

# Why Study Highway Needs and Financing?

- **\$55 Billion** worth of goods shipped to and from SD sites each year
- Deteriorating **current and future road** conditions
- Rapid increases in road infrastructure **costs**
- Federal Highway **Trust Fund solvency** issues and uncertainty surrounding future funding
- Chosen as the **number one priority topic** for an interim study by the Legislature

# **2014 Highway Needs and Financing Interim Committee**

## **Subgroups:**

- Yankton
- Sioux Falls
- Watertown
- Aberdeen
- Belle Fourche
- Rapid City

# **ROADS & BRIDGES**

**“Everyone wants good  
roads ---**

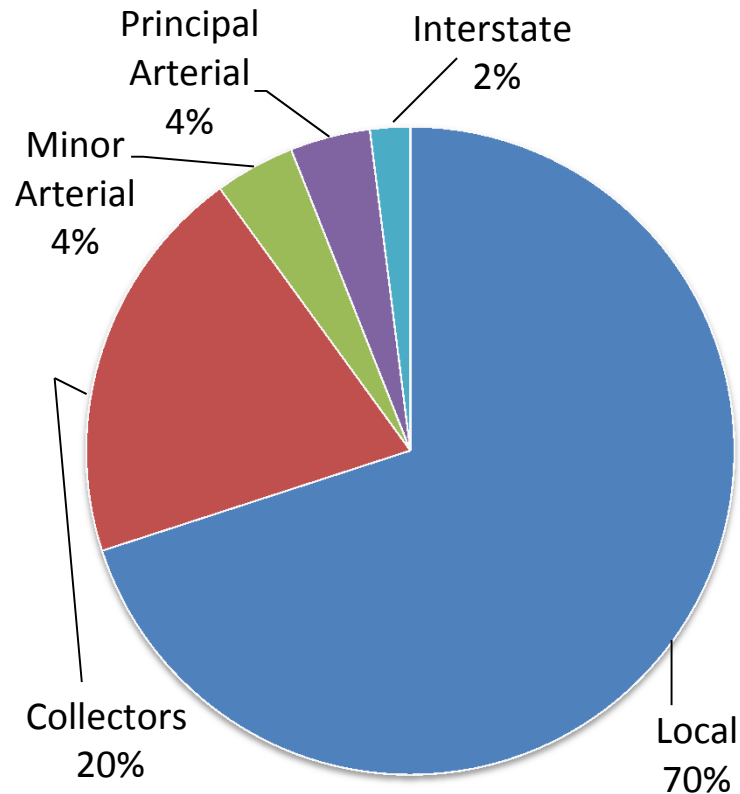
**No one wants to pay for  
them”**

# Problems/Solutions

Don't just come with Problems-

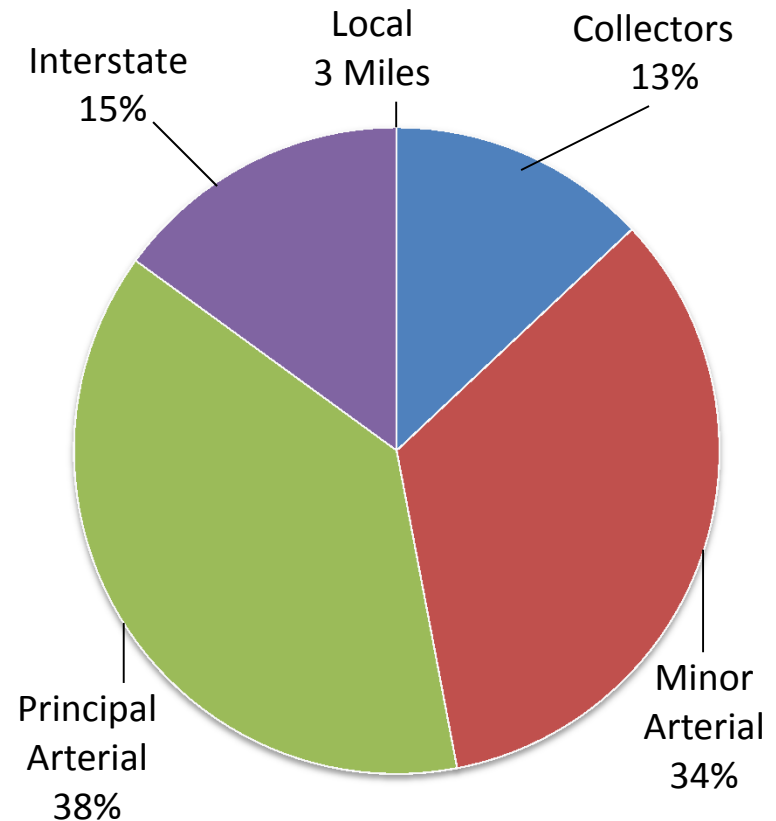
Give potential Solutions you feel are fair to all

# Functional Classification Mileage



**All South Dakota  
Jurisdictions**

**Approximately 83,650 Miles**



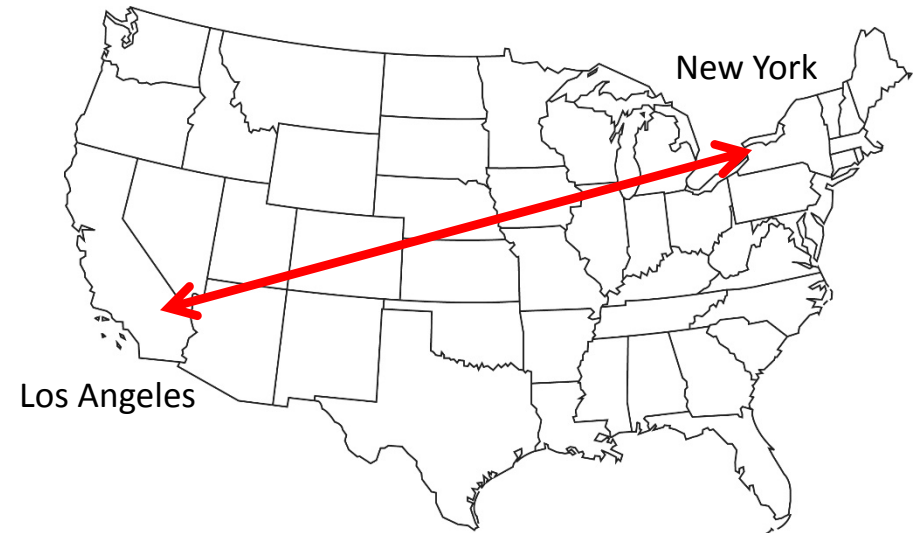
**State  
Highways**

**Approximately 8,850 Miles**

**South Dakota's 83,650 miles of roads is equivalent to 3.5 times around the world**

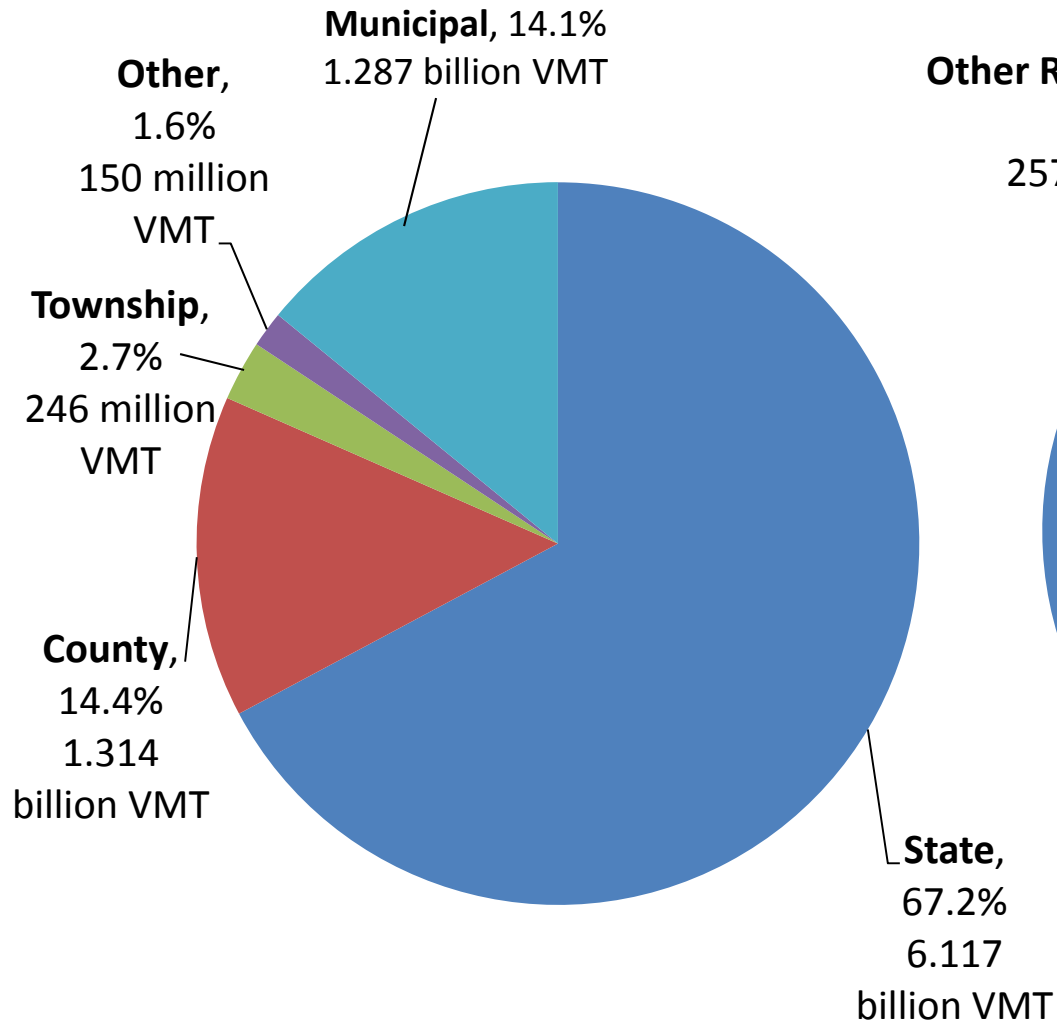


**8,850 miles of state roads equals 3.6 trips between Los Angeles and New York**

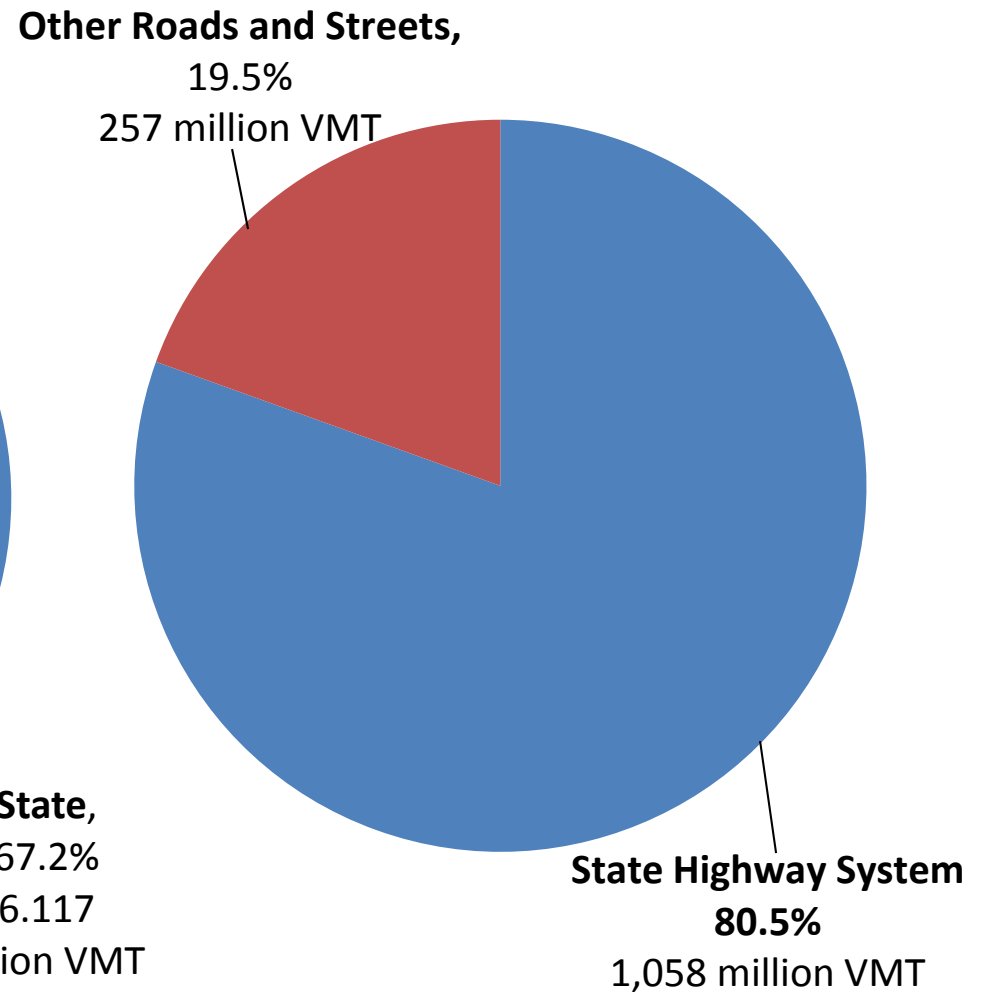


# CY 2013 Miles of Travel By Jurisdiction

Total VMT = 9.114 billion

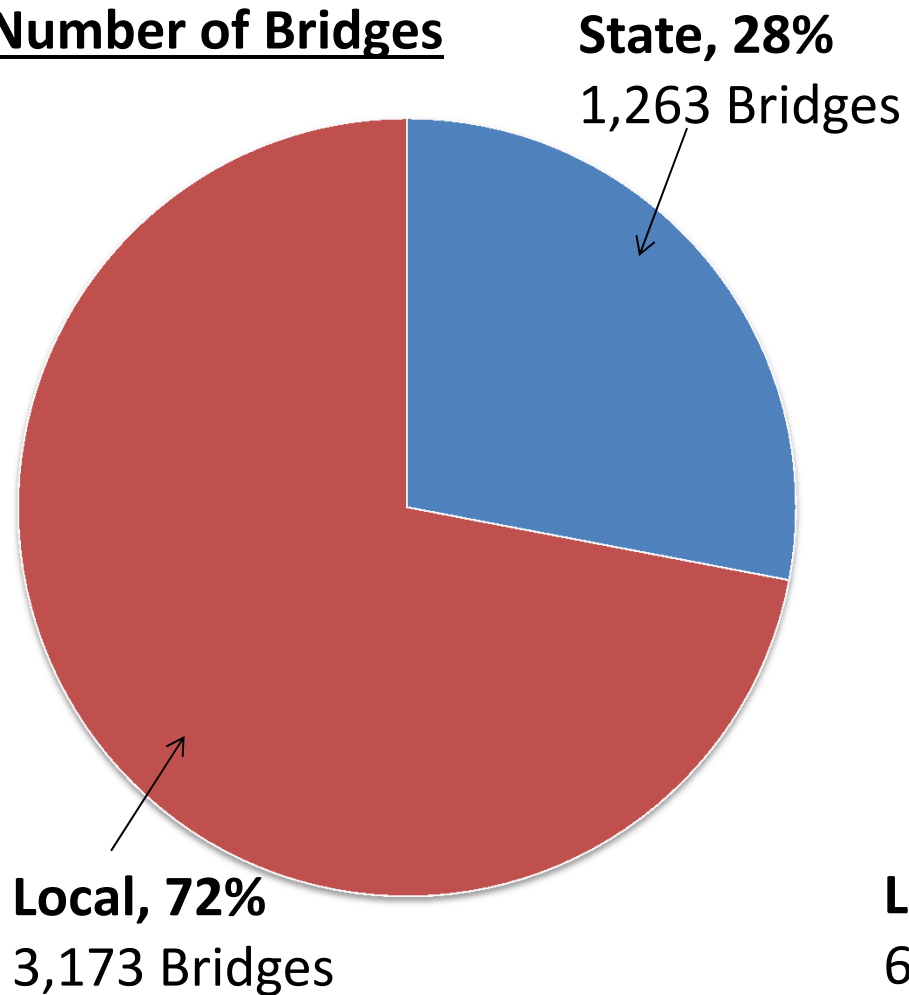


Heavy Truck VMT = 1.315 billion

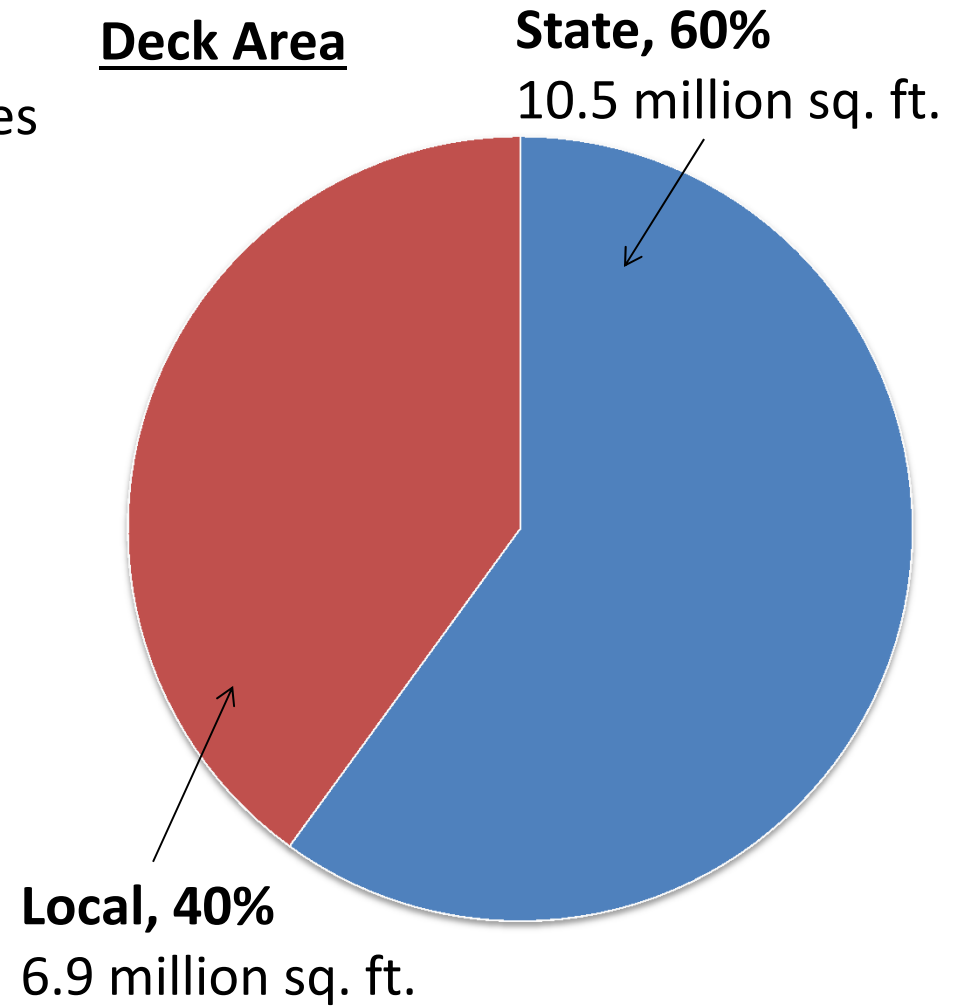


# Comparison of State and Local Bridges

## Number of Bridges



## Deck Area





# Registration per Year by Vehicle Type

## 2008-2013

Year	Passenger	Pickup/ SUV/ Van	Trailer	Motorcycle Moped, ATV	Rec Vehicle (Motorhome)	Commercial	Non- Commercial Gross Weight Trucks	Total Registrations
2013	346,690	475,998	210,503	75,669	10,528	40,996	33,372	1,193,756
2012	349,567	462,108	205,166	73,310	10,485	40,229	32,903	1,173,768
2011	354,514	448,434	200,053	69,660	10,590	39,375	33,455	1,156,081
2010	421,342	370,615	194,841	65,686	10,767	38,774	32,696	1,134,721
2009	383,120	402,199	187,658	62,735	10,603	38,468	33,163	1,117,946
2008	415,821	357,800	180,108	58,508	10,459	40,268	31,148	1,094,112

### Notes:

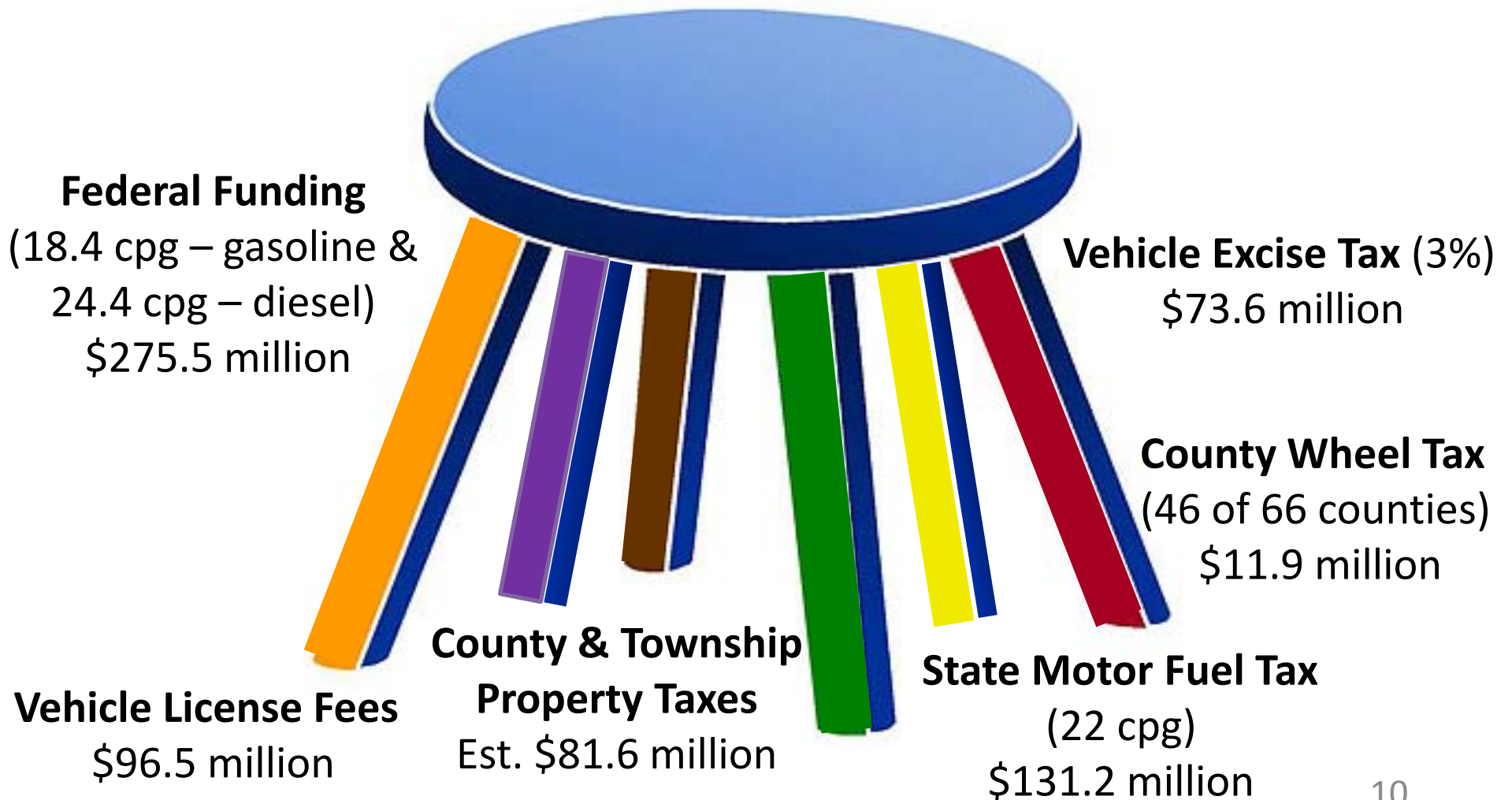
- Passenger column includes cars only
- Trailer column includes all trailers and pull campers
- Rec Vehicle is a recreational vehicle with an engine
- Non-commercial gross weight trucks is ag vehicles

Number of hybrid and electric cars  
titled and licensed:

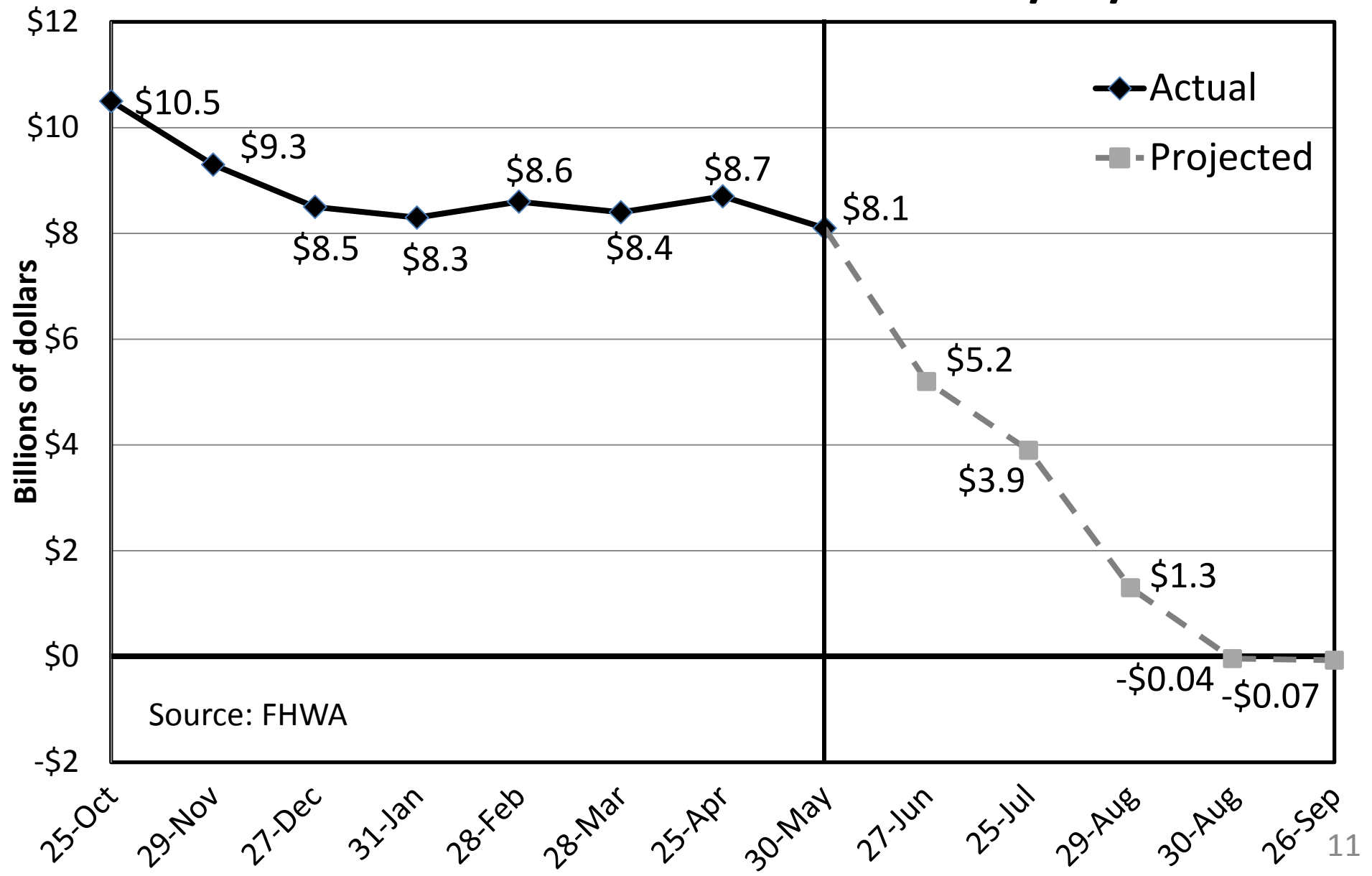
- Hybrid vehicles: 4375
- Electric vehicles: 203

# Revenue: The 6 Legged Stool

FY 2013

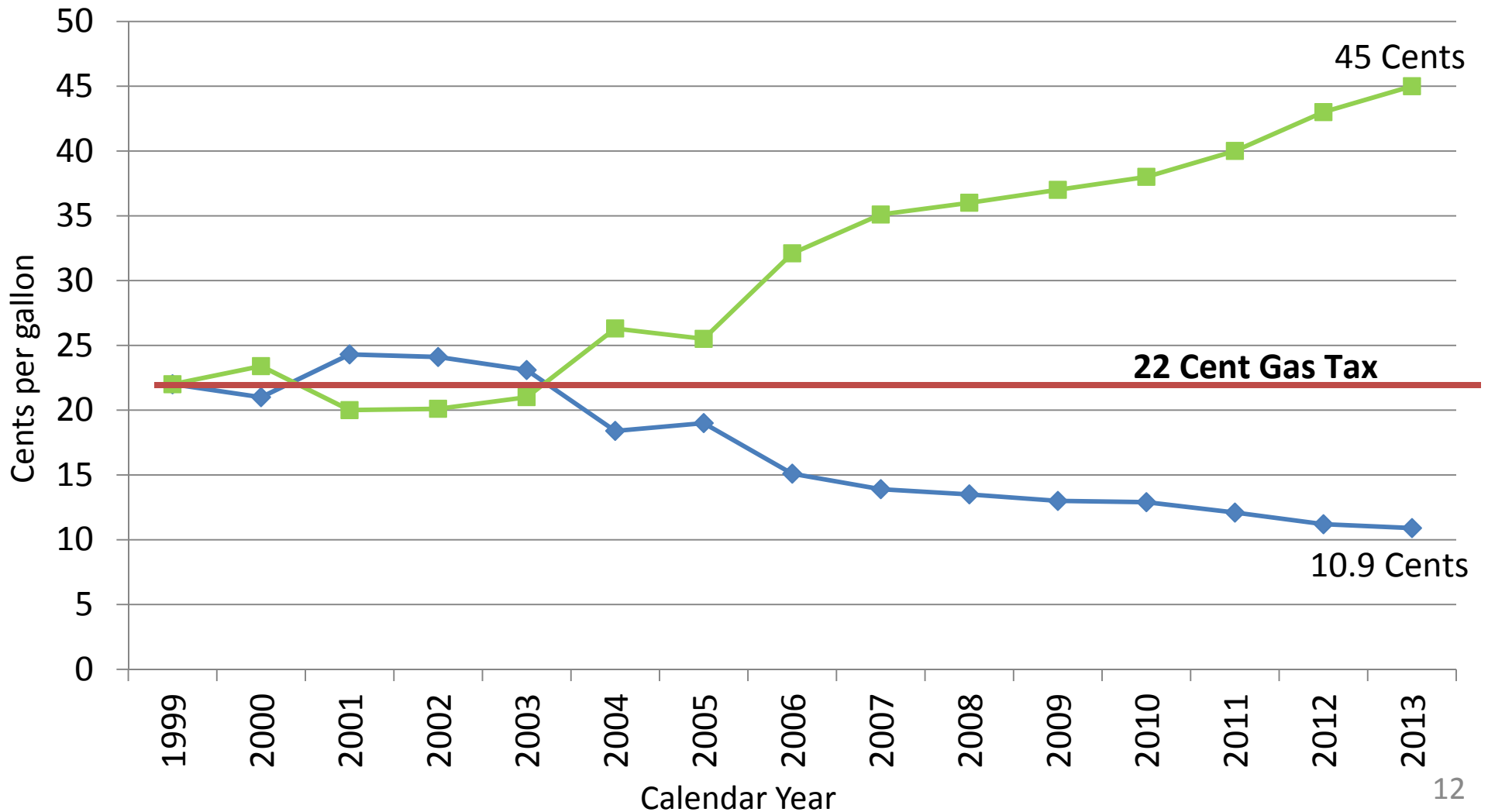


# Federal Highway Trust Fund FY 2014 Projected Estimates for End-of-Month Cash Balances as of 5/30/2014

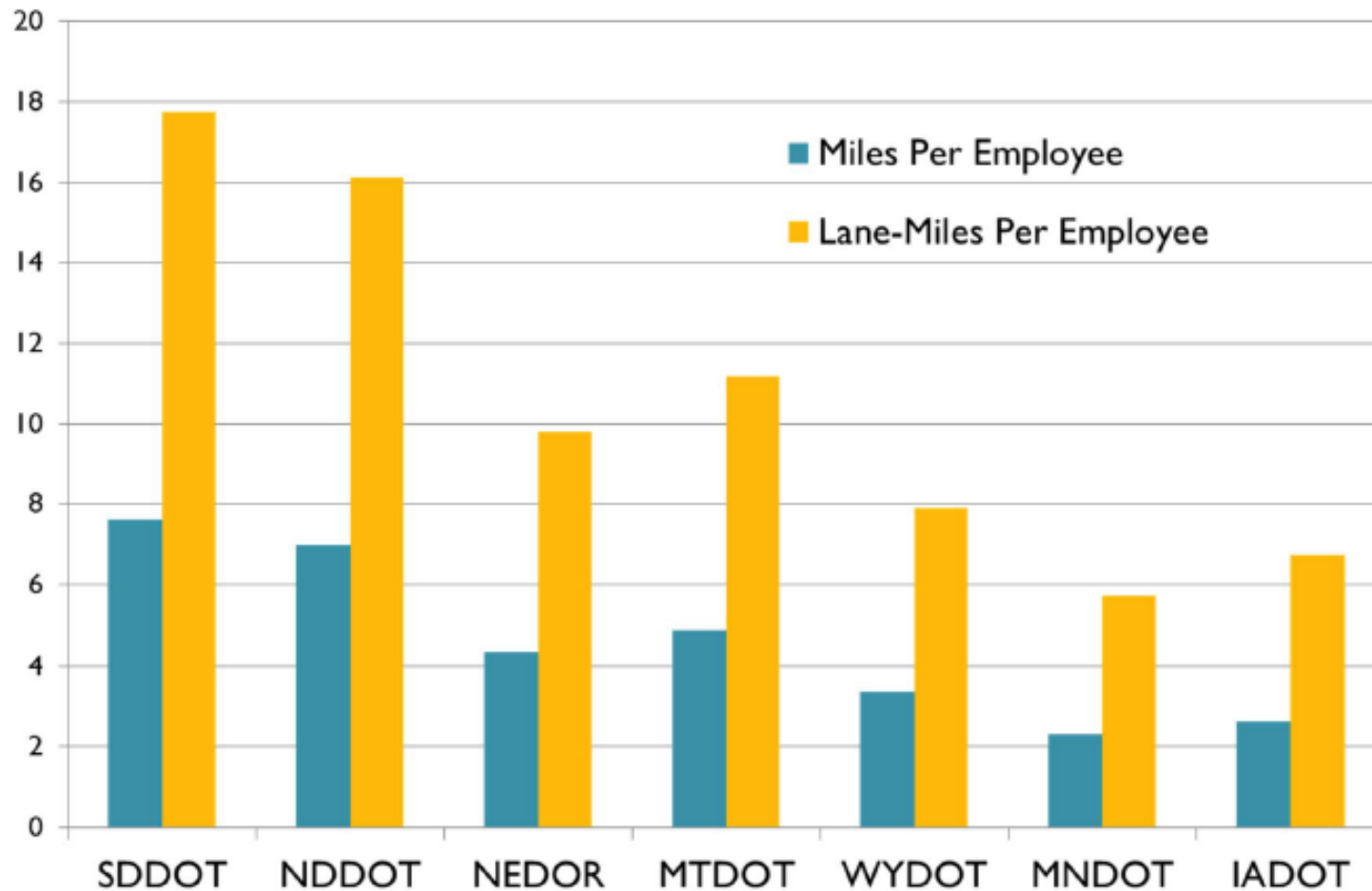


# SD Gas Tax Purchasing Power

- ◆ Purchasing Power Adjusted for Inflation of Road & Bridge Construction
- Equivalent Purchasing Power Adjusted for Inflation of Road & Bridge Construction

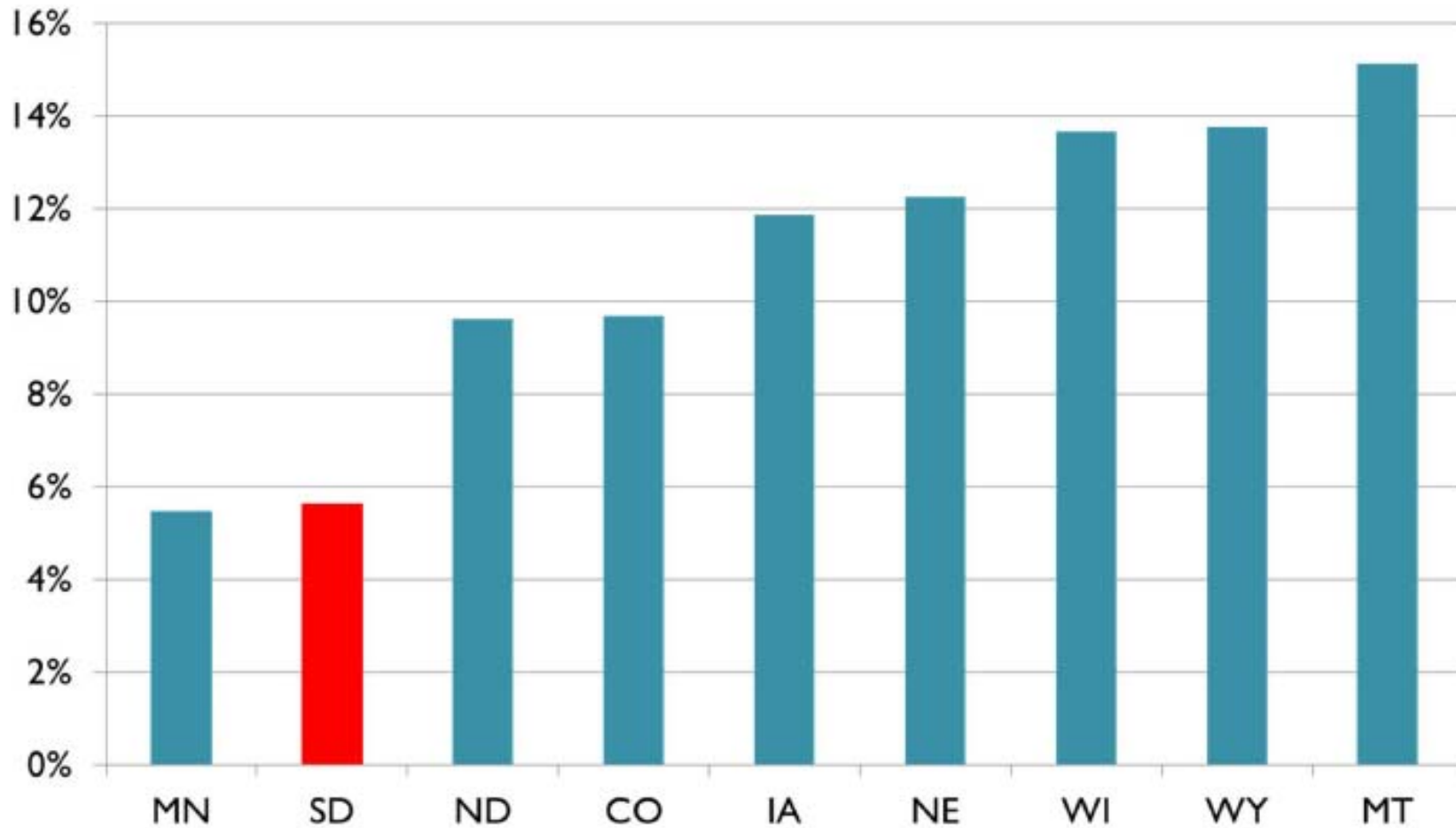


# Size of State Highway System Compared to Number of DOT Personnel



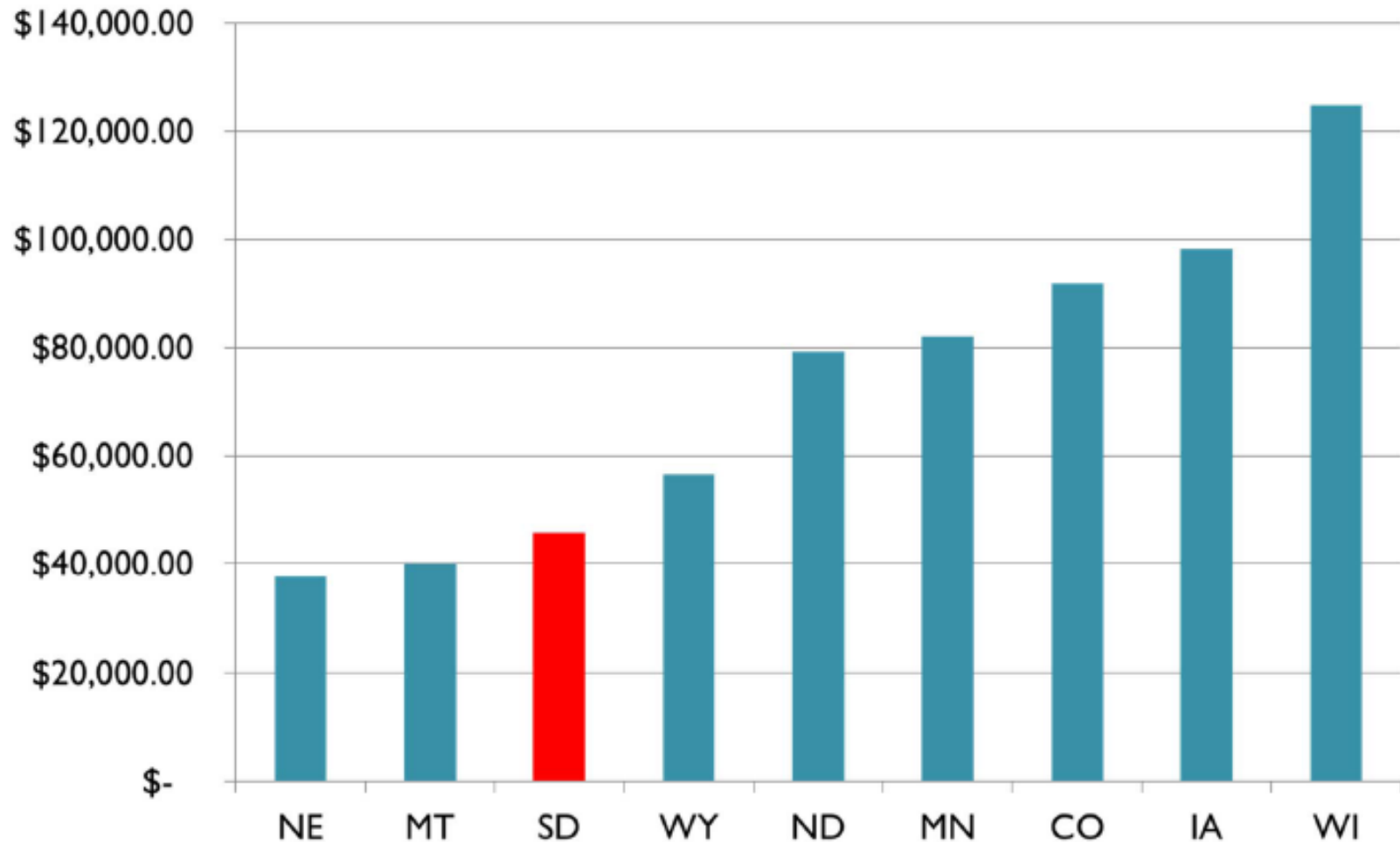
Source: FHWA Statistics (2011) & AASHTO Transportation Governance and Finance (2011)

# Preliminary & Construction Engineering % of Construction



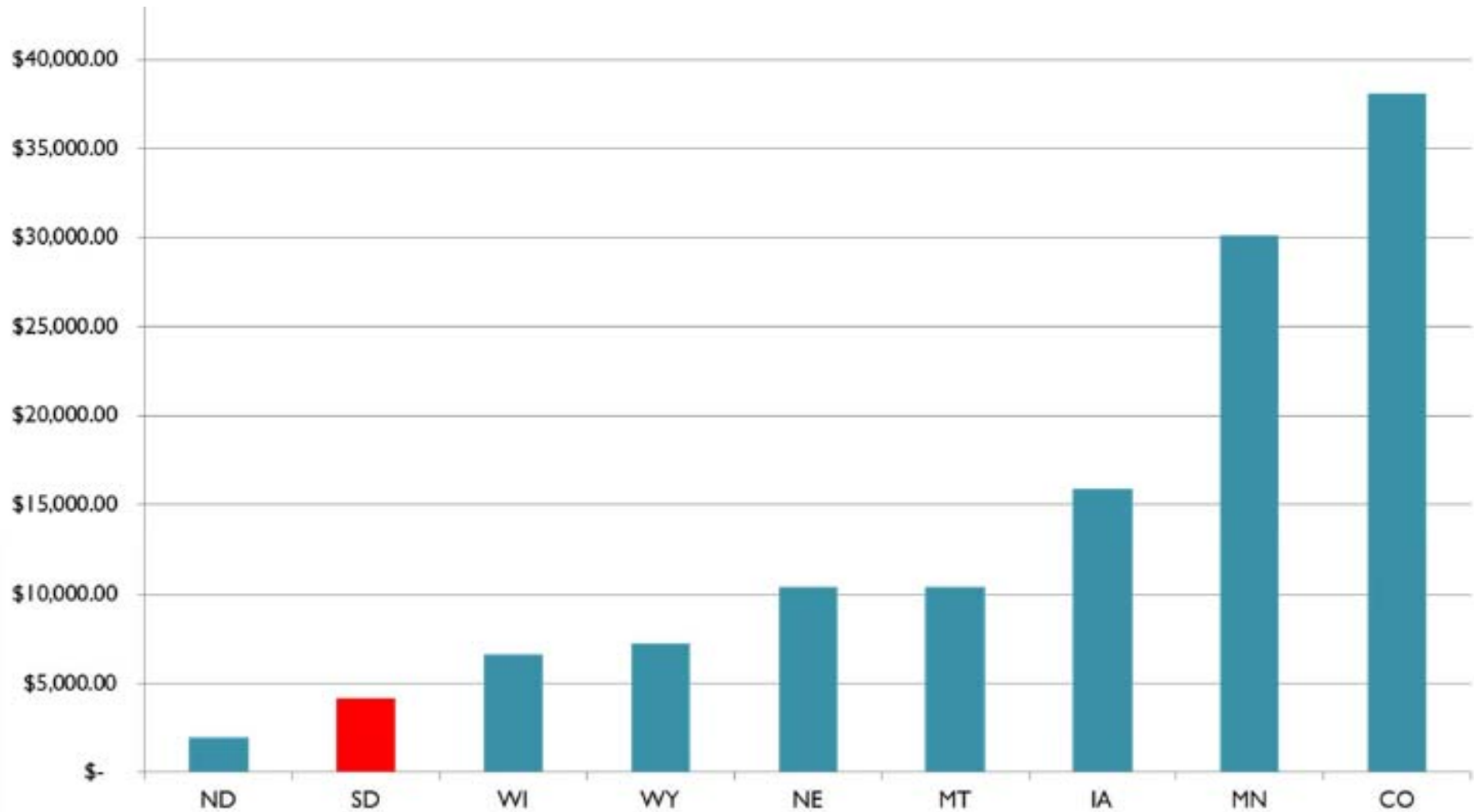
Source: 2012 Highway Statistics FHWA

# Average Construction Investment Per Mile



Source: 2012 Highway Statistics FHWA

# Roadway Maintenance Cost Per Mile

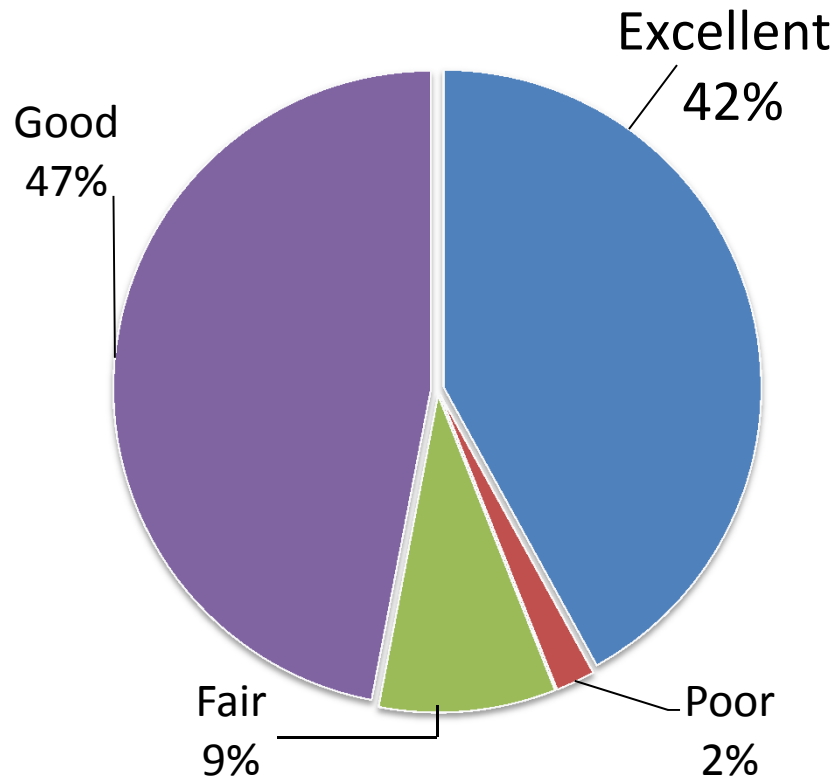


Source: 2012 Highway Statistics FHWA

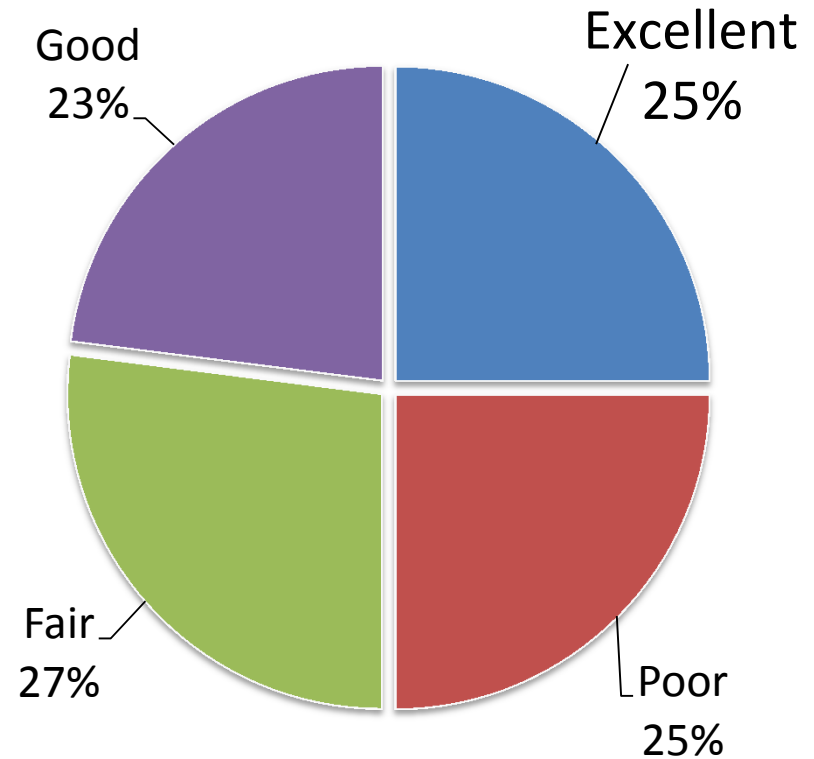


# Current and Future State Pavement Condition

**2014 Condition**

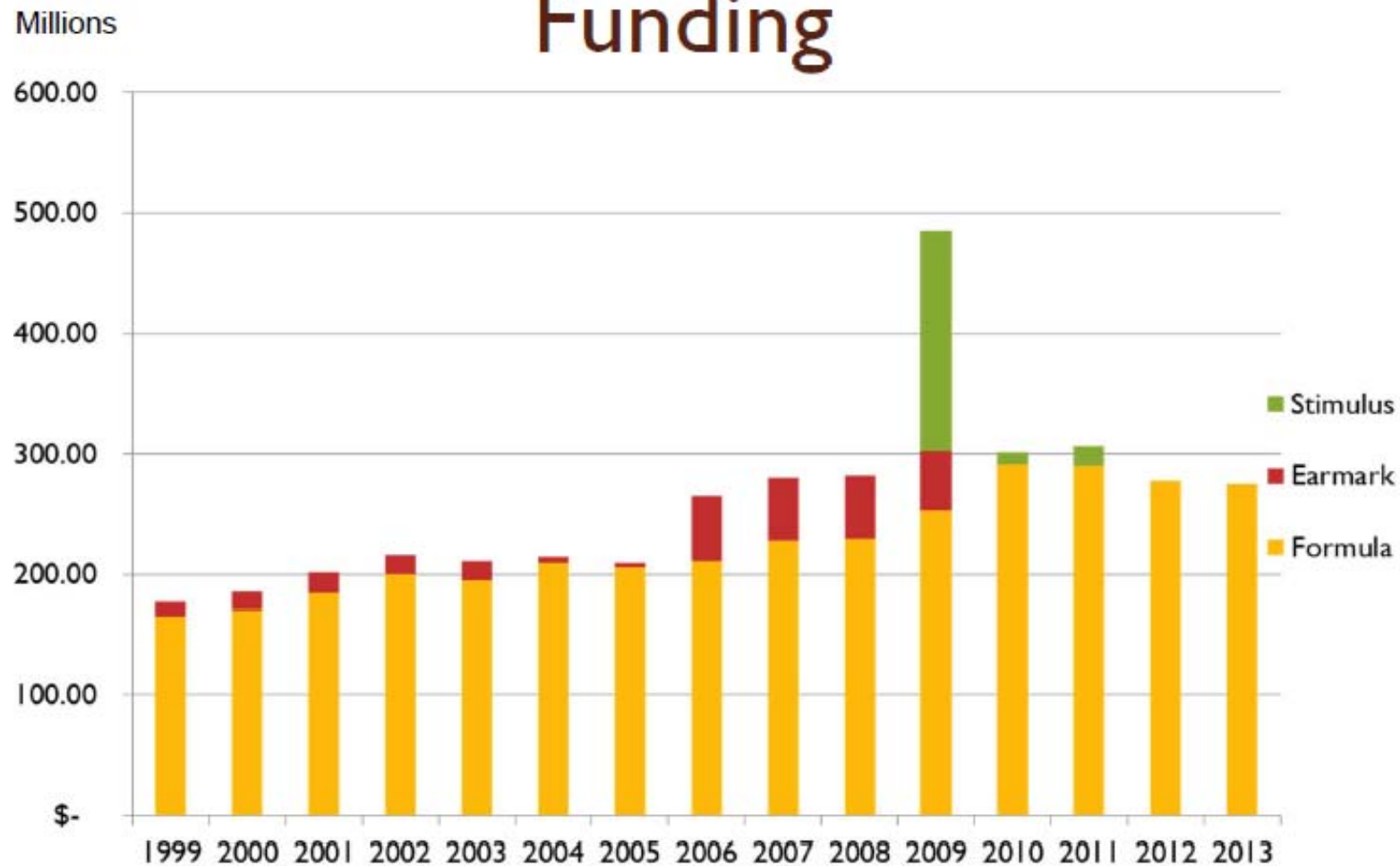


**2024 Projected Condition**



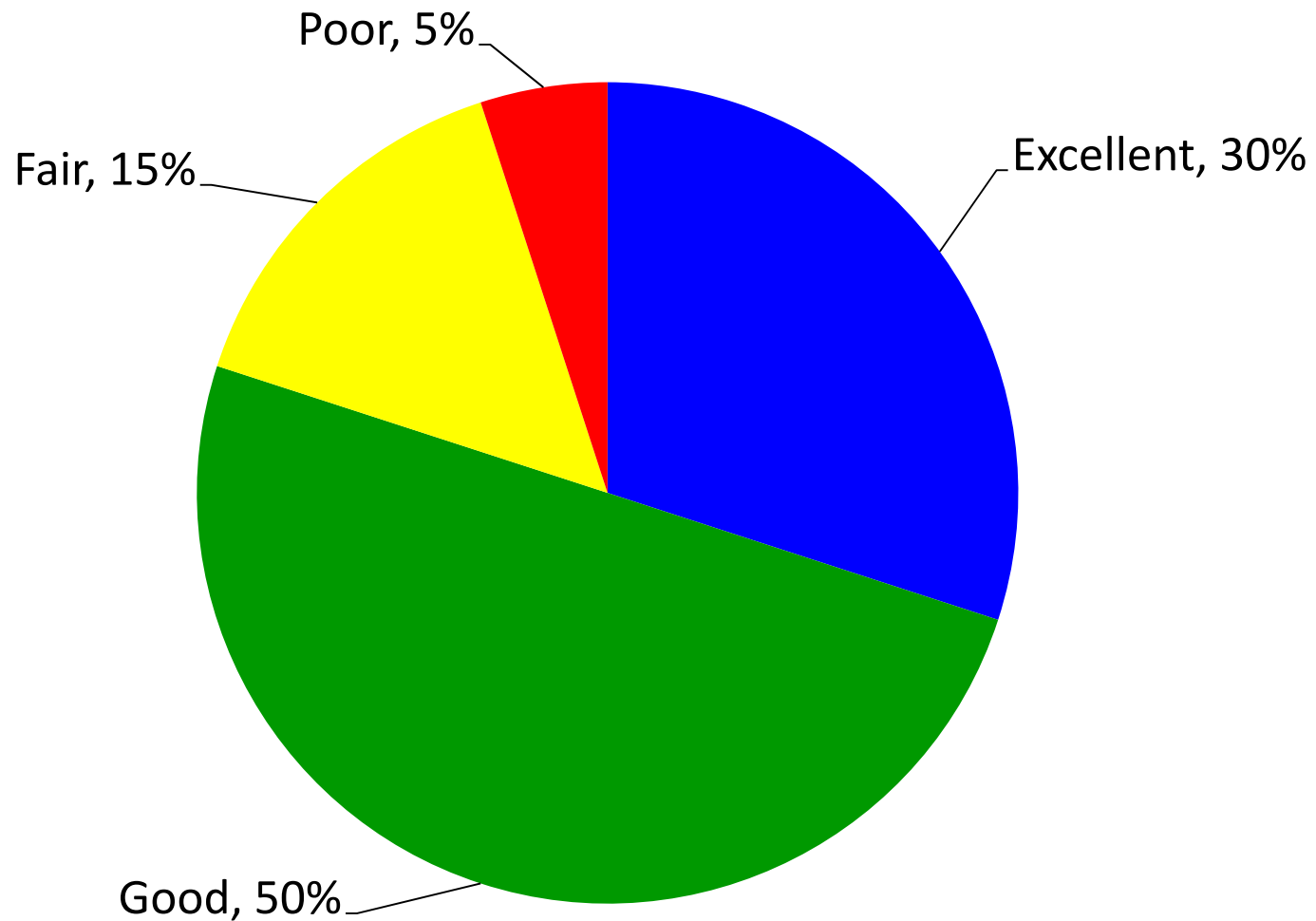
(Poor indicates it needs to be dug up and rebuilt at \$1.4 million a two-lane mile)

# History of Federal Highway Funding

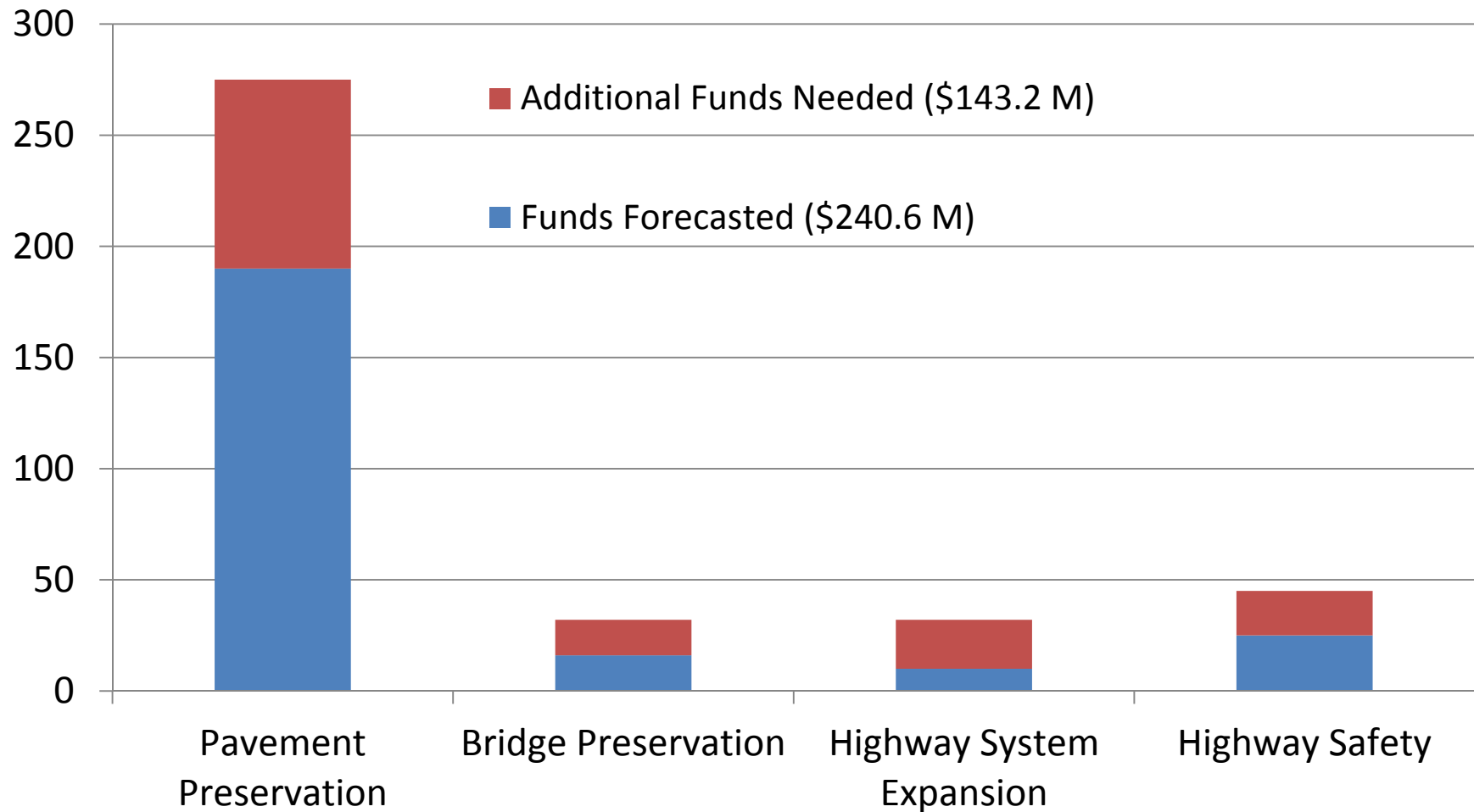


# GOAL – Dashboard Indicator

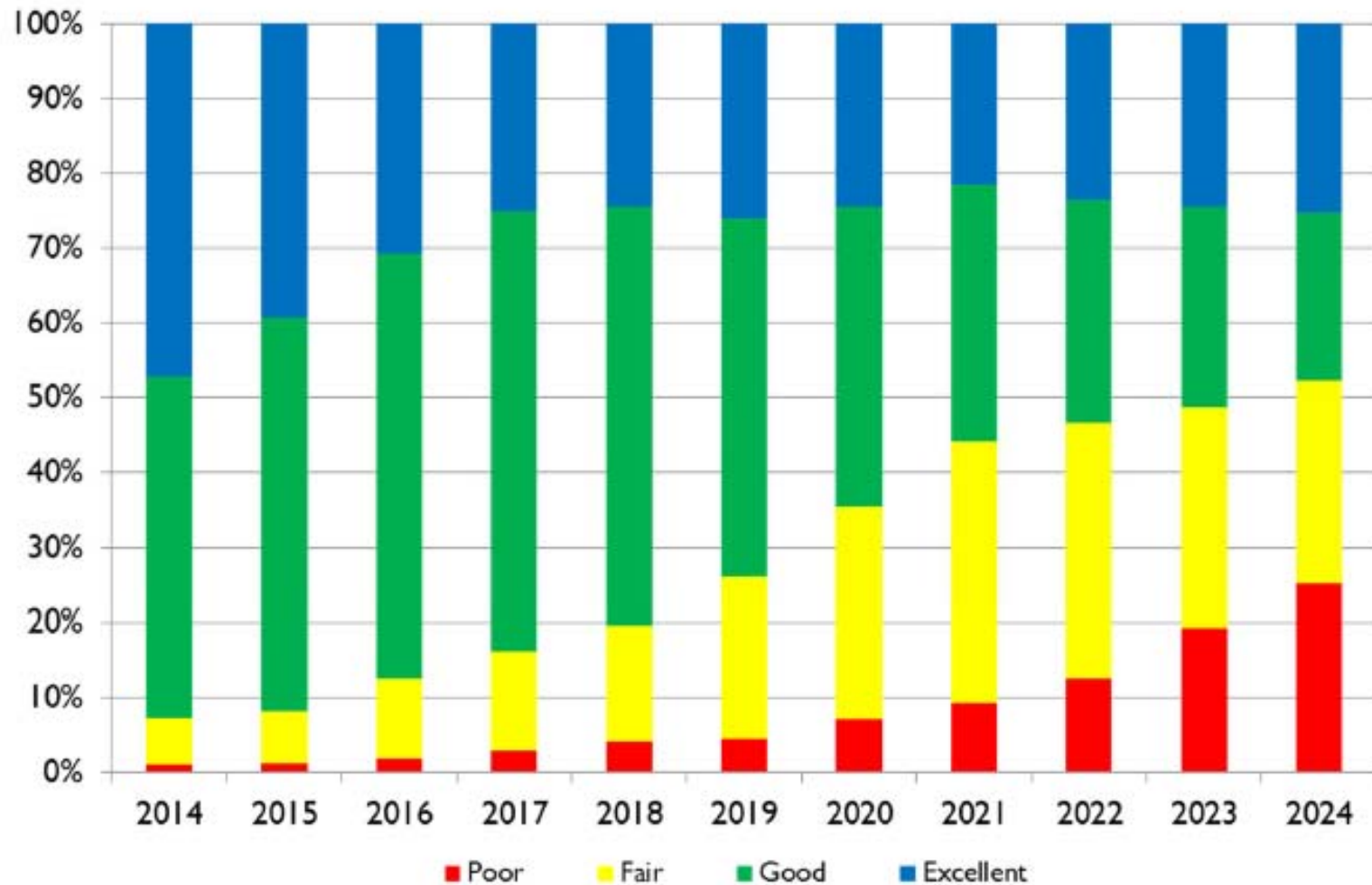
## Pavement Distribution



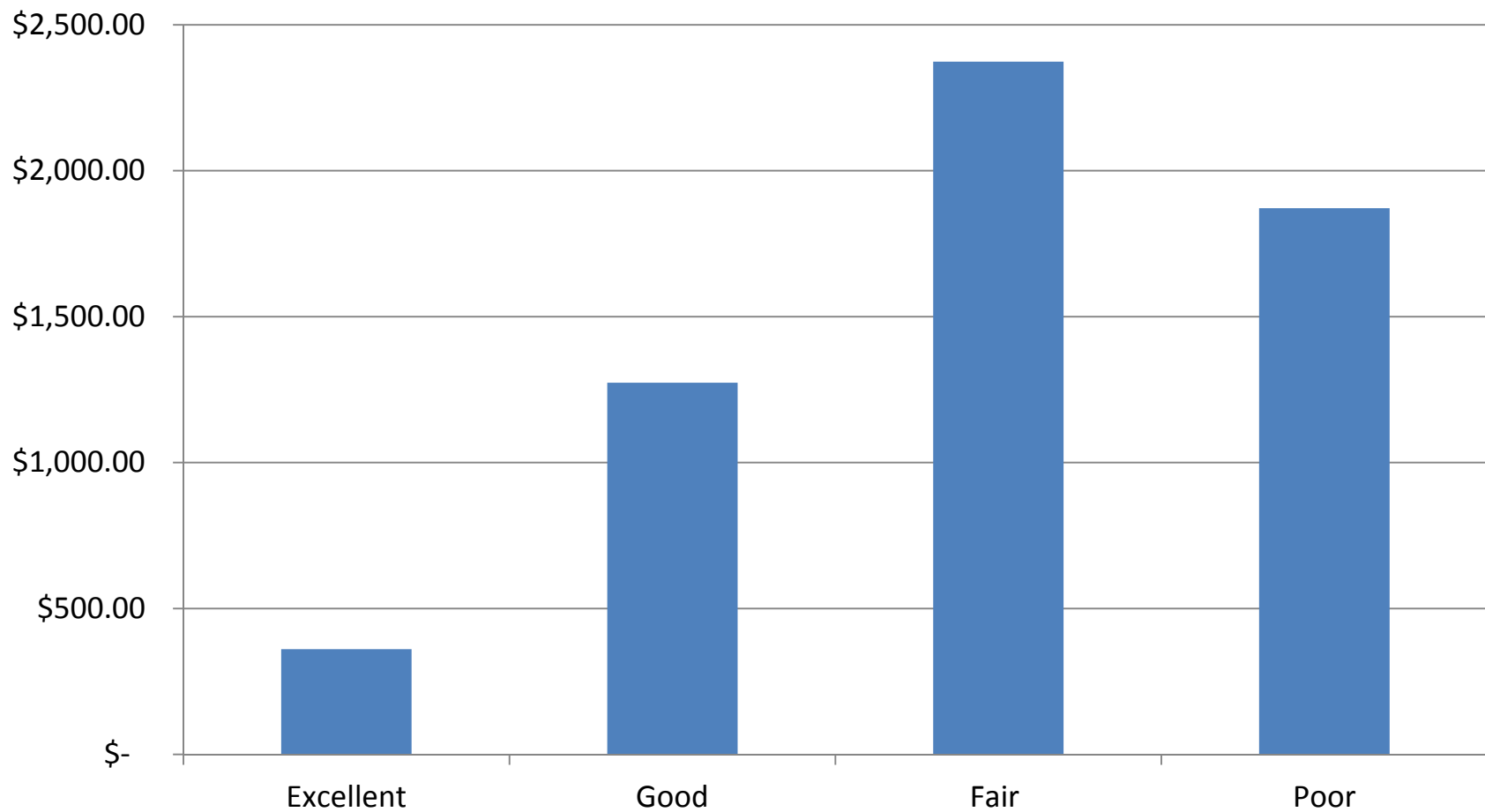
# State Highway Funding Needs



# Future Pavement Condition

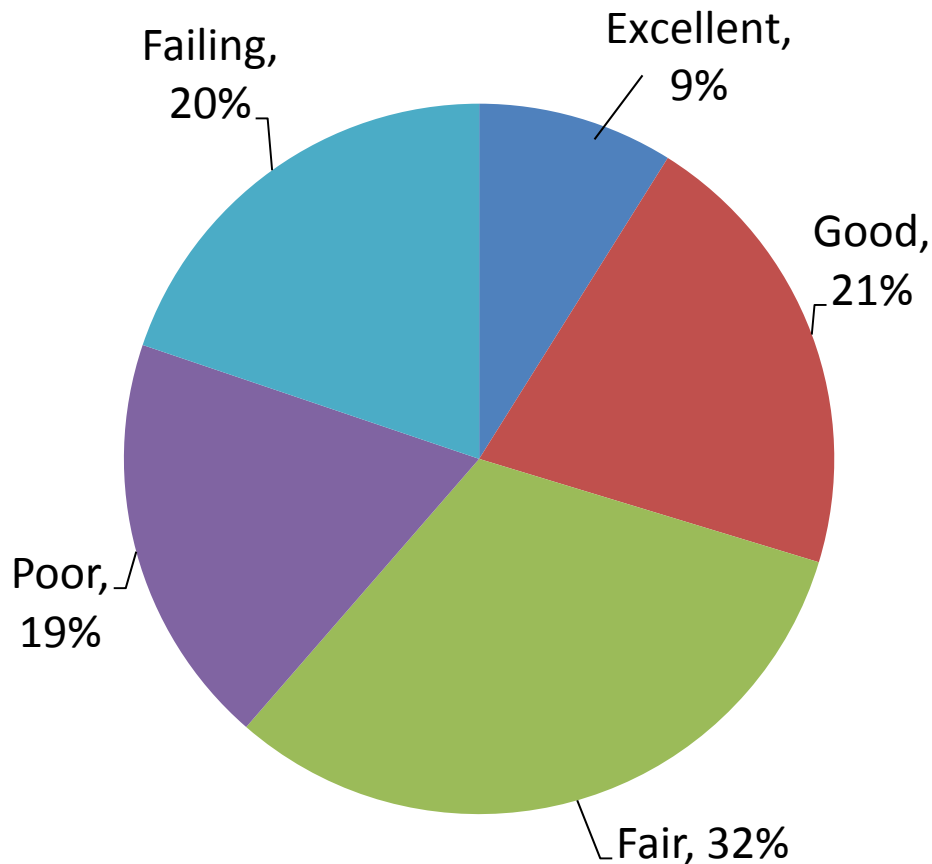


# Pavement Maintenance Costs

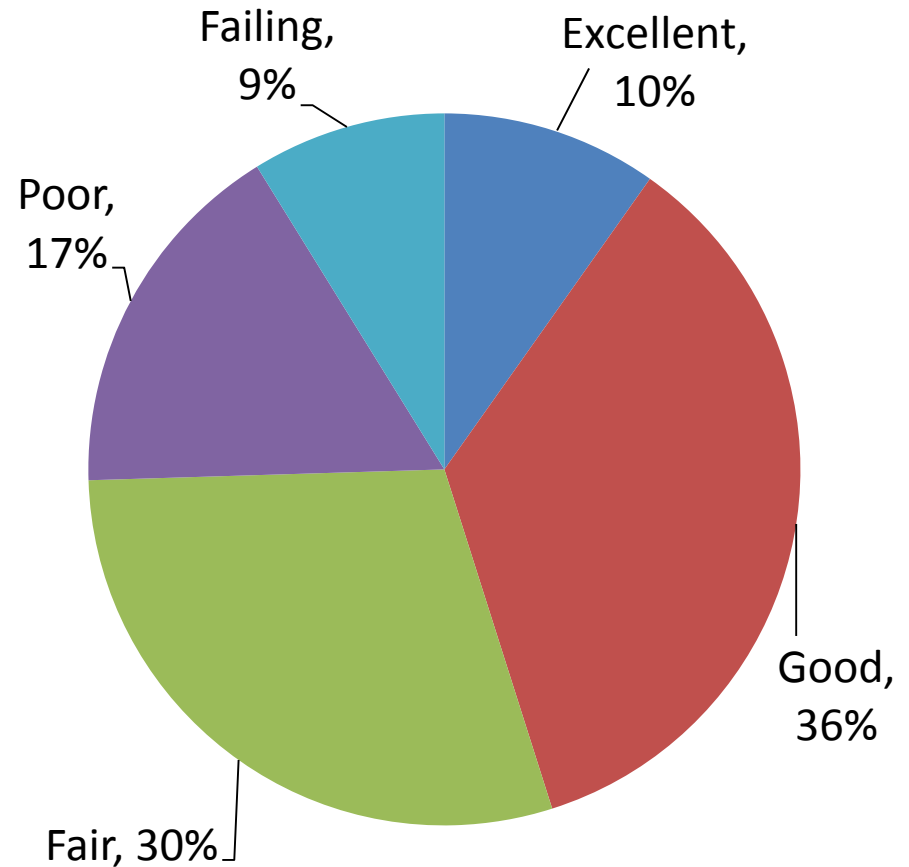


# 57 County Self-Assessed Surveys

## Overall Condition of Paved Roads: 4.86 of 10



## Overall Condition of Gravel Roads: 6.2 of 10



In addition, federally mandated bridge inspections show 28% of county structures are structurally deficient.





## Structurally Deficient

- Term is an indicator of when certain elements of a bridge need replacement or repair
- Classification does not necessarily mean bridge is unsafe
- 4.7% of state structures are structurally deficient
- **28% of county structures are structurally deficient**

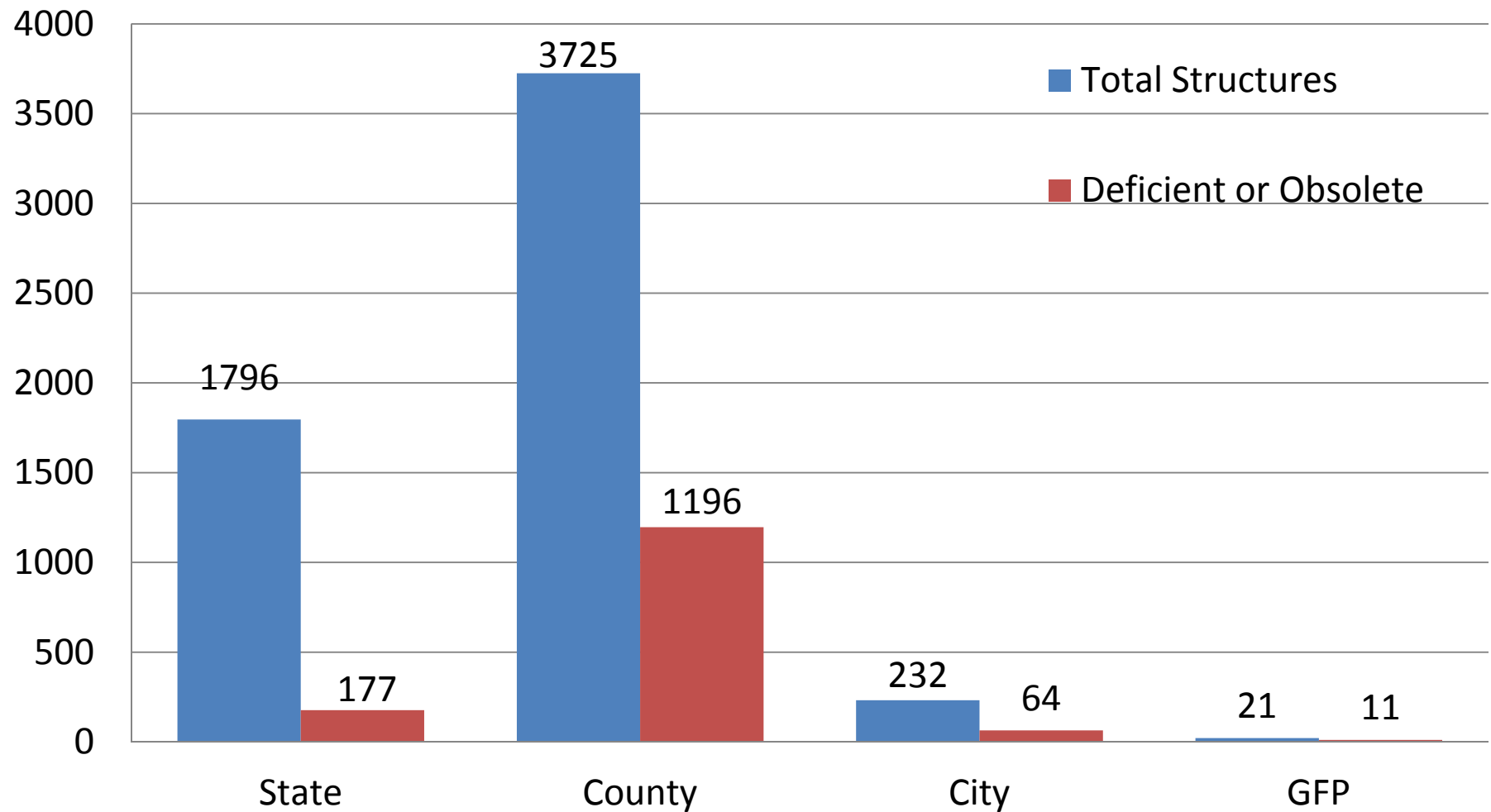
## Functionally Obsolete

- Term refers to a substandard feature within a structure relative to its design
- Example: inadequate vertical or horizontal clearances
- Classification is not an indicator of safety
- 5.1% of state structures are functionally obsolete
- 3% of county structures are functionally obsolete



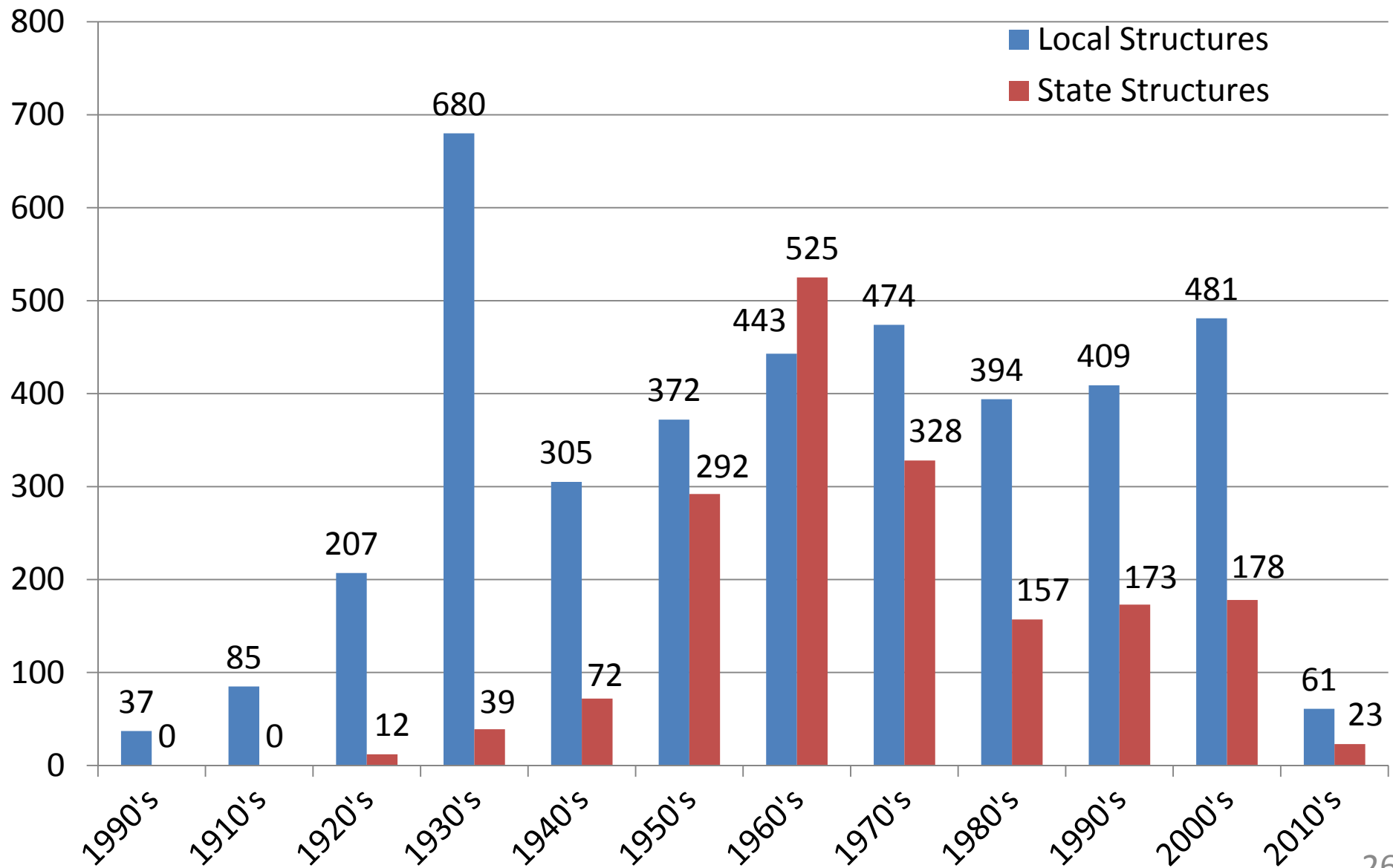
# Total Number of Structures\* vs. Structurally Deficient or Functionally Obsolete

1,448 = 25%



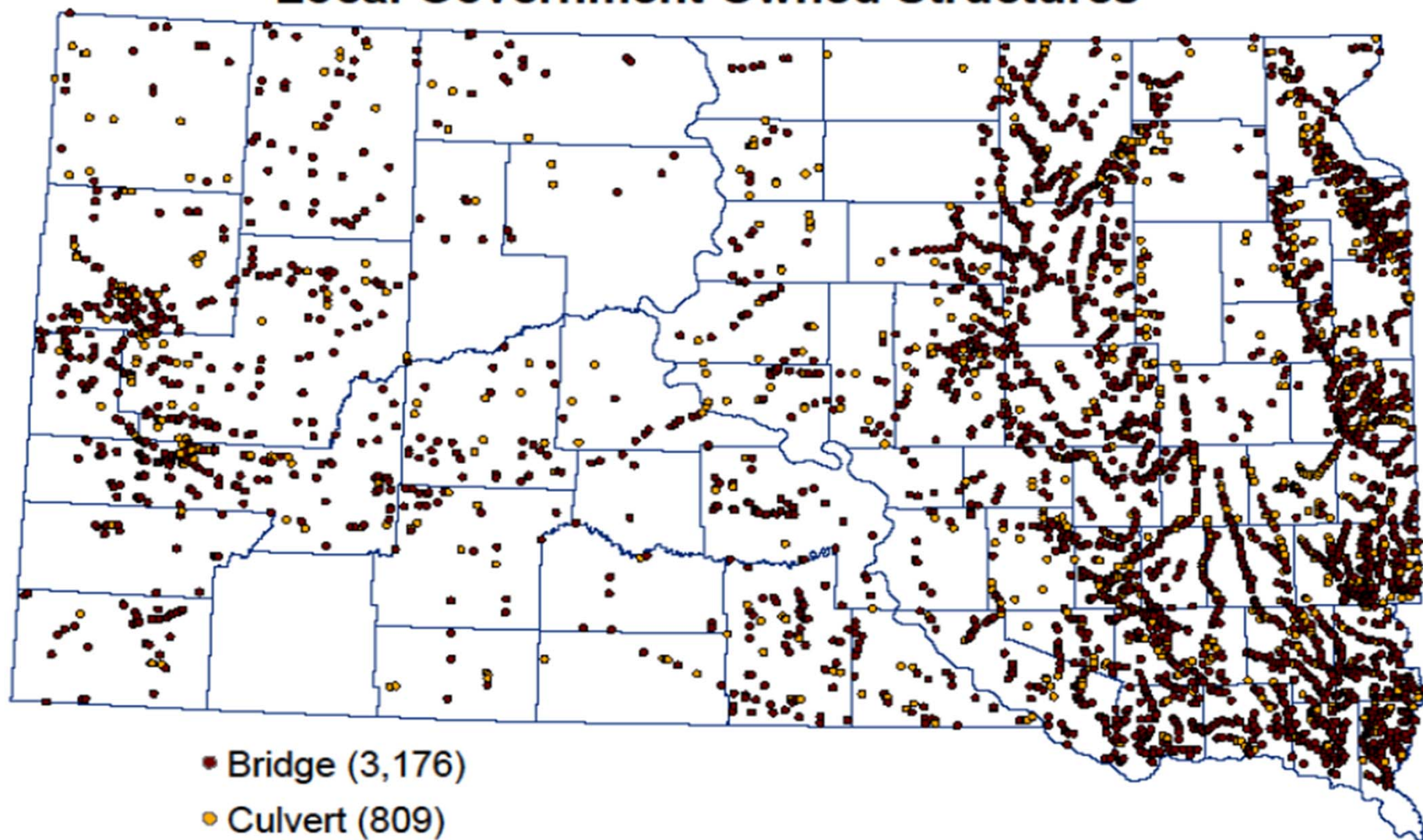
\*Structure = 20 feet or longer 27

# Structures Built by Decade

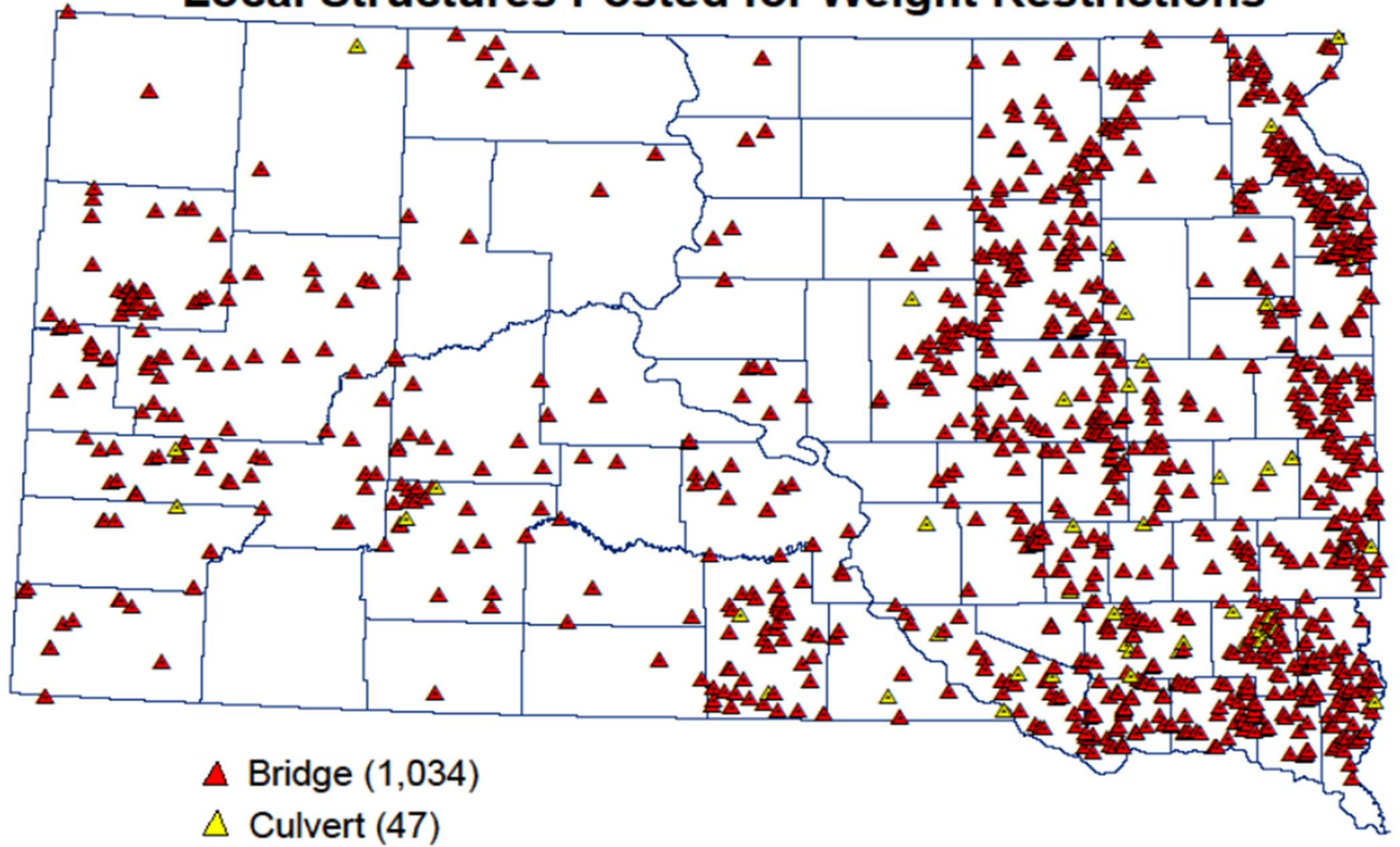




## Local Government Owned Structures

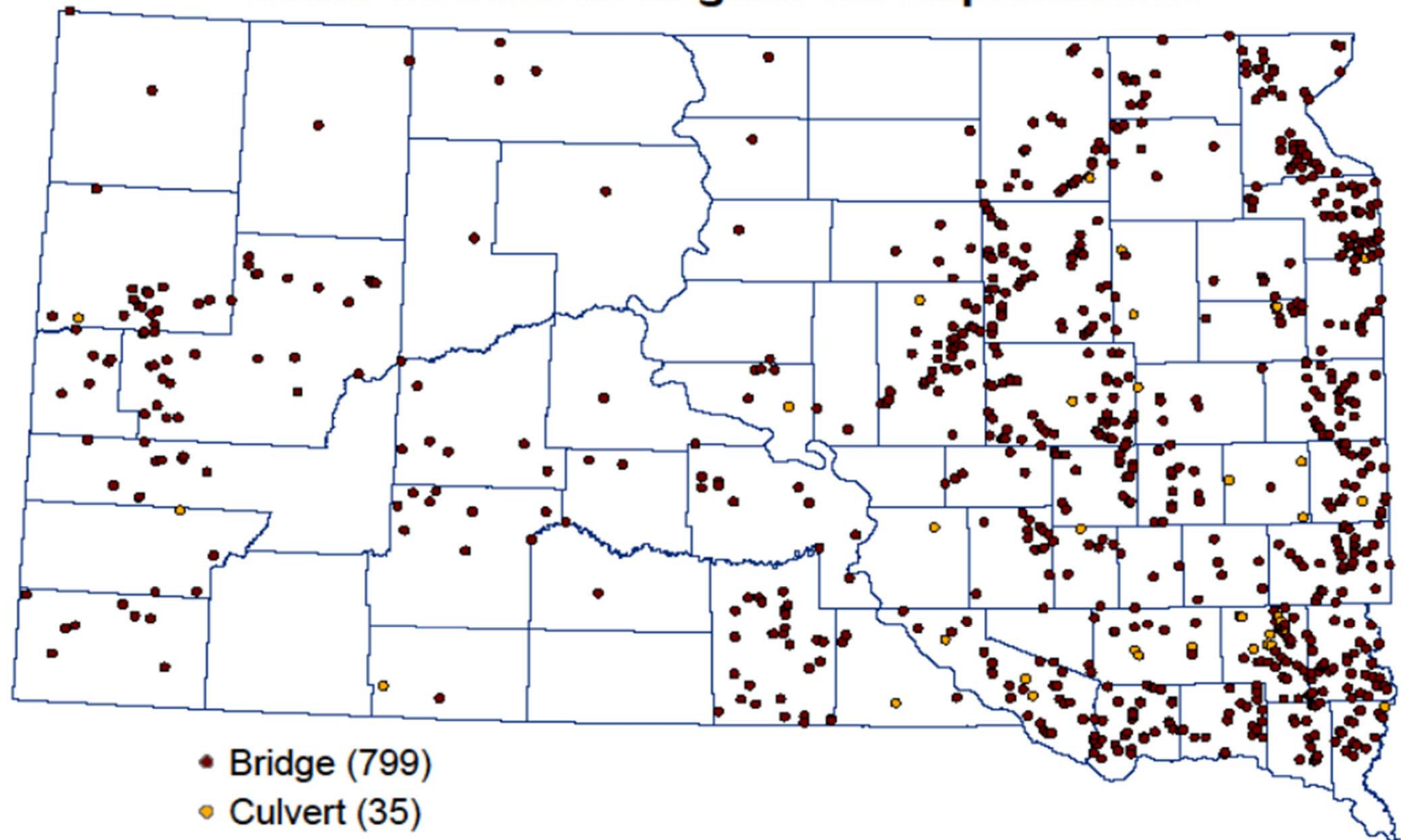


## Local Structures Posted for Weight Restrictions





## Local Structures Eligible for Replacement



# County Bridge Needs

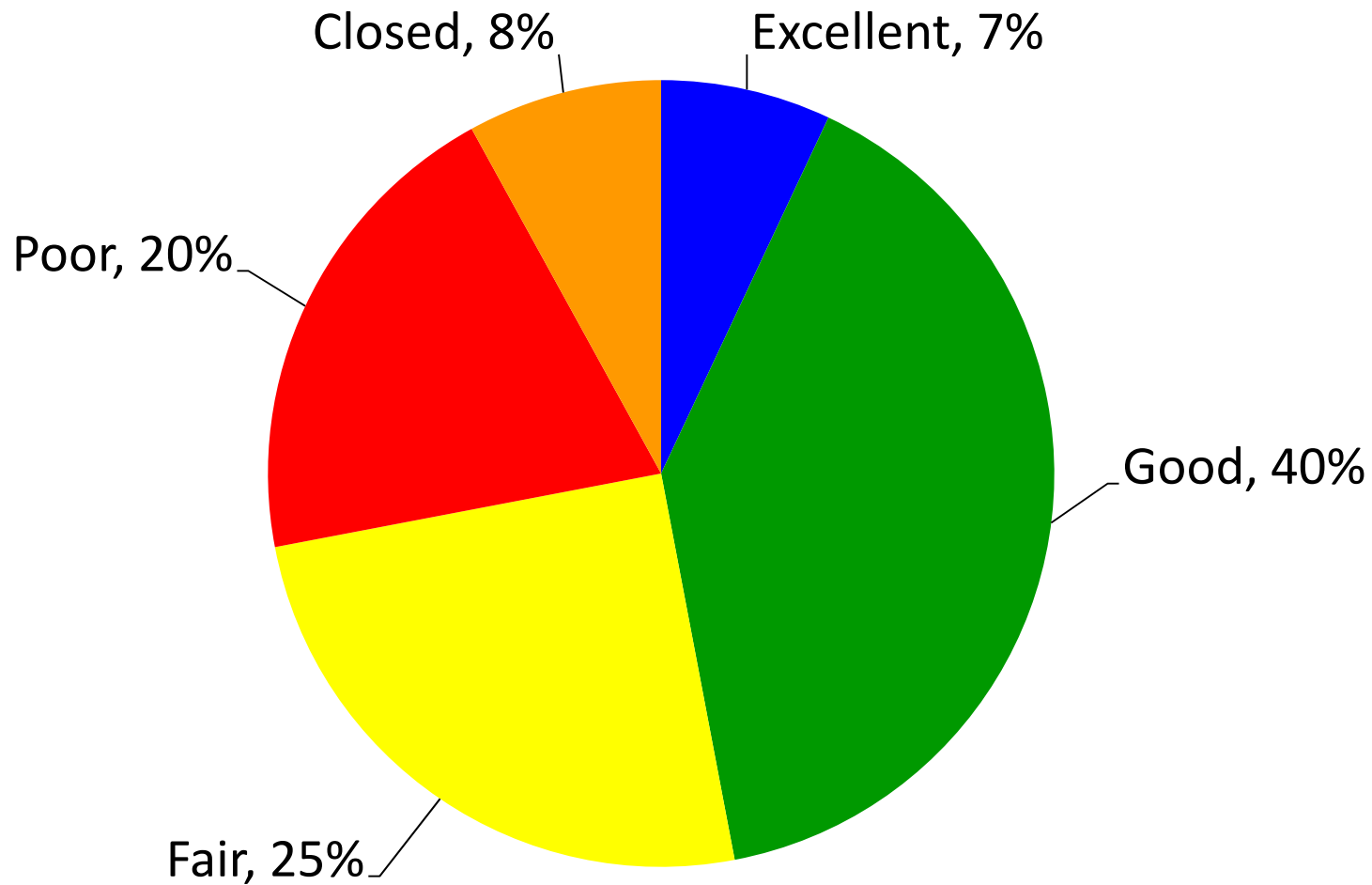
- 1045 Structures to be replaced
- Average cost of \$230,000
- \$240,350,000 to replace
- Current bridge construction money for 2014 is \$5.9 million
- 26 bridges could be replaced yearly
- Equates to 2.5% of deficient bridges



# County Budget and Needs

- Counties 2014 Budget: \$172,742,985
- **Increase needed for 2015: \$84,644,062\***
- Total Need for 2015: \$257,387,047
- 49% increase from Comprehensive Survey
- \* Includes 20% match for bridge program which equals 25 structures X \$46,000= \$1,150,000
- Current bridge needs: \$224,000,000

# Current Township Road Condition Assessment



# Township Funding Needs

## ESTIMATED ANNUAL COST TO MAINTAIN CURRENT CONDITIONS

\*Based on 31,230 Total Miles

PerCent	Condition	Total Miles	Cost to Maintain	Total
7%	Excellent	2,186	\$ 2,800.00	\$ 6,121,080.00
40%	Good	12,492	\$ 1,800.00	\$ 22,485,600.00
25%	Fair	7,808	\$ 1,000.00	\$ 7,807,500.00
20%	Poor	6,246	\$ 500.00	\$ 3,123,000.00
8%	Closed	2,498	\$ -	\$ -
TOTALS:		31,230		\$ 39,537,180.00
2013 Revenue Available:				\$ 27,000,000.00
Current Shortfall:				\$ 12,537,180.00

## ESTIMATED ANNUAL COST TO MAINTAIN TARGET CONDITIONS

\*Based on 31,230 Total Miles

PerCent	Condition	Miles	Cost to Maintain	Total
25%	Excellent	7,808	\$ 2,800.00	\$ 21,861,000.00
35%	Good	10,931	\$ 1,800.00	\$ 19,674,900.00
40%	Fair	12,492	\$ 1,000.00	\$ 12,492,000.00
TOTALS:		31,230		\$ 54,027,900.00
Annual Increase Needed:				\$ 14,600,000.00

## ESTIMATED COST TO UPGRADE TO TARGET CONDITIONS

	Miles	Cost to Upgrade/Mile	Total Cost
Good to Excellent	5622	\$ 12,132.00 =	\$ 68,206,104.00
Fair to Good	4060	\$ 10,500.00 =	\$ 42,630,000.00
Poor to Fair	6246	\$ 8,700.00 =	\$ 54,340,200.00
Total			\$ 165,176,304.00
Increased Maintenance for Target Conditions =			\$ 14,600,000.00
Total Cost to Upgrade & Maintain Target Conditions =			\$ 179,776,304.00
Annualized Over 10 Years (Approx.) =			\$ 18,000,000.00 Per Year

**TOTAL FUNDING INCREASE NEEDED TO UPDATE & MAINTAIN CURRENT AND TARGET CONDITIONS = \$ 30,500,000.00**





## Highway and Bridge Finance Options

(November 6, 2014)

Revenue Source	Current Rate	Current Revenue	Rate of Change (Increase)	Additional Revenue
Motor Fuel User Fee (Gasoline & Others)	\$0.22	\$131,200,000	\$.01 per gallon	\$6,600,000
Index Motor Fuel User Fee (if rate passed in 1999 had been indexed)	\$0.22	\$131,200,000	Average CPI (2.4% since 2000, which converts to a 9¢ increase)	\$59,400,000
Wholesale Tax on Motor Fuel	NA	NA	1% Tax on Motor Fuel	\$16,600,000
Ethyl Alcohol and Methyl Alcohol	\$0.08	\$3,000,000	\$.14 per gallon (Tax Ethyl Alcohol and Methyl Alcohol at same rate as Motor Fuel)	\$5,200,000
Motor Fuel User Fee (Dyed Special Fuel)	NA	NA	\$.01 per gallon	\$1,300,000
Sales Tax on Motor Fuel Used for Ag Purposes	NA	NA	1% Tax on Motor Fuel Used for Ag Purposes	\$4,300,000
Motor Vehicle Excise Tax	3%	\$75,800,000	1% Increase in the Excise Tax	\$25,300,000
Registration Fees (License Plates)	Vary	\$86,594,367	10% Increase Across the Board	\$8,700,000
Increase Registration Fees for Noncommercial Motor Vehicles	Vary	\$12,200,000	Require 12 Month Registration, No Seasonal	\$4,300,000
			Charge the Commercial Rate, Seasonal Registration Permitted	\$14,300,000
Commercial Motor Vehicles	Vary	\$13,000,000	Require 12 Month Registration, No Seasonal	\$2,800,000
Wheel Tax (Max. of \$4 per Wheel not to Exceed 4 Wheels)	Vary	\$12,400,000	Mandate the Wheel Tax	\$7,700,000
			Increase the Rate per Wheel by \$1.00 (If Applied in All Counties)	\$5,000,000
			Apply to More Wheels (Untaxed Wheels)	\$400,000
Remove Property Tax Budget Limitations (County)	Vary	\$309,000,000	\$.10 per \$1,000 Property Tax Levy	\$7,600,000
Property Tax for Roads (County - \$1.00 ^)	Vary		Allow to increase \$1 per \$1,000	\$76,000,000
Remove Property Tax Budget Limitations (Township)	Vary	\$19,300,000	Each \$.10 per \$1,000 Taxes	\$2,650,000

## Highway and Bridge Finance Options

(November 6, 2014)

Revenue Source	Current Rate	Current Revenue	Rate of Change (Increase)	Additional Revenue
Property Tax for Roads (Township - \$1.00 ^)	Vary		Allow to increase \$1 per \$1,000	\$26,500,000
Real Estate Transfer Fee	50¢ per \$500	\$3,500,000	Increase 10¢ per \$500	\$700,000
Increase the Sales and Use Tax and Dedicate Increase	4.0%	\$820,000,000	Each Tenth Percent Increase	\$20,500,000
Dedicate a Portion of Contractor's Excise Tax	2.0%	\$90,000,000	1% of Current Revenue (would be a Transfer from General Fund to Highway Fund)	\$900,000
Tourism Tax	1.5%	\$8,800,000	.5% Increase in the Tourism Tax	\$3,000,000
Fee for Hybrid and Electric Vehicles	NA	NA	Hybrid (4,375 est. *\$40 per vehicle) and Electric (203 est. *\$80 per vehicle)	\$190,000
Tank Inspection Fee - Redirect More Money to the Highway Fund	2%	\$16,600,000	Dedicate 50% of Revenue to Roads (Currently, the Balance Remaining is Transferred to the State Highway Fund)	\$4,500,000
Fee on Hunting Licenses - for Road Access	Vary		\$1 surcharge for 80,000 nonresident small game; 25,000 resident small game; and 45,000 combination	\$150,000
Fee on Fishing Licenses - for Road Access	Vary		\$1 surcharge for 22,000 nonresident annual; 65,000 resident annual; 45,000 nonresident 1-3 day; 8,000 nonresident family	\$140,000
Tax certain Natural Resources - Gravel/Sand	\$100 license fee	NA	\$.10 per ton	\$2,000,000
Dedicate Fines on Motor Vehicle Fines to Roads	Vary	\$6,700,000	Money Currently Dedicated to Schools per Art. 8, § 3, SD Constitution	NA
Sales Tax on Certain Agricultural Inputs	None	NA	Fertilizer, Seed, Pesticides, Herbicides	\$17,000,000
Checkoff for Agricultural Commodities (bushels, market value, 100 weight, per head)	Vary		Beef, swine, sheep, turkeys, eggs, milk, corn, soybeans, wheat, sunflowers, safflowers, canola, flax	NA

# Non-Funding Options

- Dashboard Indicators
- County Long-Term Plans
- Other Options
  - Vacate or close roads and bridges
  - Grind oil roads to gravel

# Importance of Maintaining Transportation Infrastructure

- Vital to South Dakota's economy and the movement of goods
  - Agriculture
  - Tourism
  - Business
- Critical to keep roads safe for residents, families, and movement of commercial goods



**If you produced it, a  
road moved it. Not  
much is air-lifted  
out!**



**If you got it, a road  
brought it. Not much is  
parachuted  
in!**

