

COVID 19 Pandemic Travel Impacts (Before, During and After)

Presentation to the
TERC

June 10, 2021

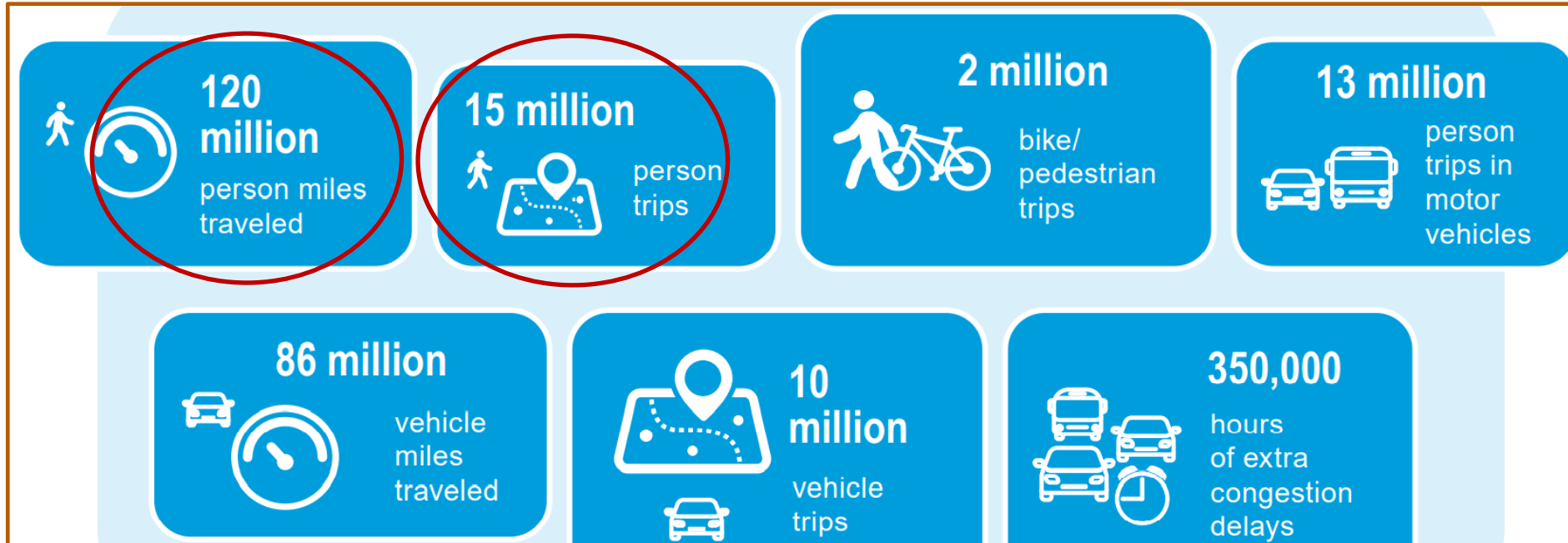
Steve Cook, Mobility Analytics and Operations Manager



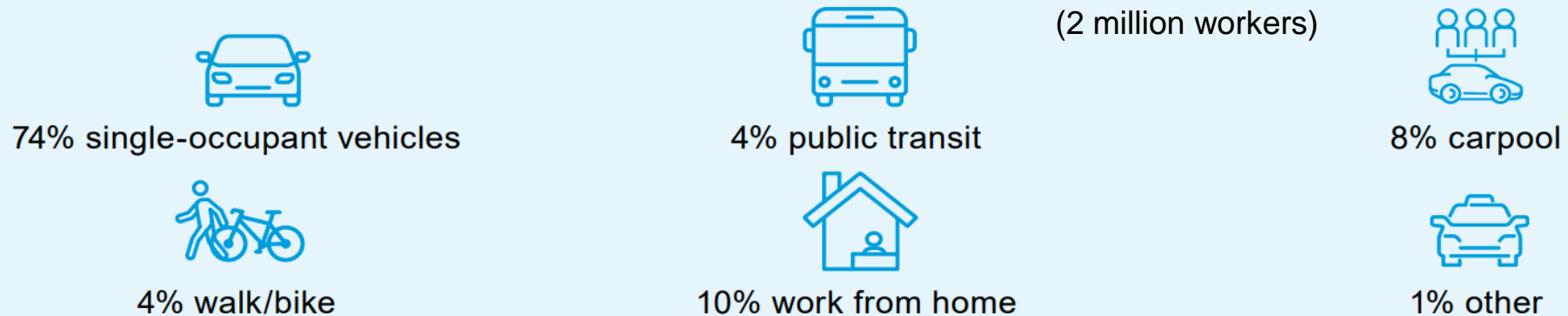
THE DENVER REGION PRE-COVID



TYPICAL WEEKDAY IN 2019:



Which modes do people use to get to work?

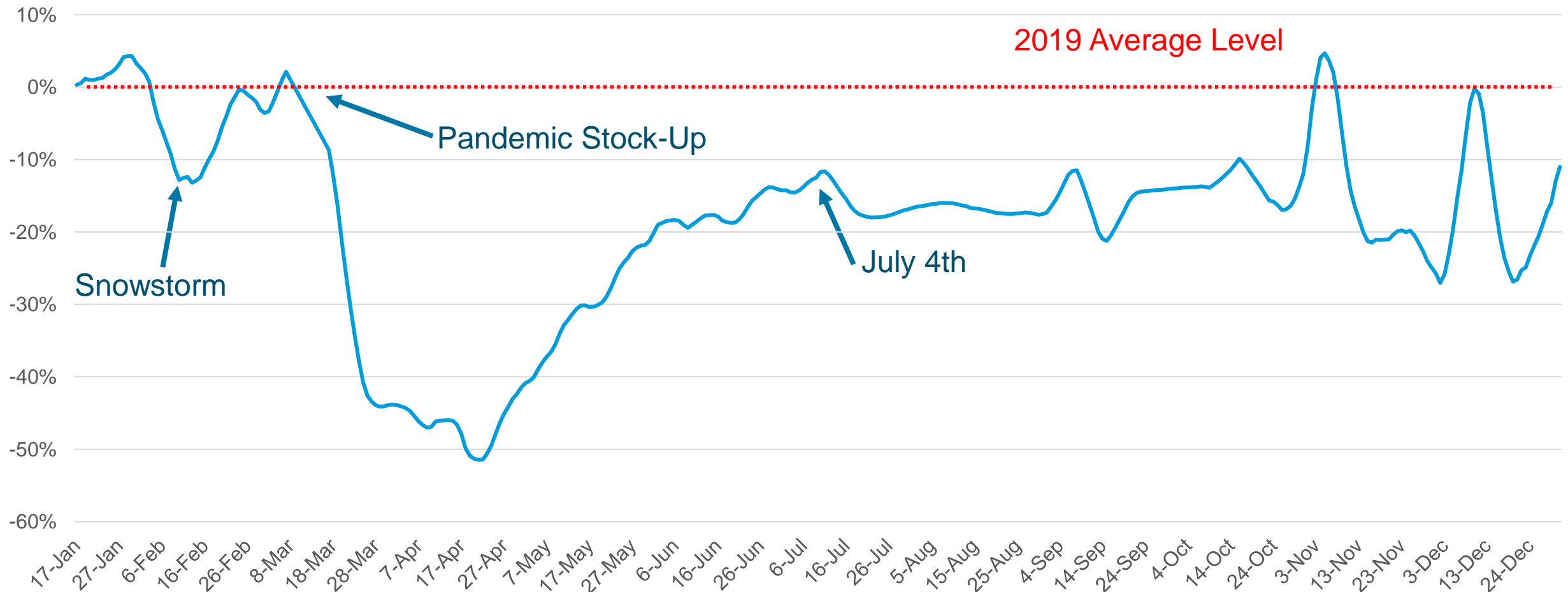




WHAT HAPPENED DURING COVID PANDEMIC?



2020 REGIONAL VMT: % CHANGE FROM 2019

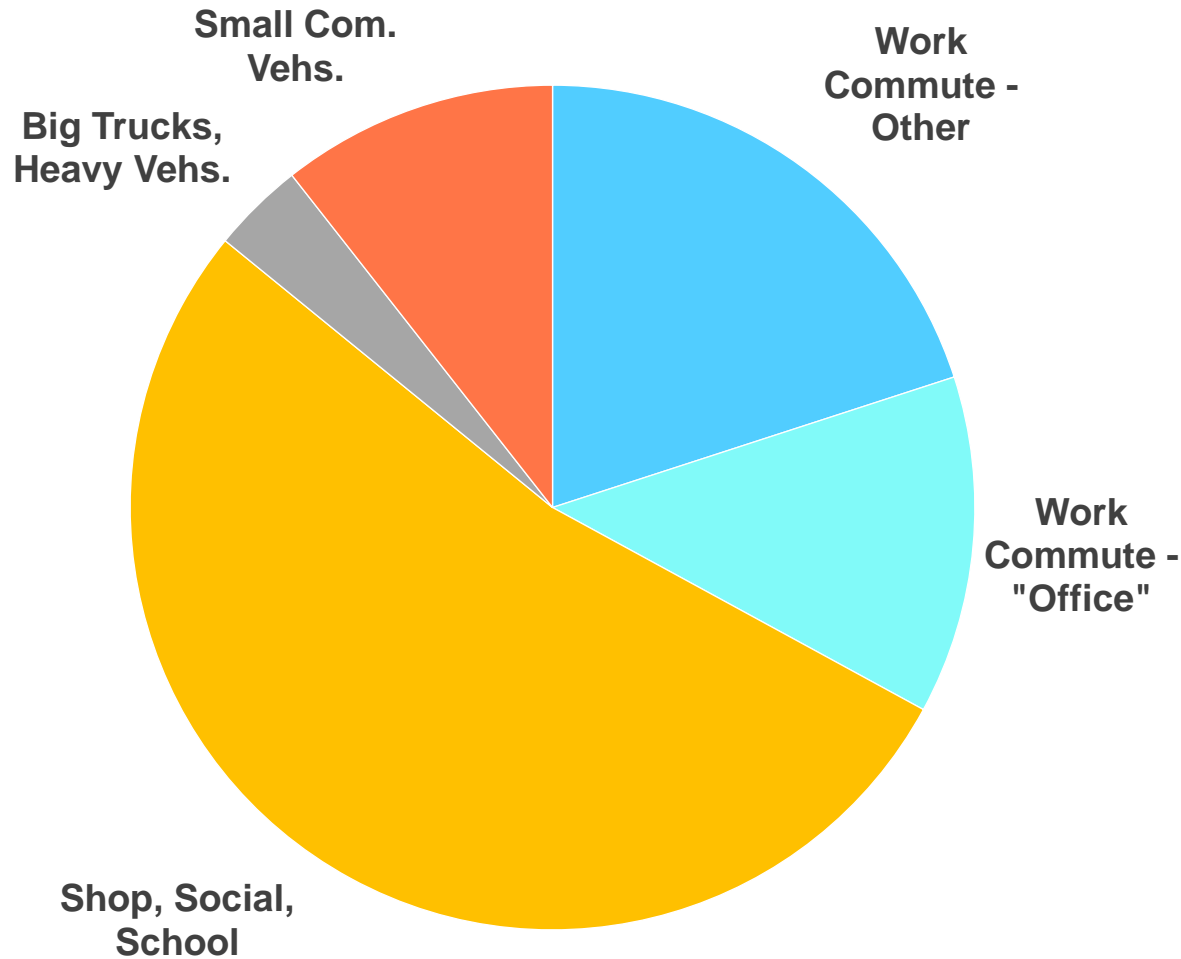


* This is one location selected as a representation of the average

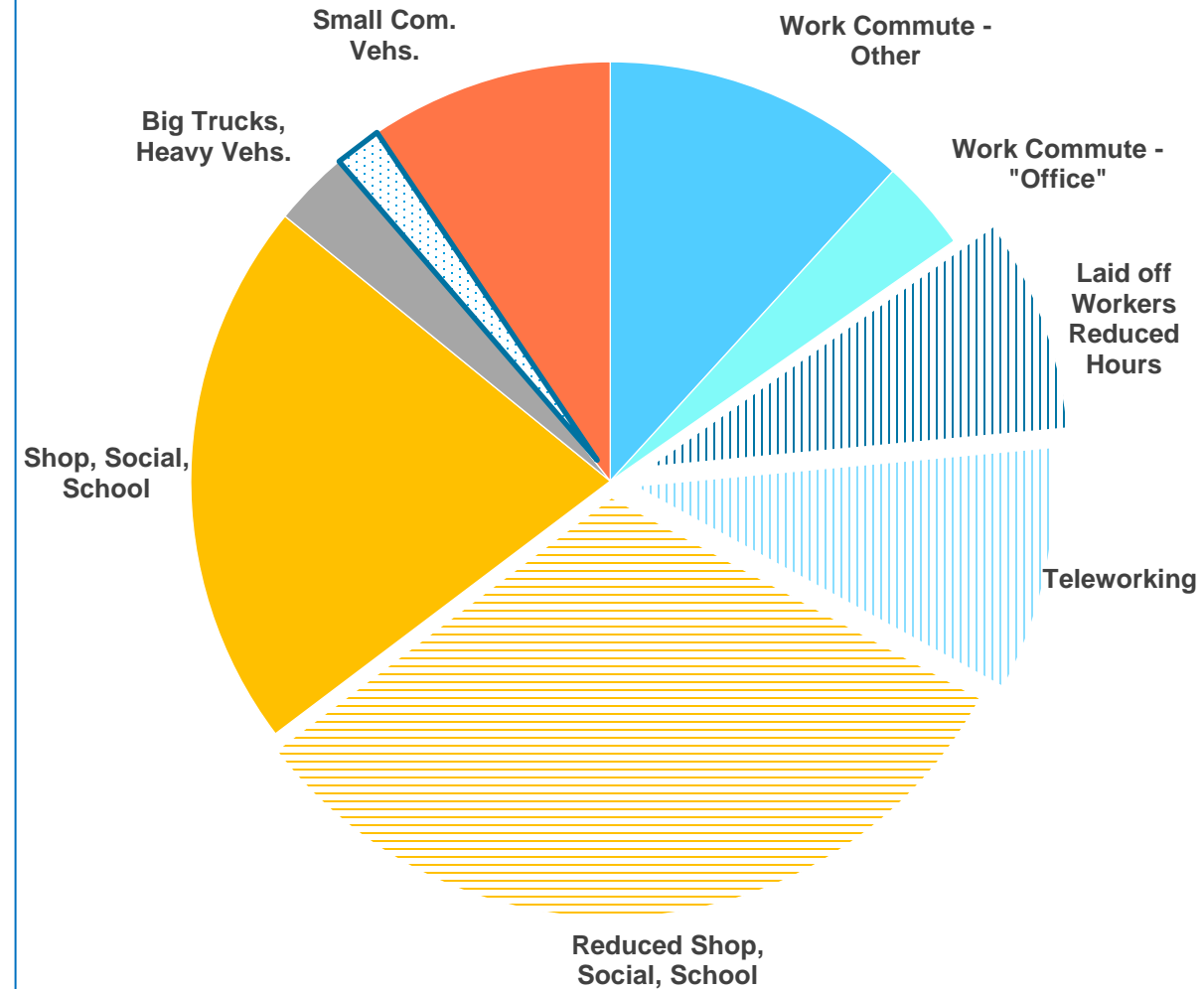


50 PERCENT VMT REDUCTION APRIL 2020

Pre-COVID 2019 - VMT by Purpose
Avg. Daily VMT = 86 million

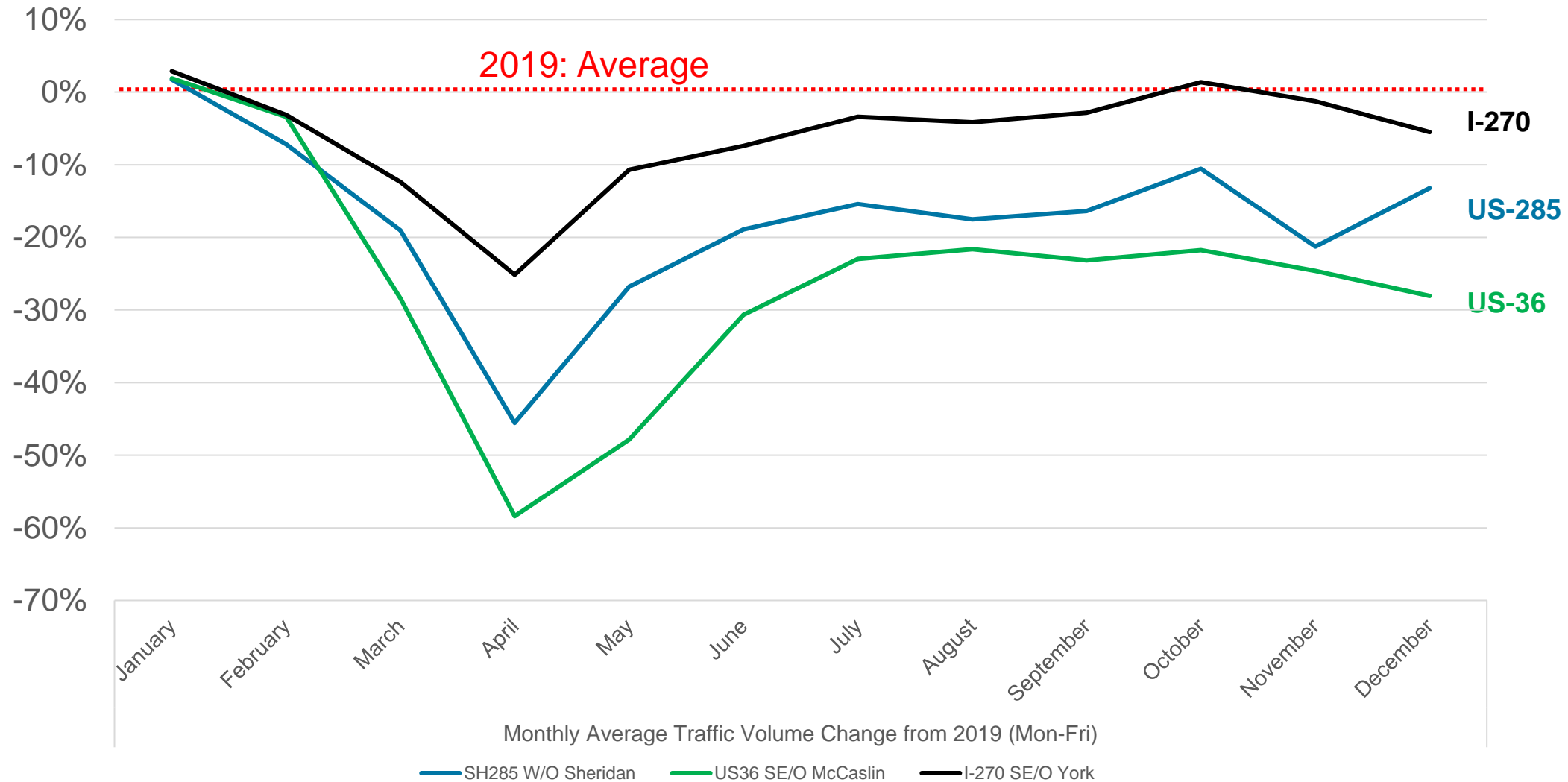


★ **April 2020 Shutdown VMT % by Purpose**
Avg. Daily VMT = 42 million



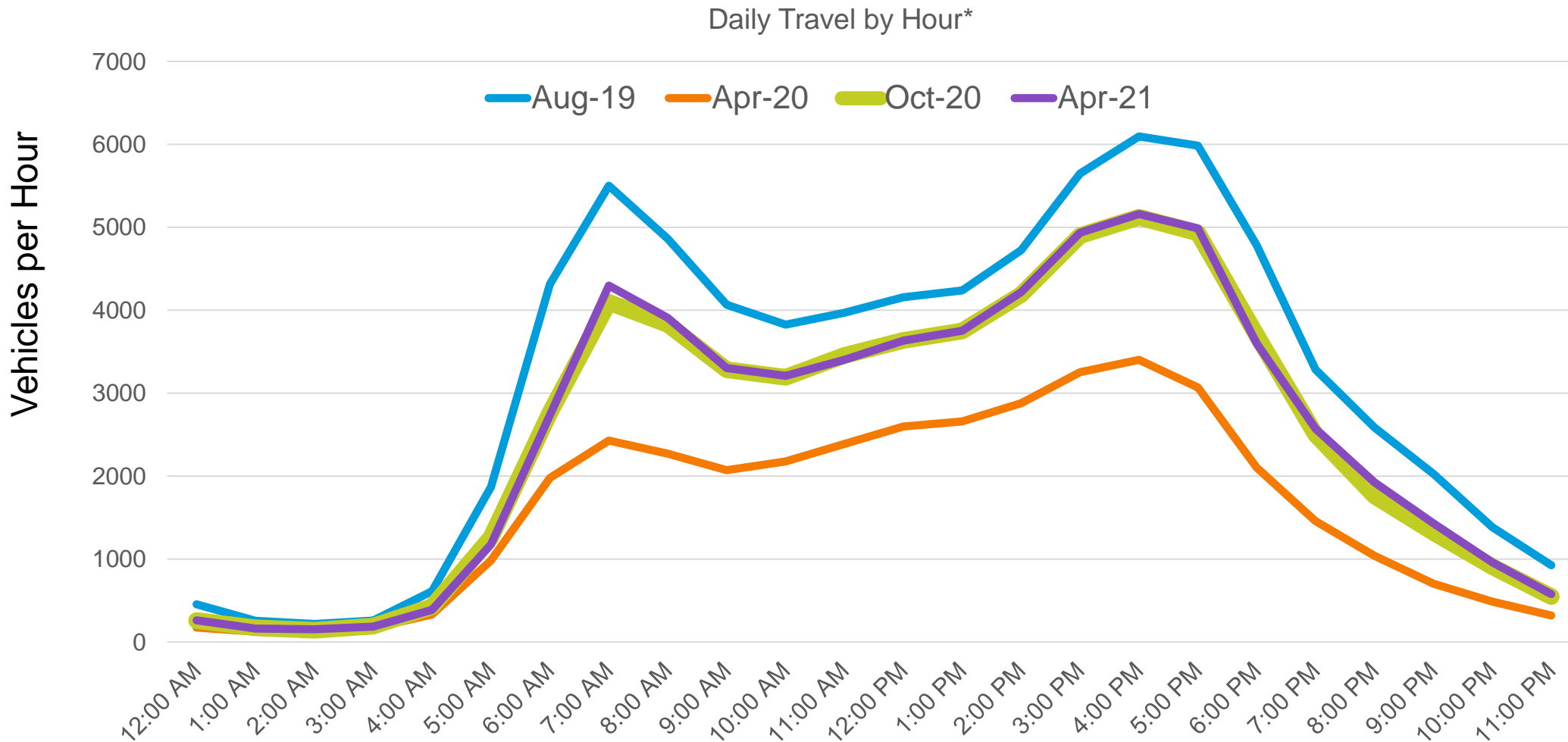


2020 VMT BY LOCATION: % CHANGE FROM 2019





TRAVEL VARIATION BY TIME OF DAY



* This is one location selected as a representation of the average



TRAVEL TRENDS SUSTAINED INTO 2021 (1)

- Higher telework rates remain among “office workers”
- Greater level of online education at home
- Significant reduction in transit ridership (office and entertainment)
- More package deliveries
- Crashes and fatalities down at first; back on the rise
- Dangerous speeding levels and careless driving observed



TRAVEL TRENDS SUSTAINED THROUGH 2020 (2)

- Major decrease in travel near:
 - Office parks, downtowns, universities
 - DIA, convention center, business hotels, entertainment venues
- Minor overall decrease in traffic = major decrease in congestion
- “Every day is Saturday” (except downtown)
- Traffic and parking impacts near mountain parks and trailheads
 - (Oct. 2020 TERC)





THE UNKNOWN FUTURE



QUESTIONS FOR FUTURE NEPA STUDIES

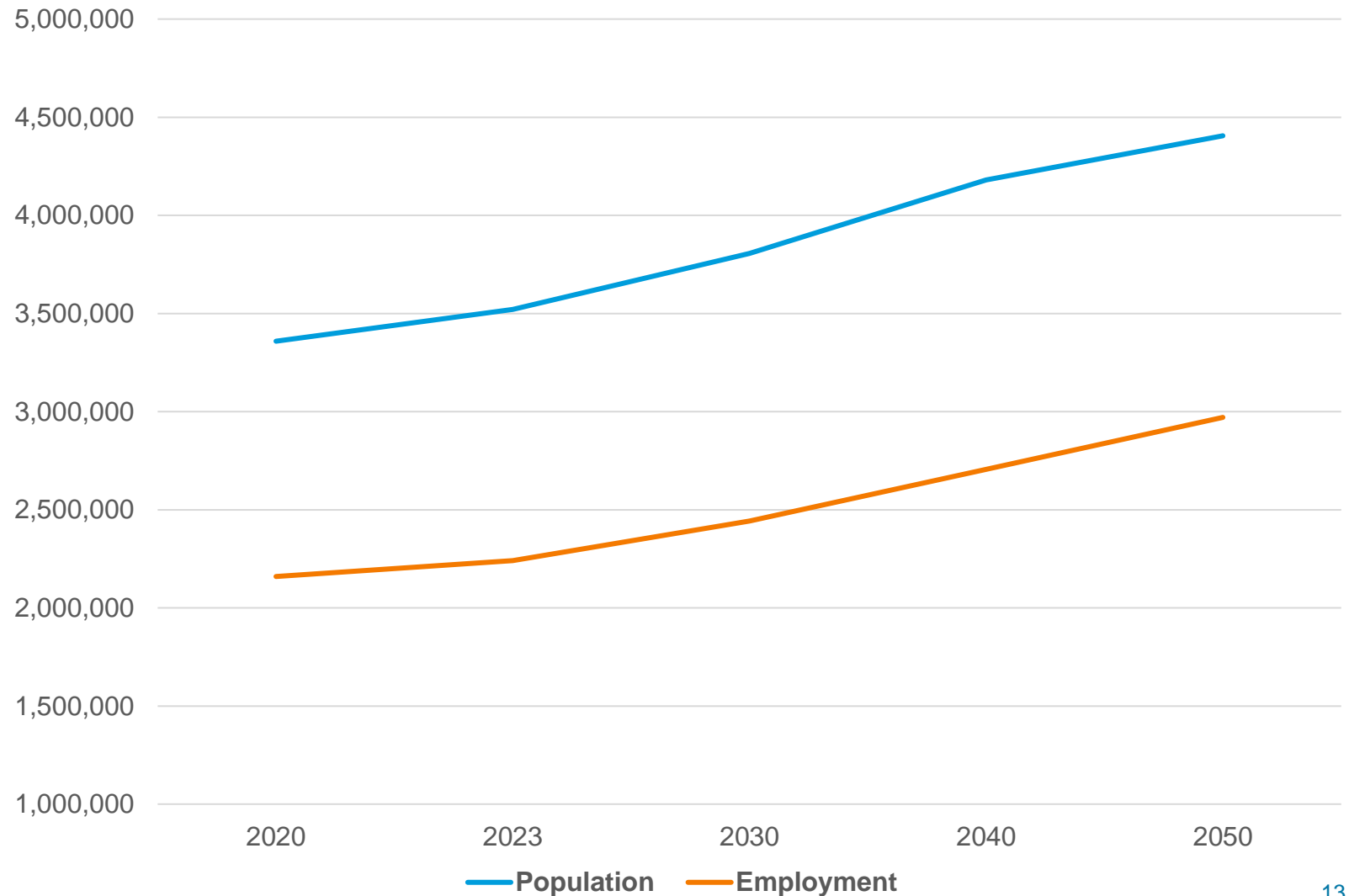
- What will be the “new-normal” level for telework by office workers?
 - Restructuring of office space and real estate?
- Will VMT increase with desire to live further from employer / home offices?
- When will transit ridership bounce back?
- Ridehailing services? Bicycle and scooter sharing?
- Economic recovery? Business travel? Conventions? Entertainment?
- Will the Denver region see continued pop. growth? (+ 1 million by 2050)

DEMOGRAPHIC ASSUMPTIONS 2020 TO 2050

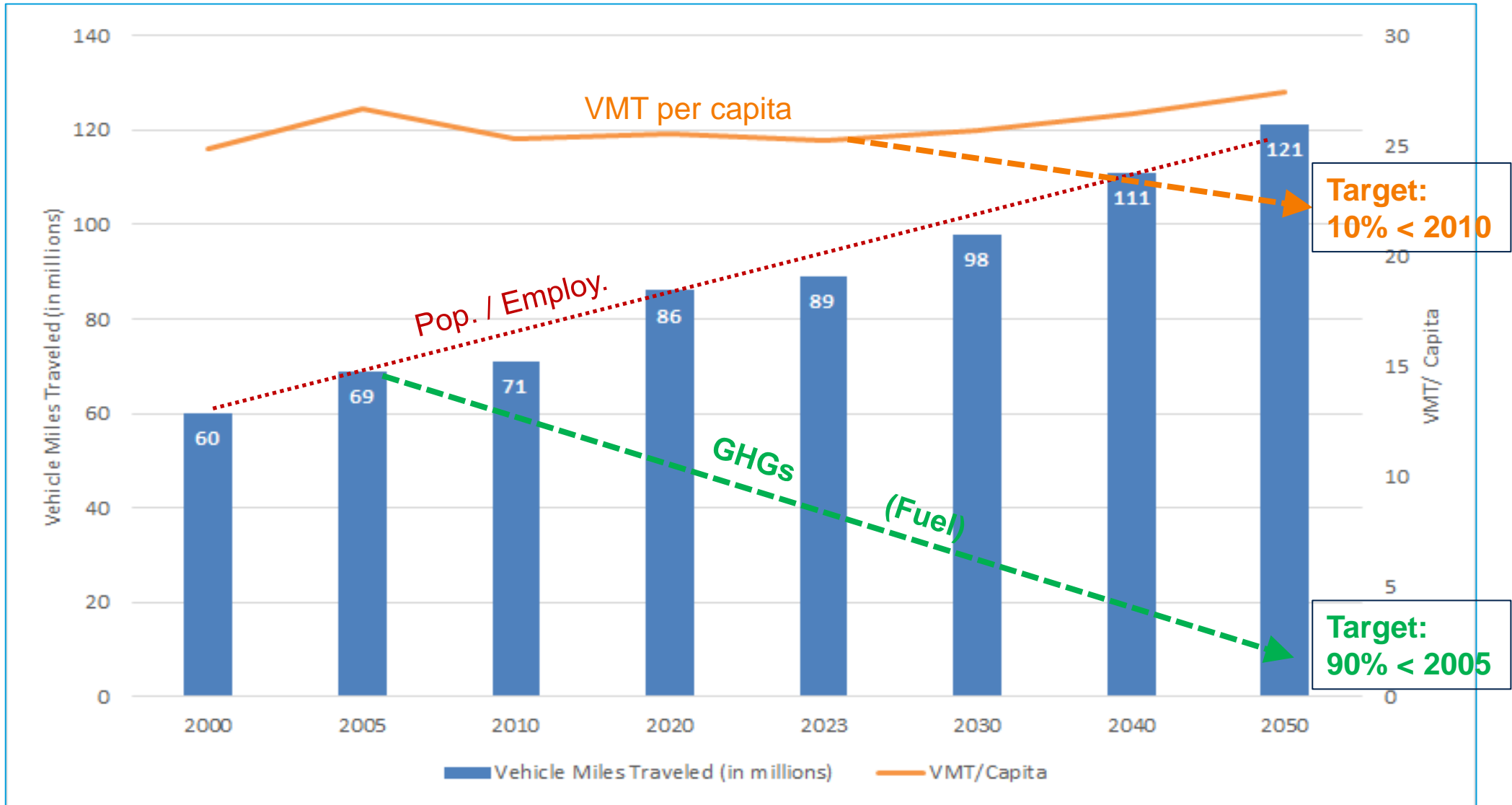


- 31% population growth
- 38% employment growth

Population and Employment Forecasts






DAILY VEHICLE MILES OF TRAVEL - FORECASTS & TARGETS



Source: US Census (historical); DRCOG forecast



MODELING/NEPA CONSIDERATIONS FOR FUTURE (1)

- Daily work-at-home levels – already adjusted 
 - Choice of “usually working at home” (workplace choice)
 - Option for periodic teleworking (daily activity)
- 2050 Regional Transportation Plan 
 - Major projects; extensive BRT system
- Commercial vehicle trip rates – packages and other home deliveries 
- DIA visitor, business, and employee travel
- Future travel lane modifications and repurposing?
 - Pedestrian, bicycle, transit, freight/goods, Automated Veh. guideways



MODELING/NEPA CONSIDERATIONS FOR FUTURE (2)

- Vehicle and roadway technology: Driver alerts, incident reduction, vehicle automation advancements, guideways)
- Real-time/multi-media traveler information: transit wait times, service options, time delays, reliability, etc.
- Time-of-day hourly trip distribution adjustments
- Transportation studies – what “observed” base year to use?
- Many unknowns for future
- Clearly denote modifications and assumptions in modeling efforts



STATEWIDE MULTIMODAL TRAVEL SURVEYS

- CDOT is leading large survey effort in 2021-2022 with MPOs
 - Households – traditional travel diaries
 - Cell phone trip app diaries
 - Locational Based Service (LBS) “big data” sources
 - Visitors, DIA, long-distance trips
 - Future tracking surveys
- Results in ~2023
- RTD surveys

- Data for policy and decision making
- Improve our multimodal travel models



THANK YOU – QUESTIONS ?