



How Tennessee Will Use SHRP2 Solutions to Advance Freeway Optimization

August 27, 2013

Paul Degges,
Chief Engineer



U.S. Department of Transportation
Federal Highway Administration



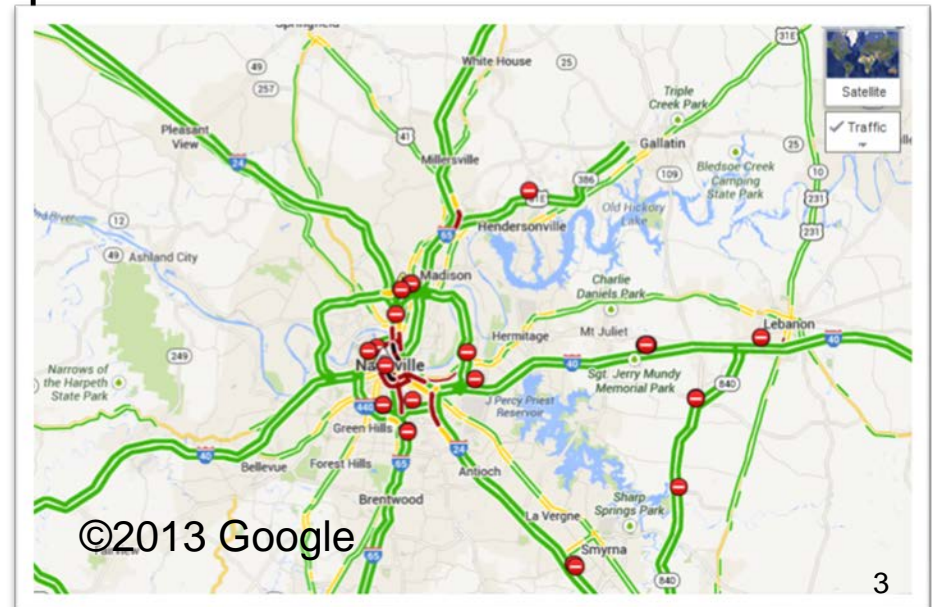
Presentation Focus

Optimizing our systems operation and management capabilities to achieve more reliable travel times while maximizing our freeway capacity.



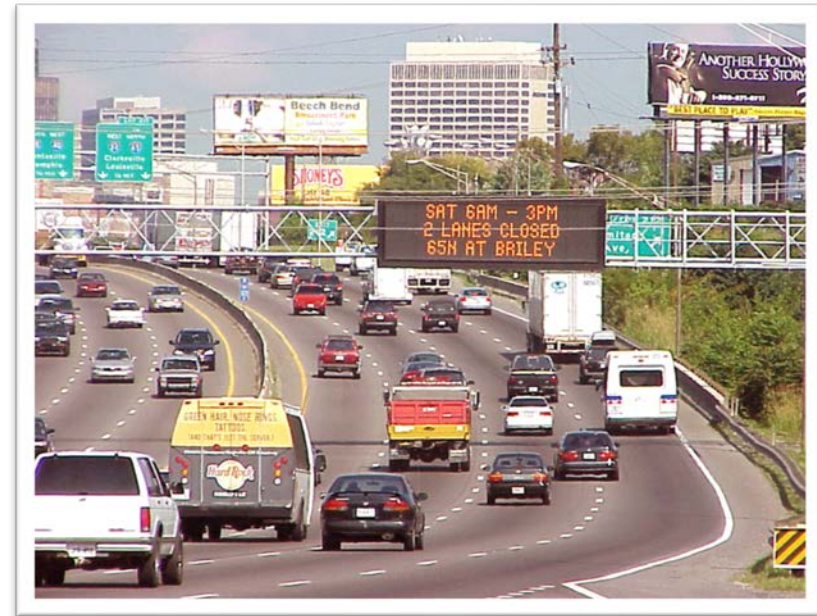
Tennessee “Hot” Spots

- Nashville – I-24 corridor to Murfreesboro, 12th fastest growing community in the US
- Chattanooga – I-24 through Missionary Ridge
- Memphis – I-240 from I-55 to 385 (Near Airways Blvd Interchange), FedEx HQ
- Knoxville – I-40/I-75, from Campbell Station Rd. to Cedar Bluff Rd.



Freeway System in Demand

- Nationally, 50% of congestion is due to non-recurring incidents such as accidents, bad weather, sporting events
- Accidents lead to safety problems for incident responders and motorists alike
- In 2009, Tennessee participated in TRB SHRP2 pilot study designed to focus on improving system operations and management
- TDOT developed a detailed action plan



Implementing Reliability Tools

Tennessee DOT –

New emphasis on more efficient traffic operations

- New Traffic Operations Division (created in January 2013)
 - Traffic Management Office
 - Traffic Incident Management Program
 - Transportation Management Center Program
 - Intelligent Transportation Systems Design Office
 - HQ Traffic Engineering Office



Traffic Incident Management

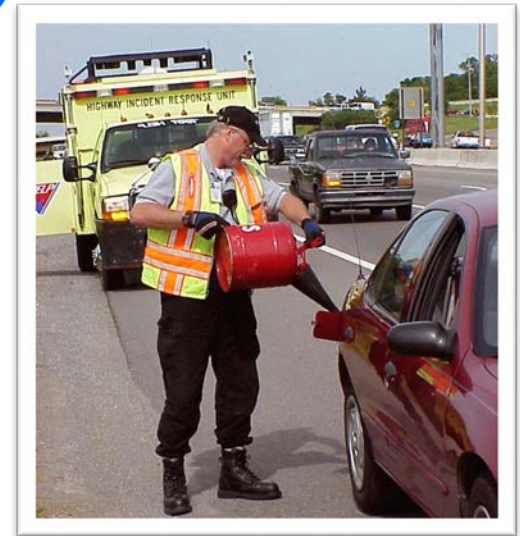
- **Early participant** in SHRP2-sponsored National Traffic Incident Management Train-the-Trainer Program
 - Creates a well-trained interdisciplinary responder corps who work together as a team – from the first emergency call to final scene clearance
 - Effort led by Tenn. Highway Patrol Colonel Tracy Trott, and TDOT's Frank Horne
 - Goal is to train all 800 Patrol staffers by end of 2013
 - To date in Tennessee, 83 trainers trained
 - To date in Tennessee, 428 first responders trained
- **Improves safety** to responders and travelers
- Results in **faster clearance times** = less congestion



Part of TIM tabletop exercise

More Incident Management

- **Constructing TIM training facility** at Tennessee Highway Patrol training academy by Fall of 2014
- **Hosting SHRP2 Pilot Regional Operations Forum**, Sept. 9 – 13
 - Will provide strategies, technologies and practices needed to continue our advancement of systems operations and management
- **Supporting the HELP Program**
 - This is **not** an acronym:
*“It’s what we do – we **help** people.”*
 - TDOT operates HELP trucks on most heavily traveled highways in Chattanooga, Knoxville, Memphis and Nashville
 - Assisted more than 1.5 million people



Tennessee DOT Turned to SHRP2

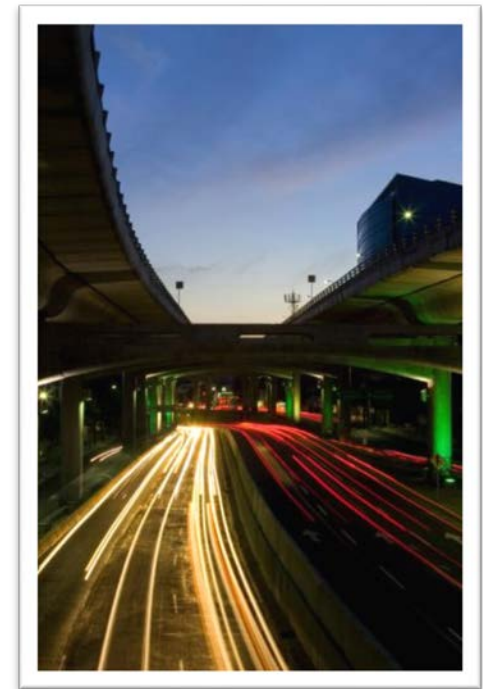
Lead Adopter for SHRP2 Solution: *Organizing to Improve Travel-Time Reliability*

- *Our opportunity to do more*



What are SHRP2 Solutions?

- Collaboration of AASHTO, FHWA, and SHRP2/TRB staff
- Designed to help state and local transportation agencies address aging infrastructure, safety, travel-time reliability, and highway capacity issues.
- Over 65+ high-priority products introduced over the next several years
- Users run the gamut of the transportation industry
- Selected products integrated into current transportation practices



SHRP2 Implementation Assistance Program



FHWA Assistance Opportunities

- Designed to help State DOTs, MPOs, local agencies, and other interested organizations deploy SHRP2 Solutions
- Round 1 announced in May for six products, including Reliability Suite
- Round 2 applications opened on August 2 and will end September 6
- Award announcements expected mid-October

Organizing to Improve Travel-Time Reliability

- **Comprehensive approach to improving traffic systems operations & management**
 - Level 1: Outreach to DOTs to gain interest
 - Level 2: DOT self-assessment of existing practices and potential opportunities
 - Level 3: Development of action plan
 - Level 4: Implementation
- **Product Goals:**
 - Improve traffic flow
 - Increase efficiency of our roadways
 - Reduce congestion for drivers & freight operators



Tennessee DOT's Approach

Build Core Team for Reliability Effort

- Tennessee DOT
 - All Regional Operations Directors (4 regions)
 - Traffic Operations Division Staff
 - Long-Range Planning Staff
 - Statewide Traffic Incident Management Coordinator
 - Statewide Transportation Management Center Coordinator
 - State Traffic Engineer

Benefits of SHRP2 Activities

Goal: Develop a systematic approach for the deployment of Traffic Operational Strategies

- Help us **achieve buy-in** across the Department
- Provide us with a structure in moving forward
- **Identify training, resources, experts, and best practices**
- **Identify improvement needs** on a system-wide and regional basis
- Establish a **baseline** and develop data to measure performance and improvement

SHRP2 Value to Tennessee DOT

- **Brings together stakeholders** to assess the state of Tennessee's operations program
- Allows us to **save money** by bringing ITS design function in-house
- Allows us to **build more consistency** in our operations programs across the state
- Helps us **standardize a statewide system**
- Will ultimately help us **maximize our existing capacity** for the traveling public

Questions?

Paul Degges

Deputy Commissioner, Chief Engineer
Tennessee Department of Transportation

Paul.Degges@tn.gov

615-741-0791

For more SHRP2 information:

<http://SHRP2.transportation.org>

**Contact Pam Hutton, AASHTO SHRP2 Implementation
Manager, 303-263-1212 or phutton@aaashto.org**

www.fhwa.dot.gov/goSHRP2

Save lives. Save money. Save time.