

**2011 SURFACE TREATMENT REPORT  
FOR THE  
TRANSPORTATION COMMISSION  
WORKSHOP**


Presented by: **Stephen Henry**  
Pavement Management  
Program

September 2011

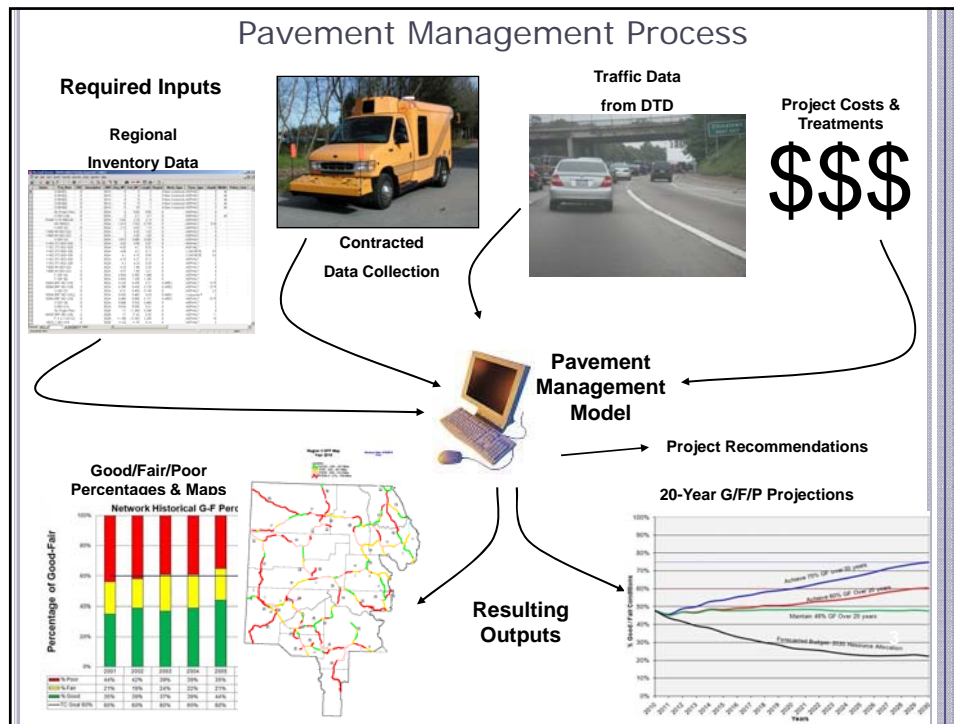
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**TOPICS**

- Good/Fair/Poor definitions
- Present the current condition of
  - Entire CDOT network
  - Interstate highways
  - National Highway System
  - Other highways
- Present long-term network condition predictions at current budget levels
- Present necessary budget to achieve Transportation Commission objectives and goals
- Provide information for the Transportation Commission to set roadway condition objectives and goals (from Policy Directive 1400.00)



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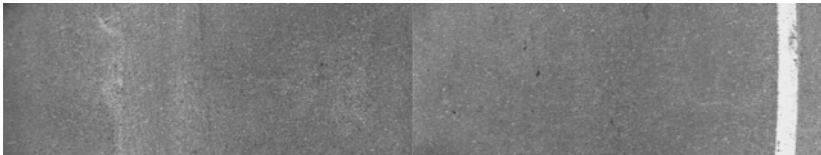
## GOOD-FAIR-POOR DEFINITIONS

- **Remaining Service Life (RSL)** - The estimated number of years, from a specified date in time, until a pavement section reaches the threshold distress index. When a pavement reaches the threshold distress, **reconstruction and/or major rehabilitation is the only cost-effective treatment**. RSL is a function of the distress level and rate of deterioration.
- **Good** > 10 years RSL
- **Fair** 6-10 years RSL
- **Poor** < 6 years RSL

### GOOD (RSL > 10) EXAMPLE



- Highway 6, MP 209, Silverthorne, Decreasing Milepost
- Reconstructed 2002
- Good Condition
- RSL = 13

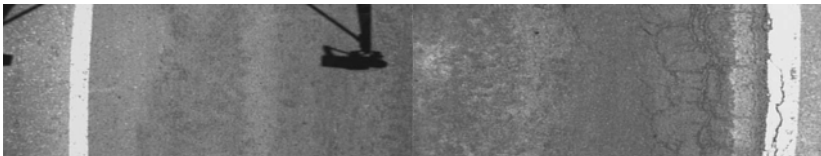


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### FAIR (RSL 6-10) EXAMPLE



- Highway 6F, MP 209, Silverthorne, Increasing Milepost
- Reconstructed 2002
- Fair Condition
- RSL = 6

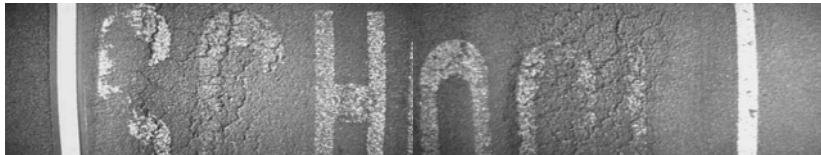


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### POOR (RSL <6) EXAMPLE



- Highway 6, MP 294, Commerce City, Decreasing Milepost
- Resurfaced 2001
- Poor Condition
- RSL = 1

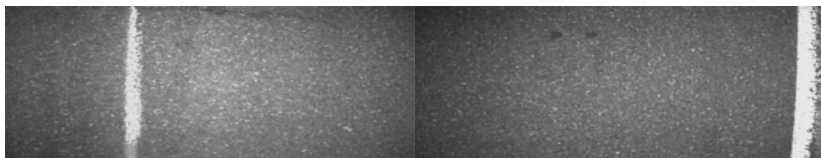


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### POOR-0 (RSL=0) EXAMPLE



- Highway 6, MP 271, Golden, Decreasing Milepost
- Reconstructed 1992
- Poor-0 Condition
- RSL = 0
  - Average Rut 0.13"
  - Average IRI 188



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### CURRENT CONDITION OF THE CDOT NETWORK

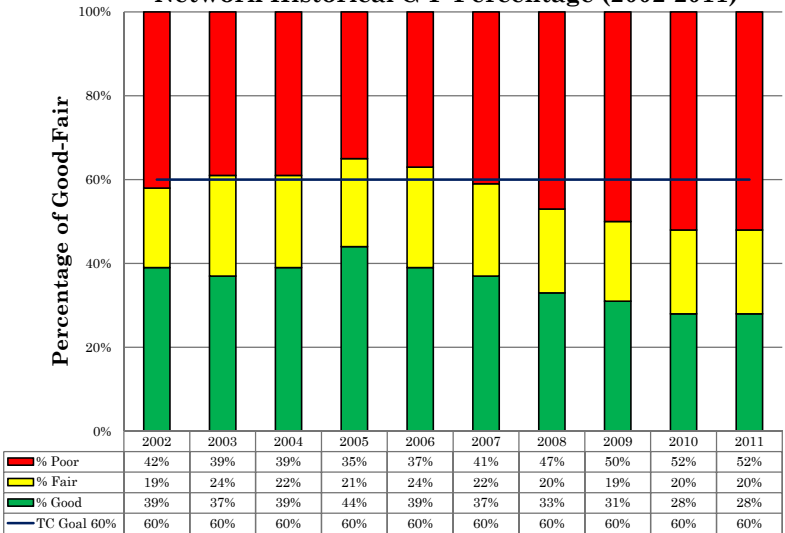
	TC Goal	2010 Condition	2011 Condition
	% G-F	% G-F	% G-F
Network	60	48	48
Interstate	85	62	65
NHS (non-Interstate)	70	63	64
Other	55	35	33

- 76% of planned projects match recommended Pavement Management strategies.

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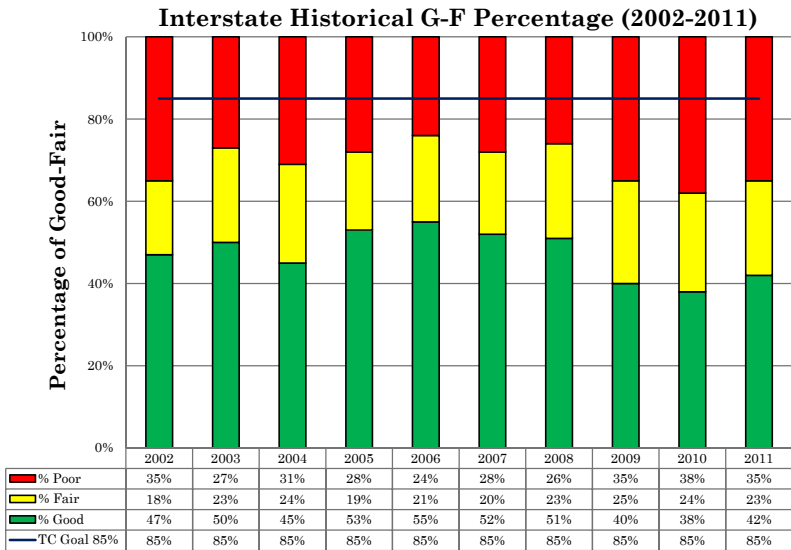
### CURRENT NETWORK CONDITION

Network Historical G-F Percentage (2002-2011)



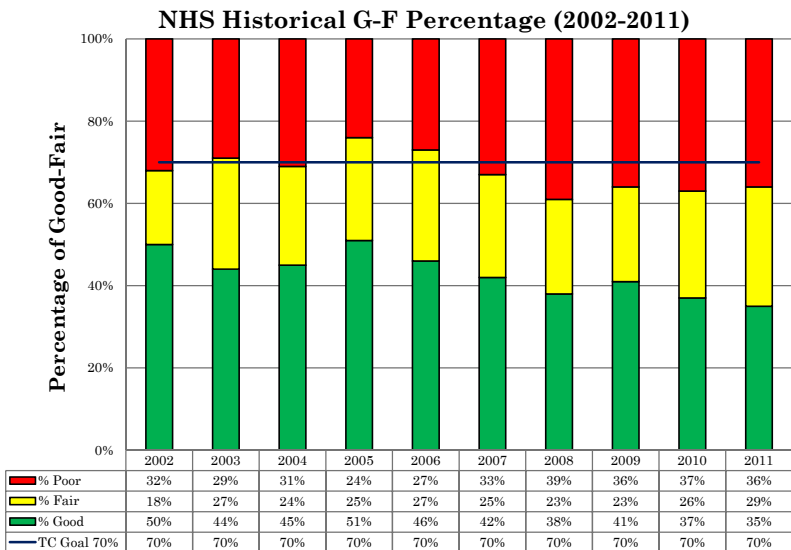
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### CURRENT INTERSTATE CONDITION



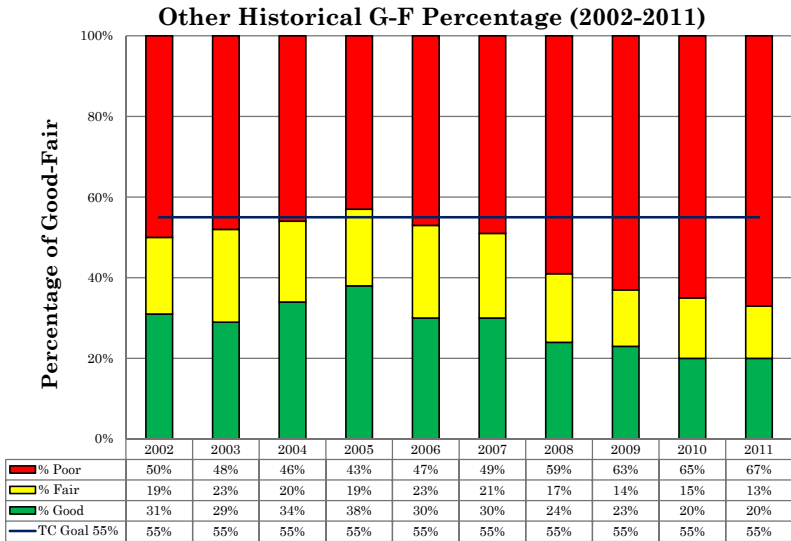
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### CURRENT NHS CONDITION



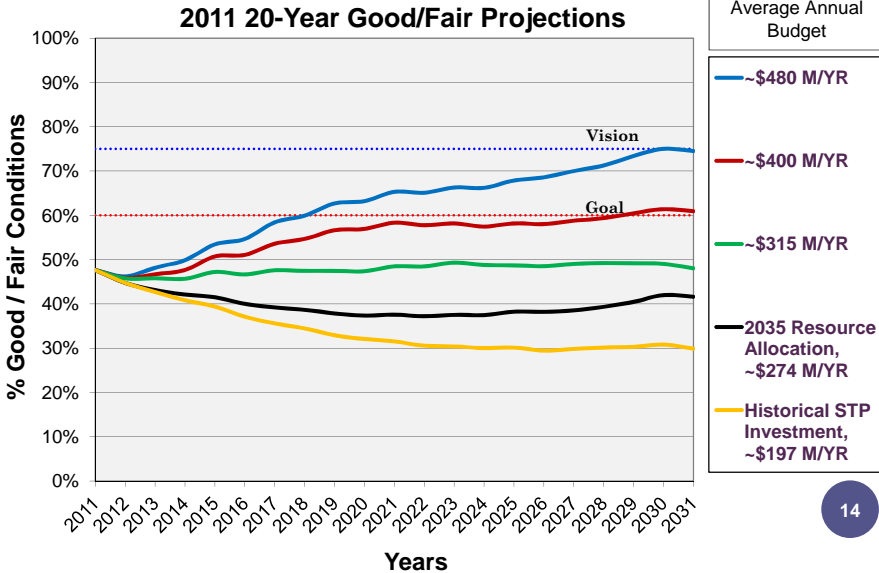
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### CURRENT OTHER CONDITION



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### LONG-TERM CONDITION PROJECTIONS AND BUDGET ANALYSIS



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### COST ANALYSIS

	2008 Costs	2011 Costs	
Maintenance Cost	\$7.50	\$6.50	per square yard
Minor Rehabilitation Cost	\$40.00	\$30.00	per square yard
Major Rehabilitation Cost	\$90.00	\$41.00	per square yard
Reconstruction Cost	\$180.00	\$166.50	per square yard
Colorado CCI	283.0	256.2	
Inflation Rate	11.00%	3.76%	

- Using a 5-year average of project data, instead of a 3-year average.
- Using an inflation rate that is more representative of long-term historic trends.
- 2008 costs greatly influenced by spike in petroleum prices and polymer shortage.

### TRANSPORTATION COMMISSION GOALS

	TC Goal	2011 Condition	2012 Condition (Predicted)	2013 Condition (Predicted)
	% G-F	% G-F	% G-F	% G-F
Network	60	48	45	43
Interstate	85	65	59	54
NHS (Non-Interstate)	70	64	59	57
Other	55	33	32	32

