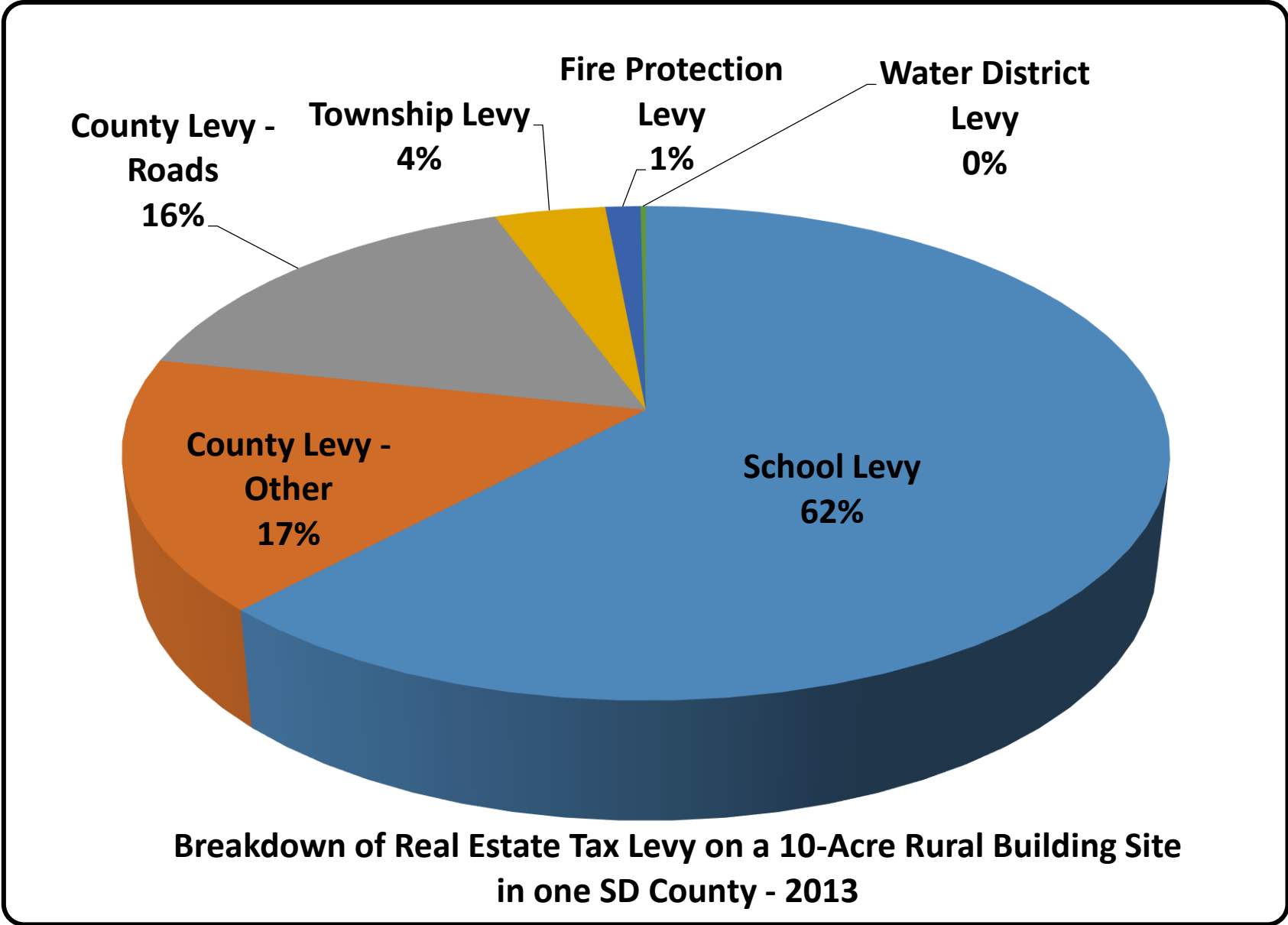


# SD Township Rd Condition and Cost Assessment

# Typical real estate tax revenue share for local road maintenance



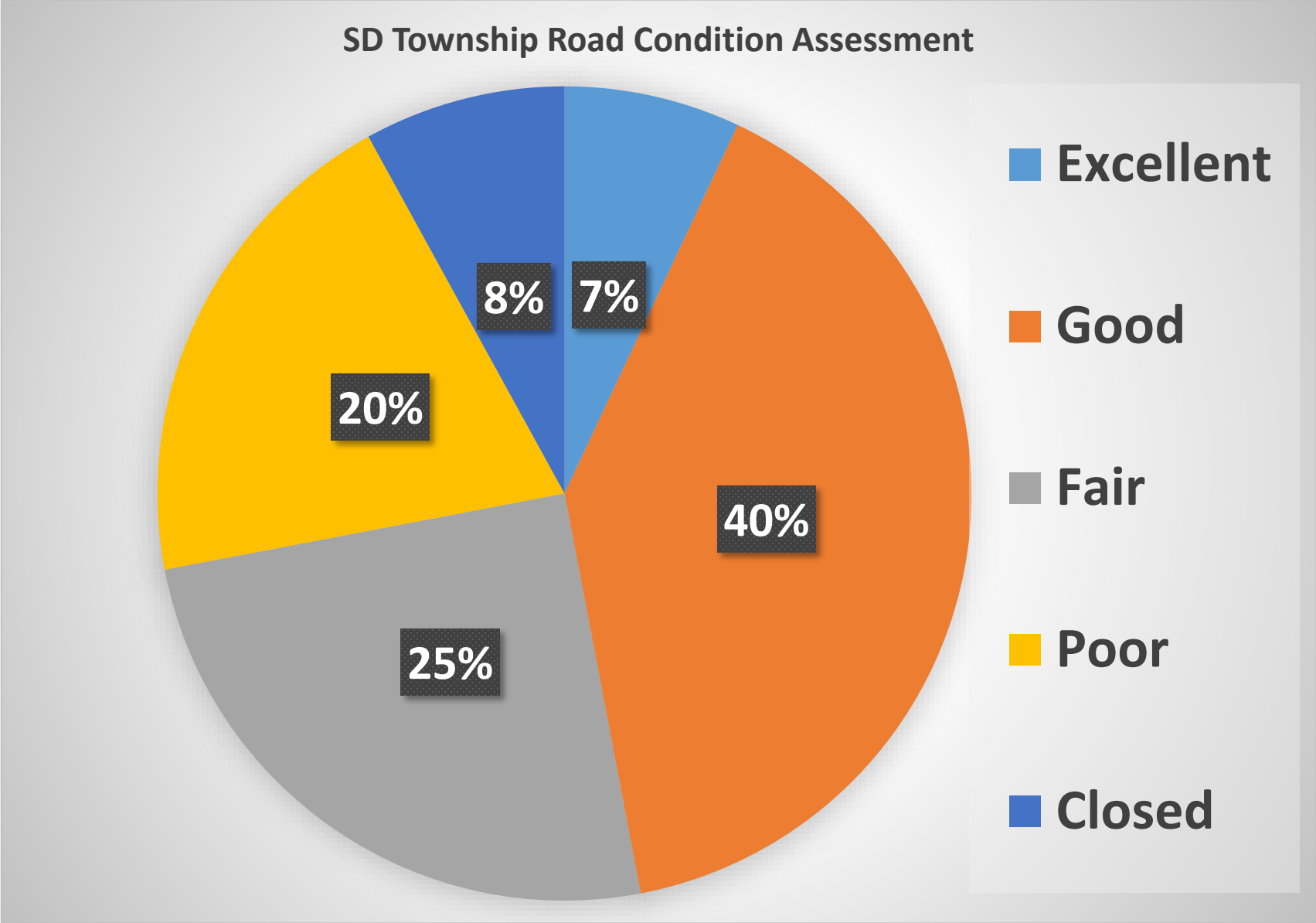
# Current SD Township Road Inventory

- **Total: 31,231 miles**
- **Breakdown by Designation (%):**
  - **Full Maintenance                      73%    (22,799 miles)**
  - **Minimum Maintenance                14%    (4,372 miles)**
  - **Closed – No Maintenance            10%    (3,123 miles)**
  - **Designated No Maintenance        3%    ( 937 miles)**

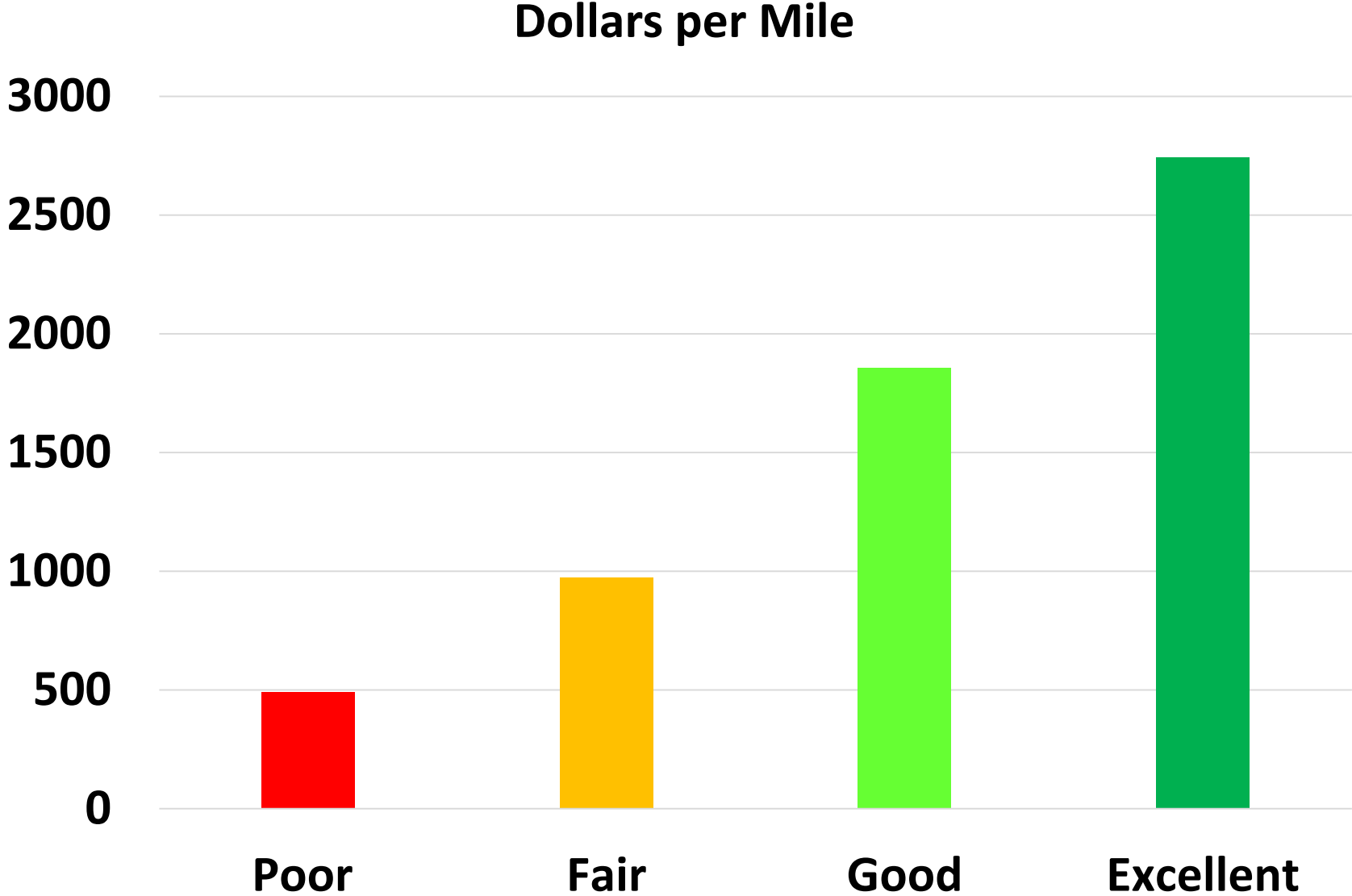
# Bridge <20 ft. (Small Structure) and Culvert Inventory

- **Total number of structures - 1,820**
  - **Percentage Needing Improvement: 49% (892 structures)**
  - **Percentage Closed: 8% (145 structures)**
  
- **Culverts 72,880\***
  - **Percentage Needing Replacement: 15% (11,220 culverts)**
  - **Percentage Failed Causing Road Closure: 1.5% (1,093 culverts)**

# Current Township Road Condition Assessment



# Annual Expenditures and Resulting Surface Conditions



# TOWNSHIP REVENUE

Information Based on Unaudited Financial Statements Submitted by the Townships to Legislative Audit

	<b>FY 2003</b>	<b>FY 2008</b>	<b>FY 2013</b>
14% Motor Vehicle Fees	\$ 4,093,340.04	\$ 4,881,250.06	\$ 7,153,926.92
Distributions from the Local Gov Hwy and Brdg Fund	\$ 666,272.68	\$ 756,482.10	\$ 1,255,240.21
Proration License Fees	\$ 887,552.47	\$ 1,037,065.63	\$ 1,436,827.61
Wheel Tax	\$ 428,543.80	\$ 546,595.46	\$ 880,851.45
Property Taxes	\$10,327,605.78	\$12,605,476.69	\$16,269,721.39
Bank Franchise Tax	\$ 183,069.91	\$ 302,575.77	\$ 245,858,.75
U.S. Fish and Wildlife Payments	\$ 170,116.29	\$ 213,595.50	\$ 393,062.04
State Highway Fund (former 10% game)	\$ 532,022.68	\$ 590,299.19	\$ 586,445.14
FEMA Grants	\$ 126,033.64	\$ 3,570,598.29	\$ 939,845.72
Interest Earned from Bank Accounts and CD's	\$ 477,511.74	\$ 860,517.56	\$ 243,505.62
Other Receipts	\$ 1,604,194.39	\$ 3,172,849.68	\$ 3,345,886.32
<b>TOTAL RECEIPTS</b>	<b>\$19,496,263.41</b>	<b>\$ 28,537,305.93</b>	<b>\$ 32,751,171.17</b>

# TOWNSHIP EXPENDITURES

Information Based on Unaudited Financial Statements Submitted by the Townships to Legislative Audit

	<b>FY 2003</b>	<b>FY 2008</b>	<b>FY 2013</b>
Road Maintenance (graveling, grading, etc.)	\$ 9,686,152.96	\$15,193,845.03	\$ 17,056,778.51
Snow Removal	\$ 380,666.73	\$ 971,581.45	\$ 799,017,.39
Weed mowing/spraying	\$ 549,786.23	\$ 664,918.76	\$ 743,288.72
Road Construction (Culverts, bridges, regrading, reconstruction)	\$ 1,674,877.41	\$ 3,304,428.69	\$ 3,433,489.14
Equipment Purchase / Lease	\$ 1,252,919.47	\$ 1,562,440.60	\$ 1,515,378.99
Salaries / Fees / Mileage of Township Officials	\$ 1,102,920.31	\$ 1,391,310.49	\$ 1,516,703.62
Fire Protection	\$ 979,364.76	\$ 1,468,237.12	\$ 1,408,642.37
Ambulance Service	\$ 104,625.80	\$ 223,247.58	\$ 239,578.76
Other (Utilities, insurance, loan repayment, postage, supplies, etc)	\$ 2,014,546.71	\$ 2,440,267.11	\$ 2,563,518.23
<b>TOTAL DISBURSEMENTS</b>	<b>\$17,745,860.38</b>	<b>\$27,220,276.83</b>	<b>\$29,276,395.73</b>



# Current Needs on Township Road System

- **Far too much deferred maintenance in last 20 years**
  - **Little gravel is being replaced**
  - **Blade maintenance is not being done frequently enough**
  - **Ditch/drainage maintenance has been almost entirely deferred**
  - **Culvert maintenance and replacement is done only on emergency basis**
  - **Counties often cannot provide replacement of bridges (small structures) <20 ft per SDCL 31-14-27 on township roads. Consequence is townships must pay much in excess of \$500 as defined in statute**

# Typical Costs for Maintaining a Mile of Twp Road

<b>Haul and place 2.5 inches of gravel at 20 ft road width – (expected life of 7.5 years)</b>	<b>\$17,111 (\$2,281 annualized)</b>
<b>Eight (8) cycles of annual blade maintenance at \$44 per cycle</b>	<b>\$352</b>
<b>Remove and replace a 24 inch culvert</b>	<b>\$1,700</b>
<b>Remove and replace a 48 inch culvert</b>	<b>\$5,000</b>
<b>Remove and replace a bridge (small structure) &lt;20 ft. (Assumption is replacement with two 60 inch pipes)</b>	<b>\$16,000</b>
<b>Repair a bridge (small structure) &lt;20 ft.</b>	<b>\$2800</b>

# Example Costs to Upgrade One Mile from Poor to Fair Condition

<b>Add enough gravel for equivalent of one inch compacted depth on the road at 20 ft width.</b>	<b>\$6,844</b>
<b>Increase blade maintenance cycles from three to five times annually @ \$44 per cycle</b>	<b>\$88</b>
<b>Remove and replace one 24 inch culvert in a mile</b>	<b>\$1,700</b>
<b>Do minimal ditch cleaning to maintain drainage</b>	<b>\$75</b>
<b>TOTAL COST OF IMPROVEMENT</b>	<b>\$8,707</b>

# Example Costs to Upgrade One Mile from Fair to Good Condition

<b>Add enough gravel for equivalent of two inches compacted depth on the road at 20 ft width (assuming one inch is in place)</b>	<b>\$6,844</b>
<b>Increase blade maintenance cycles from five to eight times annually @ \$44 per cycle</b>	<b>\$132</b>
<b>Remove and replace two 24 inch culverts in a mile</b>	<b>\$3,400</b>
<b>Do additional ditch cleaning to maintain better drainage</b>	<b>\$150</b>
<b>TOTAL COST OF IMPROVEMENT</b>	<b>\$10,526</b>

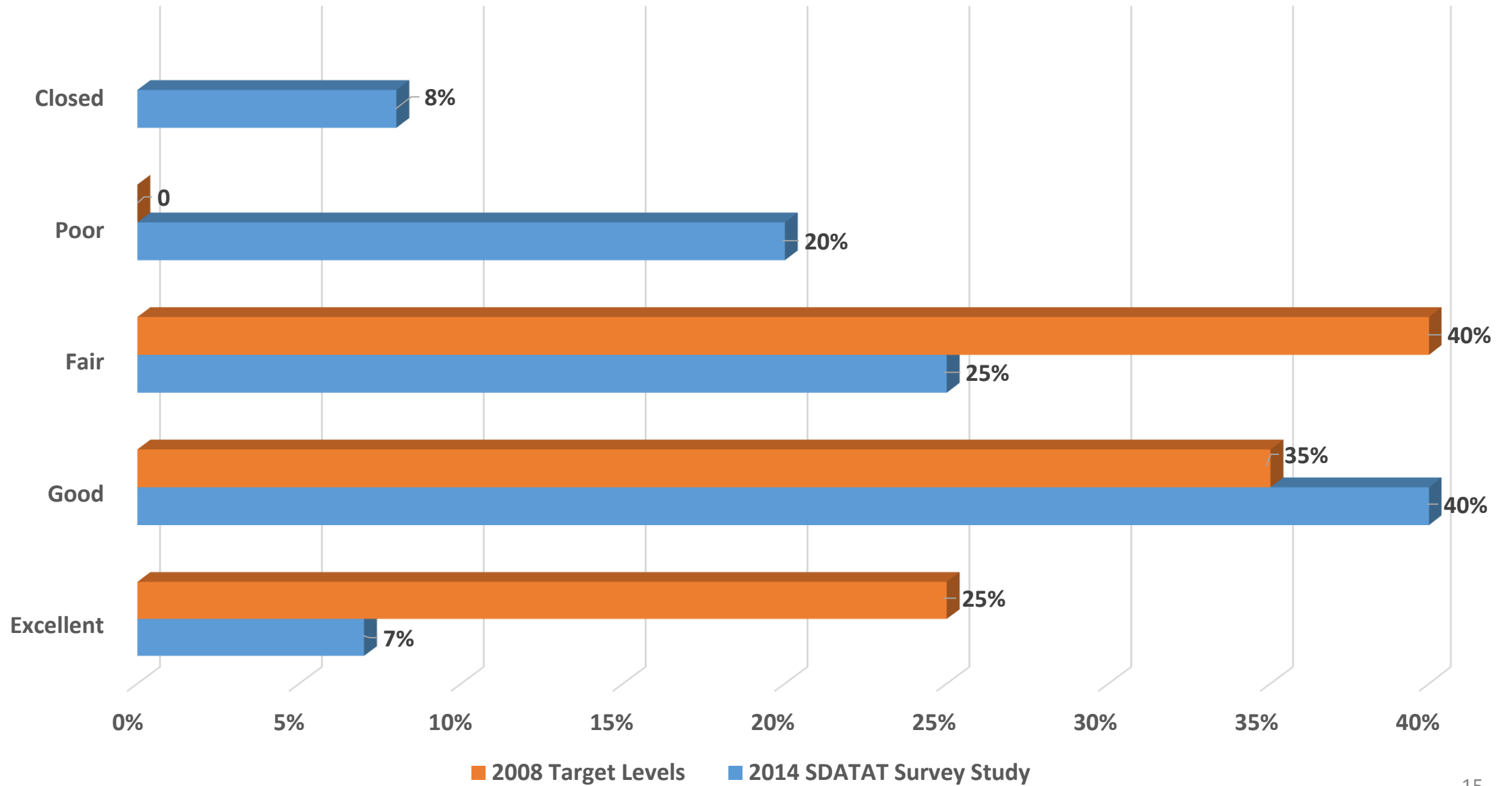
# Example Costs to Upgrade One Mile from Good to Excellent Condition

<b>Add enough gravel for equivalent of three inches compacted depth on the road at 20 ft width (assuming two inches in place)</b>	<b>\$6,844</b>
<b>Increase blade maintenance cycles from eight to ten times annually @ \$44 per cycle</b>	<b>\$88</b>
<b>Remove and replace three 24 inch culverts in a mile (could include pipes under driveways or field entrances)</b>	<b>\$5,100</b>
<b>Do more aggressive ditch cleaning to maintain drainage</b>	<b>\$100</b>
<b>TOTAL COST OF IMPROVEMENT</b>	<b>\$12,132</b>

# Example Costs to Upgrade One Mile from Fair to Excellent Condition

<b>Add enough gravel for equivalent of three inches compacted depth on the road at 20 ft width (assuming one inch in place)</b>	<b>\$13,688</b>
<b>Increase blade maintenance cycles from five to ten times annually @ \$44 per cycle</b>	<b>\$220</b>
<b>Remove and replace all 24 inch culverts in a mile (average likely four pipes including driveway or field entrance pipes)</b>	<b>\$6,800</b>
<b>Do aggressive ditch cleaning to maintain drainage</b>	<b>\$175</b>
<b>TOTAL COST OF IMPROVEMENT</b>	<b>\$20,883</b>

# Current Conditions of Township Roads



# 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	\$ -	\$ -
<b>TOTALS:</b>		<b>31,230</b>		<b>\$ 39,537,180.00</b>
			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
<b>TOTALS:</b>		<b>31,230</b>		<b>\$ 54,027,900.00</b>
			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
<b>Total</b>			<b>\$ 165,176,304.00</b>
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**



# TOWNSHIP REVENUE AND EXPENDITURES

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	FY 2003	FY 2008	FY 2013
14% Motor Vehicle Fees	\$ 4,093,340.04	\$ 4,881,250.06	\$ 7,153,926.92
Distributions from the Local Government Hwy and Bridge Fund	\$ 666,272.68	\$ 756,482.10	\$ 1,255,240.21
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Other (Utilities, insurance, loan repayment, postage, supplies, etc)	\$ 2,014,546.71	\$ 2,440,267.11	\$ 2,563,518.23
<b>Total Disbursements</b>	<b>\$17,745,860.38</b>	<b>\$27,220,276.83</b>	<b>\$29,276,395.73</b>

# HIGHWAY USER FEE DISTRIBUTION

(Since the "1985 Deal" - Millions of Dollars)

STATE HIGHWAY FUND	CY 1986	CY1997	FY 2010	FY 2013
Motor Fue Tax	\$ 47.841	\$ 99.504	\$ 122.600	\$ 131.200
<u>Motor Vehicle Excise Tax</u>	<u>\$ 19.900</u>	<u>\$ 40.270</u>	<u>\$ 54.600</u>	<u>\$ 70.400</u>
Totals:	\$ 67.741	\$ 139.774	\$ 177.200	\$ 201.600

LOCAL GOVERNMENTS	CY 1986	CY1997	FY 2010	FY 2013	% of Total
Counties	\$ 12.660	\$ 18.318	\$ 42.100	\$ 62.200	67.2%
Townships	\$ 3.489	\$ 4.663	\$ 10.700	\$ 15.800	17.1%
<u>Cities</u>	<u>\$ 2.984</u>	<u>\$ 4.289</u>	<u>\$ 9.800</u>	<u>\$ 14.600</u>	15.8%
Totals:	\$ 19.133	\$ 27.270	\$ 62.600	\$ 92.600	

TOTAL HIGHWAY USERS FEES	CY 1986	CY1997	FY 2010	FY 2013
State Highway Fund	\$ 67.741	\$ 139.774	\$ 177.200	\$ 201.600
<u>Local Governments</u>	<u>\$ 19.139</u>	<u>\$ 27.270</u>	<u>\$ 62.600</u>	<u>\$ 92.600</u>
Totals	\$ 86.880	\$ 167.044	\$ 239.800	\$ 294.200

# DISTRIBUTION OF FEDERAL HIGHWAY FUNDS (1987-2003)

(Average Annual Apportionment To South Dakota - Millions of Dollars/Year)

	FY 1987		FY 1997		FY 2010		FY 2013	
	1987	% of Total	1997	% of Total	2010	% of Total	2013	% of Total
Total Federal Apportionment	90.4	100.0%	119.3	100.0%	310	100.0%	280	100.0%
Sub-Allocation to Local Gov'ts	11.1	12.3%	14.5	12.2%	43.7	14.1%	39.5	14.1%
Available for State Hwy System	79.3	87.7%	104.8	87.8%	266.3	85.9%	240.5	85.9%

## TOTAL FEDERAL FUNDS & STATE USER FEES AVAILABLE TO THE STATE & LOCAL GOV'TS

(Average Annual Funds Available - Millions of Dollars/Year)

	FY 1987		FY 1997		FY 2010		FY 2013	
	1987	% of Total	1997	% of Total	2010	% of Total	2013	% of Total
State Highway System (7861 miles)								
Federal Funds	\$ 79.3		\$ 104.8		\$ 266.3		\$ 240.5	
User Fees (Motor Fuel & MV Excise Tax)	\$ 67.7		\$ 139.8		\$ 177.2		\$ 201.6	
TOTALS:	\$ 147.0	81.8%	\$ 244.6	84.8%	\$ 443.5	80.1%	\$ 442.1	76.5%
\$/Mile of Highway	\$ 18,700		\$ 31,116		\$ 56,418		\$ 56,240	
Local Governments (75.514 miles)								
Federal Funds (Includes State Match)	\$ 13.6		\$ 16.7		\$ 47.8		\$ 43.2	
User Fees (Vehicle Registration Fees)	\$ 19.1		\$ 27.3		\$ 62.6		\$ 92.6	
TOTALS:	\$ 32.7	18.2%	\$ 44.0	15.2%	\$ 110.4	19.9%	\$ 135.8	23.5%
\$/Mile of Highway	\$ 433		\$ 583		\$ 1,462		\$ 1,798	
<b><u>Total of State &amp; Local Governments</u></b>								
Federal Funds & User Fees	\$ 179.7	100%	\$ 288.6	100%	\$ 553.9	100%	\$ 577.9	100%