



**SCDOT Needs, Funding
Challenges, and Economic
Development
or
“Getting to Good”
(and Staying There...)**

**Robert St. Onge, SCDOT
January 2013**



SCDOT's Mission

Mission (Section 57-1-30, SC Code of Laws)

The department shall have as its functions and purposes the systematic planning, construction, maintenance and operation of the state highway system and the development of a statewide intermodal and freight system that is consistent with the needs and desires of the public.

*SCDOT's core service is to provide a **safe**, properly-maintained road and bridge network supporting citizens, visitors, and commerce.*

SC's Safety Record

Traffic fatalities in SC did not decline in 2012, but were lower than the last five-year rolling average...

- Road departures – nearly 60% of all fatalities in SC involve vehicles leaving roadway and 1 out of every 4 fatal crashes in SC involves a vehicle striking a tree (more than 3 times the national average)
- Intersections – 1 out of every 5 fatal crashes occurs at an intersection
- DUI – 44% of all fatal crashes in SC are alcohol related (tied for first in nation)
- Speeding – over 40% of fatal crashes in SC are speed related (ranks in top 5 worst in nation)
- Seat belts – usage is up...however, 62% of all 2012 fatalities involved victims who had access to seatbelts but were not wearing them

Safety Summary

- SC roads and bridges are safe within the limits, restrictions, and controls posted
- We must educate all drivers, especially our youth, about safe and defensive driving
- SCDOT and Interagency Safety Council is committed to a program called “Toward Zero Deaths”
- MAP-21 safety performance standards will potentially impact our federal funds

SCDOT's Area of Responsibility

- Ensuring SCDOT is a high-performing organization, compliant with state and federal regulations
- Preserving the state highway system
- Managing the state's highway construction requirements
- Assisting public transit authorities with coordination of services, planning of resources, and compliance issues
- Planning for the state's multimodal requirements in coordination with Department of Commerce, State Ports Authority, and our Metropolitan Planning Organizations and Councils of Government

SCDOT's Area of Responsibility

- Assisting counties with the execution of highway projects stemming from their local sales tax programs
- Administering the CTC Program
- Participating in the development and implementation of the Highway Safety Plan in coordination with DPS, DMV and FHWA
- Permitting oversize/overweight load requests
- Managing toll operations
- Providing project management services for larger State Infrastructure Bank (SIB) projects through intergovernmental agreements with SIB funding recipients (i.e. City or County)

SCDOT's Assets

Over 41,000 highway miles

Over 8,300 state-owned bridges

Over 643,000 traffic signs

9 Welcome Centers

19 Rest Areas

105,000 miles of ditches

128,000 roadside acres mowed

23,000,000 linear feet of curb and gutter

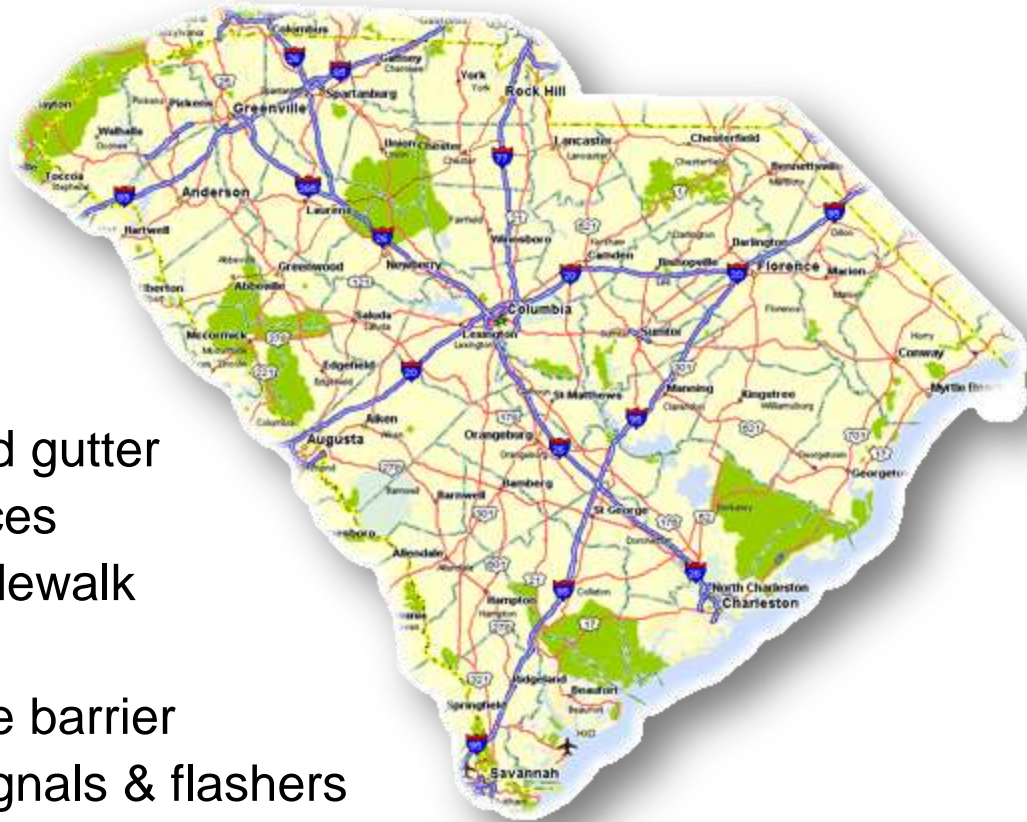
Over 1,140,000 driveway entrances

Over 20,000,000 linear feet of sidewalk

Over 1,700 miles of guardrail

Almost 500 miles of median cable barrier

Over 5,600 state-owned traffic signals & flashers



State Rankings

Miles Maintained			Motor Fuel User Fee			
Rank	State	Number of Miles	Rank	State	Number of Miles	Amount
1	TX	80,067	1	AK	5,635	8.0
2	NC	79,466	2	WY	6,734	14.0
3	VA	58,103	3	NJ	2,325	14.5
4	SC	41,444	4	SC	41,444	16.8
5	PA	39,862	5	OK	12,280	17.0

Sources: Miles – FHWA Statistics 2009, Table HM-10
 State User Fee – American Petroleum Institute

South Carolina maintains the 4th largest highway system in the nation, but has the 4th lowest motor fuel user fee

System Mileage in S.C.

<i>Type of System</i>	<i>Mileage</i>	<i>Lane Miles</i>
Interstate	851	3,796
Primary	9,475	23,765
Federal Aid Secondary	10,265	21,058
Non Federal Aid Secondary	20,853	41,819
Total	41,444	90,438

Approximate mileage, also referred to as “center line miles” is quantified by length of roadway and most statistics use center line miles. Lane miles are quantified by area.

Grading the System

SCDOT looks at two categories when grading the system...

Capacity:

bottlenecks, heavy traffic



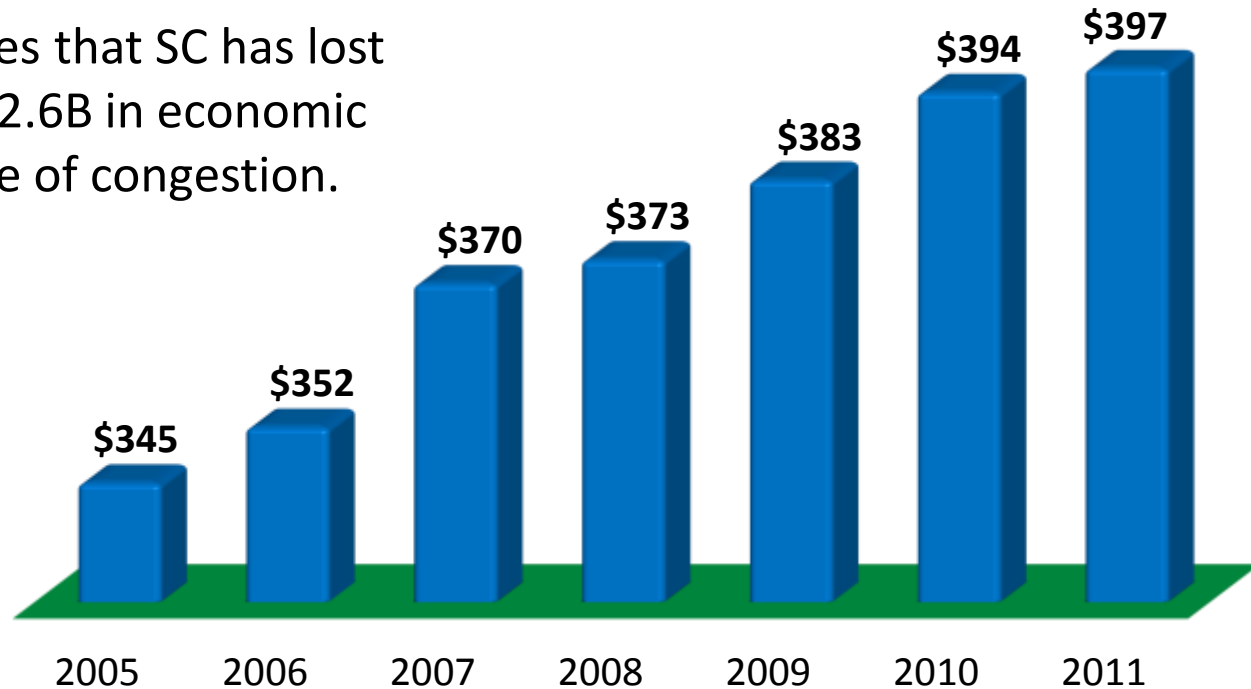
Pavement Condition:

condition of surface and road base



Cost of Congestion

SCDOT estimates that SC has lost an estimated \$2.6B in economic activity because of congestion.



Examples of Heavily Congested Areas:

- I-26 @ Dorchester Rd
- I-385 @ SC-417/Exit 31
- I-26 @ Saint Andrews Rd/Exit 106
- US-17 @ SC-707/Socastee Blvd/Phillis Blvd

Grading Pavement Condition

- Grade for pavement condition is called a Pavement Quality Index (PQI)
- PQI is made up of two components – one that measures rutting and roughness and one that measures pavement distress (cracking, raveling)

Pavement Condition	Poor	Fair	Good
PQI Range	0.0 – 2.6	2.7 – 3.3	3.4 – 5.0

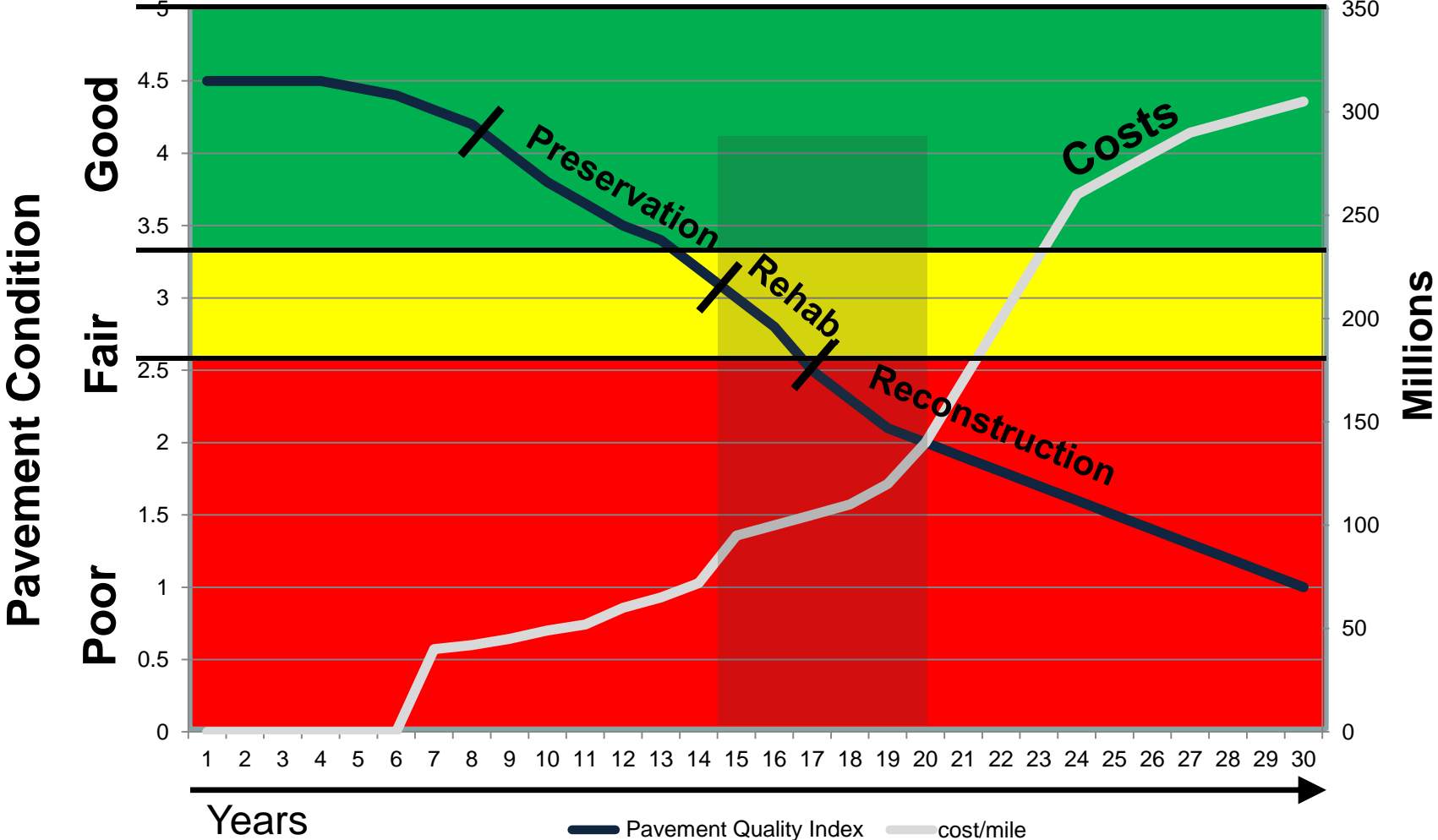
Reconstruction range 0.0 -2.4	→	Rehabilitation range 2.4 - 3.2	→	Preservation range 3.2 - 5.0	→
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Reconstruction – usually involves the complete replacement of the pavement structure

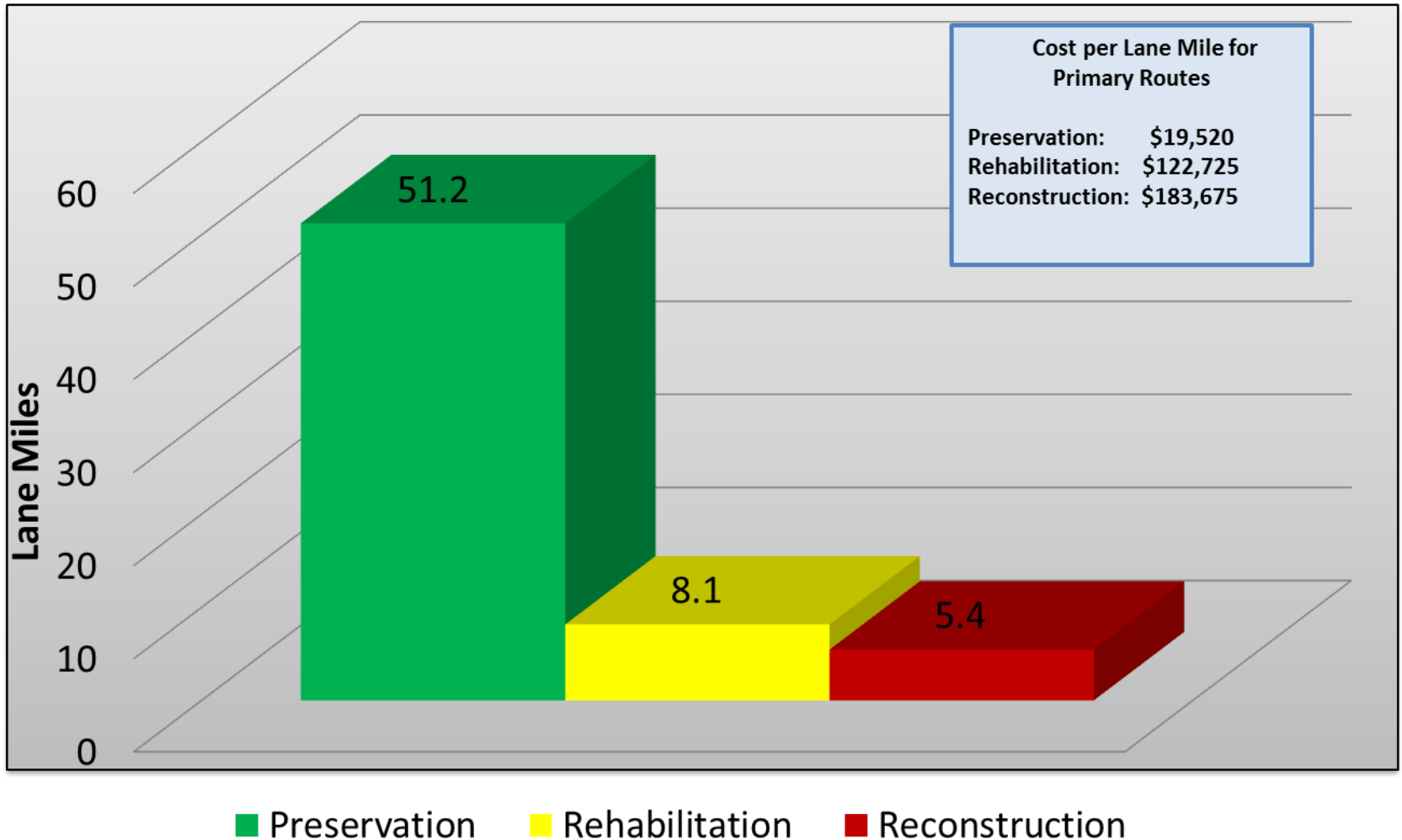
Rehabilitation – structural enhancements to improve a pavement’s load carrying capability – i.e.; adding additional layers of asphalt

Preservation – low cost treatments such as chip seals, crack sealing, or ultra thin asphalt overlays placed at the right time to slow pavement deterioration

Cost vs. Pavement Condition



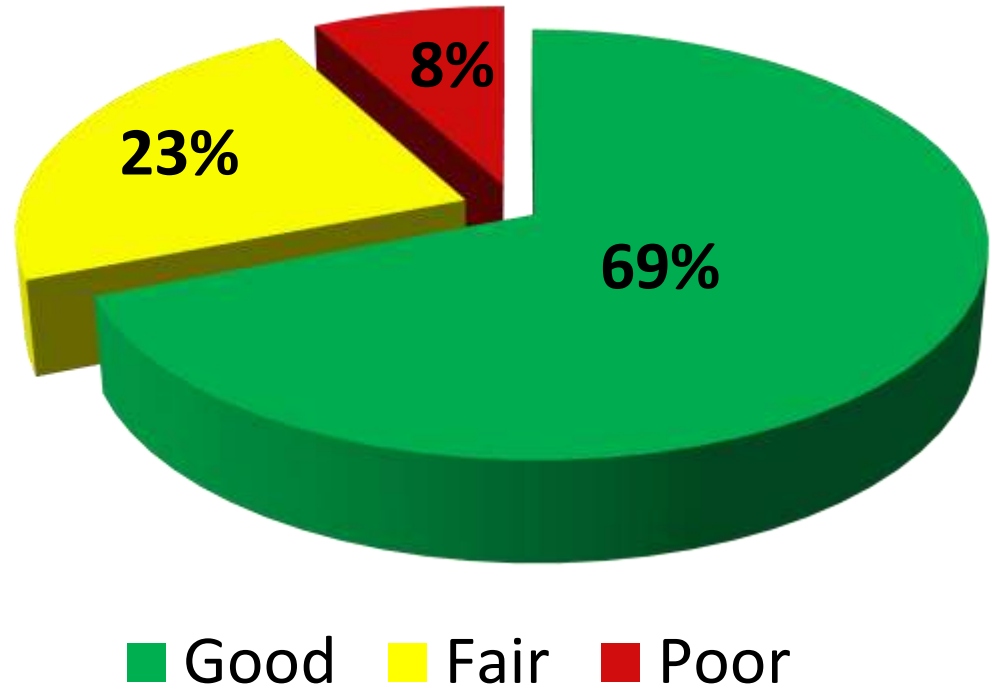
Stretching \$1M...Getting the Most For Your Money



Interstate Pavement Condition

Total of 851 miles:

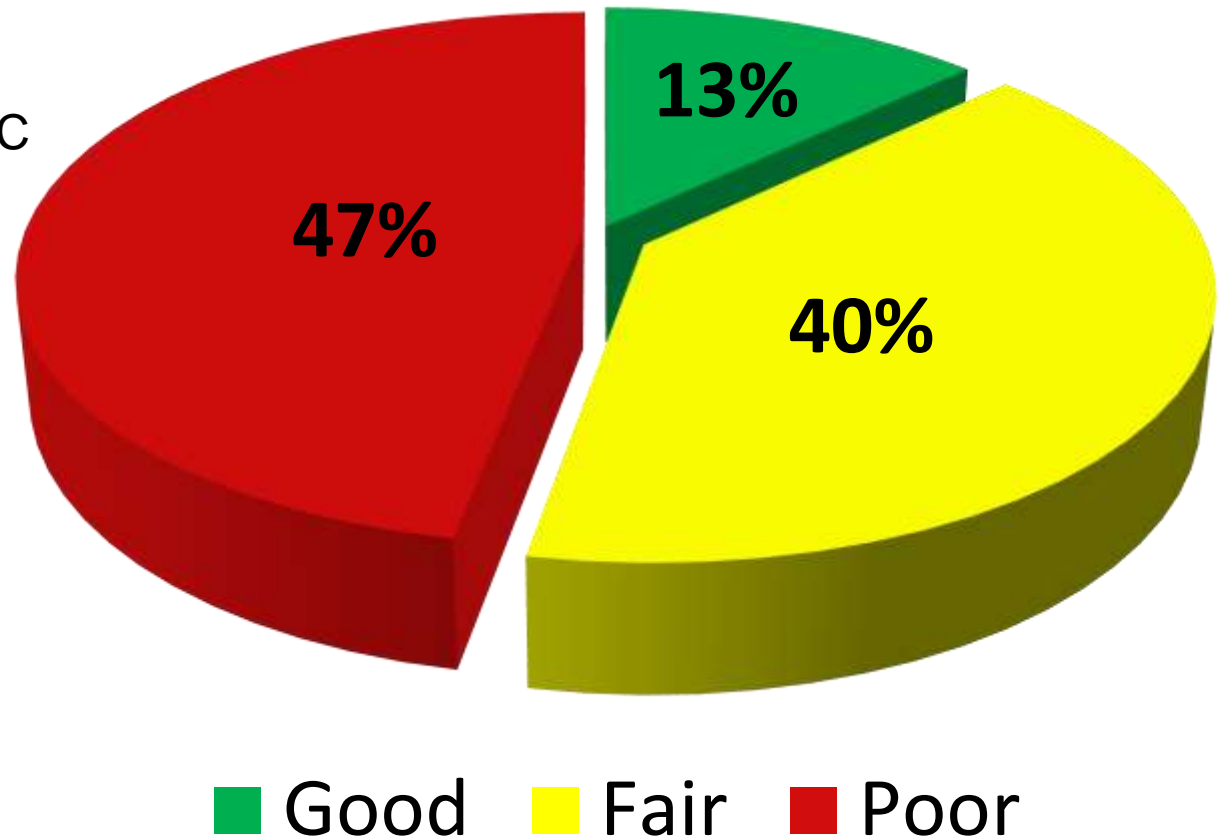
- Interstate system is over 50 years old
- Nearly 30% of all roadway travel in SC occurs on the interstates
- 113 miles of interstate are high usage, carrying over 70,000 vehicles per day
- Year 2030 capacity needs estimated to be additional 400 lane miles
- Approximately 50 out of 271 interchanges will require reconstruction over the next 20 years
- All on the National Highway System
- Trucks account for nearly 13% of all Interstate traffic
- 14% of our interstate mileage experiences recurring congestion



Primary System Pavement Condition

Total of 9,475 miles:

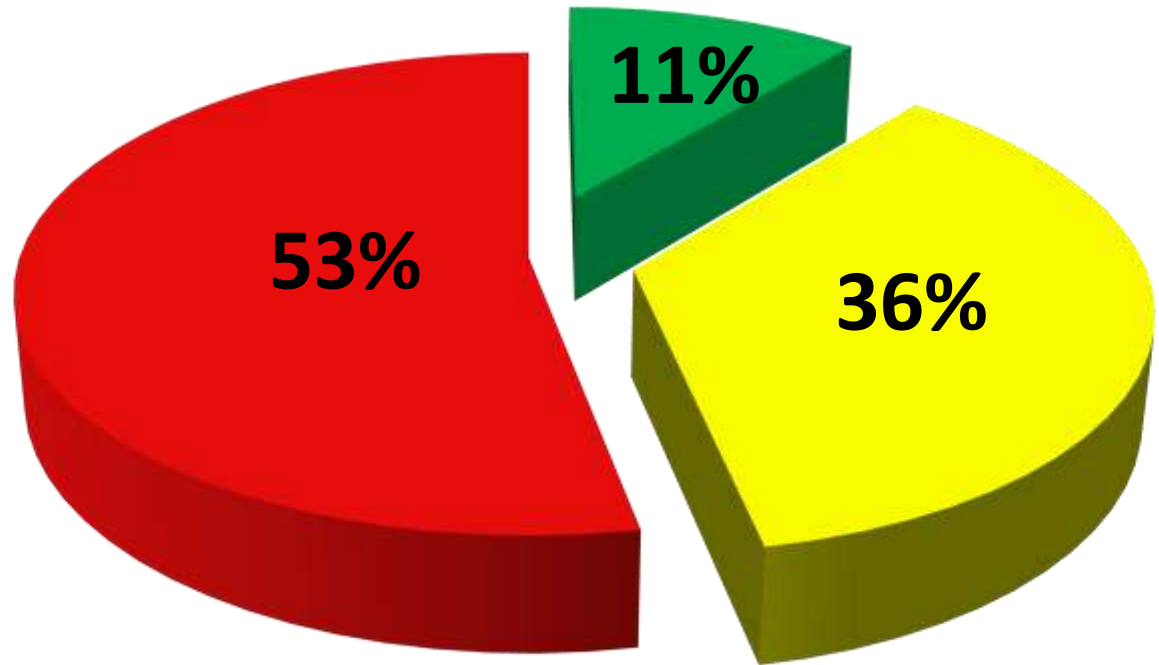
- Comprised of US and SC routes
- Includes routes on the National Highway System (NHS)
- 45% of travel occurs on the primary system



Secondary System Pavement Condition

Total of 31,118 miles:

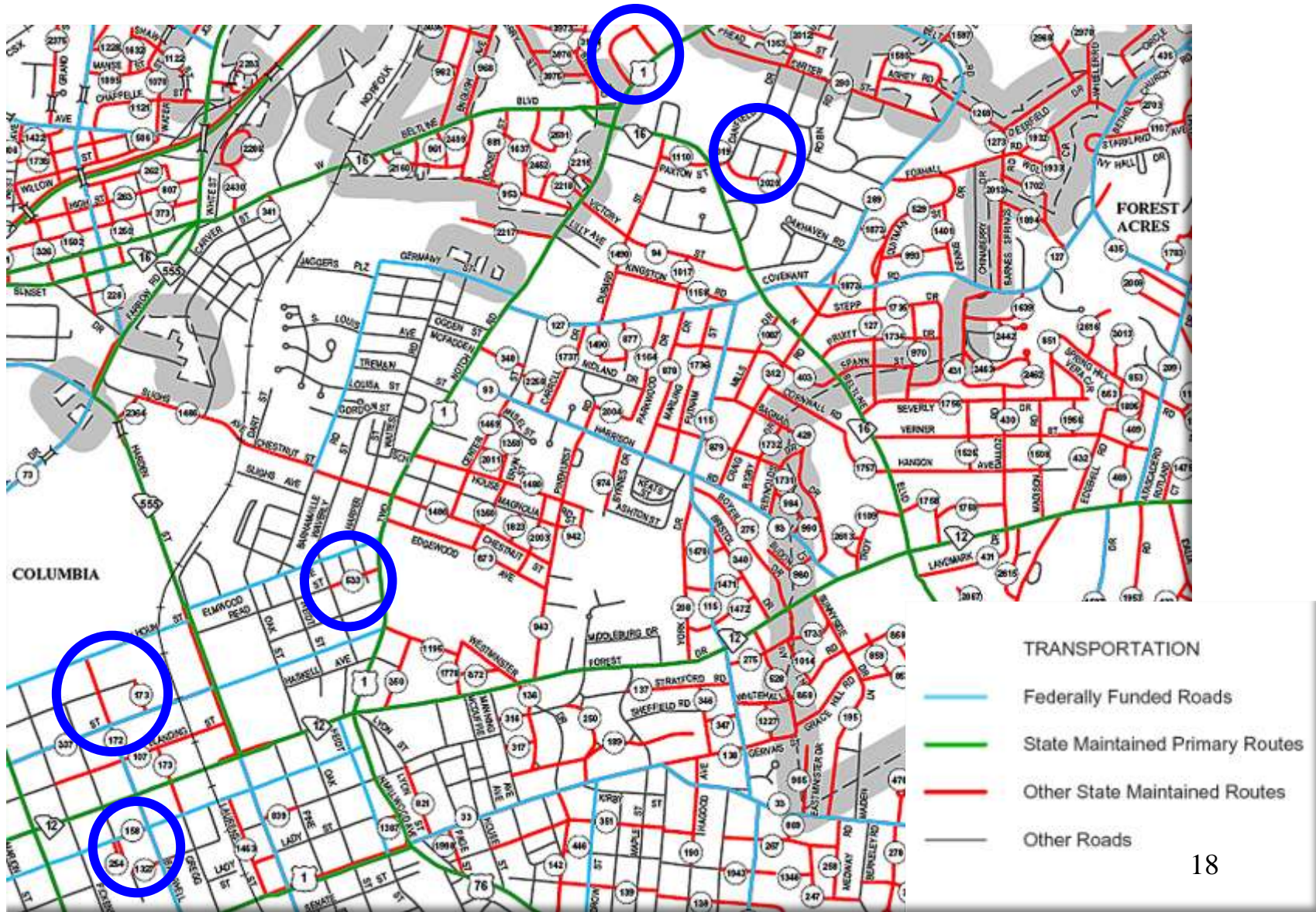
- 20,853 miles not eligible for federal funding
- 34% carry less than 200 vehicles per day
- Over 13,500 roads are less than ¼ mile in length
- Over 900 miles are unpaved



■ Good ■ Fair ■ Poor

Segmentation

(Section of map shown is Columbia east to Forest Acres)



Local Roads on State System



Bridge Program Highlights

- All bridge inspectors are certified and have completed National Bridge Inspection Standards (NBIS) training.
- Inspect approximately 6,000 bridges per year (all public bridges)
- Perform underwater inspection of approximately 50 bridges per year
- Ravenel Asset Management Project includes 7 bridge systems (25 structures)
- Advanced project selection protocols using a comprehensive Bridge Management System (BMS) combined with sound engineering judgment

Grading Bridges

Bridge condition is graded using 3 categories:

1. Deck (roadway)
2. Superstructure (part of bridge that supports the roadway)
3. Substructure (foundation, and supporting posts and piers)

Each category is given a condition rating on a scale of 0 to 9.

Bridge Rating	Poor	Fair	Good
Scoring Range	0 - 4	5	6 - 9



0 = Failed



**9 = Newly
Constructed**

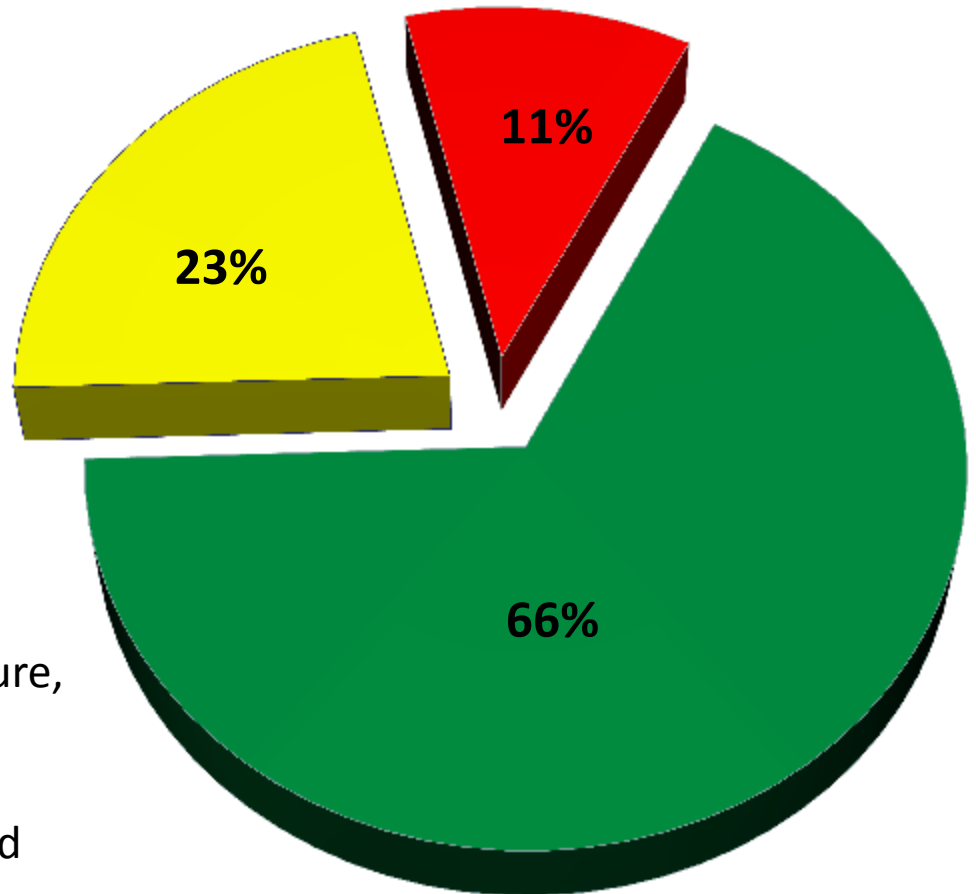
State Owned Bridge Conditions

Bridge Rating	Poor	Fair	Good
Scoring Range	0 - 4	5	6 - 9

- 8,383 total State-owned Bridges
- 1,663 Substandard
 - 886 Structurally Deficient
 - 777 Functionally Obsolete
- 420 Load Restricted
- 7 Closed

Structurally Deficient – Deck, Superstructure, or Substructure rated in poor condition

Functionally Obsolete – Design is outdated





Rocky Creek on S-13-163
Chesterfield County

Good Bridge

Poor Bridge



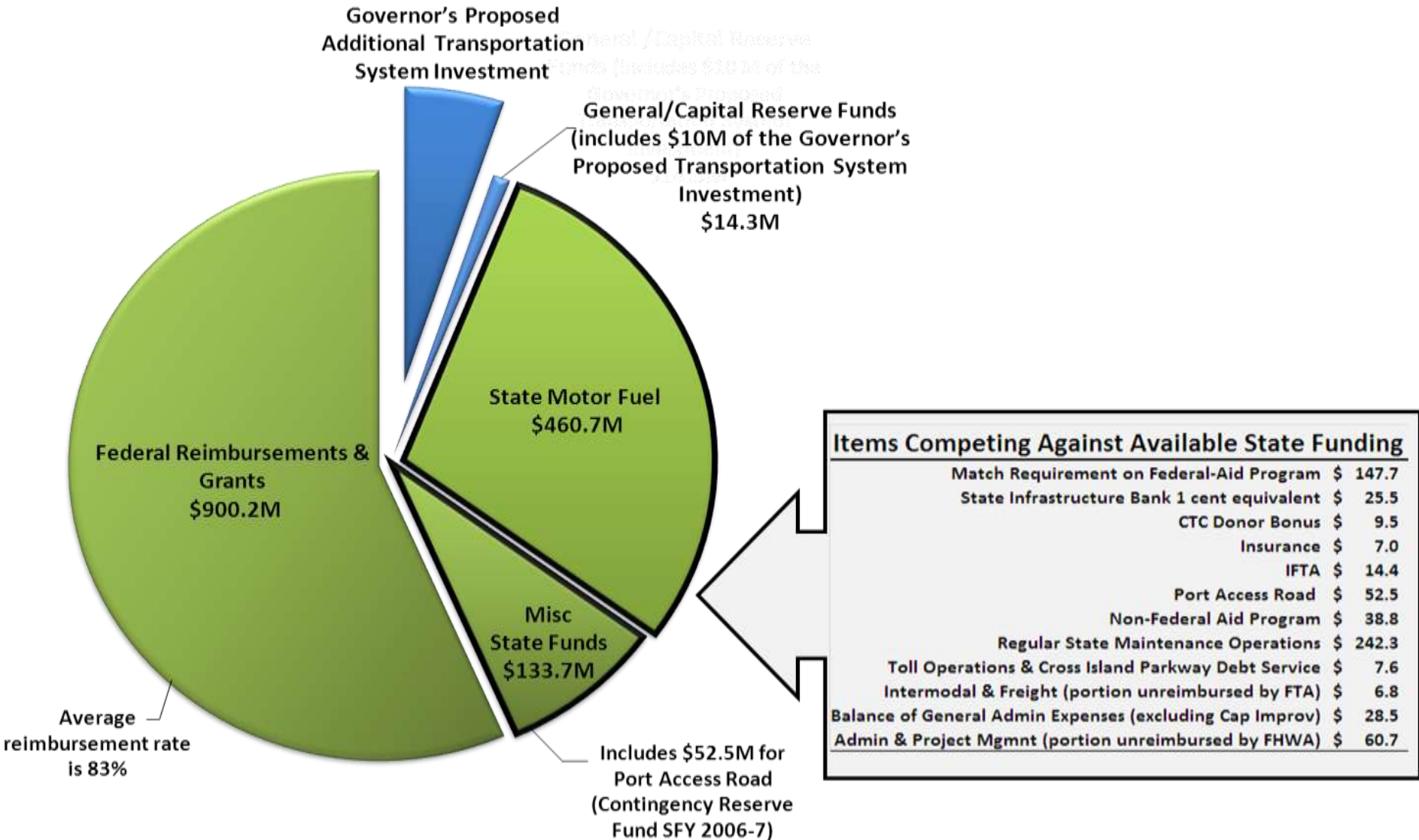
Enoree River on S- 42- 893
Spartanburg

SCDOT

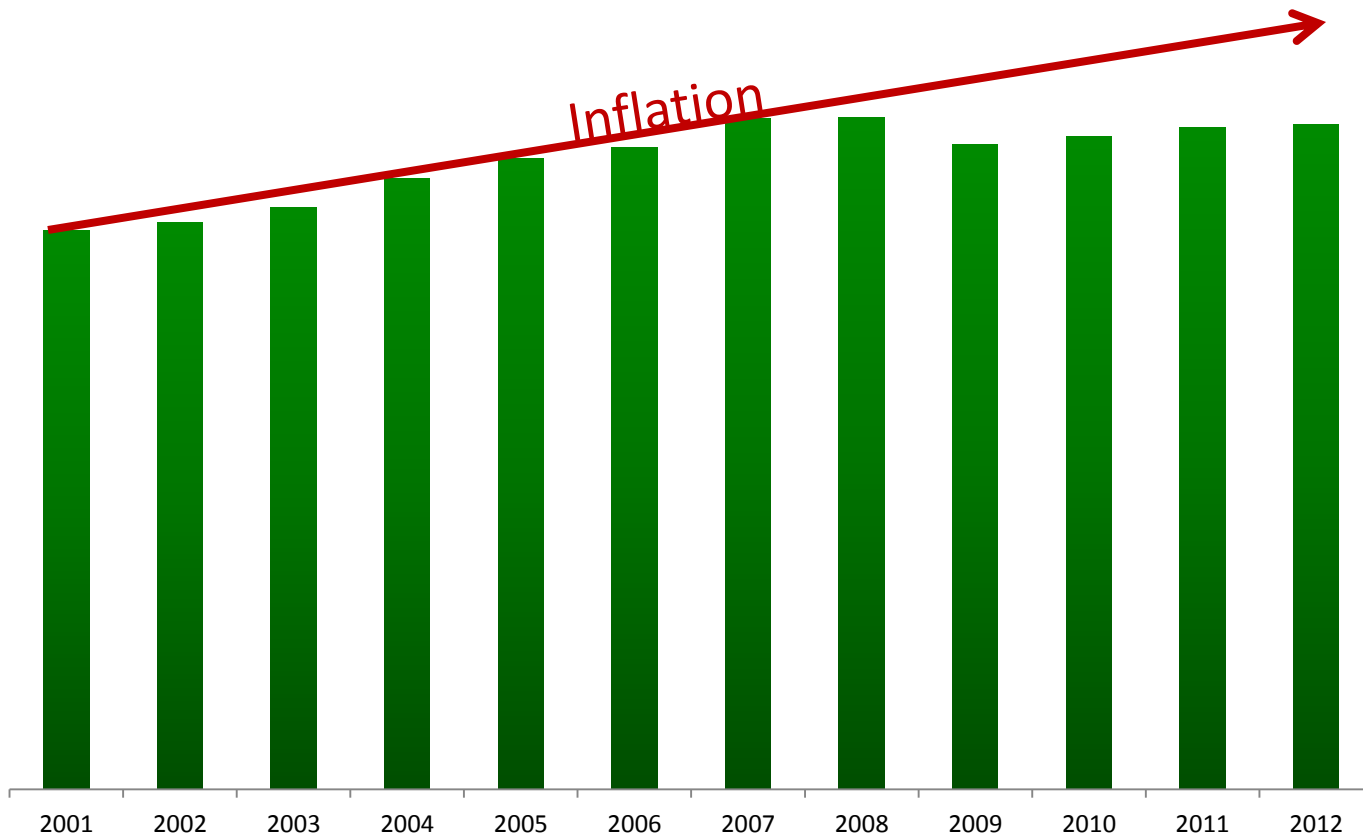
Revenues/Resources

Estimated Revenues for SFY 2013 -14

\$1,509 B Agency Base



State Motor Fuel Revenue Trend 2001-2012



***25% increase in SC population; motor fuel revenue flat
49% buying power since last change in 1987***

SC Motor Fuel User Fee *Actuals* SFY 2011-12

16.75¢ per gallon

Gross Collections (Gasoline & Diesel)

\$563,852,335

Dept of Revenue Deductions (Refunds,
Corrections, Tare Allowances, School Buses, US
Government Use)

(\$ 5,729,426)

DHEC SUPERB Fund
0.50¢ per gallon

(\$ 17,691,989)

Department of Agriculture
10% of 0.25¢

(\$ 885,224)

DNR Watercraft Fund
1% of the first 13¢ collected

(\$ 3,389,811)

County Transportation Fund
2.66¢ per gallon

(\$ 68,667,148)

County Transportation Fund
Donor Bonus

(\$ 9,500,000)

State Infrastructure Bank
1¢ Equivalent

(\$ 26,075,472)

IFTA Transfer

(\$ 13,060,627)

Remaining for SCDOT Operations

\$418,852,638

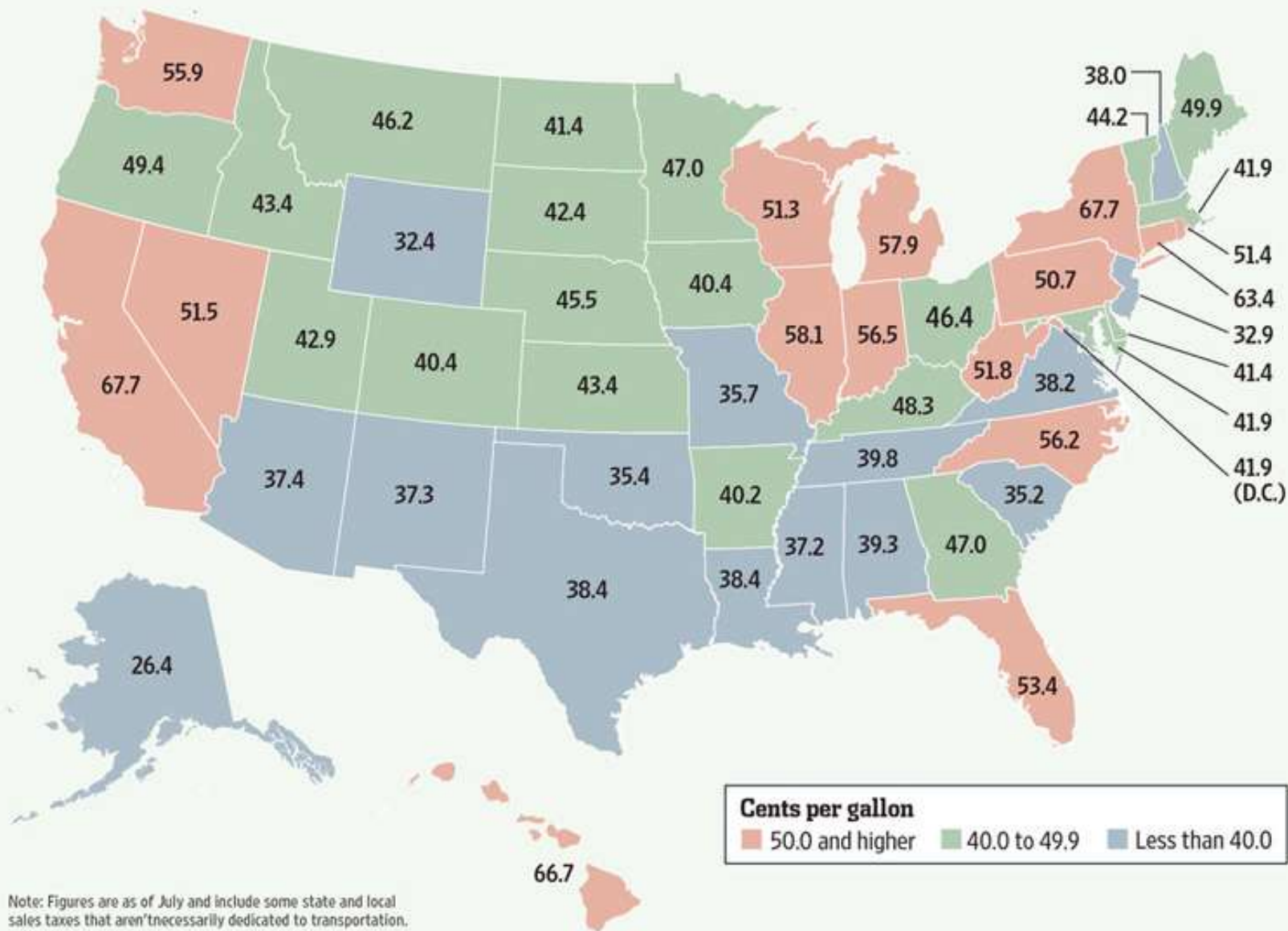
26%
Reduction

\$1 from 1987 has the purchasing power of 49¢ in 2012

Paying at the Pump | The cents and sense of the gas tax

Around the Country

Combined state and federal gasoline taxes, a main source of funds for road construction and maintenance



Federal Program MAP-21 Overview

- Two-year bill; funding levels steady
- Establishes national goals in the following areas:
 - Safety
 - Infrastructure Condition
 - Congestion Reduction
 - System Reliability
 - Freight Movement and Economic Vitality
 - Environmental Sustainability
 - Reduced Project Delivery Delays

Federal Program MAP-21 Overview

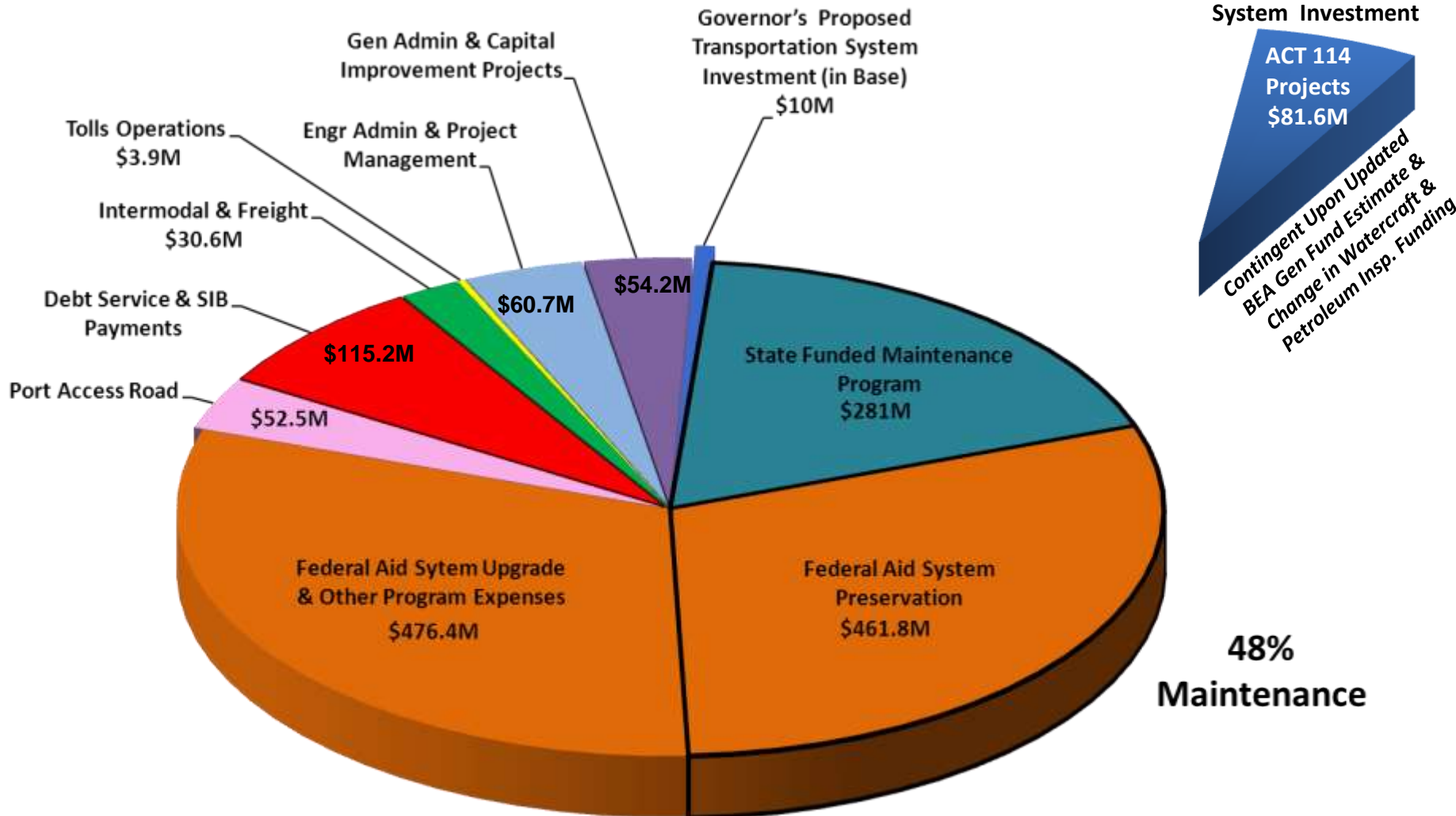
- Requires a Performance-Based Asset Management Plan
 - Failure to implement will result in a reduced Federal share on National Highway System (NHS) projects
- Measures required for pavement condition, bridge condition, and system performance
- Establishes minimum conditions for Interstate pavements
- Establishes minimum condition for NHS Bridges
- Establishes a National Freight Policy including a National Freight Network
 - Increased Federal share on Freight Routes

National Freight Network

- USDOT will establish a National Freight Network by 2013, consisting of a primary freight network and rural freight corridors.
- Freight-based highway projects are eligible for an increased federal share.
- Projects wanting to take advantage of the increased Federal share *must* be identified in a State Freight Plan.
- The freight plan must address, among other elements, how the state will meet the national freight goals established under MAP-21.
- Each state is also encouraged to create a Freight Advisory Committee.
- Future freight federal funding contingent on meeting satisfactory performance requirements.

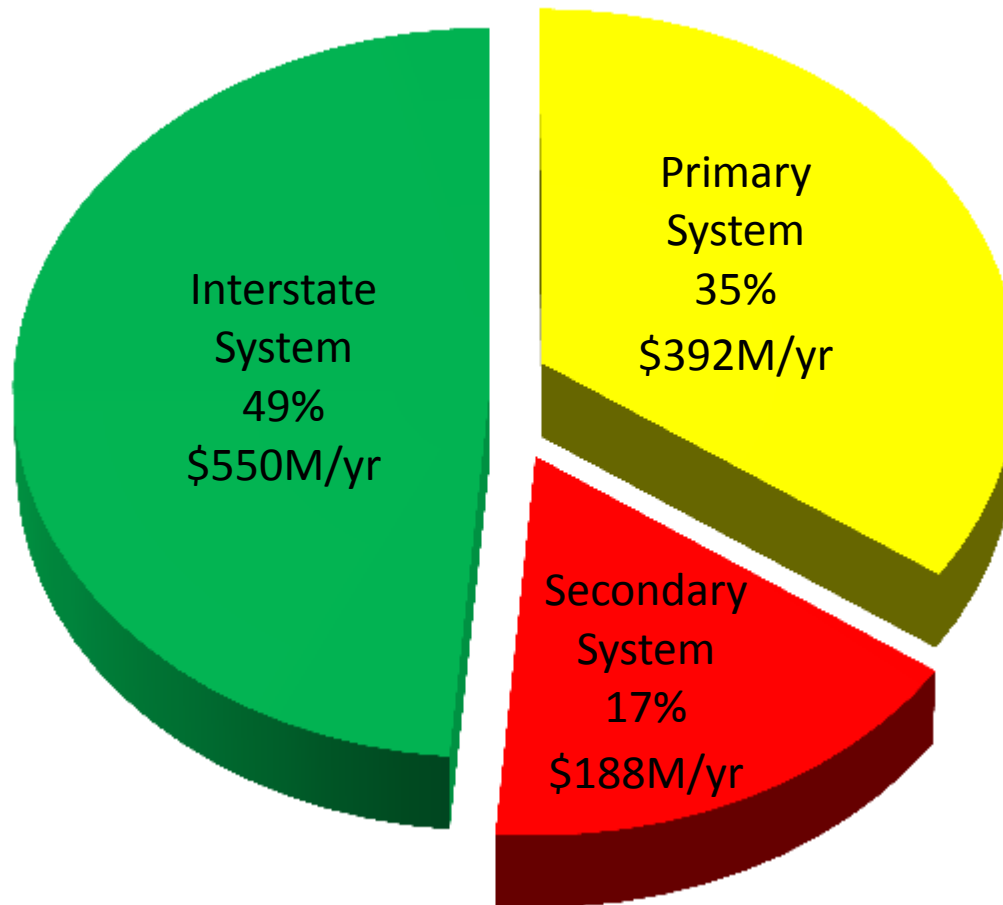


SFY 2013-14 Proposed Expenditures by Major Program Area \$1.546 B (Agency Base)



Getting to “Good”

Statewide Capacity Needs

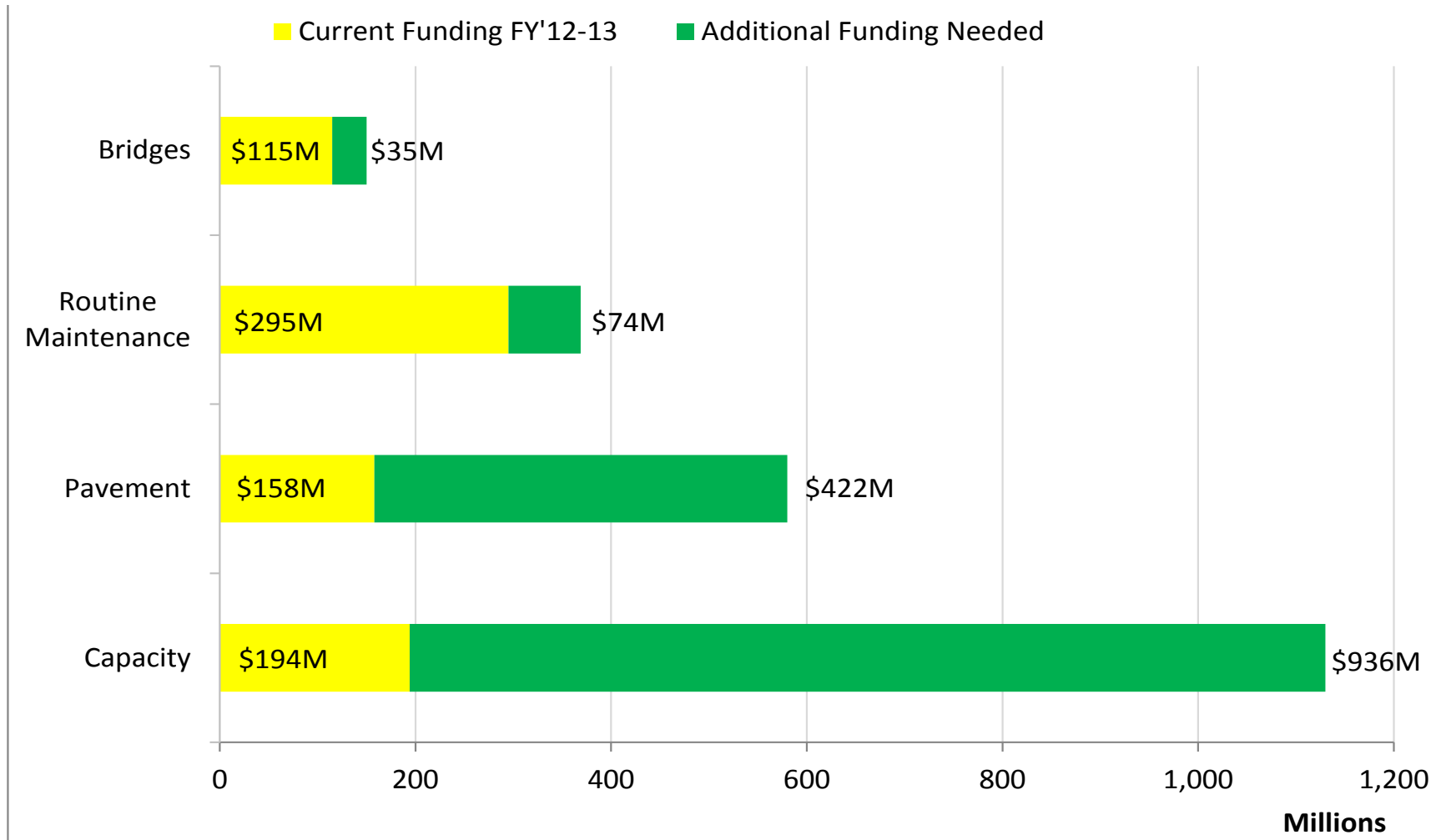


Capacity Needs In Centerline Miles

Interstate - 445
Primary - 471
Secondary - 2,577

Funding “Good”

SCDOT Total Annual Funding Needs



- ❑ ***SCDOT needs an additional \$1,476M per year for 20 years (total of \$29.3B) to bring our roads to a level of service of “Good”***
- ❑ ***\$5M in state transit funding can leverage up to \$20M in federal funding***

**Transportation
Infrastructure &
Economic Development**

South Carolina Infrastructure

“The state’s ports, rivers, rail and roads are essential arteries of commerce in South Carolina. Transportation, distribution and logistics depend on them, and they need to be maintained and expanded when necessary.”

SC Department of Commerce

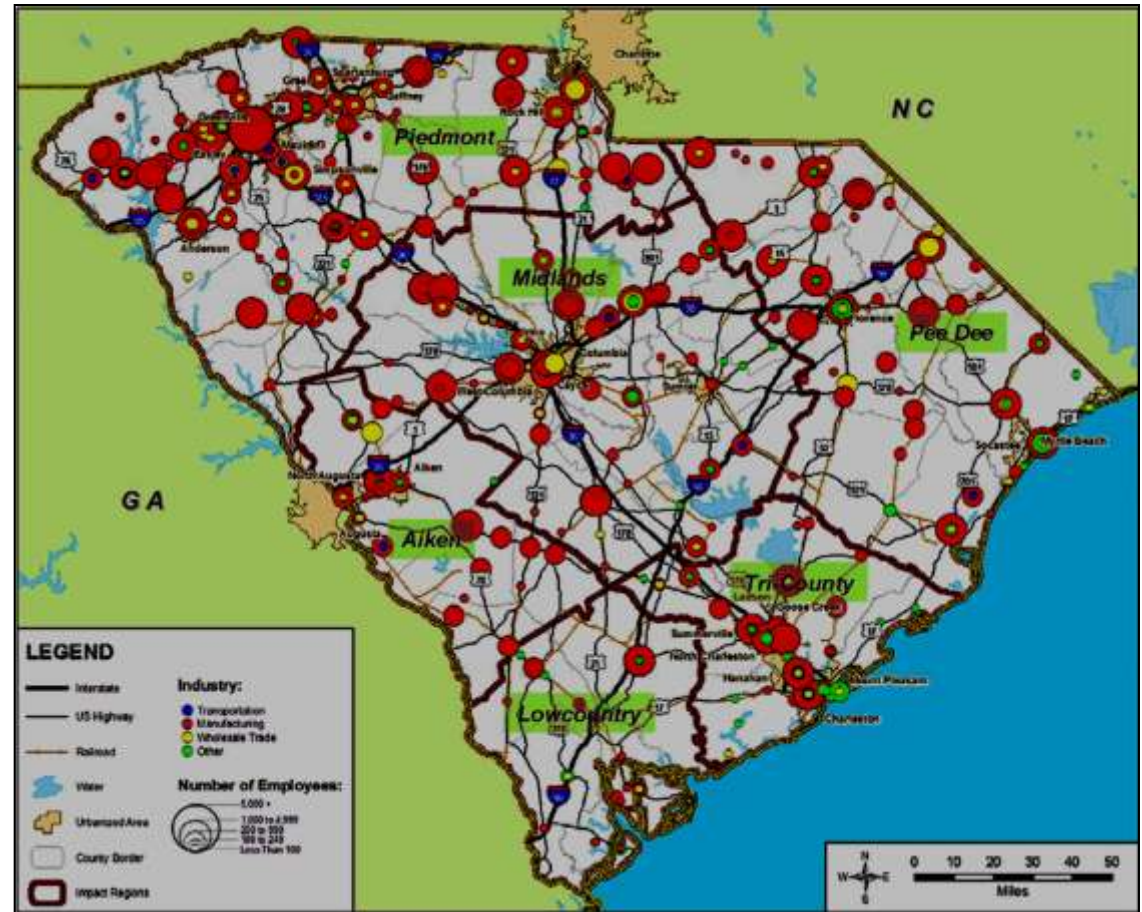
“The Port of Charleston is the engine for economic development in South Carolina...the state is strong and getting stronger on the water side, but not keeping pace on the land side.”

Robert J. St. Onge, Jr., SCDOT Secretary of Transportation

SC Industries Rely on the Port, Highway Connections

International trade and foreign investment are the very fabric of business and employment in South Carolina.

- **More than 700 companies** from every county import or export through our ports.
- **One in 11 S.C. jobs** is related to trade – growing as we leverage logistics, export and agricultural advantages.
- **Businesses of all sizes** – about half with fewer than 50 employees.



Statewide Multimodal Transportation Plan

- Statewide Multimodal Transportation Plan includes:
 - Interstate Plan
 - Strategic Corridor Plan
 - Public Transit and Coordination Plan
 - Freight Plan
 - Rail Plan
- Developed in partnership with the SC Department of Commerce and the State Ports Authority
- South Carolina's first comprehensive Freight Plan also being developed, in partnership with the New Carolina's Transportation, Distribution and Logistics Council and other partner groups

Infrastructure, Jobs, and Economic Development

“America’s surface transportation network produces over \$4 in direct benefits for each \$1 in direct costs.”

(Healthy Returns: the Economic Impact of Public Investment in Surface Transportation, March 2005)

Infrastructure Defines the State!

Questions?