



Smart Transportation

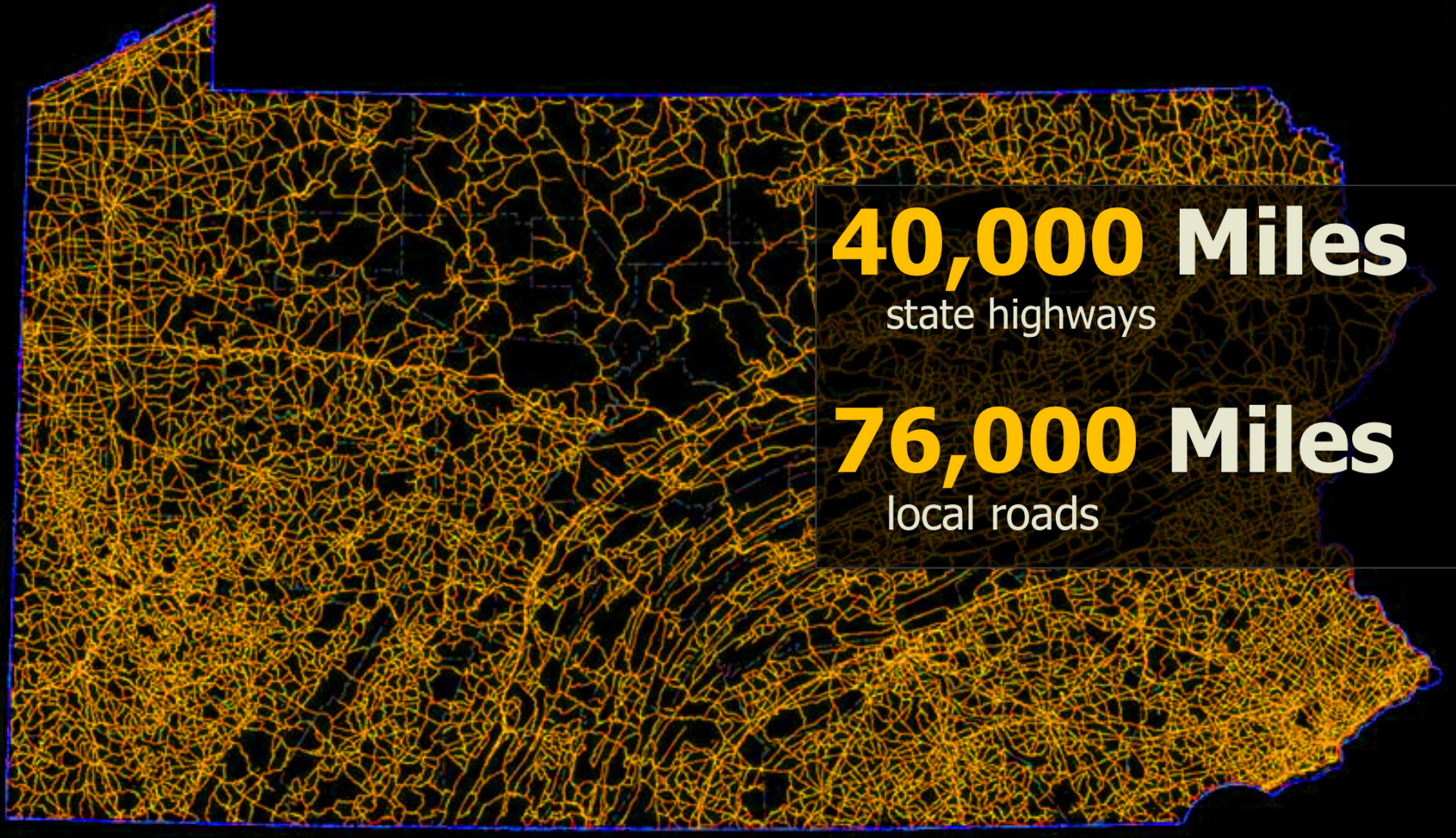
In Pennsylvania and Beyond

by **Allen D. Biehler and Mary
Taylor Raulerson**

**New Partners for
Smart Growth**

February 2, 2012


Pennsylvania's Highway System



40,000 Miles
state highways

76,000 Miles
local roads

Pennsylvania's Transit Systems



20 Urban Systems
16 Rural Systems
59 Shared Ride Systems



Pennsylvania's

Land Development (1990-00)

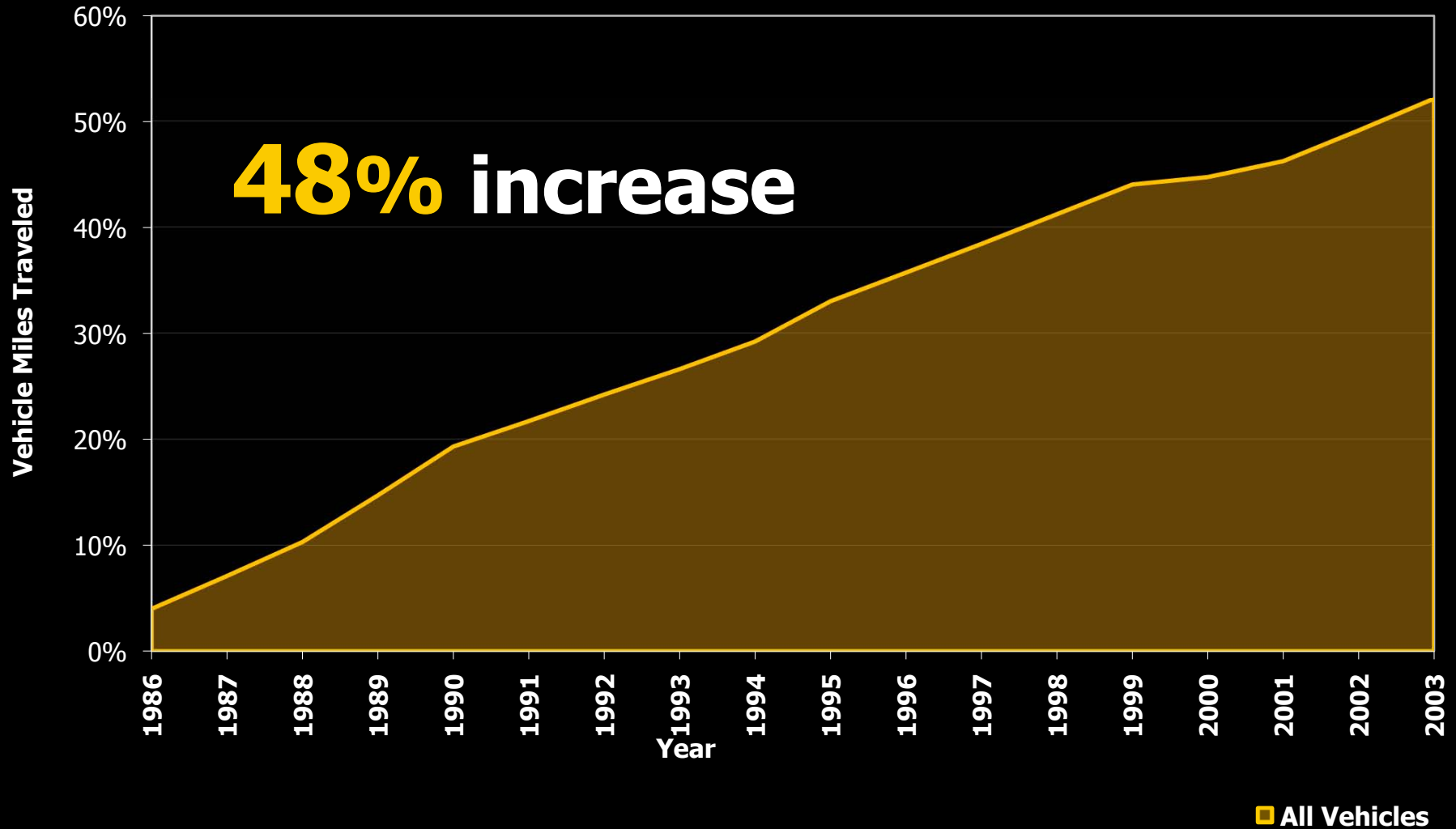
3.4%

growth
in population

54%

increase
in developed land

Pennsylvania's Traffic Growth



A Daunting Repair Backlog



Credit: Jeff Soderquist, Eric Thornley

Transportation

Program Reassessment March 2004

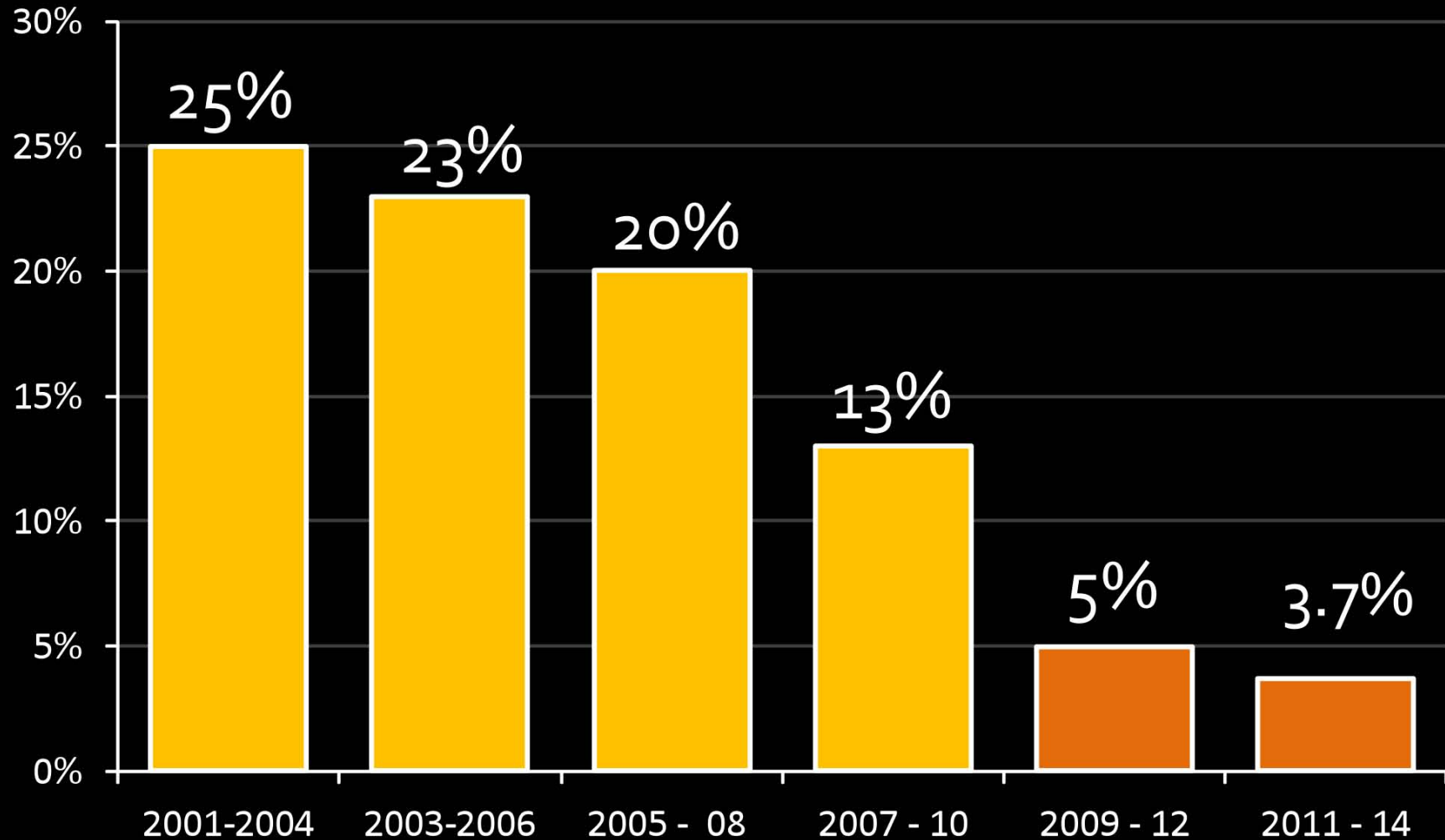
26 Projects

5 Billion Dollars

STOP or re-evaluate

Capacity Adding Projects

as percentages of total program



Keystone principles

- Redevelop First
- Provide Efficient Infrastructure
- Concentrate Development
- Increase Job Opportunities
- Foster Sustainable Businesses
- Restore And Enhance The Environment
- Enhance Recreational And Heritage Resources
- Expand Housing Opportunities
- Plan Regionally; Implement Locally
- Be Fair

PennDOT's

Smart Transportation Journey



Smart Transportation

Outreach

- DOT
- State agencies
- Municipalities
- State and local elected officials
- Developers
- Consultants
- Planners
- Engineers
- Community leaders
- Transit agencies
- Alternative transportation advocates

Suburban growth



Suburban growth



Suburban growth

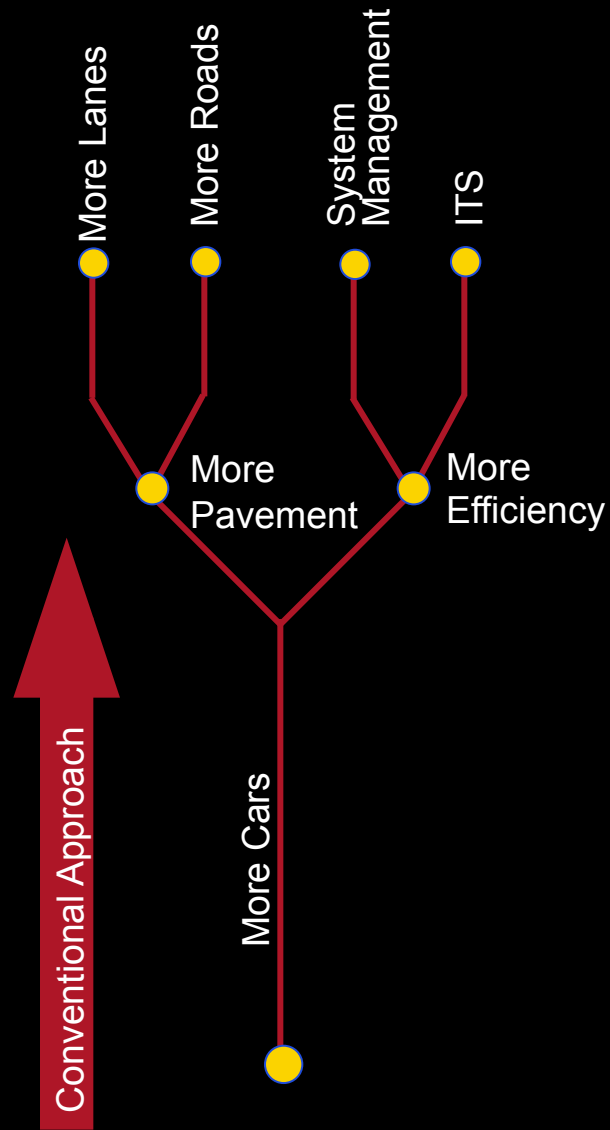


Now What?

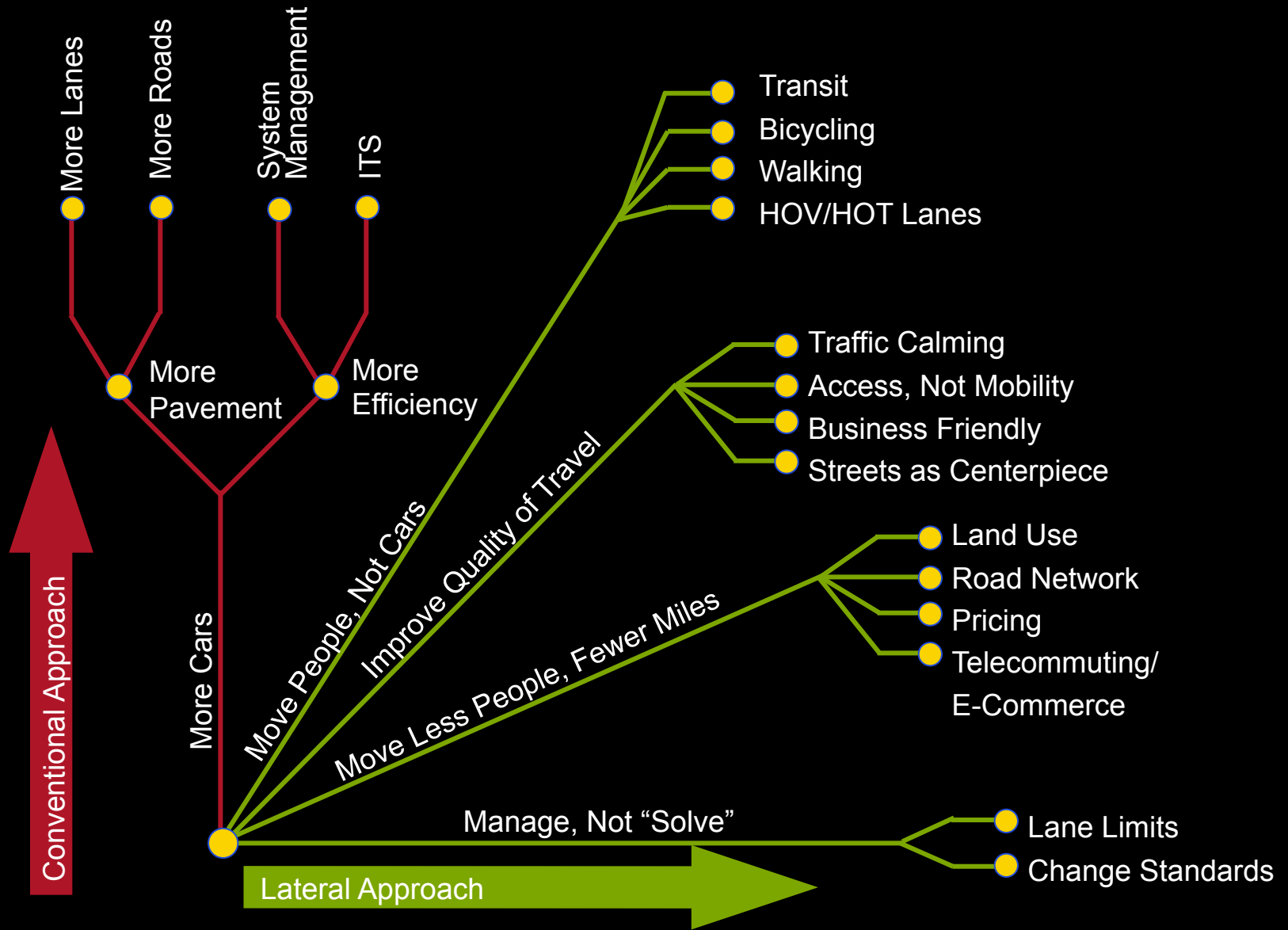


Conventional Approach

to transportation planning

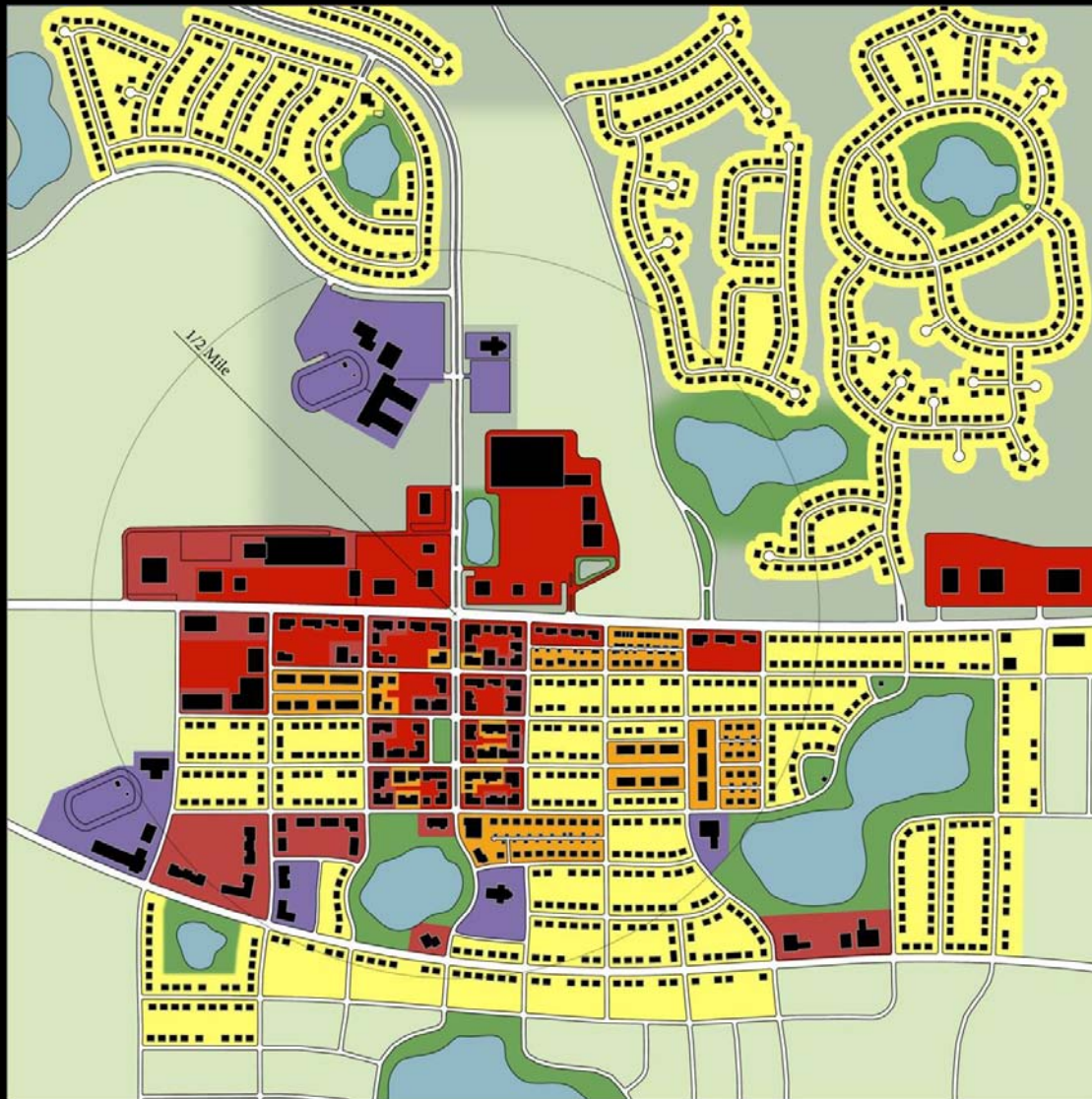


A full View of transportation options



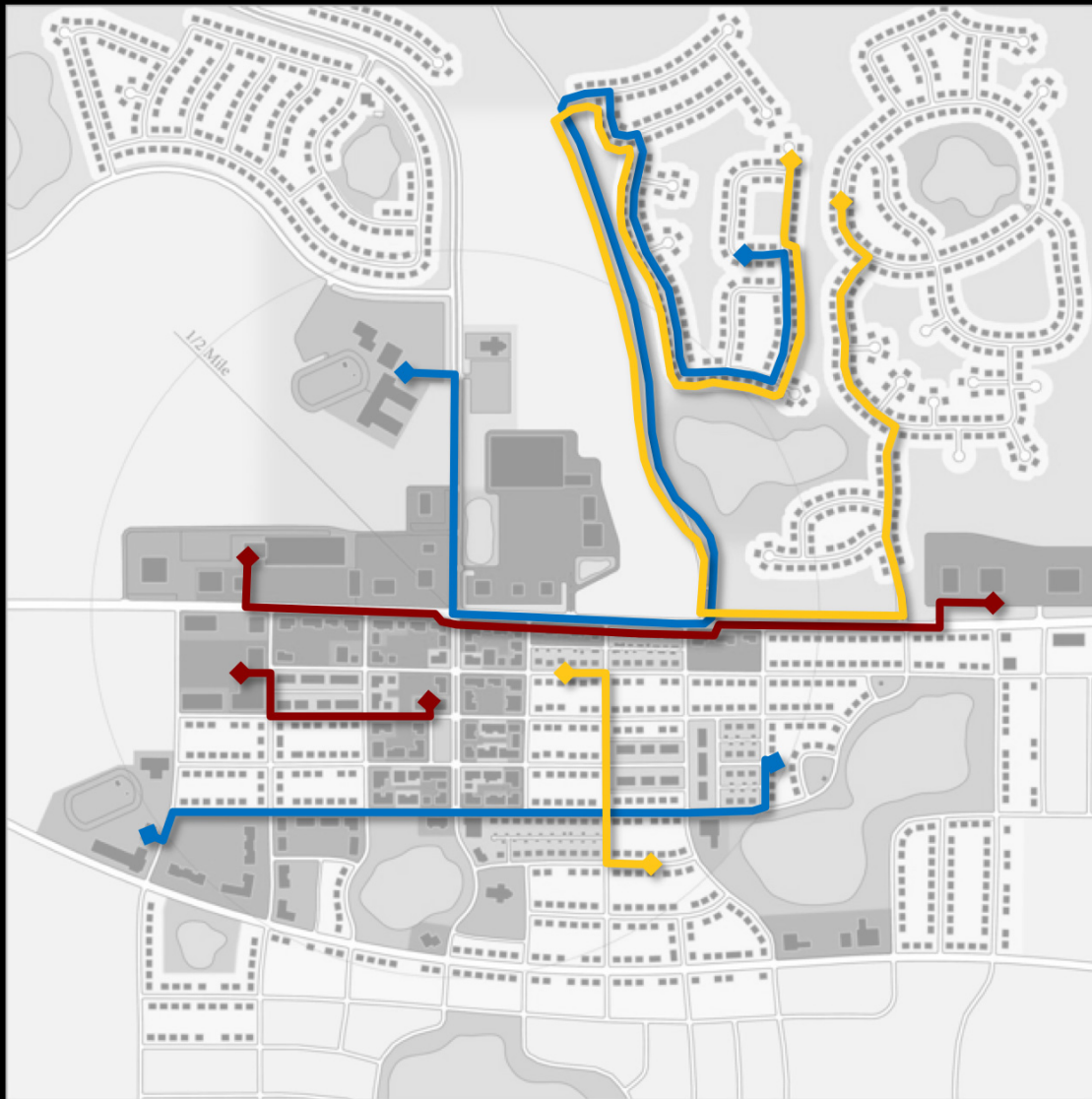
Daily Trips

compared



Daily Trips

compared



Daily Trips Compared

- ◆ From home to school
- ◆ From work to a restaurant
- ◆ Visiting a friend's house

The Realization

We can **no longer afford** the conventional approach to tackling transportation issues

Department

Focus Areas

- Infrastructure Preservation
- Safety
- Maximizing Technology to better manage transportation
- Linking Land Use and Transportation

A wooden toy train set on a circular track. The track is made of light-colored wood and curves around a central area. In the center, there are several small wooden buildings and structures, including a house with a red roof and a green roof, and a structure with a green roof and a blue base. The background is a mix of blue and green, suggesting a landscape. The overall scene is a detailed and colorful representation of a miniature town or city.

What is **Smart Transportation?**

Smart Transportation is **partnering to build great communities** for future generations of Pennsylvanians **by linking transportation investments, land use** planning and decision-making.

Smart Transportation

Themes

1. Money matters
2. Leverage and preserve existing investments
3. Choose projects with high value/price ratio
4. Safety always and maybe safety only
5. Look beyond level-of-service
6. Accommodate all modes of travel
7. Enhance local network
8. Build towns not sprawl
9. Understand the context; plan and design within the context
10. Develop local governments as strong land use partners

Money matters



Accommodate All modes of travel



Build Towns

NOT sprawl



Implementing Smart Transportation

1. Increasing **Partnership** Efforts
2. Changing the **Rules**
3. Changing the **Decision Making** Processes

Increasing partnership efforts

- **Sharing** Smart Transportation message
- **Strategic discussions** with partners and local agencies
- **Outreach** activities and interactive workshops with local officials and professionals
- Consultant **Training**

Pennsylvania
Township News
MAY 2008 • www.padt.org



**SMART
TRANSPORTATION**
PennDOT Adopts New Way of
Thinking That **Connects the Dots**
Between **Land Use** and **Transportation**

Internal Communications

- 70 Presentations Logged by 11 Districts
- 1,100 District staff attended training sessions
- Engagement of Districts in local outreach
- Weekly Messages

Changing the rules



Smart Transportation Guidebook



SMART TRANSPORTATION GUIDEBOOK

*Planning and Designing Highways and Streets
that Support Sustainable and Livable Communities*



New Jersey Department
of Transportation



Pennsylvania Department
of Transportation

MARCH 2008



Using the guidebook

- Use **flexible design** on all projects
- Increase **coordination** with municipalities
- **Link** land use and roadway design
- Understand the **design context**
- Design to a **desired** operating speed

New Jersey Department of Transportation

MARCH 2008

RURAL

SUBURBAN CORRIDOR

SUBURBAN CENTER

SUBURBAN NEIGHBORHOOD

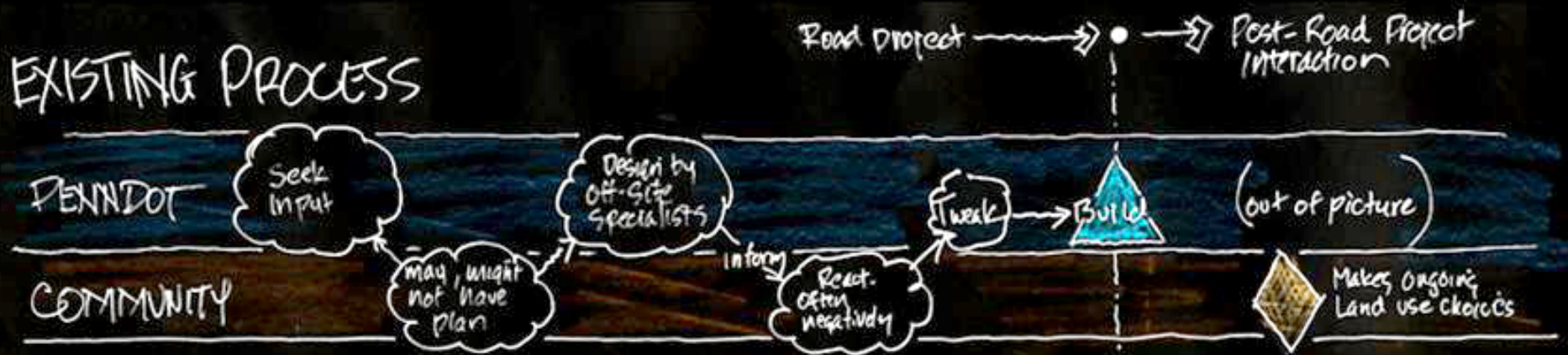
TOWN/VILLAGE CENTER

TOWN/VILLAGE NEIGHBORHOOD

URBAN CORE

Changing project development

EXISTING PROCESS



PENNDOT LEADING TRANSPORTATION/LAND USE PROCESS



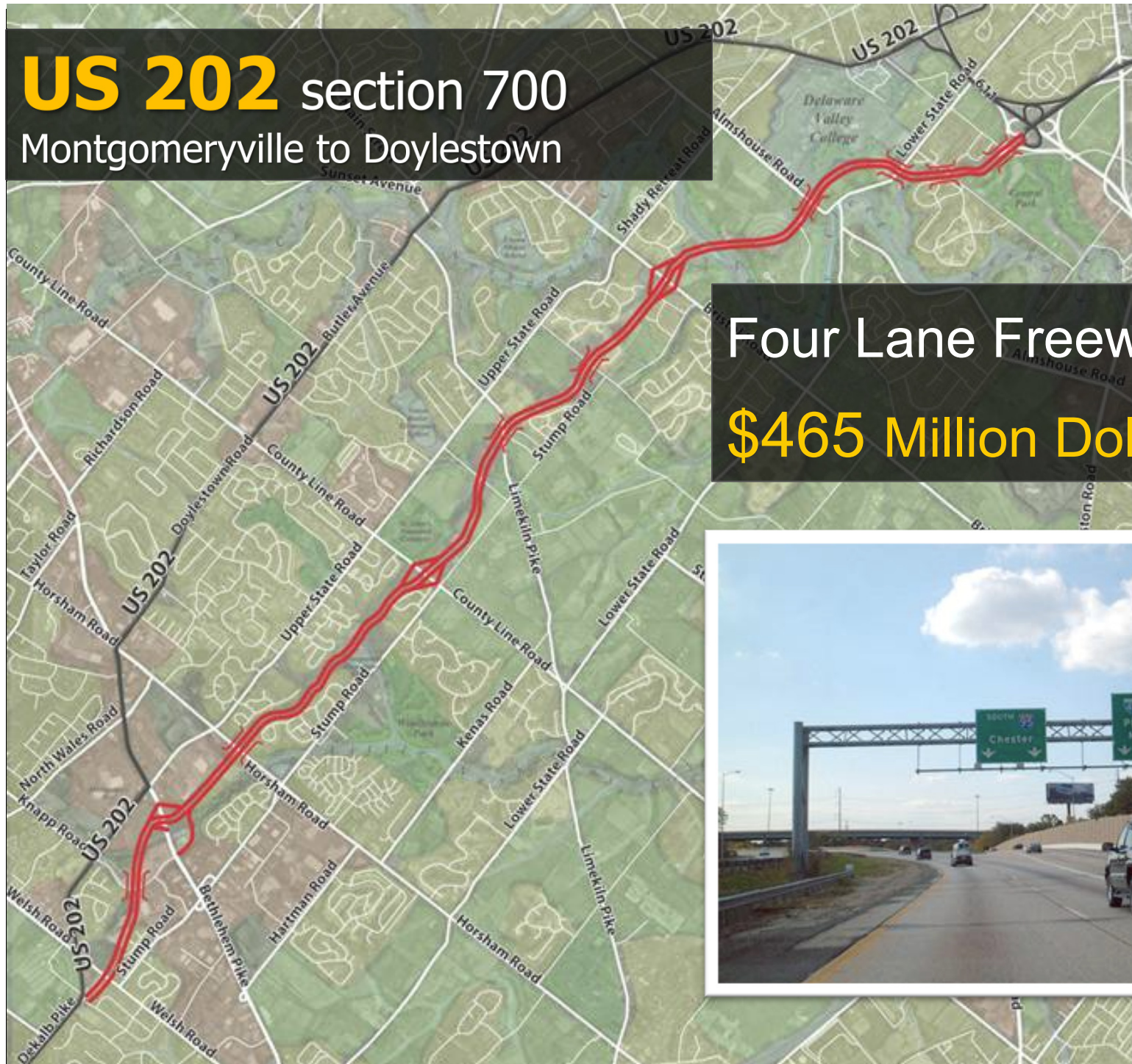
Smart Transportation

IN ACTION

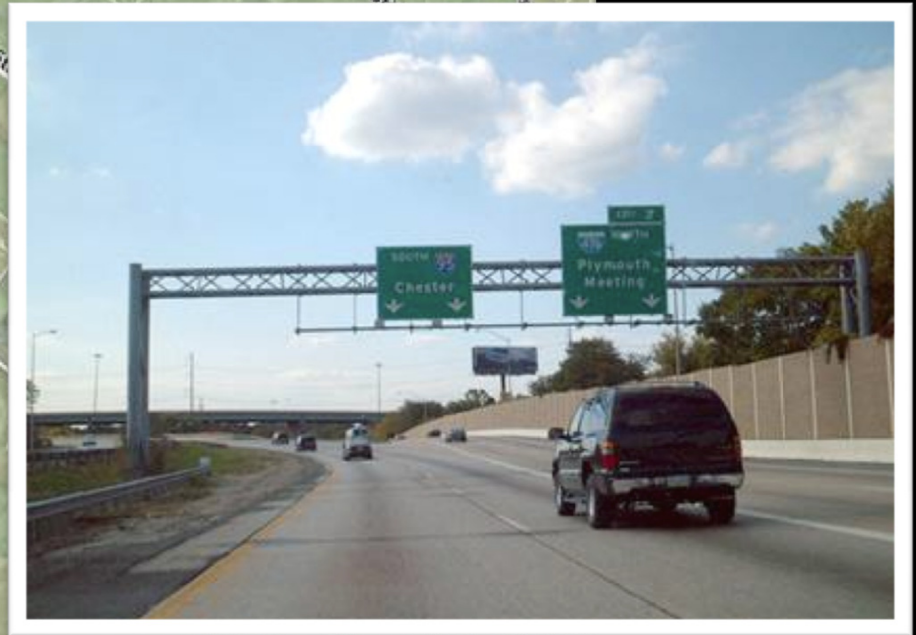


US 202 section 700

Montgomeryville to Doylestown



Four Lane Freeway
\$465 Million Dollars



US 202 section 700

Montgomeryville & Bucks County



US 202

Community Task Force



US 202

Cross Sections



Varies

5'
Bike
lane

22'

5'
Bike
lane

Varies

12'
Multi-Use
Path

Varies



Varies

5'
Bike
lane

44'

5'
Bike
lane

Varies

12'
Multi-Use
Path

Varies

Smart Transportation

IN ACTION

- From redesign to Construction in 3 years
- Community and stakeholder support
- Savings of **\$185 Million**



US 202 Construction Progress



Smart Transportation

challenges

The Challenge

"We don't *understand* what Smart Transportation is...."

What was done

Developed a **Pilot Program.**

Pennsylvania

community transportation initiative

Advance the practice of Smart Transportation

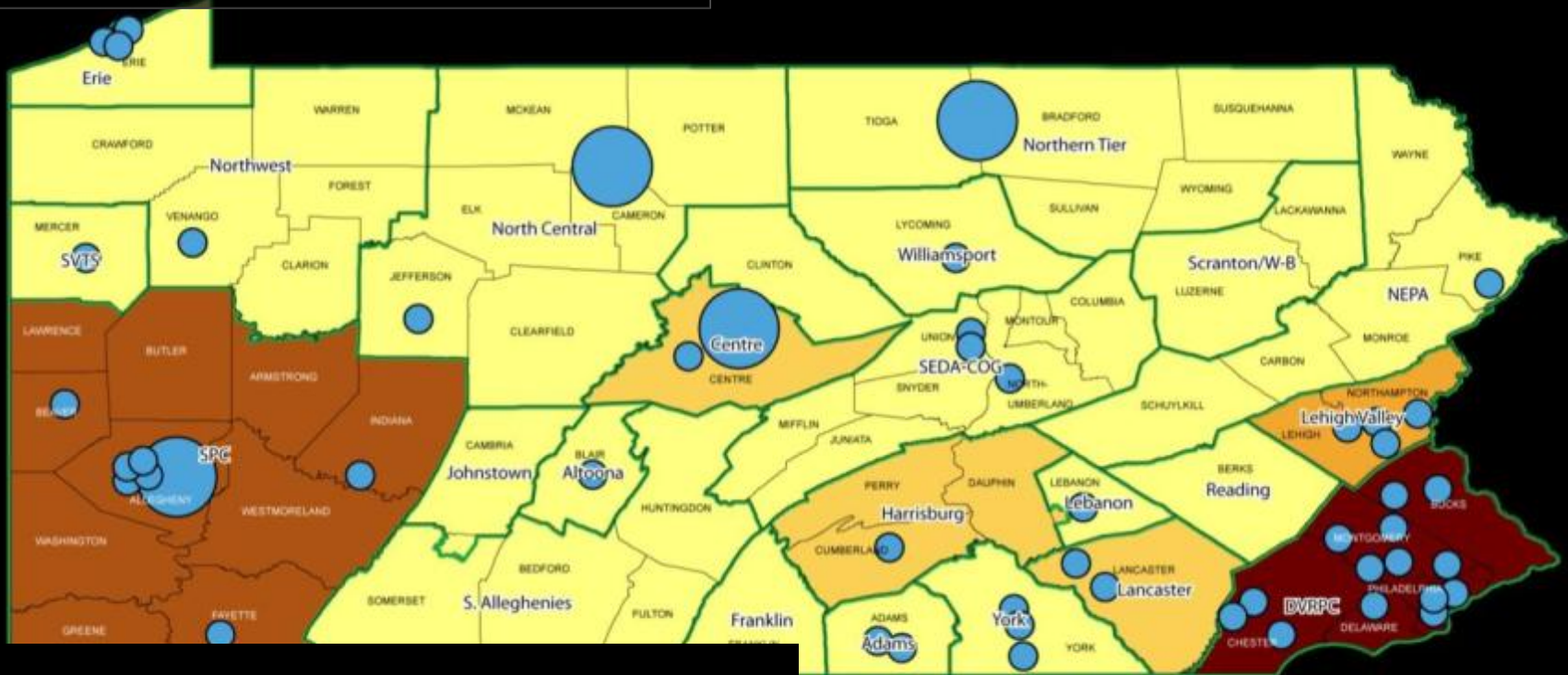
- Land Use Connection
- Collaboration with Stakeholders
- Build Towns not Sprawl
- Readiness
- Innovative
- Consistency with Regional Plans
- Teachability

Pennsylvania

community transportation initiative

- **\$60 million** dollars over two years
- Received over **400 applications** for over **\$600 million**

Selected PCTI projects








MPO/RPO	# of Applications	% of Total Applications	# of Selections	% of Total Selections	Total Funding for Selected Projects	% of Total Funding
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Applications Selected	50
Funds for Selected Projects	\$59,284,992

Selected Projects

-  Regional Project
-  Local Project

Number of Applications, by MPO/RPO

-  0-10
-  11-30
-  31-60
-  61-100
-  101-131

Project examples

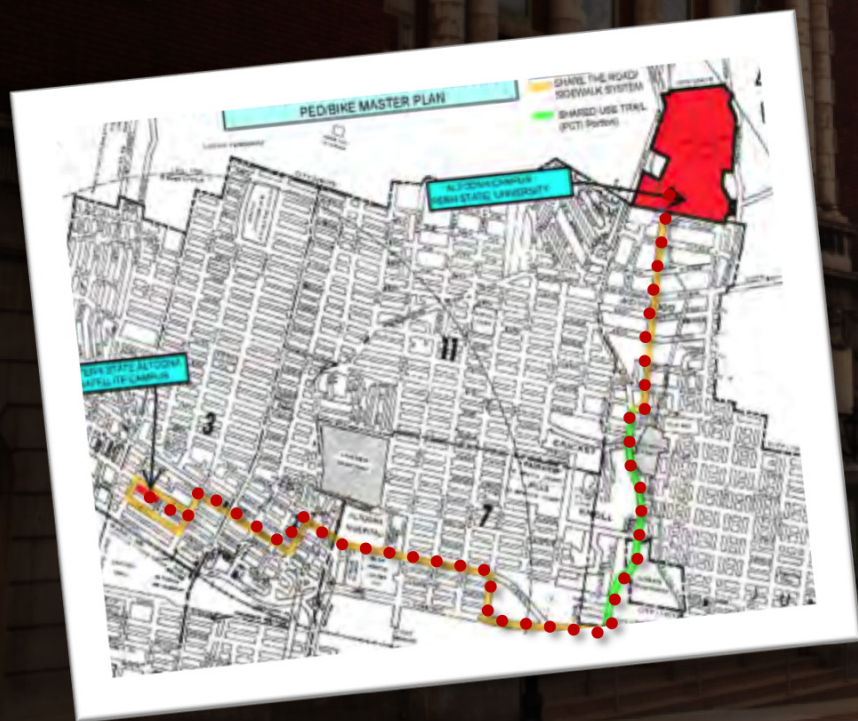


City of Altoona

pedbike trail

A 2.5 Mile Trail

connecting the Penn State Altoona Campus to Downtown



Erie

downtown accessibility



Borough of Carlisle

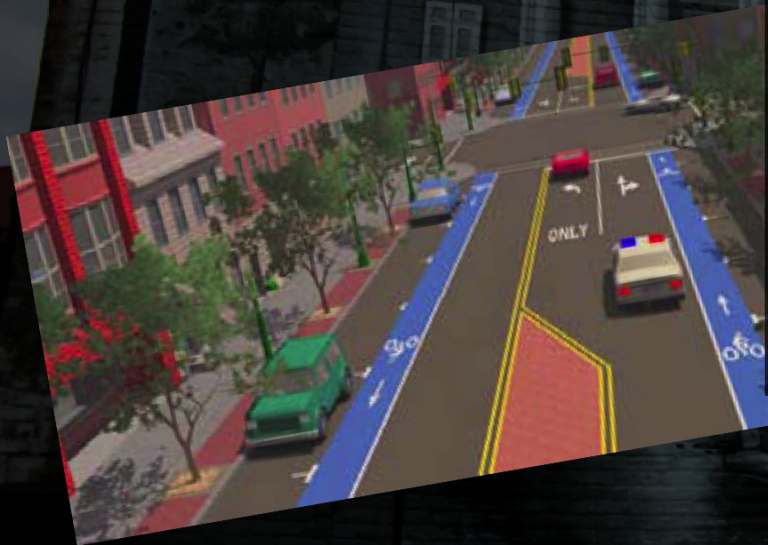
multimodal transportation

Downtown Plan

Increased walkability

Connection to multi-use trails

Enhanced Safety and Mobility



Lessons Learned

- Land use is local, transportation is regional
- Partner with local governments
- Added capacity is not always the solution
- Experiment with pilot projects

Smart Transportation

Melding transportation and community design.

It takes a culture change ... but is worth the effort.

State Smart Transportation Initiative



State
Smart Transportation
Initiative



Origin and Purpose



Origin and Purpose



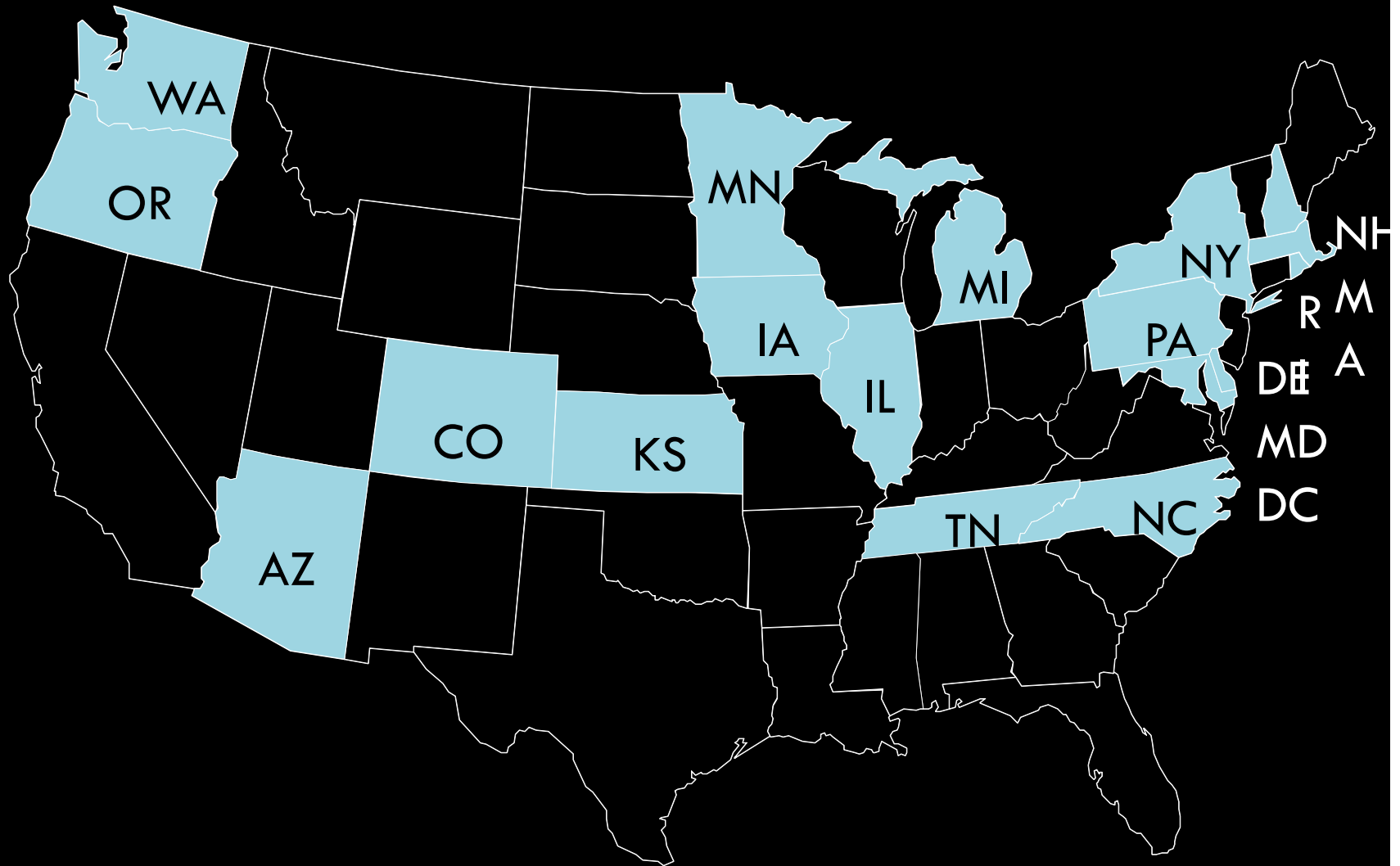
A new paradigm



SSTI Assists DOTs in Modernizing Practice

- Technical Assistance
- Community of Practice
- Dissemination

Participating DOTs



Pennsylvania

- Continuous effort to reframe practice
- Engaged critical staff
- Engaged outside partners
- Guidebook into Design Manual
- Demonstration program gave clarity
- Culture change owned by staff and partners



Iowa

- Capacity vs Preservation
- Revenue campaign
 - Messaging on system preservation





State faces concerns over funding needed to repair aging bridges

By Luke Jennett
Staff Writer

Published: Friday, November 4, 2011 7:00 PM CDT

One-third of Story County's bridges are operating at reduced loads due to structural deficiencies.

However, the important thing for drivers to know is bridges in Story County are safe, county engineer Darren Moon said. But keeping them that way, he added, might be a struggle.

The problem Moon and Story County officials are facing is the same as the one being faced across the state: how to maintain a rapidly aging bridge system with funding that hasn't really increased in decades.

But now the state has backed itself into a corner regarding its bridges, Moon said.

"The counties did a study statewide, and the study showed that we need \$150 million per year to maintain the state's bridges at the level they're at right now," he said. "Which isn't all that good."

Even the department's shining hope, a proposed 8- to 10-cent increase in state gas tax, which would bring in \$800,000 to Story County alone, will only bring in about half the money the county needs to keep its bridge system up to par.



[Click here for larger image](#)
[Purchase Photos Here](#)

By Amy Vinchattle/Ames Tribune
Henkel Construction Company employee Shawn Kellogg operates an excavator to remove the former Peterson Pit Bridge parallel to a new bridge built to replace it north of Ames, near McFarland Park.

One-year hiatus

Arizona



**Identify and Prioritize
Short- and Medium-Term
Transportation Needs**

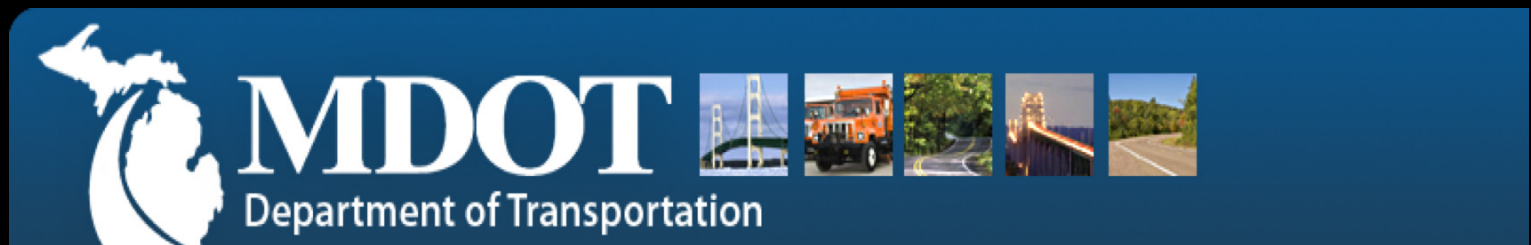
**Building a
Quality
Arizona**

**Strategic Statewide
Implementation
Program**

**Long Range Transportation,
Land Use, and Economic
Development Strategy**

Michigan

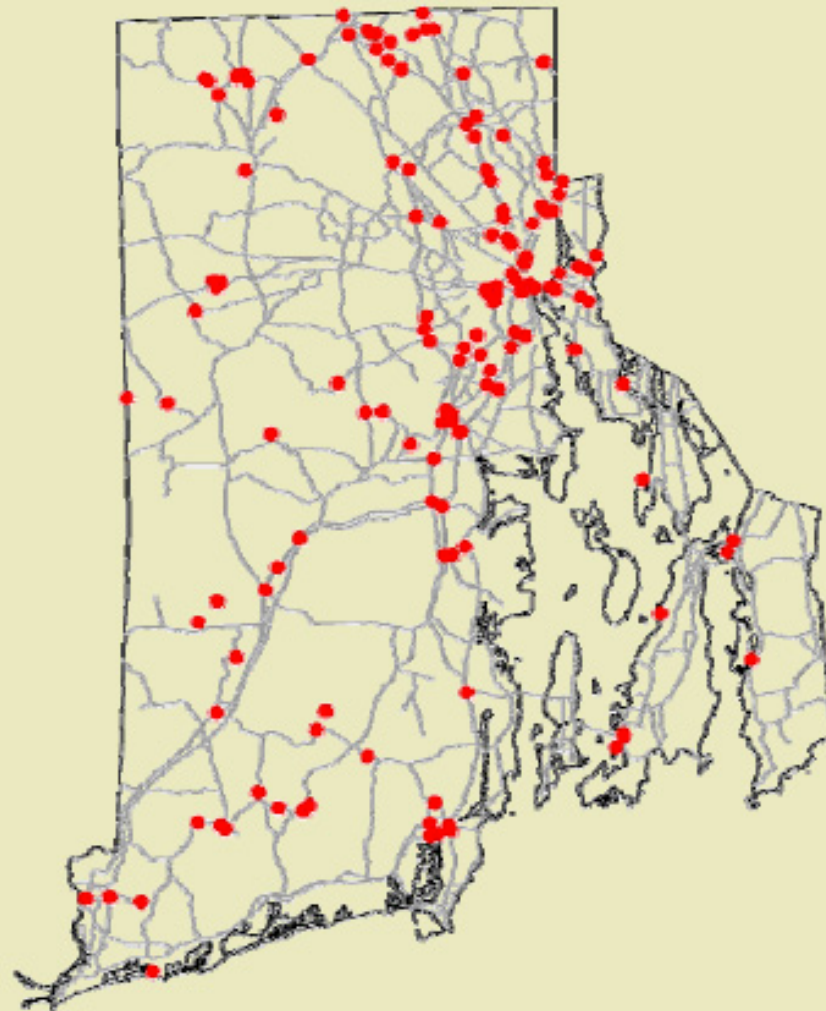
- Dashboard
 - Bus & Passenger Rail Ridership
 - Bridge and Road Conditions
- Governor Snyder - Infrastructure Funding



Rhode Island

Annual Highway Expenditures

- Capital improvements \$216M
- O& M \$ 42 M
- Debt service \$ 96 M



Rhode Island has 164 structurally deficient bridges; 61 of those bridges are posted with vehicle weight restrictions

Kansas

- Practical design
- School location guidelines



Washington



Washington



North Carolina

Global review of best practices
on funding and finance



Oregon

Governor Kitzhaber

“...transformational change”

Massachusetts



Smart Transportation

Our future depends on it.

For more Information:
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