

## 5-9035-01-P4

## 4-YEAR PAVEMENT MANAGEMENT PLAN (WITH PROPOSITION 12 PROJECTS): ANALYSIS REPORT

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*TxDOT Project 5-9035-01: Pilot Implementation of a Web-based GIS System to Provide Information for Pavement Maintenance Decision-Making* 

#### DECEMBER 2009

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Performed in cooperation with the Texas Department of Transportation and the Federal Highway Administration.				

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## Section 1. Pavement Management Plan Executive Summary

Rider 55 of TxDOT's appropriations bill requires that prior to the beginning of each fiscal year, the department provide the Legislative Budget Board and the Governor with a detailed plan for the use of these funds that includes, but is not limited to a district by district analysis of pavement score targets and how proposed maintenance spending will impact pavement scores in each district.

The 2009-2012 Pavement Management Plan, which was completed last year, provided TxDOT with a mechanism to be able to predict pavement conditions based on a specified funding level and project specific plan. The resulting report consisted of the summary of the number of lane miles that each district planned to treat as Preventive Maintenance (PM), Light, Medium or Heavy Rehabilitation and the impact that those treatments would have on the pavement conditions. This year, the plan has been updated to extend to FY2013 and a similar report generated.

## Definitions

Maintenance is composed of Routine + Preventive + Rehabilitation + Bridges

Routine Maintenance includes but is not limited to:

- Emergency response,
- Sealing cracks,
- Signs,
- Striping,
- Edge maintenance,
- Ditch cleaning,
- Operating ITS,
- Traffic signals,
- Patching,
- Pothole repair,
- Level up,
- Litter and debris removal,
- Mowing

Preventive Maintenance includes:

- Seal coats (chip seals)
- Thin Overlays
- Micro-surfacing

Rehabilitation includes:

- Thick structural overlays,
- Rebuilding the pavement structure
- Adding shoulders and passing lanes

# Note: Every \$1 spent on Preventive Maintenance saves \$6 of Rehabilitation over the life of the pavement.

## **Performance Measures**

## **Pavement Condition Ratings**

All pavements are rated on an annual basis with visual observations as well as mechanical measurements. The types of distresses considered are cracking, rutting, failures, etc. The ride quality is measure utilizing a Profiler. The Pavement Condition Score is then a measure of distress and ride quality. The Texas Transportation Commission has set a goal for 90% of our pavements to be rated "Good or Better" (Score>70) by 2012. Figure 1 below shows samples of the ratings.



## Figure 1. Photos Indicating the Pavement Conditions with the Associated Condition Ratings

## Funding relationship

The 2030 Committee identified the required level of funding associated with the Performance Measure of Pavement Condition. Figure 2 shows the necessary annual investment needed for maintaining certain Pavement Condition.

Pavement and Bridge Condition % Good or Better	Total Annual Maintenance Needs	Annual Pavement Needs (PM and Rehabilitation) 2030 Rep.	Annual Routine Maintenance Needs	Annual Bridge Needs (PM, Rehabilitation and Replacement)	2010 GAP
90%	\$ 5.8 B	\$ 3.7 B	\$ 1.2 B	\$ 0.9 B	<\$ 3.5 B>
87%	\$ 5.5 B	\$ 3.5 B	\$ 1.2 B	\$ 0.8 B	<\$ 3.2 B>
80%	\$ 4.9 B	\$ 3.1 B	\$ 1.2 B	\$ 0.6 B	<\$ 2.6 B>

## Figure 2. Funding Requirements for Associated Pavement Condition Goals as determined by the 2030 Committee

## Challenges

## Pavement Condition Trends

- Pavement conditions have continued to decrease across the state, especially in urban districts. The following observations are based on the 2009 Condition of Texas Pavements report published by the Construction Division, Materials and Pavements Section:
  - ✓ Since FY 2005, the % Good or Better average of the entire highway system has steadily decreased.
  - ✓ Asphalt concrete pavements got worse in all categories, with the largest drops being in distress and deep distress.
  - ✓ In FY 2009, only 85.94% of roadways were rated in "good or better condition," down from 86.27 in FY 2008 and down from the highest value of 87.34% in FY 2005.
  - ✓ The FY 2009 Pavement conditions are the lowest they have been since FY 2003.

## Funding Limitations

• Non pavement related tasks continually re-direct resources away from pavement maintenance.

- ✓ In FY 2008, approximately 26% of our statewide maintenance budget was spent on salaries and other miscellaneous expenditures.
- ✓ In FY 2008, only 16% of our statewide maintenance budget was spent on roadway materials.
- ✓ Over the past 4 years, an average of \$ 460 million per year (60% of total statewide maintenance budget) has been spent on non pavement items.
- ✓ Over the past 4 years, Metro districts have spent an average of 69 % of their total budget on non-pavement related items.

## Summary of 2009-2012 Plan and Projections

## Plan

Each district developed their 4 year expenditure projections based on anticipated budgets. There are certain expenses that are fixed and are part of doing business such as overhead and operational expenses. The roadside expenditures continue to be evaluated in order to find the balance with expectations. Traffic operational expenses are also pretty well established in order to maintain existing systems (ITS, signals, illumination, etc.). The pavement expenditures include both in house and routine maintenance contracts. These pavement expenditures do not include construction expenditures in which approximately \$700 M were expected to be available in 2009 for rehabilitation and preventive maintenance projects.

FY	Budget	OH & Opers.		Struct.		Roadside		Traffic Opers.		Pvmt.	
	\$	\$	%	\$	%	\$	%	\$	%	\$	%
2009	844 M	116 M	14	19 M	2	201 M	24	227 M	27	281 M	33
2010	899 M	123 M	14	18 M	2	208 M	23	238 M	28	309 M	34
2011	942 M	129 M	14	19 M	2	216 M	23	248 M	28	316 M	34
2012	942 M	132 M	14	20 M	2	222 M	24	256 M	27	321 M	34
Avg.			14		2		23		27		34

## **Statewide Expenditure Projections**

## Metros

- Expenditure projections indicate approximately 75% of maintenance resources expended on non pavement items.
- Pavement condition scores are the lowest as expected.

### Statewide

- Projected annual growth in maintenance budget at 5.7%. This was an optimistic projection.
- Overall, we can only predict spending an average of 34% of our maintenance budget on pavement work.
- Even with an aggressive approach of targeting pavement work with our Cat 1 and Maintenance budget, we still hover at 60% of total combined construction and maintenance dollars directed towards pavements.

### **Pavement Condition Projections**

- Center for Transportation Research (CTR) developed a document that summarizes all the assumptions and is included in the report.
- CTR developed a model that predicts deterioration of pavements based on several factors such as climatic region, historical deterioration and highway type.
- The 4 year plan indicated that the following number of lanes miles would be treated with PM or Rehab:
  - ➢ FY 2009 15,913 lane miles = 8.6% of system
  - ➢ FY 2010 14,987 lane miles = 8.1% of system
  - ➢ FY 2011 16,204 lane miles = 8.8% of system
  - ➢ FY 2012 18,655 lane miles = 10.1% of system
- The 4 year projections indicated that the Percent of Good or Better Pavement Conditions would be as follows:
  - ► FY 2009 84.78%
  - ► FY 2010 83.47%
  - ► FY 2011 82.01%
  - ► FY 2012 80.37%

## 2010-2013 Pavement Management Plan

#### Goals

- Develop a comprehensive and uniform pavement management plan that is roadway specific to the greatest extent possible, and is fiscally constrained
- Generate Pavement Condition Projections based on a financially constrained plan that can be reported in compliance with Rider 55 of the 2010-11 Appropriations.
- Assure maintenance resources are directed towards pavement operations and roadway related work.
- Provide a reporting mechanism for District Engineers, Administration and Commission to utilize in briefing elected officials.
- Allow districts and regions to appropriately allocate resources through long term planning in order to accomplish the plan.

## Plan

Each district developed their 4 year expenditure projections based on anticipated budgets. There are certain expenses that are fixed and are part of doing business such as overhead and operational expenses. The roadside expenditures continue to be evaluated in order to find the balance with expectations. Traffic operational expenses are also pretty well established in order to maintain existing systems (ITS, signals, illumination, etc.). The pavement expenditures include both in house and routine maintenance contracts. These pavement expenditures do not include construction expenditures in which approximately \$ 932 M was expected to be available in 2010 for rehabilitation and preventive maintenance projects from Fund 6, ARRA and Proposition 14.

FY	Budget	OH Oper	& rs.	Struct.		Roadside		Traffic Opers.		Pvmt.	
	\$	\$	%	\$	%	\$	%	\$	%	\$	%
2010	858 M	124 M	14	23 M	2.7	184 M	21	202 M	24	325 M	38. 3
2011	883 M	128 M	14	21 M	2.4	187 M	21	208 M	24	339 M	38. 6
2012	885 M	130 M	15	21 M	2.4	189 M	21	209 M	24	336 M	37. 6
2013	886 M	132 M	15	21 M	2.4	191 M	22	212 M	24	330 M	36. 6
Avg.			14. 5		2.5		21. 3		24		37. 7

## **Statewide Expenditure Projections**

## <u>Statewide</u>

- Projected annual growth in maintenance budget at 0 %.
- Overall, we can only project spending an average of 36 % of our maintenance budget on pavement work.
- Even with an aggressive approach of targeting pavement work with our Cat 1 and Maintenance budget, we still hover at 65 % of total combined construction and maintenance dollars directed towards pavements.

## **Pavement Condition Projections**

- CTR developed a document that summarizes all their assumptions and is included in the report.
- CTR developed a model that predicts deterioration of pavements based on several factors such as climatic region, historical deterioration and highway type.

- The 4 year plan indicated that the following number of lanes miles would be treated with PM or Rehab:
  - ▶ FY 2010 15,661 lane miles = 8.4 % of system
  - ➢ FY 2011 15,405 lane miles = 8.2 % of system
  - ▶ FY 2012 14,053 lane miles = 7.5 % of system
  - ▶ FY 2013 12,898 lane miles = 6.9 % of system
- The 4 year projections indicated that the Percent of Good or Better Pavement Conditions would be as follows:
  - ▶ FY 2009 (Actual) 85.94%
  - ► FY 2010 84.94 %
  - ≻ FY 2011 83.77 %
  - ► FY 2012 81.89 %
  - ▶ FY 2013 79.05 %

## Section 2. Analysis Assumptions

Key assumptions used in the analysis and prediction of the pavement conditions under the 4-year pavement management plans provided by TxDOT are discussed as follows.

### **Pavement Network**

The pavement network with which the analysis was conducted consists of the existing pavements under TxDOT's jurisdiction and is stored in the existing PMIS database. The most current version of the PMIS database was used in the analysis, based on the 2009 PMIS data collection.

### **Base Year Network Condition**

The base year of the analysis was 2009. The condition of the entire state's pavement network was initially determined based on the individual scores of the pavement sections in the PMIS database. The Condition Score of these sections was used as the performance measurement index to calculate the "Good" or Better Pavement Scores.

#### **Deterioration Models**

Before planning for the Maintenance and Rehabilitation (M&R) actions for the road network, the deterioration process of the pavements was studied in order to understand when their condition would reach a critical level that would trigger intervention. In this study, a statistical analysis was carried out to analyze the deterioration rate distribution for the different pavement structure types and highway functional classifications. As a result, nine broad groups of deterioration models were defined as presented in Table 1.

		Pavement Type					
Highway Functional C	Class	Flowible	Rigid				
		Flexible	CRCP	JCP			
Interstate Highways	IH	Group 1	Group	Crown 7			
US Highways	US	Group I	Oloup 4	Gloup /			
State Highways	SH	Group 2	Group 5	Group 8			
Farm-to-Market	FM	Group 3	Group 6	Group 9			

Table 1. Summary of Nine Groups of Deterioration Models

These nine groups were found to have distinctive deterioration rates; and therefore a different set of models were developed for each group.

It is also known that the daily temperature range and the precipitation play an important role in the pavement deterioration process. As a result, instead of developing pavement condition models for every district in Texas, these models were developed instead for the four climatic regions of Texas, as shown in Figure 1. For each climatic region, separate pavement condition models pertaining to the Distress Score and the Ride score were developed.



Figure 3. Climatic Regions in the State of Texas

#### **Next Year Network Condition**

The condition of the network for each subsequent year was based on the condition of the previous year with the addition of the effect of the natural deterioration and the M&R work planned for the previous year. Once these new values in terms of the Ride Score and their Distress Score were determined then they were combined together to calculate the new Condition Score of each section. The new Condition Scores of each sections were then averaged together weighted by their respective lane-miles to get the new state-wide Condition Score.

#### **Maintenance and Rehabilitation Costs**

Finally, the implementation of each treatment action corresponded to a specific cost for the agency, based on the unit cost of the action by lane-mile treated and the lane-miles of the treated section(s). The unit costs of each action were set to the values shown in Table 2, and were different for flexible and for rigid pavements. These values are consistent with the 2030 analysis. The treatment costs used in the 2030 Pavement Needs Estimate and the analysis undertaken in this study are based on Project delivery costs that include estimated costs for mobilization, traffic control, materials, labor, and ancillary items necessary to actually complete the pavement project. These costs generally differ from PMIS treatment costs, which primarily include the cost

for pavement materials (i.e., Hot mix, Portland Cement Concrete, etc.). In addition, the treatment costs used in this analysis are based on constant FY 2008 dollars.

M&R Action	Unit Cost (per mile per lane) for Flexible Pavements	Unit Cost (per mile per lane) for Rigid Pavements
Needs Nothing	\$0	\$0
Preventive Maintenance	\$7,000	\$10,000
Light Rehabilitation	\$40,000	\$60,000
Medium Rehabilitation	\$55,000	\$125,000
Heavy Rehabilitation	\$170,000	\$400,000

#### Table 2. Maintenance and Rehabilitation Action Unit Costs

#### Maintenance and Rehabilitation Improvements

Each M&R action was assumed to have a specific effect on the section it was applied to, in terms of the section's Ride Score and Distress Score. The correspondence between the various M&R actions and their respective effect on the pavement sections are shown in Table 3.

Table 5: Maintenance and Renabilitation Retion Improvements						
M&R Action	Ride Score Improvement	Distress Score Improvement				
Needs Nothing	0	0				
Preventive Maintenance	0.5	95				
Light Rehabilitation	1.5	100				
Medium Rehabilitation	Reset to 4.8	Reset to 100				
Heavy Rehabilitation	Reset to 4.8	Reset to 100				

#### Table 3. Maintenance and Rehabilitation Action Improvements

## Section 3. State-Wide Summary

### I. Summary of FY 2009–FY 2012 Treatments

Total State Center line miles = 80,000 Total State Lane miles = 187,179

FY 2009 Plan total treatments = 16,010.2 lane miles = 8.6% of system lane miles FY 2010 Plan total treatments = 15,732.7 lane miles = 8.4% of system lane miles FY 2011 Plan total treatments = 14,743.1 lane miles = 7.9% of system lane miles FY 2012 Plan total treatments = 16,141.6 lane miles = 8.6% of system lane miles



Figure 4. State-wide Treatment Plans for FY 2009-2012

The effect of PM, LRhb, and MRhb treatments will not take place in the fiscal year they were planned due to a 1-year delay in Condition Score improvement, whereas HRhb treatments will not improve pavement Condition Scores in the fiscal year they were planned due to a 2-year delay.

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 1,201.8, 836.9, 1228.3 and 773.9 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 942.3, 805.2, 606.6 and 336.7 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 1,735.2, 1,443.8, 1,595.7 and 692.2 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 12,130.9, 12,646.8, 11,312.5 and 14,338.8 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 14,808.40 lane miles or approximately 7.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 16,097.60 lane miles or approximately 8.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 14,351.70 lane miles or approximately 7.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 16,596.00 lane miles or approximately 8.9% of the total system.

# II. Summary of FY 2009–FY 2013 Percentage of "Good" or Better Pavements and Condition Score for Entire State

			Base Ye	ear 2009	Analysis Years			
			Measured	Predicted	2010	2011	2012	2013
Overall State		Achieved Goal (%)	85.94	84.78	84.96	83.89	82.05	79.77
C	Verall State	Achieved Average CS	90	88	88	86	83	81
	A b flom o	Achieved Goal (%)	89.31	89.98	88.88	87.05	85.44	82.81
	Abiiene	Achieved Average CS	92	91	90	87	85	82
	A	Achieved Goal (%)	87.41	86.09	88.06	88.79	87.48	85.23
	Amariiio	Achieved Average CS	90	88	89	88	86	84
	Adlanta	Achieved Goal (%)	94.25	92.48	92.55	91.23	90.21	86.56
	Atlânta	Achieved Average CS	95	92	93	90	88	85
	Austin	Achieved Goal (%)	83.95	80.71	81.69	78.6	75.38	71.23
	Ausun	Achieved Average CS	88	85	86	83	80	77
	Decement	Achieved Goal (%)	86.98	85.07	86.79	86.38	85.69	84.57
	Beaumont	Achieved Average CS	90	88	89	87	85	83
	Brownwood	Achieved Goal (%)	91.17	92.71	92.39	93.6	93.33	92.47
as		Achieved Average CS	93	93	92	91	89	87
Tex	Bryan	Achieved Goal (%)	87.57	83.87	85.27	83.5	81.81	77.52
te of		Achieved Average CS	90	86	88	86	83	81
Stat	Childroos	Achieved Goal (%)	91.48	92.00	90.87	91.25	90.15	88.01
ts in	Cilluress	Achieved Average CS	94	93	92	90	88	85
stric'	Carra Christi	Achieved Goal (%)	83.58	80.65	83.31	82.72	82.83	80.38
Dis	Corpus Christi	Achieved Average CS	88	85	87	85	84	82
	Dellas	Achieved Goal (%)	75.27	67.37	70.1	66.82	62.05	58.19
	Dahas	Achieved Average CS	81	76	78	75	71	68
	El Deso	Achieved Goal (%)	87.35	85.15	86.15	84.13	81.76	80.39
	EI F asu	Achieved Average CS	90	87	88	86	83	81
	Fort Worth	Achieved Goal (%)	81.44	79.05	80.1	77.5	74.07	78.42
	FULL WOLLI	Achieved Average CS	87	84	84	82	79	80
	Houston	Achieved Goal (%)	75.80	75.92	71.93	67.74	62.46	57.41
	nouston	Achieved Average CS	84	82	80	77	72	69
	Lanada	Achieved Goal (%)	85.37	82.87	83.30	81.36	78.01	73.27
	Lareuo	Achieved Average CS	89	86	86	84	81	78
	Lubbock	Achieved Goal (%)	86.40	89.10	85.99	86.38	86.94	84.48

## Table 4. Pavement Performance Summary for the Entire State and 25 Districts

		Base Year 2009			Analysis Years			
		Measured	Predicted	2010	2011	2012	2013	
	Achieved Average CS	91	91	89	87	86	84	
T (1-1	Achieved Goal (%)	87.87	85.75	85.26	84.33	82.8	81.74	
Lutkin	Achieved Average CS	91	88	89	87	84	2013           84           81.74           82           90.38           86           71.1           78           83.26           83           89.31           86           79.34           81           76.8           80           76.15           80           88.81           86           76.5           80	
	Achieved Goal (%)	93.33	93.19	92.75	93.69	92.57	90.38	
Odessa	Achieved Average CS	95	92	93	91	89	86	
Dania	Achieved Goal (%)	74.92	68.90	72.74	71.94	72.87	71.1	
raris	Achieved Average CS	83	79	82	80	80	78	
Dhawn	Achieved Goal (%)	80.38	80.84	80.22	85.01	84.99	s       2013         84       84         8       81.74         82       90.38         86       7         7       90.38         86       7         7       71.1         78       9         9       83.26         83       1         89       83.26         83       6         5       79.34         81       6         6       76.8         80       2       88.81         86       3       76.5         80       3       76.5         80       3       76.5         80       3       76.5	
rnarr	Achieved Average CS	88	86	86	86	85		
San Angolo	Achieved Goal (%)	94.58	94.63	94.91	94.43	92.21	86           71.1           78           83.26           83           89.31           86           79.34           81           76.8           80	
San Angelo	Achieved Average CS	95	94	94	91	88		
San Antonia	Achieved Goal (%)	83.03	85.64	81.43	80.2	77.85	79.34	
San Antonio	Achieved Average CS	88	88	85	83	80	2013         84         81.74         82         90.38         86         71.1         78         83.26         83         89.31         86         79.34         81         76.8         80         76.15         80         88.81         86         76.5         80	
Tulor	Achieved Goal (%)	92.28	83.44	89.83	86.29	81.96	76.8	
1 yier	Achieved Average CS	92	86	90	87	84	80	
Wasa	Achieved Goal (%)	86.72	88.53	83.33	81.4	80.05	ars         D12       2013         36       84         2.8       81.74         34       82         2.57       90.38         39       86         2.87       71.1         30       78         4.99       83.26         35       83         2.21       89.31         38       86         7.85       79.34         30       81        96       76.8         84       80         0.05       76.15         83       80         3.12       88.81         36       86         .023       76.5         83       80	
w aco	Achieved Average CS	89	89	87	85	83	80	
Wighita Falls	Achieved Goal (%)	92.98	92.46	91.97	89.98	88.12	2       2013         84       84         8       81.74         82       7         7       90.38         86       7         7       71.1         78       9         83.26       83         1       89.31         86       5         5       79.34         81       6         6       76.8         80       2         2       88.81         86       3         3       76.5         80       3	
wichita rans	Achieved Average CS	93	92	91	89	86	86	
Vooluum	Achieved Goal (%)	86.08	83.12	84.08	82.93	80.23	76.5	
<b>т оак</b> ит	Achieved Average CS	90	87	87	85	83	80	



III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements for Entire State

Figure 5. State-Wide Overall Pavement Performance of FY 2002-FY 2013

## **Section 4. District Summaries**

## **Abilene District**

## I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles = 3,744 Total Lane miles = 8,265

FY 2009 Plan total treatments = **573.6 lane miles** = 6.9% of system lane miles FY 2010 Plan total treatments = **533.0 lane miles** = 6.4% of system lane miles FY 2011 Plan total treatments = **517.7 lane miles** = 6.3% of system lane miles FY 2012 Plan total treatments = **457.4 lane miles** = 5.5% of system lane miles



Figure 6. Abilene District Treatment Plans for FY 2009-2012

The effect of PM, LRhb, and MRhb treatments will not take place in the fiscal year they were planned due to a 1-year delay in Condition Score improvement, whereas HRhb treatments will not improve pavement Condition Scores in the fiscal year they were planned due to a 2-year delay.

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. There were no HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 13.0, 0.0, 45.8 and 49.4 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 78.4, 10.6, 86.2, and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 482.2, 522.4, 385.7 and 408.0 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 573.6 lane miles or approximately 6.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 533.0 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 533.0 lane miles or approximately 6.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 517.7 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 517.7 lane miles or approximately 6.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 457.4 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2011 = 457.4 lane miles or approximately 5.5% of the total system.

		Base Year		Analysi	s Years		
				2010	2011	2012	2013
4 h	ilana Diatuiat	Achieved Goal (%)	89.31	88.88	87.05	85.44	82.81
Abilene District Achieved Average CS		92	90	87	85	82	
	Borden	Achieved Goal (%)	96.33	94.24	89.93	90.51	86.32
	Boruen	Achieved Average CS	96	93	90	S Years         2012       1         85.44       8         85       9         90.51       8         87       7         79.89       7         83       9         96.49       9         91       8         87.29       8         86       8         83.71       8         84       8         84       8         84       8         87       9         92.22       9	84
	Callahar	Achieved Goal (%)	85.3	86.66	83.32	79.89	77.86
	Callanan	Achieved Average CS	89	89	86	83	81
rict	<b>F</b> ish an	Achieved Goal (%)	96.09	97.61	97.22	96.49	93.63
Dist	Fisher	Achieved Average CS	97	95	93	91	88
ene	II l ll	Achieved Goal (%)	90.72	92.81	90.33	87.29	2013         82.81         82         86.32         84         77.86         81         93.63         88         85.08         81         82         80.02         81         85.9         83         90.35
Abil	Haskell	Achieved Average CS	93	92	89	S Years         2012         85.44         85         90.51         87         79.89         83         96.49         91         87.29         86         83.71         84         82.45         84         89.53         87         92.22	83
s in	II	Achieved Goal (%)	88.23	87.98	86.18	83.71	81.92
ntie	Howard	Achieved Average CS	91	89	87	Sears         2012         85.44         85         90.51         87         79.89         83         96.49         91         87.29         86         83.71         84         82.45         84         89.53         87         92.22	82
Cou	Inner	Achieved Goal (%)	88.09	88.57	85.98	82.45	80.02
	Jones	Achieved Average CS	92	90	87	84	81
	17 4	Achieved Goal (%)	95.32	94.15	92.92	89.53	85.9
	Kent	Achieved Average CS	96	93	90	87	83
	Mitchell	Achieved Goal (%)	88.54	84.62	85.57	92.22	90.35

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

Table 5. Pavement Performance Summary for Abilene District and Counties

l		Base Year		Analysis Years				
_		2009	2010	2011	2012	2013		
	Achieved Average CS	92	89	87	89	87		
Nolon	Achieved Goal (%)	90.18	89.16	86.77	81.76	78.55		
Inotati	Achieved Average CS	92	89	86	83	2013 87 78.55 80 85.12 85 84.14 82 96.27 88 72.98 77		
C	Achieved Goal (%)	91.78	91.16	90.98	88.95	2013           87           78.55           80           85.12           85           84.14           82           96.27           88           72.98           77		
Scurry	Achieved Average CS	94	91	90	87			
Shaabalfand	Achieved Goal (%)	85.62	87.45	86.77	84.2	84.14		
Snackellord	Achieved Average CS	89	88	86	84	82		
Stonowall	Achieved Goal (%)	94.06	95.53	98.71	97.49	96.27		
Stonewan	Achieved Average CS	96	95	94	91	S         2013           87         87           6         78.55           80         85           85         85           2         84.14           82         9           9         96.27           88         77		
Taylor	Achieved Goal (%)	83.96	81.02	76.97	76.79	72.98		
1 aylor	Achieved Average CS	89	85	82	81	77		

Based on the analysis results presented in Table 5, at the end of the 4-year planning horizon the county in best condition was Stonewall (96.27%) while the worst was Taylor (72.98%).

## III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 7. Abilene District Overall Pavement Performance of FY 2002-FY 2013

For FY 2002 to FY 2009 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2009 until FY 2013 are projected values from the analysis conducted by CTR.

## **Amarillo District**

## I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles = 4,092 Total Lane miles = 9,274

FY 2009 Plan total treatments = **704.0 lane miles** = 7.6% of system lane miles FY 2010 Plan total treatments = **885.9 lane miles** = 9.6% of system lane miles FY 2011 Plan total treatments = **944.9 lane miles** = 10.2% of system lane miles FY 2012 Plan total treatments = **755.6 lane miles** = 8.1% of system lane miles



Figure 8. Amarillo District Treatment Plans for FY 2009-2010

The effect of PM, LRhb, and MRhb treatments will not take place in the fiscal year they were planned due to a 1-year delay in Condition Score improvement, whereas HRhb treatments will not improve pavement Condition Scores in the fiscal year they were planned due to a 2-year delay.

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 36.4, 37.8 and 21.4 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 54.0, 0.0, 0.0 and 0.0 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 100.2 0.0, 49.5 and 0.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 549.8, 849.5, 857.6 and 734.2 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 704.0 lane miles or approximately 7.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 849.5 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 849.5 lane miles or approximately 9.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 907.1 lane miles + 36.4 lane miles of Heavy Rehab treatments from FY 2010 = 943.5 lane miles or approximately 10.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 734.2 lane miles + 37.8 lane miles of Heavy Rehab treatments from FY 2011 = 772.0 lane miles or approximately 8.3% of the total system.

		ement i ei ioi mance	ior Amarino District and Counties				
					Analys	sis Years	
				2010	2011	2012	2013
A	Achieved Goal (%)		87.41	88.06	88.79	87.48	85.23
AII	arillo District	Achieved Average CS	90	89	88	86	84
	Aumstuong	Achieved Goal (%)	79.3	90.93	92.01	96.28	2013           85.23           84           94.7           87           87.54           86           86.12           83           86.35           84           76.49           79           94.77           88           89.15
	Armstrong	Achieved Average CS	87	92	90	90	87
	Carcan	Achieved Goal (%)	83.28	80.29	84.24	87.54	87.54
trict	Carson	Achieved Average CS	87	85	86	87	2013 85.23 84 94.7 87 87.54 86 86.12 83 86.35 84 76.49 79 94.77 88 89.15
Dist	Dallam	Achieved Goal (%)	88.69	88.14	89.9	88.11	86.12
rillo	Dallam	Achieved Average CS	91	89	88	85	83
Ama		Achieved Goal (%)	90.51	90.08	89.69	87.87	86.35
iin ∕	Deal Smith	Achieved Average CS	92	90	88	S Years           2012           87.48           86           96.28           90           87.54           87           88.11           85           87.87           86           90.51           82           96.25           90           92.06	84
nties	Crear	Achieved Goal (%)	88.45	85.85	83.55	80.51	76.49
Coui	Gray	Achieved Average CS	90	88	85	s Years         2012         20           87.48         85         86         8           96.28         94         90         8           97.54         87         87         88           87.54         87         86         8           87.54         87         86         8           87.54         87         86         8           87.54         87         86         8           87.87         86         8         8           80.51         76         82         7           96.25         94         90         8           92.06         89         89         89	79
•	Hanafand	Achieved Goal (%)	96.55	96.36	97.23	96.25	2013         85.23         84         94.7         87         87.54         86         86.12         83         86.35         84         76.49         79         94.77         88         89.15
	mansiord	Achieved Average CS	96	95	93	90	88
	Hartley	Achieved Goal (%)	85.01	94.98	95.2	92.06	89.15

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

Table 6. Pavement Performance Summary for Amarillo District and Counties

		Base Year	Analysis Years			
_		2009	2010	2011	2012	2013
	Achieved Average CS	88	93	91	88	86
Homekill	Achieved Goal (%)	86.31	87.15	89.19	86.78	82.69
Hemphill	Achieved Average CS	88	88	87	85	83
Hatakingan	Achieved Goal (%)	87.83	84.3	84.47	78.94	78.38
Hutchinson	Achieved Average CS	88	85	85	82	80
T in a same	Achieved Goal (%)	81.73	86.17	89.97	91.08	87.52
Lipscomb	Achieved Average CS	86	87	88	88	86
Maana	Achieved Goal (%)	90.39	94.53	94.66	91.77	88.75
Moore	Achieved Average CS	93	93	92	89	86
O shilters s	Achieved Goal (%)	75.17	80.34	85.14	84.02	81.51
Ochiltree	Achieved Average CS	82	84	85	82	79
Oldham	Achieved Goal (%)	95.51	93.19	92.64	91.1	87.96
Olulialli	Achieved Average CS	94	92	90	89	86
Dotton	Achieved Goal (%)	84.1	83.27	81.74	78.87	76.13
rotter	Achieved Average CS	88	87	85	82	78
Dandall	Achieved Goal (%)	92.42	90.53	88.73	85.77	2013           86           82.69           83           78.38           80           87.52           86           88.75           86           81.51           79           87.96           86           76.13           78           81.94           82           94.32           89           94.28           88
Kanuan	Achieved Average CS	93	90	88	85	82
Dohanta	Achieved Goal (%)	88.47	87.97	93.65	95.07	94.32
Koberts	Achieved Average CS	93	91	91	90	89
Sharmar	Achieved Goal (%)	87.45	87.68	89.63	92.38	94.28
Sherman	Achieved Average CS	91	89	89	88	88

Based on the analysis results presented in Table 6, at the end of the 4-year planning horizon the county in best condition was Hansford (94.77%) while the worst was Potter (76.13%).



III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements

Figure 9. Amarillo District Overall Pavement Performance of FY 2002-FY 2013

For FY 2002 to FY 2009 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2009 until FY 2013 are projected values from the analysis conducted by CTR.

## **Atlanta District**

## I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,691
Total Lane miles	= 6,217

FY 2009 Plan total treatments = **412.6 lane miles** = 6.6% of system lane miles FY 2010 Plan total treatments = **541.7 lane miles** = 8.7% of system lane miles FY 2011 Plan total treatments = **659.4 lane miles** = 10.6% of system lane miles FY 2012 Plan total treatments = **503.7 lane miles** = 8.1% of system lane miles



Figure 10. Atlanta District Treatment Plans for FY 2009-2012

The effect of PM, LRhb, and MRhb treatments will not take place in the fiscal year they were planned due to a 1-year delay in Condition Score improvement, whereas HRhb treatments will not improve pavement Condition Scores in the fiscal year they were planned due to a 2-year delay.

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. There were no HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 46.4, 101.4, 24.0 and 28.8 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 81.6, 70.4, 288.8 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 284.6, 369.9, 346.6 and 474.9 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 412.6 lane miles or approximately 6.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 541.7 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 541.7 lane miles or approximately 8.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 659.4 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 659.4 lane miles or approximately 10.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 503.7 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2011 = 503.7 lane miles or approximately 8.1% of the total system.

		Base Year		Analysis Years				
			2009	2010	2011	2011	2012	
Achieved Goal (%)		94.25	92.55	91.23	90.21	86.56		
At	ianta District	Achieved Average CS	95	93	90	88	85	
	Bowie	Achieved Goal (%)	92.71	89.9	87.43	87.05	83.6	
	Dowle	Achieved Average CS	93	91	88	86	83	
	Comm	Achieved Goal (%)	94.85	90.59	88.58	88.42	88.5	
	Camp	Achieved Average CS	94	91	91	89	2012         86.56         85         83.6         83         88.5         87         88.55         86         90.7         86         91.26         88         87.86         86         81.55	
rict	Cass	Achieved Goal (%)	97.01	95.43	93.33	91.84	88.5           87           88.55           86           84.4           84	
Dist	Cass	Achieved Average CS	96	95	92	89	86	
nta	Hourison	Achieved Goal (%)	94.42	94.41	93.08	89.6	84.4	
Atla	narrison	Achieved Average CS	94	93	90	2011         90.21         88         87.05         86         88.42         89         91.84         89         93.95         90         94.8         90         91.59         90         86.08	84	
s in		Achieved Goal (%)	96.88	95.1	93.89	93.95	90.7	
intie	Marion	Achieved Average CS	96	94	91	90	86	
Cou	Maarda	Achieved Goal (%)	97.83	96.23	96.8	Years           2011         2012           90.21         86.5           88         85           87.05         83.6           86         83           88.42         88.5           89         87           91.84         88.5           89         86           89.6         84.4           93.95         90.7           90         86           94.8         91.20           90         88           91.59         87.8           90         86           86.08         83.3	91.26	
	WIOFFIS	Achieved Average CS	98	96	94	90	88	
	Danala	Achieved Goal (%)	95.61	94	93.86	91.59	87.86	
	ranola	Achieved Average CS	96	94	92	90	86	
	Titus	Achieved Goal (%)	87.15	85.2	84.78	86.08	83.32	

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

Table 7. Pavement Performance Summary for Atlanta District and Counties

		Base Year		Analysis Years			
		2009	2010	2011	2011	2012	
		Achieved Average CS	91	89	87	86	84
	Unshaa	Achieved Goal (%)	93.65	91.86	90.79	92.34	88.3
	Opsnur	Achieved Average CS	95	93	90	Years       2011     20       86     8       92.34     8       89     8	85

Based on the analysis results presented in Table 7, at the end of the 4-year planning horizon the county in best condition was Morris (91.26%) while the worst was Titus (83.32%).

## III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements



Figure 11. Atlanta District Overall Pavement Performance of FY 2002-FY 2013

For FY 2002 to FY 2009 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2009 until FY 2013 are projected values from the analysis conducted by CTR.
### **Austin District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles = 3,345 Total Lane miles = 8,766

FY 2009 Plan total treatments = **431.1 lane miles** = 4.9% of system lane miles FY 2010 Plan total treatments = **458.5 lane miles** = 5.2% of system lane miles FY 2011 Plan total treatments = **438.0 lane miles** = 5.0% of system lane miles FY 2012 Plan total treatments = **183.8 lane miles** = 2.1% of system lane miles



Figure 12. Austin District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 17.0, 4.0, 54.4 and 14.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 64.0, 35.1, 17.6 and 15.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 47.8, 133.6, 21.6 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 302.3, 285.8, 344.4 and 154.8 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 414.1 lane miles or approximately 4.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 454.5 lane miles + 17.0 lane miles of Heavy Rehab treatments from FY 2009 = 471.5 lane miles or approximately 5.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 383.6 lane miles + 4.0 lane miles of Heavy Rehab treatments from FY 2010 = 387.6 lane miles or approximately 4.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 169.8 lane miles + 54.4 lane miles of Heavy Rehab treatments from FY 2011 = 224.2 lane miles or approximately 2.6% of the total system.

			Base Year	Analysis Years				
		_	2009	2010	2011	2012	2013	
Achieved Goal (%)		83.95	81.69	78.6	75.38	71.23		
A	istin District	Achieved Average CS	88	86	83	80	77	
	Destuon	Achieved Goal (%)	82.4	80.38	78.57	77.69	76.49	
	Базитор	Achieved Average CS	87	85	83	82	79	
	Dlanao	Achieved Goal (%)	90.35	84.4	80.49	76.53	69.01	
t	Blanco	Achieved Average CS	91	88	85	81	77	
stric	Burnet	Achieved Goal (%)	88.71	88.21	86.67	82.15	77.22	
n Di		Achieved Average CS	90	88	87	84	80	
usti	Caldwall	Achieved Goal (%)	73.08	75.12	73	70.81	64.98	
in A	Caldwell	Achieved Average CS	83	82	79	76	73	
ties	Cilleanie	Achieved Goal (%)	89.9	85.93	79.62	76.56	70.47	
oun	Gillespie	Achieved Average CS	91	88	85	82	77	
0	Пана	Achieved Goal (%)	84.38	82.55	78.9	75.95	73.57	
	Hays	Achieved Average CS	89	86	83	80	78	
	Ŧ	Achieved Goal (%)	78.82	78.9	80.89	79.33	74.39	
	Lee	Achieved Average CS	86	85	84	83	79	

 Table 8. Pavement Performance Summary for Austin District and Counties

			Base Year	Analysis Years				
			2009	2010	2011	2012	2013	
	Llana	Achieved Goal (%)	87.87	85.28	81.07	77.05	70.56	
	Liano	Achieved Average CS	89	86	83	80	76	
	Mason	Achieved Goal (%)	90.39	89.23	84.71	82.56	78.75	
		Achieved Average CS	92	91	88	85	82	
	Turnia	Achieved Goal (%)	85.72	83.67	81.21	77.42	72.63	
	I ravis	Achieved Average CS	89	87	85	82	78	
	Williamaan	Achieved Goal (%)	77.92	73.7	69.06	65.16	63.22	
	Williamson	Achieved Average CS	84	80	77	74	73	

Based on the analysis results presented in Table 8, at the end of the 4-year planning horizon the county in best condition was Mason (78.75%) while the worst was Williamson (63.22%).



III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 13. Austin District Overall Pavement Performance of FY 2002-FY 2013

## **Beaumont District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,374
Total Lane miles	= 5,370

FY 2009 Plan total treatments = **694.6 lane miles** = 12.9% of system lane miles FY 2010 Plan total treatments = **691.6 lane miles** = 12.9% of system lane miles FY 2011 Plan total treatments = **618.1 lane miles** = 11.5% of system lane miles FY 2012 Plan total treatments = **646.1 lane miles** = 12.0% of system lane miles



Figure 14. Beaumont District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 29.2, 38.0, 13.4 and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 10.2, 12.8, 0.0 and 15.7 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 6.4, 136.6, 37.0 and 12.6 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 648.8, 504.2, 567.7 and 615.8 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 665.4 lane miles or approximately 12.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 653.6 lane miles + 29.2 lane miles of Heavy Rehab treatments from FY 2009 = 682.6 lane miles or approximately 12.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 604.7 lane miles + 38.0 lane miles of Heavy Rehab treatments from FY 2010 = 642.7 lane miles or approximately 12.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 644.1 lane miles + 13.4 lane miles of Heavy Rehab treatments from FY 2011 = 657.5 lane miles or approximately 12.2% of the total system.

			Base Year	Analysis Years				
			2009	2010	2011	2012	2013	
Dee	<b>D'</b>	Achieved Goal (%)	86.98	86.79	86.38	85.69	84.57	
веа	umont District	Achieved Average CS	90	89	87	85	83	
	Chamberry	Achieved Goal (%)	90.87	91.23	89.67	87.85	86.48	
	Chambers	Achieved Average CS	92	91	89	87	84	
t	II	Achieved Goal (%)	93.79	93.27	93.64	91.01	89.25	
tric	Hardin	Achieved Average CS	95	93	92	89	86	
t Dis	Jasper	Achieved Goal (%)	91.99	93.94	93.2	90.92	87.05	
non		Achieved Average CS	93	93	91	88	84	
eaui	T . CC	Achieved Goal (%)	73.74	71.69	70.34	74.51	75.25	
in B	Jefferson	Achieved Average CS	81	79	77	77	78	
ties	T 91 /	Achieved Goal (%)	90.61	87.55	89.44	89.69	87.89	
oun	Liberty	Achieved Average CS	92	90	89	88	85	
С	Name	Achieved Goal (%)	97.2	96.82	96.63	93.18	93.22	
	Newton	Achieved Average CS	97	95	93	90	89	
	Orange	Achieved Goal (%)	76.51	78.76	80.34	79.48	80.42	

Table 9. Pavement Performance Summary for Beaumont District and Counties

1		Base Year	Analysis Years				
	_		2009	2010	2011	2012	2013
		Achieved Average CS	84	83	83	81	82
	Tyler	Achieved Goal (%)	91.43	93.25	90.41	87.09	84.4
		Achieved Average CS	93	92	89	86	83

Based on the analysis results presented in Table 9, at the end of the 4-year planning horizon the county in best condition was Newton (93.22%) while the worst was Jefferson (75.25%).

III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 15. Beaumont District Overall Pavement Performance of FY 2002-FY 2013

### **Brownwood District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,678
Total Lane miles	= 5,741

FY 2009 Plan total treatments = **962.8 lane miles** = 16.8% of system lane miles FY 2010 Plan total treatments = **958.2 lane miles** = 16.7% of system lane miles FY 2011 Plan total treatments = **777.3 lane miles** = 13.5% of system lane miles FY 2012 Plan total treatments = **657.8 lane miles** = 11.5% of system lane miles



Figure 16. Brownwood District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 42.2, 0.0, 42.6 and 7.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 14.8, 0.0, 0.0 and 0.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0 20.0, 0.0 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 905.6 and 938.2, 734.7 and 650.8 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 920.4 lane miles or approximately 16.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 958.2 lane miles + 42.4 lane miles of Heavy Rehab treatments from FY 2009 = 1000.6 lane miles or approximately 17.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 734.7 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 734.7 lane miles or approximately 12.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 650.8 lane miles + 42.6 lane miles of Heavy Rehab treatments from FY 2011 = 693.4 lane miles or approximately 12.1% of the total system.

Table 10: 1 avenient 1 er for manee Summary for Brownwood District and Countie							Counties	
			Base Year	Analysis Years				
		_	2008	2010	2011	2012	2013	
Brownwood Achieved Goal (%)		91.17	92.39	93.6	93.33	92.47		
	District	Achieved Average CS	93	92	91	89	87	
	D	Achieved Goal (%)	94.38	92.97	92.6	90.87	88.09	
	Brown	Achieved Average CS	95	93	91	88	86	
ct	Calaman	Achieved Goal (%)	92.24	94.28	94.57	94.17	93.11	
istri	Coleman	Achieved Average CS	93	93	91	89	86	
d D	Comanche	Achieved Goal (%)	91.28	92.06	96	95.06	93.25	
IWOO		Achieved Average CS	94	92	92	89	87	
UMO.	Factland	Achieved Goal (%)	91.84	92.88	93.51	91.38	91.21	
n Br	Lasuanu	Achieved Average CS	93	92	90	88	87	
ies i	Tammaaaa	Achieved Goal (%)	95.04	93.92	93.59	92.8	90.53	
ount	Lampasas	Achieved Average CS	95	93	91	89	87	
C	MaCullach	Achieved Goal (%)	93.96	94.15	93.73	96.42	96.85	
	McCulloch	Achieved Average CS	94	93	91	91	89	
	Mills	Achieved Goal (%)	95.75	94.8	97.7	97.24	98.1	

Table 10	Pavement	Performance	Summary	for Brownwood	District and	Counties
$\mathbf{I}$ a $\mathbf{U}$ $\mathbf{U}$ $\mathbf{U}$	<b></b>	I UIIVI MANU	Summary		i District anu	Country

			Base Year		Analysis Years		
_	_	_	2008	2010	2011	2012	2013
		Achieved Average CS	95	94	94	92	90
	San Saba	Achieved Goal (%)	86.51	87.02	87.67	89.65	92.33
		Achieved Average CS	89	89	88	88	88
	Store borne	Achieved Goal (%)	77.71	87.64	91.96	93.54	91.32
	Stephens	Achieved Average CS	85	90	90	89	86

Based on the analysis results presented in Table 10, at the end of the 4-year planning horizon the county in best condition was Mills (98.10%) while the worst was Brown (88.09%).



III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements

Figure 17. Brownwood District Overall Pavement Performance of FY 2002-FY 2013

## **Bryan District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,127
Total Lane miles	= 6,833

FY 2009 Plan total treatments = **816.3 lane miles** = 11.9% of system lane miles FY 2010 Plan total treatments = **627.0 lane miles** = 9.2% of system lane miles FY 2011 Plan total treatments = **580.8 lane miles** = 8.5% of system lane miles FY 2012 Plan total treatments = **532.2 lane miles** = 7.8% of system lane miles



Figure 18. Bryan District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 118.8, 88.0, 51.8 and 4.8 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 32.8, 81.2, 35.8 and 16.8 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 39.6, 19.8, 77.6 and 114.2 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 625.1, 438.0, 415.6 and 396.4 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 697.5 lane miles or approximately 10.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 539.0 lane miles + 118.8 lane miles of Heavy Rehab treatments from FY 2009 = 657.8 lane miles or approximately 9.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 529.0 lane miles + 88.0 lane miles of Heavy Rehab treatments from FY 2010 = 617.0 lane miles or approximately 9.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 527.4 lane miles + 51.8 lane miles of Heavy Rehab treatments from FY 2011 = 579.2 lane miles or approximately 8.5% of the total system.

			Base Year	Analysis Years				
		_	2009	2010	2011	2012	2013	
Achieved Goal (%)		87.57	85.27	83.5	81.81	77.52		
B	ryan District	Achieved Average CS	90	88	86	83	81	
	Duomos	Achieved Goal (%)	83.33	82.19	80	75.38	68.45	
	Brazos	Achieved Average CS	88	87	83	79	75	
	Duulaaan	Achieved Goal (%)	88.87	84.55	79.46	79.49	71.75	
ict	Burleson	Achieved Average CS	90	87	84	82	78	
Distr	Freestone	Achieved Goal (%)	82.47	79.21	80.12	80.85	77.22	
an I		Achieved Average CS	87	85	84	84	81	
Bry	Cuiman	Achieved Goal (%)	85.16	81.58	80.75	77.5	77.8	
es in	Grimes	Achieved Average CS	89	86	85	82	82	
untie	I	Achieved Goal (%)	88.68	86.93	82.45	84.4	79.97	
Col	Leon	Achieved Average CS	90	89	85	85	82	
	Madinar	Achieved Goal (%)	85.19	82.66	81.16	78.66	73.41	
	Madison	Achieved Average CS	88	86	85	82	78	
	Milam	Achieved Goal (%)	89.33	87.4	87.93	83.31	78.5	

 Table 11. Pavement Performance Summary for Bryan District and Counties

		Base Year	Analysis Years				
	_		2009	2010	2011	2012	2013
		Achieved Average CS	91	89	89	85	81
	Robertson	Achieved Goal (%)	87.11	86.28	87.37	85.69	83.12
		Achieved Average CS	91	89	88	86	83
	Walker	Achieved Goal (%)	94.5	91.97	88.29	87.39	83.32
		Achieved Average CS	93	91	88	85	83
	Washington	Achieved Goal (%)	91.91	90.05	87.61	85.21	81.79
		Achieved Average CS	93	91	87	84	82

Based on the analysis results presented in Table 11, at the end of the 4-year planning horizon the county in best condition was Walker (83.32%) while the worst was Brazos (68.45%).



#### III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 19. Bryan District Overall Pavement Performance of FY 2002-FY 2013

## **Childress District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,506
Total Lane miles	= 5,401

FY 2009 Plan total treatments = **417.0 lane miles** = 7.7% of system lane miles FY 2010 Plan total treatments = **337.5 lane miles** = 6.2% of system lane miles FY 2011 Plan total treatments = **308.6 lane miles** = 5.7% of system lane miles FY 2012 Plan total treatments = **382.4 lane miles** = 7.1% of system lane miles



Figure 20. Childress District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 43.6, 0.0, 27.2 and 39.4 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 0.0, 4.0 and 0.0.
- There were no Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 373.4, 337.5, 277.4 and 343.0 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 373.4 lane miles or approximately 6.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 337.5 lane miles + 43.6 lane miles of Heavy Rehab treatments from FY 2009 = 381.1 lane miles or approximately 7.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 281.4 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 281.4 lane miles or approximately 5.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 343.0 lane miles + 27.2 lane miles of Heavy Rehab treatments from FY 2011 = 370.2 lane miles or approximately 6.9% of the total system.

E		Base Year	Analysis Years				
				2010	2011	2012	2013
Ch	Iduces Distuist	Achieved Goal (%)	91.48	90.87	91.25	90.15	88.01
Cill	luress District	Achieved Average CS	94	92	90	88	85
	Deringen	Achieved Goal (%)	91.18	90.94	88.18	89.04	85.12
	Driscoe	Achieved Average CS	93	92	89	87	84
	Childrees	Achieved Goal (%)	84.77	83.55	92.32	91.1	87.91
ict	Childress	Achieved Average CS	90	88	91	88	85
listr	Callin ann anth	Achieved Goal (%)	91.71	89.94	89.1	88.7	86.48
ess I	Collingsworth	Achieved Average CS	94	92	90	87	83
ildre	Cattle	Achieved Goal (%)	98.09	96.54	95.15	94.22	90.5
l Ch	Cottle	Achieved Average CS	97	95	92	89	86
es in	D'shara	Achieved Goal (%)	94.43	92.81	91.49	89.66	87.66
unti	Dickens	Achieved Average CS	96	93	91	88	86
Co	Domlory	Achieved Goal (%)	82.77	80.69	88.33	87.08	85.77
	Donley	Achieved Average CS	91	89	89	87	85
	Foord	Achieved Goal (%)	90.47	86.49	82.03	82.3	80.47
	roard	Achieved Average CS	91	89	86	85	82

 Table 12. Pavement Performance Summary for Childress District and Counties

			Base Year		Analysi	s Years	
			2009	2010	2011	2012	2013
	Hall	Achieved Goal (%)	94.77	93.75	94.46	93.18	90.68
	Hall	Achieved Average CS	96	94	92	90	87
	Handaman	Achieved Goal (%)	87.04	90.1	91.46	88.92	85.77
	Hardeman	Achieved Average CS	92	91	90	87	84
	King	Achieved Goal (%)	92.99	93.5	91.98	97.46	96.95
		Achieved Average CS	93	93	90	92	90
	Vnor	Achieved Goal (%)	94.51	97.23	95.89	95.03	92.18
	KIIOX	Achieved Average CS	96	95	92	90	88
	Madlari	Achieved Goal (%)	96.49	96.25	95.34	94.43	93.1
	Motiey	Achieved Average CS	96	95	93	90	87
	XX /1 1	Achieved Goal (%)	91.98	91	89.09	85.48	85.75
	vv neeler	Achieved Average CS	93	91	88	85	84

Based on the analysis results presented in Table 12, at the end of the 4-year planning horizon the county in best condition was King (96.95%) while the worst was Foard (80.47%).



### III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 21. Childress District Overall Pavement Performance of FY 2002-FY 2013

## **Corpus Christi District**

### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,886
Total Lane miles	= 6,866

FY 2009 Plan total treatments = **1033.5 lane miles** = 15.1% of system lane miles FY 2010 Plan total treatments = **972.8 lane miles** = 14.2% of system lane miles FY 2011 Plan total treatments = **972.1 lane miles** = 14.2% of system lane miles FY 2012 Plan total treatments = **677.4 lane miles** = 9.9% of system lane miles



Figure 22. Corpus Christi District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 40.4, 52.4, 49.6 and 98.4 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 164.2, 11.0, 68.8 and 20.4 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 185.2, 110.2, 74.2 and 38.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 643.7, 799.2, 779.5 and 520.6 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 993.1 lane miles or approximately 14.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 920.4 lane miles + 40.4 lane miles of Heavy Rehab treatments from FY 2009 = 960.8 lane miles or approximately 14.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 922.5 lane miles + 52.4 lane miles of Heavy Rehab treatments from FY 2010 = 974.9 lane miles or approximately 14.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 579.0 lane miles + 49.6 lane miles of Heavy Rehab treatments from FY 2011 = 628.6 lane miles or approximately 9.2% of the total system.

1		Base Year					
				2010	2011	2012	2013
Co	orpus Christi	Achieved Goal (%)	83.58	83.31	82.72	82.83	80.38
	District	Achieved Average CS	88	87	85	84	82
	Anoncoc	Achieved Goal (%)	89.85	84.59	84.11	78.84	80.66
	Aransas	Achieved Average CS	91	87	85	82	83
t	Dee	Achieved Goal (%)	86.39	88.82	88.41	88.31	84.53
stric	Вее	Achieved Average CS	90	90	88	86	83
ti Di	Goliad	Achieved Goal (%)	82.97	88.86	82.68	80.77	77.55
hrist		Achieved Average CS	87	89	86	83	81
IS C	lim Walla	Achieved Goal (%)	76.21	76.4	77.88	81.22	83.59
orpı	Jim wens	Achieved Average CS	84	83	83	83	83
in C	Varnas	Achieved Goal (%)	85.59	81.88	80.16	77.42	72.21
ties	Karnes	Achieved Average CS	89	87	84	81	78
oun	Vlahaur	Achieved Goal (%)	84.47	86.47	86.7	84.13	79.22
С	Kiederg	Achieved Average CS	88	88	87	84	80
	Live Oal-	Achieved Goal (%)	84.32	85.32	83.59	83.51	79.09
	Live Oak	Achieved Average CS	88	89	87	85	81

### Table 13. Pavement Performance Summary for Corpus Christi District and Counties

II. Summary of FY 2010-FY 2013 Percentage of "Good" or Better Pavements and

**Condition Score** 

		Base Year		Analysis Years		
		2009	2010	2011	2012	2013
Nuccor	Achieved Goal (%)	85.1	82.04	82.37	82.2	80.73
nueces	Achieved Average CS	89	86	85	84	82
Defecto	Achieved Goal (%)	91.1	91.19	88.52	88.91	84.79
Refugio	Achieved Average CS	90	89	87	87	83
San Datricia	Achieved Goal (%)	77.48	77.4	79.27	83.02	81.51
San Patricio	Achieved Average CS	85	84	83	84	82

Based on the analysis results presented in Table 13, at the end of the 4-year planning horizon the county in best condition was Refugio (84.79%) while the worst was Karnes (72.21%).



#### III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements

Figure 23. Corpus Christi District Overall Pavement Performance of FY 2002-FY 2013

## **Dallas District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,289
Total Lane miles	= 10,040

FY 2009 Plan total treatments = **671.4 lane miles** = 6.7% of system lane miles FY 2010 Plan total treatments = **830.6 lane miles** = 8.3% of system lane miles FY 2011 Plan total treatments = **448.2 lane miles** = 4.5% of system lane miles FY 2012 Plan total treatments = **436.5 lane miles** = 4.3% of system lane miles



Figure 24. Dallas District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 186.6, 152.6, 153.9 and 182.3 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 17.0, 55.3, 38.3 and 28.8 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 35.0, 55.2, 0.0 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 432.8, 567.5, 256.0 and 225.4 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 484.8 lane miles or approximately 4.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 678.0 lane miles + 186.6 lane miles of Heavy Rehab treatments from FY 2009 = 864.6 lane miles or approximately 8.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 294.3 lane miles + 152.6 lane miles of Heavy Rehab treatments from FY 2010 = 446.9 lane miles or approximately 4.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 254.2 lane miles + 153.9 lane miles of Heavy Rehab treatments from FY 2011 = 408.1 lane miles or approximately 4.1% of the total system.

			Base Year	<b>J</b>	Analysi	s Years	
			2009	2010	2011	2012	2013
n	allag Distuist	Achieved Goal (%)	75.27	70.1	66.82	62.05	58.19
D	anas District	Achieved Average CS	81	78	75	71	68
	Callin	Achieved Goal (%)	78.41	75.03	71.37	64.6	62.19
	Comm	Achieved Average CS	83	81	78	74	71
t	Dallag	Achieved Goal (%)	67.98	60.14	55.71	50.85	45.95
stric	Dallas	Achieved Average CS	76	71	68	64	60
s Dis	Denton	Achieved Goal (%)	80.92	74.19	72.1	66.32	64.6
alla		Achieved Average CS	85	81	78	74	72
in D	FII!«	Achieved Goal (%)	82	81.62	77.88	75.36	73.16
ties	Ellis	Achieved Average CS	86	84	81	79	77
oun	Varifinan	Achieved Goal (%)	69.83	65.13	60.27	55.95	52.22
	Kauiman	Achieved Average CS	78	74	71	67	63
	Nanana	Achieved Goal (%)	86.02	80.97	79.76	76.19	69.79
	navarro	Achieved Average CS	88	85	82	79	75
	Dealawall	Achieved Goal (%)	57.51	53.75	58.16	51.15	42.58
	KOCKWAII	Achieved Average CS	71	69	70	67	61

Table 14. Pavement Performance Summary for Dallas District and Counties

Based on the analysis results presented in Table 14, at the end of the 4-year planning horizon the county in best condition was Ellis (73.16%) while the worst was Rockwall (42.58%).



III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 25. Dallas District Overall Pavement Performance of FY 2002-FY 2013

## **El Paso District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 1,927
Total Lane miles	= 4,717

FY 2009 Plan total treatments = **319.1 lane miles** = 6.8% of system lane miles FY 2010 Plan total treatments = **79.2 lane miles** = 1.7% of system lane miles FY 2011 Plan total treatments = **263.3 lane miles** = 5.6% of system lane miles FY 2012 Plan total treatments = **349.0 lane miles** = 7.4% of system lane miles



Figure 26. El Paso District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 8.8, 50.3 and 23.8 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 175.5, 6.0, 92.8 and 44.8 lane miles respectively.
- There were no Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 143.6, 64.4, 120.2 and 280.4 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 319.1 lane miles or approximately 6.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 70.4 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 70.4 lane miles or approximately 1.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 213.0 lane miles + 8.8 lane miles of Heavy Rehab treatments from FY 2010 = 221.8 lane miles or approximately 4.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 325.2 lane miles + 50.3 lane miles of Heavy Rehab treatments from FY 2011 = 375.5 lane miles or approximately 8.0% of the total system.

[	H		Base Year	•	Analysi	is Years	
				2010	2011	2012	2013
T.	Daga Distuist	Achieved Goal (%)	87.35	86.15	84.13	81.76	80.39
EI	Paso District	Achieved Average CS	90	88	86	83	81
	Duomaton	Achieved Goal (%)	95.55	93.93	92.44	91.24	87.47
	Brewster	Achieved Average CS	95	93	90	88	85
÷	Culberson	Achieved Goal (%)	92.46	92.27	89.91	86.54	82.23
stric		Achieved Average CS	93	92	89	85	82
0 Di	El Paso	Achieved Goal (%)	78.34	77.39	73.86	71.88	73.44
Pas		Achieved Average CS	84	83	80	78	79
n El	<b>H</b> 1 4	Achieved Goal (%)	90.42	90.15	90.8	88	85.02
ies i	Hudspeth	Achieved Average CS	93	91	89	87	83
ount		Achieved Goal (%)	87.94	84.36	82.51	79.73	81.49
Ŭ	Jeff Davis	Achieved Average CS	90	88	85	82	82
	Durati	Achieved Goal (%)	92.01	89.83	87.79	85.31	81.95
	Presidio	Achieved Average CS	93	90	87	85	81

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

 Table 15. Pavement Performance Summary for El Paso District and Counties

Based on the analysis results presented in Table 15, at the end of the 4-year planning horizon the county in best condition was Brewster (87.47%) while the worst was El Paso (73.44%).



III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 27. El Paso District Overall Pavement Performance of FY 2002-FY 2013

## **Fort Worth District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles= 3,297Total Lane miles= 8,528

FY 2009 Plan total treatments = **754.8 lane miles** = 8.9% of system lane miles FY 2010 Plan total treatments = **566.5 lane miles** = 6.6% of system lane miles FY 2011 Plan total treatments = **571.8 lane miles** = 6.7% of system lane miles FY 2012 Plan total treatments = **2122.1 lane miles** = 24.9% of system lane miles



Figure 28. Fort Worth District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 95.0, 1.0 and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 3.0 0.0, 42.4 and 0.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 38.0 0.0, 0.0 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 713.8, 471.5, 528.4 and 2122.1 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 754.8 lane miles or approximately 8.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 471.5 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 471.5 lane miles or approximately 5.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 570.8 lane miles + 95.0 lane miles of Heavy Rehab treatments from FY 2010 = 665.8 lane miles or approximately 7.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 2122.1 lane miles + 1.0 lane miles of Heavy Rehab treatments from FY 2011 = 2123.1 lane miles or approximately 24.9% of the total system.

1		Base Year	Analysis Years				
			2009	2010	2011	2012	2013
Fort	Wouth Distuist	Achieved Goal (%)	81.44	80.1	77.5	74.07	78.42
FOFU	worth District	Achieved Average CS	87	84	82	79	80
	Enoth	Achieved Goal (%)	87.59	88.03	86.51	82.69	77.39
	Eratii	Achieved Average CS	90	89	86	83	80
	Head	Achieved Goal (%)	73.75	70.12	79.92	80.18	85.78
it .	Hood	Achieved Average CS	85	82	84	82	83
stric		Achieved Goal (%)	91.2	91.52	91.55	90.47	83.8
h Di	Jack	Achieved Average CS	93	91	90	87	82
Vort		Achieved Goal (%)	76.29	77.25	75.32	74.51	76.46
rt V	Jonnson	Achieved Average CS	84	82	80	78	78
n Fo	<b>D I D'</b> (	Achieved Goal (%)	90.36	86.86	83.44	78.55	75.24
ies i	Palo Pinto	Achieved Average CS	93	90	86	82	79
ount	D I	Achieved Goal (%)	78.17	81.65	76.89	77.61	82.09
Ŭ	Parker	Achieved Average CS	83	84	80	80	83
	<b>a</b> "	Achieved Goal (%)	83.74	77.61	85.5	80.65	80.44
	Somervell	Achieved Average CS	89	84	87	84	80
	Tarrant	Achieved Goal (%)	79.2	73.97	68.78	63.22	77.29

## Condition Score Table 16. Pavement Performance Summary for Fort Worth District and Counties

II. Summary of FY 2010-FY 2013 Percentage of "Good" or Better Pavements and

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			Base Year		Analysis Years		
		2009	2010	2011	2012	2013	
		Achieved Average CS	85	80	77	73	81
	Wise	Achieved Goal (%)	80.79	87.68	86.1	82.21	77.53
		Achieved Average CS	87	90	87	83	79

Based on the analysis results presented in Table 16, at the end of the 4-year planning horizon the county in best condition was Hood (85.78%) while the worst was Palo Pinto (75.24%).

III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 29. Fort Worth District Overall Pavement Performance of FY 2002-FY 2013

### **Houston District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles= 3,134Total Lane miles= 9,885

FY 2009 Plan total treatments = **506.8 lane miles** = 5.1% of system lane miles FY 2010 Plan total treatments = **288.5 lane miles** = 2.9% of system lane miles FY 2011 Plan total treatments = **154.6 lane miles** = 1.6% of system lane miles FY 2012 Plan total treatments = **226.3 lane miles** = 2.3% of system lane miles



Figure 30. Houston District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 119.0, 10.6, 9.2 and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 62.2, 0.0, 0.0 and 0.0 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 19.8 0.0, 12.0 and 0.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 305.8 and 277.9, 133.4 and 226.4 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 387.8 lane miles or approximately 3.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 277.9 lane miles + 119.0 lane miles of Heavy Rehab treatments from FY 2009 = 396.9 lane miles or approximately 4.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 145.4 lane miles + 10.6 lane miles of Heavy Rehab treatments from FY 2010 = 156.0 lane miles or approximately 1.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 226.4 lane miles + 9.2 lane miles of Heavy Rehab treatments from FY 2011 = 235.6 lane miles or approximately 2.4% of the total system.

Table 17. Favement refiormance Summary for Houston District and Countes							
		Base Year	Analysis Years				
_			2009	2010	2011	2012	2013
Houston District Achi		Achieved Goal (%)	75.8	71.93	67.74	62.46	57.41
		Achieved Average CS	84	80	77	72	69
	Brazoria	Achieved Goal (%)	74.26	73.72	70.17	65.42	62.53
		Achieved Average CS	82	81	77	73	70
ct	Fort Bend	Achieved Goal (%)	81.43	78.45	74.3	70.26	66.73
uston Distri		Achieved Average CS	88	85	81	77	73
	Galveston	Achieved Goal (%)	70.75	66.4	64.58	61.08	58.48
		Achieved Average CS	81	78	76	72	70
n Ho	Harris	Achieved Goal (%)	75.09	69.14	62.84	56.19	48.66
Counties in		Achieved Average CS	82	78	74	68	64
	Montgomery	Achieved Goal (%)	80.45	76.64	74.59	70.42	67.39
		Achieved Average CS	88	85	82	78	75
	Waller	Achieved Goal (%)	75.3	80.9	84.63	82.18	82.3
		Achieved Average CS	87	88	88	85	82

Based on the analysis results presented in Table 17, at the end of the 4-year planning horizon the county in best condition was Waller (82.30%) while the worst was Harris (48.66%).



III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements

Figure 31. Houston District Overall Pavement Performance of FY 2002-FY 2013

## Laredo District

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,266
Total Lane miles	= 4,892

FY 2009 Plan total treatments = **153.8 lane miles** = 3.1% of system lane miles FY 2010 Plan total treatments = **379.1 lane miles** = 7.8% of system lane miles FY 2011 Plan total treatments = **194.6 lane miles** = 4.0% of system lane miles FY 2012 Plan total treatments = **337.7 lane miles** = 6.9% of system lane miles



Figure 32. Laredo District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 49.8 and 17.8, 115.0 and 73.6 lane miles respectively.
- There were no Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 104.0 0.0, 0.0 and 0.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 361.3, 79.6 and 264.1 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 104.0 lane miles or approximately 2.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 361.3 lane miles + 49.8 lane miles of Heavy Rehab treatments from FY 2009 = 411.1 lane miles or approximately 8.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 79.6 lane miles + 17.8 lane miles of Heavy Rehab treatments from FY 2010 = 97.4 lane miles or approximately 2.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 264.1 lane miles + 115.0 lane miles of Heavy Rehab treatments from FY 2011 = 379.1 lane miles or approximately 7.8% of the total system.

Table 18. Pavement Performance			Summary	mary for Laredo District and Counties				
		Base Year	Analysis Years					
			2009	2010	2011	2012	2013	
Laredo DistrictAchieved Goal (%)Achieved Average CS		85.37	83.30	81.36	78.01	73.27		
		Achieved Average CS	89	86	84	81	78	
	Dimmit	Achieved Goal (%)	83.76	80.1	77.57	76.1	76.33	
		Achieved Average CS	89	86	82	80	80	
	Duval	Achieved Goal (%)	93.46	92.18	89.62	86.43	81.47	
		Achieved Average CS	94	92	88	85	82	
t	Kinney	Achieved Goal (%)	94.09	90.94	88.98	83.63	77.07	
stric		Achieved Average CS	95	91	88	84	79	
rredo Dis	La Salle	Achieved Goal (%)	79.29	80.87	76.22	72.9	70.68	
		Achieved Average CS	86	86	82	78	77	
n Lá	Maverick	Achieved Goal (%)	67.95	65.15	70.17	64.74	59.80	
ties i		Achieved Average CS	78	74	78	74	71	
oun	Val Verde	Achieved Goal (%)	91.2	88.42	86.31	84.26	77.49	
C		Achieved Average CS	92	88	86	83	80	
	Webb	Achieved Goal (%)	87.79	85.69	84.32	81.45	76.47	
		Achieved Average CS	90	88	86	82	79	
	Zavala	Achieved Goal (%)	79.62	76.03	71.4	66.53	59.15	
		Achieved Average CS	86	83	79	74	69	

## II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

### Table 18. Pavement Performance Summary for Laredo District and Counties

Based on the analysis results presented in Table 18, at the end of the 4-year planning horizon the county in best condition was Duval (81.47%) while the worst was Zavala (59.15%).



III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements

Figure 33. Laredo District Overall Pavement Performance of FY 2002-FY 2013

## **Lubbock District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 5,267
Total Lane miles	= 11,732

FY 2009 Plan total treatments = **815.0 lane miles** = 6.9% of system lane miles FY 2010 Plan total treatments = **684.5 lane miles** = 5.8% of system lane miles FY 2011 Plan total treatments = **845.7 lane miles** = 7.2% of system lane miles FY 2012 Plan total treatments = **691.8 lane miles** = 5.9% of system lane miles



Figure 34. Lubbock District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 41.2, 29.0, 17.4 and 47.2 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 14.0, 31.0, 120.3 and 0.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 98.8, 57.8, 87.8 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 661.0 and 566.7, 620.2 and 644.6 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 773.8 lane miles or approximately 6.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 655.5 lane miles + 41.2 lane miles of Heavy Rehab treatments from FY 2009 = 696.7 lane miles or approximately 5.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 828.3 lane miles + 29.0 lane miles of Heavy Rehab treatments from FY 2010 = 857.3 lane miles or approximately 7.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 644.6 lane miles + 17.4 lane miles of Heavy Rehab treatments from FY 2011 = 662.0 lane miles or approximately 5.6% of the total system.

		Base Year	Analysis Years				
			2009	2010	2011	2012	2013
Lubbock District Achieved Goal (%) Achieved Average CS		86.4	85.99	86.38	86.94	84.48	
		Achieved Average CS	91	89	87	86	84
	Bailey	Achieved Goal (%)	91.77	91.57	89.95	89.13	89.58
<b>Counties in Lubbock District</b>		Achieved Average CS	93	91	88	86	85
	Castro	Achieved Goal (%)	82.35	81.64	86.66	85.58	81.94
		Achieved Average CS	88	86	88	85	82
	Cochran	Achieved Goal (%)	95.54	94.04	94.59	93.52	88.33
		Achieved Average CS	96	94	92	89	86
	Crosby	Achieved Goal (%)	76.42	80.81	88.79	92.61	87.8
		Achieved Average CS	87	88	89	89	85
	Dawson	Achieved Goal (%)	79.8	79.83	77.46	89.33	87.98
		Achieved Average CS	88	86	83	87	85
	Floyd	Achieved Goal (%)	77.64	75.62	74.86	73.11	79.64
		Achieved Average CS	87	84	82	79	82
	Gaines	Achieved Goal (%)	92.59	92.56	95.25	92.34	89.52
		Achieved Average CS	94	92	91	88	86
	Garza	Achieved Goal (%)	96.59	95.42	96.64	94.03	90.17

Table 19. Pavement Performance Summary for Lubbock District and Counties
			Base Year	Analysis Years			
			2009	2010	2011	2012	2013
		Achieved Average CS	97	94	93	90	86
	Hala	Achieved Goal (%)	90.96	90.42	88.13	85.78	84.46
	Hale	Achieved Average CS	93	91	88	85	84
	Haaldaa	Achieved Goal (%)	85.01	81.65	83.05	82.07	79.3
	носкіеў	Achieved Average CS	88	87	86	84	82
	Lamb	Achieved Goal (%)	76.32	78.25	80.31	80.57	75.86
	Lamo	Achieved Average CS	85	85	84	83	80
	Lubbock	Achieved Goal (%)	88.62	87.43	86.94	87.73	83.65
		Achieved Average CS	91	90	88	87	84
	Ŧ	Achieved Goal (%)	85.43	86.8	88.52	87.73	83.51
	Lynn	Achieved Average CS	91	89	88	86	83
	Damman	Achieved Goal (%)	77.06	74.63	74.46	77.19	77.42
	Parmer	Achieved Average CS	86	84	82	81	80
	C	Achieved Goal (%)	93.98	91.58	89.18	88.57	84.16
	Swisner	Achieved Average CS	94	92	89	87	84
	Τ	Achieved Goal (%)	87.75	90.94	90.85	91.64	90.49
	Terry	Achieved Average CS	92	92	90	88	86
	Vooluum	Achieved Goal (%)	94.4	92.98	90.77	95.76	92.33
	<b>Y OAKU</b> M	Achieved Average CS	95	93	90	91	88

Based on the analysis results presented in Table 19, at the end of the 4-year planning horizon the county in best condition was Yoakum (92.33%) while the worst was Lamb (75.86%).



III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 35. Lubbock District Overall Pavement Performance of FY 2002-FY 2013

## Lufkin District

## I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,880
Total Lane miles	= 6,386

FY 2009 Plan total treatments = **616.2 lane miles** = 9.6% of system lane miles FY 2010 Plan total treatments = **970.7 lane miles** = 15.2% of system lane miles FY 2011 Plan total treatments = **745.9 lane miles** = 11.7% of system lane miles FY 2012 Plan total treatments = **573.2 lane miles** = 9.0% of system lane miles



Figure 36. Lufkin District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 66.2 and 10.2, 49.6 and 28.6 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 26.0, 0.0, 0.0 and 0.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 28.4 and 183.0, 77.0 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 495.6, 777.5, 619.3 and 544.6 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 550.0 lane miles or approximately 8.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 960.5 lane miles + 66.2 lane miles of Heavy Rehab treatments from FY 2009 = 1026.7 lane miles or approximately 16.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 696.3 lane miles + 10.2 lane miles of Heavy Rehab treatments from FY 2010 = 706.5 lane miles or approximately 11.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 544.6 lane miles + 49.6 lane miles of Heavy Rehab treatments from FY 2011 = 594.2 lane miles or approximately 9.3% of the total system.

			Base Year		Analysi	s Years	
		_	2009	2010	2011	2012	2013
T.	Alin Distuist	Achieved Goal (%)	87.87	85.26	84.33	82.8	81.74
L	likin District	Achieved Average CS	91	89	87	84	82
	Angeline	Achieved Goal (%)	88.24	84.49	83.56	79.85	81.99
	Angenna	Achieved Average CS	91	89	86	82	82
	IIt	Achieved Goal (%)	82.34	77.45	74.84	75.51	72.57
t	Houston	Achieved Average CS	87	84	81	80	76
stric	Nacogdoches	Achieved Goal (%)	89.97	85.28	82.99	80.46	79.62
n Di		Achieved Average CS	91	89	85	83	81
ufki	D. II.	Achieved Goal (%)	81.01	84.92	85.51	83.97	83.52
in L	POIK	Achieved Average CS	88	88	87	85	82
ties i	<b>6</b> 1.	Achieved Goal (%)	90.07	85.4	82.26	82.09	83.21
uno	Sabine	Achieved Average CS	91	89	86	84	83
0	S	Achieved Goal (%)	91.69	92.2	91.8	91.21	88.17
	San Augustine	Achieved Average CS	93	93	91	89	85
	Com Lostari	Achieved Goal (%)	97.21	95.58	93.63	92.95	92.2
	San Jacinto	Achieved Average CS	97	95	92	90	88

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

 Table 20. Pavement Performance Summary for Lufkin District and Counties

		Base Year		Analysi	s Years		
			2009	2010	2011	2012	2013
	Shelby	Achieved Goal (%)	88.19	83.01	82.58	79.92	77.07
		Achieved Average CS	91	87	85	83	81
	Trinity	Achieved Goal (%)	87.73	86.45	91	90.71	88.01
		Achieved Average CS	92	90	90	88	85

Based on the analysis results presented in Table 20, at the end of the 4-year planning horizon the county in best condition was San Jacinto (92.20%) while the worst was Houston (72.57%).

### III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 37. Lufkin District Overall Pavement Performance of FY 2002-FY 2013

## **Odessa District**

### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,388
Total Lane miles	= 8,079

FY 2009 Plan total treatments = **708.4 lane miles** = 8.8% of system lane miles FY 2010 Plan total treatments = **638.4 lane miles** = 7.9% of system lane miles FY 2011 Plan total treatments = **605.6 lane miles** = 7.5% of system lane miles FY 2012 Plan total treatments = **440.4 lane miles** = 5.5% of system lane miles



Figure 38. Odessa District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 74.4, 17.8, 3.0 and 35.2 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0 and 67.8, 6.6 and 11.0 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 0.0, 92.4 and 0.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 634.0, 552.8, 503.6 and 394.2 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 634.0 lane miles or approximately 7.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 620.6 lane miles + 74.4 lane miles of Heavy Rehab treatments from FY 2009 = 695.0 lane miles or approximately 8.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 602.6 lane miles + 17.8 lane miles of Heavy Rehab treatments from FY 2010 = 620.4 lane miles or approximately 7.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 405.2 lane miles + 3.0 lane miles of Heavy Rehab treatments from FY 2011 = 408.2 lane miles or approximately 5.1% of the total system.

1	abic 21. 1 ave		Summary	iry for Ouessa District and Counti			untics	
			Base Year	Analysis Years				
		_	2009	2010	2011	2012	2013	
	lesse Distaint	Achieved Goal (%)	93.33	92.75	93.69	92.57	90.38	
Ū	iessa District	Achieved Average CS	95	93	91	89	86	
	A J	Achieved Goal (%)	96.17	95.25	96.83	94.88	92.89	
	Andrews	Achieved Average CS	96	94	93	90	88	
t	Crane	Achieved Goal (%)	98.98	100	99.04	98.66	97.57	
stric		Achieved Average CS	96	97	94	92	90	
a Di	Ector	Achieved Goal (%)	89.52	89.86	91.18	90.35	88.08	
dess		Achieved Average CS	94	92	90	88	85	
in O	Tarlar	Achieved Goal (%)	98.81	98.52	97.03	98.22	94.07	
ties i	Loving	Achieved Average CS	99	97	95	92	89	
uno	Maartin	Achieved Goal (%)	85.84	89.88	96.17	95.08	92.3	
Ŭ	Martin	Achieved Average CS	91	91	93	90	86	
	Maland	Achieved Goal (%)	85.97	82.35	84.13	81.46	76.77	
	wiidland	Achieved Average CS	90	87	86	83	79	

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

Table 21. Pavement Performance Summary for Odessa District and Counties

			Base Year	Analysis Years				
			2009	2010	2011	2012	2013	
	Deser	Achieved Goal (%)	98.71	98.15	98.35	97.2	95.58	
	Pecos	Achieved Average CS	98	96	94	92	89	
	D	Achieved Goal (%)	92.34	90.95	90.61	91	90.4	
	Reeves	Achieved Average CS	94	92	90	89	87	
	Terrell	Achieved Goal (%)	96.51	98.18	99.48	99.22	97.11	
		Achieved Average CS	97	96	94	91	88	
	I	Achieved Goal (%)	96.97	97.9	98.87	98.1	97.08	
	Upton	Achieved Average CS	98	96	94	92	89	
	Ward	Achieved Goal (%)	96.63	94.35	94.97	93.92	90.4	
	ward	Achieved Average CS	97	95	92	89	86	
	Winkler	Achieved Goal (%)	92.27	91.06	88.63	84.73	83.39	
		Achieved Average CS	94	92	90	87	84	

Based on the analysis results presented in Table 21, at the end of the 4-year planning horizon the county in best condition was Crane (97.57%) while the worst was Midland (76.77%).

## III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 39. Odessa District Overall Pavement Performance of FY 2002-FY 2013

## **Paris District**

### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,412
Total Lane miles	= 6,780

FY 2009 Plan total treatments = **684.8 lane miles** = 10.1% of system lane miles FY 2010 Plan total treatments = **560.6 lane miles** = 8.3% of system lane miles FY 2011 Plan total treatments = **716.4 lane miles** = 10.6% of system lane miles FY 2012 Plan total treatments = **479.0 lane miles** = 7.1% of system lane miles



Figure 40. Paris District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 93.6, 107.8, 66.4 and 48.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 34.2, 0.0, 8.4 and 14.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 557.0 373.8, 531.8 and 417.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 79.0, 109.8 and 0.0 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 591.2 lane miles or approximately 8.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 452.8 lane miles + 93.6 lane miles of Heavy Rehab treatments from FY 2009 = 546.4 lane miles or approximately 8.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 650.0 lane miles + 107.8 lane miles of Heavy Rehab treatments from FY 2010 = 757.8 lane miles or approximately 11.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 431.0 lane miles + 66.4 lane miles of Heavy Rehab treatments from FY 2011 = 497.4 lane miles or approximately 7.3% of the total system.

			Base Year	•	Analysi	s Years	
			2009	2010	2011	2012	2013
D	anic District	Achieved Goal (%)	74.92	72.74	71.94	72.87	71.1
ľ	aris District	Achieved Average CS	83	82	80	80	78
	Dolto	Achieved Goal (%)	75.38	66.03	59.63	58.95	62.15
	Dena	Achieved Average CS	84	79	76	74	75
	Fannin	Achieved Goal (%)	62.59	66.78	65.74	67.98	66.74
	Fannin	Achieved Average CS	80	80	78	78	76
trict	Franklin	Achieved Goal (%)	82.99	82.5	84.63	81.65	78.84
Dis		Achieved Average CS	89	89	88	85	83
aris	Carrows	Achieved Goal (%)	67.46	63.27	62.71	64.78	63.89
in F	Grayson	Achieved Average CS	78	76	75	76	74
nties	H	Achieved Goal (%)	77.67	75.11	73.95	74.34	72.46
Cour	норкіпя	Achieved Average CS	84	82	81	79	77
Ĭ	II	Achieved Goal (%)	78.32	74.25	72.11	70.43	68.17
	Hunt	Achieved Average CS	83	81	79	78	76
	T	Achieved Goal (%)	73.13	73.72	77.26	80.68	79.36
	Lamar	Achieved Average CS	83	83	83	84	82

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

 Table 22. Pavement Performance Summary for Paris District and Counties

Base Year Analysis Years							
		2009	2010	2011	2012	2013	
	Rains	Achieved Goal (%)	79.61	75.28	70.71	75.98	70.16
		Achieved Average CS	85	82	79	81	77
	Red River	Achieved Goal (%)	89.96	86.03	84.54	84.68	80.82
		Achieved Average CS	91	89	87	86	83

Based on the analysis results presented in Table 22, at the end of the 4-year planning horizon the county in best condition was Red River (80.82%) while the worst was Delta (62.15%).

#### III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 41. Paris District Overall Pavement Performance of FY 2002-FY 2013

## **Pharr District**

#### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,322
Total Lane miles	= 5,690

FY 2009 Plan total treatments = **675.1 lane miles** = 11.9 % of system lane miles FY 2010 Plan total treatments = **731.7 lane miles** = 12.9 % of system lane miles FY 2011 Plan total treatments = **540.4 lane miles** = 9.5% of system lane miles FY 2012 Plan total treatments = **590.4 lane miles** = 10.4% of system lane miles



Figure 42. Pharr District Treatment Plans for FY 2010-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 151.1, 106.4, 123.4 and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 0.0, 10.6 and 0.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0 32.4, 7.4 and 0.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 524.0, 592.9, 399.0 and 590.4 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 524.0lane miles or approximately 9.2 % of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 625.3lane miles + 151.1 lane miles of Heavy Rehab treatments from FY 2009 = 776.4 lane miles or approximately 13.6 % of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 417.0lane miles + 106.4 lane miles of Heavy Rehab treatments from FY 2010 = 523.4 lane miles or approximately 9.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 590.4 lane miles + 123.4 lane miles of Heavy Rehab treatments from FY 2011 = 713.8 lane miles or approximately 12.5% of the total system.

]	Table 23. Pavement Performance Summary for Pharr District and Counties							
			Base Year	Year Analysis Years				
			2009	2010	2011	2012	2013	
	harry District	Achieved Goal (%)	80.38	80.22	85.01	84.99	83.26	
P	narr District	Achieved Average CS	88	86	86	85	83	
	Ducalia	Achieved Goal (%)	92.39	91.48	96.8	94.44	94.37	
	DLOOKS	Achieved Average CS	94	92	92	90	89	
	Comoron	Achieved Goal (%)	84.91	81.53	83.85	83.04	79.32	
	Cameron	Achieved Average CS	89	86	85	84	82	
t	Hidalgo	Achieved Goal (%)	78.74	80.2	85.03	84.87	83.6	
stric		Achieved Average CS	86	86	86	84	83	
- Dis	Jim Hogg	Achieved Goal (%)	95.93	94.97	94.56	91.8	90.35	
harı		Achieved Average CS	97	95	92	89	86	
in P	Vanada	Achieved Goal (%)	0	0.42	56.26	79.94	79.94	
ıties	Kenedy	Achieved Average CS	59	54	75	83	80	
Cour	Starr	Achieved Goal (%)	78.95	80.38	81.78	82.23	82.51	
	Starr	Achieved Average CS	88	87	86	84	83	
	Willow	Achieved Goal (%)	92.15	94.71	91.1	85.85	81.52	
	w macy	Achieved Average CS	92	92	88	85	83	
	Zanata	Achieved Goal (%)	75.12	75.12	85.3	88.5	93.11	
	Zapata	Achieved Average CS	86	84	87	88	90	

II. Summary of FY 2010-FY 2013 Percentage of "Good" or Better Pavements and **Condition Score** 

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Based on the analysis results presented in Table 23, at the end of the 4-year planning horizon the county in best condition was Brooks (94.37%) while the worst was Cameron (79.32%).



III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 43. Pharr District Overall Pavement Performance of FY 2002-FY 2013

## San Angelo District

### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,253
Total Lane miles	= 7,174

FY 2009 Plan total treatments = **453.8 lane miles** = 6.3% of system lane miles FY 2010 Plan total treatments = **470.6 lane miles** = 6.6% of system lane miles FY 2011 Plan total treatments = **304.2 lane miles** = 4.2% of system lane miles FY 2012 Plan total treatments = **407.2 lane miles** = 5.7% of system lane miles



Figure 44. San Angelo District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 0.0, 4.0, and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 8.0, 0.0 and 0.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 4.0 0.0, 0.0 and 0.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 449.8 and 462.6, 300.2 and 407.2 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 453.8 lane miles or approximately 6.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 470.6 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 470.6 lane miles or approximately 6.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 300.2 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 300.2 lane miles or approximately 4.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 407.2 lane miles + 4.0 lane miles of Heavy Rehab treatments from FY 2011 = 411.2 lane miles or approximately 5.7% of the total system.

		Base Year	Analysis Years				
			2009	2010	2011	2012	2013
Sam	Angele District	Achieved Goal (%)	94.58	94.91	94.43	92.21	89.31
San.	Angelo District	Achieved Average CS	95	94	91	88	86
	Coke	Achieved Goal (%)	97.6	95.92	93.58	91.54	89.89
	CORC	Achieved Average CS	97	95	92	89	86
	Concho	Achieved Goal (%)	87.67	86.99	96.65	92.16	91.34
ict	Concho	Achieved Average CS	93	90	92	Isysis Years         2012         3       92.21         3       92.21         8       91.54         89       9         5       92.16         89       9         5       92.16         89       9         8       94.47         90       8         8       94.87         90       90         8       94.90.59         8       90         4       90.59         88       9         6       93.28         89       9         6       92.14         88       9	86
istr	Createstt	Achieved Goal (%)	92.93	93.58	96.88	94.47	93.34
D	Crockett	Achieved Average CS	95	93	93	90	88
gelo	Edwards	Achieved Goal (%)	95.86	94.41	92.8	89.82	86.48
۸ng		Achieved Average CS	95	92	89	86	84
un ∕		Achieved Goal (%)	98.3	97.21	97.21	96.88	95.11
ı Sa	Glasscock	Achieved Average CS	98	96	94	90	87
s iı	Inion	Achieved Goal (%)	94.42	94	94.84	90.59	84.76
tie	111011	Achieved Average CS	95	93	91	88	85
u n o	V'	Achieved Goal (%)	96.65	96.3	94.66	93.28	91.02
С	Kimble	Achieved Average CS	96	95	92	89	87
	Manand	Achieved Goal (%)	95.35	96.29	93.46	92.14	87.08
	Menaru	Achieved Average CS	95	94	91	88	84

## II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

Table 24. Pavement Performance Summary for San Angelo District and Counties

			Analysis Years			
		2009	2010	2011	2012	2013
Deegen	Achieved Goal (%)	98.75	100	98.75	97.44	94.57
Keagan	Achieved Average CS	98	97	94	91	88
D I	Achieved Goal (%)	91.8	89.99	88.9	85.12	78.96
Keal	Achieved Average CS	94	92	89	Sis Years           2012         2013           97.44         94.57           91         88           85.12         78.96           85         81           90.76         86.04           88         84           94.92         90.22           89         87           90.64         88.64           88         86           94.11         92.82           89         87.5           90.13         87.5	
Dunnala	Achieved Goal (%)	95.83	95.11	92.45	90.76	86.04
Runnels	Achieved Average CS	95	93	91	88	84
G. h h . ' . h	Achieved Goal (%)	94.09	97.68	96.3	94.92	90.22
Schleicher	Achieved Average CS	96	95	92	89	87
64 <b>I</b> '	Achieved Goal (%)	91.36	89.44	89.44	90.64	88.64
Sterling	Achieved Average CS	94	91	89	88	86
S44 a	Achieved Goal (%)	95.87	98	97.09	94.11	92.82
Sution	Achieved Average CS	95	95	92	89	88
Tom Green	Achieved Goal (%)	93.12	95.44	92.64	90.13	87.5
i olii Greeli	Achieved Average CS	94	93	90	87	84

Based on the analysis results presented in Table 24, at the end of the 4-year planning horizon the county in best condition was Glasscock (95.11%) while the worst was Real (78.96%).



III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements

Figure 45. San Angelo District Overall Pavement Performance of FY 2002-FY 2013

## San Antonio District

## I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 4,270
Total Lane miles	= 10,713

FY 2009 Plan total treatments = **1024.4 lane miles** = 9.6% of system lane miles FY 2010 Plan total treatments = **1010.4 lane miles** = 9.4% of system lane miles FY 2011 Plan total treatments = **881.6 lane miles** = 8.2% of system lane miles FY 2012 Plan total treatments = **2061.7 lane miles** = 19.2% of system lane miles



Figure 46. San Antonio District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009 and FY 2010 are 56.7, 0.0, 9.8 and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 21.2, 13.0 and 17.4 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 61.4, 33.0, 0.0 and 15.8 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 906.3, 956.2, 858.8 and 2028.5 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 967.7 lane miles or approximately 9.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 1010.4 lane miles + 56.7 lane miles of Heavy Rehab treatments from FY 2009 = 1067.1 lane miles or approximately 10.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 871.8 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 871.8 lane miles or approximately 8.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 2061.7 lane miles + 9.8 lane miles of Heavy Rehab treatments from FY 2011 = 2071.5 lane miles or approximately 19.3% of the total system.

			Base Year	Analysis Years			
		_	2009	2010	2011	2012	2013
S	mtonio Distuiot	Achieved Goal (%)	83.03	81.43	80.2	77.85	79.34
San P	Antonio District	Achieved Average CS	88	85	83	80	81
	A tagaaga	Achieved Goal (%)	80.84	83.32	86.38	84	78.82
	Atascosa	Achieved Average CS	87	87	86	83	79
	Dandana	Achieved Goal (%)	95.3	88.3	86.8	84           83           89.99           87           69.16           76           83.8	82.7
rict	Danuera	Achieved Average CS	94	90	87	87	83
Dist	Daman	Achieved Goal (%)	79.86	76.54	74.16	69.16	80.83
onio	Dexar	Achieved Average CS	85	82	80	76	83
Anto		Achieved Goal (%)	88.34	88.49	88.41	83.8	86.17
San	Comai	Achieved Average CS	91	89	87	83	86
s in S	E:	Achieved Goal (%)	91.69	90.4	90.56	87.96	83.64
ntie	F F10	Achieved Average CS	93	91	89	86	82
Cou	Cuedelune	Achieved Goal (%)	76.95	75.73	76.13	79.85	77.55
	Guadalupe	Achieved Average CS	84	83	81	81	78
	Vandall	Achieved Goal (%)	82.79	77.8	72.65	68.78	74.67
	Kendan	Achieved Average CS	87	84	80	76	79

## Table 25. Pavement Performance Summary for San Antonio District and Counties

II. Summary of FY 2010-FY 2013 Percentage of "Good" or Better Pavements and

**Condition Score** 

		Base Year		Analysis Years				
		2009	2010	2011	2012	2013		
Konn	Achieved Goal (%)	84.99	84.6	81.5	77.52	78.45		
Kerr	Achieved Average CS	89	87	84	80	79		
MaMallon	Achieved Goal (%)	80.22	80.22	77.38	76.55	72.16		
McMullen	Achieved Average CS	85	85	82	81	76		
Madina	Achieved Goal (%)	89.16	89.88	87.55	84.75	81.3		
Medina	Achieved Average CS	92	90	87	84	82		
Unalda	Achieved Goal (%)	79.12	81.05	77.77	77.04	70.66		
Uvalde	Achieved Average CS	85	85	83	80	77		
Wilcom	Achieved Goal (%)	83.78	78.81	80.03	81.51	75.65		
vv ilson	Achieved Average CS	89	85	84	82	78		

Based on the analysis results presented in Table 25, at the end of the 4-year planning horizon the county in best condition was Comal (86.17%) while the worst was Uvalde (70.66%).

#### III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 47. San Antonio District Overall Pavement Performance of FY 2002-FY 2013

## **Tyler District**

## I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,704
Total Lane miles	= 8,526

FY 2009 Plan total treatments = **857.2 lane miles** = 10.1% of system lane miles FY 2010 Plan total treatments = **733.2 lane miles** = 8.6% of system lane miles FY 2011 Plan total treatments = **814.2 lane miles** = 9.5% of system lane miles FY 2012 Plan total treatments = **588.5 lane miles** = 6.9% of system lane miles



Figure 48. Tyler District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 45.4, 0.0, 56.5 and 88.2 lane miles respectively.
- There were no Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 154.6 142.2, 152.4 and 12.6 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 657.2, 591.0, 605.3, and 487.7 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 811.8 lane miles or approximately 9.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 733.2 lane miles + 45.4 lane miles of Heavy Rehab treatments from FY 2009 = 778.6 lane miles or approximately 9.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 757.7 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 757.7 lane miles or approximately 8.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 500.3 lane miles + 56.5 lane miles of Heavy Rehab treatments from FY 2011 = 556.8 lane miles or approximately 6.5% of the total system.

	Table 20. Favement reflormance Summary for Tyter District and Counties								
			Base Year	Analysis Years					
			2009	2010	2011	2012	2013		
	- 1 D'	Achieved Goal (%)	92.28	89.83	86.29	81.96	76.8		
1	yler District	Achieved Average CS	92	90	87	84	80		
	A m downom	Achieved Goal (%)	96.15	93.36	89.28	84.81	76.89		
	Anderson	Achieved Average CS	94	91	87	84	80		
		Achieved Goal (%)	96.86	95.8	92.37	87.88	81.18		
	Cherokee	Achieved Average CS	95	93	90	86	82		
	Course	Achieved Goal (%)	88.6	84.97	83.58	78.64	75.02		
trict	Gregg	Achieved Average CS	91	88	86	83	79		
Dis	Henderson	Achieved Goal (%)	90.32	87.66	83.15	79.48	73.27		
yler		Achieved Average CS	90	88	85	82	79		
in T		Achieved Goal (%)	88.1	84.7	80.93	76.72	72.29		
ties	KUSK	Achieved Average CS	90	87	85	81	78		
Cour	G . 14	Achieved Goal (%)	92.89	91.18	87.16	82.75	78.09		
	Smith	Achieved Average CS	93	91	88	84	81		
	N	Achieved Goal (%)	91.37	89.12	85.71	84.18	80.43		
	van Zandt	Achieved Average CS	92	90	87	85	82		
	XX7 1	Achieved Goal (%)	93.35	90.58	87.58	79.94	75.75		
	Wood	Achieved Average CS	91	89	87	83	80		

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

 Table 26. Pavement Performance Summary for Tyler District and Counties

Based on the analysis results presented in Table 26, at the end of the 4-year planning horizon the county in best condition was Cherokee (81.18%) while the worst was Rusk (72.29%).



III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements

Figure 49. Tyler District Overall Pavement Performance of FY 2002-FY 2013

## **Waco District**

### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,404
Total Lane miles	= 7,339

FY 2009 Plan total treatments = **457.2 lane miles** = 6.2% of system lane miles FY 2010 Plan total treatments = **686.3 lane miles** = 9.4% of system lane miles FY 2011 Plan total treatments = **764.8 lane miles** = 10.4% of system lane miles FY 2012 Plan total treatments = **115.8 lane miles** = 1.6% of system lane miles



Figure 50. Waco District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009 and FY 2010 are 0.0, 62.1, 178.2 and 39.8 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 48.8, 218.2, 9.0 and 0.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 83.8 27.0, 0.0 and 76.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 324.6, 379.0, 577.6 and 0.0 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 457.2lane miles or approximately 6.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 624.2lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 624.2 lane miles or approximately 8.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 586.6 lane miles + 62.1 lane miles of Heavy Rehab treatments from FY 2010 = 648.7 lane miles or approximately 8.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 76.0lane miles + 178.2 lane miles of Heavy Rehab treatments from FY 2011 = 254.2 lane miles or approximately 3.5% of the total system.

	Table 27. Pavement Performance Summary for Waco District and Counties							
			Base Year		Analysi	s Years		
			2009	2010	2011	2012	2013	
**	7	Achieved Goal (%)	86.72	83.33	81.4	80.05	76.15	
M	aco District	Achieved Average CS	89	87	85	83	80	
	Dall	Achieved Goal (%)	81.44	78.44	74.68	74.92	70.72	
	Dell	Achieved Average CS	87	85	82	81	78	
	D	Achieved Goal (%)	97.04	92.79	91.67	93.16	89.81	
	возцие	Achieved Average CS	95	92	90	90	87	
	Coryell	Achieved Goal (%)	95.01	90.33	88.2	86.87	82.33	
trict		Achieved Average CS	93	91	88	86	83	
Dis	Falls	Achieved Goal (%)	95.56	92.79	91.68	89.96	85.95	
Vaco		Achieved Average CS	95	93	91	88	84	
in V	TT 11/	Achieved Goal (%)	92.88	86.47	83.85	83.81	81.74	
ıties	Hamilton	Achieved Average CS	92	89	87	86	84	
Oun	TT*11	Achieved Goal (%)	78.49	76.39	75.6	73.97	69.45	
	Hill	Achieved Average CS	84	82	81	79	75	
	T Second and	Achieved Goal (%)	87.86	84.68	83.02	80.11	75.59	
	Limestone	Achieved Average CS	91	88	87	84	80	
	N/ T	Achieved Goal (%)	81.77	78.83	77.19	73.81	70.29	
	WicLennan	Achieved Average CS	86	84	82	79	75	

## II. Summary of FY 2010-FY 2013 Percentage of "Good" or Better Pavements and **Condition Score**

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Based on the analysis results presented in Table 27, at the end of the 4-year planning horizon the county in best condition was Bosque (89.81%) while the worst was Hill (69.45%).



III. Summary of FY 2002–FY 2013 Percentage of "Good" or Better Pavements

Figure 51. Waco District Overall Pavement Performance of FY 2002-FY 2013

## Wichita Falls District

## I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 2,857
Total Lane miles	= 6,121

FY 2009 Plan total treatments = **580.4 lane miles** = 9.5% of system lane miles FY 2010 Plan total treatments = **357.2 lane miles** = 5.8% of system lane miles FY 2011 Plan total treatments = **505.1 lane miles** = 8.3% of system lane miles FY 2012 Plan total treatments = **1356.3 lane miles** = 22.2% of system lane miles



Figure 52. Wichita Falls District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 0.0, 0.0, 86.0 and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 113.0, 96.4, 0.0 and 9.8 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 3.2 0.0, 0.0 and 6.0 lane miles respectively.

• The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011 and FY 2012 are 464.2, 260.8, 419.1 and 1340.5 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 580.4 lane miles or approximately 9.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 357.2 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2009 = 357.2 lane miles or approximately 5.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 419.1 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 419.1 lane miles or approximately 6.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1356.3 lane miles + 86.0 lane miles of Heavy Rehab treatments from FY 2011 = 1442.3 lane miles or approximately 23.6% of the total system.

I		Base Year	Analysis Years				
		_	2009	2010	2011	2012	2013
v	Vichita Falls	Achieved Goal (%)	92.98	91.97	89.98	88.12	88.81
	District	Achieved Average CS	93	91	89	86	86
	Anaban	Achieved Goal (%)	95.18	95.62	94.4	92.7	92.07
	Archer	Achieved Average CS	96	94	91	88	87
	Davlan	Achieved Goal (%)	96.99	95.89	94.31	94.22 90 93.16	90.39
trict	Daylor	Achieved Average CS	97	94	92		86
Dis	Clay	Achieved Goal (%)	97.14	96.8	94.89	93.16	92.79
Falls	Clay	Achieved Average CS	96	94	91	89	87
iita ]		Achieved Goal (%)	91.19	89.34	86.1	84.03	86.83
Vich	Cooke	Achieved Average CS	91	90	87	84	86
in	Mantania	Achieved Goal (%)	90.64	90.47	86.46	83	83.88
nties	Montague	Achieved Average CS	92	90	87	84	84
Cour	Thus alors and an	Achieved Goal (%)	96.44	94.54	93.77	92.57	87.48
Ĭ	Inrockmorton	Achieved Average CS	95	93	91	89	85
	Wishita	Achieved Goal (%)	86.28	84.78	82.43	80.03	86.35
	wichita	Achieved Average CS	88	87	84	81	86

#### Table 28. Pavement Performance Summary for Wichita Falls District and Counties

II. Summary of FY 2010-FY 2013 Percentage of "Good" or Better Pavements and

**Condition Score** 

		Base Year	Analysis Years					
		2009	2010	2011	2012	2013		
	<b>XX</b> /*11	Achieved Goal (%)	94.32	93.63	93.49	92.12	94.1	
	wildarger	Achieved Average CS	95	93	91	89	89	
	<b>V</b> /	Achieved Goal (%)	96.24	94.29	93.28	92.26	89.72	
	Young	Achieved Average CS	95	92	90	89	87	

Based on the analysis results presented in Table 28, at the end of the 4-year planning horizon the county in best condition was Wilbarger (94.10%) while the worst was Montague (83.88%).

#### III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 53. Wichita Falls District Overall Pavement Performance of FY 2002-FY 2013

## **Yoakum District**

### I. Summary of FY 2009–FY 2012 Treatments

Total Center line miles	= 3,836
Total Lane miles	= 7,843

FY 2009 Plan total treatments = **686.3 lane miles** = 8.8% of system lane miles FY 2010 Plan total treatments = **739.0 lane miles** = 9.4% of system lane miles FY 2011 Plan total treatments = **569.4 lane miles** = 7.3% of system lane miles FY 2012 Plan total treatments = **569.2 lane miles** = 7.3% of system lane miles



Figure 54. Yoakum District Treatment Plans for FY 2009-2012

- Heavy Rehabilitation pertains to both existing sections and Added Capacity. The HRhb treatments planned for FY 2009, FY 2010, FY 2011, and FY 2012 are 26.4, 0.0, 27.8, and 22.2 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011, and FY 2012 are 49.2, 59.8, 69.2, and 64.8 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2009, FY 2010, FY 2011, and FY 2012 are 8.0, 38.2, 0.0, and 0.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2009, FY 2010, FY 2011, and FY 2012 are 602.7, 641.0, 472.4, and 482.2 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2010 = 659.9 lane miles or approximately 8.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 739.0 lane miles + 26.4 lane miles of Heavy Rehab treatments from FY 2009 = 765.4 lane miles or approximately 9.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 541.6 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 541.6 lane miles or approximately 6.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 547.0 lane miles + 27.8 lane miles of Heavy Rehab treatments from FY 2011 = 574.8 lane miles or approximately 7.3% of the total system.

Table 29: 1 avenuent 1 erior mance Summary 101 Toakum District and Counties									
			Base Year		Analysis Years				
			2009	2010	2011	2012	2013		
Yoakum District Achieved Goal (%) Achieved Average CS		86.08	84.08	82.93	80.23	76.5			
		Achieved Average CS	90	87	85	83	80		
	Austin	Achieved Goal (%)	85.34	88.35	88.9	84.94	84.71		
		Achieved Average CS	89	89	87	84	85		
ct	<b>C</b> 11	Achieved Goal (%)	86.08	81.92	82.16	84.53	79.66		
istri	Cainoun	Achieved Average CS	90	87	86	Sis Years           2012         20           80.23         76           83         8           84.94         84.           84         8           84.53         79.           86         8           84.83         79.           85         8           81.42         77.           81         7           74.98         71.           80         7	82		
m D	Colorado	Achieved Goal (%)	90.79	87.5	86.99	84.83	79.47		
aku		Achieved Average CS	93	90	88	85	82		
n Yo	D 14	Achieved Goal (%)	87.42	84.83	84.59	81.42	77.56		
ies ii	Dewitt	Achieved Average CS	91	89	87	84	80		
ount	Foretto	Achieved Goal (%)	83.07	82.62	81.18	78.07	72.93		
Ŭ	Fayette	Achieved Average CS	88	87	84	81	77		
	Gonzales	Achieved Goal (%)	83.21	81.19	79	74.98	71.81		
		Achieved Average CS	88	86	84	80	77		

# II. Summary of FY 2010–FY 2013 Percentage of "Good" or Better Pavements and Condition Score

Table 29. Pavement Performance	Summary f	for Y	oakum	District and	Counties
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~				

		Base Year	Analysis Years				
		2009	2010	2011	2012	2013	
Laskson	Achieved Goal (%)	85.72	85.07	81.26	80.86	76.54	
Jackson	Achieved Average CS	90	88	85	84	81	
Lavaaa	Achieved Goal (%)	79.93	76.39	76.57	76.7	73.11	
Lavaca	Achieved Average CS	87	84	82	81	77	
Mataganda	Achieved Goal (%)	90.34	92.09	92.27	88.73	85.96	
Matagorua	Achieved Average CS	92	91	90	87	85	
Vietorio	Achieved Goal (%)	88.27	82.9	79.32	75.12	70.25	
victoria	Achieved Average CS	89	86	84	81	78	
Whenten	Achieved Goal (%)	87.01	82.74	81.97	77.84	75.35	
wnarton	Achieved Average CS	90	87	85	81	79	

Based on the analysis results presented in Table 29, at the end of the 4-year planning horizon the county in best condition was Matagorda (85.96%) while the worst was Victoria (70.25%).

### III. Summary of FY 2002-FY 2013 Percentage of "Good" or Better Pavements



Figure 55. Yoakum District Overall Pavement Performance of FY 2002-FY 2013