

# Use of HSIP funds in Pavement Preservation Projects

Greg Duncan, TNDOT

Assistant Chief Engineer for Operations

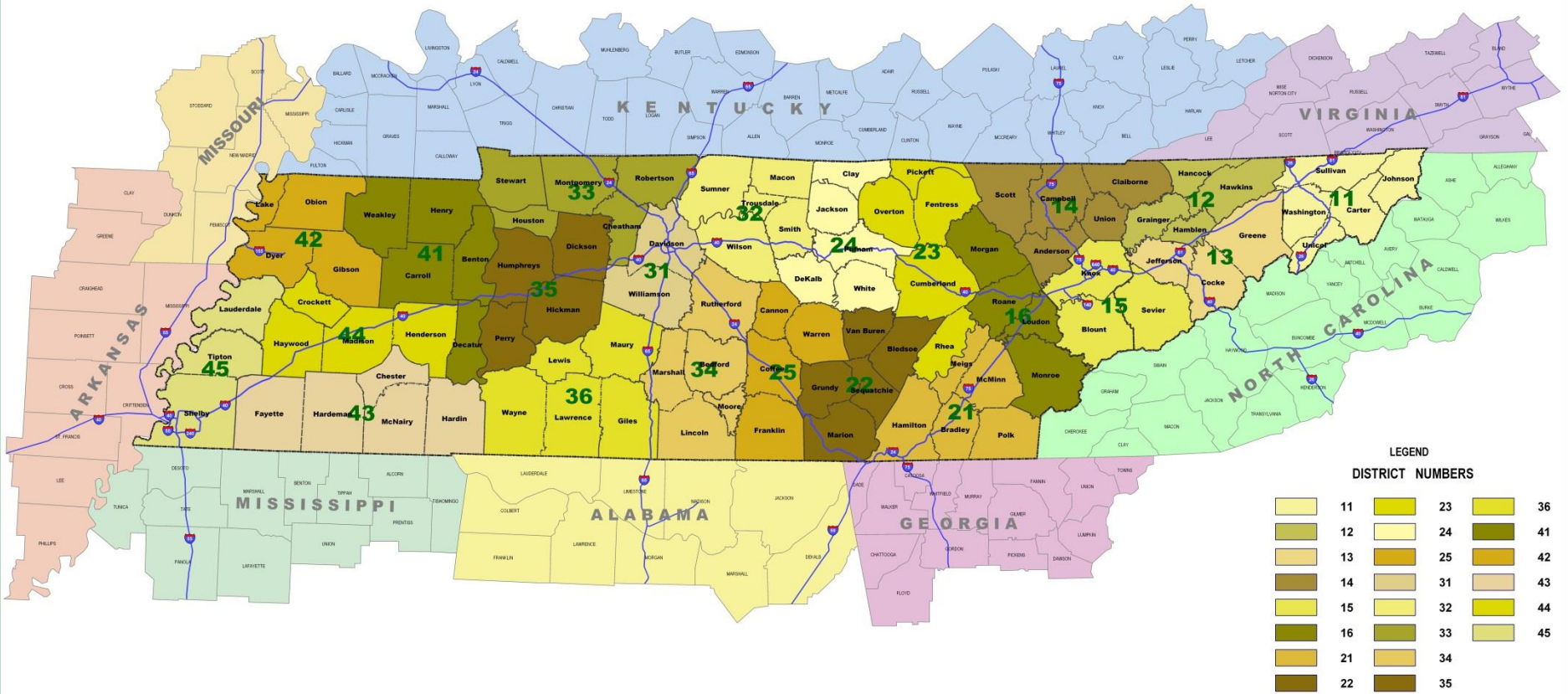
Southeastern Pavement Preservation Partnership

May 28, 2014



# Tennessee

## TENNESSEE DISTRICTS



**LEGEND**

**DISTRICT NUMBERS**

11	23	36
12	24	41
13	25	42
14	31	43
15	32	44
16	33	45
21	34	
22	35	

The Tennessee Department of Transportation, Long Rang Planning Division, GIS Mapping and Facilities Data (TRMS) Office provided this illustration. For Comments or questions please contact: 615-741-3744 7-25-08

In case some of you don't remember.....



Home of the Best Equipment Operators in the Southeast!!!



# Network Size

- 14,000 Centerline Miles of Interstates (1104) and State Routes (16<sup>th</sup> in size)
- 37,000 Lane Miles (17<sup>th</sup> in size)
- \$205 M Pavement Preservation Annual Budget
  - \$65M Interstate Funding (NHPP)
  - \$45M State Funds
  - \$95M NHPP/STP
- \$14 M HSIP along w/ Pavement Preservation

# Highway Fatalities Avg. 1124/yr

Since 2004

Year                      Fatalities                      Annual VMT                      Fatality Rate

2004	1,339	708.60	1.89
2005	1,270	707.04	1.80
2006	1,284	707.08	1.82
2007	1,211	712.50	1.70
2008	1,043	694.70	1.50
2009	986	702.89	1.40
2010	1,032	704.29	1.47
2011	937	707.45	1.32
2012	1,014	711.46	1.43

# Strategic Highway Safety Plan

- Created in 2004, the Tennessee Strategic Highway Safety Plan (SHSP) defined a system, organization, and process for managing the attributes of the road, the driver, and the vehicle to achieve the highest level of highway safety by intergrading the work of disciplines and agencies involved. This was the first SHSP in the country.

# Strategic Highway Safety Plan

- In 2014, Tennessee is once again improving the document; accounting for MAP-21 changes, requirements and suggestions. The 2014 revision includes
  - performance measures,
  - targets,
  - goals,
  - and quantitative data on past emphasis.
- It is scheduled to be approved summer 2014.



# SHSP Emphasis Areas:

- **Traffic Records**

- Crash Data
- Bridge Inspection

- **Infrastructure Improvements**

- Roadway Departures, 63% of fatalities and 42% of serious injuries
- Intersections, 16% of fatalities and 28% of serious injuries
- Railroad Crossing, <1% of fatalities and <1% of serious injuries



# SHSP Emphasis Areas:

- **Operational Improvements**

- Work Zone Safety, 1% of fatalities and 1% of serious injuries
- Incident Management

- **Driver Behavior**

- Unrestrained, 42% of fatalities and 20% of serious injuries
- Impaired, 29% of fatalities and % of serious injuries
- Distractive
- Teen, 12% of fatalities and 18% of serious injuries
- Aggressive, 21% of fatalities and 11% of serious injuries

# SHSP Emphasis Areas:

- **Vulnerable Users**

- Senior Drivers, 18% of fatalities and 14% of serious injuries
- Motorcyclists, 13% of fatalities and 10% of serious injuries
- Pedestrians, 7% of fatalities and 3% of serious injuries
- Bicyclists, 1% of fatalities and 1% of serious injuries

- **Motor Carrier Safety**

- Large Truck, 10% of fatalities and 14% of serious injuries

- *\*please note that the cumulated percentages are from a 2008-2012 average\**

# Types of roadway safety projects and Crash Mod Factors

- Location Safety

- Cable Rail ~100% CRF in all areas on fatal crashes
- Shoulder Widening ~20% CRF in rural areas
- Road Safety Audits (RSA's)

# Types of roadway safety projects and Crash Mod Factors

- Systemic Safety

- Roadway Departure Action Plan ~570 lives will be saved over a 10 year period on lane departure type crashes
- Intersection Action Plan ~20 lives will be saved annually at intersection related crashes
- High-friction Surface Initiative ~35% CRF in rural and ~54% CRF in urban areas
- Centerline and Shoulder Safety Initiative ~19% CRF for pavement markings and ~15% CRF for shoulder rumbles

# Partnership with FHWA

- Resurfacing Safety Check List
  - Signing
  - Striping
  - Guardrail and other roadway delineation
  - ADA Features
- Through the Road Safety Audit (RSA) program, it was agreed upon that if a resurfacing project's limits falls within the limits of a RSA, all the resurfacing items and quantities will be included into the RSA and utilize HSIP funds.
- Project “bracketing” to reduce unit costs

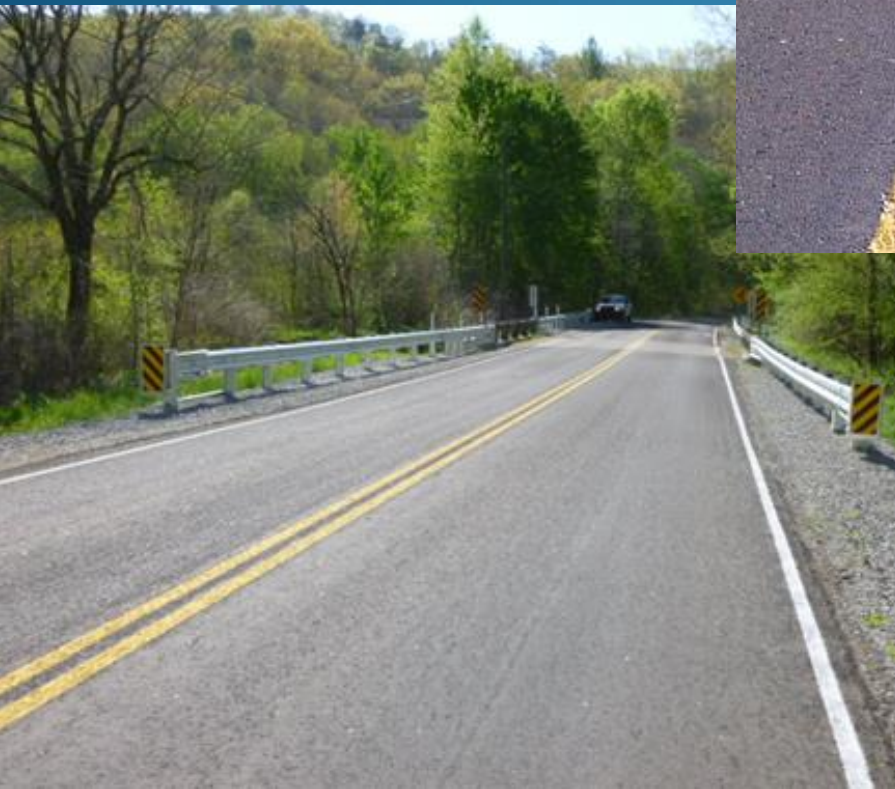
# Low-Cost Safety Improvements



# Low-Cost Safety Improvements



# Low-Cost Safety Improvements





# Low-Cost Safety Improvements



# How we did it

- Good working relationship with FHWA
- Good Crash History
  - Data Driven
- Integrated Safety Processes in Project Development


## Stewardship and Oversight Agreement Tennessee Federal-aid Highway Program

Developed in partnership between the Federal Highway Administration, Tennessee Division and the Tennessee Department of Transportation

We support the concept of this Stewardship Agreement and hereby direct that the stewardship and oversight of the Federal-aid Highway Program be carried out in the spirit of a true partnership, as described herein.

  
John Schroer  
Commissioner  
Tennessee Department of Transportation

Date

  
Pamela M. Kordenbrock  
FHWA, TN Division Administrator  
FHWA Tennessee Division

Date



# How it works....

- Dual Fund Code for all Pavement Preservation Projects (>\$10,000 of safety improvements)
- Evaluate previous projects
  - 3 years prior compared to 3 years after

Any questions?

