

ALL ROADS LEAD TO TRAFFIC

Where are Tennessee's roads being hit hardest
by population growth?

Matt Parker | January 23, 2020

DATA

- TN GIS Traffic Counts
 - <https://www.arcgis.com/apps/webappviewer/index.html?id=075987cdae37474b88fa400d65681354>
 - Daily traffic counts conducted by TDOT at over 12,000 stations in all 95 counties
- US Census
 - Population and Commute Time, 2010-2019



TN POPULATION

(2019) est:

6,829,174



TN POPULATION

(2030) proj:

7,397,302



TN AVG COMMUTE

(2019, minutes)

25.2



TN AVG COMMUTE

Rank in US

24th

TIMELINE OF ROAD CONSTRUCTION



PLANNING

6 – 24+ MONTHS

- Data Collection
- Identify and Acquire right of way
- Analyze environmental concerns
- Determine community impact
- Identify and Secure Funding



DESIGN & ENGINEERING

6-36+ MONTHS

- Survey Land
- Consider factors (such as):
 - Terrain/Soil
 - Traffic Volume
 - Ratio of cars vs other
 - Project future growth
- Gather public input
- Hire Contractors for Building



CONSTRUCTION

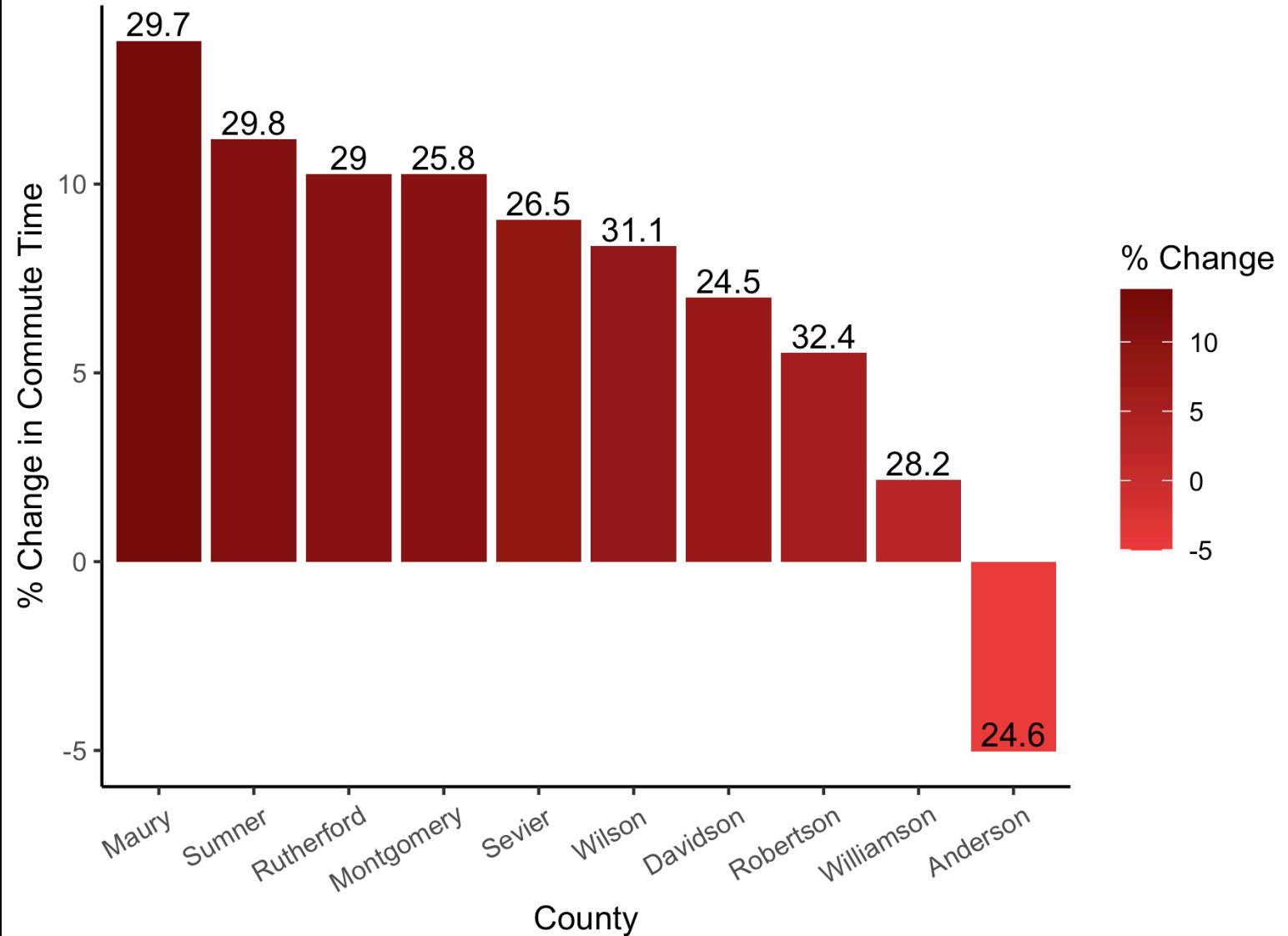
6 – 36+ MONTHS

- Build Embankments and level dirt
- Install drains, sewers, and other utilities
- Lay Gravel, Pave, Paint
- Complete necessary infrastructure (sidewalks, road signs, traffic signals, etc)

COMMUTE TIME

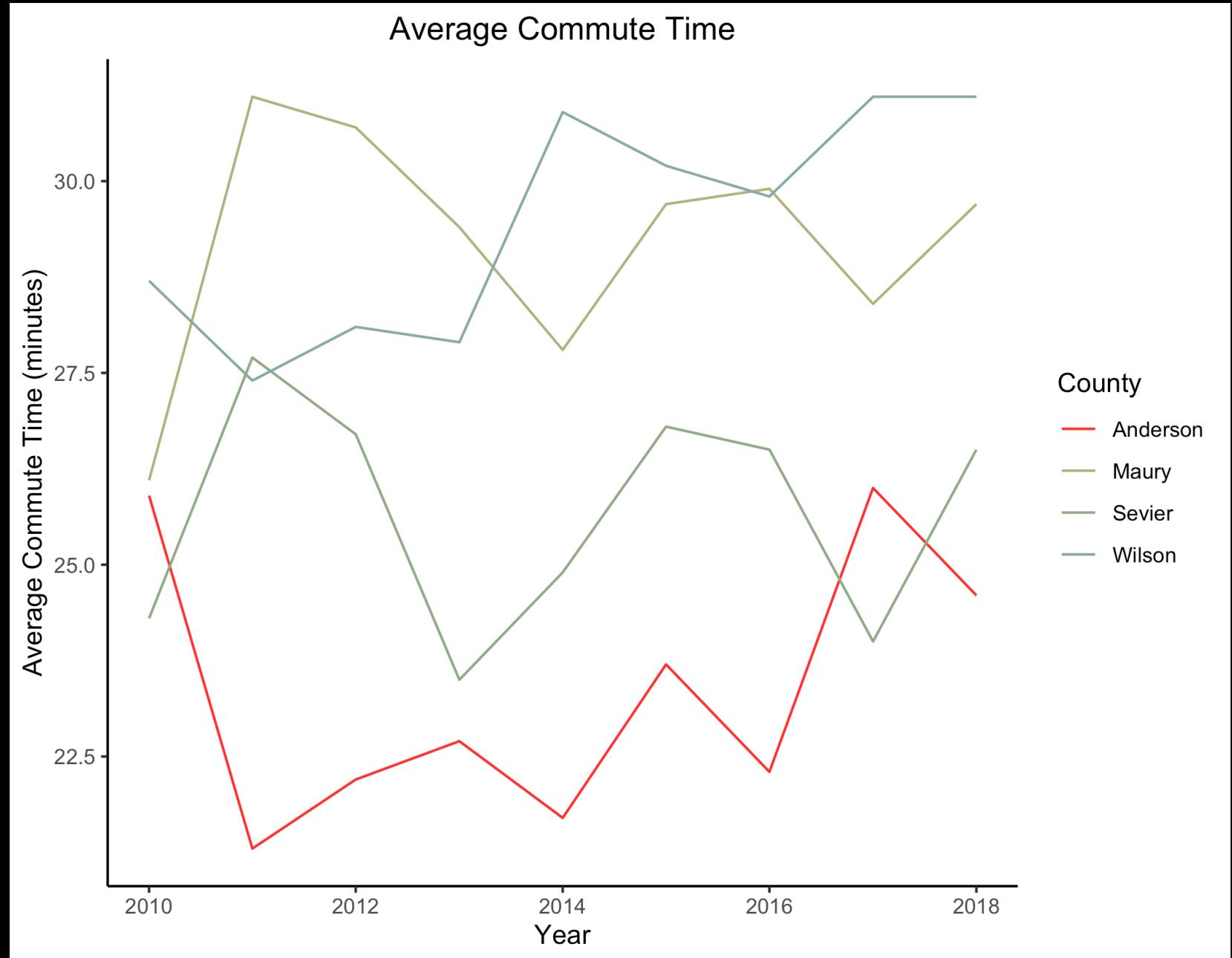
COUNTY
BY
CHANGE
2010-2018

Percent Change in Commute Time, 2010-2018
(2018 Commute Time in mins)



COMMUTE TIME

COUNTY
BY
CHANGE
2010-2018





PROBLEMS IN PLANNING



LONG PLANNING SCHEDULE

With projects requiring a minimum of 3-5 years or longer, there is a large window of time for unknown factors to arise.



MANY VARIABLES TO CONSIDER

In addition to population and traffic volume, planners must consider current infrastructure conditions, building permits, terrain limitations, and more.



DIFFICULT TRENDS TO PREDICT

5 years is a long time when it comes to social geography. A lot can change in the time it takes to plan a major road project.

SOURCES

DATA:

- <https://www.arcgis.com/apps/webappviewer/index.html?id=075987cdae37474b88fa400d65681354>
- <https://www.census.gov/>

CONSTRUCTION PLANNING:

- <https://www.michigan.gov/mdot/0,4616,7-151-9615-129011--.00.html>
- <https://www.rcocweb.org/166/Steps-in-a-Road-Project>
- <https://www.virginiadot.org/projects/pr-howroadblt.asp>

POPULATION PROJECTIONS:

- <https://www.tn.gov/content/dam/tn/tacir/documents/Population2010.pdf>

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