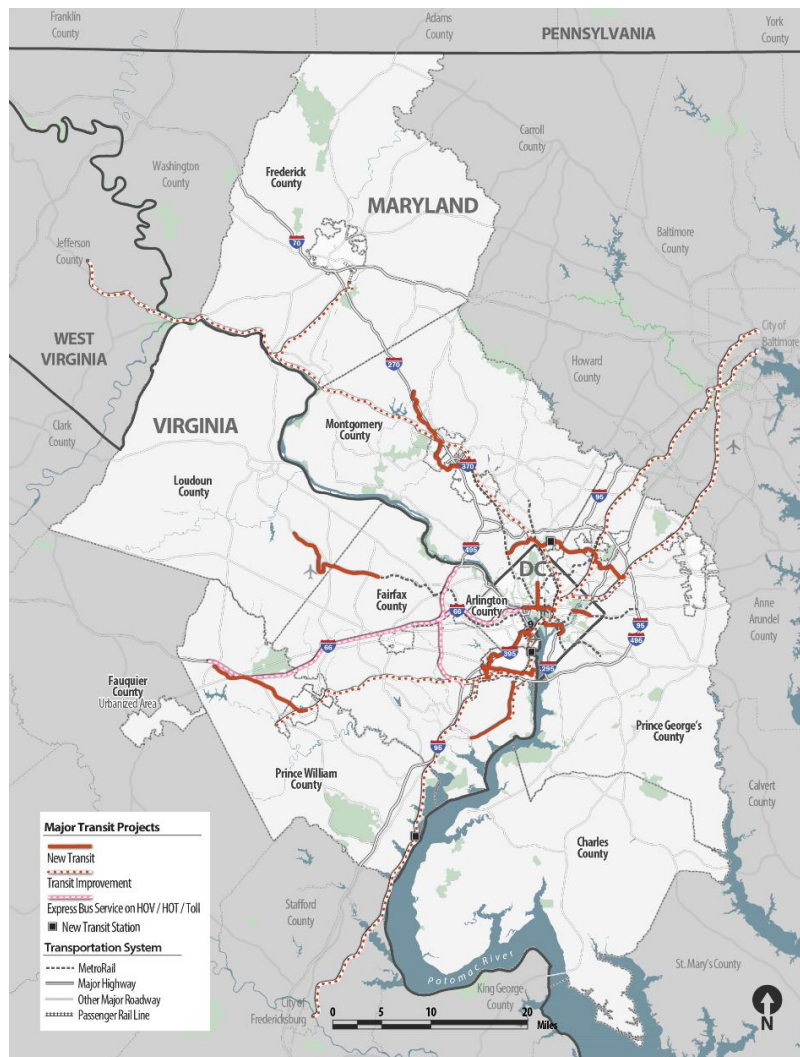
- The 2014 CLRP financial plan included a full funding commitment for operations and state of good repair for transit and roads

CLRP Expenditures (2015-2040)



Additional high capacity transit

System	Existing	CLRP
Metro Rail	119 mi	+12 mi
Light Rail/ Streetcars	2 mi	+28 mi
BRT	4 mi	+25 mi
Commuter Rail	167 mi	+11 mi
TOTAL	292 mi	+76 mi



Transit: Some highlighted examples

Metrorail Expansion

- Silver Line Phase II

Light Rail

- Purple Line

Bus Rapid Transit

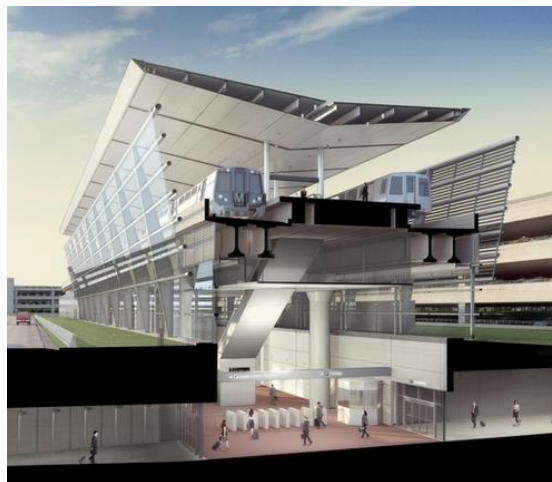
- Corridor Cities Transitway
- Route 1 BRT

Streetcars

- DC Streetcar to Georgetown

Commuter Rail

- VRE to Gainesville/
Haymarket

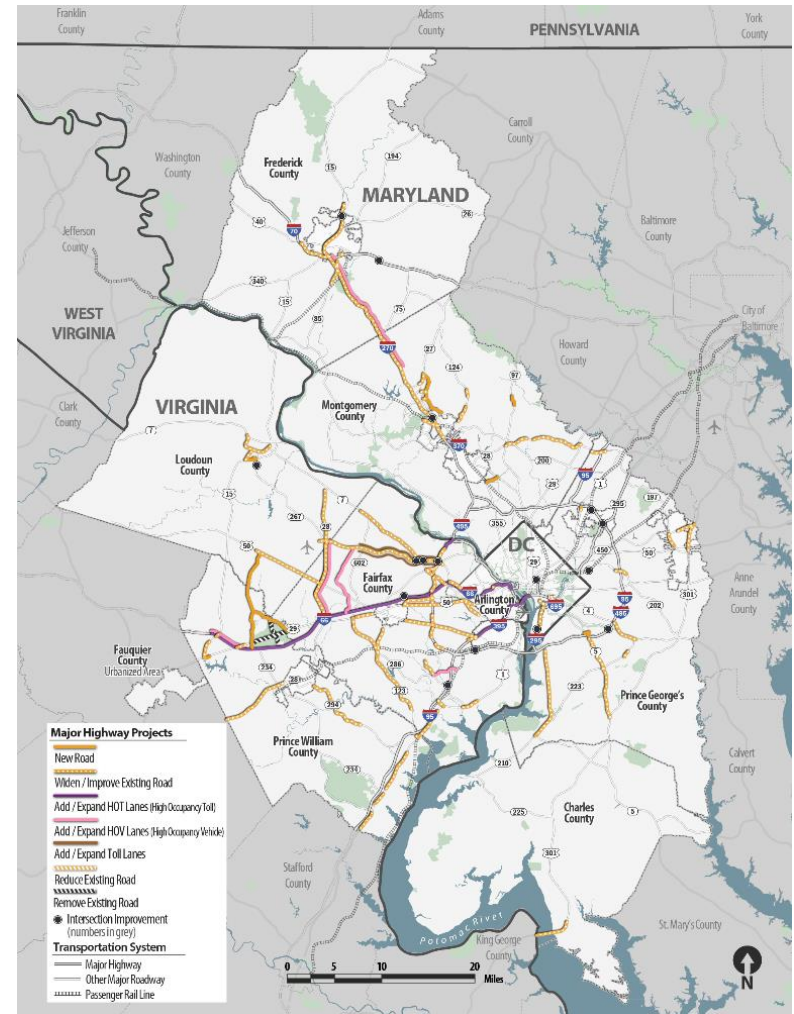


Congestion Relief – Roadway Projects

System	Existing (lane miles)	CLRP (additional lane miles)
Freeways / Expressways	3,572 mi	+467 mi
Arterials	13,362mi	+715 mi
TOTAL	16,934 mi	+1,182 mi

System	Existing (lane miles)	CLRP (additional lane miles)
Tolled Lane Miles	394 mi	+213 mi

18% of new lane miles would be tolled under the CLRP in 2040



Road projects: Some highlighted examples

New Road Capacity

- South Capital Bridge Reconstruction
- I-270/US-15 Corridor HOV
- I-66 Express Lanes – Inside and Outside the Beltway
- I-395 Express Lanes – Inside the Beltway
- Fairfax County Parkway HOV



Jumpy, Wikimedia Commons



Analysis

Activity Center Connectivity by Transit

People's Travel Mode Choice
Regionally
Sub-regionally

Roadway Congestion

Access to Jobs

Motor Vehicle Emissions



How will Activity Centers be better connected by transit?








More Activity Centers connected to high-capacity transit

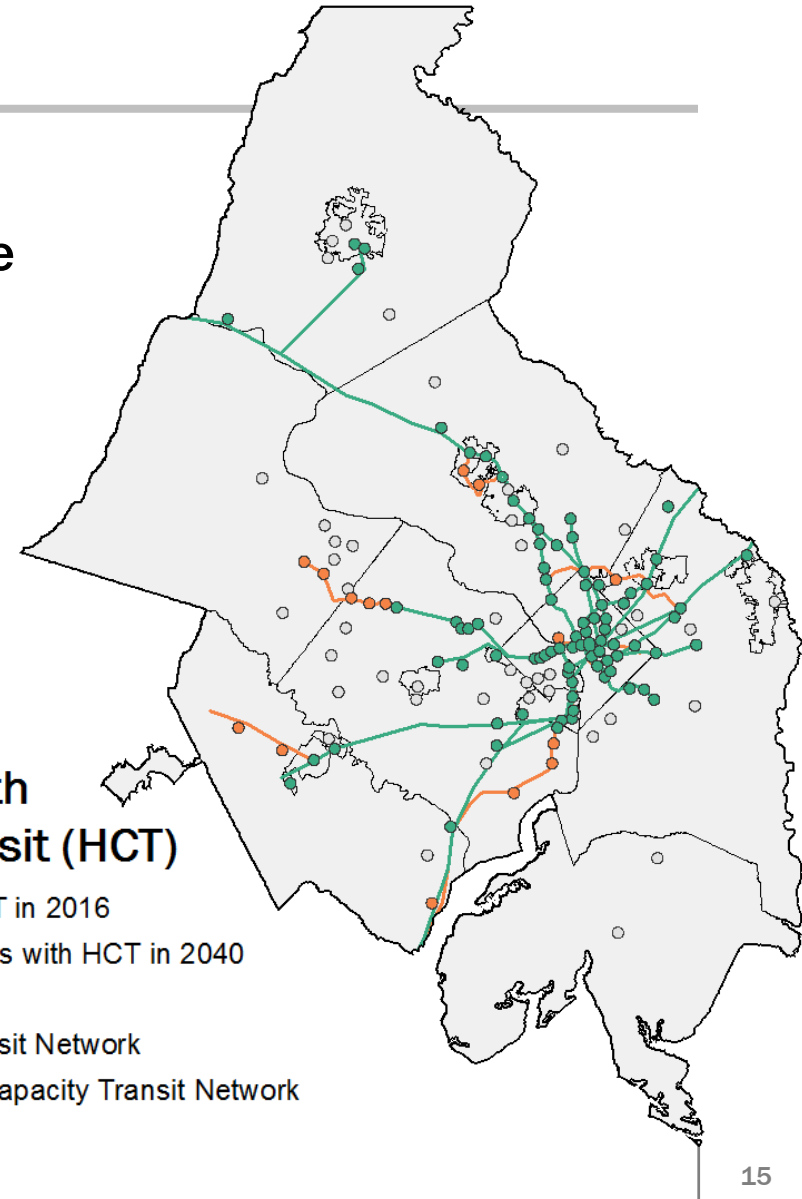
In 2040, 15 new Activity Centers will be connected to by Metro, Streetcar, BRT, Light Rail, and Commuter Rail.

2016: 82 Activity Centers (59%)

2040: 97 Activity Centers (69%)

Activity Centers with High Capacity Transit (HCT)

-  Activity Centers with HCT in 2016
-  Additional Activity Centers with HCT in 2040
-  All Other Activity Centers
-  2016 High Capacity Transit Network
-  2040 Additions to High Capacity Transit Network



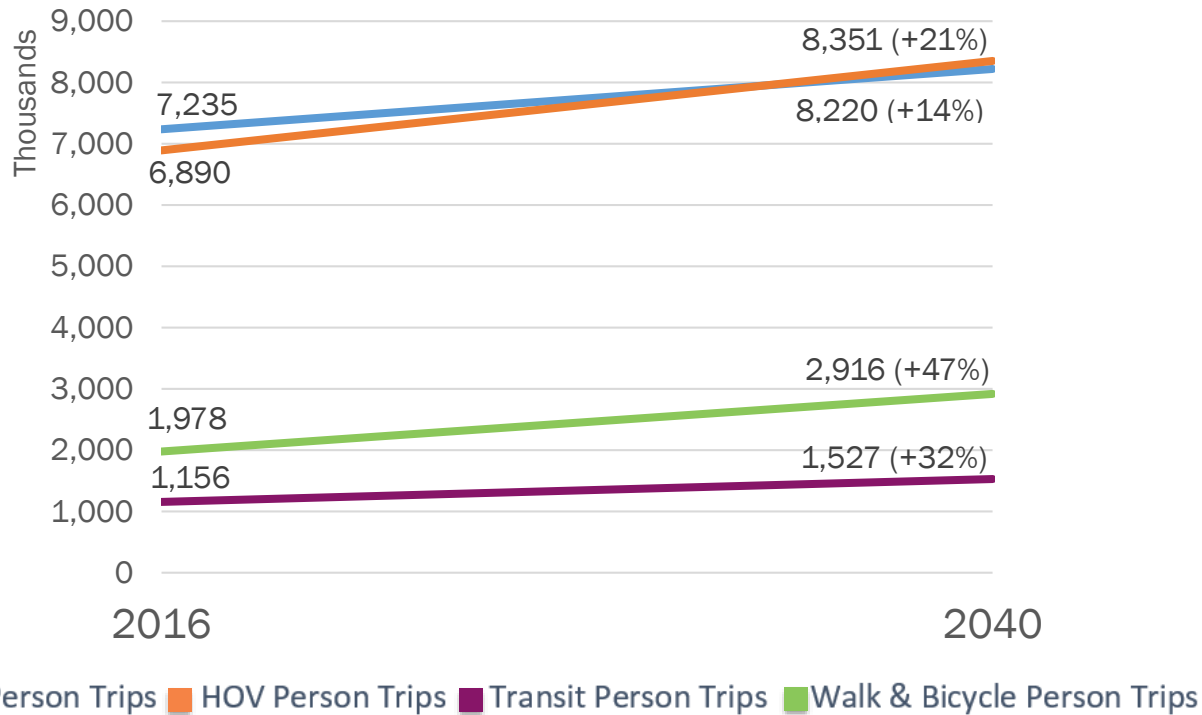
How will people's travel choices change?



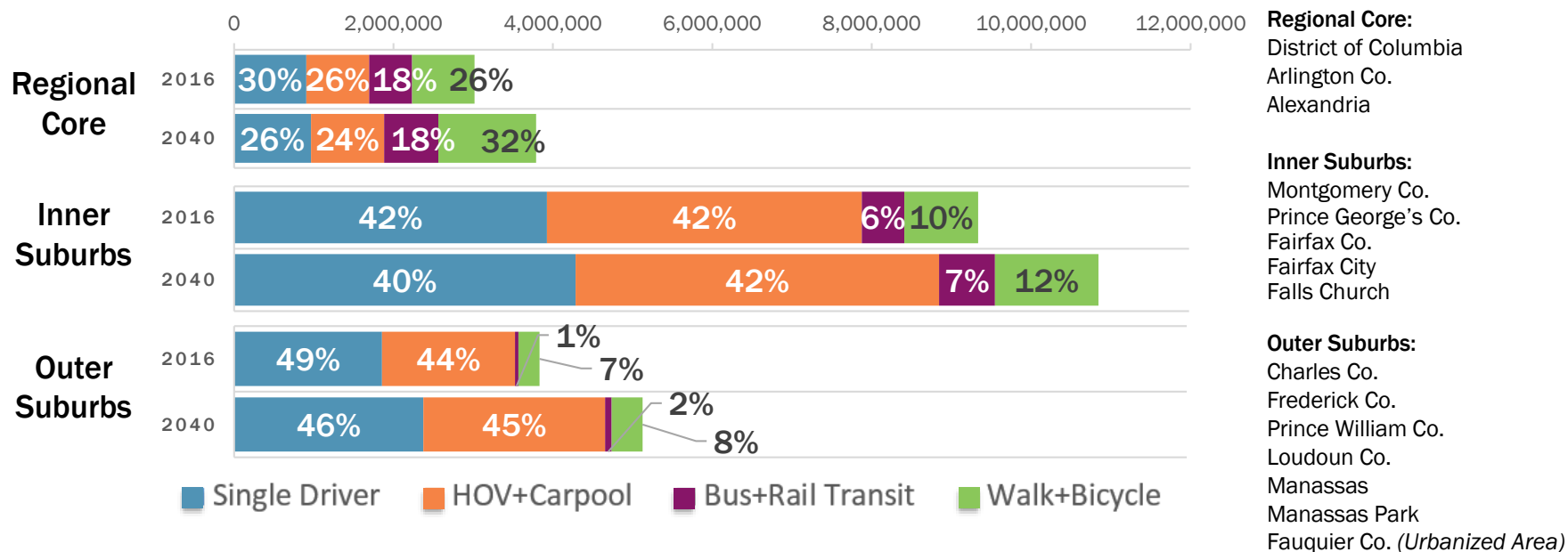
Growth in other modes will outpace single-driver trips

Driving will be the main way of getting around but other modes will grow at a faster pace.

ALL TRIPS



All Trips: Geographic Differences



- The majority of all trips in the region will continue to be generated in the region's populous Inner Suburbs.
- Throughout all areas of the region, the share of driving alone trips is expected to decline and the share of walking and bicycling trips is expected to increase.
- In the outer suburbs, while the percentage of transit trips is expected to double by 2040 this type of trip will still account for the smallest number of trips.

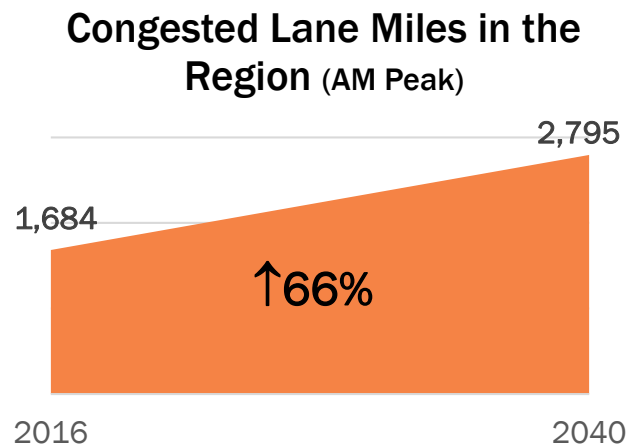


How will roadway congestion change?



Congestion increases

Compared to today, more lanes will be congested in 2040 during the peak morning commute.



* Lane mile measure includes all facilities except local roads.

* Roads are congested if Volume/Capacity > 1.00

- The number and share of lane-miles that are congested during peak periods is expected to increase substantially between now and 2040.
- Congested lanes will continue to make up a small, but growing, portion of the region's roadways, from 10% to 15%.



How will access to jobs change?



LOCATION OF JOBS

+



TRAVEL TIME
(BY AUTO OR TRANSIT)

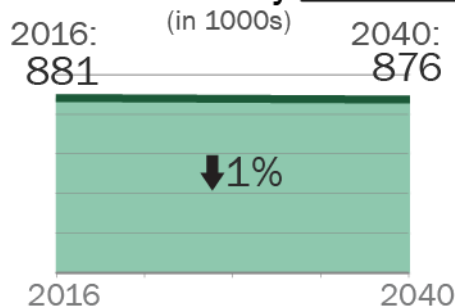
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ACCESSIBILITY
[NUMBER OF JOBS
WITHIN 45 MINUTE
COMMUTE]

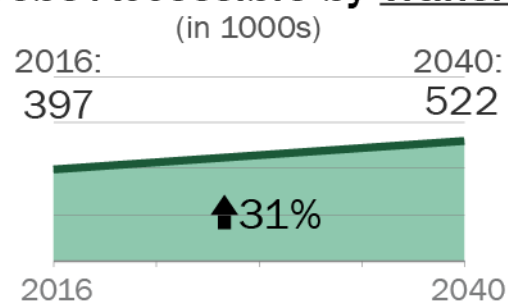


Access to Jobs: Transit access increases; Auto access slightly decreases

**Average number of
Jobs Accessible by Automobile**



**Average number of
Jobs Accessible by Transit**



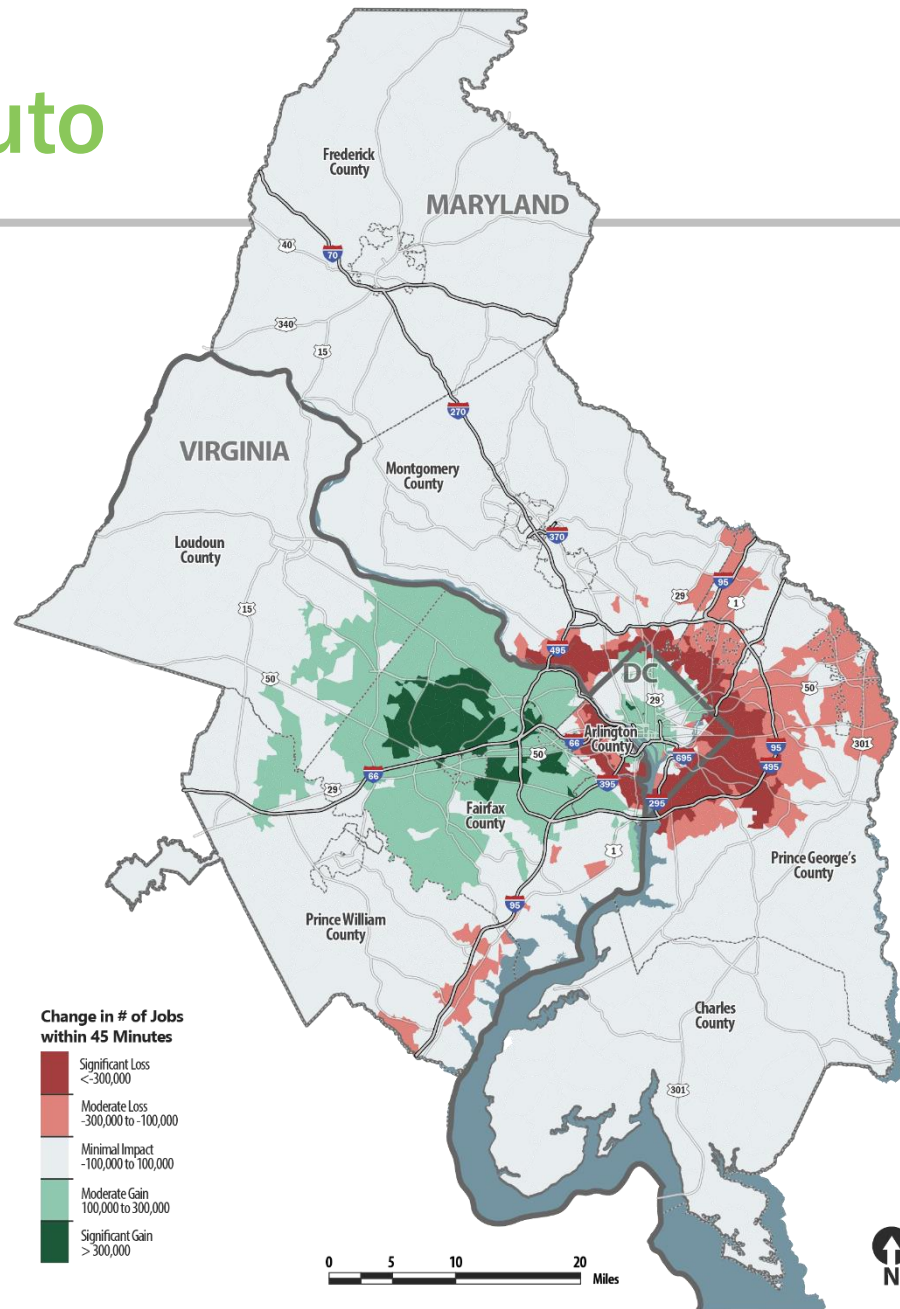
- The average number of jobs accessible by auto will decrease.
- The average number of jobs accessible by transit will increase by 31 percent.
- The total number of jobs that are accessible by transit, however, will remain less than those accessible by automobile, because transit will continue to not reach all parts of the region.



Access to Jobs by Auto

Change in Access to Jobs by Automobile (2016-2040)

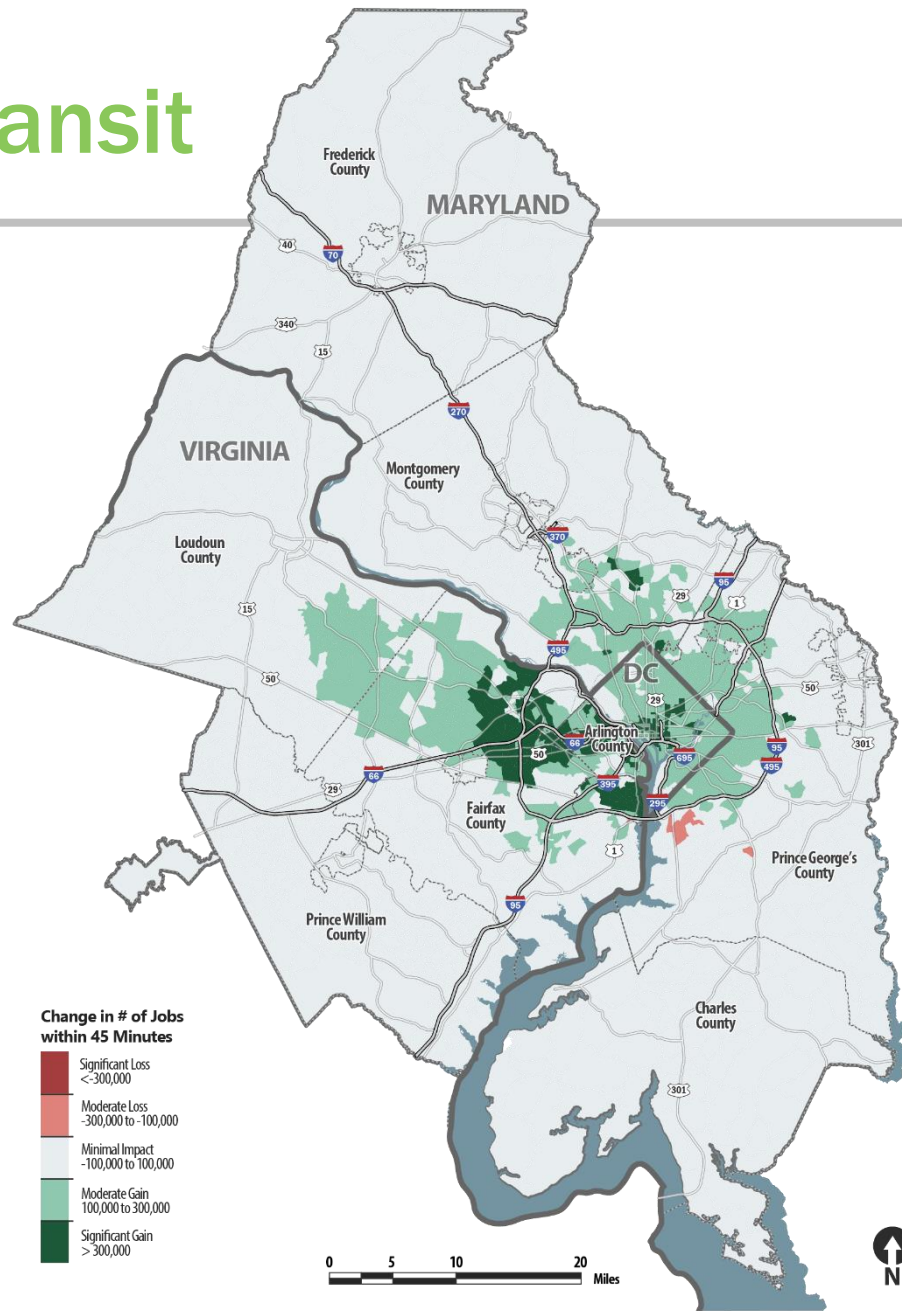
- Many areas, mainly on the eastern side of the region and the inner suburbs, will see declines in accessibility within a 45 minute commute.
- These declines are the result of two important factors:
 1. Anticipated increases in roadway congestion, which make it more difficult to reach other parts of the region by car within 45 minutes.
 2. More of the new jobs anticipated between now and 2040 are forecast to be located on the western side of the region, more than 45 minutes from those living on the eastern side.



Access to Jobs by Transit

Change in Access to Jobs by Transit (2016-2040)

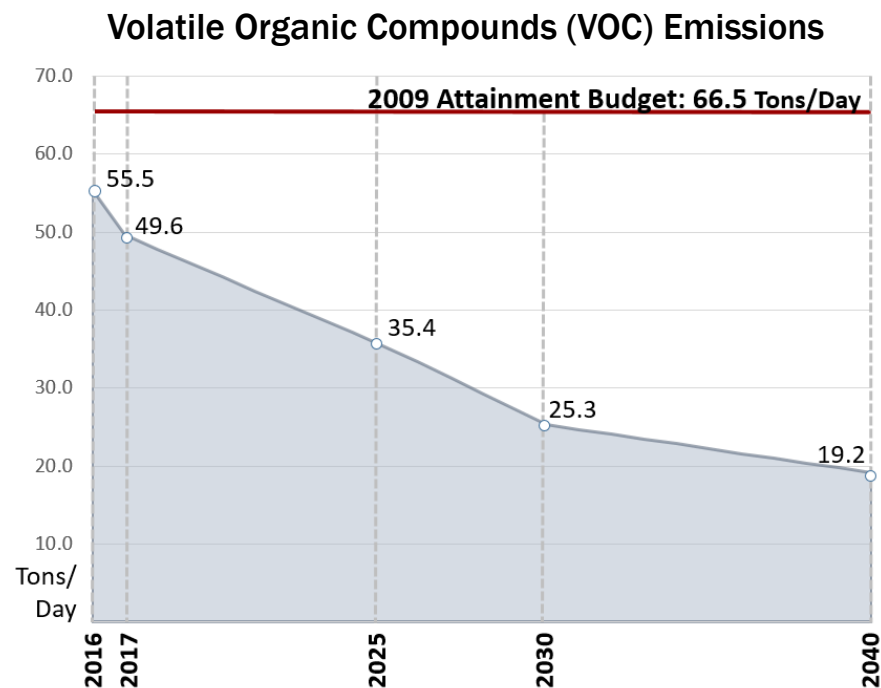
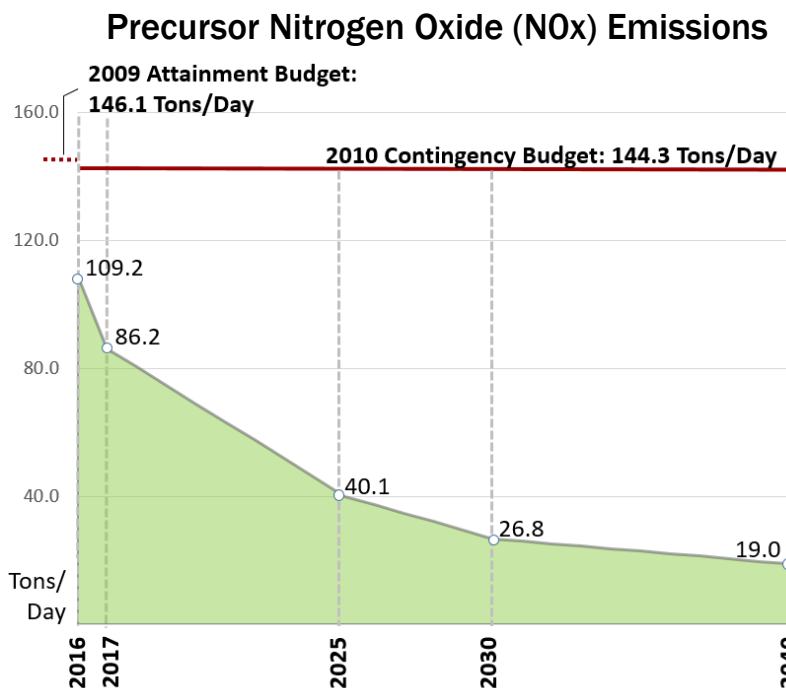
- Most places with access to transit, will experience increases in the number of jobs that are accessible within a 45 minute commute.
- However, in 2040 transit will still not be a viable commute options for many people in the region due to lack of access to transit facilities and potentially long travel times.



How will the CLRP affect emissions?



Mobile Source Emissions



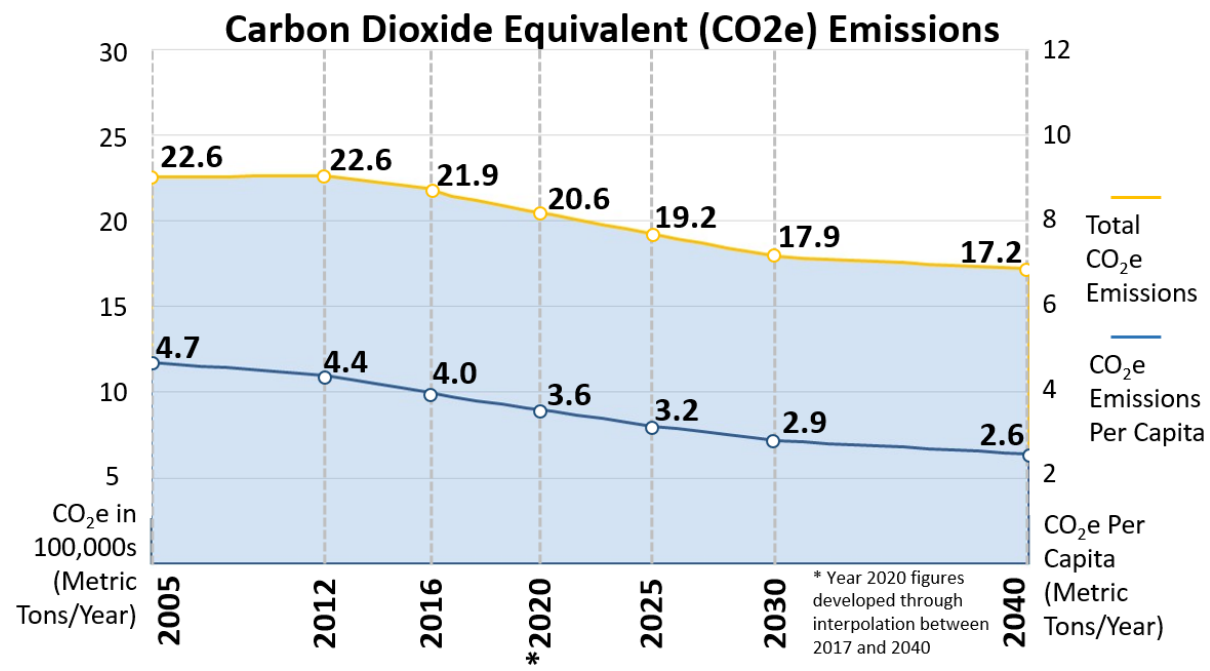
Emissions of all criteria pollutants are expected to drop steadily between now and 2040.

- Emissions reductions are expected due to tougher federal fuel and vehicle efficiency standards.
- Changes in development patterns, investments in transit and other travel options, and improved operational efficiency of area roadways will also contribute to reductions in vehicle related emissions.



Mobile Source Greenhouse Gas Emissions

Total and per capita CO₂e emissions are forecast to drop 24% and 45%, respectively, by 2040



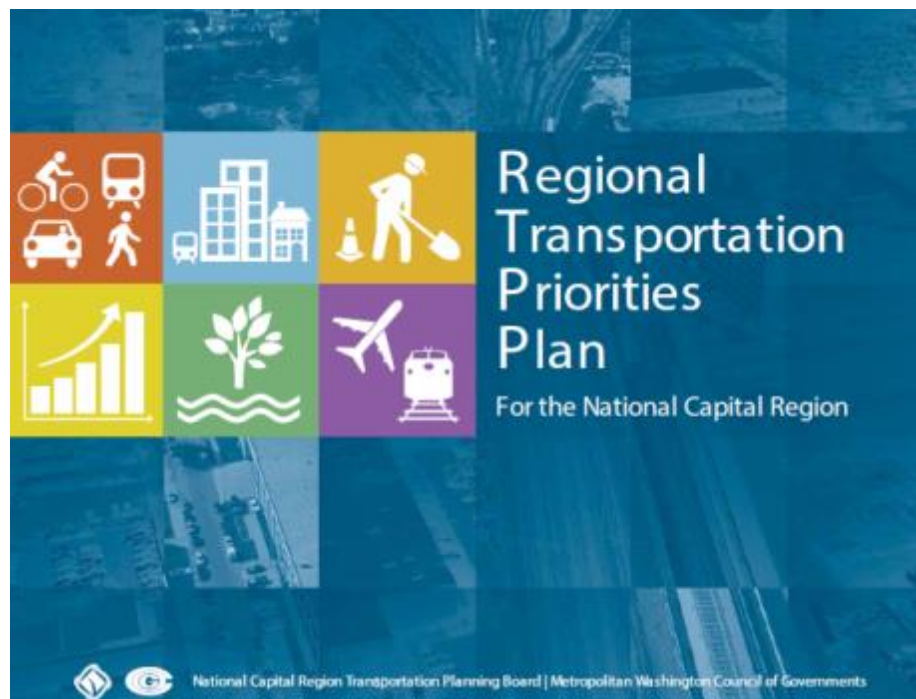
- A significant amount of the greenhouse gas reductions are due to new tougher federal fuel efficiency standards. In addition changes in development patterns and investments in transit and other travel options will contribute to reductions.
- Currently no federal standards exist for greenhouse gas emissions. These emissions are not a required part of the transportation Air Quality Conformity Analysis.

Findings



The CLRP addresses key strategies from the RTPP

- Maintenance
- Transit Improvements
- Targeted Congestion Relief
- Activity Centers



Findings: Impacts of the CLRP

Looking at relevant RTPP strategies:

Maintenance

- The region anticipates full funding to be available for maintenance

Transit Improvements

- Transit will be more widely available
 - 26% increase in new miles of high-capacity transit
- Transit will be much more extensively used
 - Transit ridership will increase by 32%
- Job accessibility by transit will increase
 - Region-wide, the average number of jobs accessible by transit will increase 31%
- The mode share for single driver trips will be reduced
 - SOV mode share (all trips) will decrease from 42% to 39%
- Additional capacity on the existing system:
 - Funded for commuter rail, but not for Metro 2025 projects



Findings: Impacts of the CLRP (continued)

Looking at relevant RTPP strategies:

Targeted Congestion Relief

- Congestion and delay will increase
 - Congested lane miles increase 66%
 - Vehicle hours of delay will increase 74%
- Toll lanes will provide alternatives to congested roads
 - Toll roads will increase by 213 miles (18% of all new lane miles will be tolled)

Activity Centers

- Most new growth will be in Activity Centers
 - 3 out of 4 new jobs will be in Activity Centers
- Most Activity Centers will have multimodal connections
 - 69% of Activity Centers will be connected by high-capacity transit



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