



## Maintenance and Operations Program

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Chief of System Operations

## Overview

- **Code of Virginia Requirements**
- **Focus of Maintenance and Operations**
- **Overview of 2009 Biennial Report of Maintenance and Operations Needs**
- **Maintenance and Operations 2011 Budget and Performance**

# Background

## Code of Virginia Statutory Requirements:

**Section 33.1-13.02** – requires VDOT to report by September 15<sup>th</sup> of each odd-numbered year on the condition of and needs for maintaining the existing transportation system

- On July 1, reporting requirement will change to November 30 every year (in Section 33.1-13.03)

## **Section 33.1-23.2**

- Provides the definition of maintenance, operations, and asset management
- Requires VDOT to adopt an asset management approach to assess its maintenance and operations needs

**Section 33.1-41.1** – pertains to payments to localities and include requirements for localities to report expenditures of state funds received as well as performance of local roads

# Maintenance

The focus of maintenance is on physical assets

**Interstate, Primary, Secondary Roads**

**Roads**



**Tunnels**



**Bridges**



**Rest Areas**

**Roadside**



# Operations

The focus of operations is on movement of traffic



**Ops Centers**



**Cameras**



**Incident Mgt**



**Messaging**



# Maintenance and Operations Program Goals

## Deliver emergency and safety services to efficiently operate the system

- Emergency response - snow, flood and other emergencies
- Incident management activities - safety service patrols
- Operate and maintain the 24/7 facilities: traffic operations centers, river and mountain tunnels, movable bridges, safety rest areas, ferries, parking lots
- Ordinary maintenance on pavements, bridges, tunnels, traffic & safety, and technology assets, response to citizen calls for service
- Maintain drainage, vegetation, barriers, equipment

## Maintain and extend the useful life of core highway assets

- Perform corrective, restorative & rehabilitation maintenance - pavements and bridges
- Perform major repairs and equipment replacement based on life-cycle cost for tunnel systems, traffic & safety, and technology assets

# FY 2011 Needs and Budget (\$ million)

|  | FY 2011<br>Needs | FY 2011<br>Budget |
|--|------------------|-------------------|
| <b>Investment</b>                          |                  |                   |
| <b>Pavement</b>                            | <b>\$708.9</b>   | <b>\$318.3</b>    |
| Interstate Pavement                        | 119.1            | 92.6              |
| Primary Pavement                           | 251.6            | 164.9             |
| Secondary Pavement                         | 338.3            | 60.7              |
| <b>Bridges<sup>1</sup></b>                 | <b>142.9</b>     | <b>131.1</b>      |
| <b>Tunnels</b>                             | <b>32.0</b>      | <b>24.6</b>       |
| <b>Traffic and Safety</b>                  | <b>200.4</b>     | <b>116.5</b>      |
| <b>TOC &amp; Technology</b>                | <b>48.6</b>      | <b>23.3</b>       |
| <b>Sub-Total</b>                           | <b>\$1,132.8</b> | <b>\$613.8</b>    |
| <b>Services</b>                            |                  |                   |
| <b>Emergency and Incident Mgt Services</b> | <b>\$155.1</b>   | <b>\$157.7</b>    |
| <b>Traffic and Safety Services</b>         | <b>84.5</b>      | <b>70.4</b>       |
| <b>Roadway Services</b>                    | <b>185.4</b>     | <b>173.5</b>      |
| <b>Roadside Services</b>                   | <b>149.4</b>     | <b>137.9</b>      |
| <b>Facility and Other Services</b>         | <b>207.6</b>     | <b>192.1</b>      |
| <b>Sub-Total</b>                           | <b>\$782.0</b>   | <b>\$731.5</b>    |
| <b>Total</b>                               | <b>\$1,914.7</b> | <b>\$1,345.3</b>  |

<sup>1</sup> Bridge needs updated April 2010. Bridge reconstruction needs to replace structurally deficient bridges are not included

# Maintenance and Operations Program Budgets (\$ million), Lane Mileage, and Daily VMT

| Program Area                       | FY 2009           | FY 2010           | FY 2011           |
|------------------------------------|-------------------|-------------------|-------------------|
| Interstate Maintenance             | \$ 264.2          | \$ 308.5          | \$ 345.3          |
| Primary Maintenance                | 340.3             | 449.5             | 456.7             |
| Secondary Maintenance              | 357.2             | 338.2             | 345.3             |
| Transportation Operations Services | 132.1             | 127.7             | 120.6             |
| Management and Direction           | 92.7              | 88.6              | 77.4              |
| <b>Total</b>                       | <b>\$ 1,186.4</b> | <b>\$ 1,312.4</b> | <b>\$ 1,345.3</b> |

| Roadway System | 2009<br>Lane Mileage | Percent of Total<br>Lane Mileage | 2009<br>Daily VMT  | Percent of Total<br>Daily VMT |
|----------------|----------------------|----------------------------------|--------------------|-------------------------------|
| Interstate     | 5,844                | 5%                               | 65,743,215         | 38%                           |
| Primary        | 21,879               | 17%                              | 67,604,994         | 39%                           |
| Secondary      | 98,463               | 78%                              | 39,495,813         | 23%                           |
| <b>Total</b>   | <b>126,187</b>       | <b>100%</b>                      | <b>172,844,022</b> | <b>100%</b>                   |



# Maintenance and Operations Program FY 2011 Budget by Services (\$ million)

| Services                          | Interstate Maintenance | Primary Maintenance | Secondary Maintenance | Transportation Operations Services | Management and Direction | Total             |
|-----------------------------------|------------------------|---------------------|-----------------------|------------------------------------|--------------------------|-------------------|
| Roadway                           | \$ 181.1               | \$ 249.6            | \$ 196.2              | \$ 20.5                            |                          | \$ 647.4          |
| Emergency and Incident Management | 64.5                   | 51.6                | 33.1                  | 31.8                               |                          | 181.0             |
| Traffic and Safety                | 48.2                   | 89.1                | 19.5                  | 30.1                               |                          | 186.9             |
| Roadside                          | 23.1                   | 41.3                | 73.4                  |                                    |                          | 137.9             |
| Facility and Other                | 28.3                   | 25.1                | 23.0                  | 38.3                               | 77.4                     | 192.1             |
| <b>Total</b>                      | <b>\$ 345.3</b>        | <b>\$ 456.7</b>     | <b>\$ 345.3</b>       | <b>\$ 120.6</b>                    | <b>\$ 77.4</b>           | <b>\$ 1,345.3</b> |

Roadway services – pavements, bridges, tunnels

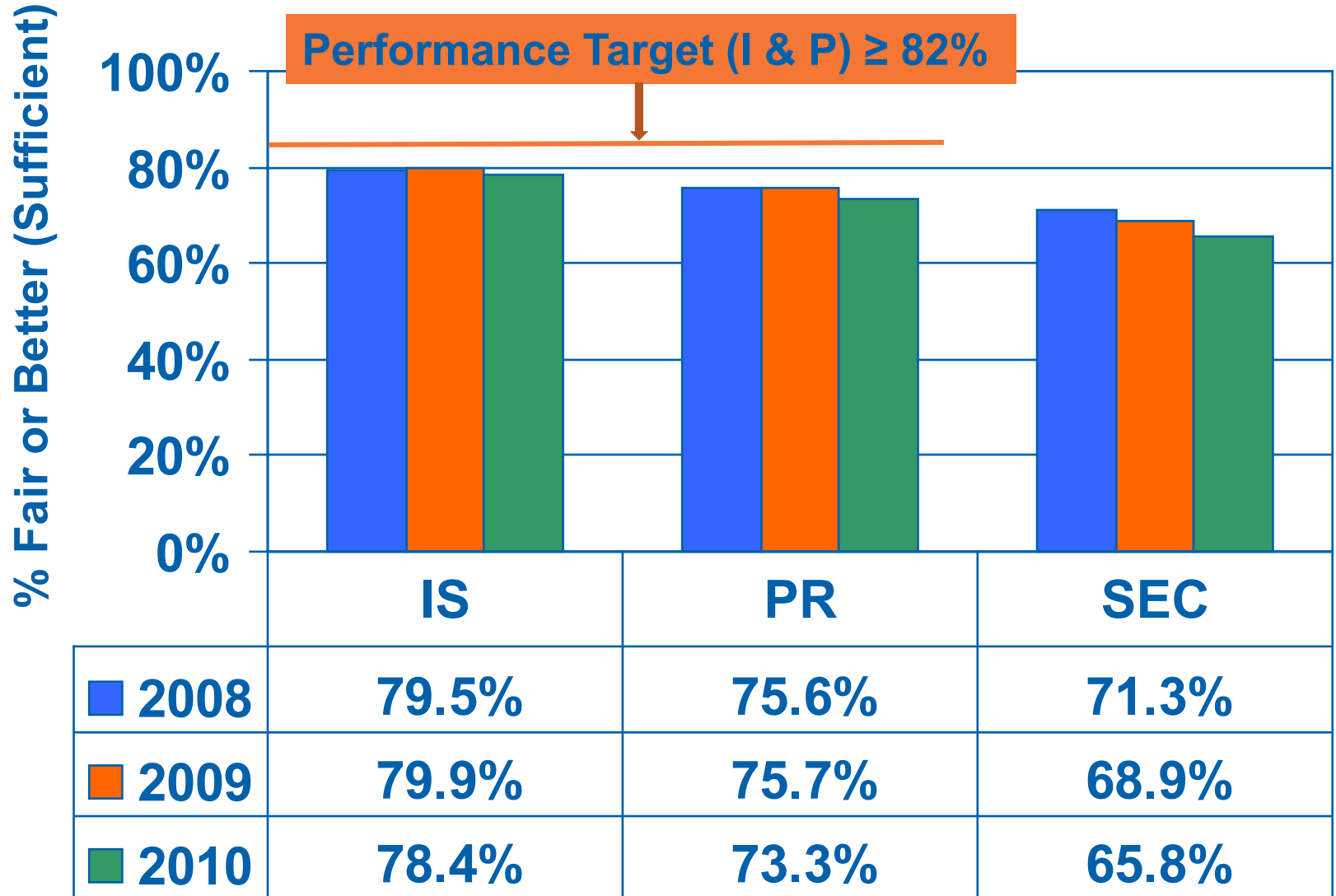
Emergency and incident management services – incident response, snow and Ice control, traffic operations centers

Traffic and safety services – signs, markings, guardrail, signals, lights, traffic and safety engineering services

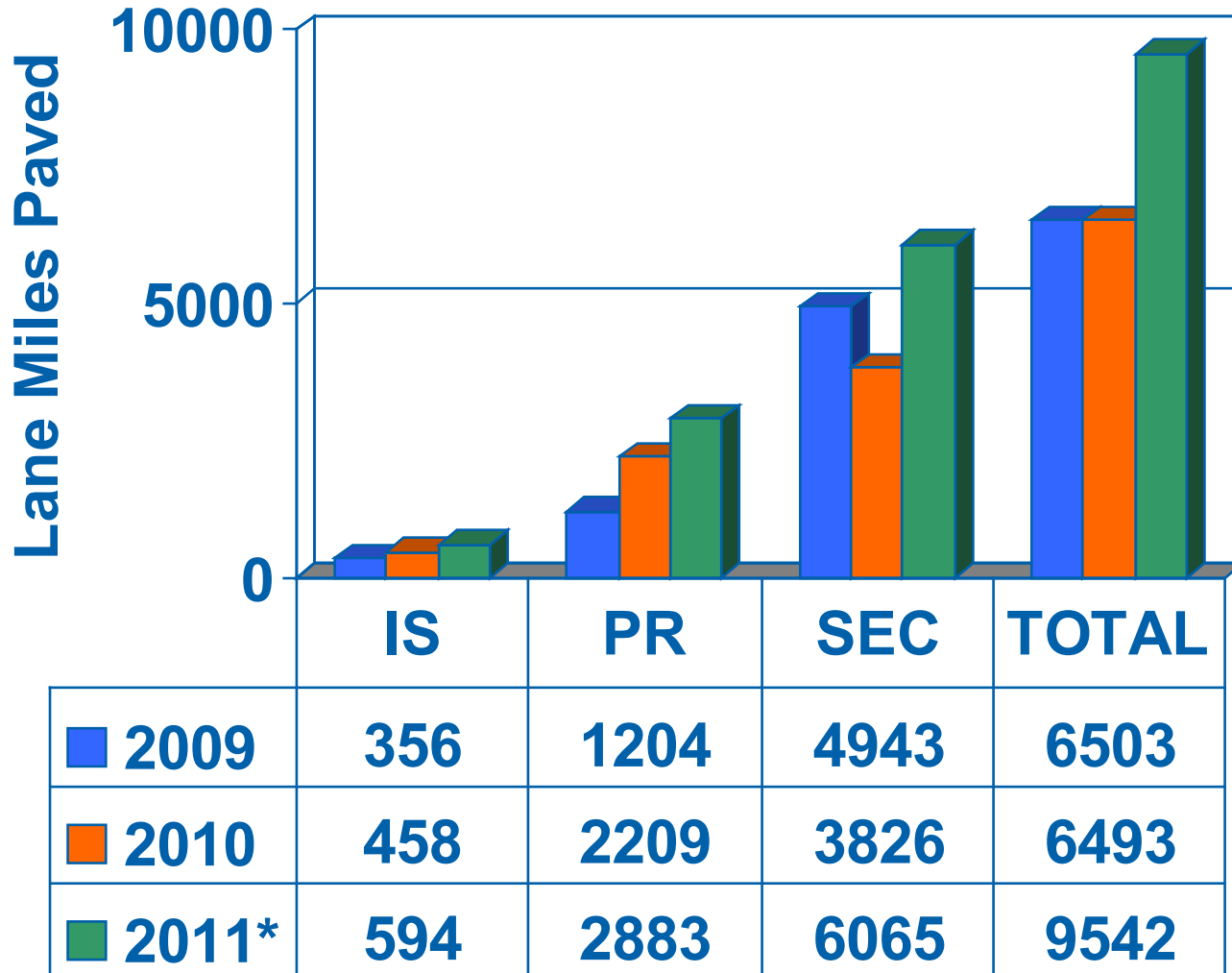
Roadside services – drainage, vegetation, fences

Facility and other services – equipment, ferries, rest areas, sidewalks/trails, management and direction

# Pavement Condition % Rated Fair or Better



## Lane Miles Paved by System



## Maintenance Program Spending

- **At end of FY 2010, \$530 million of allocation (including federal funds) not spent**
  - **\$318 million of contract work underway but not completed**
- **The total estimated value of contracts included in the fall 2010 paving schedules was more than double that from the fall 2009 paving schedules**
  - **Anticipate most of the expenditures will not occur before summer (FY 2012)**
- **Current estimates of maintenance program allocation (including federal funds) not spent are approximately:**
  - ≤ **\$400 million at end of FY 2011**
  - ≤ **\$100 million at end of FY 2012**

# Questions