



TDOT
Department of
Transportation

Organizing to Support TSM&O in Tennessee



Brad Freeze, PE
Director, Traffic Operations Division

Planning for Operations, Glossary (FHWA)

Transportation Systems Management and Operations (TSM&O): An **integrated program** to optimize the performance of existing infrastructure through the implementation of systems, services, and projects designed to preserve capacity and improve security, safety, and reliability.

New Concepts?



Tragedy on Interstate 75

- ❑ December 11, 1990 – Dense Fog on a segment of I-75 near Calhoun, Tennessee causes a chain-reaction collision involving 99 vehicles with 42 injuries and 12 fatalities.
- ❑ 1993 – TDOT installs an automated fog detection and warning system on I-75.



TDOT Incident Management Program (HELP)

- ❑ June, 1999, Staged implementation begins with patrols in Nashville & Knoxville.
- ❑ June, 2000, Service begins in Chattanooga & Memphis.
- ❑ September 2001, Patrols expanded to 7 days a week.



Deployment of the TDOT SmartWay

- ❑ June 6, 2003 – Nashville Transportation Management Center (TMC) Opens
- ❑ May 5, 2005 – Knoxville TMC Opens
- ❑ November 13, 2008 – Memphis TMC Opens
- ❑ December 14, 2011 - Chattanooga TMC Opens



Nov, 2009 – TN Operations & Mobility Summit – Capability & Maturity Model Self Assessment

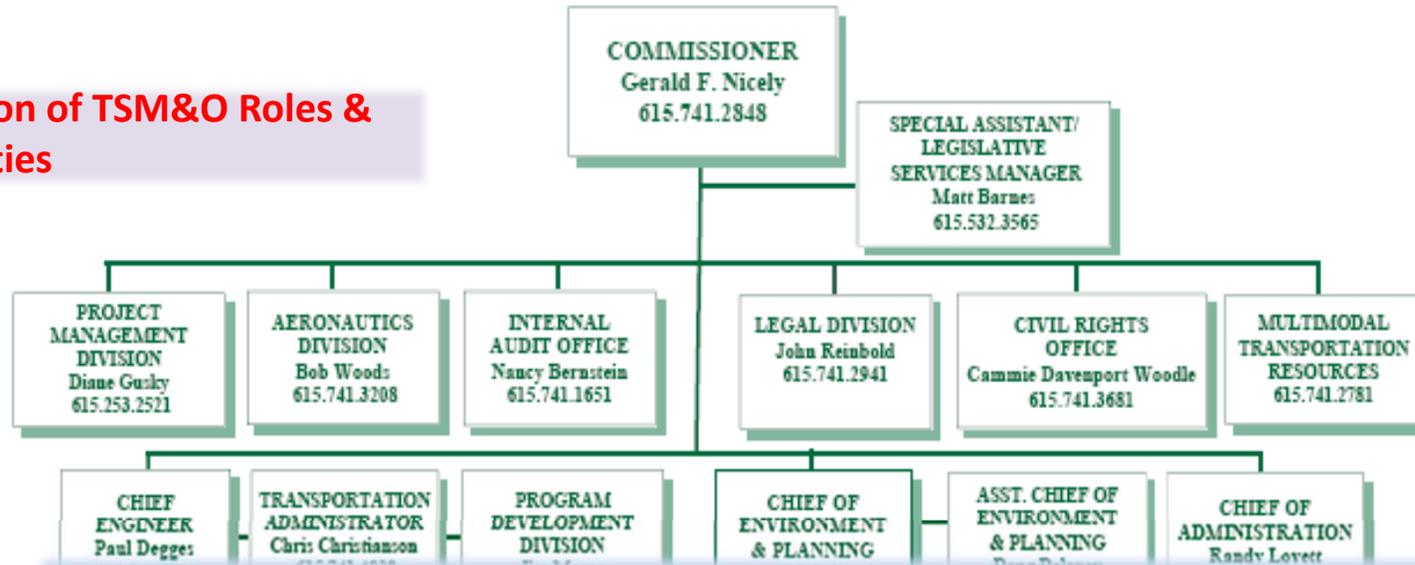
Element	Rating	Comments
Planning and Programming	1	Systems Operations and Management in some metro long-range plans; Past focus on low-hanging fruit projects.
Technology and Systems	2	Major challenge-working with first responders; TDOT can't apply data; Existing Manual of Operations.
Performance	2	There is no data consistency; Incident Management program has performance measures in place.
Culture	2	Good customer service approach (511, information); TTAP library provides access to traffic operations and ITS info.
Organization/Staffing	1	HELP operator training program is nationally recognized. Fragmented legacy organization with some operations.
Resource Allocation to Systems Operations and Management	2	Signal Timing funding major concern; Ongoing operations budgets in place, but not for program expansion; Smart Way Traffic Management Center System well funded. No long term allocations; No budget for program expansion.
Partnerships	2	Signals maintained on local basis; Agreements - good faith but not enforceable; Limited with maintenance & planning.

Observations From 2009 CMM Self Assessment

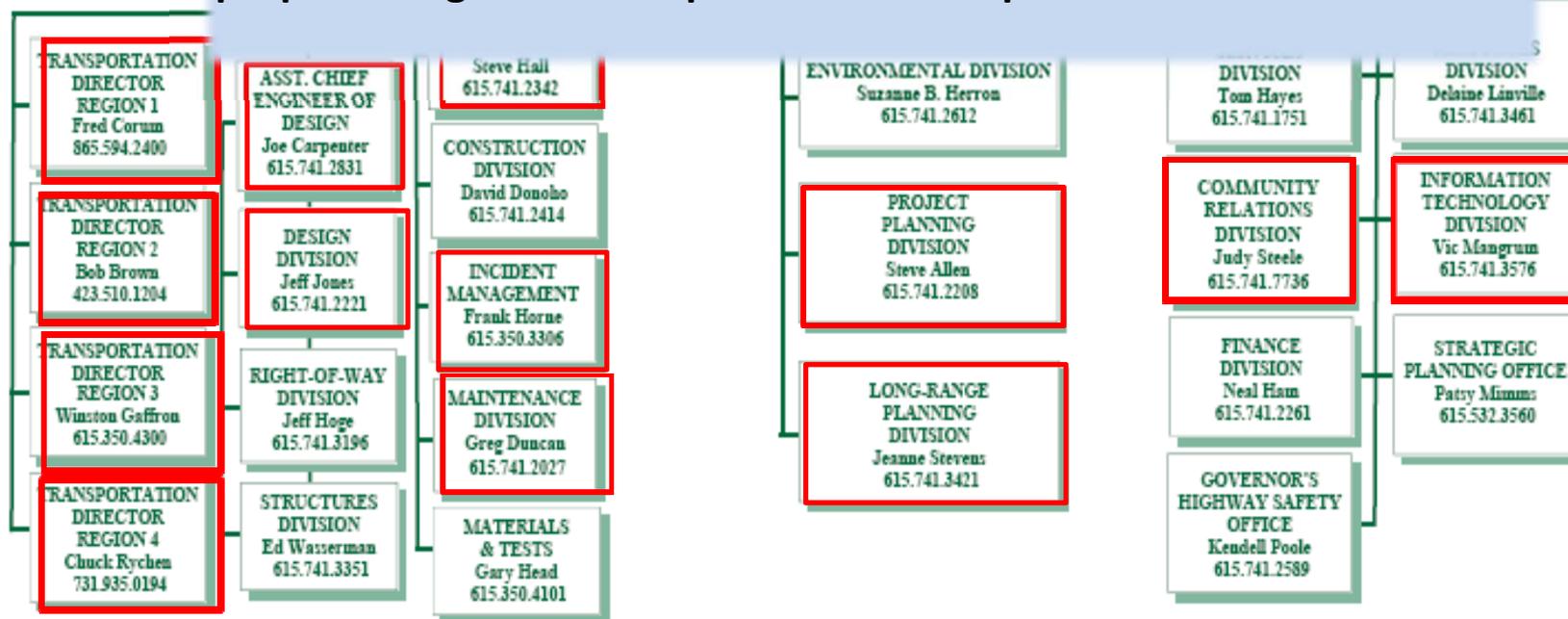
- ❑ Fragmented legacy organization with TSM&O related responsibilities spread across multiple TDOT Divisions and work units
- ❑ TSM&O initiatives lead by champions who where working outside of their traditional job responsibilities
- ❑ A collection of disparate TSM&O focused programs separated by geographic TDOT Regions with no standard guidelines or procedures
- ❑ Lack of strategic direction for TSM&O deployments & practices

Tennessee Department of Transportation

Fragmentation of TSM&O Roles & Responsibilities



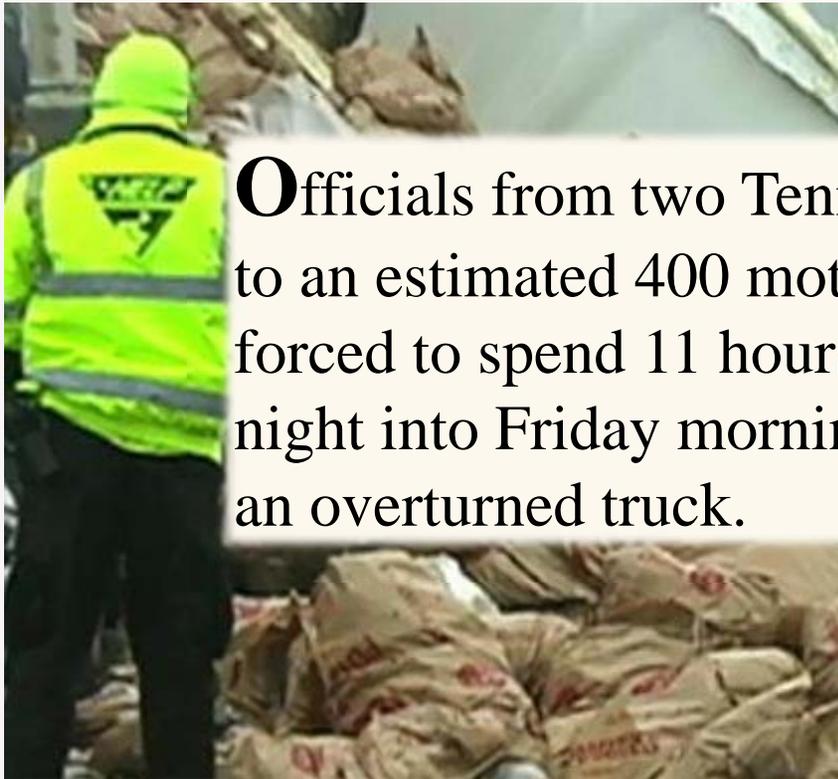
2009 CMM Self Assessment Action Item: Vet and implement proposed organizational plan and move operations to a division level



December 11, 2011

NEWS

State apologizes for 11-hour tie-up after potato truck crashes on I-40



A Tennessee DOT HELP Operator works to clear Interstate 40 after a tractor-trailer carrying a load of 40,000 pounds of potatoes overturns

Officials from two Tennessee state agencies apologized to an estimated 400 motorists on Interstate 40 who were forced to spend 11 hours in their vehicles from Thursday night into Friday morning after an accident that involved an overturned truck.

“We should have done better, and we apologize,”

Officials from two Tennessee state agencies apologized to an estimated 400 motorists on Interstate 40 who were forced to spend 11 hours in their vehicles from Thursday night into Friday morning after an accident that involved an overturned truck.

aftermath of the wreck.

The tractor-trailer carrying a load of about 40,000 pounds of potatoes crashed about 8 p.m.

Thursday just before mile marker 245 in the Tuckers Crossroads area east of Lebanon in Wilson County. All the eastbound lanes were blocked for about 11 hours until the interstate partially opened just after 7 a.m.

Reorganizing to Support TSM&O

- ❑ **Traffic Operations Division established on January 16, 2013. This Division consists of the following offices:**
 - **Headquarters Traffic Engineering (Relocated from Maintenance Division)**
 - **Intelligent Transportation Systems (Relocated from Design Division)**
 - **Transportation Management (Relocation of Incident Management Office, with the expanded oversight of Traffic Management Center (TMC) Programs)**

**Deputy Commissioner
Chief Engineer Bureau
of Engineering Paul
Degges**
615-741-0791

**Assistant Chief
Engineer of Operations
Chuck Rychen**
615-741-2342

**Assistant Chief
Engineer of Design
Jeff Jones**
615-741-2831

**Headquarters Construction
Division**
Will Reid
615-741-2414

Maintenance Division
Jerry Hatcher
615-741-2027

Materials & Test Division
Brian Egan
615-741-2414

Region 1
Steve Borden
865-594-2400

Region 2
Ray Rucker
423-892-3430

Region 3
David Layhew
615-350-4300

Region 4
Jason Baker
731-935-0194

Traffic Operations
Brad Freeze
615-741-5017

Roadway Design Division
Jennifer Lloyd
615-741-2221

Structures Division
Wayne Seger
615-741-3351

Right of Way Division
Jeff Hoge
615-741-3196

**Program Development
and Administration Jim
Moore**
615-741-3301

Bid Analysis & Estimating Office
Wayburn Crabtree
615-253-2901

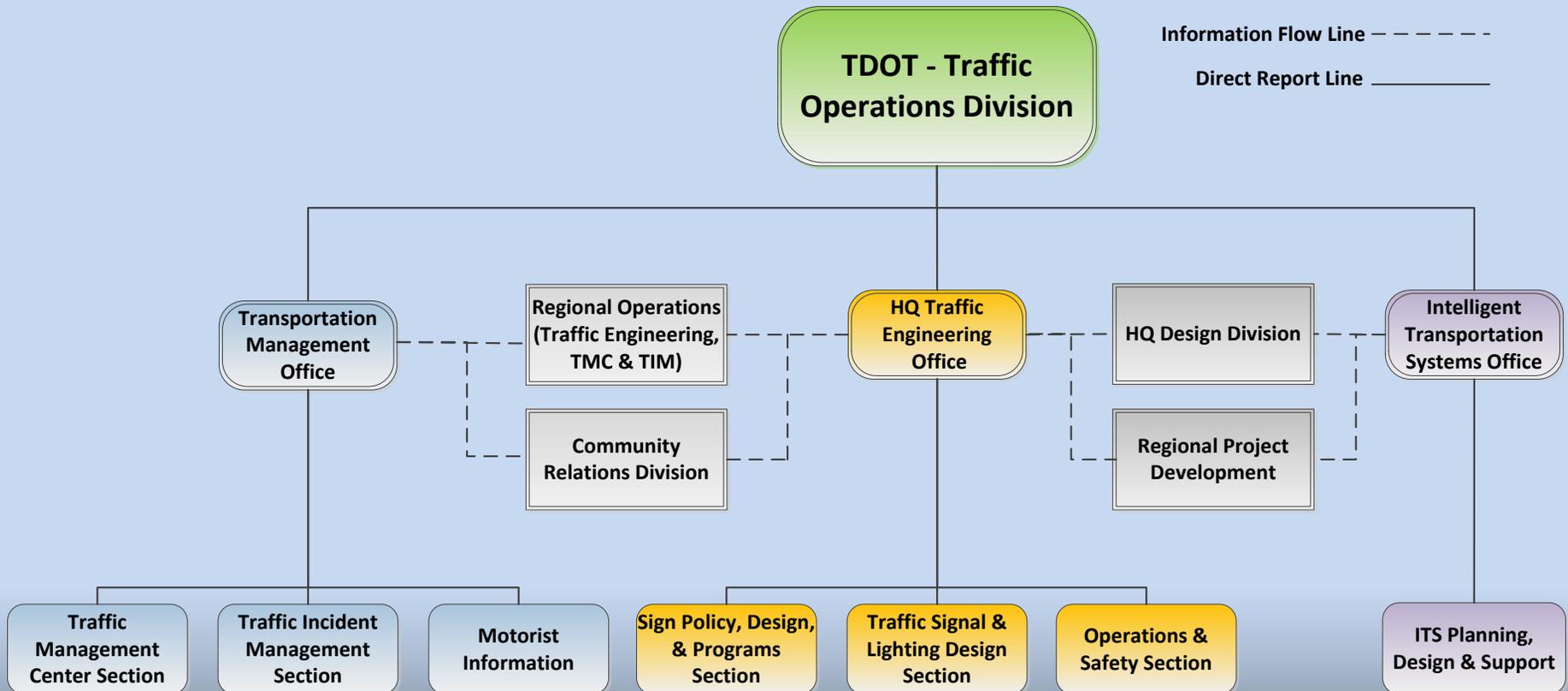
Project Management
Danielle Hagewood 615-
253-2521

**Strategic Transportation
Investments**
Steve Allen
615-741-2208

Updated May 6, 2016

ion

Functional Organization Chart



Results Achieved After Reorganization

- ❑ Standard Transportation Management Center (TMC) & Traffic Incident Guidelines
- ❑ IT Division engagement into Systems Operations
- ❑ TDOT TSM&O Program Plan* - Draft Under Review
- ❑ Pathway for systems operations performance measurement incorporation into overall agency objectives
- ❑ TSM&O integration into TDOT's Long Range Transportation and Strategic Highway Safety Plans

Results Achieved After Reorganization

- ❑ Increased Co-Operation with the Tennessee Highway Patrol, culminating in the building of the Traffic Incident Management Training site and a Traffic Management Center Co-location.





TDOT
Department of
Transportation

Questions?



Brad Freeze, PE
Director, Traffic Operations Division