

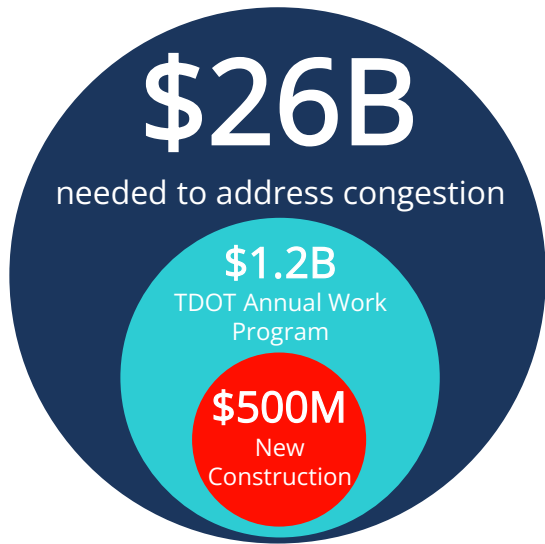
**Build
With
Us**



TDOT
Department of
Transportation

Infrastructure Priorities

Bottom-Line Up-Front: Challenges



Congestion



Delivery



Workforce

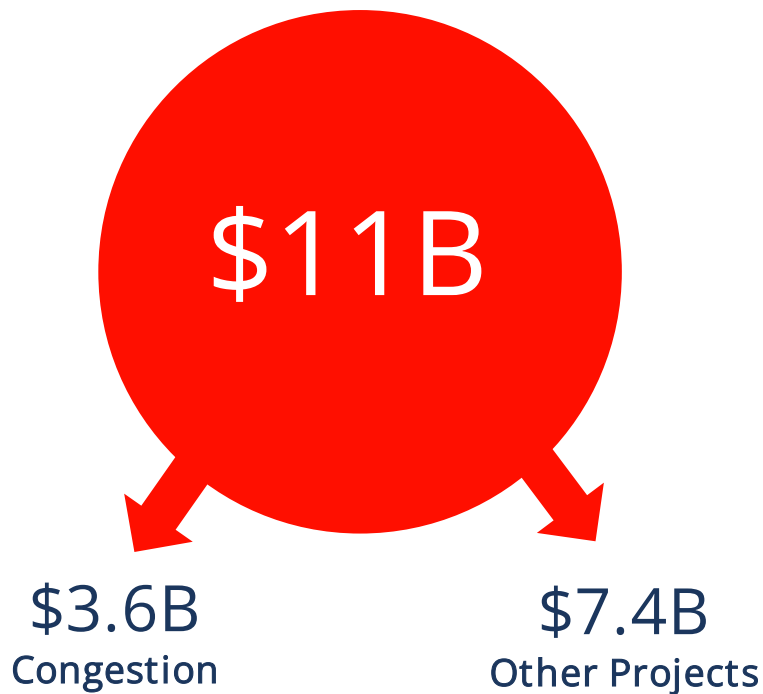
Needed
\$522M
\$11B for 10-15-year delivery

2017 IMPROVE Act
962 Projects

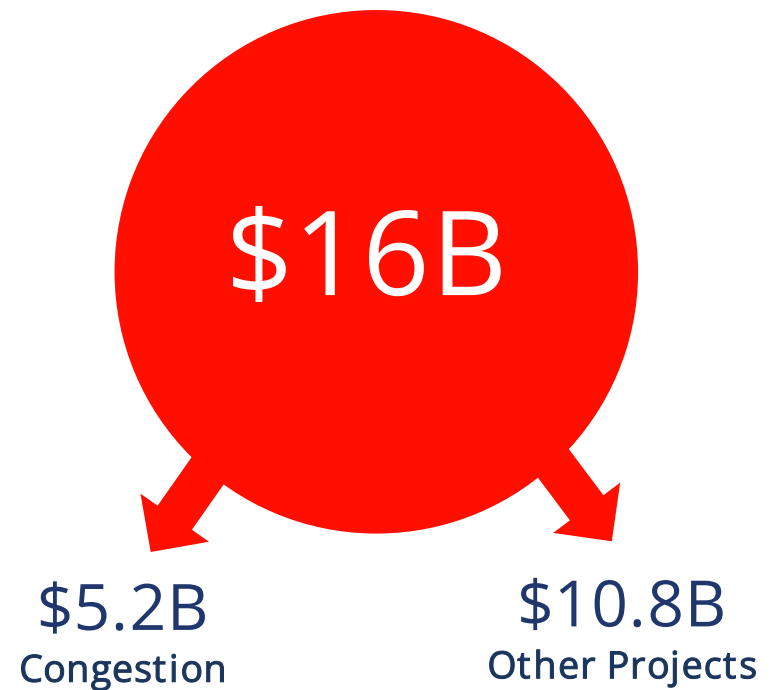
Implemented
\$244M
\$16B balance for 50+-year delivery
(Revised estimates + inflation)

Bottom-Line Up-Front: Challenges

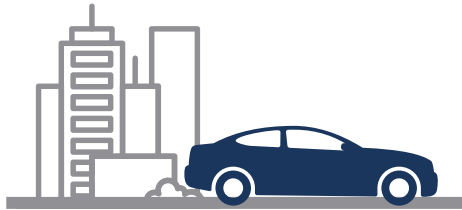
IMPROVE Act Cost:
2017



Remaining IMPROVE Act Costs:
2022



Bottom-Line Up-Front: Challenges



\$17.5B

Urban Congestion



\$12.4B

Rural Congestion

=



\$29.9B

Congestion Total







(\$3.6B)
IMPROVE Act

\$26B

Statewide Congestion Needs

Bottom-Line Up-Front: Off the Table

This proposal does **NOT**:

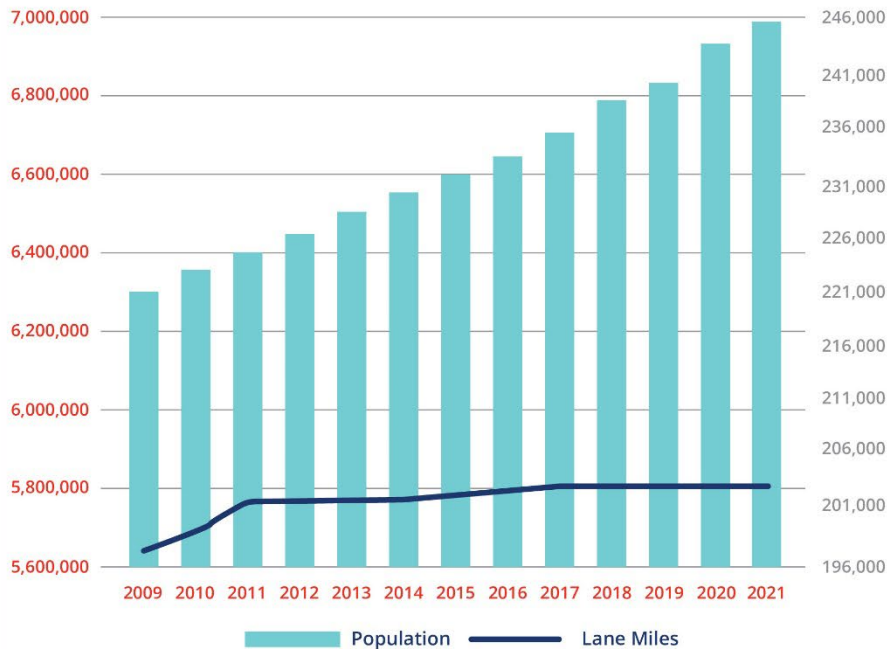
-  Do nothing
-  Propose raising the gas tax
-  Propose issuing road debt
-  Spend a disproportionate amount of funds in urban areas, to the detriment of rural areas
-  Reduce road and bridge maintenance budget
-  Propose toll roads

Challenge: Congestion

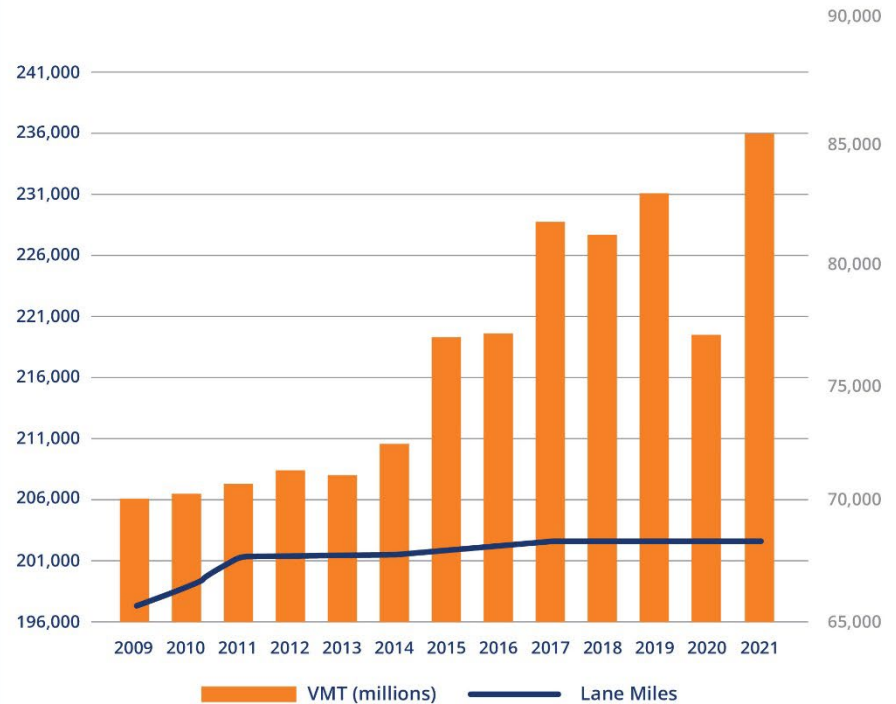
Growth in Population & Traffic Outpacing Roadway Capacity Investments

Recent Population and Vehicle Miles Traveled (VMT) Growth vs. Lane Miles

Growth of Population vs. Lane Miles



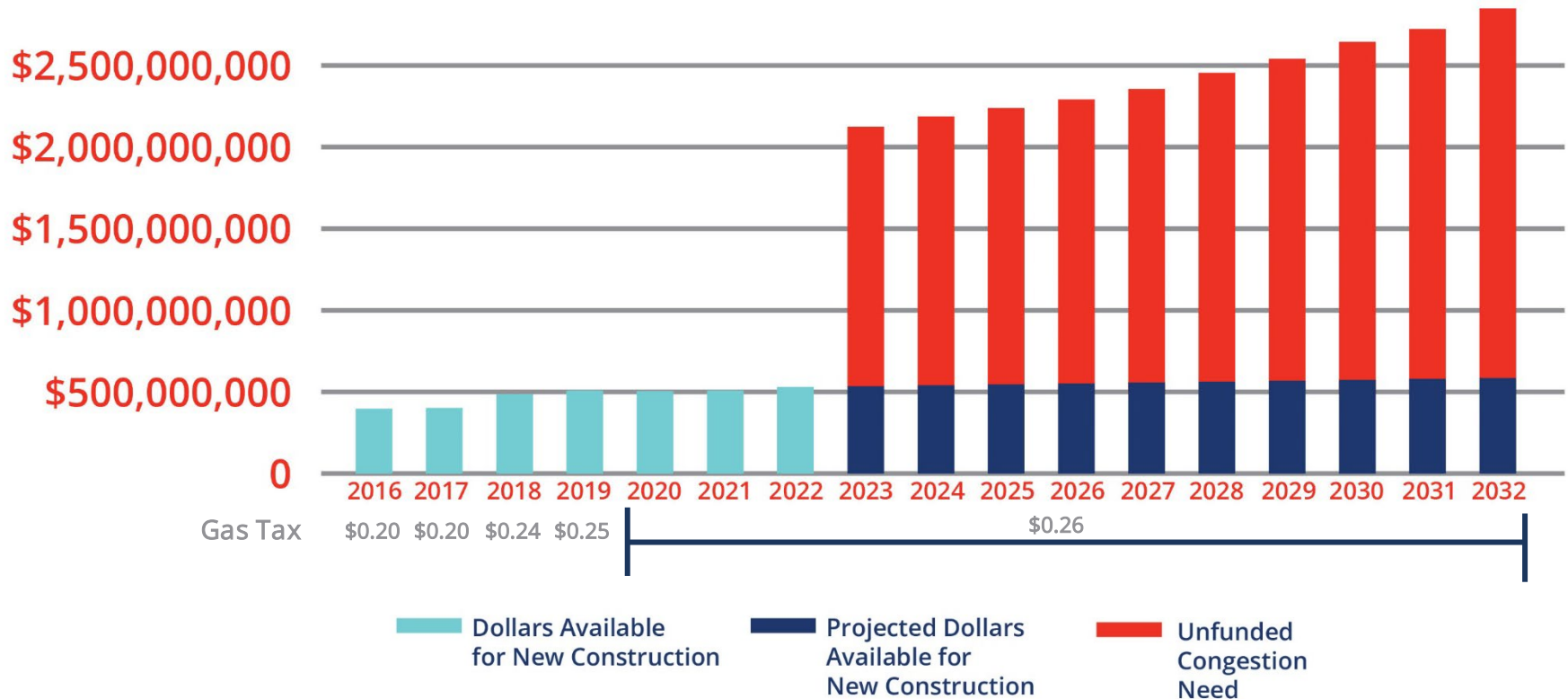
Growth of VMT vs. Lane Miles



Challenge: Congestion

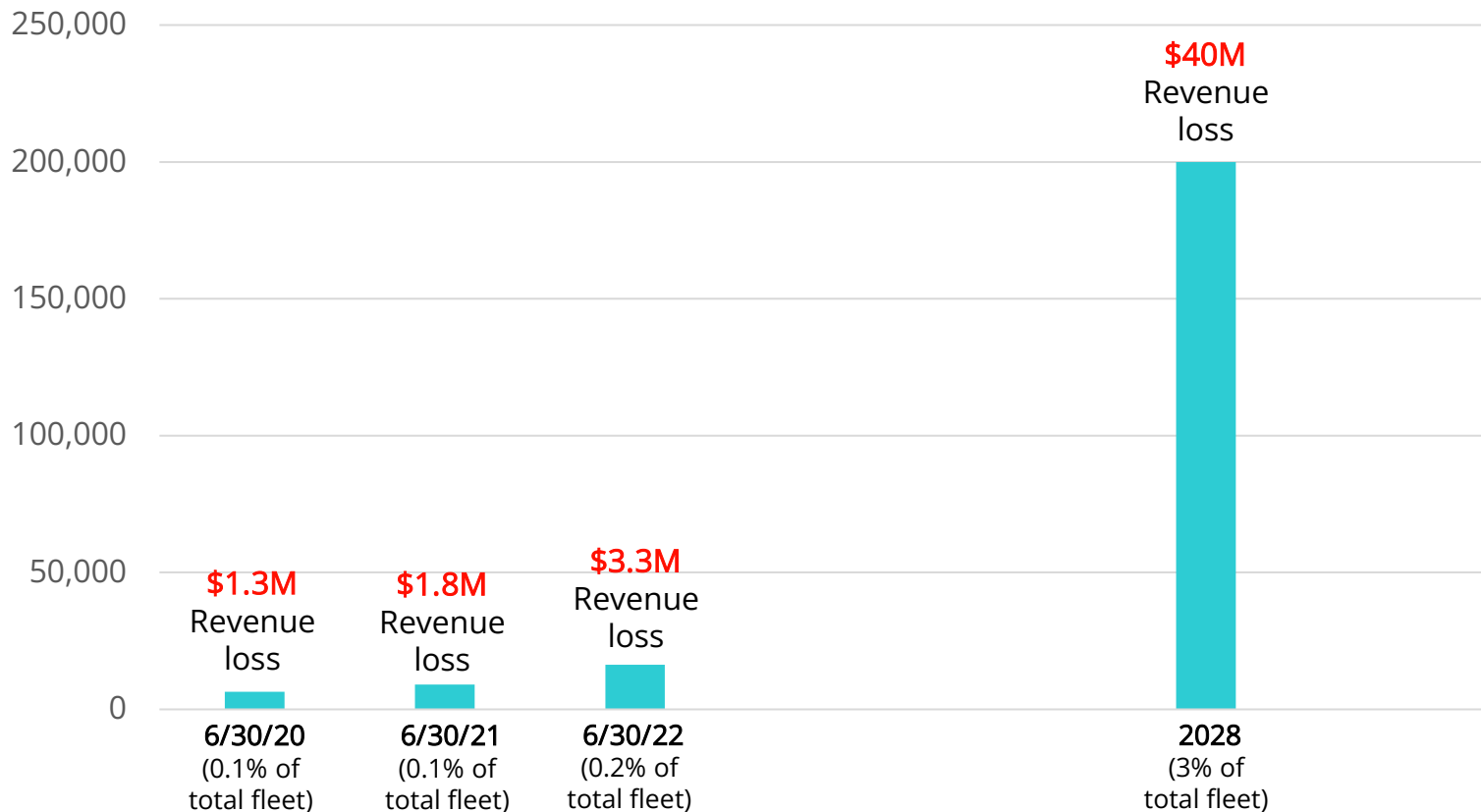
Why Current Revenue Doesn't Keep Pace

Dollars Available vs. Needed Revenue to Address Congestion



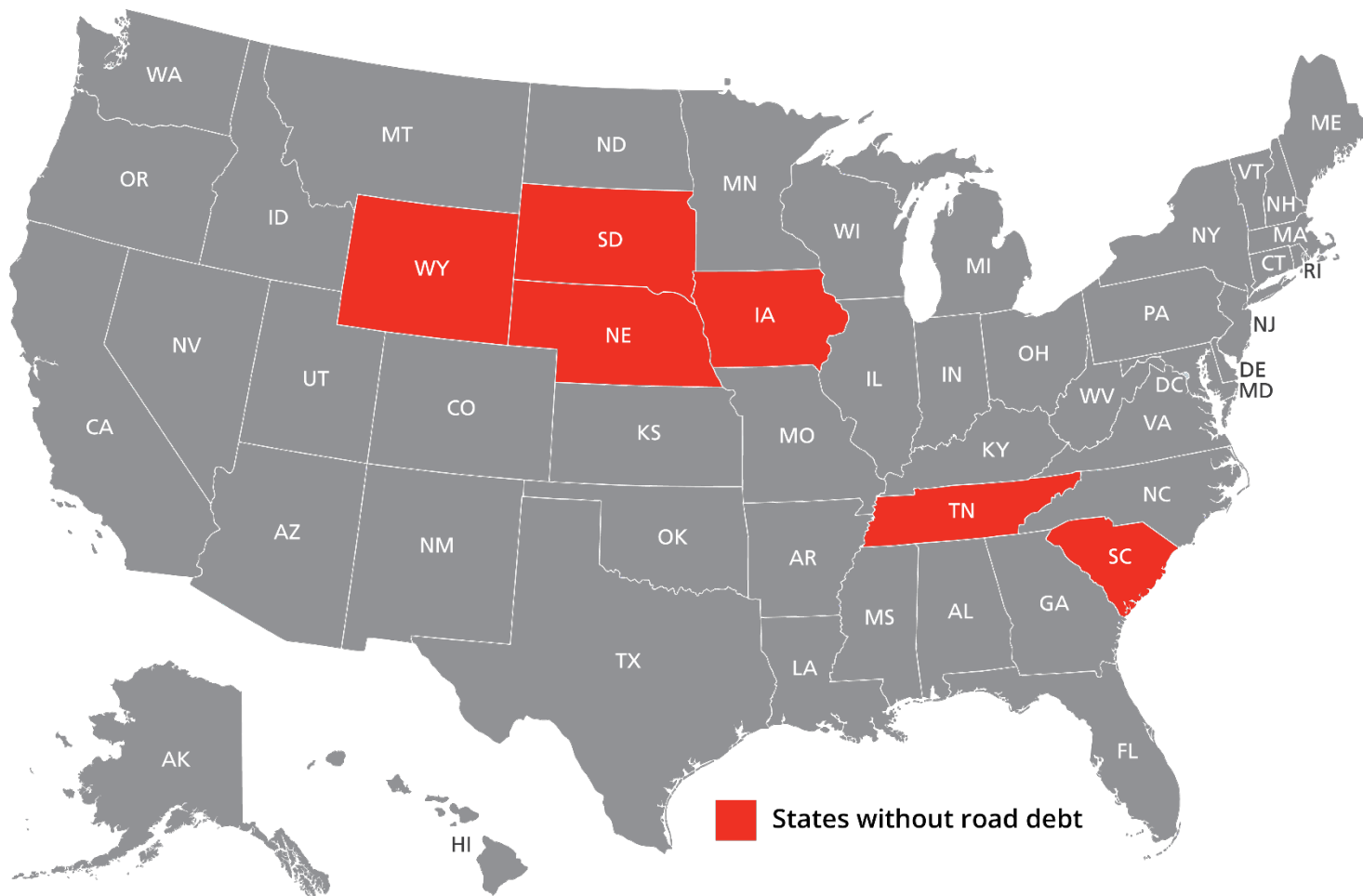
Challenge: Congestion

Growth in Purely Electric Vehicles

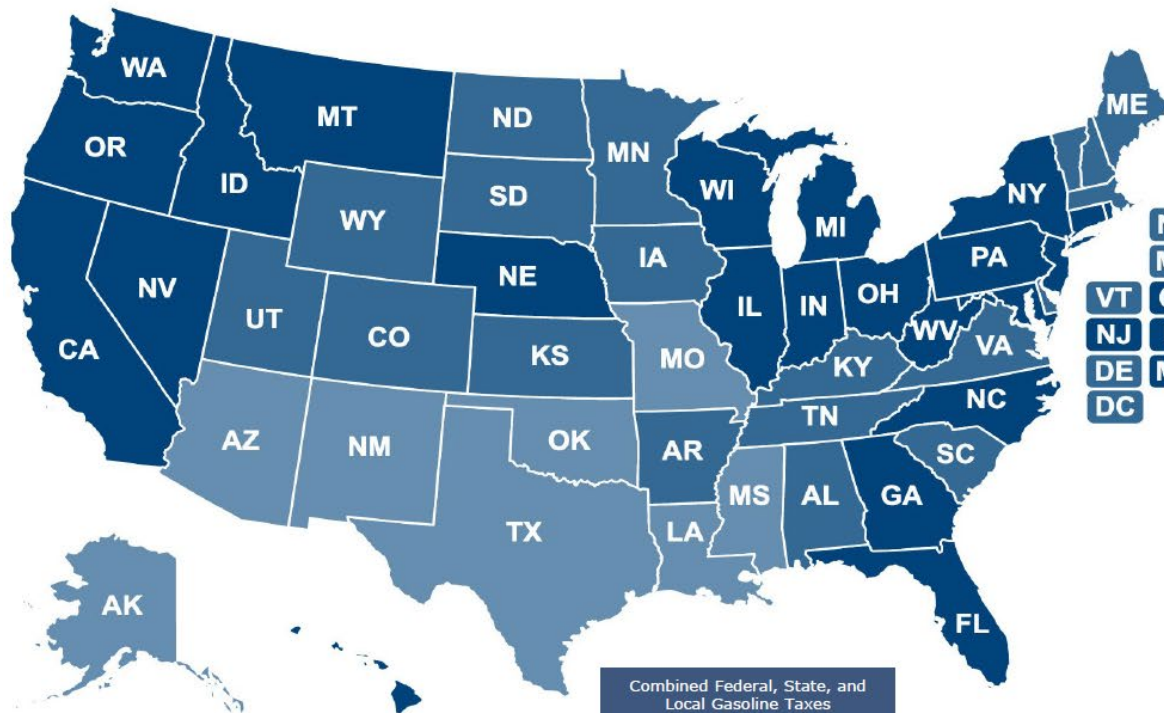


Challenge: Congestion

We Don't Take on Road Debt

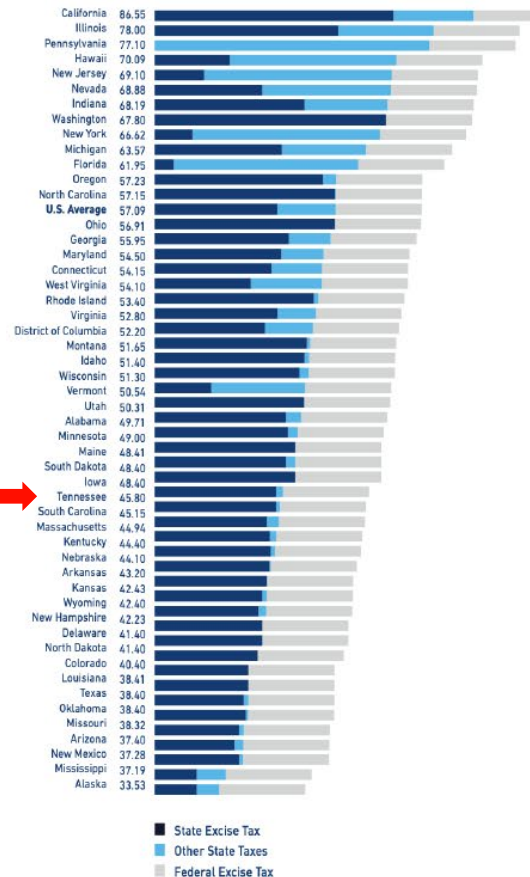


Challenge: Congestion State Motor Fuel Taxes



GASOLINE MOTOR FUEL TAXES BY STATE

(cents per gallon)



Challenge: Congestion

Increased Opportunity in Tennessee

BUSINESS

Smith & Wesson moving HQ from Springfield to Tennessee

Tennessee Keeps Attracting Headquarters Operations

With 18 Fortune 1000 company headquarters located in Tennessee, the number of headquarters jobs is surging.

Ford, partner to spend \$11.4B on four new plants in Tennessee, Kentucky to support EVs

Challenge: Congestion

Current and Future (2045) Congestion Comparison



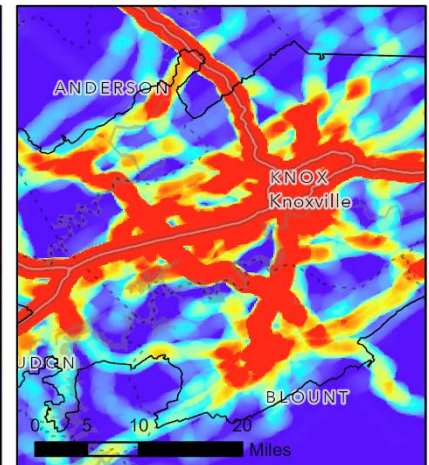
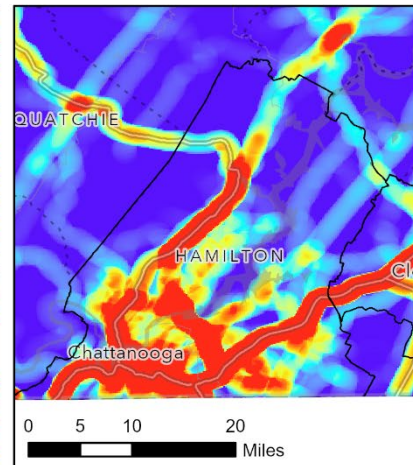
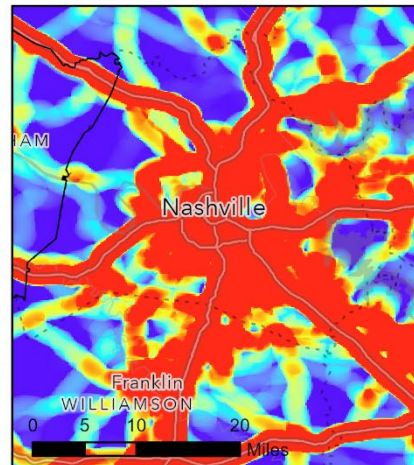
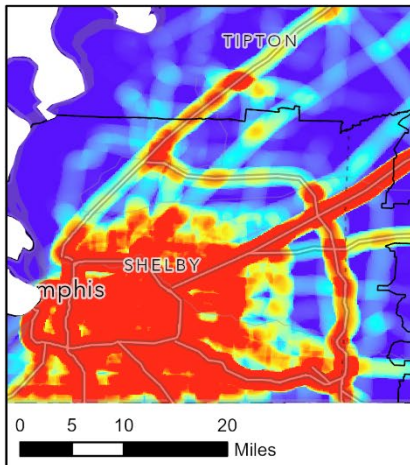
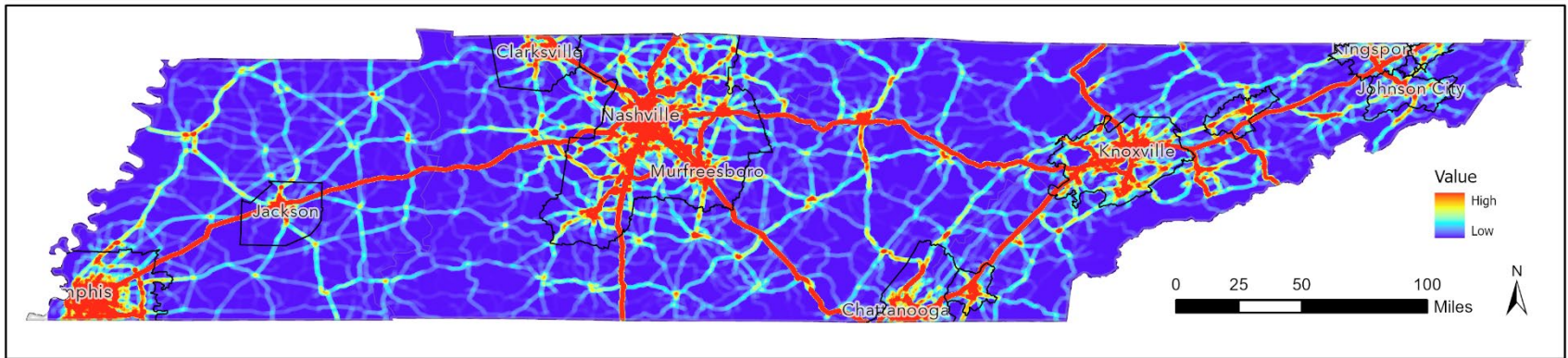
Notes:

- 1) Future Roadway Network Includes IMPROVE Act Projects
- 2) Red Indicates Locations Where Trip Reliability is Severely Impacted

Challenge: Congestion

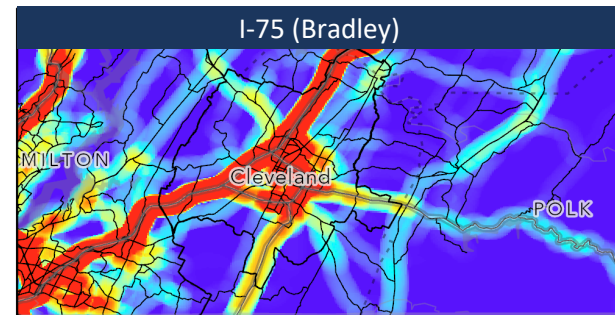
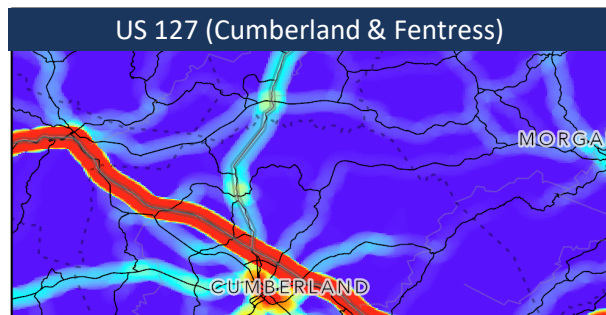
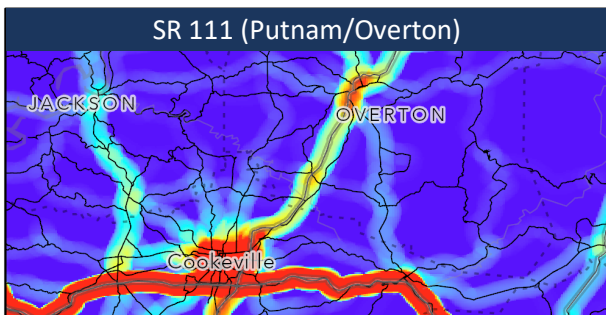
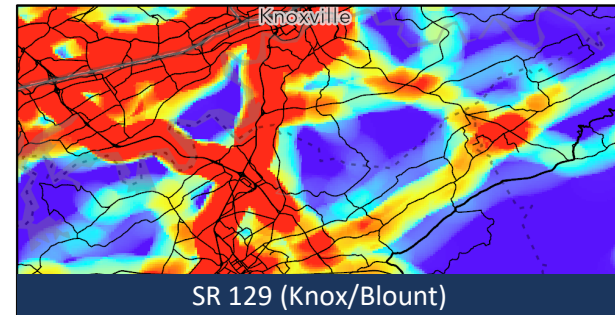
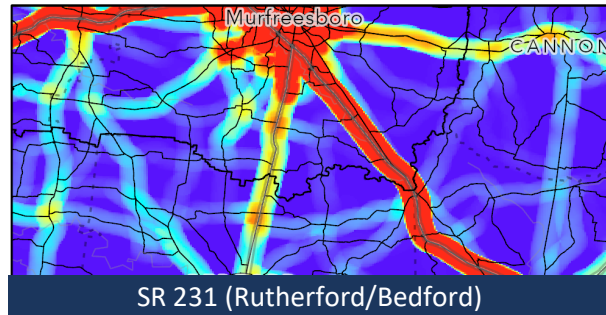
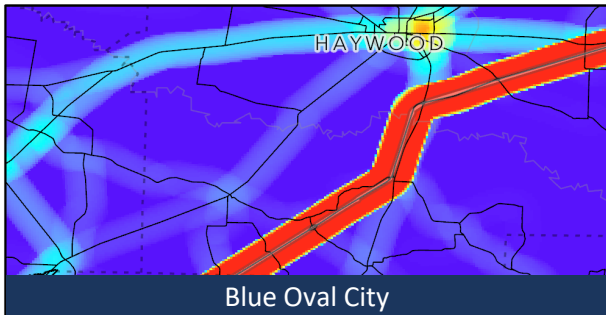
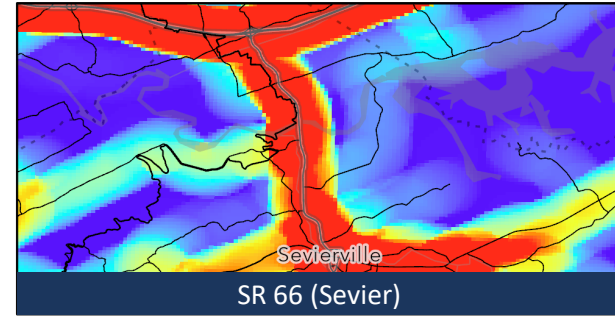
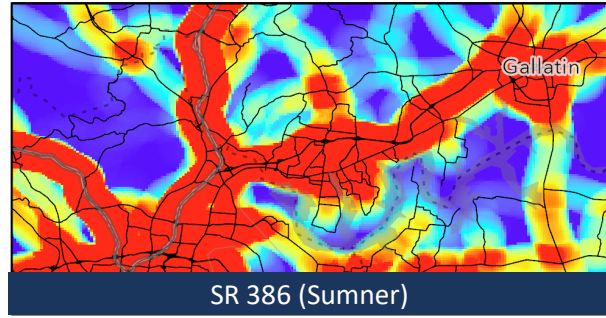
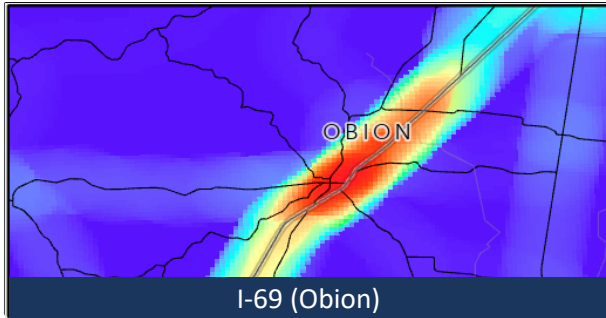
What This Means for Tennesseans

Commute times will **increase by 60%** and intercity travel times between major Tennessee cities will increase by up to **one hour**.



Challenge: Congestion

It's a Statewide Problem



Challenge: Congestion

Long-Haul Truck Traffic - 2012



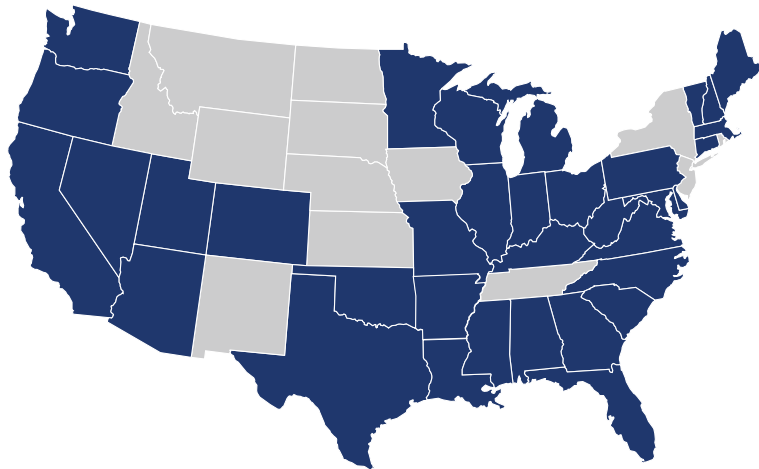
Challenge: Congestion

Long-Haul Truck Traffic - 2040

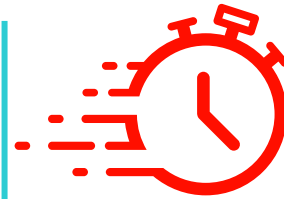


Solutions: Public-Private Partnerships (P3)

Public-Private Partnership (P3) Authorization Across the United States



■ States with Public-Private Partnership (P3) authorization for highways



Expedited Delivery & More Projects



Design/Construction Innovation



80% Private Investment



Private Investment = Rural Solutions



Efficient Risk Transfer

Solutions: Public-Private Partnerships (P3) Lead to More Rural Investment

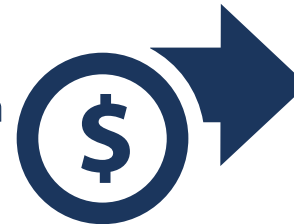
Non-Viable Option



Viable Option



Public-Private Partnerships in urban areas



Frees \$\$ for rural investment (such as adding interstate lanes)

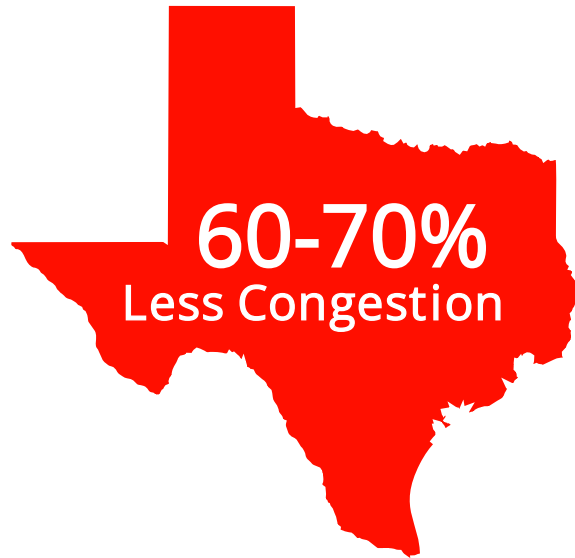
New Construction from IMPROVE Act

New Construction > **\$500M**
Annual Construction Budget

Examples

I-24 Congestion Reduction **\$400M**
Interchange at I-640/275 (Sharps Gap) **\$304M**

Solutions: Choice Lanes Decrease Congestion and Increase Economic Impact



- 60-70% reduction in congestion
- 10-15% increase in speed



70%, on average,
performed by **local**
contractors



- 30 mph to 50 mph speed increase in general purpose (GP) lanes
- 10% increase in on-time bus performance

Solutions: Thinking Outside the Box

Expanding Technology Opportunities

- As technology evolves, so must our infrastructure
- Prioritizing research and technology advancement, like on I-24 where technology is a congestion management strategy
- I-24 MOTION is a step forward in innovative and outside the box solutions



Choice Lanes Result in Transit Success

73%

More customers due to improved travel reliability



x4

Ridership quadrupled in first 5 years



10%

Increase in on-time performance



68%

Reduction in travel times



Solutions: TDOT and Transit

Tennessee's Transit Program

\$200M

TDOT's annual transit budget

2017

P3 authority passed for transit

Current law allows for transit Public-Private Partnerships (P3) to advance transit solutions

IMPROVE Transit Capital Grant

- Supports both urban and rural transit investments
- New or replacement vehicles, bus stops and bus shelters, and maintenance facility improvements
- Electric buses in Knoxville and a transit center in Pigeon Forge

\$77M

State transit funds



\$26M

Matches federal funding

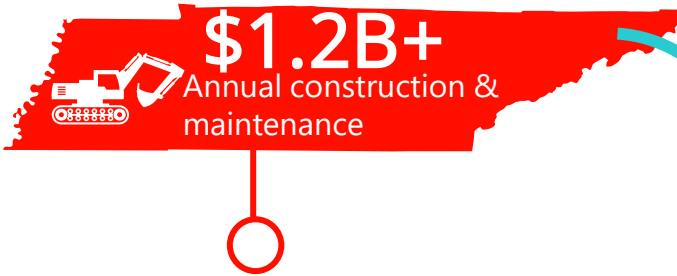
\$30M

Operating assistance

\$21M

Capital assistance

Solutions: Tools can Benefit the Industry; Grows Revenue and Advances Growing Project Needs



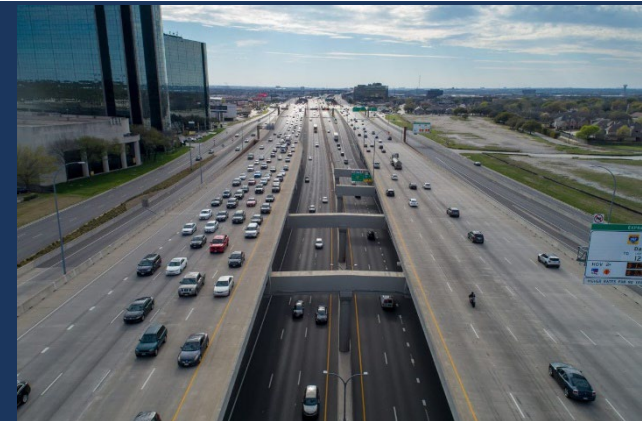
Tennessee's construction industry providers will continue to build these jobs.

Alternative revenue sources allow for new and increased revenue to industry.



In Public-Private Partnership (P3) delivery, an average of 70% goes to local contractors.

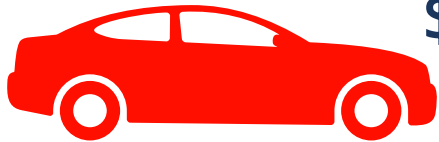
Texas LBJ Managed Lanes cost \$2.6 billion; local contractors received \$1.8 billion on top of Texas annual letting program



Solutions: Electric Vehicle Revenue

Current

Combustible engine owners pay
\$300 annually
into highway fund

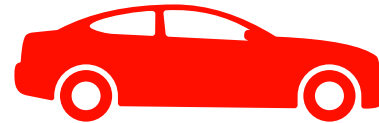


EV owners pay
\$100 annually
into highway fund



Future

Combustible Engine



Hybrid



EV

Creating parity between combustion engine drivers and electric vehicle drivers

Challenge: Delivery

15
total years



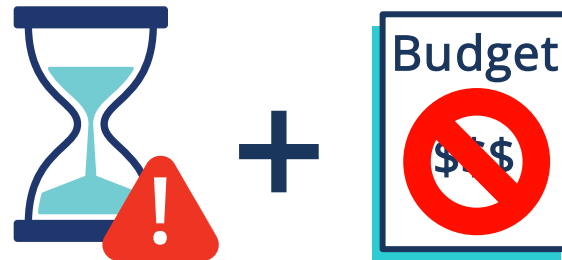
Current
Traditional
Project
Delivery Time

Traditional
delivery
projects cost

40%
more

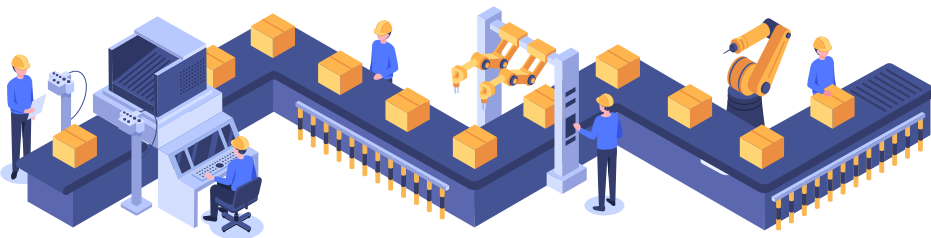
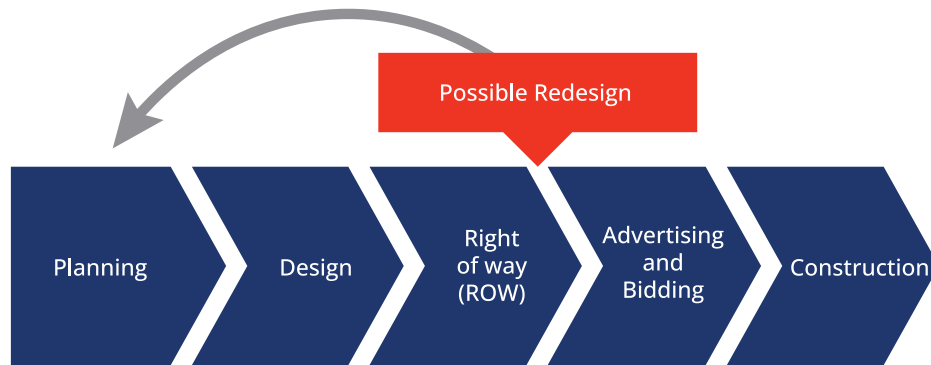
than original
estimates

Bottom Line:
Projects take too long
and cost too much

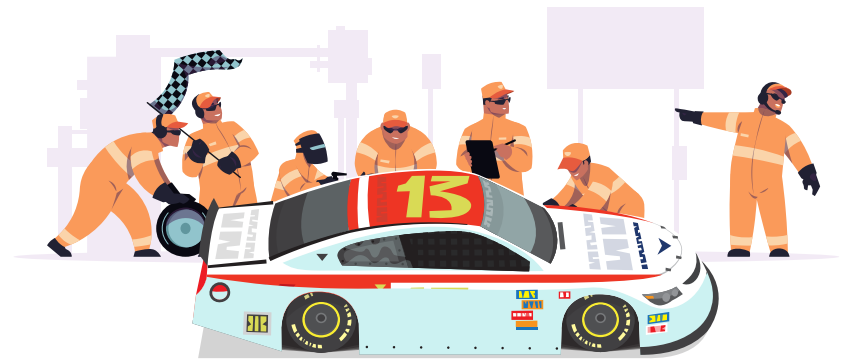


Challenge: Delivery Limited Tools to Deliver Projects Efficiently

Traditional Delivery



Alternative Delivery

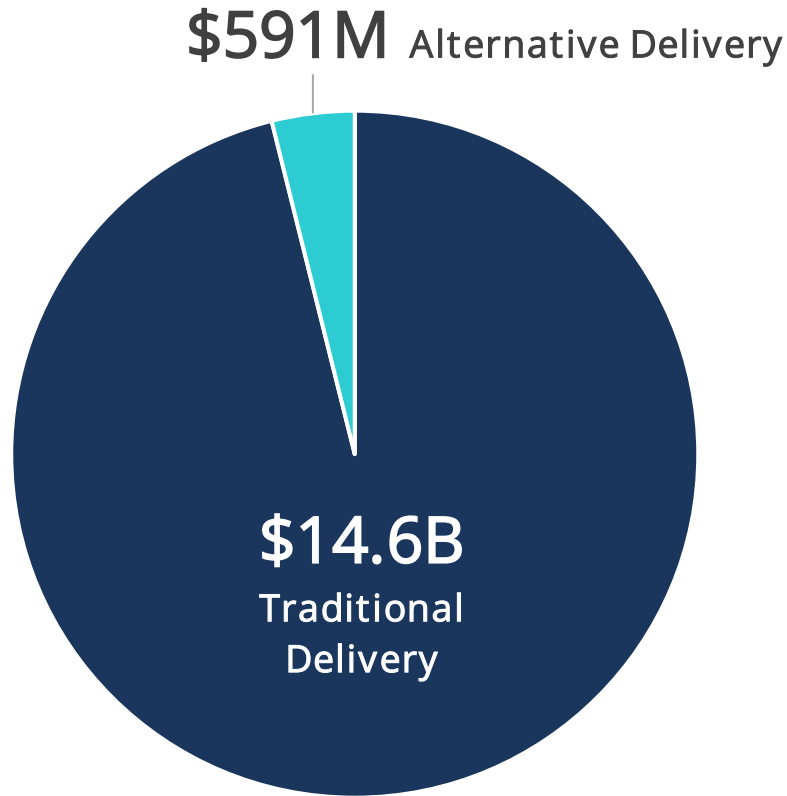


Note: Alternative delivery currently statutorily limited

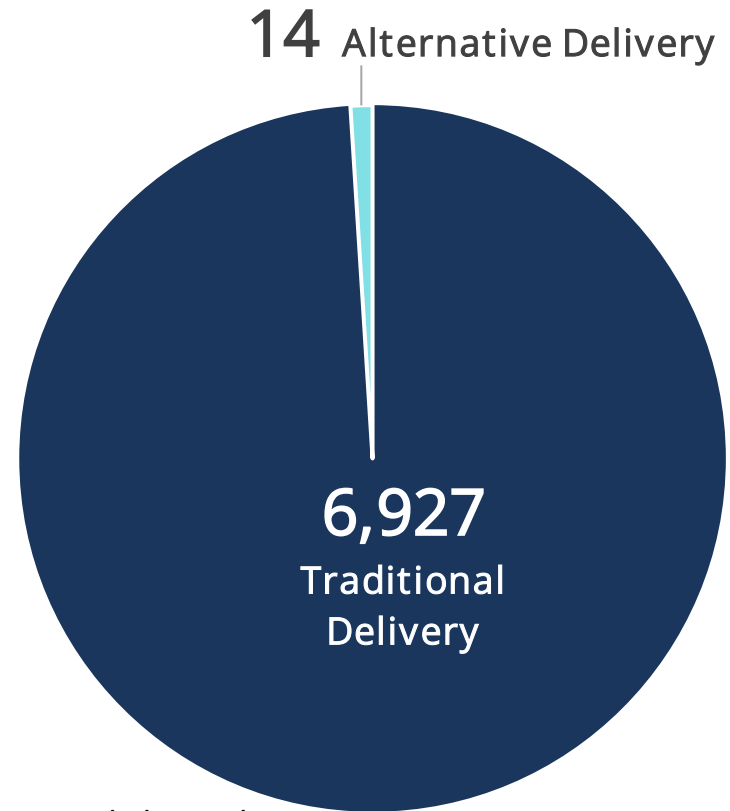
Challenge: Delivery

Traditional vs. Alternative Delivery (2004-2022)

Types of Contracts (Dollars)



Types of Contracts (Number)



Note: Alternative delivery currently statutorily limited

Challenge: Delivery

Alternative Delivery/Demonstrated Results

Traditional and Alternative Delivery Project Examples

I-75 Phase 1 (Alternative Delivery)

\$132M	\$133M	945
Original Contract	Adjusted Contract	Days

I-124/US 27 Widening & Olgiate Bridge (Traditional Delivery)

\$126M	\$144M	1,723
Original Contract	Adjusted Contract	Days

Note: Construction started at the same time

TDOT Alternative Delivery Program Saves Time and Money



\$22M
Cost Savings

70%
Faster Delivery

*Statutorily-limited Alternative Delivery Program

Challenge: Delivery

Delivery Comparisons

County	Description	Total Duration (Days)	Total Time Savings
Polk	SR 40 Bridge over Ocoee River	900	
Coffee	SR 127 Bridge over Bradley Creek	1,469	569
Multiple	Region 4 Bridge Bundles (6 bridges)	830	
Fayette	SR 196 Bridge over Shaw Creek	2,699	1,869

Note: Bold in table indicates alternative delivery project. Nonbold indicates traditional delivery project.

Madison County – I-40 Widening (3 phases)

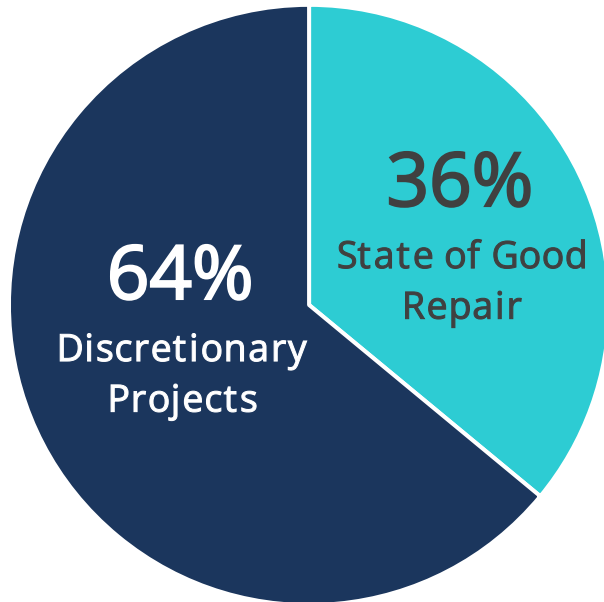
If alternative delivery was used, 1,777 days of construction would have been reduced



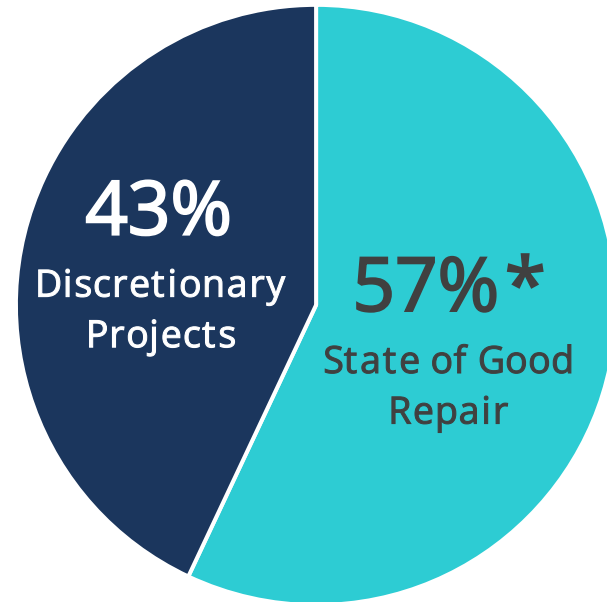
Challenge: Delivery

New Construction Program Shrinking

Current (FY 22)



Future (FY 45)

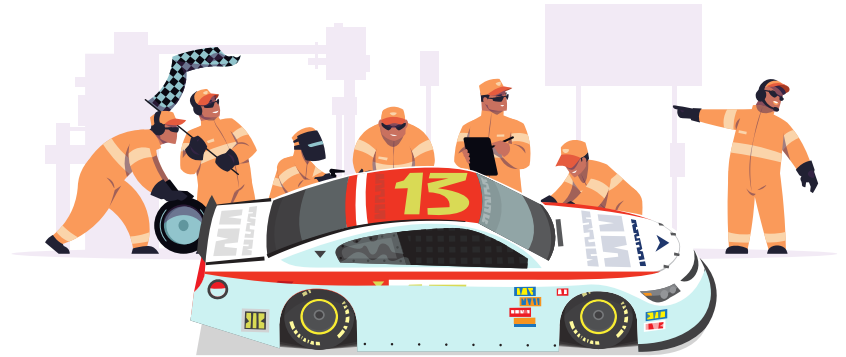
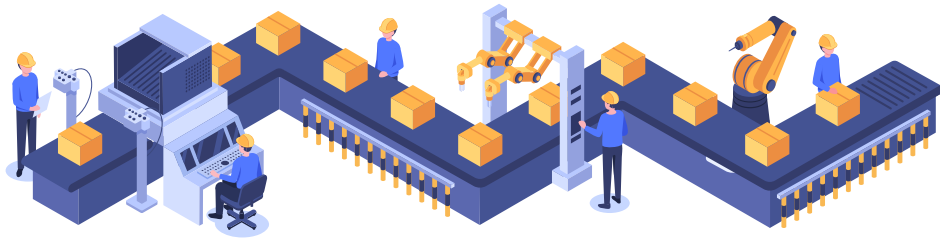


**Assumes \$10M annual increase in state of good repair costs*

“...the Department of Transportation will become the Department of Maintenance.”
-IMPROVE Act Debate

Solution: Delivery

The Right Tools for the Right Job

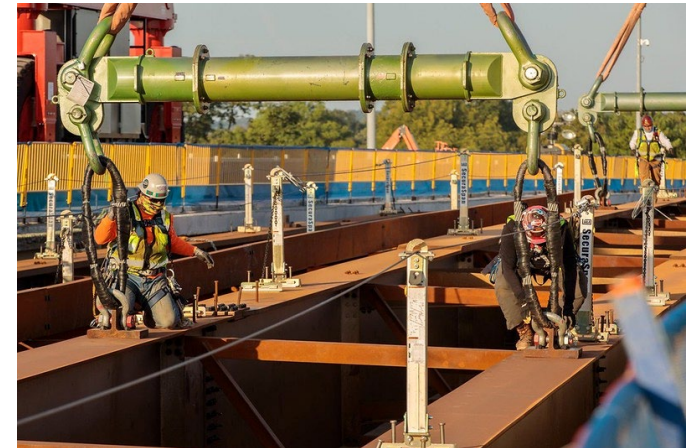


Challenge: Workforce



OLD

VS



NEW

3,600

Current TDOT employees

0

Filled positions eliminated

10-15%

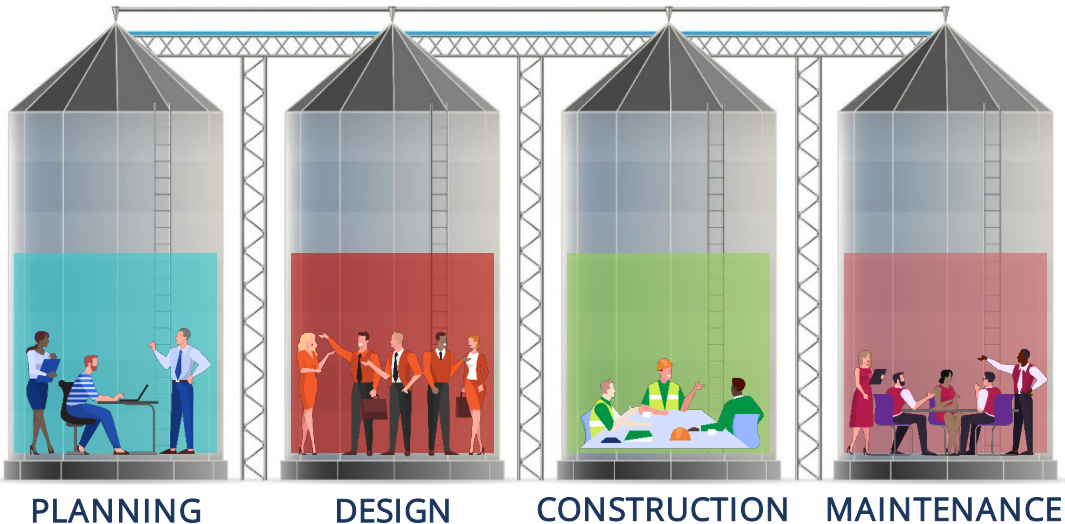
Below market level salaries for employees

\$34M

pumped into salaries

Improving our Workforce

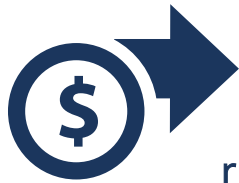
- ✓ Improving TDOT processes for on-time & on-budget delivery
- ✓ Silos disappear = more teamwork
- ✓ Eliminating vacancies = market pay for staff



Tennessee: Build With Us



Public-Private Partnerships in urban areas



Frees \$\$ for rural investment (such as adding interstate lanes)



Decreased Congestion & Increased Economic Activity

50% Faster Delivery & **40%** Cost Savings

Decreased Project Delivery Time & Increased Cost Savings



Tennessee

Build With Us



Visit the Build With Us website