



# Unlocking Clean Transportation with Outcome- Based Policy

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Miguel Moravec, RMI  
February 10, 2026





GAS

BUS



# **Why fix it first?**

## ***Induced Demand***

# Expanding lanes fails to reduce congestion

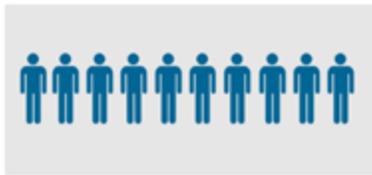
## 100 Largest Urban Areas in US, 1993-2017

Lane miles  
increase



42%

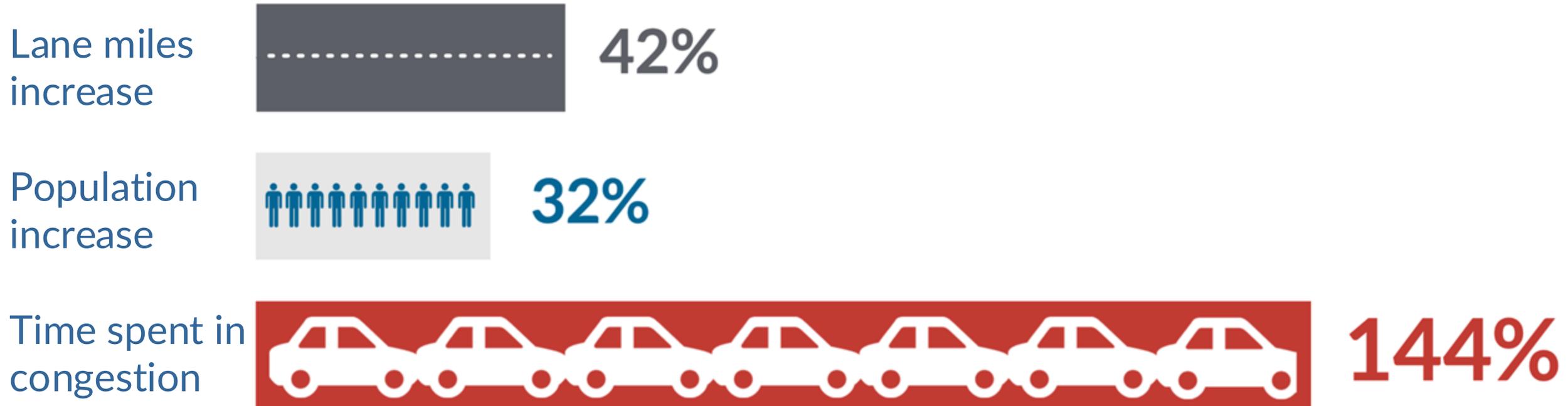
Population  
increase

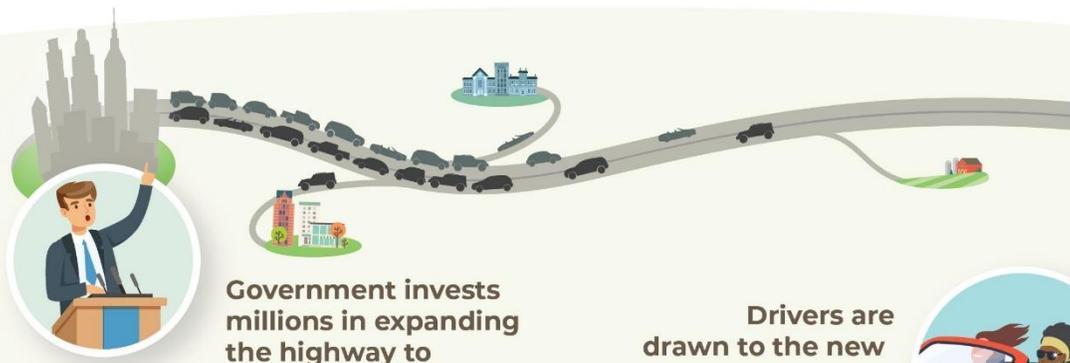


32%

# Expanding lanes fails to reduce congestion

*Across US metro areas, freeway capacity grew faster than population, yet delay exploded*



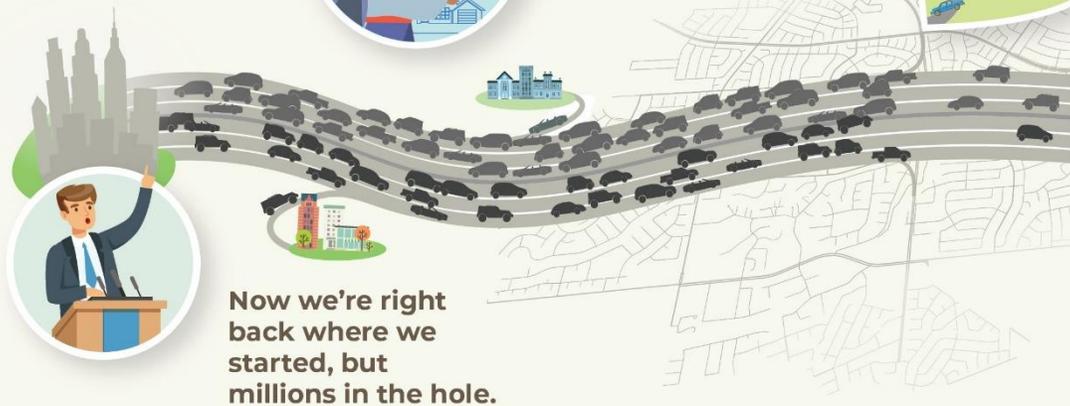


Government invests millions in expanding the highway to “alleviate” congestion.

Drivers are drawn to the new open road, even adding new trips where they previously avoided them.



Development follows, prompting more (and longer) car trips.



Now we're right back where we started, but millions in the hole.

## Induced demand

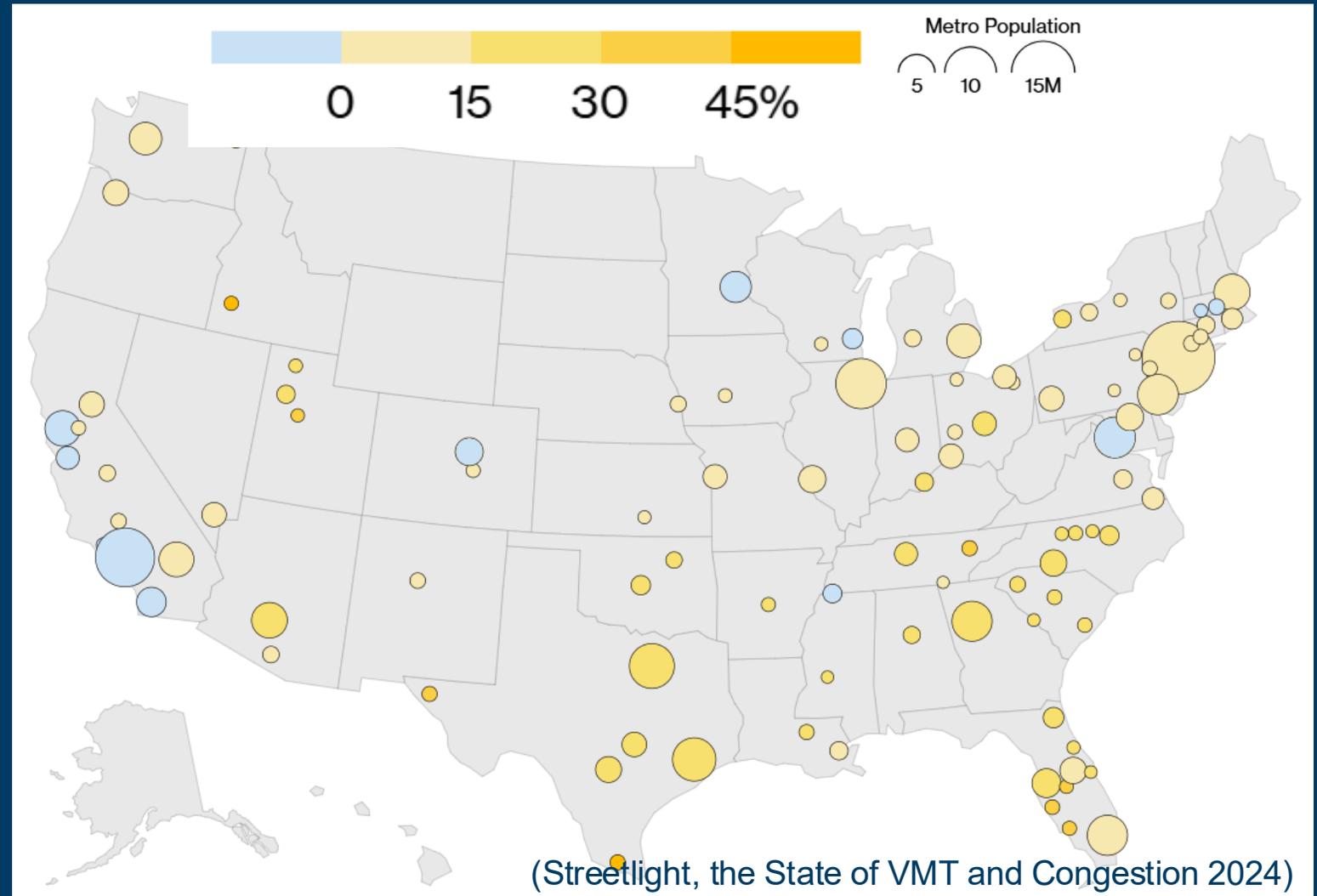
How highway expansion actually creates more traffic



more expansions  
=  
more traffic

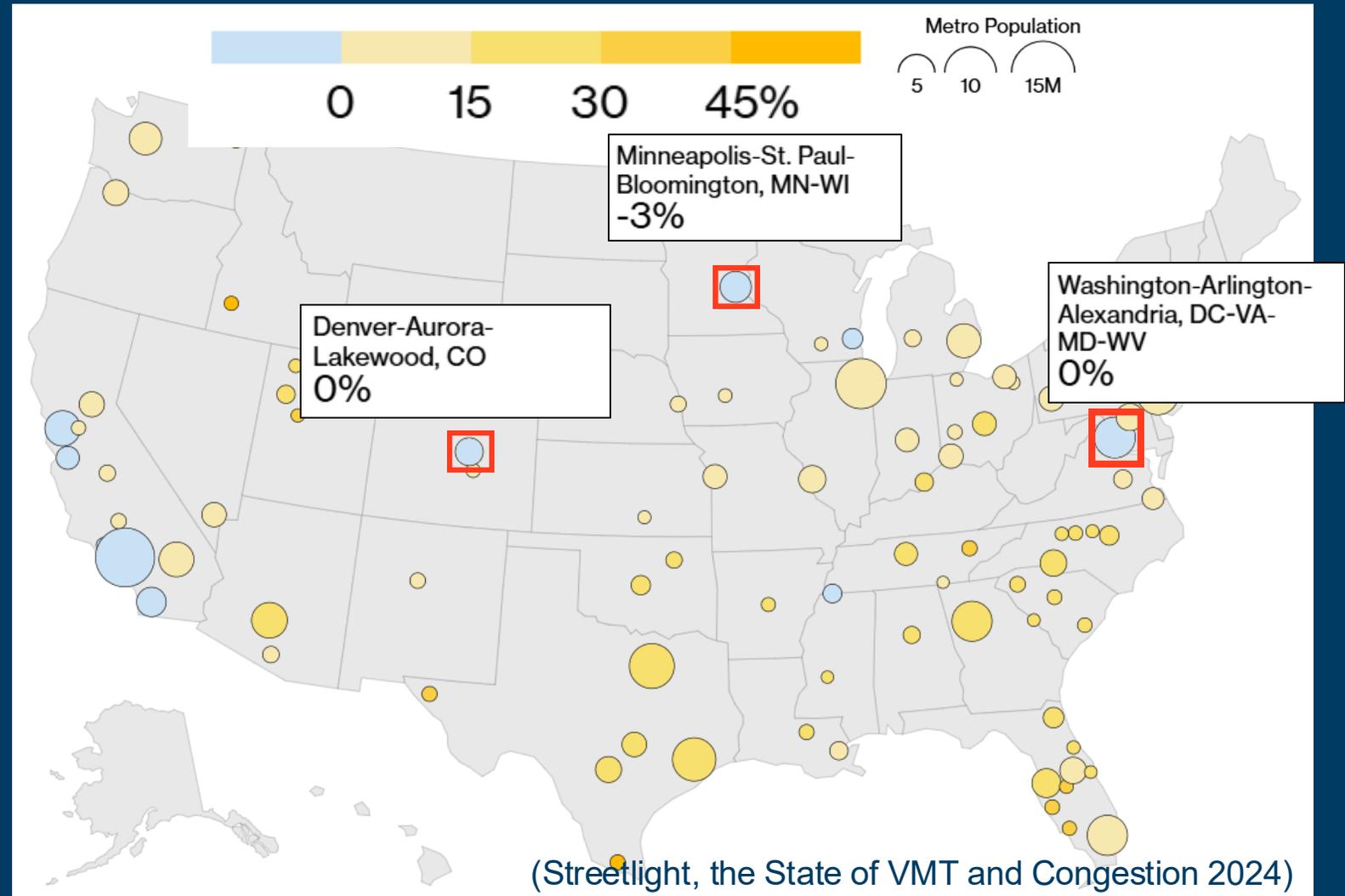
# Change in driving 2019-2024

- Traffic is up **12%** in most of country, US population grew **1%**



# Change in driving 2019-2024

- Traffic is up **12%** in most of country, US population grew **1%**
- Exception: 'fix it first' style policies helped growing regions **stabilize traffic**



← Outcome-Based Policy →

1



**Climate  
Goals**

2



**Affordable  
Choice**

3



**Fiscal  
Responsibility**

# 1

# Colorado



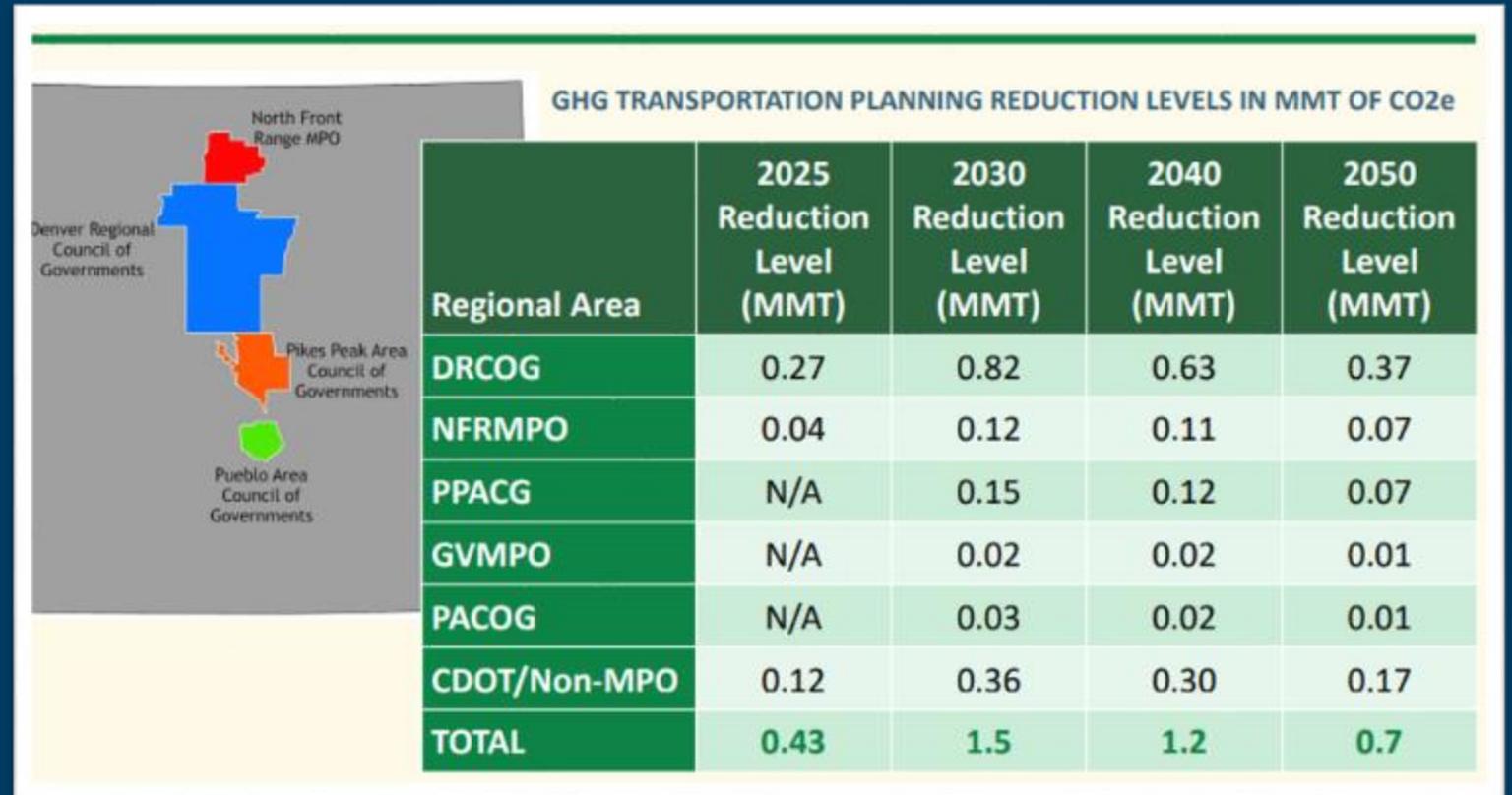
**Climate  
Goals**

**“CDOT GHG  
Planning Standard”  
SB 21-260**

# CDOT GHG Planning Standard

## How it works:

1. **Assign regional targets** based on state climate goals



# CDOT GHG Planning Standard

## How it works:

1. **Assign regional targets** based on state climate goals
2. **Close gap w/ menu** of multimodal and land use mitigations



# Real impact: CO policy shifted \$1 billion from expansions into multimodal solutions



5 Bus Rapid Transit Corridors



Bike, Walk, and Transit Networks



Transit Oriented Development

# Cost Savings: CO forecasts \$40 billion net benefit for residents by 2050

## The Benefits of CDOT's GHG Planning Standard: \$40 Billion by 2050

### Vehicle Operating Costs



**\$11 Billion Savings**

Consumer savings from lower fuel & maintenance costs.

### Safety (Crashes)



**\$19 Billion Savings**

Lower costs associated with traffic fatalities or injuries such as medical costs, insurance, vehicle property damage, lost workplace productivity.

### Traffic Delay



**\$9 Billion Savings**

Decreased travel time for commuting, errands, personal travel & freight movement.

### Air Pollution



**\$270 Million Savings**

Lower healthcare costs from less local air pollution.

### Social Cost of Carbon



**\$1.2 Billion Savings**

Avoided financial losses and costs to pay for damages caused by climate change.

### Physical Inactivity



**\$618 Million Savings**

Improved health from more physical activity such as walking and biking.

# Colorado uses climate targets to unlock fix it first outcomes



# 2

# Minnesota



**Affordable  
Choices**

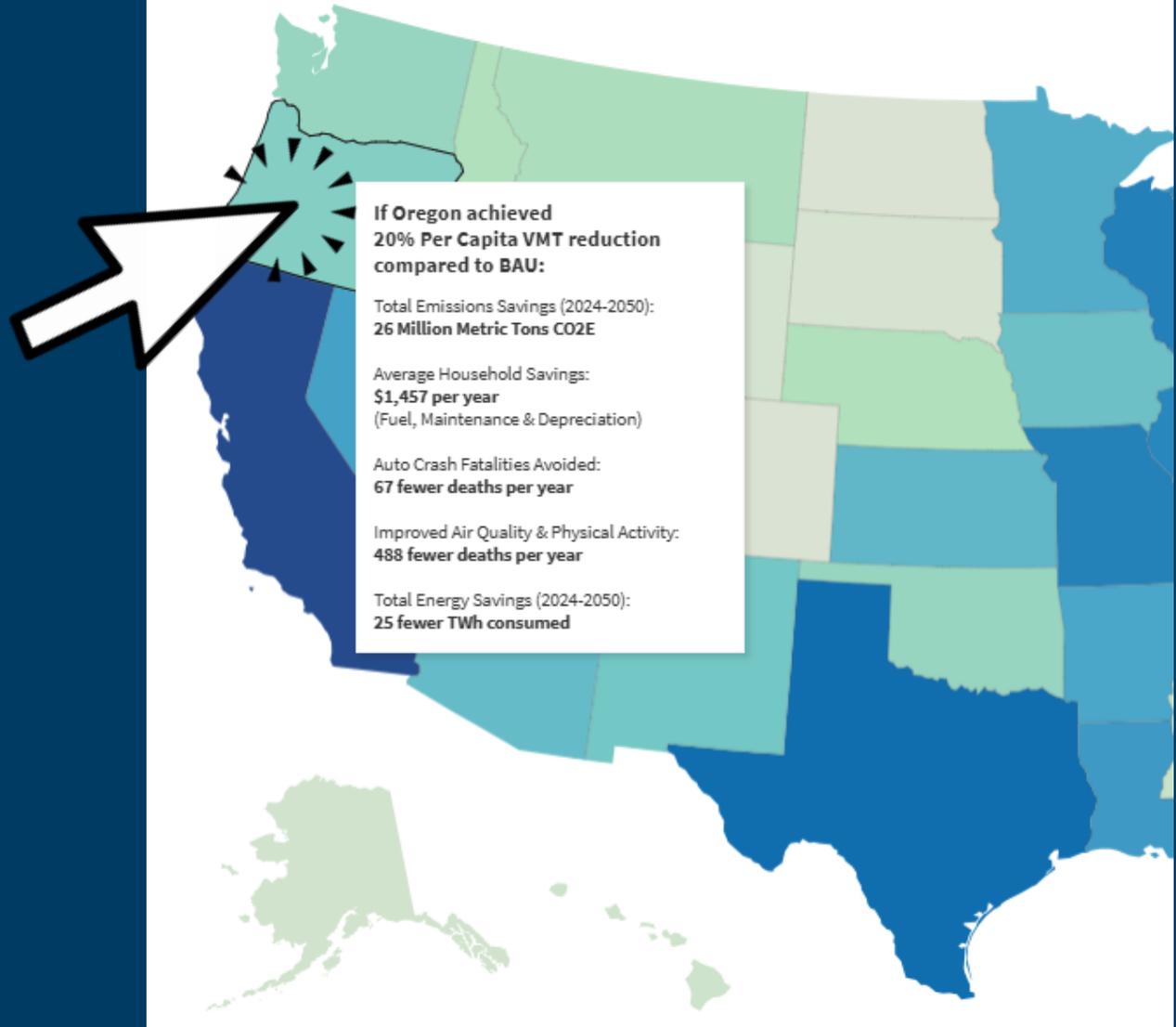
**“MnDOT Driving Down  
Emissions Framework”**

**HF 2887 / 5242**



See your state's  
"Smarter MODES"  
cost-savings  
online

Avoided CO2e  
Emissions (Million  
Metric Tons)



**If Oregon achieved  
20% Per Capita VMT reduction  
compared to BAU:**

Total Emissions Savings (2024-2050):  
**26 Million Metric Tons CO2e**

Average Household Savings:  
**\$1,457 per year**  
(Fuel, Maintenance & Depreciation)

Auto Crash Fatalities Avoided:  
**67 fewer deaths per year**

Improved Air Quality & Physical Activity:  
**488 fewer deaths per year**

Total Energy Savings (2024-2050):  
**25 fewer TWh consumed**

# MN Driving Down Emissions: lawmakers spoke to benefits of affordable choices

## Cost Savings from Climate-Smart Transportation, Minnesota

If MnDOT met its statewide VMT goal and expanded transportation options, taxpayers would benefit from the following savings:

■ Avoided Crash Fatality Costs ■ Avoided Crash Injury Costs ■ Avoided Fuel/Charging Costs ■ Avoided Maintenance Costs ■ Avoided Air Quality Fatality Costs



**Analysis: Minnesotans would save up to \$91 billion from climate-smart transportation**

Investments in clean transportation would expand options while saving Minnesotans money and making communities safer and healthier.



File 2887

Transportation firm a few weeks ago, Rocky Mountain Institute released a study

Saturday, May 21, 2023

# MN Driving Down Emissions: bill passes, adds teeth to CO model with “VMT” targets

**PROJECTS MUST MEET 2050 TARGETS TO**  
**reduce per capita vehicle miles traveled (VMT) by 20%**  
**reduce greenhouse gas emissions (GHG) by 100%**



If it doesn't meet VMT and GHG targets, MnDOT must cancel or adjust the project...



or offset the increased GHG and VMT by adding sustainable options, like bike lanes and/or new transit lines



GHG VMT

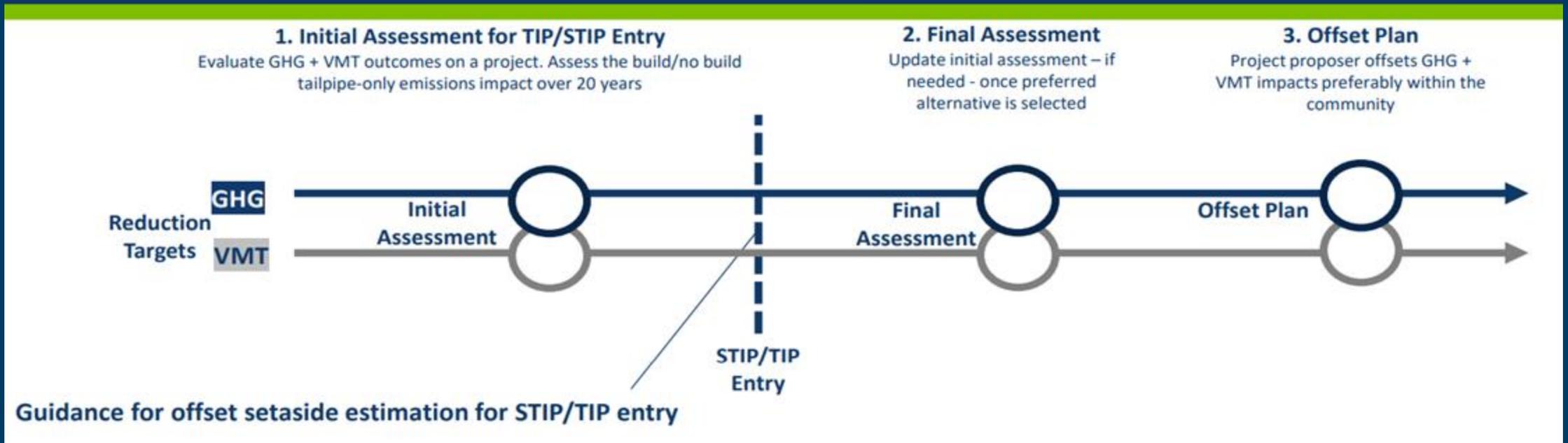


GHG VMT

*move*  
MINNESOTA



# MN Driving Down Emissions: projects must be evaluated early, paired with offset funding





**Minnesota uses affordable choices (VMT) to unlock fix it first outcomes**

# 3

# Virginia



**Fiscally  
Responsible**

**“SMART SCALE  
Project Prioritization”  
HB 2 \*\***

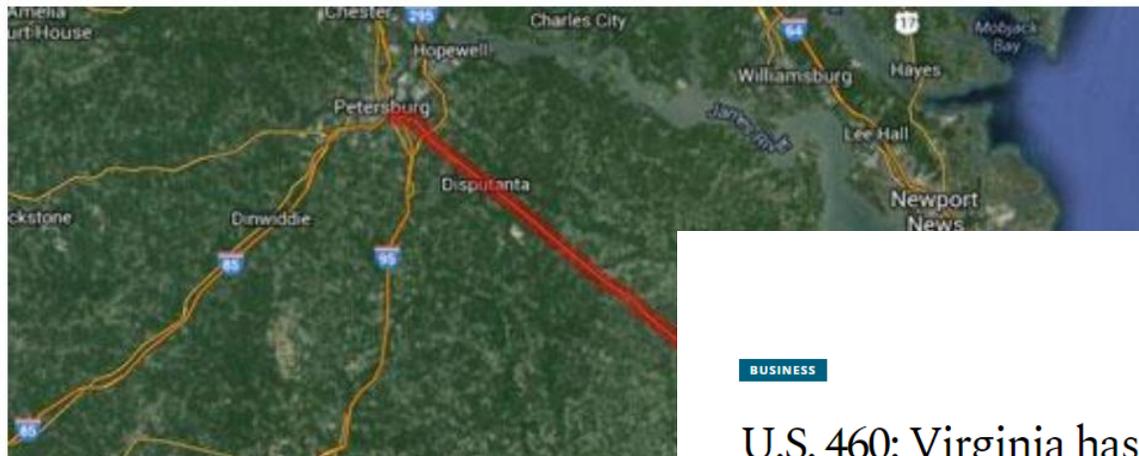
# Virginia SMART SCALE: 2014 highway cost-overrun, cancellation demands accountability

ROADS

## State suspends \$1.4 billion U.S. 460 project

BY JIM NOLAN AND MICHAEL MARTZ  
Richmond Times-Dispatch

Mar 14, 2014



## Contract terminated for team chosen to complete Route 460 project

POSTED 4:10 PM, APRIL 15, 2015, BY BECCA MITCHELL AND NADEEN YANES, UPDATED AT 09:21 PM, APRIL 15, 2015

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BUSINESS

## U.S. 460: Virginia has spent \$270 million for a road that may not be built

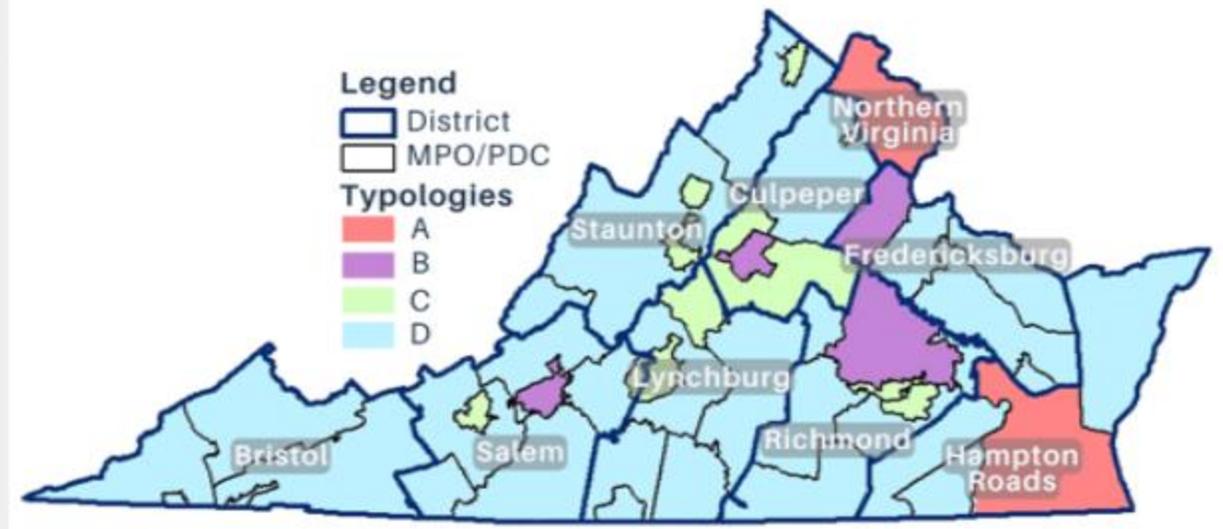
By TRAVIS FAIN and TFAIN@DAILYPRESS.COM  
DAILY PRESS | APR 05, 2014 | 7:34 PM | RICHMOND

TWITTER FACEBOOK SHARE

With more than \$270 million already spent and more on the line, state

# Virginia SMART SCALE: Legislature acts - 6 transparent metrics, weighted by region

<b>Safety</b>	Reduce the number and rate of fatalities and severe injuries
<b>Congestion</b>	Reduce person-hours of delay and increase person throughput
<b>Accessibility</b>	Increase access to jobs and travel options
<b>Land Use</b>	Support transportation-efficient land development patterns
<b>Economic Development</b>	Support economic development and improve goods movement
<b>Environment</b>	Improve air quality and avoid impacts to the environment

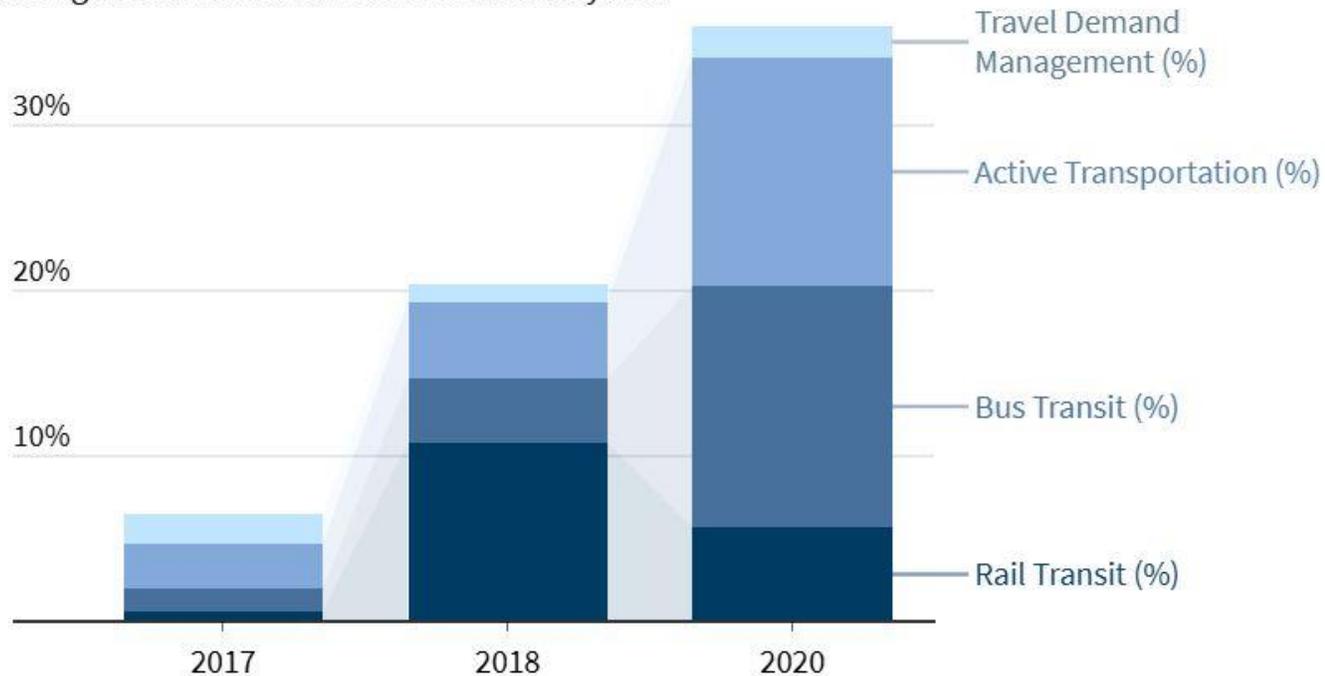


Factor	Safety	Congestion	Accessibility	Land Use	Economic Development	Environment
Type A	5%	45%	15%	20%	5%	10%
Type B	20%	15%	20%	15%	20%	10%
Type C	25%	15%	15%	10%	25%	10%
Type D	30%	10%	10%	10%	30%	10%

# Virginia SMART SCALE: State road expansion funding decreased substantially

## Virginia SMART SCALE increases multimodal funding sixfold (6x)

Results are the proportion of state discretionary dollars allocated to Multimodal Strategies during SMART SCALE's first three award cycles.



Source: SSTI - Three steps toward smarter transportation investments

“It's hard under the SMART scale that Virginia operates under for us to get that kind of funding for I-73 [expansion]”

- State Sen. Bill Stanley, R-Franklin County

# Virginia SMART SCALE: Transit investment attracts \$2.5B Amazon HQ2 to Arlington

3 Metrorail stations served by Blue and Yellow lines

5 Arlington Transit bus routes

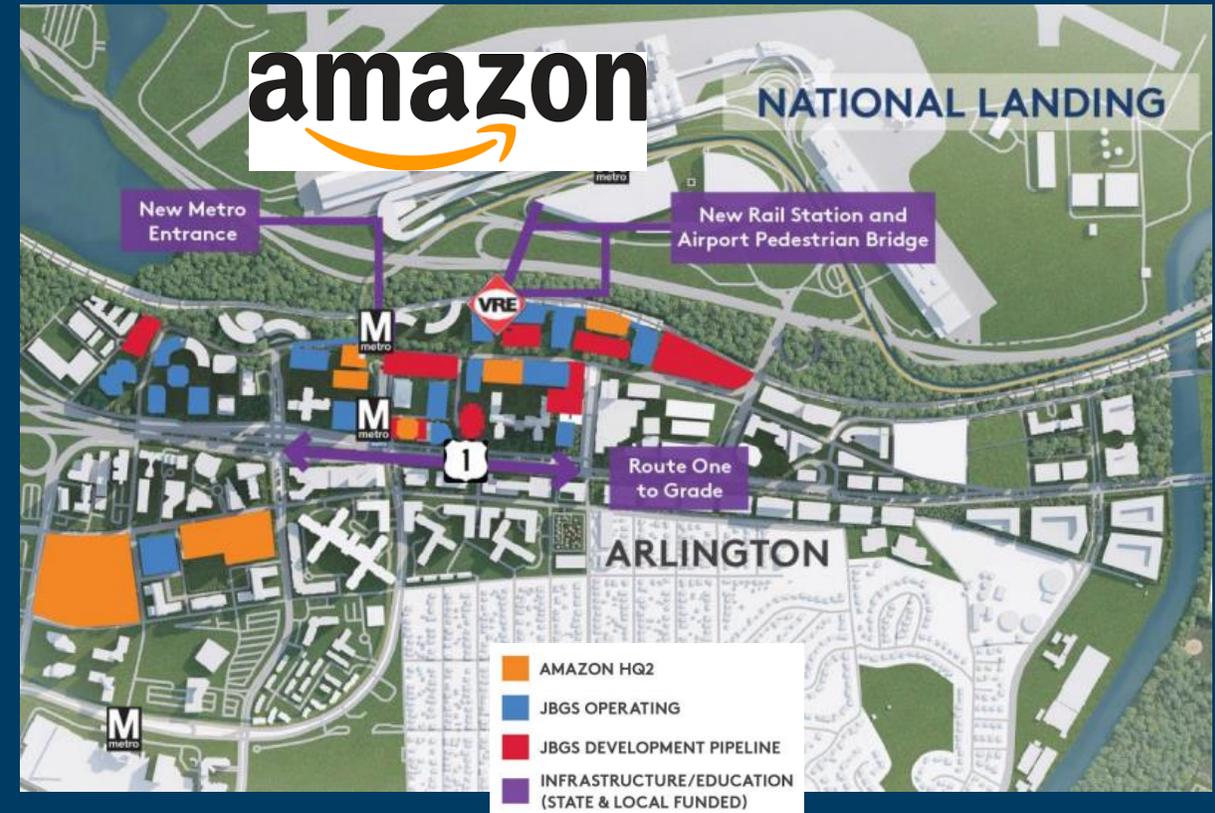
9 WMATA bus routes

3 commuter bus routes

Two trailheads accessing hundreds of miles of regional trails

Bus rapid transit with dedicated lanes

Only 34% of National Landing employees drive alone to work, compared with a national average of 76%<sup>1</sup>



Virginia is #1 state for business

# Virginia uses fiscal responsibility to fix it first outcomes

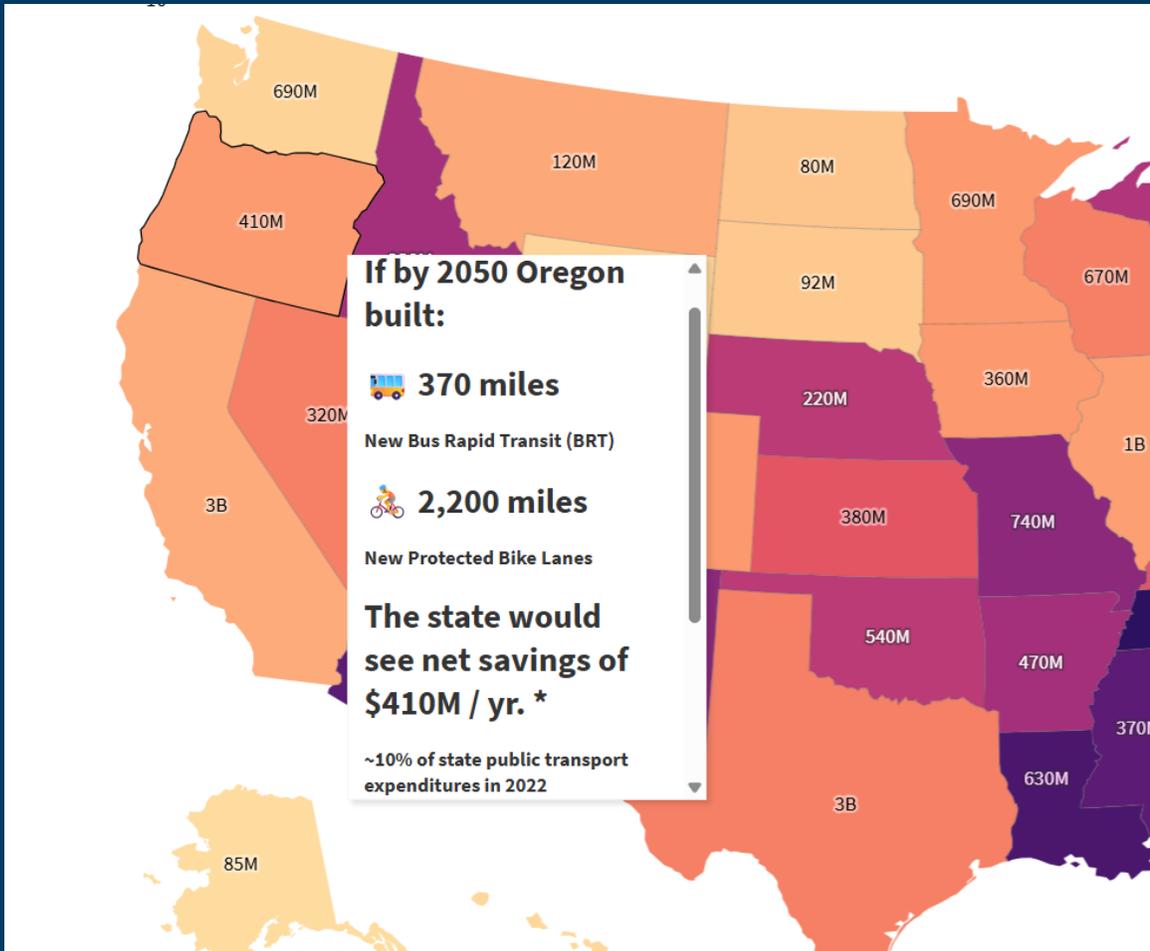




**How does this apply to Oregon?**

# Oregon can save \$410 M / yr by 'fixing it first'

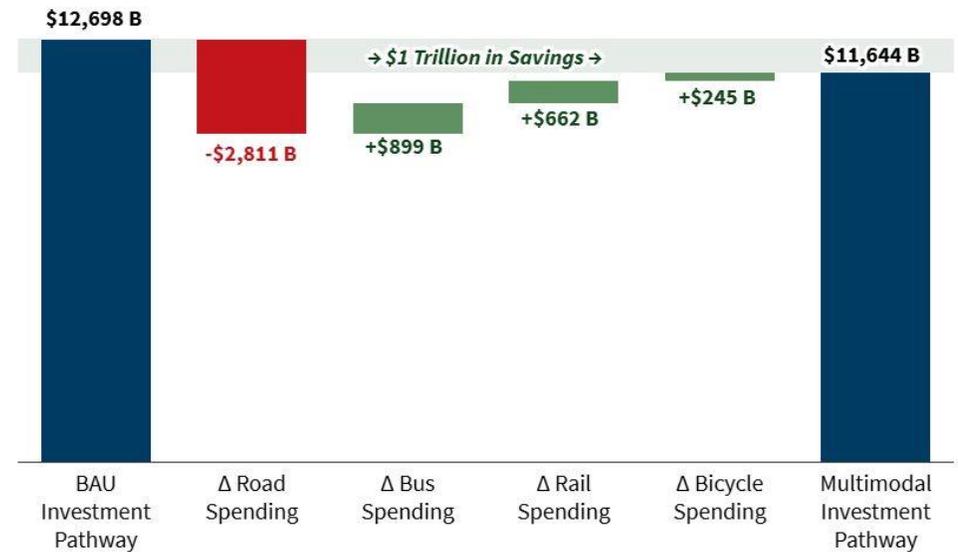
Meeting urban travel demand by prioritizing the buildout of a complete multimodal systems could unlock net transportation expenditure savings of ~10% in OR



## Investing in better bus, rail, and cycling infrastructure saves \$1 trillion and helps commuters skip traffic.

This graphic depicts two different cumulative investment pathways for urban U.S. transportation expenditures between 2015 and 2050: Business as Usual (blue, left) vs. Maximum Feasible Multimodal (blue, right).

- Cumulative Expenditures by Scenario
- Change (Δ) in Road Spending
- Change (Δ) in Multimodal Spending



Source: ITDP - Compact Cities Electrified: USA

1



## Climate Goals

CO SB21-260  
(2021)

2



## Affordable Choice

MN HF 2887 (2023)  
MN HF 5242 (2024)

3



## Fiscal Responsibility

VA HB 2 (2014)  
VA HB 2241 (2017)

# Questions:

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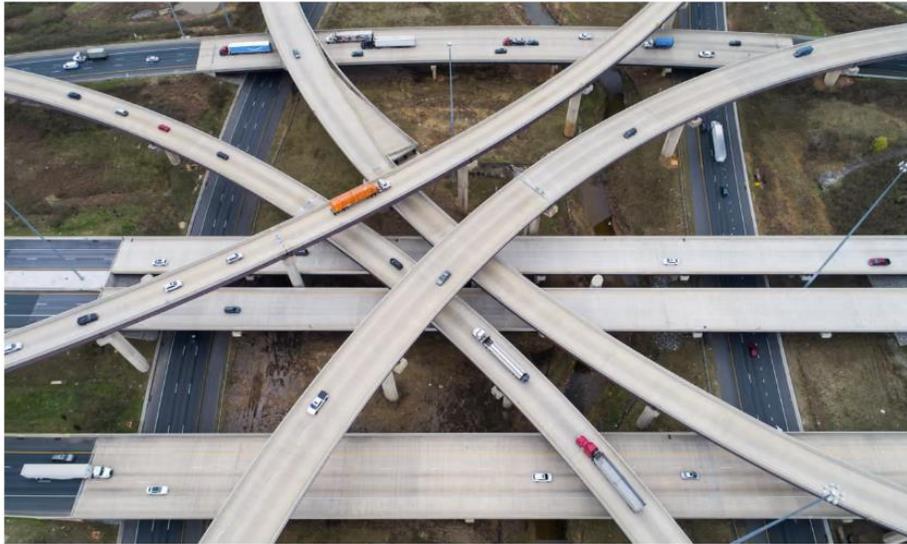


# Appendix



## US spends billions on roads rather than public transport in 'climate time bomb'

New analysis finds money from Biden's \$1.2tn infrastructure bill has overwhelmingly been spent on widening highways for cars

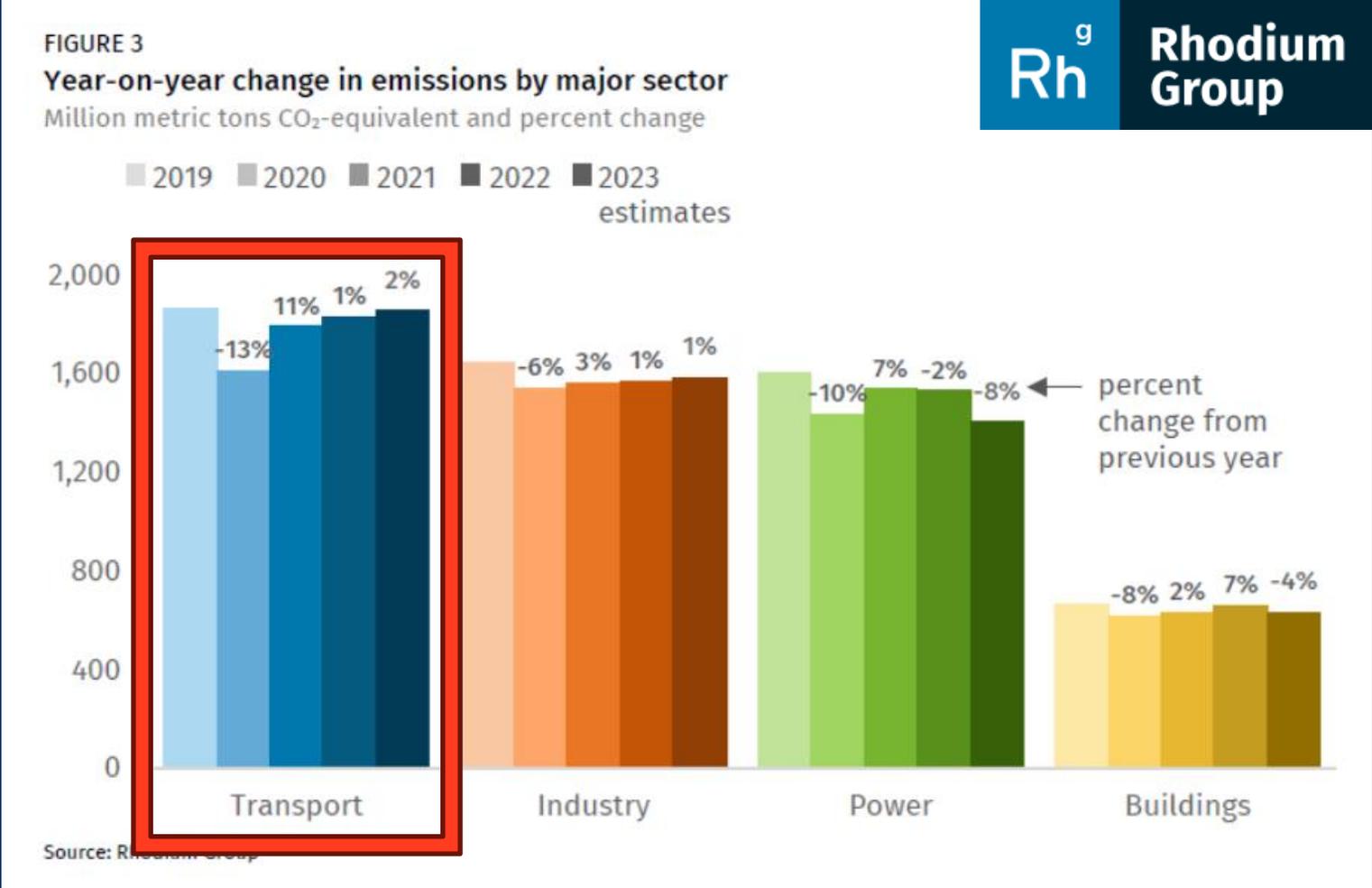


Of reported funds dispersed to states, more than half - around \$70bn - have been spent on the resurfacing and expansion of highways. Photograph: Jim Lo Scalzo/EPA

**Highway Expansion:**

- climate "time bomb"
- fails to reduce traffic
- gobbles limited \$

# more traffic = more climate pollution



# Rural Mitigation Example: Roaring Fork Valley Bike Share Expansion

Table A1-2.3 TDM Grant: City of Aspen, Micro Transit and Bike Share Pilot Expansion

Component	Description of information to be submitted with application.			
Measure Description	The expansion of an existing micro transit service program, demonstrating new, on-demand service models and approaches to users requesting services. The program will also include the installation of permanent e-bike share infrastructure and the purchase of additional shared e-bikes for the existing fleet. By 2030, the program anticipates adding more than 46 e-bikes and incorporating successful micro-transit models demonstrated within the pilot into long-term transit programming within the city.			
Timing	<ul style="list-style-type: none"> <li>• Anticipated Start Date: July 2022</li> <li>• Completion Date: March 2023 (end of CDOT grant period).</li> </ul>			
GHG Reductions	2030: 7 Metric Tons			
	Mitigation Project Type	Metric (per 100 bikes)	Points per Metric in 2030	Total
	Bikeshare Program	0.46	15	7
Co-benefits	Annual VMT reduced per bike	Number of bikes	Total	
	531	46	54,426	
	Pollutants Avoided	Estimated Kg avoided annually (2030)		
	CO	56		

