CTR

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A FOUR-YEAR PAVEMENT MANAGEMENT PLAN (FY 2011–FY 2014)

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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

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Section 1. FY 2011–2014 Pavement Management Plan Executive Summary

Rider 55 of the Texas Department of Transportation's (TxDOT) 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.

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 the 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.

The 2011–2014 Pavement Management Plan (PMP) provides TxDOT with a mechanism 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 (LRhb), Medium (MRhb), or Heavy Rehabilitation (HRhb) and the impact that those treatments are predicted to have on the pavement conditions.

Plan Components

➢ The financial constraint for all categories of funding for FY 2011–14 was identified from finance revenue projections and utilized to plan the projects.

➢ Projects for the FY 2011–14 planned lettings were identified in P6 and considered for impact on pavement condition.

➢ All maintenance expenditures (Strategy 105/144) were captured in the PMP system, taking into account all routine and preventive maintenance work.

Maintenance Expenditures (Strategy 105/144)
Each district developed their 4-year expenditure projections based on anticipated budgets. Certain expenses 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 well established in order to maintain existing systems (Intelligent Transportation System [ITS], signals, illumination, etc.). The pavement expenditures include both in-house state force work and routine maintenance contracts. These

pavement expenditures do not include construction expenditures in which approximately $626 M were expected to be available in 2011 for rehabilitation and preventive maintenance projects from Fund 6.

Statewide Expenditure Projections

FY	Budget $	OH & Opers. $	%	Struct $	%	Roadside $	%	Traffic Opers. $	%	Pvmt $	%
11	909 M	116 M	13	18 M	2	191 M	21	225 M	25	357 M	39
12	909 M	120 M	13	19 M	2	190 M	21	227 M	25	350 M	39
13	909 M	121 M	14	19 M	2	192 M	21	229 M	25	345 M	38
14	909 M	124 M	14	19 M	2.	194 M	21	231 M	26	335 M	37
Avg			14		2		21		25		38

Statewide

- Projected annual growth in maintenance budget at0 %.
- Overall, we can project spending an average of 38% of our maintenance budget on pavement work, which is an increase from previous plans.

Pavement Condition Prediction Model
The project data identified above was analyzed through the Center for Transportation Research (CTR)'s prediction model described below.

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 Pavement Management Information System (PMIS) database. The most current version of the PMIS database was used in the analysis, based on the 2010 PMIS data collection.

Base Year Network Condition
The base year of the analysis was 2010. 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 Condition Scores.

Proposed Improvements
The projects identified in the Planned Lettings and in the Maintenance portions of the PMP were applied to the model with the appropriate work type as defined below:

- ➢ **Routine Maintenance:** sealing cracks, patching, pothole repair, level up, etc.
- ➢ **Preventive Maintenance:** seal coats (chip seals),thin overlays, micro-surfacing
- ➢ **Light Rehab:** 2 in. < overlays < 3 in., widening pavement and seal coat, base repairs and seal coat, mill, seal and thin overlay
- ➢ **Medium Rehab**: 3 in. < Overlays < 5 in., Mill and Inlay (Mill and Fill), Mill, stabilize base and Seal, Level up and overlay, Base repairs and Overlay

> **Heavy Rehab:** Full pavement reconstruction, Bomag, add base and overlay or seal (2R)

Deterioration Model

CTR's model, which predicts deterioration of pavements, is based on several factors such as climatic region, historical deterioration, and highway type. The network is loaded with the proposed improvements and then deterioration applied using the model resulting in predicted Pavement Condition scores.

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 measured utilizing a Profiler. The Pavement Condition Score is 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" (Condition Score≥70) by 2012. Figure 1 shows samples of the ratings.
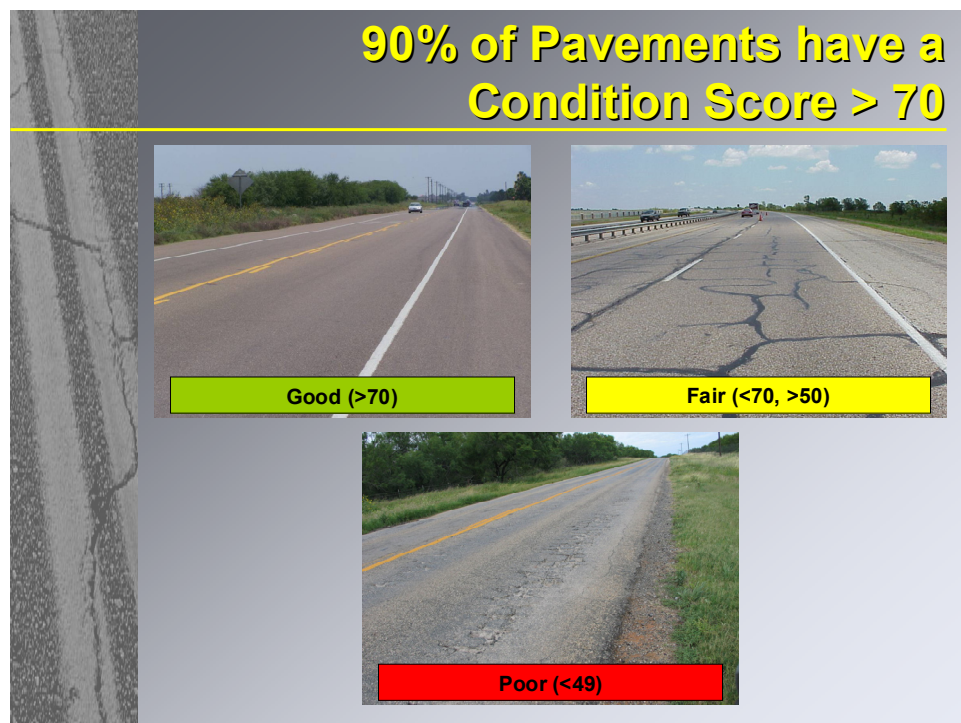
Figure 1. Photos indicate the visual pavement condition with the associated Condition Score.

Pavement Condition Improvements

Statewide PMIS Scores
FY 2009: 85.94% GOOD OR BETTER
FY 2010: 86.99% GOOD OR BETTER

Contributing factors

➢ Additional Pavement Preservation Funding (ARRA)

➢ Peer Reviews (5 of 7 Districts reviewed improved scores)

➢ Pennies to the pavement approach in managing expenditures

➢ Planning maintenance strategically (Results-oriented PMP)

Pavement Condition Projections

- The 4-year plan indicated that the following number of lanes miles would be treated with PM or Rehabilitation:

  ➢ FY 2011 - 23,302 lane miles = 12.2 % of system

  ➢ FY 2012 - 21,404 lane miles = 11.2 % of system

  ➢ FY 2013 - 23,939 lane miles = 12.6 % of system

  ➢ FY 2014 - 20,410 lane miles = 10.7 % of system

- The 4-year projections indicated that the percent of "Good or Better" pavement conditions would be as follows:

  ➢ FY 2010 (Actual) – 86.97%

  ➢ FY 2011 – 86.17 %

  ➢ FY 2012 – 85.34 %

  ➢ FY 2013 – 83.85 %

  ➢ FY 2014 – 81.99 %
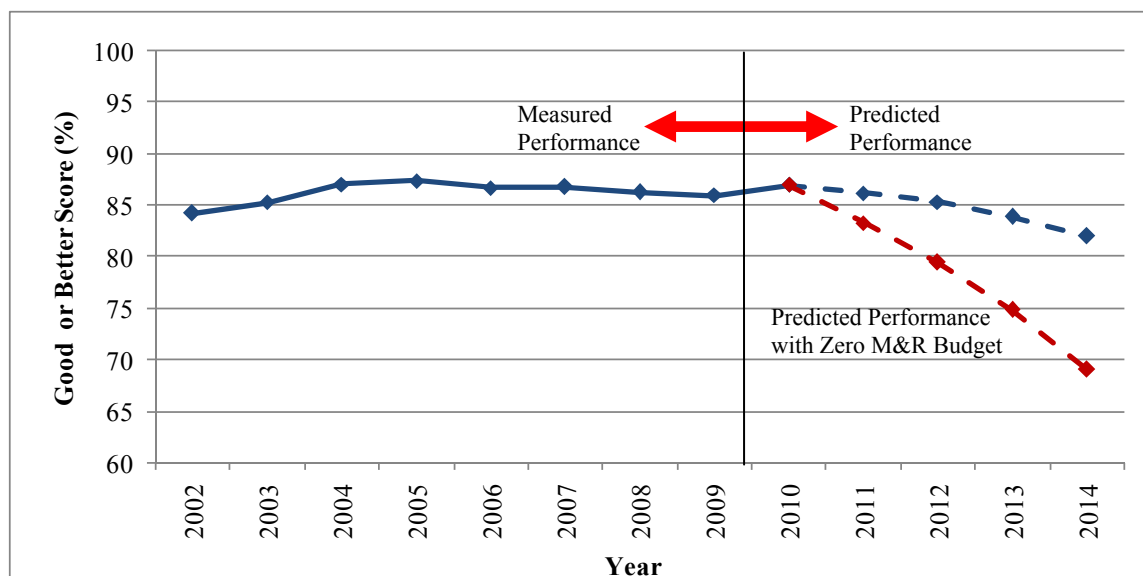
Figure 2. Statewide Overall Pavement Performance for FY 2002–FY 2014

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 2010 PMIS data collection.

Base Year Network Condition
The base year of the analysis was 2010. 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.

Table 1. Summary of Nine Groups of Deterioration Models

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

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 3. For each climatic region, separate pavement condition models pertaining to the Distress Score and the Ride score were developed.
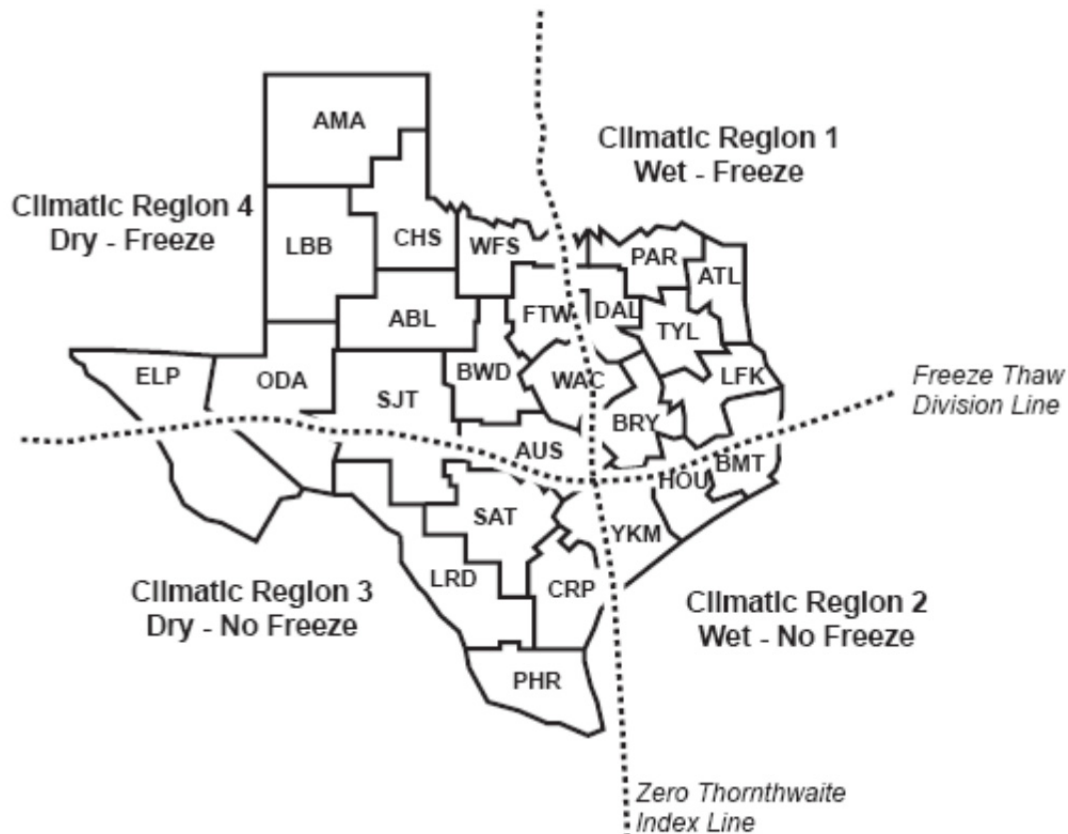
Figure 3. Climatic Regions in the State of Texas

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 combined to calculate the new Condition Score of each section. The new Condition Score of each section were then averaged together and weighted by their respective lane-miles to get the new statewide 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 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, which 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.

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Table 2. Maintenance and Rehabilitation Action Unit Costs

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	$29,000	$36,000
Light Rehabilitation	$173,000	$60,000
Medium Rehabilitation	$237,000	$256,000
Heavy Rehabilitation	$442,000	$651,000

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 3. Maintenance and Rehabilitation Action 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

Section 3. Statewide Summary

I. Summary of FY 2010–FY 2013 Treatments

Total State Center line miles = 80,000
Total State Lane miles = 190,396

FY 2010 Plan total treatments = **16,905.5 lane miles** = 8.9% of system lane miles
FY 2011 Plan total treatments = **23,302.4 lane miles** = 12.2% of system lane miles
FY 2012 Plan total treatments = **21,404.0 lane miles** = 11.2% of system lane miles
FY 2013 Plan total treatments = **23,938.9 lane miles** = 12.6% of system lane miles
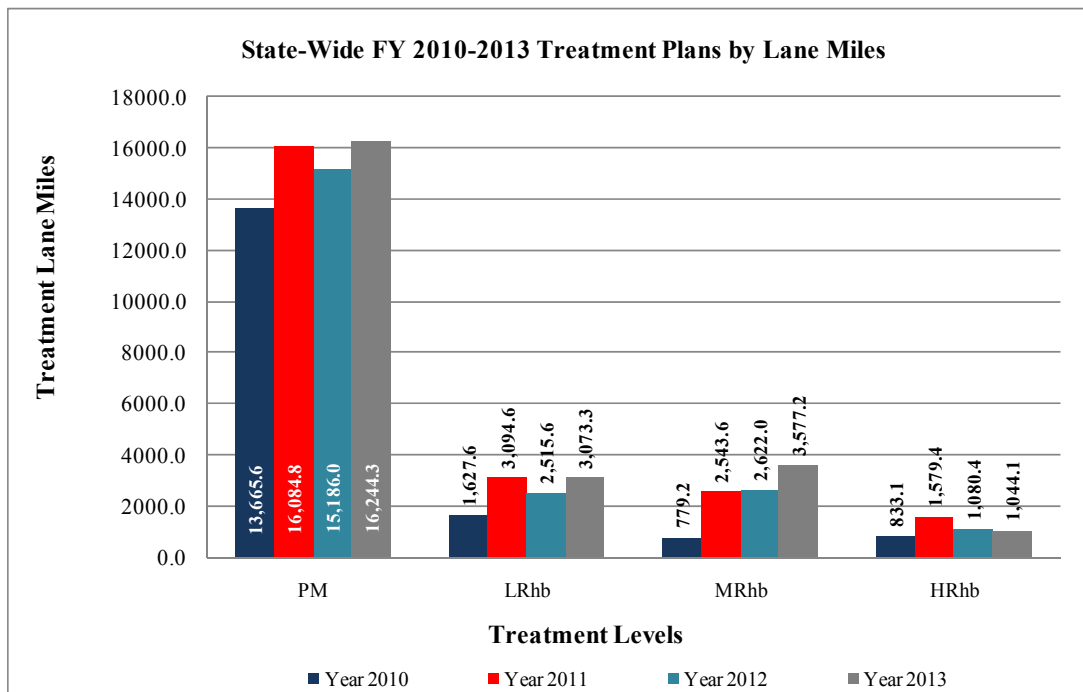
Figure 4. Statewide Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 833.1, 1,579.4, 1,080.4, and 1,044.1 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 779.2, 2,543.6, 2,622.0, and 3,577.2 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 1,627.6, 3,094.6, 2,515.6, and 3,073.3 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 13,665.6, 16,084.8, 15,186.0, and 16,244.3 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 16,072.4 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 = 22,556.1 lane miles or approximately 11.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 21,903.0 lane miles or approximately 11.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 23,975.2 lane miles or approximately 12.6% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor, and Very Poor) are summarized in Figure 5.

Figure 5. Statewide District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2010–FY 2014 Percentage of "Good or Better" Pavements and Condition Score for Entire State

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

			Base Year 2010		Analysis Years			
			Measured	Predicted	2011	2012	2013	2014
Overall State		**Achieved Goal (%)**	**86.97**	**84.96**	**86.17**	**85.34**	**83.85**	**81.99**
		Achieved Average CS	**90**	**88**	**88**	**87**	**85**	**83**
Districts in State of Texas	**Abilene**	Achieved Goal (%)	90.22	88.88	88.63	88.14	85.09	83.14
		Achieved Average CS	92	90	90	88	85	83
	Amarillo	Achieved Goal (%)	86.04	88.06	86.96	85.38	84.49	82.36
		Achieved Average CS	90	89	89	87	85	82
	Atlanta	Achieved Goal (%)	93.35	92.55	93.16	91.99	90.03	87.12
		Achieved Average CS	94	93	92	90	87	85
	Austin	Achieved Goal (%)	82.71	81.69	80.37	81.44	79.77	79.71
		Achieved Average CS	88	86	86	85	83	82
	Beaumont	Achieved Goal (%)	91.06	86.79	90.22	89.65	87.78	86.2
		Achieved Average CS	93	89	91	89	86	84
	Brownwood	Achieved Goal (%)	93.44	92.39	94.68	94.49	93.88	91.91
		Achieved Average CS	95	92	94	92	90	87
	Bryan	Achieved Goal (%)	86.38	85.27	82.69	79.67	77.32	75.64
		Achieved Average CS	89	88	86	84	81	80
	Childress	Achieved Goal (%)	89.53	90.87	90.47	90.14	89.93	88.15
		Achieved Average CS	93	92	92	89	88	85
	Corpus Christi	Achieved Goal (%)	81.58	83.31	81.58	84.15	84.51	84.95
		Achieved Average CS	87	87	86	86	85	84
	Dallas	Achieved Goal (%)	78.28	70.1	73.79	71.91	68.7	65.09
		Achieved Average CS	84	78	80	78	75	73
	El Paso	Achieved Goal (%)	89.01	86.15	86.63	84.27	81.67	81.97
		Achieved Average CS	91	88	89	86	83	83
	Fort Worth	Achieved Goal (%)	85.52	80.1	84.35	79.98	75.71	72.36
		Achieved Average CS	88	84	86	83	79	77
	Houston	Achieved Goal (%)	76.04	71.93	71.46	67.07	61.55	56.54
		Achieved Average CS	84	80	80	76	72	69
	Laredo	Achieved Goal (%)	85.69	83.3	82.88	83.08	82.67	81.99
		Achieved Average CS	89	86	87	85	84	82
	Lubbock	Achieved Goal (%)	87.36	85.99	87.9	89.36	89.45	87.96
		Achieved Average CS	92	89	90	89	88	86
	Lufkin	Achieved Goal (%)	89.3	85.26	87.44	84.79	83.6	82.04
		Achieved Average CS	91	89	89	87	84	82
	Odessa	Achieved Goal (%)	93.33	92.75	93.56	92.91	91.24	88.33
		Achieved Average CS	94	93	93	90	87	85
	Paris	Achieved Goal (%)	80.6	72.74	79.57	82.18	81.78	81.51

		Base Year 2010		Analysis Years			
		Measured	**Predicted**	**2011**	**2012**	**2013**	**2014**
Overall State	**Achieved Goal (%)**	**86.97**	**84.96**	**86.17**	**85.34**	**83.85**	**81.99**
	Achieved Average CS	86	82	84	86	85	84
Pharr	Achieved Goal (%)	84.07	80.22	86.88	88.48	90.14	88.58
	Achieved Average CS	90	86	89	88	88	86
San Angelo	Achieved Goal (%)	95.23	94.91	95.12	94.91	93.76	91.44
	Achieved Average CS	96	94	94	93	90	88
San Antonio	Achieved Goal (%)	84.82	81.43	82.96	81.52	80.02	76.61
	Achieved Average CS	89	85	87	84	82	80
Tyler	Achieved Goal (%)	93.85	89.83	90.41	87.61	84.86	82.14
	Achieved Average CS	93	90	90	88	86	84
Waco	Achieved Goal (%)	87.54	83.33	84.64	83.46	81.59	80.21
	Achieved Average CS	90	87	88	86	84	82
Wichita Falls	Achieved Goal (%)	93.18	91.97	91.81	92	92.71	92.53
	Achieved Average CS	94	91	92	91	91	90
Yoakum	Achieved Goal (%)	87.86	84.08	86.1	84.97	83.94	81.36
	Achieved Average CS	90	87	88	87	85	82

III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements for Entire State
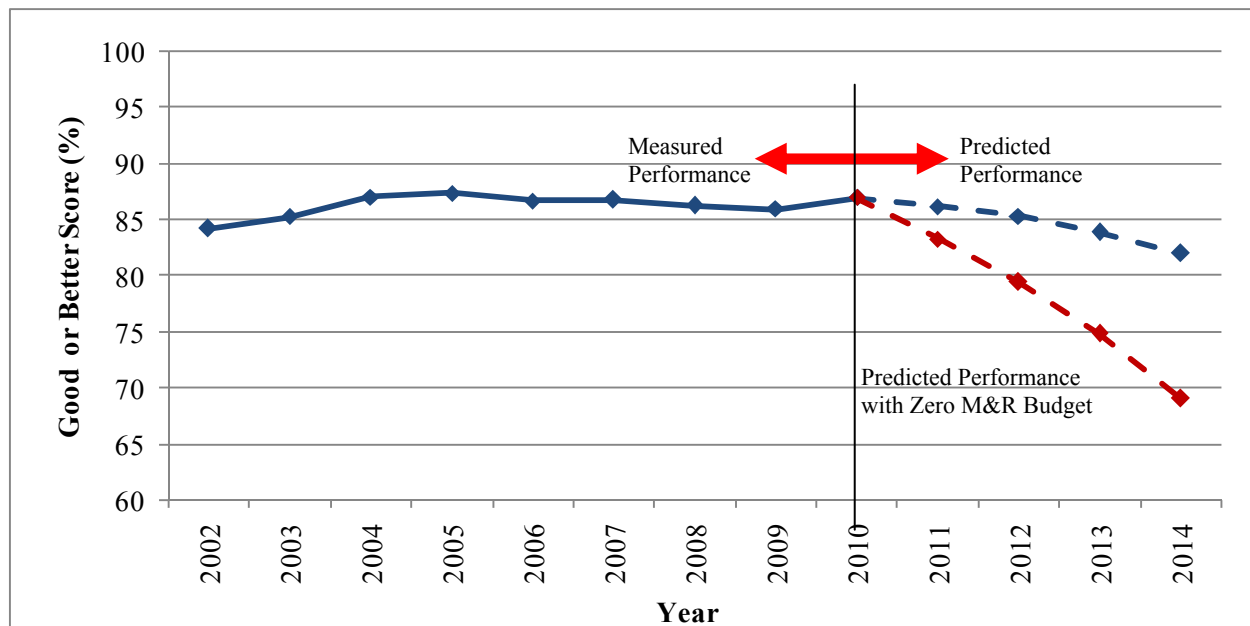
Figure 6. Statewide Overall Pavement Performance for FY 2002-FY 2014

Section 4. District Summaries

Abilene District

I. Summary of FY 2010–FY 2013 Treatments
Total Center lane miles = 3,744
Total Lane miles = 8,397

FY 2010 Plan total treatments = **572.0 lane miles** = 6.8% of system lane miles
FY 2011 Plan total treatments = **1,484.9 lane miles** = 17.7% of system lane miles
FY 2012 Plan total treatments = **1,494.0 lane miles** = 17.8% of system lane miles
FY 2013 Plan total treatments = **1,641.7 lane miles** = 19.6% of system lane miles
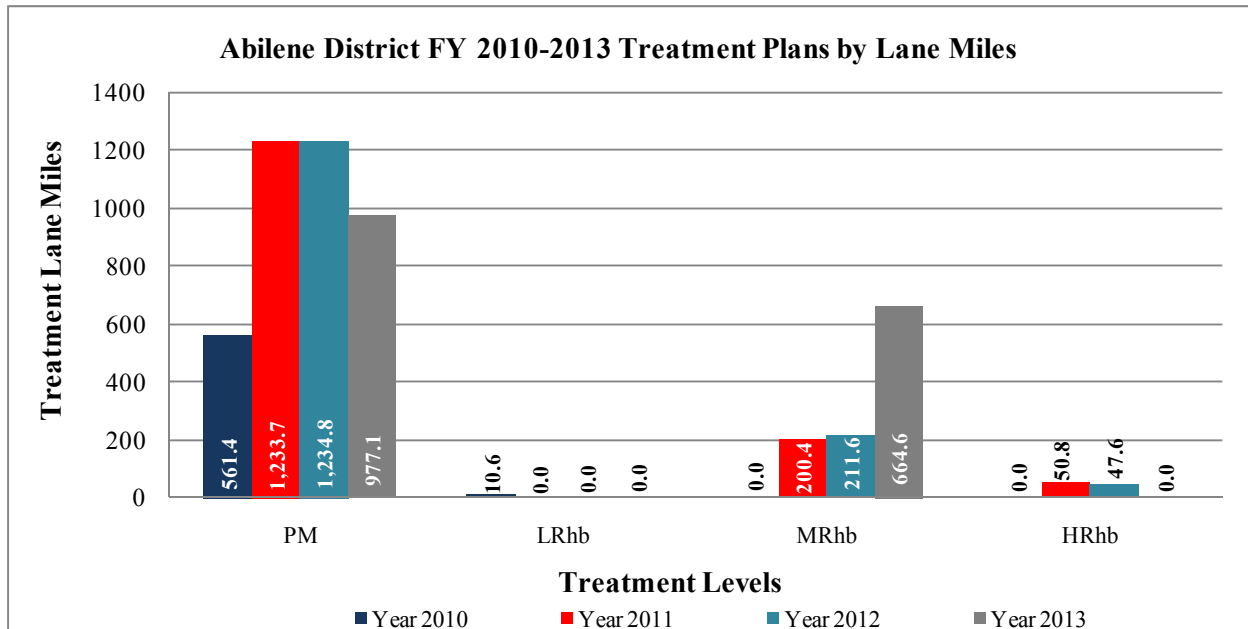
Figure 7. Abilene District Treatment Plans for FY 2010–2013

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 Heavy Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 50.8, 47.6, and 0.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 200.4, 211.6, and 664.6 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 10.6, 0.0, 0.0, and 0.0 lane miles respectively.
- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 561.4, 1233.7, 1234.8, and 977.1 lane miles respectively.

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The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 572.0 lane miles or approximately 6.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 1434.1 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 1434.1 lane miles or approximately 17.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1446.4 lane miles + 50.8 lane miles of Heavy Rehab treatments from FY 2011 = 1497.2 lane miles or approximately 17.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 1641.7 lane miles + 47.6 lane miles of Heavy Rehab treatments from FY 2012 = 1689.3 lane miles or approximately 20.1% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 8.
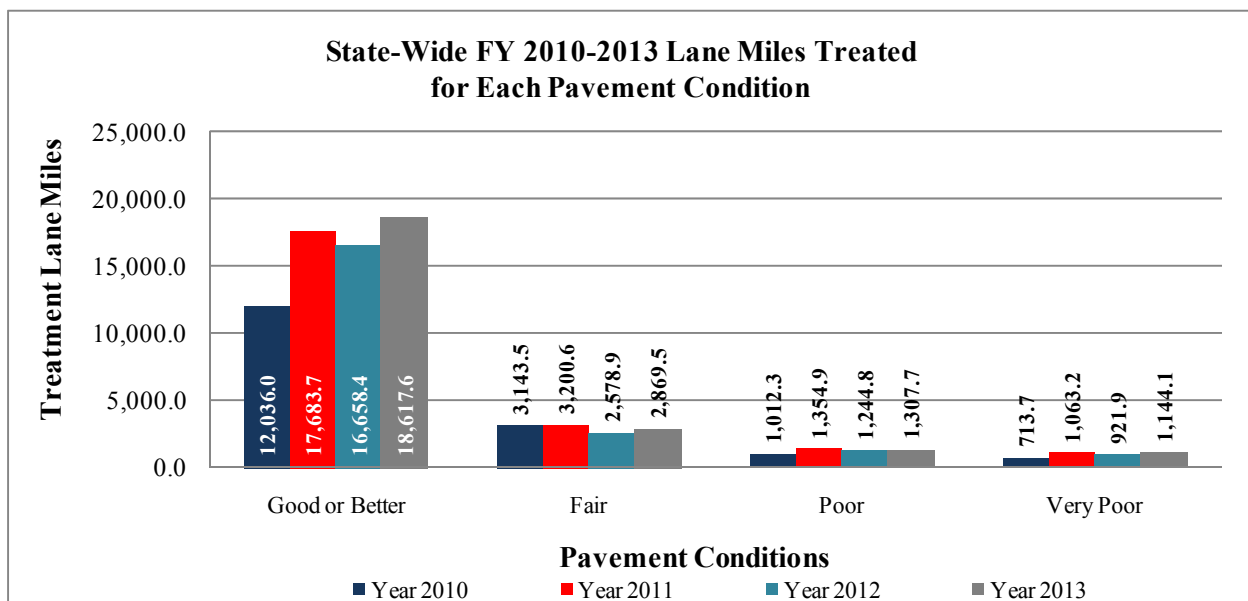

Figure 8. Abilene District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 5. Pavement Performance Summary for Abilene District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Abilene District	**Achieved Goal (%)**	**90.22**	**89.26**	**89.79**	**88.56**	**88.40**
	Achieved Average CS	**92**	**90**	**89**	**87**	**86**
Borden	Achieved Goal (%)	95.91	92.46	92.93	89.95	87.26
	Achieved Average CS	94	91	91	89	86
Callahan	Achieved Goal (%)	90.14	88.1	87	86.08	87.35
	Achieved Average CS	92	89	87	86	86
Fisher	Achieved Goal (%)	95.85	95.63	94.41	95.02	93.58
	Achieved Average CS	96	94	91	90	87
Haskell	Achieved Goal (%)	93.16	89.91	86.81	82.38	82.62
	Achieved Average CS	93	90	87	84	83
Howard	Achieved Goal (%)	85.43	84.27	86.42	84.88	85.24
	Achieved Average CS	91	89	88	86	84
Jones	Achieved Goal (%)	86.63	85.67	85.69	85.45	85.39
	Achieved Average CS	91	89	87	85	84
Kent	Achieved Goal (%)	95.82	92.55	91.63	88.92	95.88
	Achieved Average CS	95	92	90	88	94
Mitchell	Achieved Goal (%)	86.8	89.55	95.73	95.58	94.85
	Achieved Average CS	92	91	93	92	90
Nolan	Achieved Goal (%)	91.96	91.29	89.26	85.52	86.13
	Achieved Average CS	93	90	88	85	85
Scurry	Achieved Goal (%)	90.64	91.4	93.98	93.66	93.16
	Achieved Average CS	93	91	92	91	89
Shackelford	Achieved Goal (%)	91.69	89.42	96.72	94.17	92.02
	Achieved Average CS	92	90	92	90	89
Stonewall	Achieved Goal (%)	96.3	97.15	96.54	95.39	95.27
	Achieved Average CS	96	96	93	90	91
Taylor	Achieved Goal (%)	87.85	86.64	86.22	86.71	84.97
	Achieved Average CS	90	88	87	86	84

(Left side label: Counties in Abilene District)

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Stonewall (96.3%) while the worst was Howard (85.43%).

III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 9. Abilene District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Amarillo District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 4,092
Total Lane miles = 9,362

FY 2010 Plan total treatments = **890.1 lane miles** = 9.5% of system lane miles
FY 2011 Plan total treatments = **645.7 lane miles** = 6.9% of system lane miles
FY 2012 Plan total treatments = **682.6 lane miles** = 7.3% of system lane miles
FY 2013 Plan total treatments = **638.6 lane miles** = 6.8% of system lane miles

Figure 10. Amarillo District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 36.4, 69.7, 29.6, and 83.8 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 0.0, 28.8, and 9.2 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0 39.2, 33.2, and 32.6 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 853.7, 536.8, 591.0, and 513.0 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 853.7 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 = 576.0 lane miles + 36.4 lane miles of Heavy Rehab treatments from FY 2010 = 612.4 lane miles or approximately 6.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 653.0 lane miles + 69.7 lane miles of Heavy Rehab treatments from FY 2011 = 722.7 lane miles or approximately 7.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 554.8 lane miles + 29.6 lane miles of Heavy Rehab treatments from FY 2012 = 584.4 lane miles or approximately 6.2% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 11.
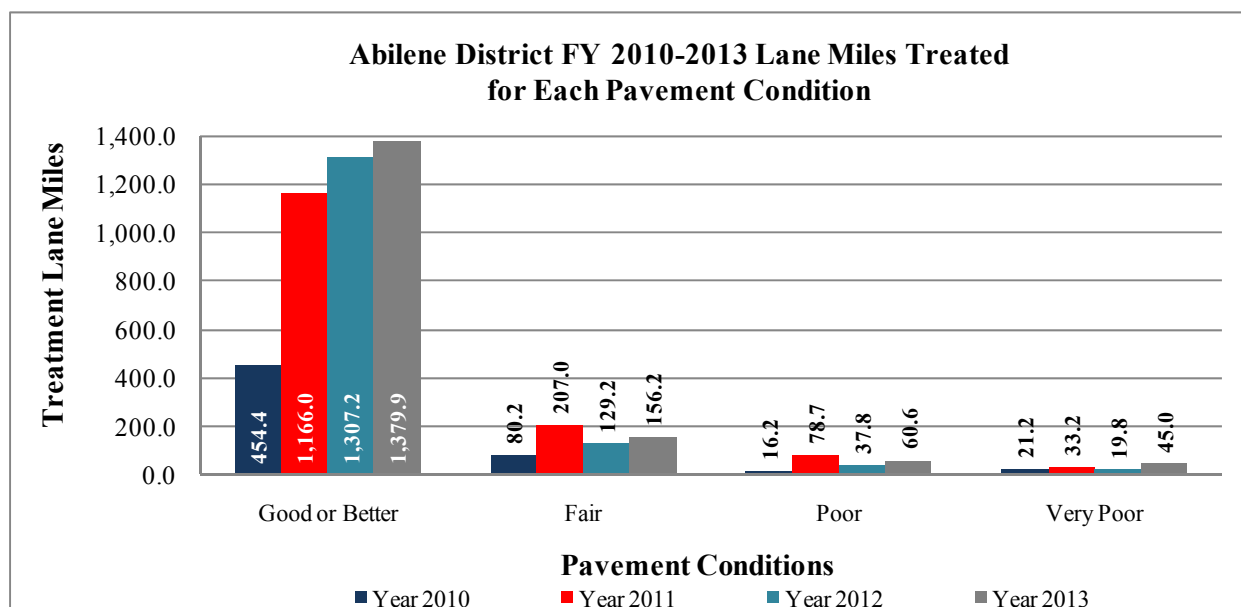

Figure 11. Amarillo District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 6. Pavement Performance Summary for Amarillo District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Amarillo District		**Achieved Goal (%)**	**86.04**	**86.96**	**85.38**	**84.49**	**82.36**
		Achieved Average CS	**90**	**89**	**87**	**85**	**82**
Counties in Amarillo District	Armstrong	Achieved Goal (%)	91.74	92.35	91.66	93.98	95.36
		Achieved Average CS	95	93	91	91	89
	Carson	Achieved Goal (%)	81.01	86.06	86.7	84.51	81.97
		Achieved Average CS	87	88	87	85	82
	Dallam	Achieved Goal (%)	85.33	88.38	86.67	86.98	85.67
		Achieved Average CS	90	90	87	86	84
	Deaf Smith	Achieved Goal (%)	87.7	86.57	85.34	85.28	83.65
		Achieved Average CS	90	89	86	84	82
	Gray	Achieved Goal (%)	87.14	86.58	85.13	83.08	80.23
		Achieved Average CS	91	89	87	84	80
	Hansford	Achieved Goal (%)	95.76	96.22	95.08	95.01	93.99
		Achieved Average CS	97	95	93	90	88
	Hartley	Achieved Goal (%)	80.71	86.4	84.33	86.36	80.71
		Achieved Average CS	87	89	86	85	81
	Hemphill	Achieved Goal (%)	89.8	90.94	87.93	85.96	82.42
		Achieved Average CS	90	90	87	85	82
	Hutchinson	Achieved Goal (%)	92.34	90.69	88.4	86.37	84.09
		Achieved Average CS	92	91	88	85	83
	Lipscomb	Achieved Goal (%)	88.53	89.52	86.65	88.14	89.88
		Achieved Average CS	90	91	88	88	88
	Moore	Achieved Goal (%)	90.51	92.4	91.15	89.6	86.13
		Achieved Average CS	94	93	90	87	85
	Ochiltree	Achieved Goal (%)	84.19	87.63	83.73	85.36	86.89
		Achieved Average CS	89	88	85	85	84
	Oldham	Achieved Goal (%)	89.41	88.32	85.28	81.98	79.42
		Achieved Average CS	92	90	87	85	82
	Potter	Achieved Goal (%)	70.67	71.22	68.76	65.48	62.36
		Achieved Average CS	82	80	77	75	71
	Randall	Achieved Goal (%)	87.27	84.75	82.93	80.64	77.97
		Achieved Average CS	90	88	85	83	80
	Roberts	Achieved Goal (%)	91.66	92.74	91.33	93.49	88.99
		Achieved Average CS	92	91	89	88	86
	Sherman	Achieved Goal (%)	86.52	86.29	88.56	88.52	87.03
		Achieved Average CS	89	88	88	87	85

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Hansford (95.76%) while the worst was Potter (70.67%).

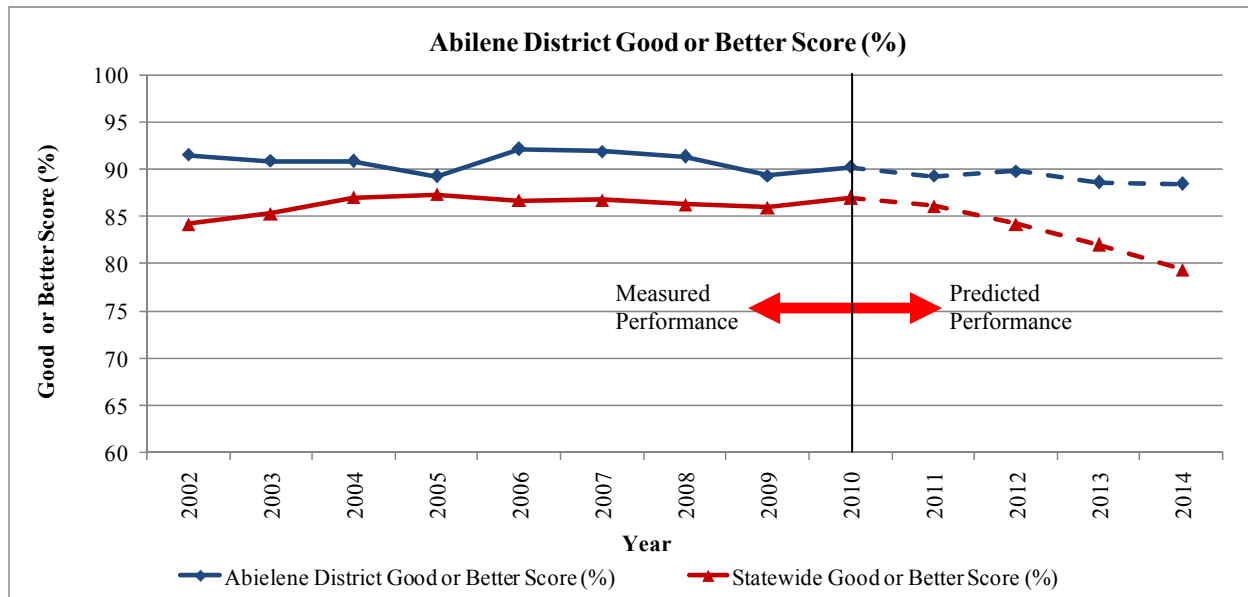## III.   Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 12. Amarillo District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Atlanta District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,691
Total Lane miles = 6,155

FY 2010 Plan total treatments = **569.7 lane miles** = 9.3% of system lane miles
FY 2011 Plan total treatments = **576.3 lane miles** = 9.4% of system lane miles
FY 2012 Plan total treatments = **555.9 lane miles** = 9.0% of system lane miles
FY 2013 Plan total treatments = **627.9 lane miles** = 10.2% of system lane miles
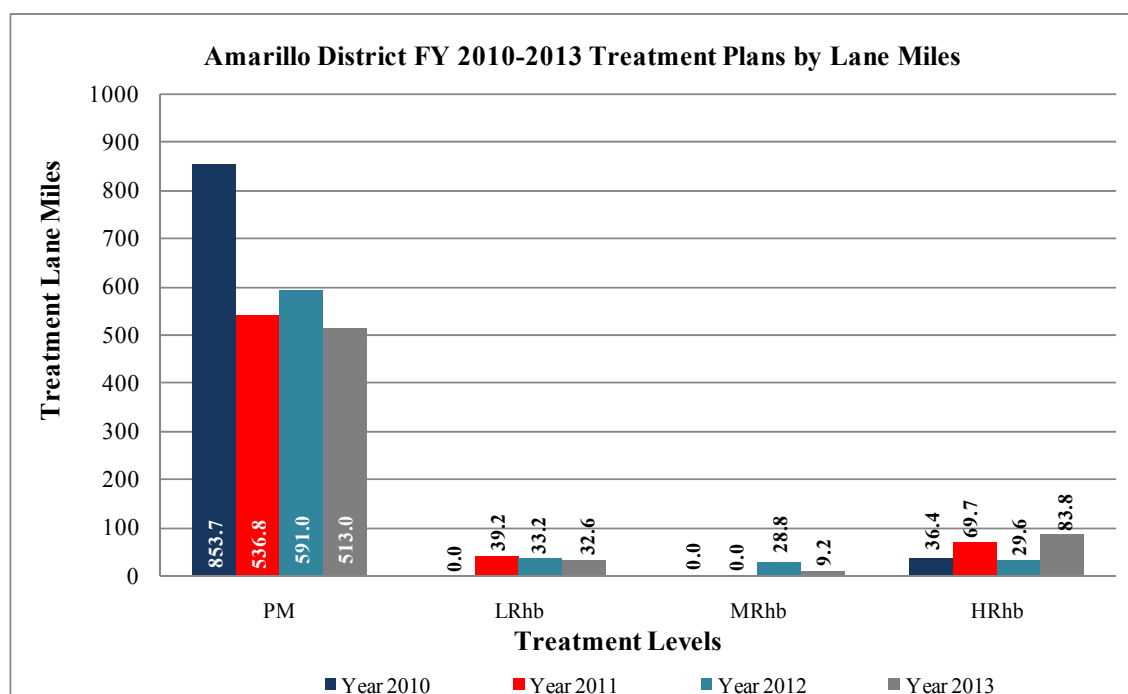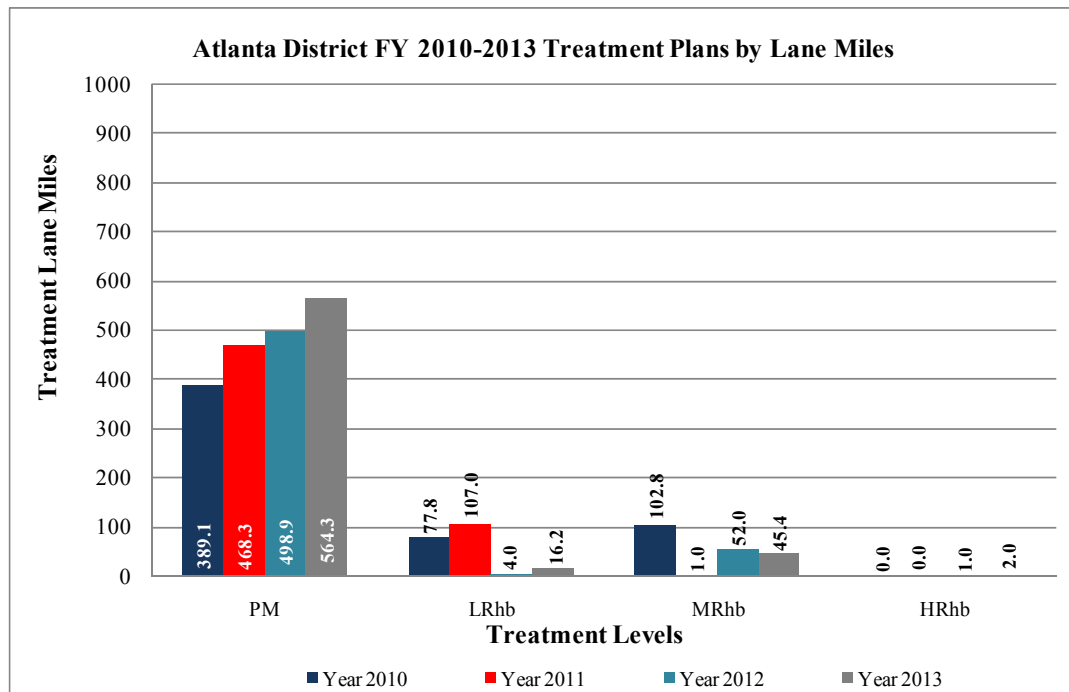

Figure 13. Atlanta District Treatment Plans for FY 2010–2013

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 Heavy Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 0.0, 1.0, and 2.0 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 102.8, 1.0, 52.0, and 45.4 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 77.8, 107.0, 4.0, and 16.2 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 389.1, 468.3, 498.9, and 564.3 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 569.7 lane miles or approximately 9.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 576.3 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 576.3 lane miles or approximately 9.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 554.9 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2011 = 554.9 lane miles or approximately 9.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 625.9 lane miles + 1.0 lane miles of Heavy Rehab treatments from FY 2012 = 626.9 lane miles or approximately 10.2% of the total system.

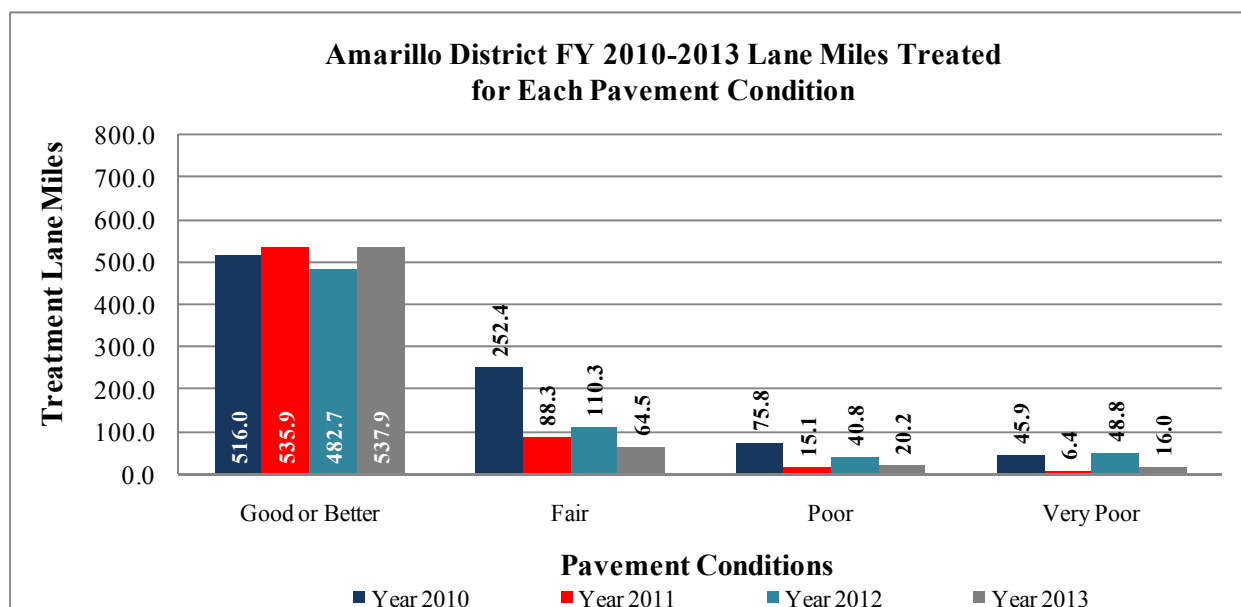The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 14.

Figure 14. Atlanta District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 7. Pavement Performance Summary for Atlanta District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Atlanta District		Achieved Goal (%)	93.35	93.16	91.99	90.03	87.12
		Achieved Average CS	94	92	90	87	85
Counties in Atlanta District	Bowie	Achieved Goal (%)	92.88	92.4	90.08	88.26	83.41
		Achieved Average CS	93	91	88	86	83
	Camp	Achieved Goal (%)	85.77	93.49	94.69	93.41	93.89
		Achieved Average CS	90	93	93	89	87
	Cass	Achieved Goal (%)	95.88	95.48	94.79	93.47	92.39
		Achieved Average CS	97	95	92	90	88
	Harrison	Achieved Goal (%)	93.64	92.33	90.39	87.86	85.1
		Achieved Average CS	94	92	89	86	84
	Marion	Achieved Goal (%)	94.79	97.43	96.28	91.68	90.66
		Achieved Average CS	95	93	91	87	86
	Morris	Achieved Goal (%)	94.99	93.31	94.82	93.19	92.29
		Achieved Average CS	96	94	93	90	88
	Panola	Achieved Goal (%)	93.8	94.17	92.44	89.83	84.58
		Achieved Average CS	94	93	91	88	84
	Titus	Achieved Goal (%)	90.96	89.2	88.37	88.33	85.62
		Achieved Average CS	92	90	89	87	83
	Upshur	Achieved Goal (%)	92.82	92.51	91.81	89.67	86.52
		Achieved Average CS	94	92	90	88	85

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Cass (95.88%) while the worst was Camp (85.77%).

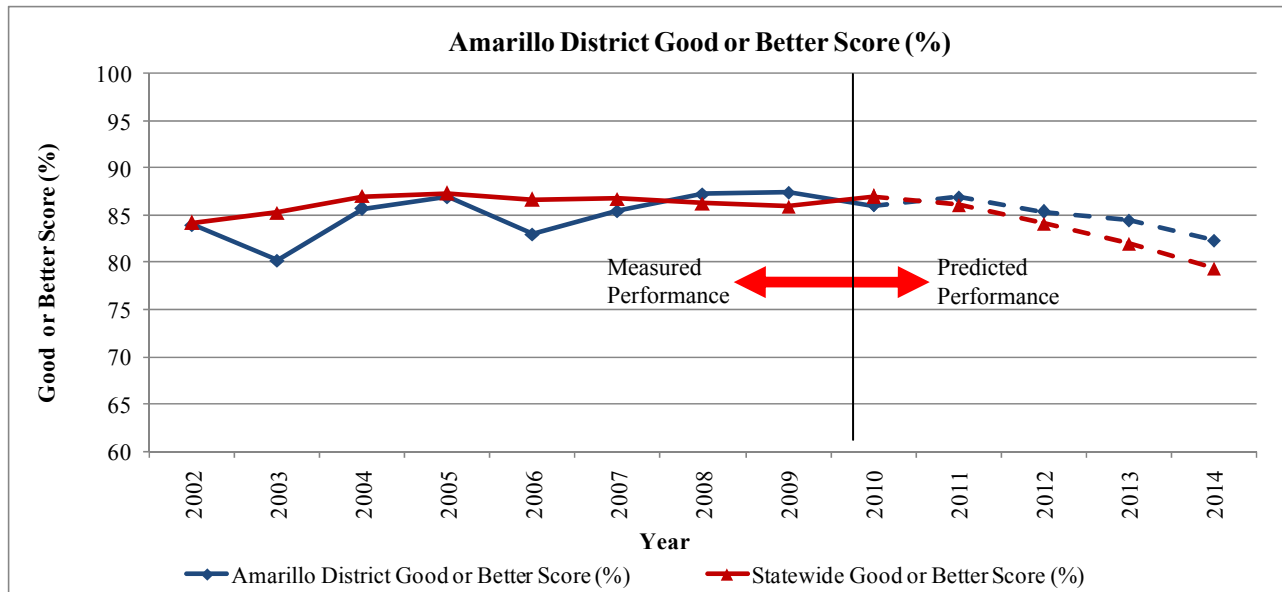**III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements**

Figure 15. Atlanta District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Austin District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,345
Total Lane miles = 8,976

FY 2010 Plan total treatments = **518.7 lane miles** = 5.8% of system lane miles
FY 2011 Plan total treatments = **1,875.9 lane miles** = 20.9% of system lane miles
FY 2012 Plan total treatments = **1,305.8 lane miles** = 14.5% of system lane miles
FY 2013 Plan total treatments = **1,596.0 lane miles** = 17.8% of system lane miles

Figure 16. Austin District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 4.0, 133.6, 55.6, and 27.2 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 34.7, 24.2, 119.2, and 216.2 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 133.8, 316.1, 107.6, and 125.2 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 346.2, 1402.0, 1023.4, and 1227.4 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 514.7 lane miles or approximately 5.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 1742.3 lane miles + 4.0 lane miles of Heavy Rehab treatments from FY 2010 = 1746.3 lane miles or approximately 19.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1250.2 lane miles + 133.6 lane miles of Heavy Rehab treatments from FY 2011 = 1383.8 lane miles or approximately 15.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 1568.8 lane miles + 55.6 lane miles of Heavy Rehab treatments from FY 2012 = 1624.4 lane miles or approximately 18.1% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 17.
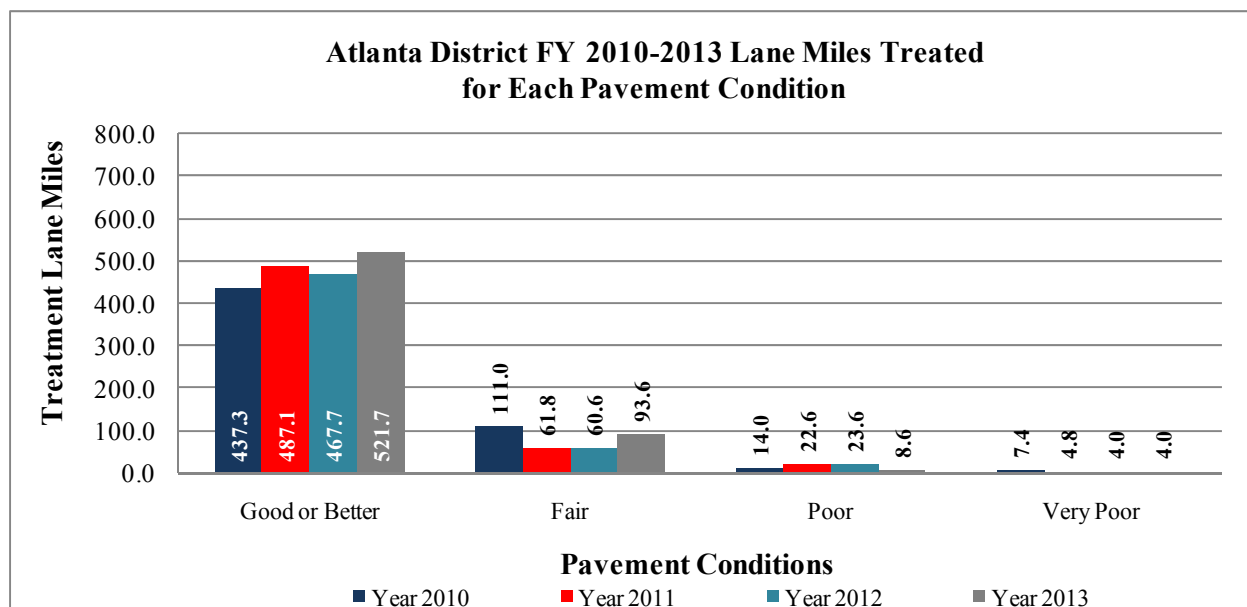

Figure 17. Austin District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 8. Pavement Performance Summary for Austin District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Austin District		Achieved Goal (%)	82.71	80.37	81.44	79.77	79.71
		Achieved Average CS	88	86	85	83	82
Counties in Austin District	Bastrop	Achieved Goal (%)	75.13	75.02	76.41	74.76	73.61
		Achieved Average CS	85	84	82	80	78
	Blanco	Achieved Goal (%)	85.61	80.52	77.61	75	82.39
		Achieved Average CS	90	88	86	81	83
	Burnet	Achieved Goal (%)	90.5	89.74	90.04	86.6	84.4
		Achieved Average CS	92	90	89	86	84
	Caldwell	Achieved Goal (%)	53.88	51.43	56.77	60.06	66.16
		Achieved Average CS	70	68	70	71	72
	Gillespie	Achieved Goal (%)	89.76	85.09	87.59	83.55	81.57
		Achieved Average CS	92	89	89	86	85
	Hays	Achieved Goal (%)	86.18	82.17	82.16	79.67	75.14
		Achieved Average CS	90	87	84	83	79
	Lee	Achieved Goal (%)	78.73	80.4	75.45	74.22	82.12
		Achieved Average CS	86	86	82	80	83
	Llano	Achieved Goal (%)	83.53	81.03	90.56	90.24	87.18
		Achieved Average CS	87	84	91	89	86
	Mason	Achieved Goal (%)	91	88.04	84.93	79.79	77.91
		Achieved Average CS	92	90	87	84	81
	Travis	Achieved Goal (%)	87.82	85.11	89.4	88.75	88.07
		Achieved Average CS	91	89	89	88	87
	Williamson	Achieved Goal (%)	79.65	77.32	74.84	73.14	72.79
		Achieved Average CS	85	83	81	79	79

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Mason (91.00%) while the worst was Caldwell (53.88%).

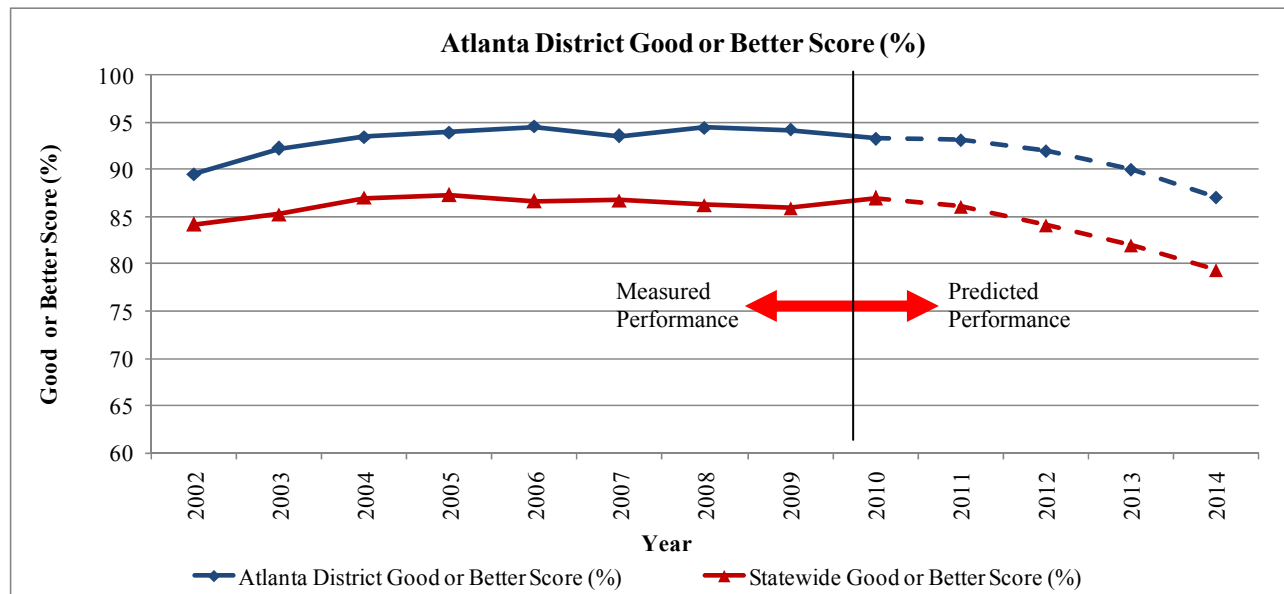**III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements**

Figure 18. Austin District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Beaumont District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,374
Total Lane miles = 5,672

FY 2010 Plan total treatments = **677.6 lane miles** = 11.9% of system lane miles
FY 2011 Plan total treatments = **612.4 lane miles** = 10.8% of system lane miles
FY 2012 Plan total treatments = **706.2 lane miles** = 12.5% of system lane miles
FY 2013 Plan total treatments = **613.0 lane miles** = 10.8% of system lane miles
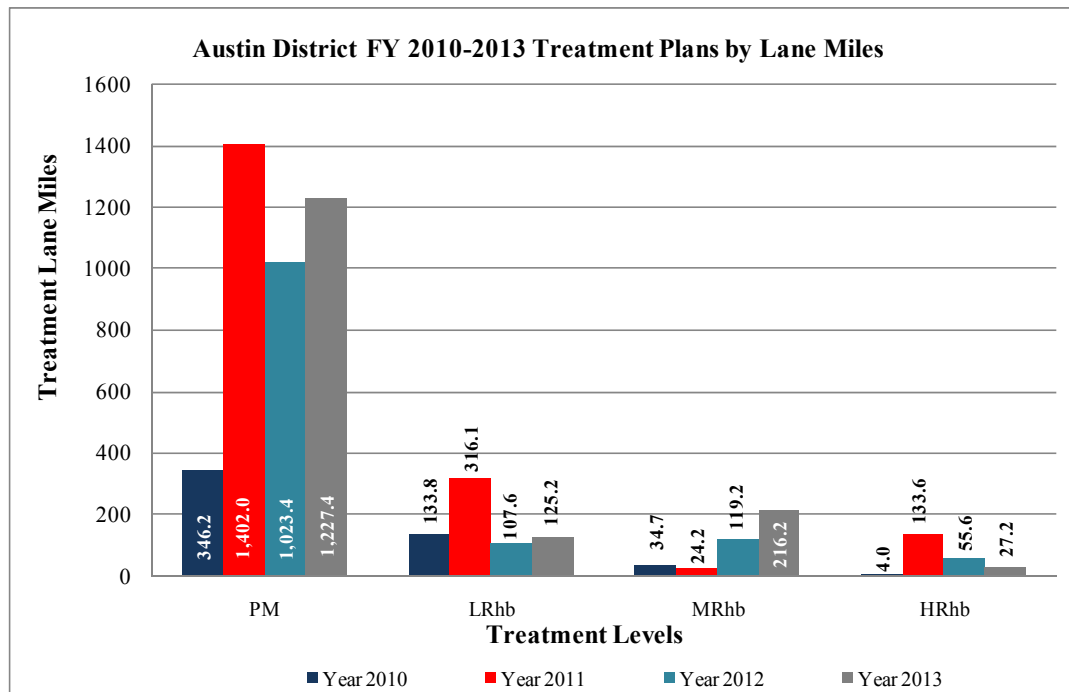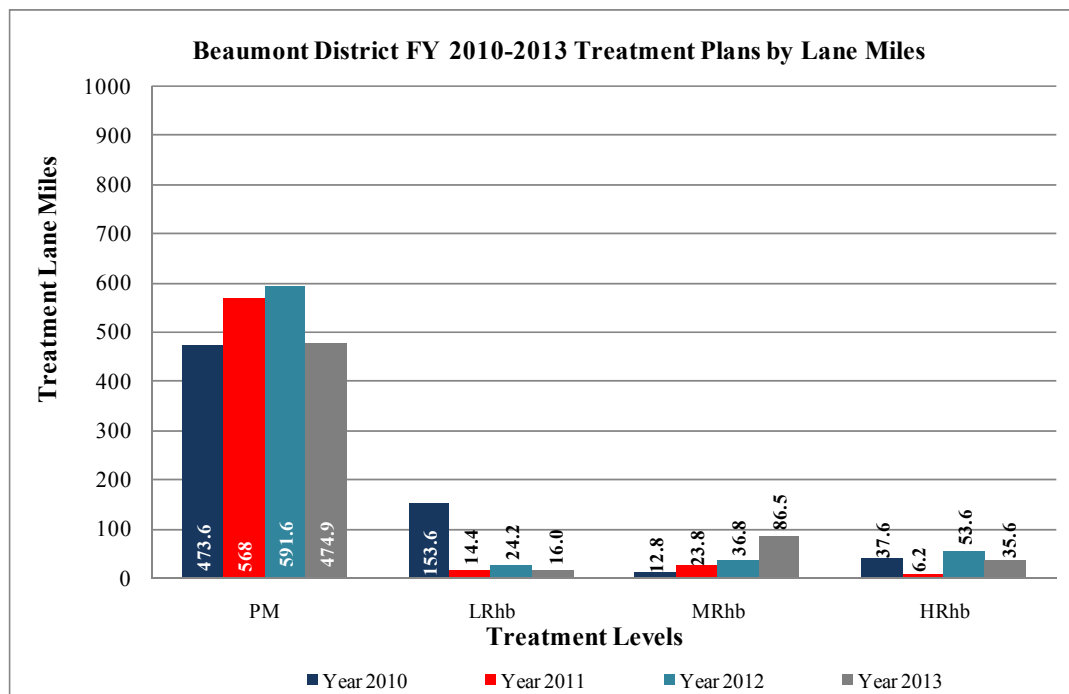

Figure 19. Beaumont District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 37.6, 6.2, 53.6, and 35.6 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 12.8, 23.8, 36.8, and 86.5 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 153.6, 14.4, 24.2, and 16.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 473.6, 568.0, 591.6, and 474.9 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 640.0 lane miles or approximately 11.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 606.2 lane miles + 37.6 lane miles of Heavy Rehab treatments from FY 2010 = 643.8 lane miles or approximately 11.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 652.6 lane miles + 6.2 lane miles of Heavy Rehab treatments from FY 2011 = 658.8 lane miles or approximately 11.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 577.4 lane miles + 53.6 lane miles of Heavy Rehab treatments from FY 2012 = 631.0 lane miles or approximately 11.1% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 20.
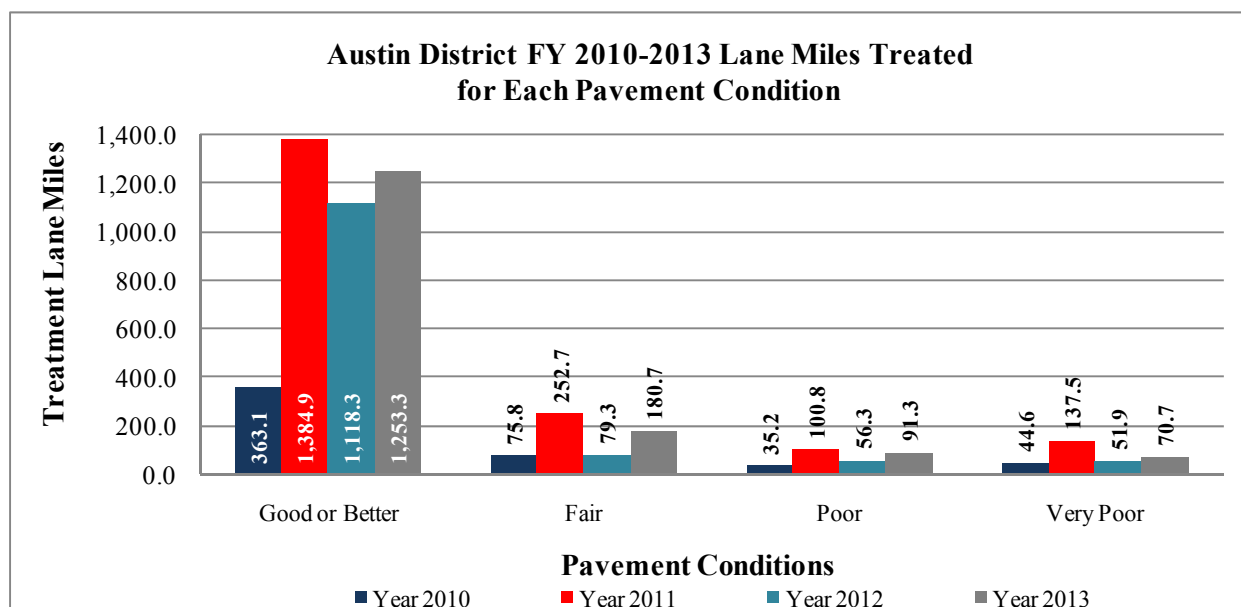

Figure 20. Beaumont District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 9. Pavement Performance Summary for Beaumont District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Beaumont District		Achieved Goal (%)	91.06	90.22	89.65	87.78	86.2
		Achieved Average CS	93	91	89	86	84
Counties in Beaumont District	Chambers	Achieved Goal (%)	90.57	89.27	91.2	88.5	86.64
		Achieved Average CS	93	91	90	87	85
	Hardin	Achieved Goal (%)	95.89	95.32	95.29	94.4	93.55
		Achieved Average CS	97	95	93	90	88
	Jasper	Achieved Goal (%)	89.17	92.09	91.64	90.04	87.92
		Achieved Average CS	93	93	90	87	85
	Jefferson	Achieved Goal (%)	87.24	83.71	82	79.67	76.86
		Achieved Average CS	89	86	84	81	79
	Liberty	Achieved Goal (%)	89.89	88.46	87.54	85.64	85.49
		Achieved Average CS	92	90	88	86	85
	Newton	Achieved Goal (%)	96.66	95.57	96.08	95.75	94.19
		Achieved Average CS	97	95	93	91	89
	Orange	Achieved Goal (%)	85.71	85.95	82.66	79.78	78.97
		Achieved Average CS	89	88	85	82	80
	Tyler	Achieved Goal (%)	99.09	98.71	98.37	96.86	95.12
		Achieved Average CS	98	96	94	91	88

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Tyler (99.09%) while the worst was Orange (85.71%).

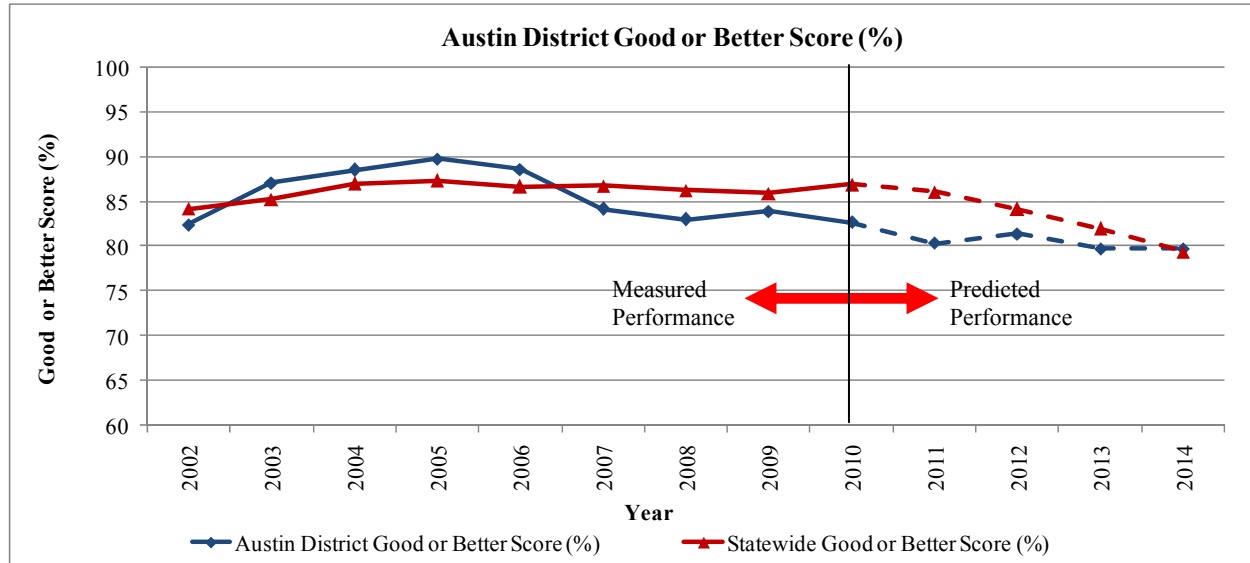## III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 21. Beaumont District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Brownwood District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,678
Total Lane miles = 5,809

FY 2010 Plan total treatments = **981.2 lane miles** = 16.9% of system lane miles
FY 2011 Plan total treatments = **1,055.5 lane miles** = 18.2% of system lane miles
FY 2012 Plan total treatments = **1,104.5 lane miles** = 19.0% of system lane miles
FY 2013 Plan total treatments = **916.5 lane miles** = 15.8% of system lane miles

Figure 22. Brownwood District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 3.2, 11.0, and 8.2 lane miles respectively.

- There were no Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 20.0 0.0, 0.0, and 0.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 961.2 and 1052.3, 1093.5 and 908.3 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 981.2 lane miles or approximately 16.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 1052.3 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 1052.3 lane miles or approximately 18.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1093.5 lane miles + 3.2 lane miles of Heavy Rehab treatments from FY 2011 = 1096.7 lane miles or approximately 18.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 908.3 lane miles + 11.0 lane miles of Heavy Rehab treatments from FY 2012 = 919.3 lane miles or approximately 15.8% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 23.
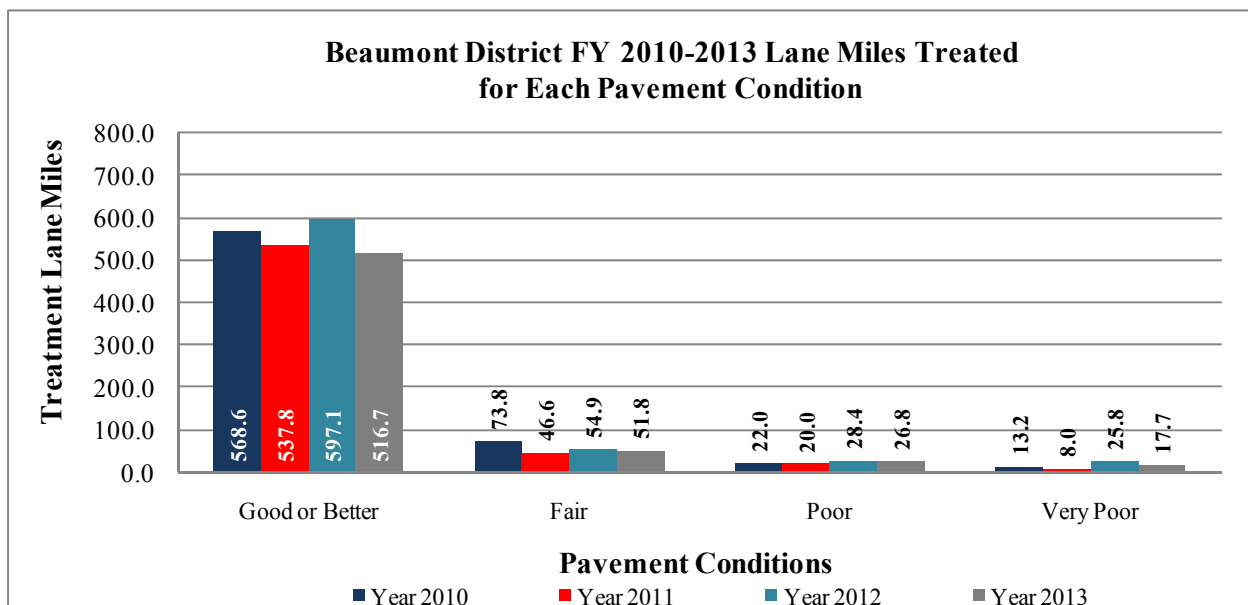

Figure 23. Brownwood District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

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II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 10. Pavement Performance Summary for Brownwood District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Brownwood District	**Achieved Goal (%)**	**93.44**	**94.68**	**94.49**	**93.88**	**91.91**
	Achieved Average CS	**95**	**94**	**92**	**90**	**87**
Counties in Brownwood District — Brown	Achieved Goal (%)	92.79	92.58	91.21	92.93	90.93
	Achieved Average CS	94	93	91	90	87
Coleman	Achieved Goal (%)	95.6	96.51	96.83	95.31	91.75
	Achieved Average CS	96	94	92	89	87
Comanche	Achieved Goal (%)	92.65	97.37	96.77	95.96	94.14
	Achieved Average CS	95	95	93	91	88
Eastland	Achieved Goal (%)	92.15	92.13	92.23	92.21	91.09
	Achieved Average CS	94	92	90	89	86
Lampasas	Achieved Goal (%)	96.85	96.29	97.01	96.33	96.73
	Achieved Average CS	96	95	93	91	91
McCulloch	Achieved Goal (%)	95.62	95.35	95.25	93.77	92.12
	Achieved Average CS	96	95	92	90	87
Mills	Achieved Goal (%)	93.08	96.1	97.62	97.62	96.83
	Achieved Average CS	95	95	94	92	89
San Saba	Achieved Goal (%)	93.72	93.67	93.35	89.83	86
	Achieved Average CS	94	93	91	87	84
Stephens	Achieved Goal (%)	89.37	93.73	92.61	92.32	88.9
	Achieved Average CS	92	93	91	88	86

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Lampasas (96.85%) while the worst was Stephens (89.37%).

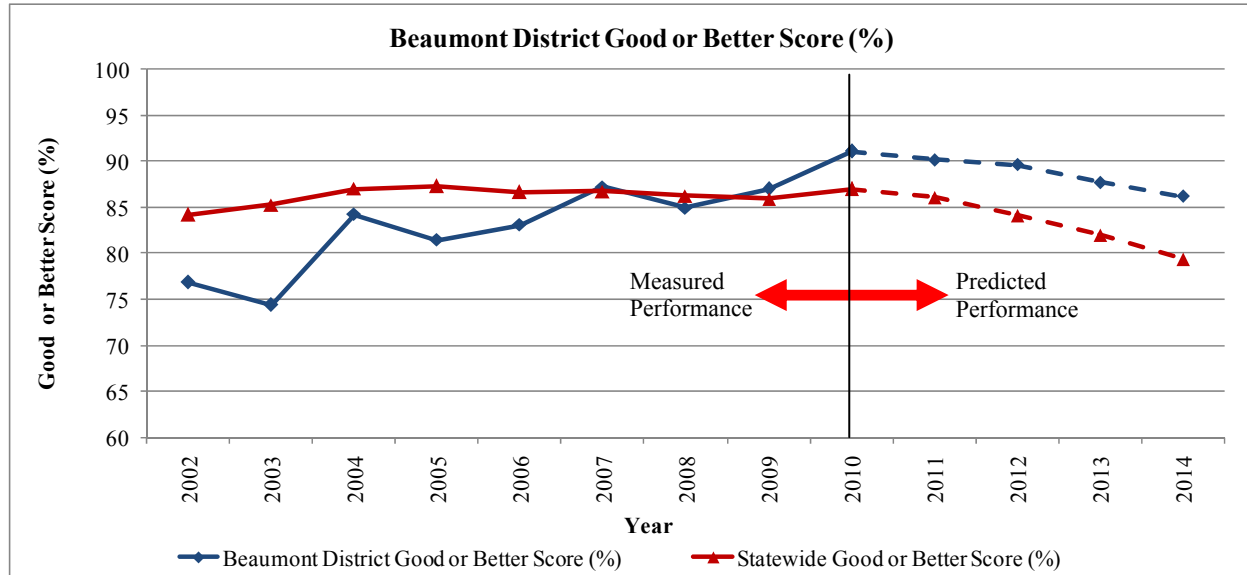## III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 24. Brownwood District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Bryan District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,127
Total Lane miles = 6,880

FY 2010 Plan total treatments = **660.2 lane miles** = 9.6% of system lane miles
FY 2011 Plan total treatments = **615.2 lane miles** = 8.9% of system lane miles
FY 2012 Plan total treatments = **762.2 lane miles** = 11.1% of system lane miles
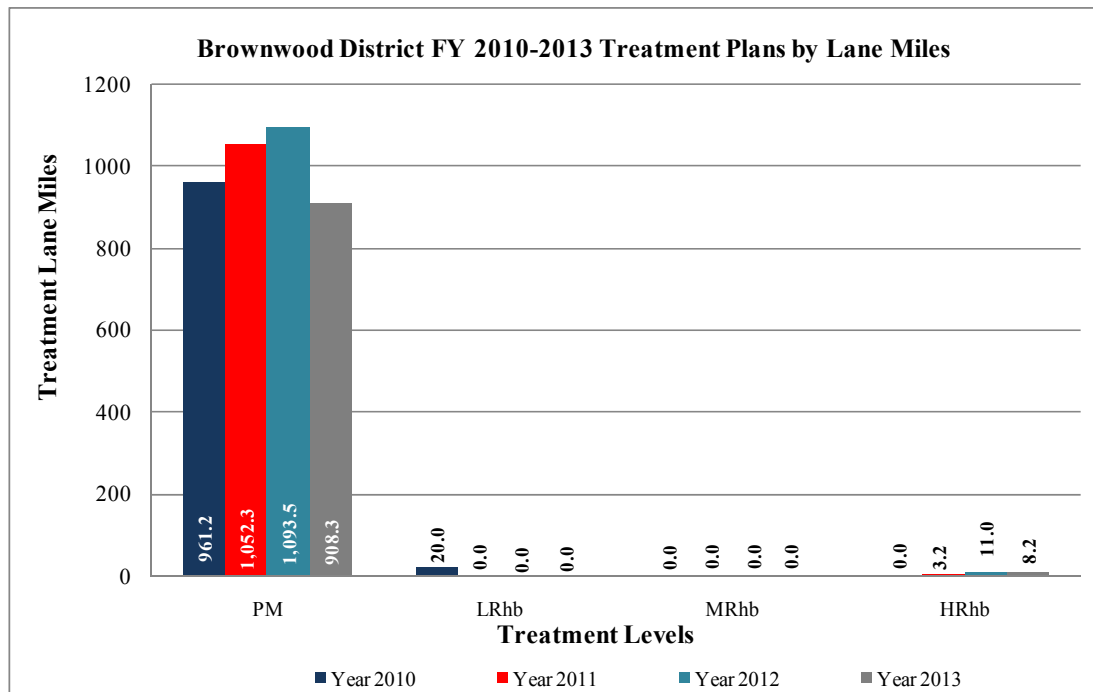FY 2013 Plan total treatments = **765.4 lane miles** = 11.1% of system lane miles

Figure 25. Bryan District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 56.6, 60.8, 158.4, and 77.6 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 81.2, 30.8, 18.0, and 30.0 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 22.8, 54.4, 98.2, and 204.2 lane miles respectively.
- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 499.6, 469.2, 487.6, and 453.6 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 603.6 lane miles or approximately 8.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 554.4 lane miles + 56.6 lane miles of Heavy Rehab treatments from FY 2010 = 611.0 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 = 603.8 lane miles + 60.8 lane miles of Heavy Rehab treatments from FY 2011 = 664.6 lane miles or approximately 9.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 687.8 lane miles + 158.4 lane miles of Heavy Rehab treatments from FY 2012 = 846.2 lane miles or approximately 12.3% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 26.
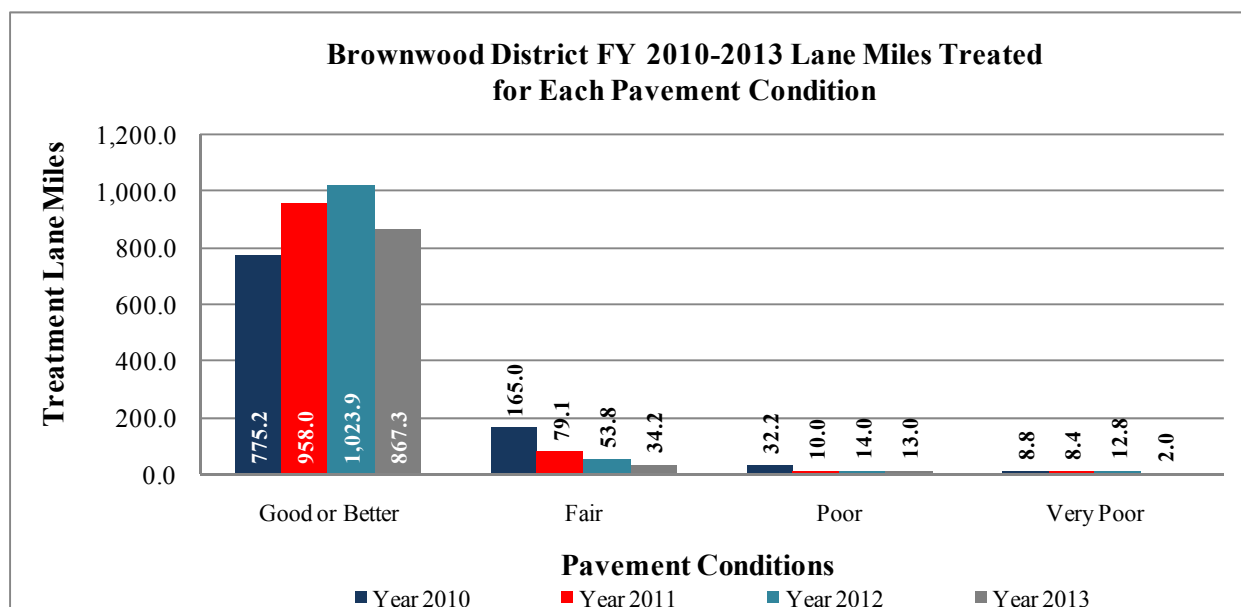

Figure 26. Bryan District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 11. Pavement Performance Summary for Bryan District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Bryan District		Achieved Goal (%)	86.38	82.69	79.67	77.32	75.64
		Achieved Average CS	89	86	84	81	80
Counties in Bryan District	Brazos	Achieved Goal (%)	84.27	81.06	78.66	76.22	73.62
		Achieved Average CS	88	86	83	80	78
	Burleson	Achieved Goal (%)	87.69	84.09	84.85	81.02	78.26
		Achieved Average CS	90	87	86	84	81
	Freestone	Achieved Goal (%)	84.47	80.14	72.83	68.23	62.81
		Achieved Average CS	86	83	80	77	75
	Grimes	Achieved Goal (%)	80.02	77.55	72.95	78.2	85.14
		Achieved Average CS	87	85	82	83	84
	Leon	Achieved Goal (%)	89	84.59	84.87	81.02	80.44
		Achieved Average CS	91	87	86	83	82
	Madison	Achieved Goal (%)	76.61	72.14	65.48	59.3	55.41
		Achieved Average CS	82	80	76	72	70
	Milam	Achieved Goal (%)	87.12	85.56	81.36	82.22	80.58
		Achieved Average CS	88	88	85	84	83
	Robertson	Achieved Goal (%)	87.18	84.52	82.71	81.15	81.19
		Achieved Average CS	90	87	85	83	83
	Walker	Achieved Goal (%)	92.98	87.06	84.35	79.97	76.28
		Achieved Average CS	91	87	85	82	81
	Washington	Achieved Goal (%)	92.38	88.52	87.08	84.94	82.82
		Achieved Average CS	92	90	88	85	84

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Walker (92.98%) while the worst was Madison (76.61%).

III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

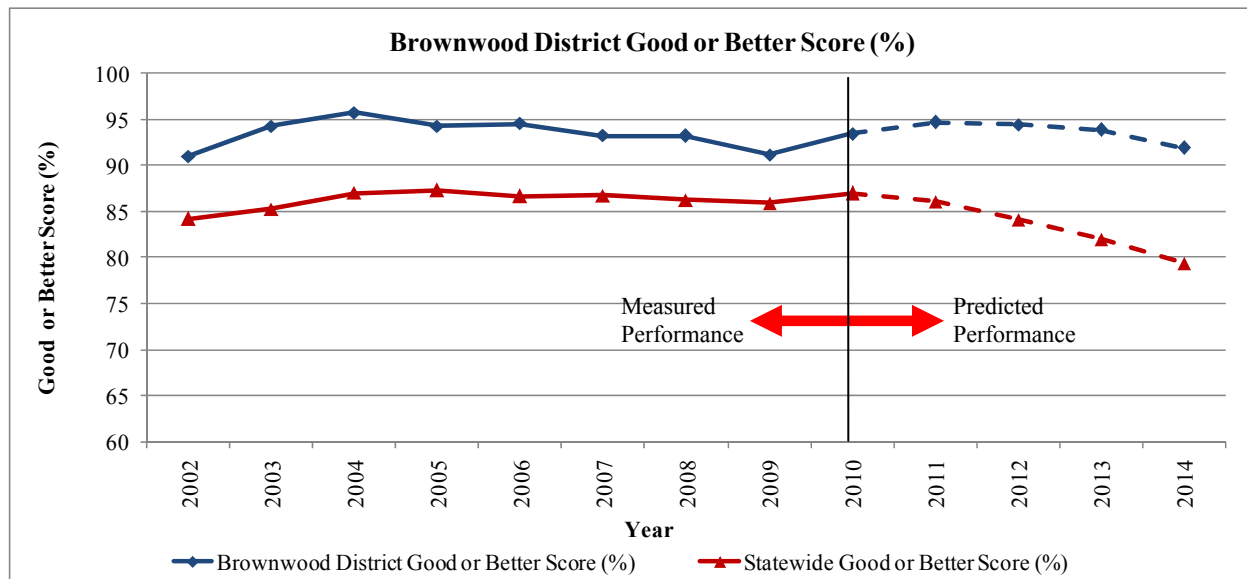*Figure 27. Bryan District Overall Pavement Performance of FY 2002–FY 2014*

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Childress District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,506
Total Lane miles = 5,300

FY 2010 Plan total treatments = **379.7 lane miles** = 7.2% of system lane miles
FY 2011 Plan total treatments = **295.3 lane miles** = 5.6% of system lane miles
FY 2012 Plan total treatments = **481.9 lane miles** = 9.1% of system lane miles
FY 2013 Plan total treatments = **479.6 lane miles** = 9.0% of system lane miles
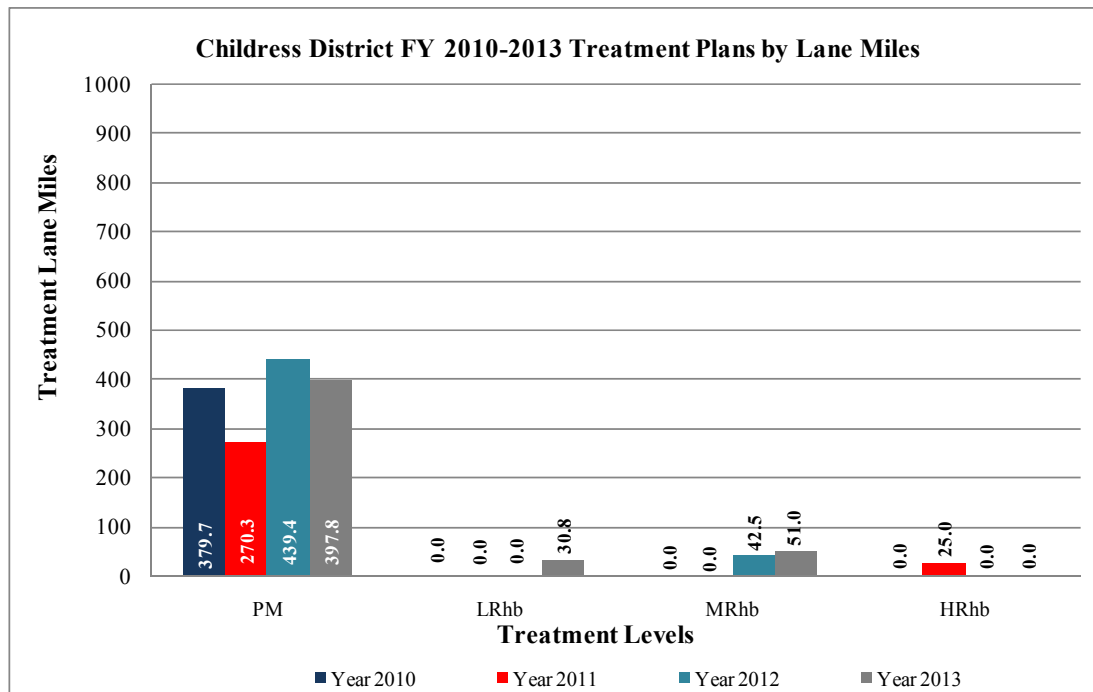
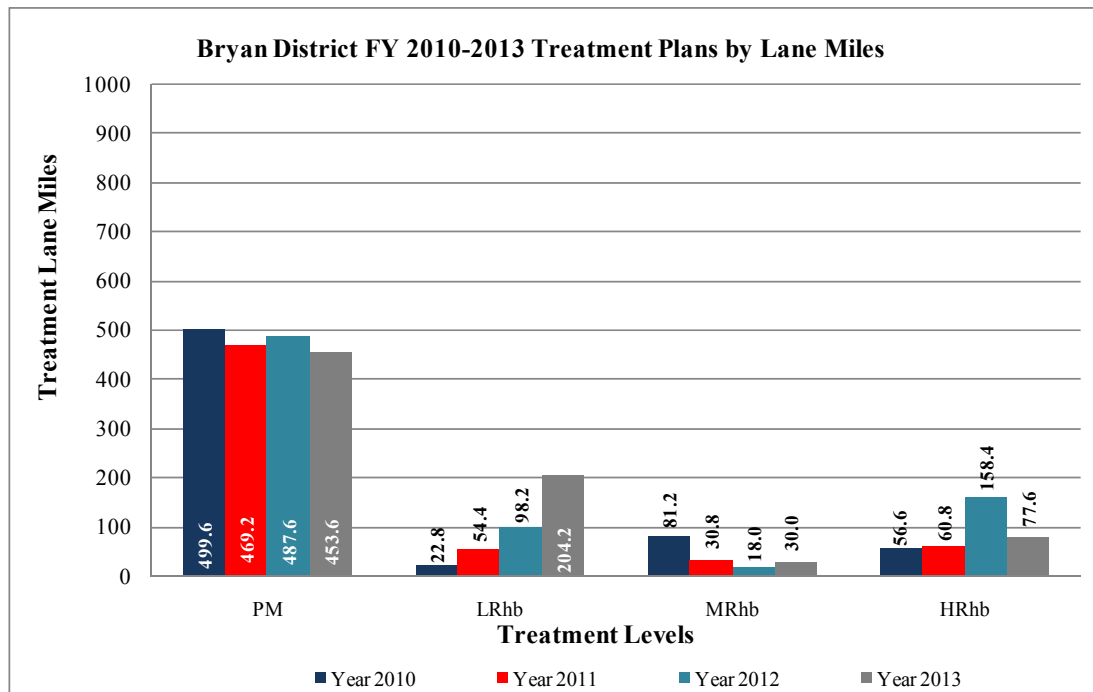*Figure 28. Childress District Treatment Plans for FY 2010–2013*

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 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 25.0, 0.0, and 0.0 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 0.0, 42.5, and 51.0 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 0.0, 0.0, and 30.8 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 379.7, 270.3, 439.4, and 397.8 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 379.7 lane miles or approximately 7.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 270.3 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 270.3 lane miles or approximately 5.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 481.9 lane miles + 25.0 lane miles of Heavy Rehab treatments from FY 2011 = 506.9 lane miles or approximately 9.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 479.6 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2012 = 479.6 lane miles or approximately 9.0% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 29.
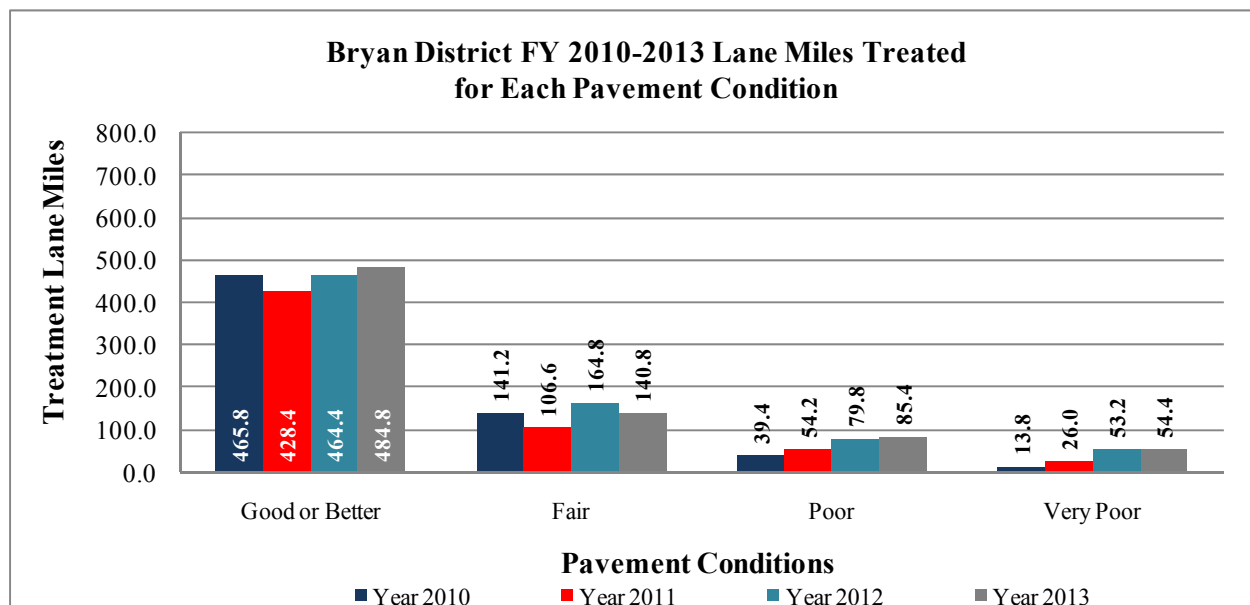

Figure 29. Childress District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 12. Pavement Performance Summary for Childress District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Childress District		Achieved Goal (%)	**89.53**	**90.47**	**90.14**	**89.93**	**88.15**
		Achieved Average CS	**93**	**92**	**89**	**88**	**85**
Counties in Childress District	Briscoe	Achieved Goal (%)	88.36	84.08	83.47	79.79	83.53
		Achieved Average CS	91	88	85	82	83
	Childress	Achieved Goal (%)	85.64	95.37	95.24	94.23	90.82
		Achieved Average CS	89	94	92	89	87
	Collingsworth	Achieved Goal (%)	94.03	94.79	92.84	94.21	93.06
		Achieved Average CS	95	93	91	90	87
	Cottle	Achieved Goal (%)	97.83	97.47	95.67	94.84	92.41
		Achieved Average CS	97	95	93	91	88
	Dickens	Achieved Goal (%)	92.73	92.45	91.77	95.06	93.37
		Achieved Average CS	95	93	91	90	88
	Donley	Achieved Goal (%)	77.25	85.7	86.47	83.91	81.84
		Achieved Average CS	87	89	87	84	82
	Foard	Achieved Goal (%)	93.5	90.21	87.67	84.32	83.31
		Achieved Average CS	93	91	88	85	84
	Hall	Achieved Goal (%)	91.94	91.15	90.36	88.45	84.56
		Achieved Average CS	94	92	90	87	84
	Hardeman	Achieved Goal (%)	85	84.68	84.68	83.68	82.98
		Achieved Average CS	91	90	88	86	83
	King	Achieved Goal (%)	93.97	92.76	97.29	98.29	97.39
		Achieved Average CS	96	94	94	93	92
	Knox	Achieved Goal (%)	92.53	94.89	93.56	92.49	90.82
		Achieved Average CS	96	94	91	89	87
	Motley	Achieved Goal (%)	94.12	93.51	92.18	97.33	95.09
		Achieved Average CS	96	94	91	92	89
	Wheeler	Achieved Goal (%)	84.09	82.45	84.65	85.99	82.85
		Achieved Average CS	89	86	85	85	82

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Cottle (97.83%) while the worst was Donley (77.25%).

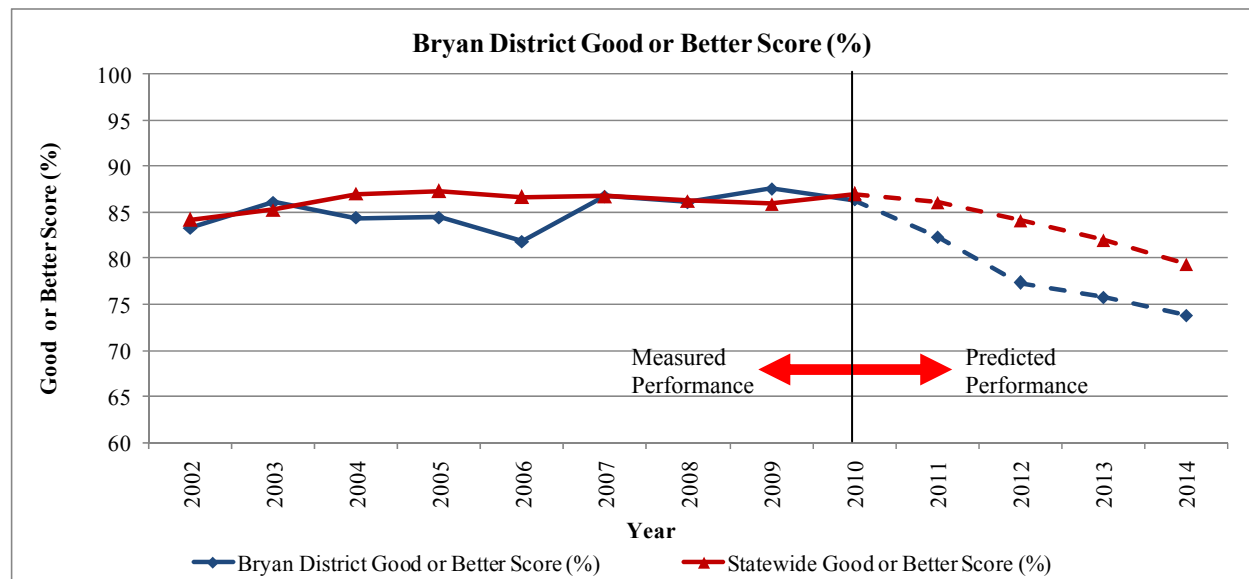**III.   Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements**

Figure 30. Childress District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Corpus Christi District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,886
Total Lane miles = 7,026

FY 2010 Plan total treatments = **974.0 lane miles** = 13.9% of system lane miles
FY 2011 Plan total treatments = **1,743.2 lane miles** = 24.8% of system lane miles
FY 2012 Plan total treatments = **1,717.2 lane miles** = 24.4% of system lane miles
FY 2013 Plan total treatments = **1,529.7 lane miles** = 21.8% of system lane miles

Figure 31. Corpus Christi District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 52.4, 73.4, 46.4, and 113.4 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 11.0, 550.0, 520.2, and 269.3 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 109.4, 105.1, 111.4, and 138.2 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 801.2, 1014.7, 1039.2, and 1008.8 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 921.6 lane miles or approximately 13.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 1669.8 lane miles + 52.4 lane miles of Heavy Rehab treatments from FY 2010 = 1722.2 lane miles or approximately 24.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1670.8 lane miles + 73.4 lane miles of Heavy Rehab treatments from FY 2011 = 1744.2 lane miles or approximately 24.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 1416.3 lane miles + 46.4 lane miles of Heavy Rehab treatments from FY 2012 = 1462.7 lane miles or approximately 20.8% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 32.
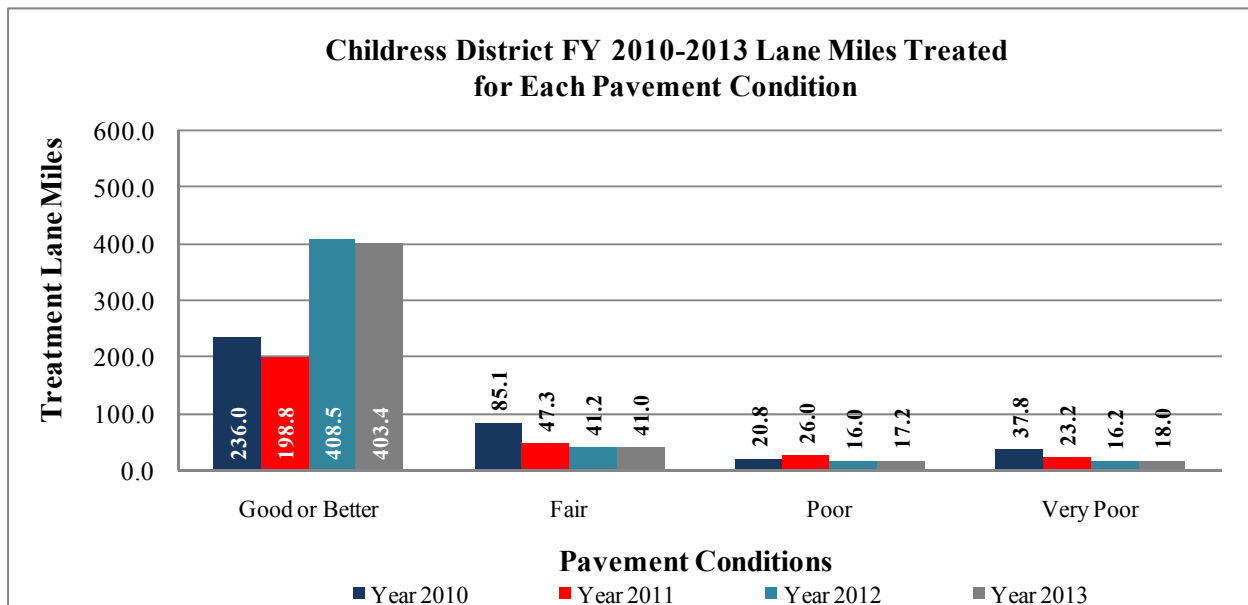

Figure 32. Corpus Christi District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

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

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Corpus Christi District	**Achieved Goal (%)**	**81.58**	**81.58**	**84.15**	**84.51**	**84.95**
	Achieved Average CS	**87**	**86**	**86**	**85**	**84**
Counties in Corpus Christi District	**Aransas** Achieved Goal (%)	80.54	78.21	75.79	78.99	75.4
	Achieved Average CS	87	86	83	84	81
	Bee Achieved Goal (%)	85.64	88.01	91.47	91.77	93.55
	Achieved Average CS	90	89	89	89	88
	Goliad Achieved Goal (%)	85.19	84.07	84	82.93	83.94
	Achieved Average CS	90	89	86	84	83
	Jim Wells Achieved Goal (%)	72.45	74.81	76.51	79.06	81.33
	Achieved Average CS	82	82	82	82	83
	Karnes Achieved Goal (%)	86.64	85.47	85.06	85.09	84.83
	Achieved Average CS	90	88	87	85	84
	Kleberg Achieved Goal (%)	74.73	75.24	80.35	77.43	74.9
	Achieved Average CS	85	83	83	80	80
	Live Oak Achieved Goal (%)	85.69	86.22	90.74	91.26	89.12
	Achieved Average CS	90	89	90	89	86
	Nueces Achieved Goal (%)	76.78	74.51	76.86	78.09	80.96
	Achieved Average CS	82	81	81	81	81
	Refugio Achieved Goal (%)	90.99	89.31	94.31	96.25	94.78
	Achieved Average CS	93	91	94	95	94
	San Patricio Achieved Goal (%)	81.44	84.14	87.8	85.95	86.36
	Achieved Average CS	88	87	89	88	87

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Refugio (90.99%) while the worst was Jim Wells (72.45%).

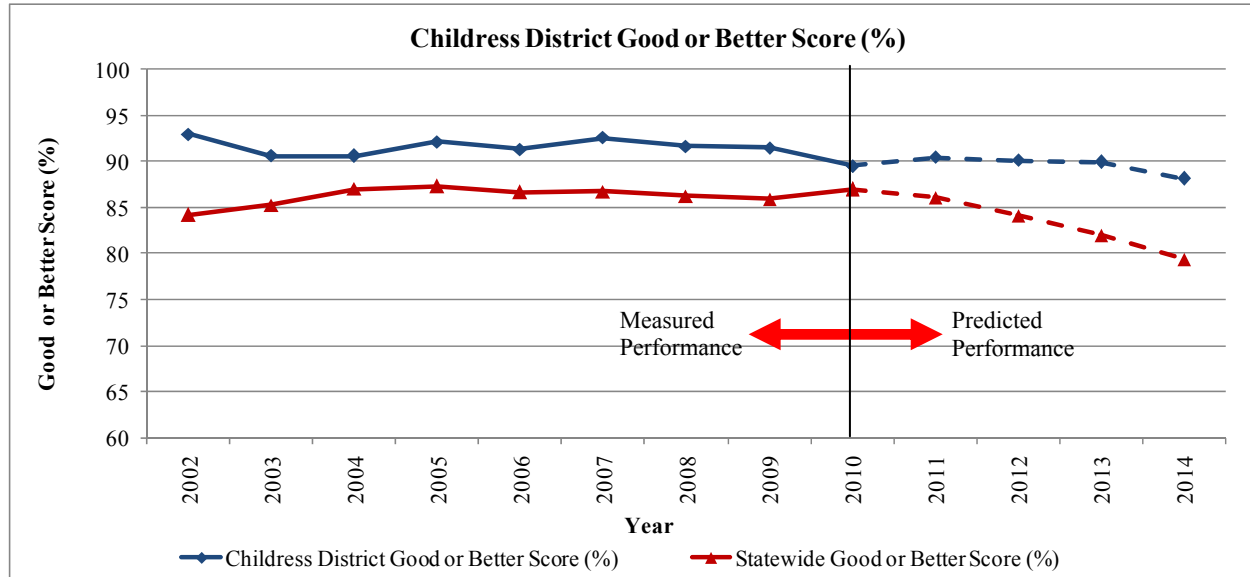### III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 33. Corpus Christi District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Dallas District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,289
Total Lane miles = 10,207

FY 2010 Plan total treatments = **845.1 lane miles** = 8.3% of system lane miles
FY 2011 Plan total treatments = **900.8 lane miles** = 8.8% of system lane miles
FY 2012 Plan total treatments = **702.0 lane miles** = 6.9% of system lane miles
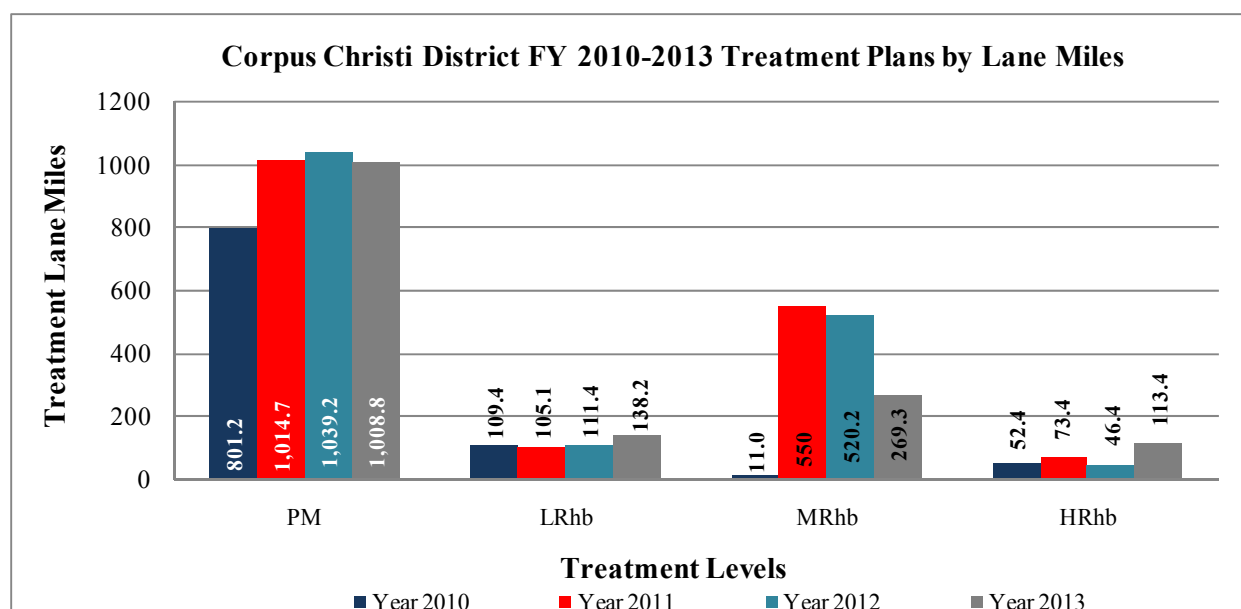FY 2013 Plan total treatments = **901.4 lane miles** = 8.8% of system lane miles

Figure 34. Dallas District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 155.4, 97.6, 50.2, and 30.6 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 55.3, 331.0, 162.3, and 252.2 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 55.2, 89.1, 30.4, and 40.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 579.2 and 383.1, 459.1 and 578.6 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011= 689.7 lane miles or approximately 6.8% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012= 803.2 lane miles + 155.4 lane miles of Heavy Rehab treatments from FY 2010 = 958.6 lane miles or approximately 9.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013= 651.8 lane miles + 97.6 lane miles of Heavy Rehab treatments from FY 2011 = 749.4 lane miles or approximately 7.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014= 870.8 lane miles + 50.2 lane miles of Heavy Rehab treatments from FY 2012 = 921.0 lane miles or approximately 9.0% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 35.
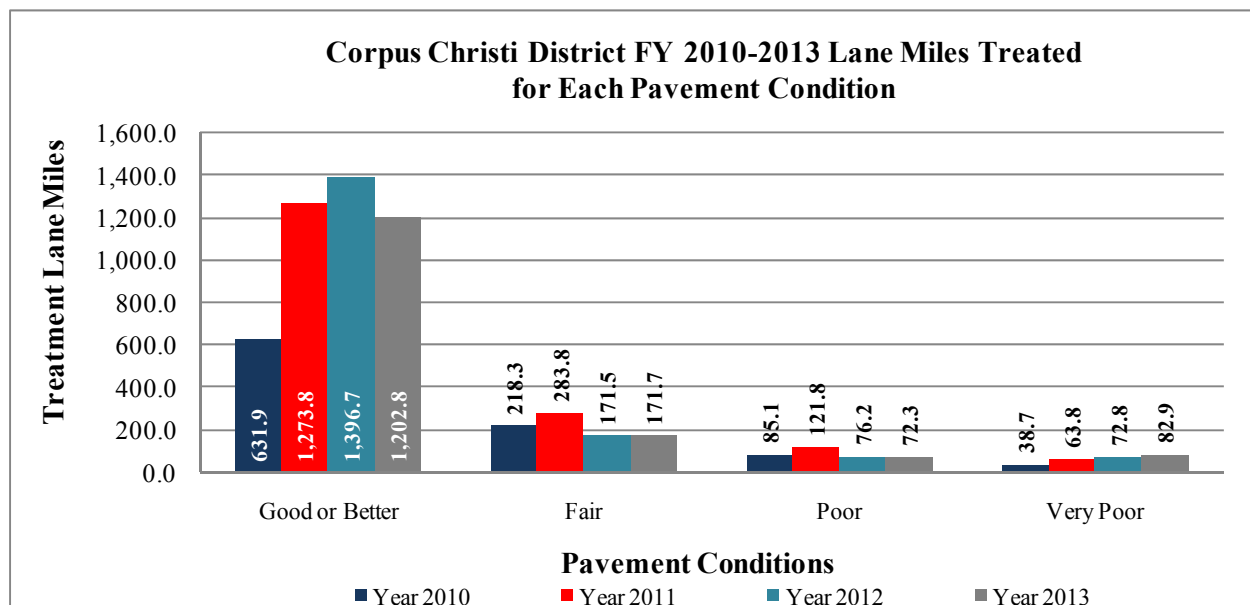

Figure 35. Dallas District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011FY 2014Percentage of "Good or Better" Pavements and Condition Score

Table 14. Pavement Performance Summary for Dallas District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Dallas District	Achieved Goal (%)	78.28	73.79	71.91	68.7	65.09
	Achieved Average CS	84	80	78	75	73
Counties in Dallas District — Collin	Achieved Goal (%)	85.75	78.96	77.07	72.99	67.24
	Achieved Average CS	87	83	82	79	76
Dallas	Achieved Goal (%)	72.06	65.33	62.08	59.47	53.97
	Achieved Average CS	79	75	72	70	66
Denton	Achieved Goal (%)	83.46	79.35	78.78	74.27	70.78
	Achieved Average CS	88	84	83	79	76
Ellis	Achieved Goal (%)	82.02	77.91	78.41	77.09	75.89
	Achieved Average CS	87	83	82	80	79
Kaufman	Achieved Goal (%)	74.26	72.13	70.44	65.47	63.48
	Achieved Average CS	82	79	77	73	72
Navarro	Achieved Goal (%)	84.57	84.3	80.97	78.1	75.69
	Achieved Average CS	88	86	83	80	78
Rockwall	Achieved Goal (%)	57.16	57.01	56.12	53.87	56.06
	Achieved Average CS	70	71	68	65	66

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Collin (85.75%) while the worst was Rockwall (57.16%).

III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

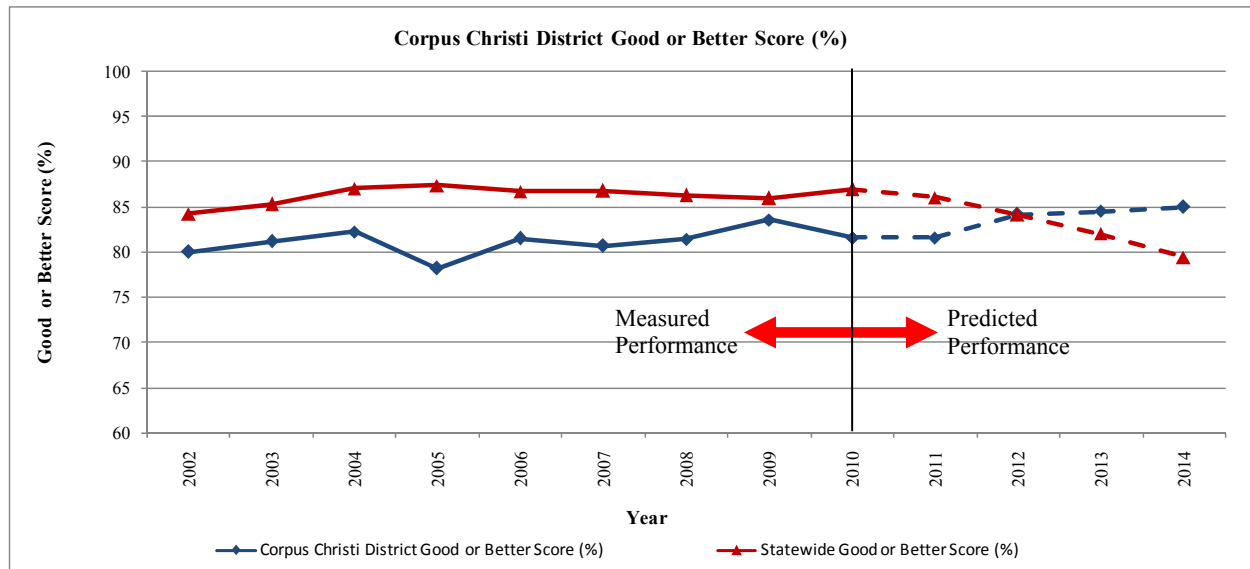*Figure 36. Dallas District Overall Pavement Performance of FY 2002–FY 2014*

For FY 2002 to FY 2010he solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010ntil FY 2014are projected values from the analysis conducted by CTR.

El Paso District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 1,927
Total Lane miles = 4,772

FY 2010 Plan total treatments = **79.2 lane miles** = 1.7% of system lane miles
FY 2011 Plan total treatments = **207.8 lane miles** = 4.4% of system lane miles
FY 2012 Plan total treatments = **217.3 lane miles** = 4.6% of system lane miles
FY 2013 Plan total treatments = **509.2 lane miles** = 10.7% of system lane miles
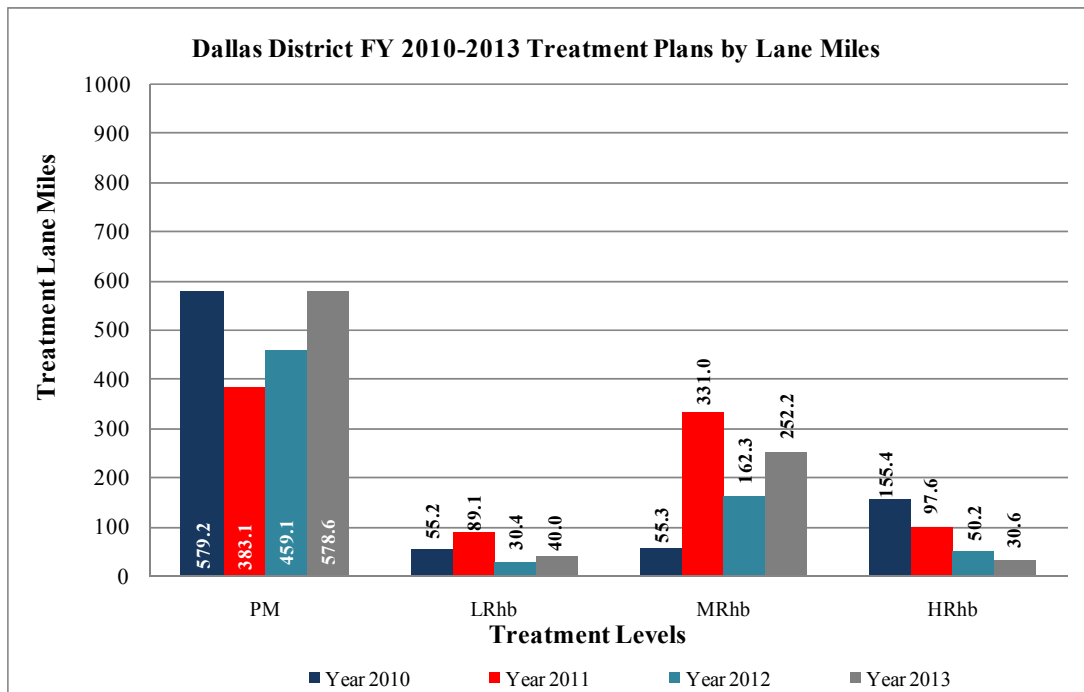

Figure 37. El Paso District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 8.8, 5.4, 0.0, and 4.4 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 6.0, 19.4, 32.7, and 278.1 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 9.8, 18.0, 53.6 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 64.4, 173.2, 166.6, and 173.1 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011= 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= 202.4 lane miles + 8.8 lane miles of Heavy Rehab treatments from FY 2010 = 211.2 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= 217.3 lane miles + 5.4 lane miles of Heavy Rehab treatments from FY 2011 = 222.7 lane miles or approximately 4.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014= 504.8 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2012 = 504.8 lane miles or approximately 10.6% of the total system.

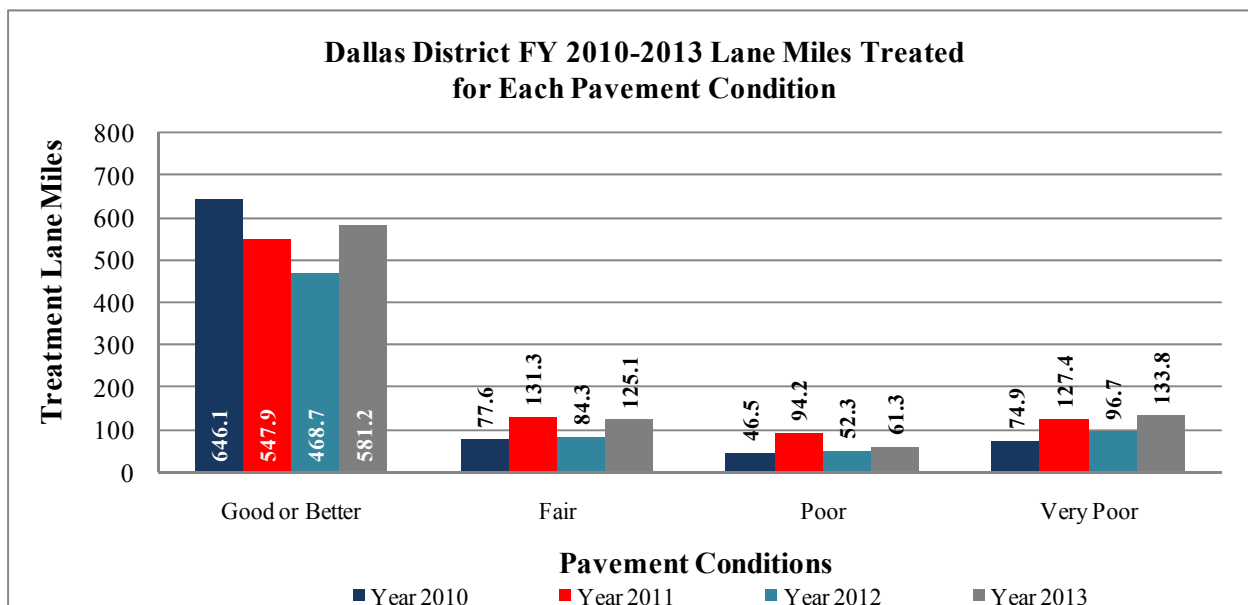The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 38.

Figure 38. El Paso District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

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

		Base Year	Analysis Years			
		2010	**2011**	**2012**	**2013**	**2014**
El Paso District	**Achieved Goal (%)**	**89.01**	**86.63**	**84.27**	**81.67**	**81.97**
	Achieved Average CS	**91**	**89**	**86**	**83**	**83**
Counties in El Paso District	Brewster — Achieved Goal (%)	97.79	97.47	95.29	92.56	89.74
	Brewster — Achieved Average CS	97	95	93	90	87
	Culberson — Achieved Goal (%)	94.2	91.94	90.16	87.92	84.01
	Culberson — Achieved Average CS	95	92	89	87	84
	El Paso — Achieved Goal (%)	80.25	76.17	71.81	69.18	72.07
	El Paso — Achieved Average CS	86	82	79	76	78
	Hudspeth — Achieved Goal (%)	91.43	90.99	89.16	86.21	85.42
	Hudspeth — Achieved Average CS	93	91	89	86	84
	Jeff Davis — Achieved Goal (%)	88.61	85.29	86.16	86.86	83.72
	Jeff Davis — Achieved Average CS	91	88	86	86	82
	Presidio — Achieved Goal (%)	94.06	91.96	90.94	85.76	92.44
	Presidio — Achieved Average CS	94	91	89	85	91

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Brewster (97.79%) while the worst was El Paso (80.25%).

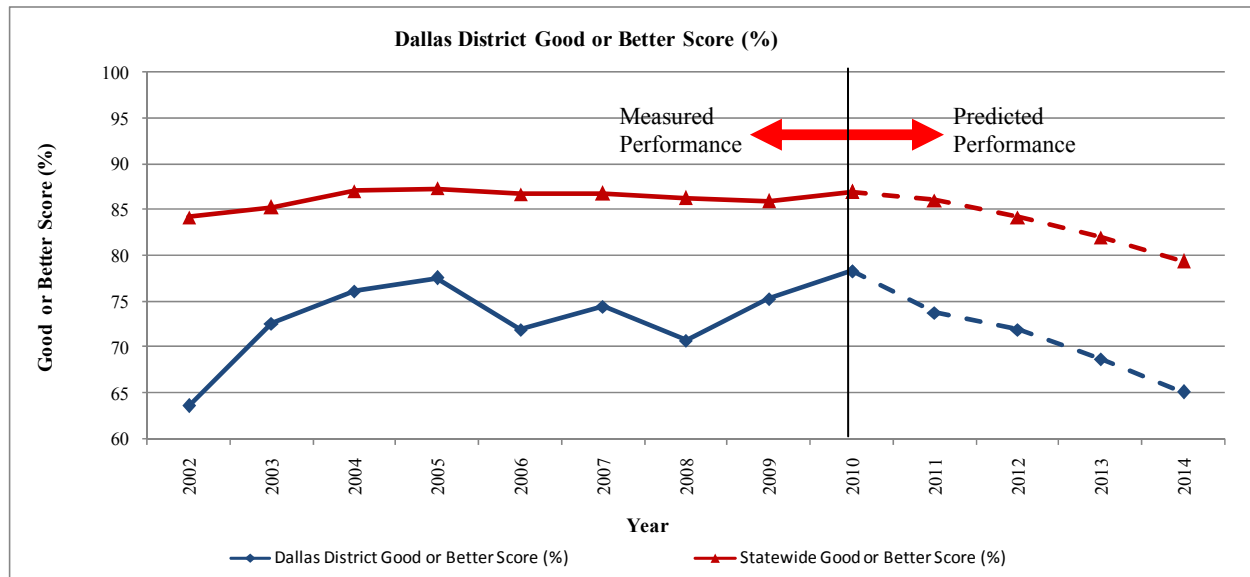### III. Summary of FY 2002–FY 2014Percentage of "Good or Better" Pavements

Figure 39. El Paso District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Fort Worth District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,297
Total Lane miles = 8,533

FY 2010 Plan total treatments = **1,009.3 lane miles** = 11.8% of system lane miles
FY 2011 Plan total treatments = **588.7 lane miles** = 6.9% of system lane miles
FY 2012 Plan total treatments = **207.2 lane miles** = 2.4% of system lane miles
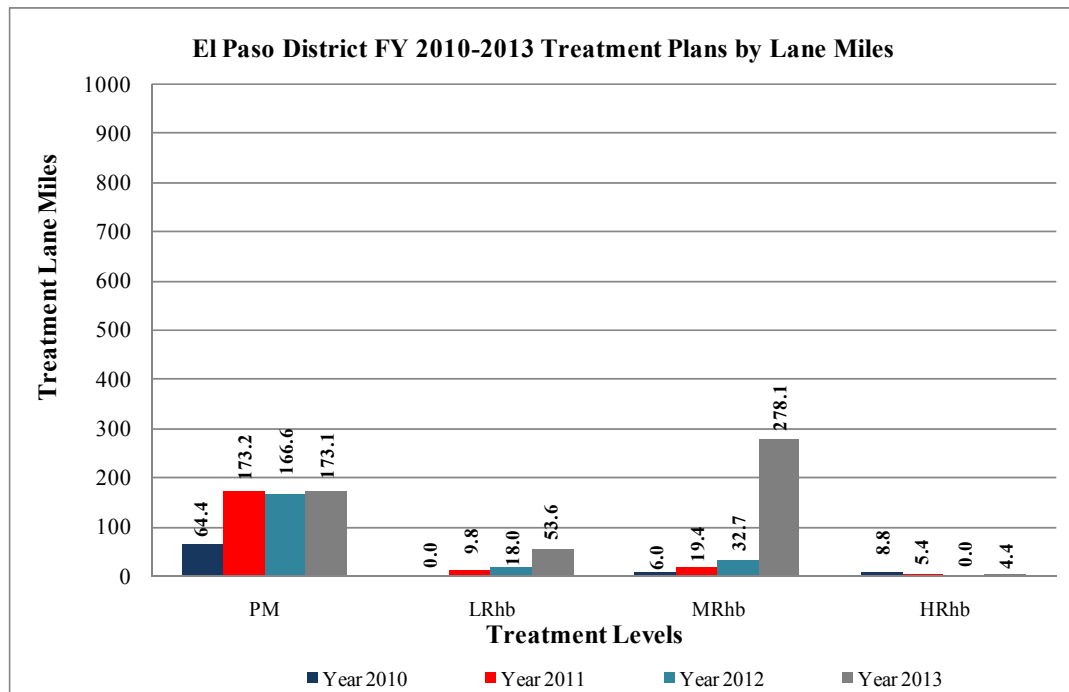FY 2013 Plan total treatments = **960.5 lane miles** = 11.3% of system lane miles
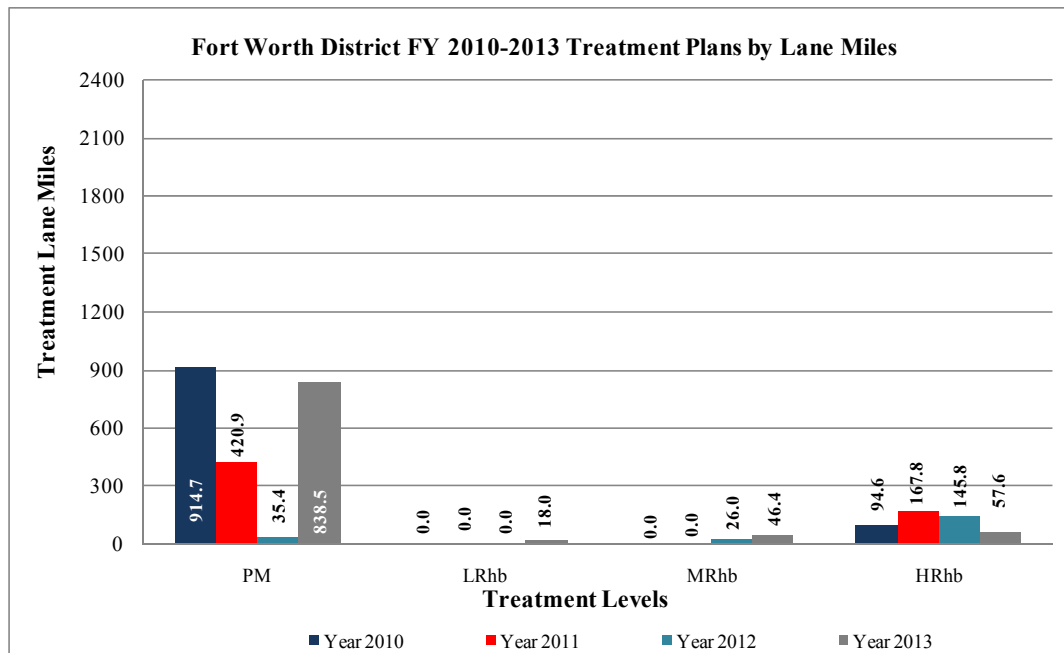
Figure 40. Fort Worth District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 94.6, 167.8, 145.8, and 57.6 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 0.0, 26.0, and 46.4 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 0.0, 0.0, and 18.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 914.7, 420.9, 35.4, and 838.5 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 914.7 lane miles or approximately 10.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 420.9 lane miles + 94.6 lane miles of Heavy Rehab treatments from FY 2010 = 515.5 lane miles or approximately 6.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 61.4 lane miles + 167.8 lane miles of Heavy Rehab treatments from FY 2011 = 229.2 lane miles or approximately 2.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 902.9 lane miles + 145.8 lane miles of Heavy Rehab treatments from FY 2012 = 1048.7 lane miles or approximately 12.3% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 41.
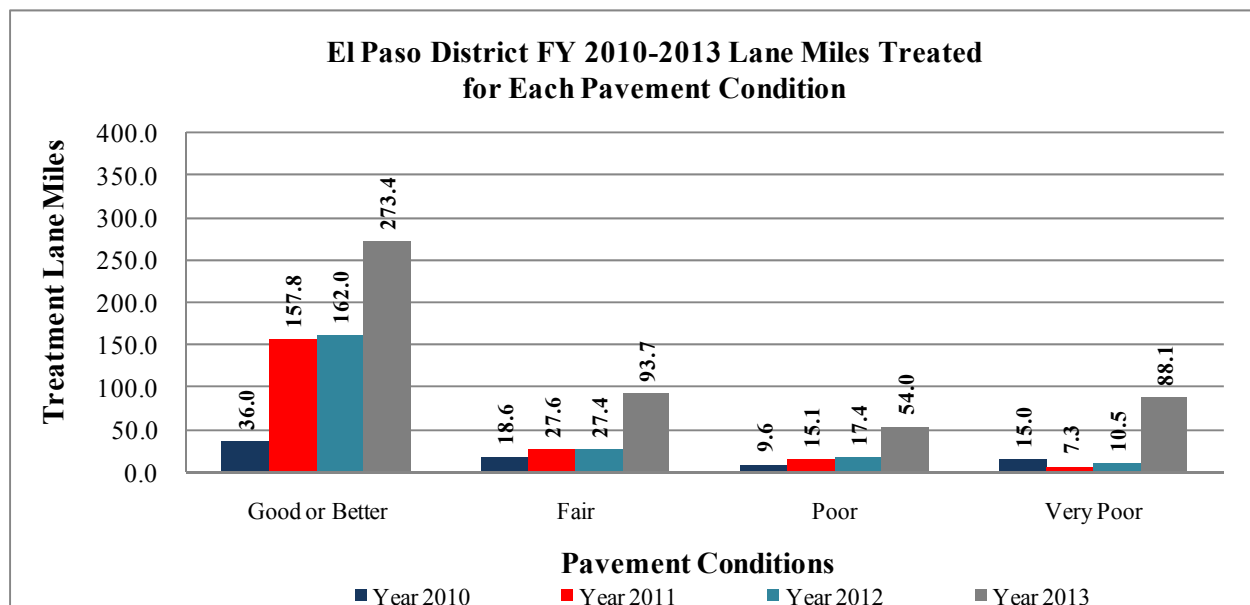

Figure 41. Fort Worth District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

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

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Fort Worth District	Achieved Goal (%)	85.52	84.35	79.98	75.71	72.36
	Achieved Average CS	88	86	83	79	77
Erath	Achieved Goal (%)	90.88	88.77	86.44	82.62	75.5
	Achieved Average CS	92	90	88	84	80
Hood	Achieved Goal (%)	81.76	86.79	87.56	83.06	81.66
	Achieved Average CS	87	88	87	83	81
Jack	Achieved Goal (%)	92.61	91.8	90.2	85.7	77.54
	Achieved Average CS	90	89	87	85	81
Johnson	Achieved Goal (%)	88.02	83.76	78.4	73.65	69.21
	Achieved Average CS	90	86	83	78	76
Palo Pinto	Achieved Goal (%)	86.75	84.25	79.77	74.05	73.34
	Achieved Average CS	90	87	83	78	78
Parker	Achieved Goal (%)	86.67	81.63	75.34	72.8	69.18
	Achieved Average CS	88	84	82	79	76
Somervell	Achieved Goal (%)	86.79	98.68	92.31	87.45	84.82
	Achieved Average CS	91	94	90	86	83
Tarrant	Achieved Goal (%)	80.48	80.43	74.9	70.69	68.15
	Achieved Average CS	85	84	80	76	75
Wise	Achieved Goal (%)	90.09	88.32	85.56	81.15	79.66
	Achieved Average CS	92	89	85	83	83

(Left spanning label: **Counties in Fort Worth District**)

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Erath (90.88%) while the worst was Tarrant (80.48%).

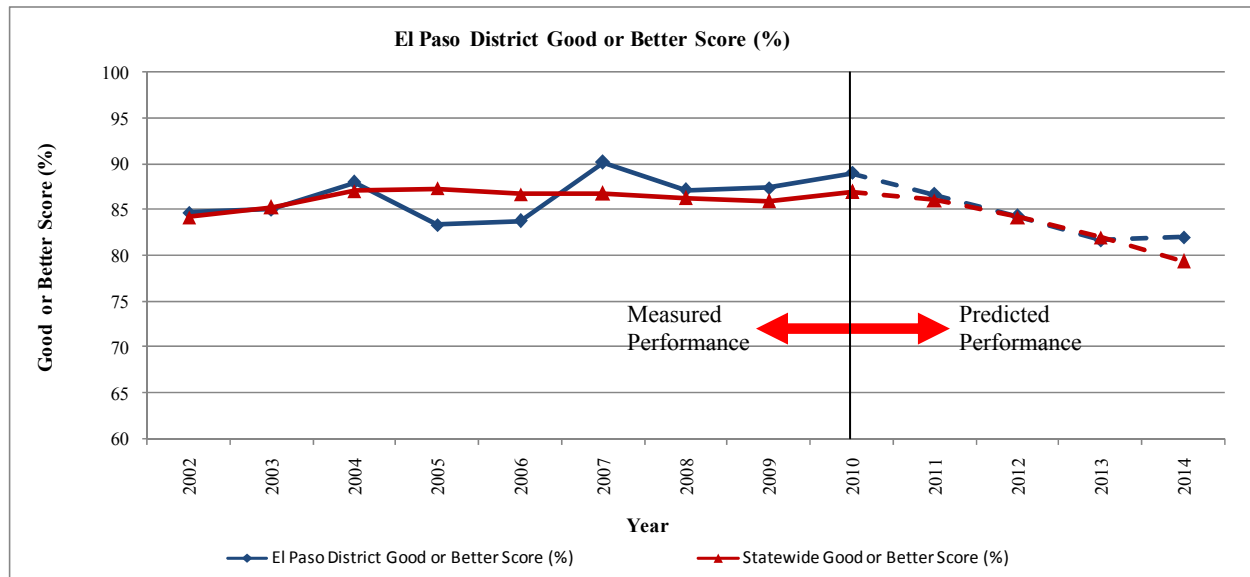## III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 42. Fort Worth District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Houston District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,134
Total Lane miles = 10,210

FY 2010 Plan total treatments = **304.2 lane miles** = 3.0% of system lane miles
FY 2011 Plan total treatments = **311.0 lane miles** = 3.0% of system lane miles
FY 2012 Plan total treatments = **301.2 lane miles** = 2.9% of system lane miles
FY 2013 Plan total treatments = **464.8 lane miles** = 4.6% of system lane miles
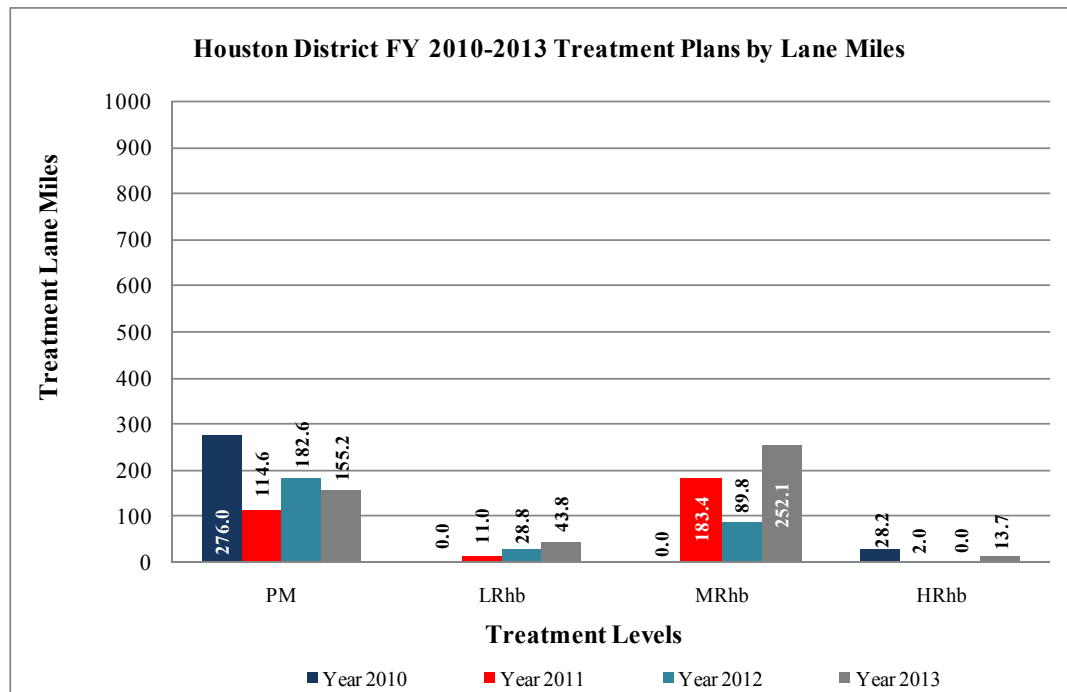
Figure 43. Houston District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 28.2, 2.0, 0.0, and 13.7 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 183.4, 89.8, and 252.1 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0 11.0, 28.8, and 43.8 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 276.0 and 114.6, 182.6 and 155.2 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 276.0 lane miles or approximately 2.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 309.0 lane miles + 28.2 lane miles of Heavy Rehab treatments from FY 2010 = 337.2 lane miles or approximately 3.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 301.2 lane miles + 2.0 lane miles of Heavy Rehab treatments from FY 2011 = 303.2 lane miles or approximately 3.0% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 451.1 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2012 = 451.1 lane miles or approximately 4.4% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 44.
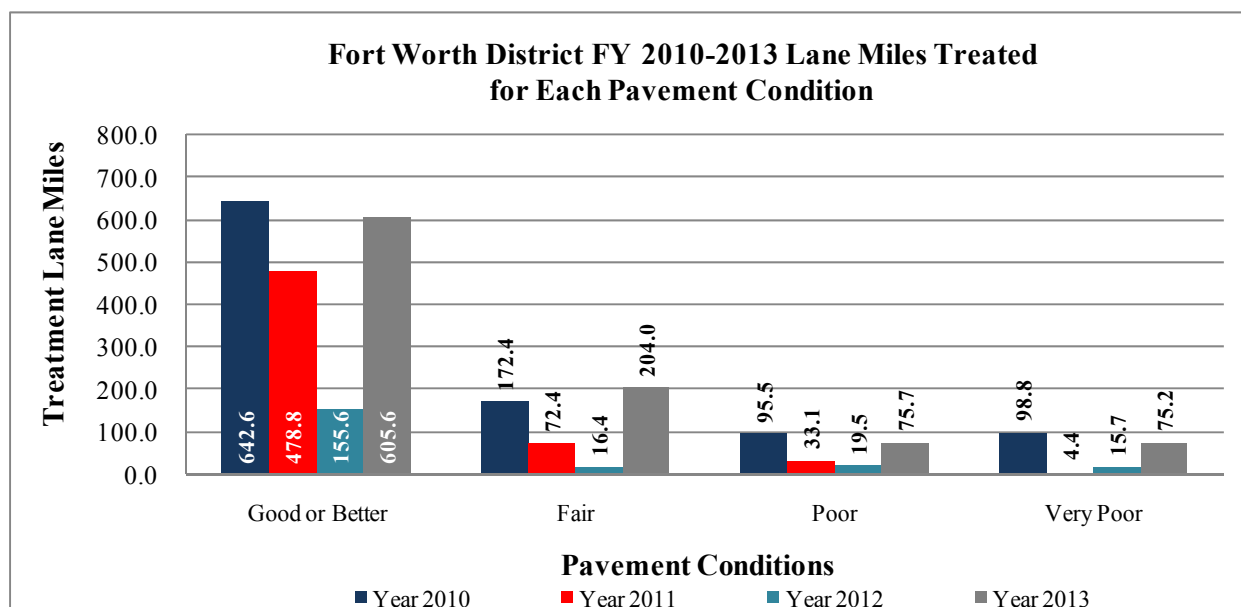

Figure 44. Houston District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 17. Pavement Performance Summary for Houston District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Houston District		Achieved Goal (%)	76.04	71.46	67.07	61.55	56.54
		Achieved Average CS	84	80	76	72	69
Counties in Houston District	**Brazoria**	Achieved Goal (%)	73.05	68.91	67.28	64.15	61.87
		Achieved Average CS	82	78	76	73	71
	Fort Bend	Achieved Goal (%)	81.11	76.03	69.94	65.05	57.63
		Achieved Average CS	87	83	79	76	71
	Galveston	Achieved Goal (%)	66.2	63.48	59.08	55.59	53.69
		Achieved Average CS	78	76	73	70	68
	Harris	Achieved Goal (%)	77.54	71.65	66.4	59.14	50.86
		Achieved Average CS	84	79	75	70	66
	Montgomery	Achieved Goal (%)	77.07	73.44	70.34	64.91	67.88
		Achieved Average CS	87	83	79	76	77
	Waller	Achieved Goal (%)	76.47	77.79	75.26	73.98	73.55
		Achieved Average CS	86	85	81	79	77

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Fort Bend (81.11%) while the worst was Galveston (66.20%).

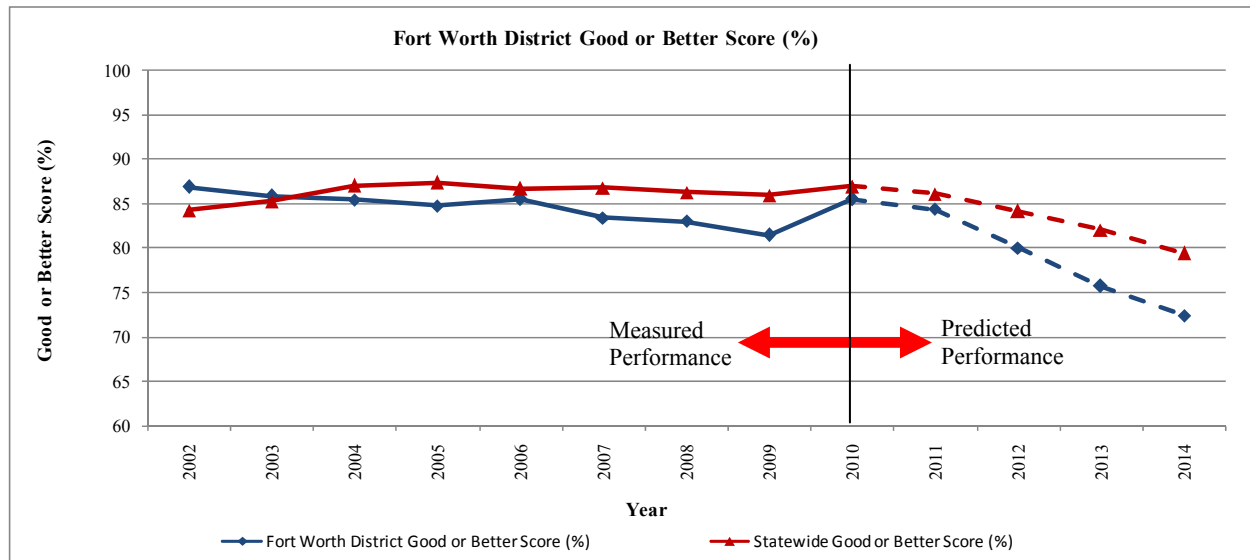### III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 45. Houston District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Laredo District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,266
Total Lane miles = 5,056

FY 2010 Plan total treatments = **388.5 lane miles** = 7.7% of system lane miles
FY 2011 Plan total treatments = **698.7 lane miles** = 13.8% of system lane miles
FY 2012 Plan total treatments = **779.6 lane miles** = 15.4% of system lane miles
FY 2013 Plan total treatments = **931.1 lane miles** = 18.4% of system lane miles
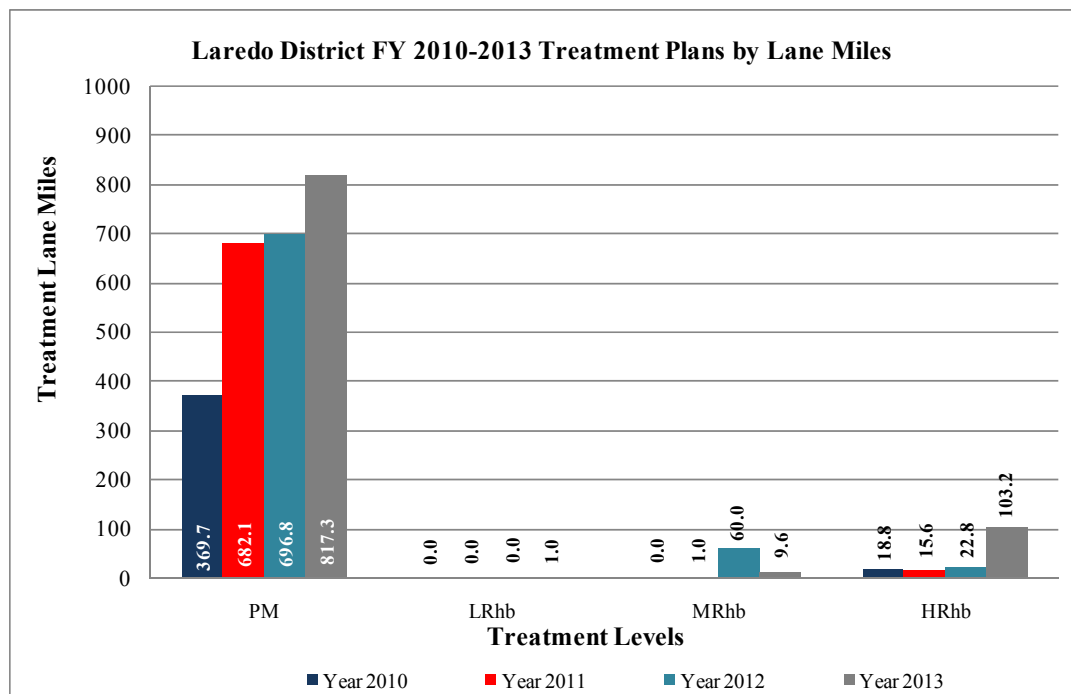
Figure 46. Laredo District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 18.8, 15.6, 22.8, and 103.2 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 1.0, 60.0, and 9.6 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0 0.0, 0.0, and 1.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 369.7, 682.1, 696.8, and 817.3 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 369.7 lane miles or approximately 7.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 683.1 lane miles + 18.8 lane miles of Heavy Rehab treatments from FY 2010 = 701.9 lane miles or approximately 13.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 756.8 lane miles + 15.6 lane miles of Heavy Rehab treatments from FY 2011 = 772.4 lane miles or approximately 15.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 827.9 lane miles + 22.8 lane miles of Heavy Rehab treatments from FY 2012 = 850.7 lane miles or approximately 16.8% of the total system.

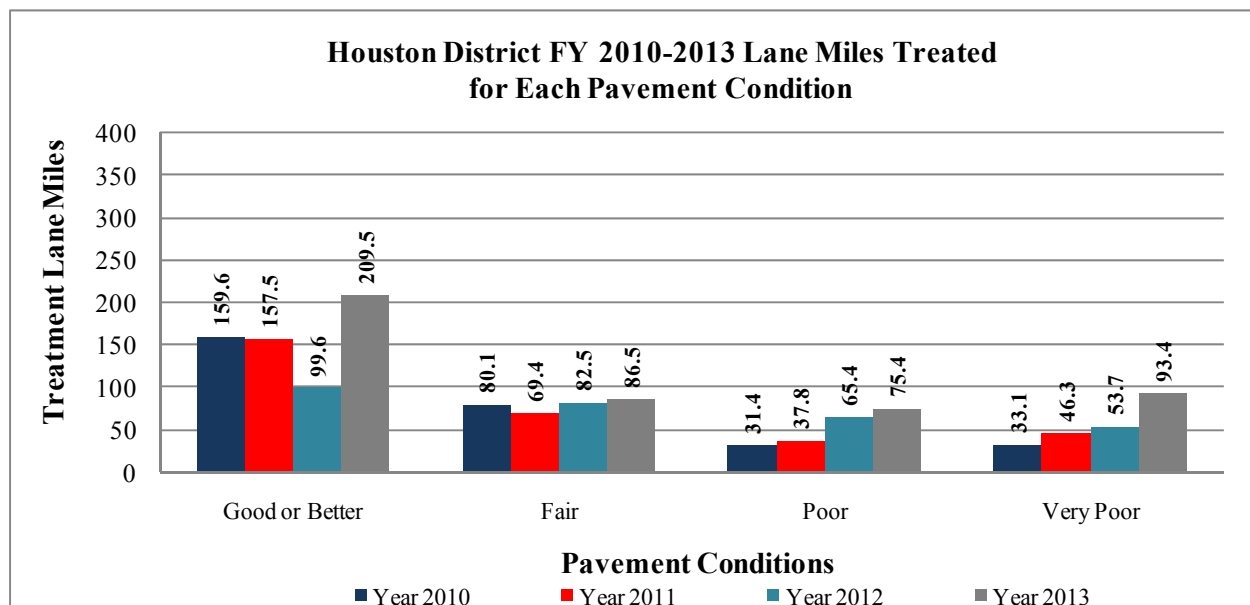The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 47.
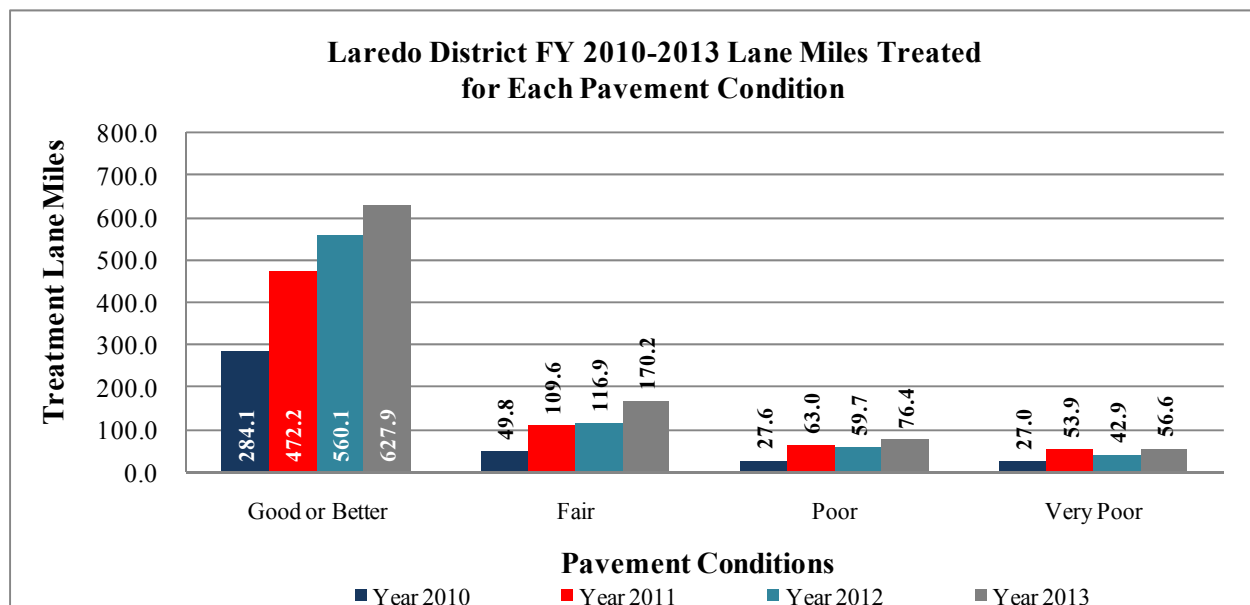
Figure 47. Laredo District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 18. Pavement Performance Summary for Laredo District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Laredo District	**Achieved Goal (%)**	**85.69**	**82.88**	**83.08**	**82.67**	**81.99**
	Achieved Average CS	**89**	**87**	**85**	**84**	**82**
Dimmit	Achieved Goal (%)	84.27	80.88	82.62	80.69	80.73
	Achieved Average CS	89	87	85	82	82
Duval	Achieved Goal (%)	93.31	92.43	89.73	89.42	89.04
	Achieved Average CS	95	93	89	87	86
Kinney	Achieved Goal (%)	93.61	89.92	87.65	82.64	81.11
	Achieved Average CS	94	91	87	85	83
La Salle	Achieved Goal (%)	86.08	81.02	77.64	76.43	69.86
	Achieved Average CS	89	86	82	80	76
Maverick	Achieved Goal (%)	78.7	78.61	78.7	80.04	78.83
	Achieved Average CS	84	83	83	82	81
Val Verde	Achieved Goal (%)	88.27	85.42	87.36	87.46	91.27
	Achieved Average CS	91	88	88	86	88
Webb	Achieved Goal (%)	83	81.2	86.75	87.78	84.12
	Achieved Average CS	88	86	87	86	82
Zavala	Achieved Goal (%)	79.87	74.29	69.23	69.34	75.8
	Achieved Average CS	86	82	79	78	80

(Left vertical label: Counties in Laredo District)

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Kinney (93.61%) while the worst was Maverick (78.70%).

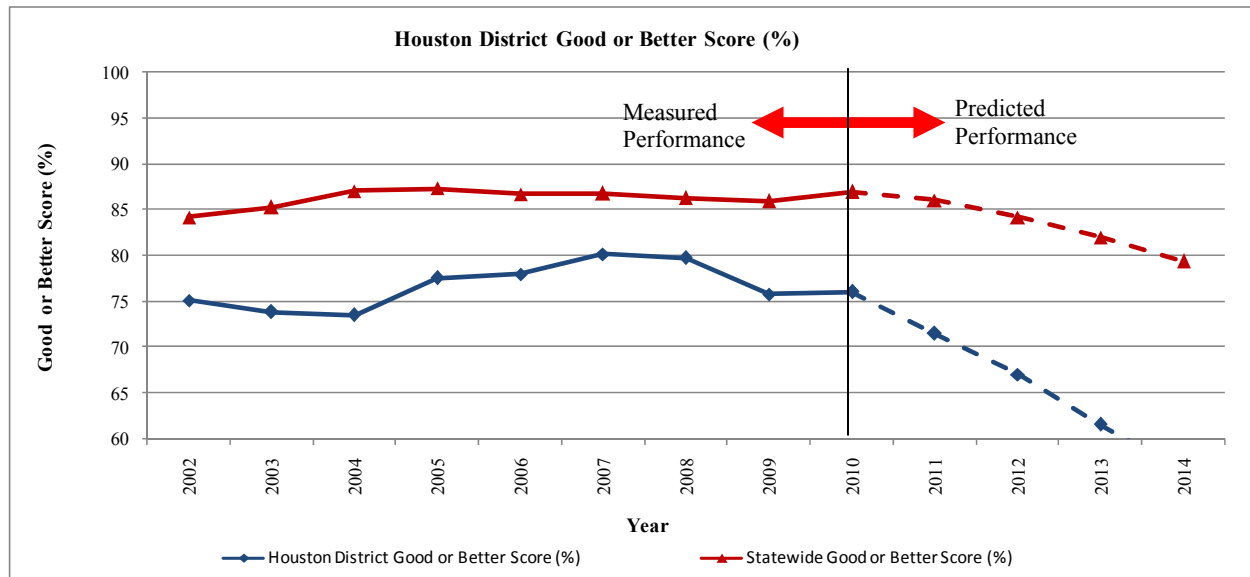## III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 48. Laredo District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Lubbock District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 5,267
Total Lane miles = 12,056

FY 2010 Plan total treatments = **861.9 lane miles** = 7.1% of system lane miles
FY 2011 Plan total treatments = **1,246.2 lane miles** = 10.3% of system lane miles
FY 2012 Plan total treatments = **1,163.5 lane miles** = 9.7% of system lane miles
FY 2013 Plan total treatments = **1,242.3 lane miles** = 10.3% of system lane miles
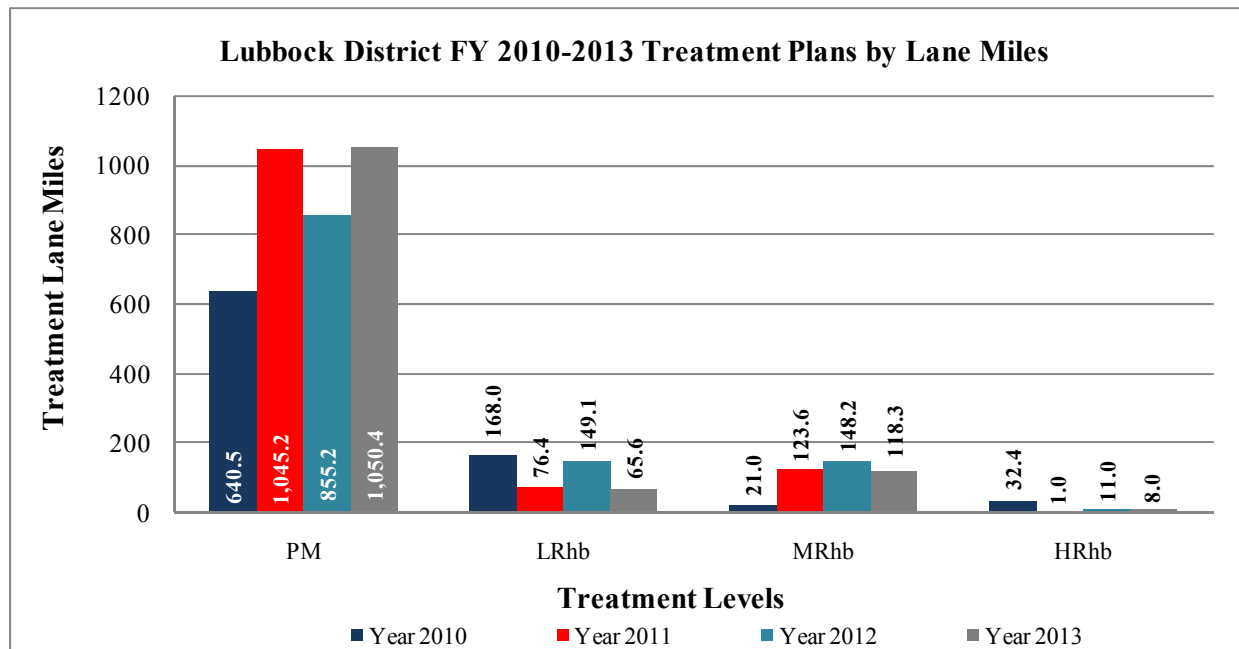
Figure 49. Lubbock District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 32.4, 1.0, 11.0, and 8.0 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 21.0, 123.6, 148.2, and 118.3 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 168.0, 76.4, 149.1, and 65.6 lane miles respectively.
- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 640.5, 1045.2, 855.2, and 1050.4 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 829.5 lane miles or approximately 6.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 1245.2 lane miles + 32.4 lane miles of Heavy Rehab treatments from FY 2010 = 1277.6 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 = 1152.5 lane miles + 1.0 lane miles of Heavy Rehab treatments from FY 2011 = 1153.5 lane miles or approximately 9.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 1234.3 lane miles + 11.0 lane miles of Heavy Rehab treatments from FY 2012 = 1245.3 lane miles or approximately 10.3% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 50.
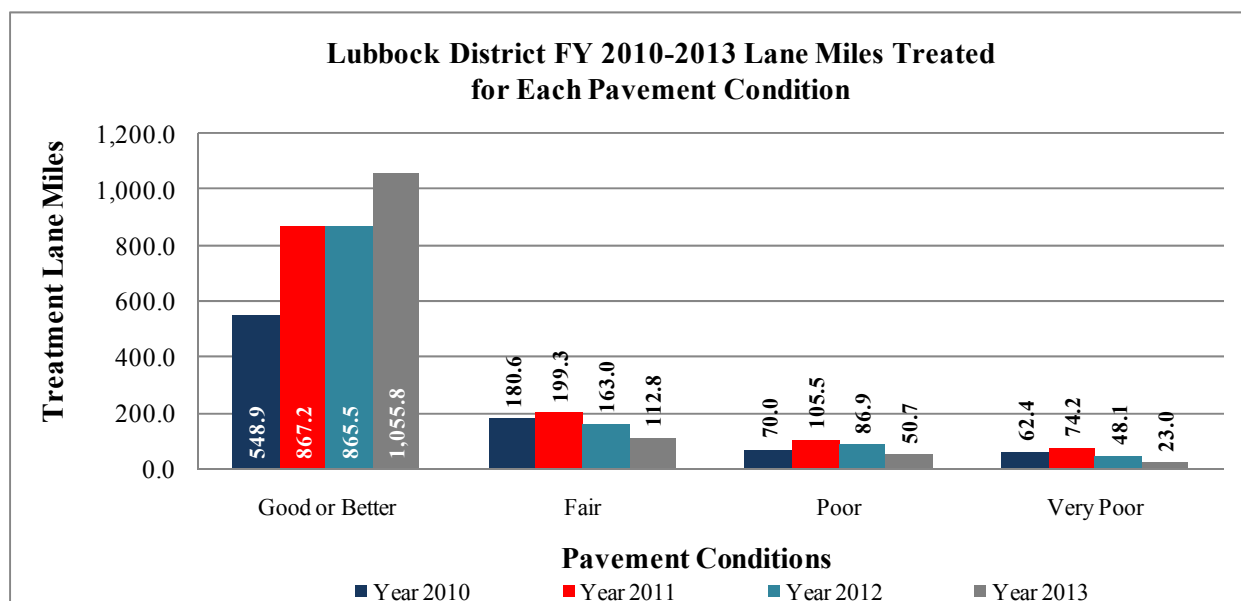
Figure 50. Lubbock District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 19. Pavement Performance Summary for Lubbock District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Lubbock District	Achieved Goal (%)	87.36	87.9	89.36	89.45	87.96
	Achieved Average CS	92	90	89	88	86
Counties in Lubbock District	Bailey — Achieved Goal (%)	90.81	89.18	92.98	93.43	92.61
	Bailey — Achieved Average CS	93	91	91	89	88
	Castro — Achieved Goal (%)	88.81	89.93	90.64	88.21	85.77
	Castro — Achieved Average CS	92	91	89	87	84
	Cochran — Achieved Goal (%)	95.29	93.51	92.07	93.51	92.24
	Cochran — Achieved Average CS	95	94	91	90	89
	Crosby — Achieved Goal (%)	78.44	86.49	85.19	85.19	83.89
	Crosby — Achieved Average CS	87	90	87	86	85
	Dawson — Achieved Goal (%)	78.21	77.32	79.77	88.67	85.71
	Dawson — Achieved Average CS	87	85	84	87	84
	Floyd — Achieved Goal (%)	79.55	82.55	91.66	90.95	89.43
	Floyd — Achieved Average CS	87	87	90	89	87
	Gaines — Achieved Goal (%)	92.65	95.34	93.88	94.21	92.48
	Gaines — Achieved Average CS	95	95	92	90	88
	Garza — Achieved Goal (%)	95.41	93.51	93.95	95.02	93.43
	Garza — Achieved Average CS	96	94	92	91	88
	Hale — Achieved Goal (%)	91.04	92.41	93.37	91.55	87.33
	Hale — Achieved Average CS	93	92	91	88	85
	Hockley — Achieved Goal (%)	84.12	84.81	85.26	86.24	85.18
	Hockley — Achieved Average CS	90	88	88	87	86
	Lamb — Achieved Goal (%)	83.57	84.52	84.19	86.98	87.08
	Lamb — Achieved Average CS	91	89	87	87	85
	Lubbock — Achieved Goal (%)	88.42	87.01	88.13	85.69	85.58
	Lubbock — Achieved Average CS	92	89	88	86	85
	Lynn — Achieved Goal (%)	86.6	88.1	89.8	88.72	88.44
	Lynn — Achieved Average CS	93	91	90	87	86
	Parmer — Achieved Goal (%)	79.86	80.25	86.72	87.48	85.41
	Parmer — Achieved Average CS	88	87	88	88	85
	Swisher — Achieved Goal (%)	93.32	91.51	90.69	89.15	87.63
	Swisher — Achieved Average CS	94	92	89	87	85
	Terry — Achieved Goal (%)	88.66	89.45	93.61	94.06	93.39
	Terry — Achieved Average CS	93	92	92	90	88
	Yoakum — Achieved Goal (%)	94.34	93.6	92.39	90.17	86.97
	Yoakum — Achieved Average CS	96	94	92	89	86

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Garza (95.41%) while the worst was Dawson (78.21%).

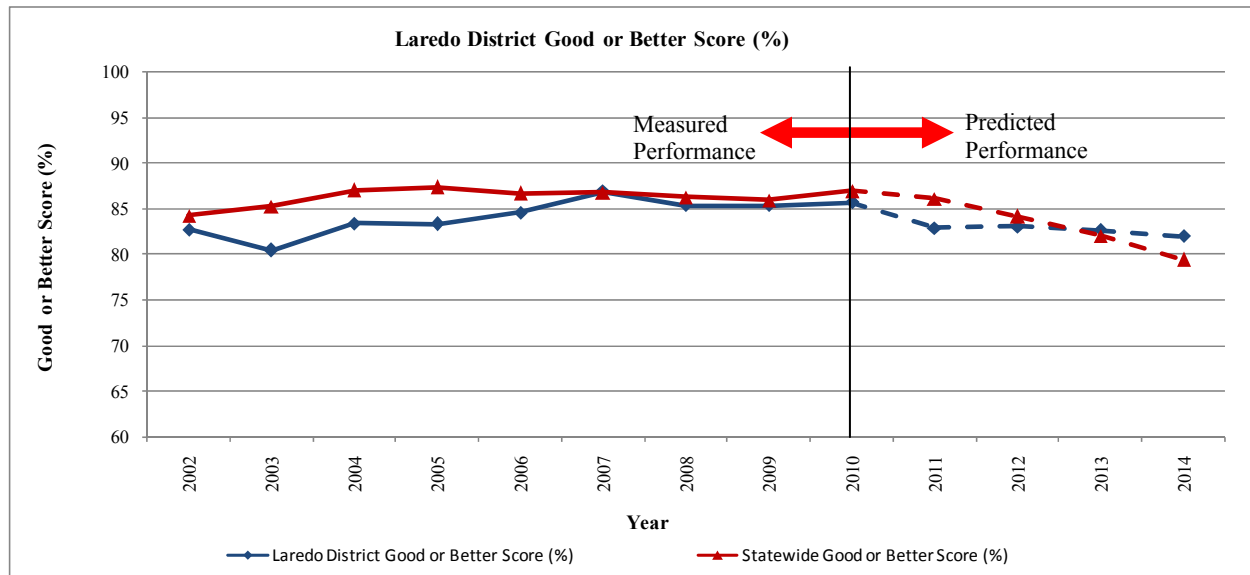## III. Summary of FY 2002–FY 2014 Percentage
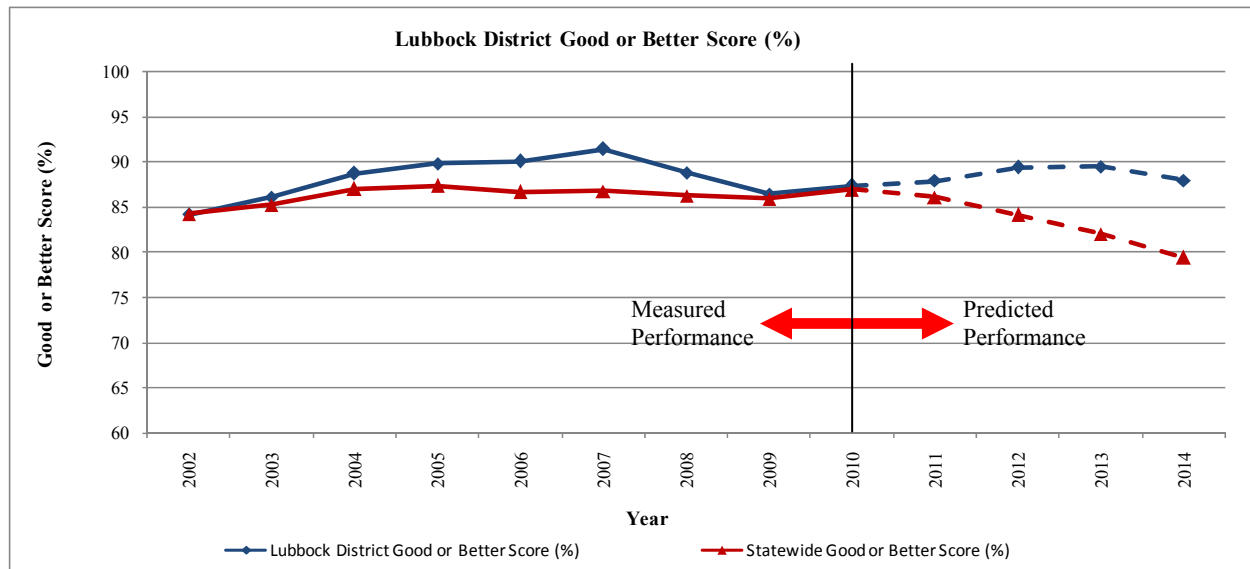
Figure 51. Lubbock District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Lufkin District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,880
Total Lane miles = 6,580

FY 2010 Plan total treatments = **1,008.8 lane miles** = 15.3% of system lane miles
FY 2011 Plan total treatments = **1,006.9 lane miles** = 15.3% of system lane miles
FY 2012 Plan total treatments = **625.1 lane miles** = 9.5% of system lane miles
FY 2013 Plan total treatments = **586.5 lane miles** = 8.9% of system lane miles
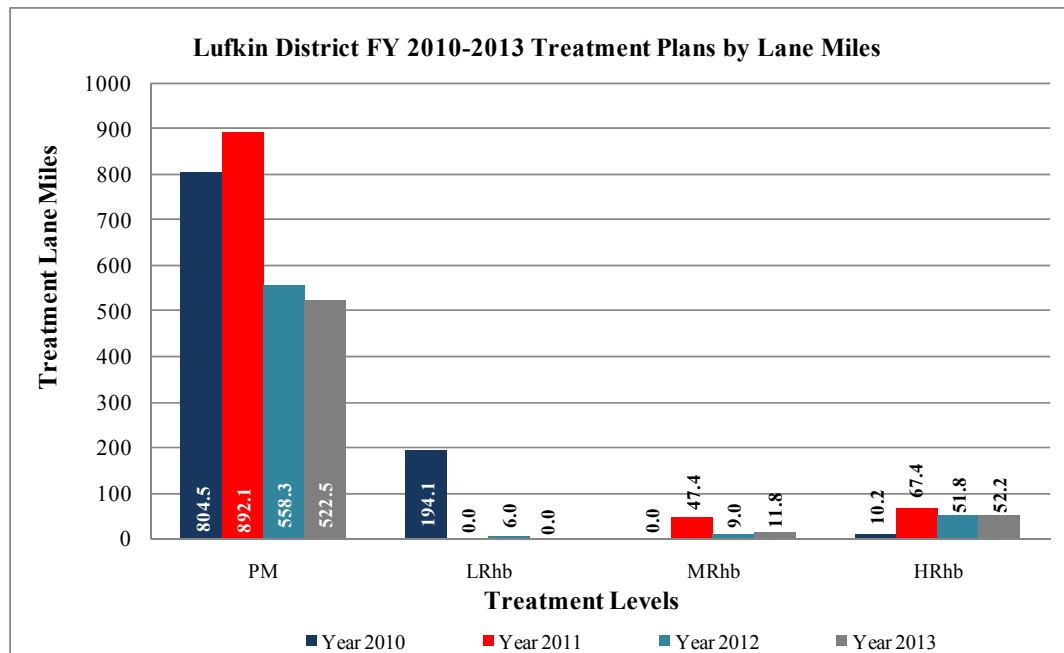
Figure 52. Lufkin District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 10.2, 67.4, 51.8, and 52.2 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 47.4, 9.0, and 11.8 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012 and FY 2013 are 194.1 and 0.0, 6.0 and 0.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 804.5, 892.1, 558.3, and 522.5 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 998.6 lane miles or approximately 15.2% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 939.5 lane miles + 10.2 lane miles of Heavy Rehab treatments from FY 2010 = 949.7 lane miles or approximately 14.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 573.3 lane miles + 67.4 lane miles of Heavy Rehab treatments from FY 2011 = 640.7 lane miles or approximately 9.7% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 534.3 lane miles + 51.8 lane miles of Heavy Rehab treatments from FY 2012 = 586.1 lane miles or approximately 8.9% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 53.
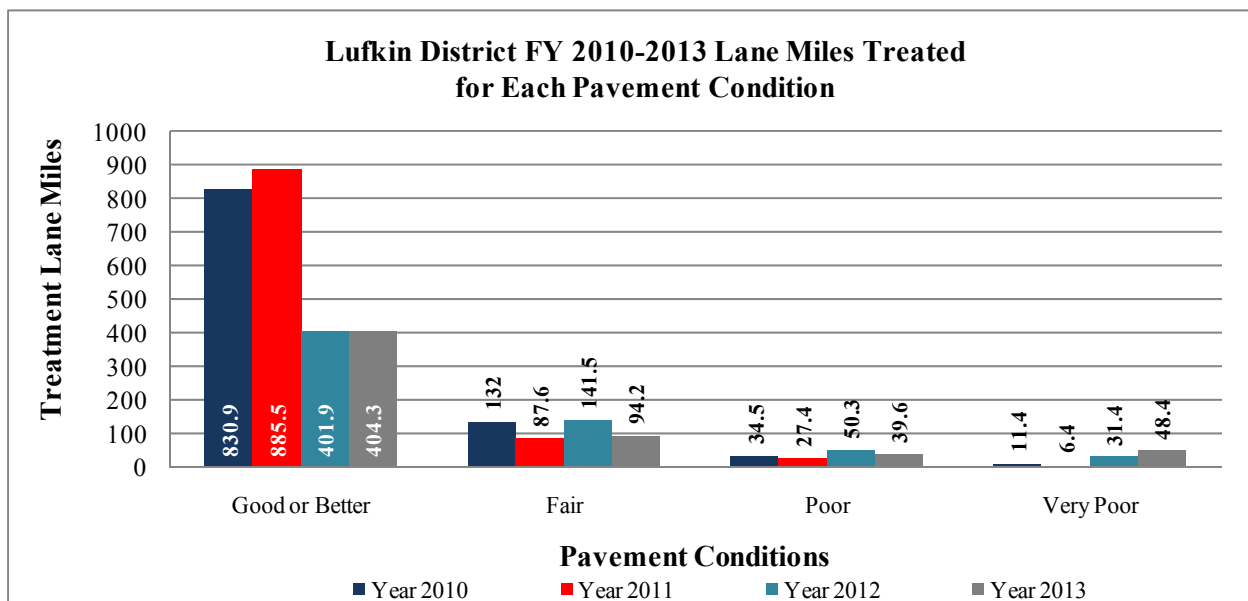
Figure 53. Lufkin District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 20. Pavement Performance Summary for Lufkin District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Lufkin District	**Achieved Goal (%)**	**89.3**	**87.44**	**84.79**	**83.6**	**82.04**
	Achieved Average CS	**91**	**89**	**87**	**84**	**82**
Angelina	Achieved Goal (%)	88.76	87.5	83.52	83.01	83.65
	Achieved Average CS	92	89	87	84	83
Houston	Achieved Goal (%)	88.95	84.77	81.35	78.04	77.64
	Achieved Average CS	90	87	84	81	80
Nacogdoches	Achieved Goal (%)	86.79	85.15	83.38	81.07	78.83
	Achieved Average CS	90	88	85	84	81
Polk	Achieved Goal (%)	88.26	89.79	87.06	85.79	83.88
	Achieved Average CS	91	90	87	85	83
Sabine	Achieved Goal (%)	94.12	91.1	88.47	87.79	84.65
	Achieved Average CS	93	91	88	87	84
San Augustine	Achieved Goal (%)	91.44	90.07	90.45	90.34	87.18
	Achieved Average CS	93	91	90	88	84
San Jacinto	Achieved Goal (%)	97.17	96.15	95.88	95.27	95.04
	Achieved Average CS	97	95	92	91	89
Shelby	Achieved Goal (%)	85.21	78.55	74.37	74.53	72.58
	Achieved Average CS	88	85	82	80	77
Trinity	Achieved Goal (%)	89.75	93.62	89.88	88.85	85.48
	Achieved Average CS	93	93	90	87	84

(Leftmost vertical label: Counties in Lufkin District)

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was San Jacinto (97.17%) while the worst was Shelby (85.21%).

III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements
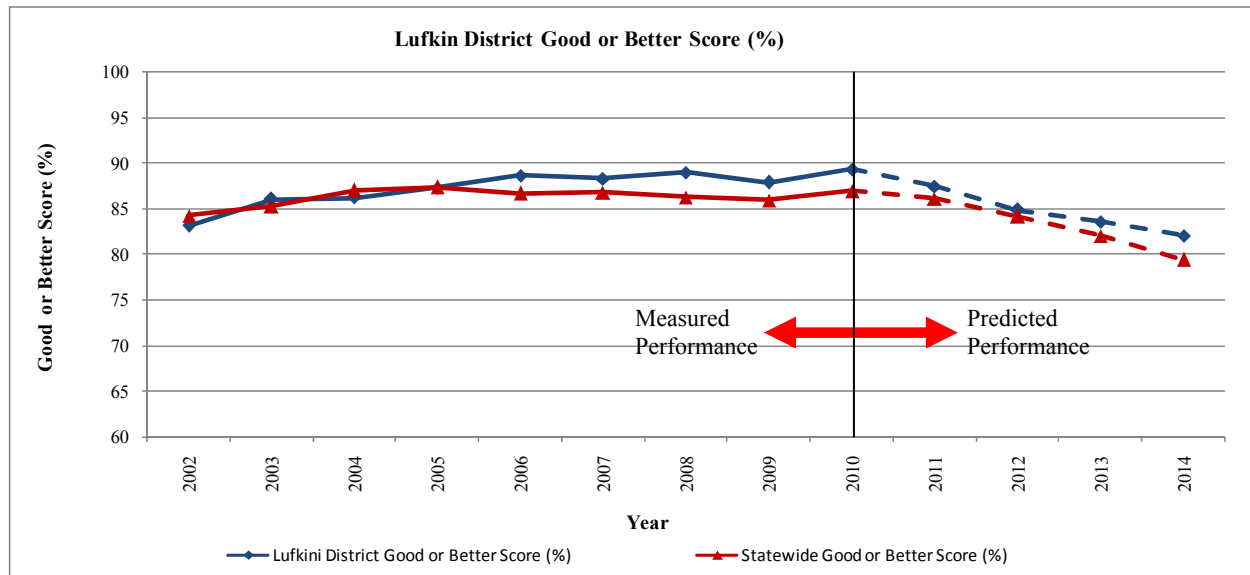
Figure 54. Lufkin District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Odessa District

I. Summary of FY 2010–FY 2013 Treatments
Total Center line miles = 3,388
Total Lane miles = 8,066

FY 2010 Plan total treatments = **653.8 lane miles** = 8.1% of system lane miles
FY 2011 Plan total treatments = **151.6 lane miles** = 1.9% of system lane miles
FY 2012 Plan total treatments = **222.2 lane miles** = 2.8% of system lane miles
FY 2013 Plan total treatments = **456.9 lane miles** = 5.7% of system lane miles
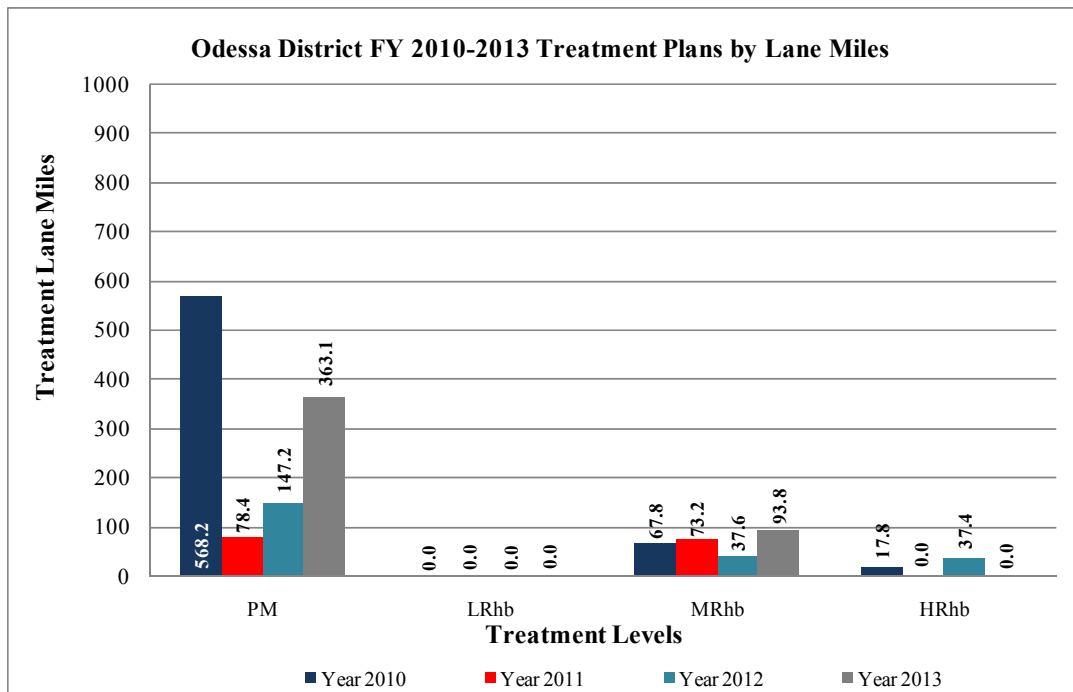
Figure 55. Odessa District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 17.8, 0.0, 37.4, and 0.0 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 67.8, 73.2, 37.6, and 93.8 lane miles respectively.

- There are no Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 568.2, 78.4, 147.2, and 363.1 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 636.0 lane miles or approximately 7.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 151.6 lane miles + 17.8 lane miles of Heavy Rehab treatments from FY 2010 = 169.4 lane miles or approximately 2.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 184.8 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2011 = 184.8 lane miles or approximately 2.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 456.9 lane miles + 37.4 lane miles of Heavy Rehab treatments from FY 2012 = 494.3 lane miles or approximately 6.1% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 56.
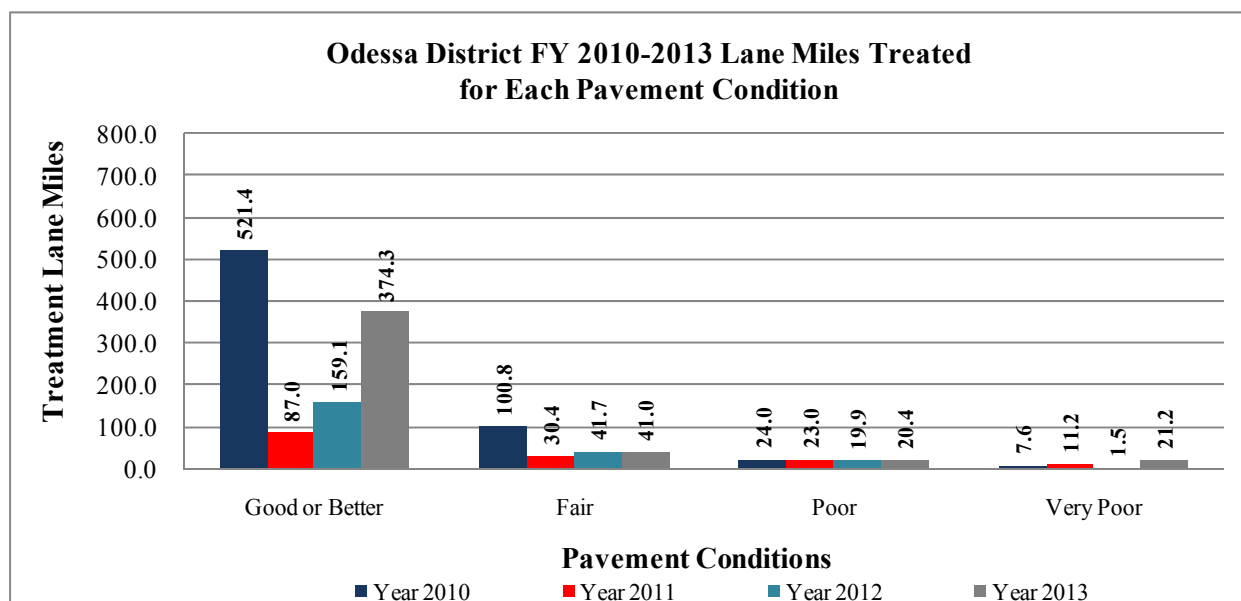
Figure 56. Odessa District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 21. Pavement Performance Summary for Odessa District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Odessa District	**Achieved Goal (%)**	**93.33**	**93.56**	**92.91**	**91.24**	**88.33**
	Achieved Average CS	**94**	**93**	**90**	**87**	**85**
Counties in Odessa District — Andrews	Achieved Goal (%)	97.07	97.18	95.66	93.02	87.5
	Achieved Average CS	95	93	90	87	84
Crane	Achieved Goal (%)	98.44	98.06	97.69	96.75	96.56
	Achieved Average CS	98	96	93	90	90
Ector	Achieved Goal (%)	93.93	93.67	92.59	92.39	90.08
	Achieved Average CS	95	93	91	89	86
Loving	Achieved Goal (%)	95.22	95.22	91.94	91.94	87.16
	Achieved Average CS	97	94	91	88	84
Martin	Achieved Goal (%)	88.75	96.45	96.48	94.94	90.65
	Achieved Average CS	94	95	93	90	86
Midland	Achieved Goal (%)	82.88	82.68	80.37	74.78	72.09
	Achieved Average CS	88	87	83	79	78
Pecos	Achieved Goal (%)	97.82	97.08	96.33	95.34	91.94
	Achieved Average CS	97	95	93	90	87
Reeves	Achieved Goal (%)	90.47	89	91.01	91.52	88
	Achieved Average CS	93	91	90	88	86
Terrell	Achieved Goal (%)	98.45	99.12	98.34	95.86	94.51
	Achieved Average CS	97	95	92	89	86
Upton	Achieved Goal (%)	96.6	98.94	98.43	97.92	96.96
	Achieved Average CS	97	96	93	90	88
Ward	Achieved Goal (%)	94.87	94.81	94.18	92.23	88.6
	Achieved Average CS	95	93	90	87	85
Winkler	Achieved Goal (%)	97.12	96.45	93.36	88.8	90.34
	Achieved Average CS	95	93	89	86	86

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Terrell (98.45%) while the worst was Midland (82.88%).

III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements
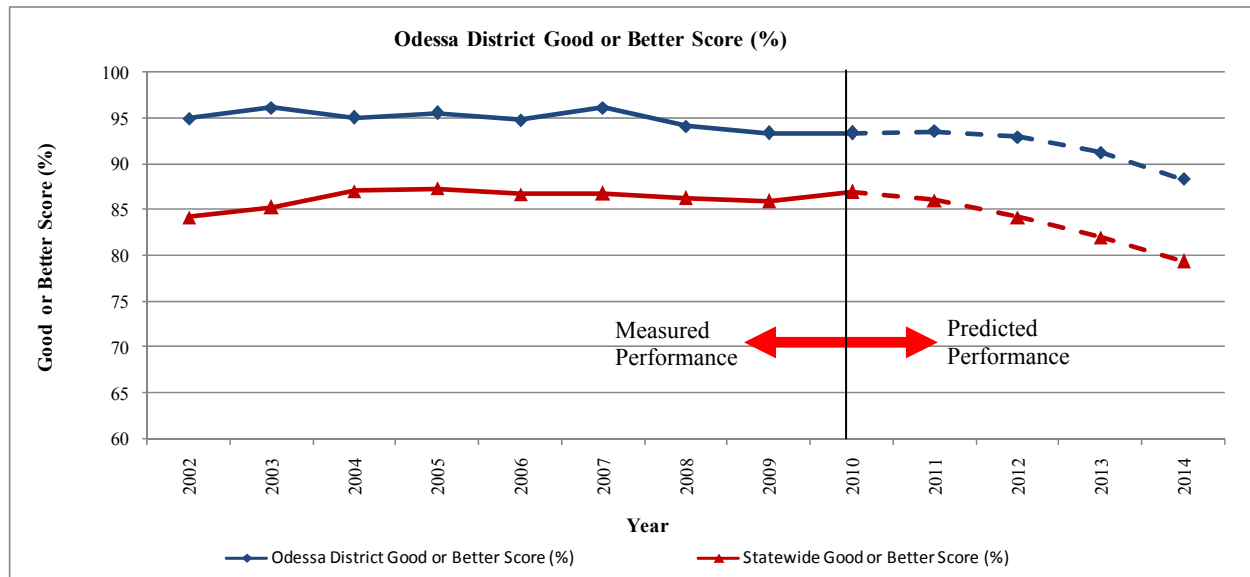
Figure 57. Odessa District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Paris District

I. Summary of FY 2010–FY 2013 Treatments
Total Center line miles = 3,412
Total Lane miles = 6,801

FY 2010 Plan total treatments = **634.6 lane miles** = 9.3% of system lane miles
FY 2011 Plan total treatments = **1,458.8 lane miles** = 21.4% of system lane miles
FY 2012 Plan total treatments = **754.7 lane miles** = 11.1% of system lane miles
FY 2013 Plan total treatments = **1,058.2 lane miles** = 15.6% of system lane miles
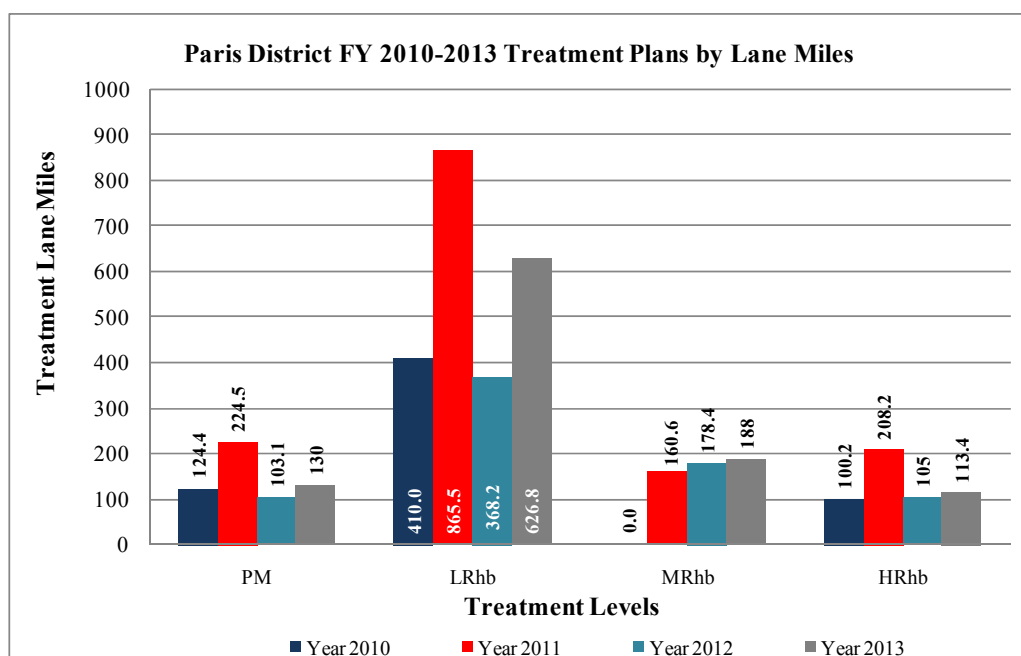
Figure 58. Paris District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 100.2, 208.2, 105, and 113.4 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 160.6, 178.4, and 188.0 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 410.0, 865.5, 368.2, and 626.8 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 124.4, 224.5, 103.1, and 130 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 534.4 lane miles or approximately 7.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 1250.6 lane miles + 100.2 lane miles of Heavy Rehab treatments from FY 2010 = 1350.8 lane miles or approximately 19.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 649.7 lane miles + 208.2 lane miles of Heavy Rehab treatments from FY 2011 = 857.9 lane miles or approximately 12.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 944.8 lane miles + 105 lane miles of Heavy Rehab treatments from FY 2012 = 1049.8 lane miles or approximately 15.4% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 59.
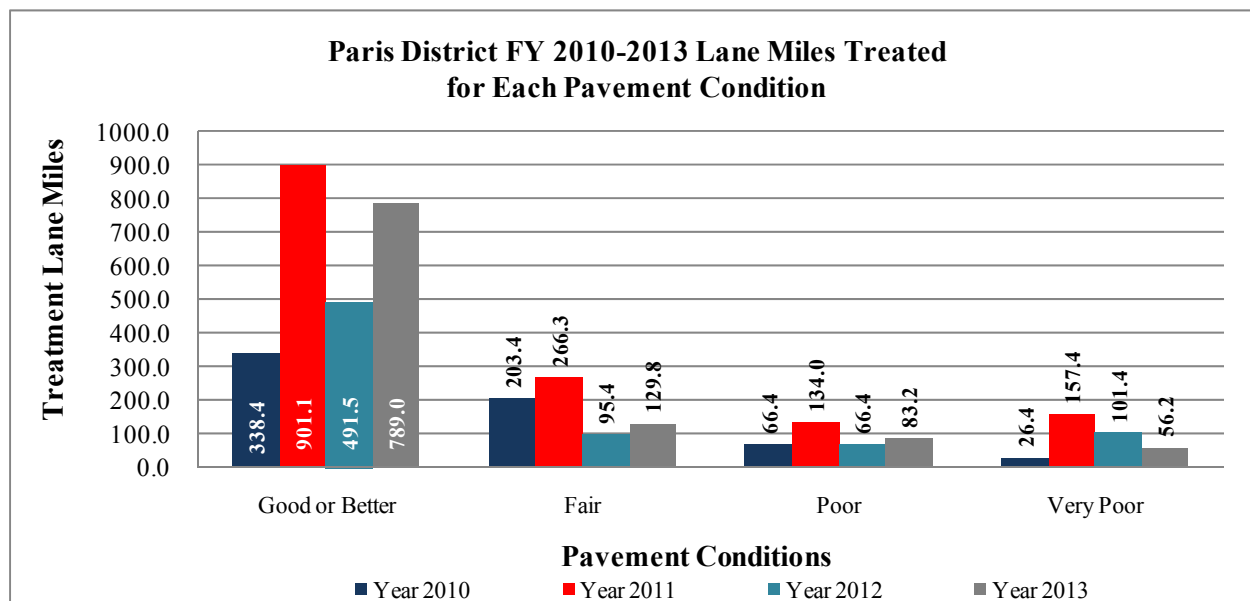
Figure 59. Paris District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 22. Pavement Performance Summary for Paris District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Paris District		Achieved Goal (%)	80.6	79.57	82.18	81.78	81.51
		Achieved Average CS	86	84	86	85	84
Counties in Paris District	Delta	Achieved Goal (%)	84.77	81.4	82.64	81.23	78.93
		Achieved Average CS	89	86	87	86	84
	Fannin	Achieved Goal (%)	76.27	75.81	74.72	70.66	75.9
		Achieved Average CS	85	83	82	78	81
	Franklin	Achieved Goal (%)	85.75	93.45	88.82	89	95.13
		Achieved Average CS	89	91	91	90	93
	Grayson	Achieved Goal (%)	72.23	71.51	80.8	82.07	82.99
		Achieved Average CS	81	80	86	86	86
	Hopkins	Achieved Goal (%)	81.4	81.23	80.11	82.18	79.58
		Achieved Average CS	85	85	83	85	84
	Hunt	Achieved Goal (%)	82.78	77.93	81.29	82.51	81.74
		Achieved Average CS	87	83	85	85	85
	Lamar	Achieved Goal (%)	80.33	79.31	86.41	84.68	81.81
		Achieved Average CS	87	85	88	86	83
	Rains	Achieved Goal (%)	85.24	81.79	86.42	80.22	74.57
		Achieved Average CS	89	86	88	85	82
	Red River	Achieved Goal (%)	89.28	89.66	87.73	87.73	85.59
		Achieved Average CS	93	90	88	87	86

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Red River (89.28%) while the worst was Grayson (72.23%).

III.   Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 60. Paris District Overall Pavement Performance of FY 2002–FY 2014
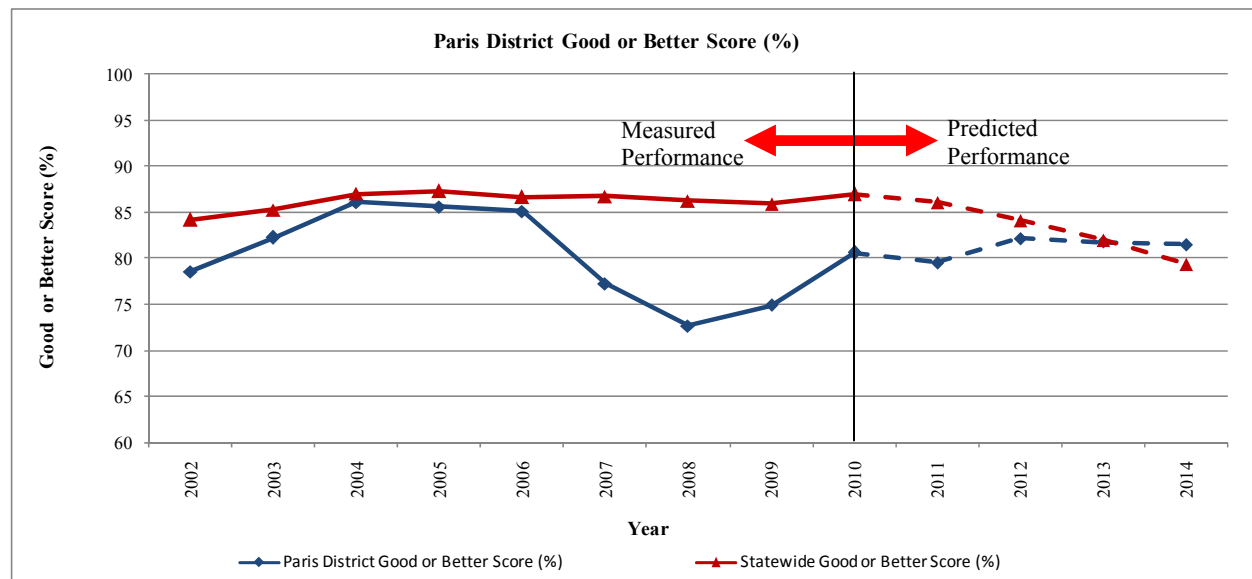
For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Pharr District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 2,322
Total Lane miles = 6,020

FY 2010 Plan total treatments = **731.4 lane miles** = 12.1% of system lane miles
FY 2011 Plan total treatments = **843.1 lane miles** = 14.0% of system lane miles
FY 2012 Plan total treatments = **990.0 lane miles** = 16.4% of system lane miles
FY 2013 Plan total treatments = **892.3 lane miles** = 14.8% of system lane miles
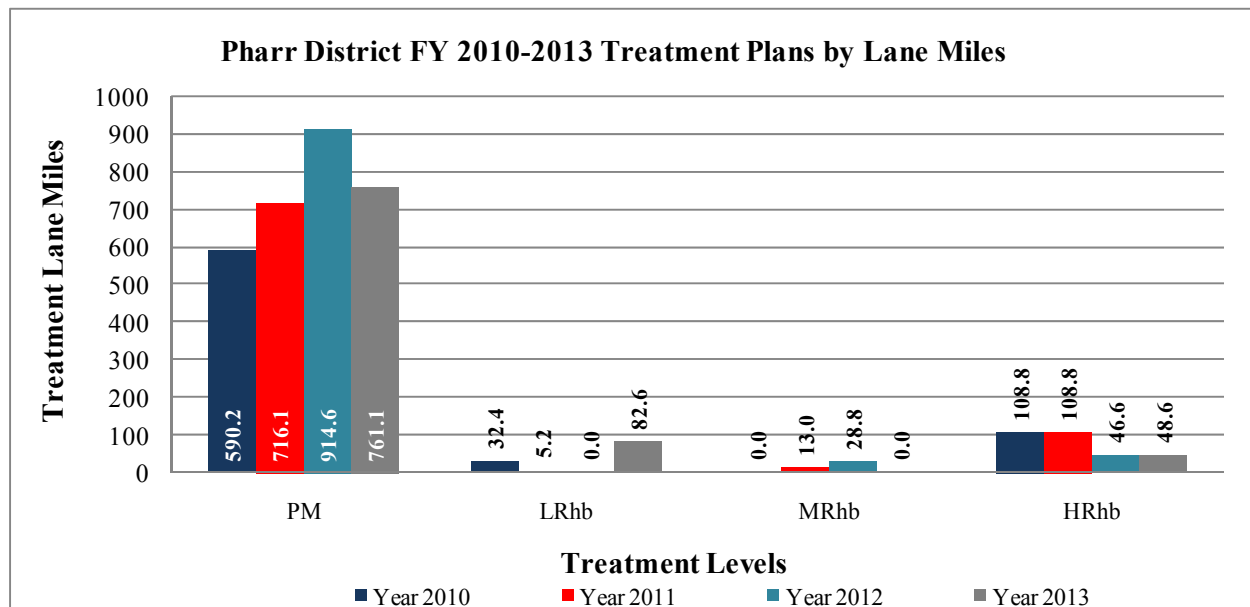
Figure 61. Pharr District Treatment Plans for FY 2010–2012

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 2010, FY 2011, FY 2012, and FY 2013 are 108.8, 108.8, 46.6, and 48.6 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 13.0, 28.8, and 0.0 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 32.4, 5.2, 0.0, and 82.6 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 590.2, 716.1, 914.6, and 761.1 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 622.6 lane miles or approximately 10.3 % of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 734.3 lane miles + 108.8 lane miles of Heavy Rehab treatments from FY 2010 = 843.1 lane miles or approximately 14.0 % of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 943.4 lane miles + 108.8 lane miles of Heavy Rehab treatments from FY 2011 = 1052.2 lane miles or approximately 17.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 843.7 lane miles + 46.6 lane miles of Heavy Rehab treatments from FY 2012 = 890.3 lane miles or approximately 14.8% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 62.
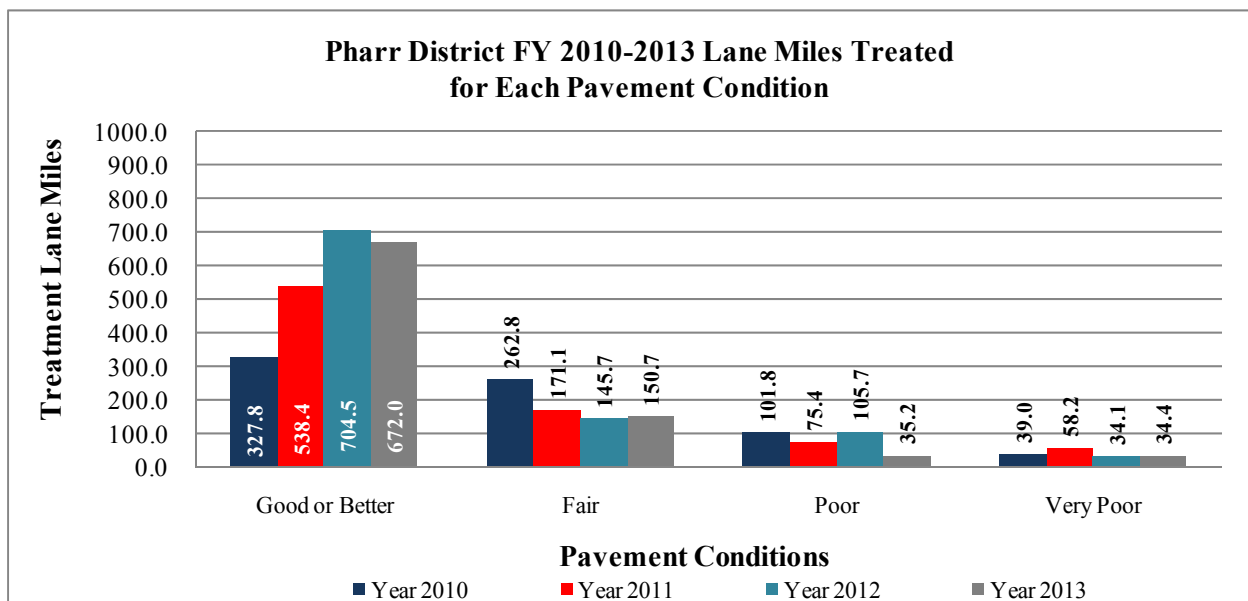

Figure 62. Pharr District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 23. Pavement Performance Summary for Pharr District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Pharr District		Achieved Goal (%)	84.07	86.88	88.48	90.14	88.58
		Achieved Average CS	90	89	88	88	86
Counties in Pharr District	**Brooks**	Achieved Goal (%)	85.02	82.7	94.04	94.04	92.38
		Achieved Average CS	92	89	92	90	88
	Cameron	Achieved Goal (%)	84.82	86.26	86.12	87.38	84.34
		Achieved Average CS	90	89	87	86	84
	Hidalgo	Achieved Goal (%)	85.04	87.29	88.9	92.15	90.96
		Achieved Average CS	90	89	88	88	87
	Jim Hogg	Achieved Goal (%)	96.82	95.37	97.93	96.89	92.4
		Achieved Average CS	97	94	93	91	87
	Kenedy*	Achieved Goal (%)	0	56.43	63.97	63.44	68.12
		Achieved Average CS	59	77	77	72	74
	Starr	Achieved Goal (%)	90.8	88.5	89.77	93.3	91.91
		Achieved Average CS	93	90	89	89	88
	Willacy	Achieved Goal (%)	95.02	92.86	91.48	90.03	91.52
		Achieved Average CS	93	91	90	88	87
	Zapata	Achieved Goal (%)	81.76	90.19	93.1	92.51	90.15
		Achieved Average CS	89	92	91	90	86

*No data available for Kenedy County for the analysis.

Based on the analysis results presented in Table 2, at the end of the 4-year planning horizon the county in best condition was Jim Hogg (96.82%) while the worst was Zapata (81.76%).

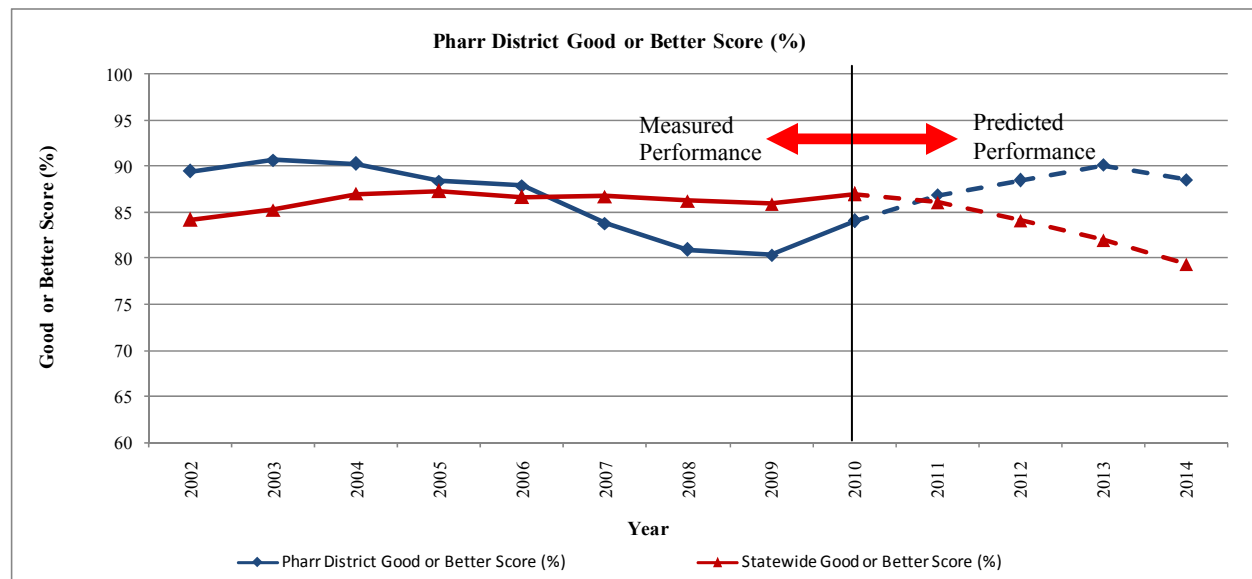## III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 63. Pharr District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

San Angelo District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,253
Total Lane miles = 7,297

FY 2010 Plan total treatments = **554.2 lane miles** = 7.6% of system lane miles
FY 2011 Plan total treatments = **972.6 lane miles** = 13.3% of system lane miles
FY 2012 Plan total treatments = **1,046.8 lane miles** = 14.3% of system lane miles
FY 2013 Plan total treatments = **877.4 lane miles** = 12.0% of system lane miles
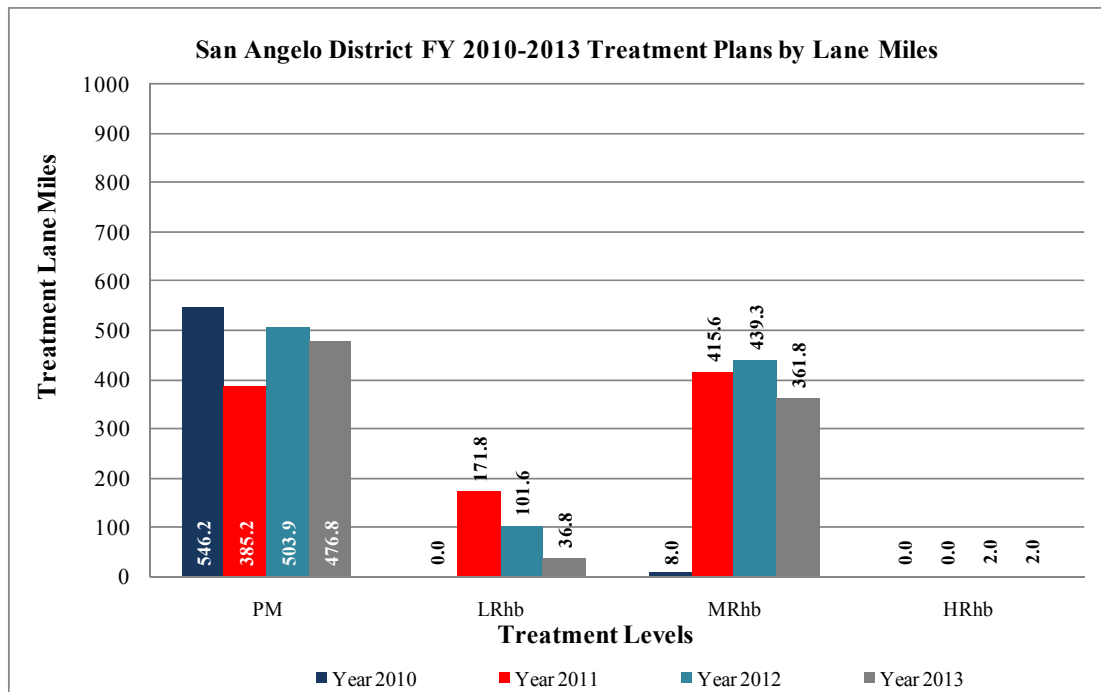
Figure 64. San Angelo District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 0.0, 2.0, and 2.0 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 8.0, 415.6, 439.3, and 361.8 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0 171.8, 101.6, and 36.8 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 546.2 and 385.2, 503.9 and 476.8 lane miles respectively.

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The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 554.2 lane miles or approximately 7.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 972.6 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 972.6 lane miles or approximately 13.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1044.8 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2011 = 1044.8 lane miles or approximately 14.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 875.4 lane miles + 2.0 lane miles of Heavy Rehab treatments from FY 2012 = 877.4 lane miles or approximately 12.0% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 65.
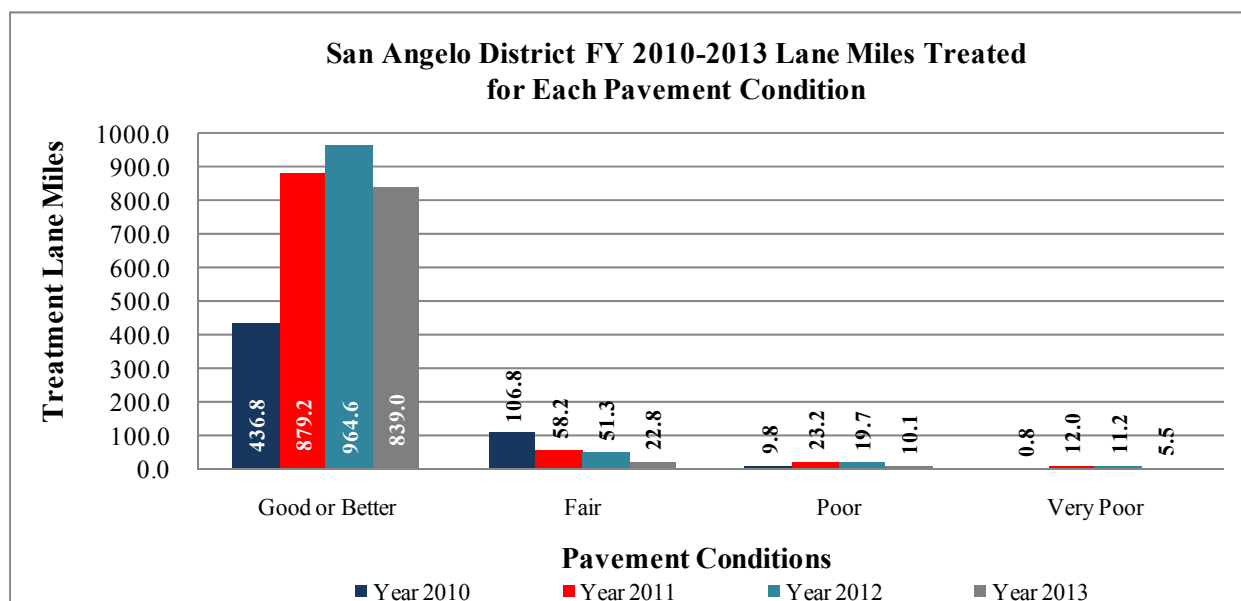

Figure 65. San Angelo District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

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

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
San Angelo District	Achieved Goal (%)	95.23	95.12	94.91	93.76	91.44
	Achieved Average CS	96	94	93	90	88
Coke	Achieved Goal (%)	96.32	94.7	93.13	91.02	86.78
	Achieved Average CS	96	93	91	88	85
Concho	Achieved Goal (%)	87.73	96.15	97.05	96.04	94.41
	Achieved Average CS	93	95	94	92	89
Crockett	Achieved Goal (%)	97.17	98.05	97.63	96.56	94.83
	Achieved Average CS	97	96	94	91	88
Edwards	Achieved Goal (%)	96.92	94.32	96.64	96.24	94.8
	Achieved Average CS	96	92	94	93	92
Glasscock	Achieved Goal (%)	94.89	96.25	95.91	95.57	94.35
	Achieved Average CS	96	95	92	92	90
Irion	Achieved Goal (%)	94.02	94.67	92.62	93.52	90.25
	Achieved Average CS	95	93	91	90	87
Kimble	Achieved Goal (%)	97.45	96.57	95.58	95.26	92.12
	Achieved Average CS	98	95	93	91	88
Menard	Achieved Goal (%)	98.79	98.04	98.16	94.88	91.83
	Achieved Average CS	98	96	94	93	89
Reagan	Achieved Goal (%)	99.31	98.44	98.13	94.7	94.07
	Achieved Average CS	99	96	94	91	89
Real	Achieved Goal (%)	94.2	90.43	93.22	93.36	91.4
	Achieved Average CS	95	92	92	92	90
Runnels	Achieved Goal (%)	94.75	93.48	91.08	89.9	87.53
	Achieved Average CS	95	93	91	89	87
Schleicher	Achieved Goal (%)	98.35	97.53	96.15	94.01	93.18
	Achieved Average CS	98	96	93	91	89
Sterling	Achieved Goal (%)	87.3	84.67	86.8	86.09	87.51
	Achieved Average CS	92	90	89	87	88
Sutton	Achieved Goal (%)	98.07	97.12	97.8	96.37	93.35
	Achieved Average CS	98	96	94	91	88
Tom Green	Achieved Goal (%)	92.55	93.15	92.8	91.68	88.17
	Achieved Average CS	94	92	91	89	86

Counties in San Angelo District

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Reagan (99.31%) while the worst was Sterling (87.30%).
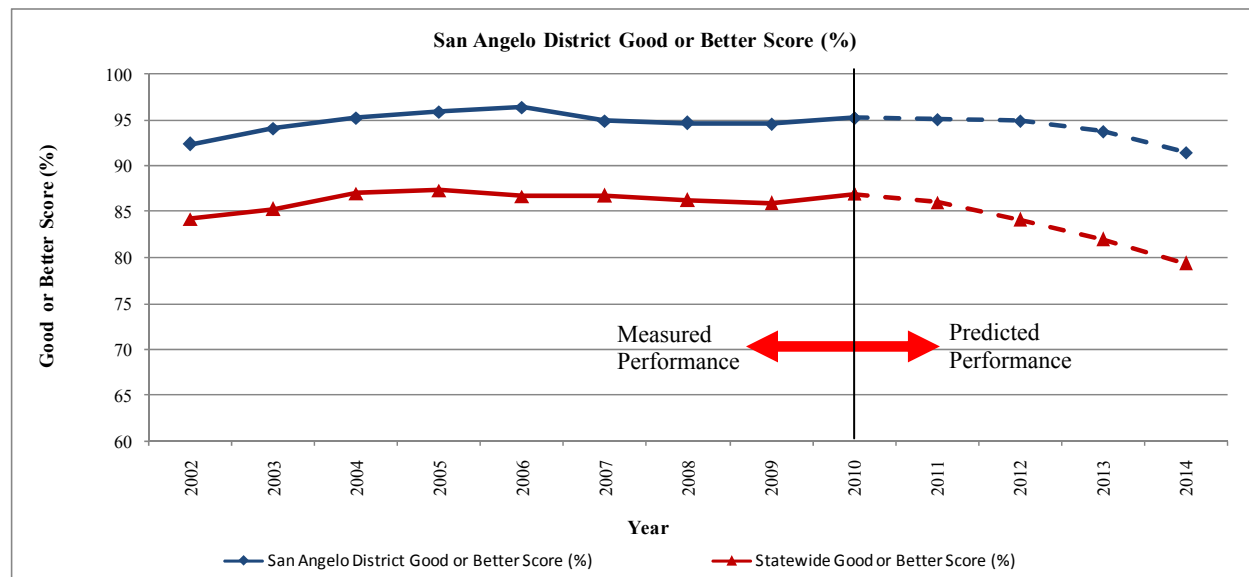
Figure 66. San Angelo District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

San Antonio District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 4,270
Total Lane miles = 10,870

FY 2010 Plan total treatments = **1,062.9 lane miles** = 9.8% of system lane miles
FY 2011 Plan total treatments = **1,068.8 lane miles** = 9.8% of system lane miles
FY 2012 Plan total treatments = **1,222.7 lane miles** = 11.2% of system lane miles
FY 2013 Plan total treatments = **890.7 lane miles** = 8.2% of system lane miles
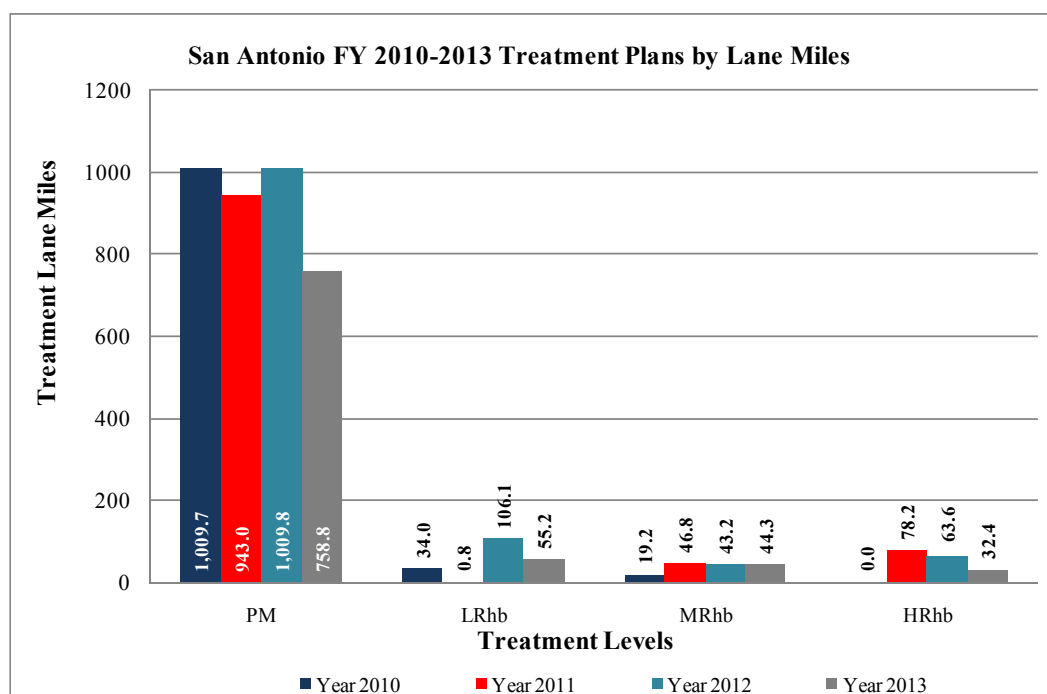
Figure 67. San Antonio District Treatment Plans for FY 2010–2013

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 and FY 2010 are 0.0, 78.2, 63.6, and 32.4 lane miles respectively.
- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 19.2, 46.8, 43.2, and 44.3 lane miles respectively.
- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 34.0, 0.8, 43.2, and 44.3 lane miles respectively.
- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 1009.7, 943.0, 1009.8, and 758.8 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 1062.9 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 = 990.6 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 1001.1 lane miles or approximately 9.1% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1159.1 lane miles + 78.2 lane miles of Heavy Rehab treatments from FY 2011 = 1237.3 lane miles or approximately 11.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 858.3 lane miles + 63.6 lane miles of Heavy Rehab treatments from FY 2012 = 921.9 lane miles or approximately 8.5% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 68.
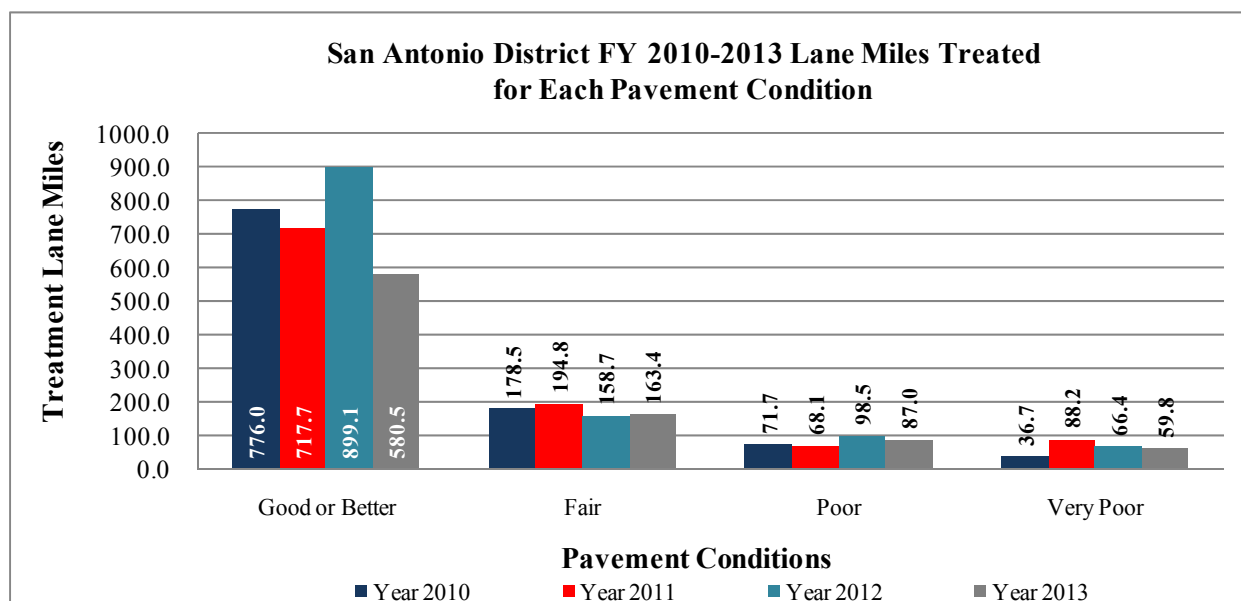

Figure 68. San Antonio District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

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

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
San Antonio District	**Achieved Goal (%)**	**84.82**	**82.96**	**81.52**	**80.02**	**76.61**
	Achieved Average CS	**89**	**87**	**84**	**82**	**80**
Atascosa	Achieved Goal (%)	86.07	87.58	86.8	85.27	82.18
	Achieved Average CS	90	89	87	85	83
Bandera	Achieved Goal (%)	96.44	93.83	92.66	92.66	88.03
	Achieved Average CS	96	93	91	89	86
Bexar	Achieved Goal (%)	79.15	77.23	73.9	70.03	65.57
	Achieved Average CS	86	83	80	77	74
Comal	Achieved Goal (%)	90.64	87.81	83.67	82.62	78.63
	Achieved Average CS	91	89	86	84	81
Frio	Achieved Goal (%)	93.13	91.89	90.66	89	86.71
	Achieved Average CS	94	92	89	87	85
Guadalupe	Achieved Goal (%)	80.35	77.04	78.78	77.1	74.61
	Achieved Average CS	86	84	83	81	79
Kendall	Achieved Goal (%)	87.91	81.61	82.56	86.11	82.66
	Achieved Average CS	89	87	85	85	83
Kerr	Achieved Goal (%)	82.41	79.69	75.12	73.63	69.35
	Achieved Average CS	88	85	81	79	76
McMullen	Achieved Goal (%)	83.58	79.78	79.78	80.75	85.19
	Achieved Average CS	88	85	84	83	85
Medina	Achieved Goal (%)	95.58	94.42	92.19	92.11	89.17
	Achieved Average CS	96	93	90	88	86
Uvalde	Achieved Goal (%)	82.05	80.01	83.16	83.32	80.18
	Achieved Average CS	87	85	85	84	81
Wilson	Achieved Goal (%)	85.74	85.61	86.87	88.03	84.83
	Achieved Average CS	90	89	87	87	83

Row label (vertical): Counties in San Antonio District

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Bandern (96.44%) while the worst was Bexar (79.15%).

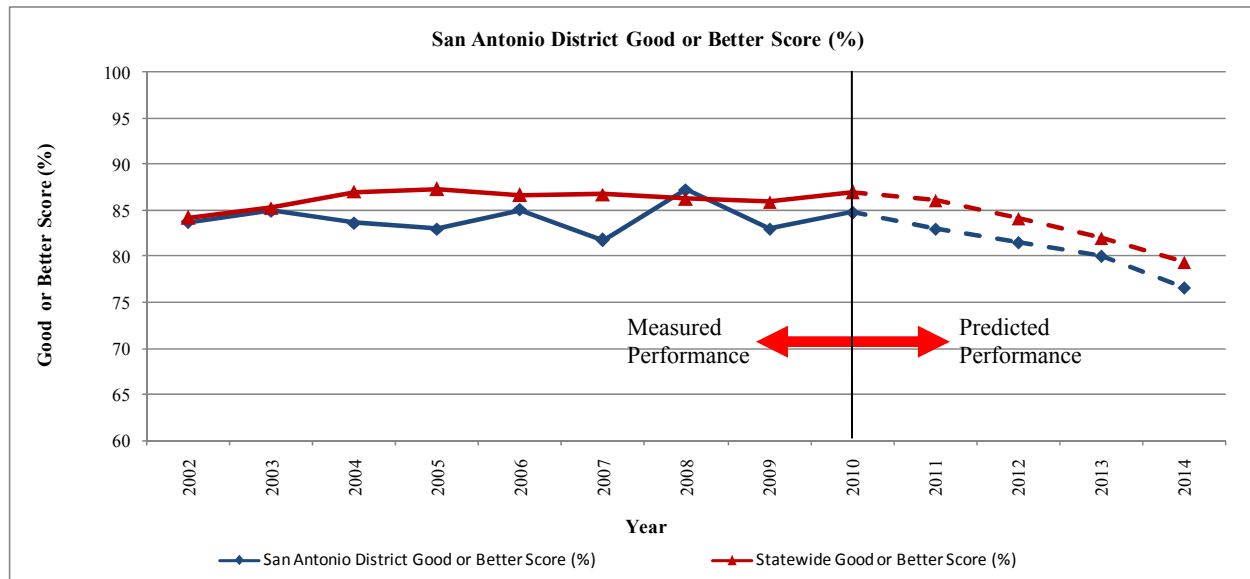**III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements**

Figure 69. San Antonio District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Tyler District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,704
Total Lane miles = 8,659

FY 2010 Plan total treatments = **731.8 lane miles** = 8.5% of system lane miles
FY 2011 Plan total treatments = **1,160.7 lane miles** = 13.4% of system lane miles
FY 2012 Plan total treatments = **969.9 lane miles** = 11.2% of system lane miles
FY 2013 Plan total treatments = **1,614.6 lane miles** = 18.6% of system lane miles
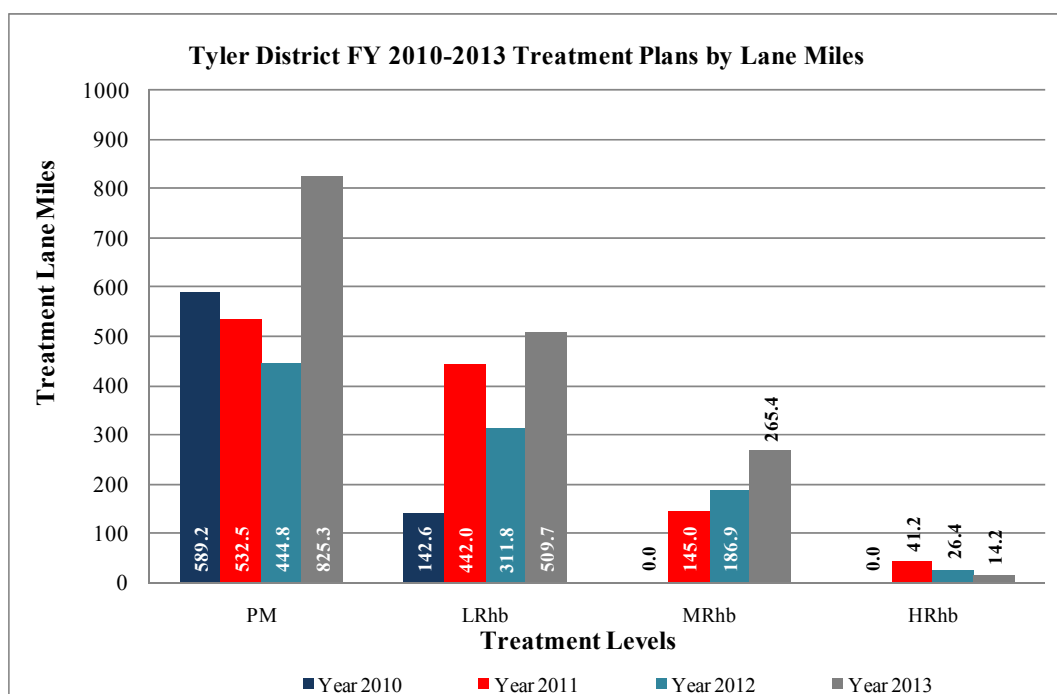

Figure 70. Tyler District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 41.2, 26.4, and 14.2 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 145.0, 186.9, and 265.4 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 142.6, 442, 311.8, and 509.7 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 589.2, 532.5, 444.8, and 825.3 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 731.8 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 = 1119.5 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 1119.5 lane miles or approximately 12.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 943.5 lane miles + 41.2 lane miles of Heavy Rehab treatments from FY 2011 = 984.7 lane miles or approximately 11.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 1600.4 lane miles + 26.4 lane miles of Heavy Rehab treatments from FY 2012 = 1626.8 lane miles or approximately 18.8% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 71.
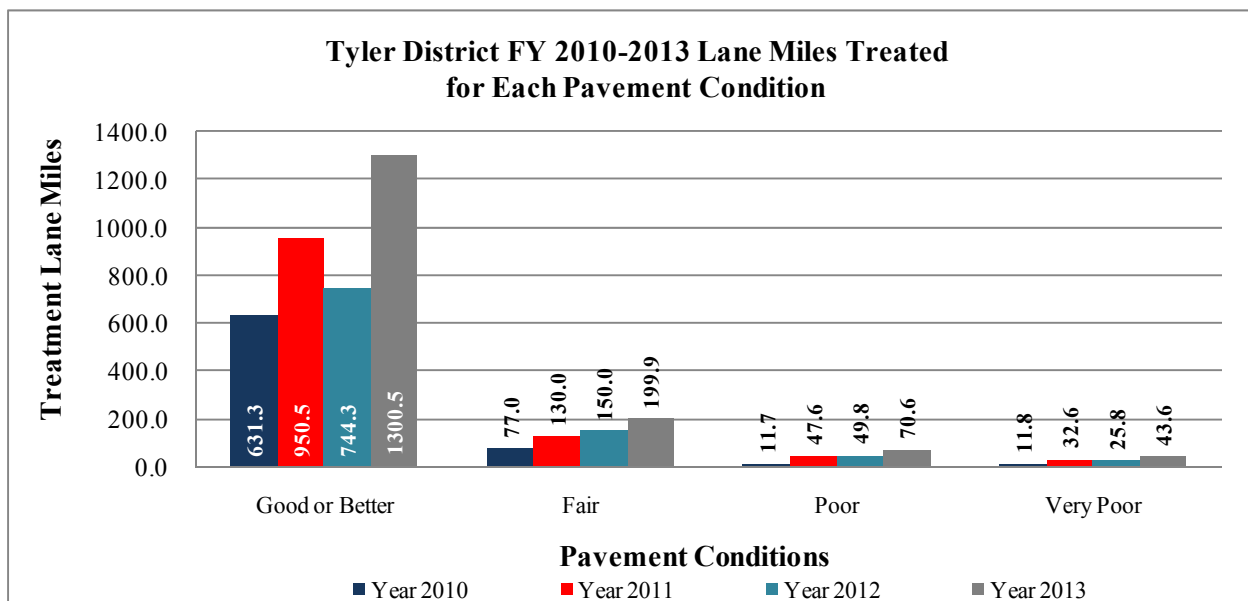

Figure 71. Tyler District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 26. Pavement Performance Summary for Tyler District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Tyler District	Achieved Goal (%)	93.85	90.41	87.61	84.86	82.14
	Achieved Average CS	93	90	88	86	84
Anderson	Achieved Goal (%)	97.12	95.5	91.46	87.11	84.42
	Achieved Average CS	95	92	90	86	85
Cherokee	Achieved Goal (%)	97.37	95.09	93.13	88.32	81.83
	Achieved Average CS	95	92	89	87	84
Gregg	Achieved Goal (%)	90.39	85.25	82.04	79.5	82.11
	Achieved Average CS	91	88	86	83	85
Henderson	Achieved Goal (%)	96.06	92.38	89.12	87.97	84.69
	Achieved Average CS	94	91	88	87	86
Rusk	Achieved Goal (%)	88.65	86.69	84.74	80.43	82.61
	Achieved Average CS	90	88	86	83	85
Smith	Achieved Goal (%)	93.88	90.86	87.32	87.33	82.76
	Achieved Average CS	93	91	88	87	84
Van Zandt	Achieved Goal (%)	92.52	88.71	87.87	86.05	81.42
	Achieved Average CS	92	90	89	87	84
Wood	Achieved Goal (%)	95.03	87.83	83.75	79.33	76.71
	Achieved Average CS	91	88	86	84	82

Counties in Tyler District

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Cherokee (97.37%) while the worst was Rusk (88.65%).

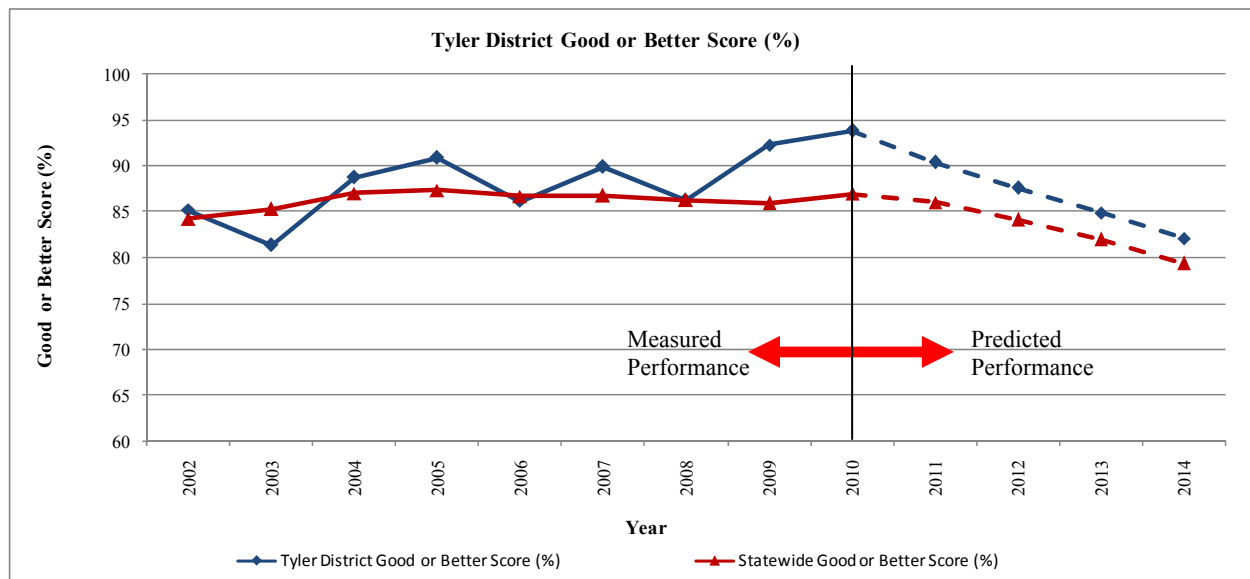### III.   Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 72. Tyler District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Waco District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles = 3,404
Total Lane miles = 7,621

FY 2010 Plan total treatments = **716.4 lane miles** = 9.4% of system lane miles
FY 2011 Plan total treatments = **948.7 lane miles** = 12.4% of system lane miles
FY 2012 Plan total treatments = **703.1 lane miles** = 9.2% of system lane miles
FY 2013 Plan total treatments = **643.2 lane miles** = 8.4% of system lane miles
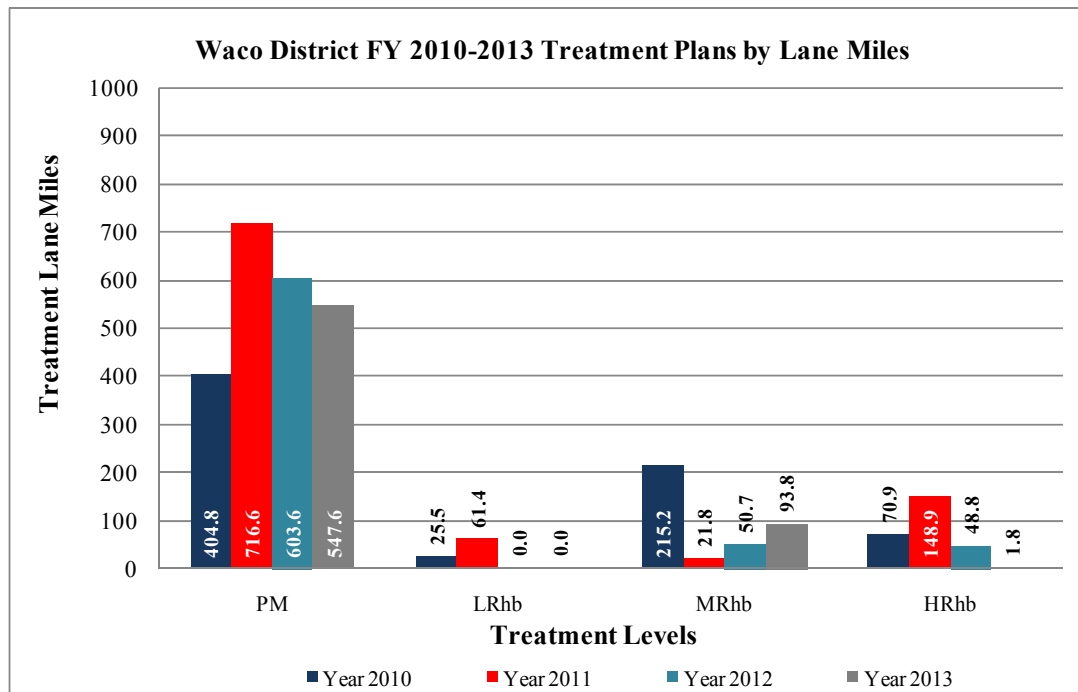

Figure 73. Waco District Treatment Plans for FY 2010–2013

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 and FY 2010 are 70.9, 148.9, 48.8, and 1.8 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 215.2, 21.8, 50.7, and 93.8 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 25.5, 61.4, 0.0, and 0.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 404.8, 716.6, 603.6, and 547.6 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 645.5 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 = 799.8 lane miles + 70.9 lane miles of Heavy Rehab treatments from FY 2010 = 870.7 lane miles or approximately 11.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 654.3 lane miles + 148.9 lane miles of Heavy Rehab treatments from FY 2011 = 803.2 lane miles or approximately 10.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 641.4 lane miles + 48.8 lane miles of Heavy Rehab treatments from FY 2012 = 690.2 lane miles or approximately 9.1% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 74.
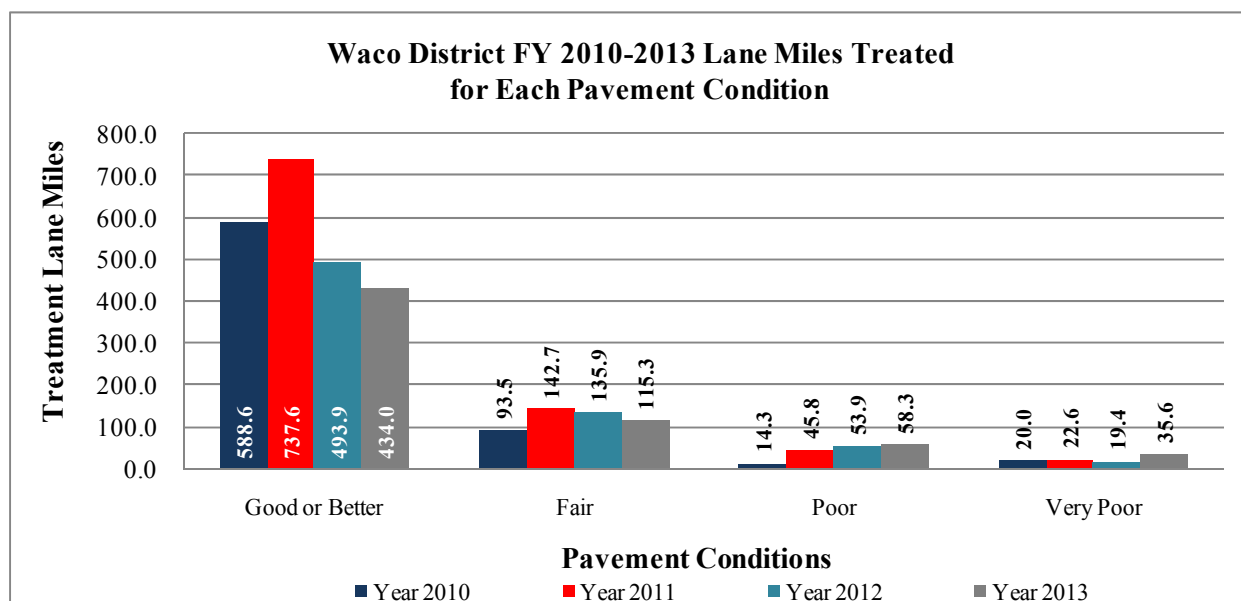

Figure 74. Waco District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 27. Pavement Performance Summary for Waco District and Counties

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Waco District	**Achieved Goal (%)**	**87.54**	**84.64**	**83.46**	**81.59**	**80.21**
	Achieved Average CS	**90**	**88**	**86**	**84**	**82**
Bell	Achieved Goal (%)	84.84	80.98	81.68	80.14	81.18
	Achieved Average CS	89	86	85	84	83
Bosque	Achieved Goal (%)	96.24	93.76	89.16	86.59	81.16
	Achieved Average CS	93	92	89	86	83
Coryell	Achieved Goal (%)	91.6	87.9	83.45	78.47	74.8
	Achieved Average CS	90	88	86	83	80
Falls	Achieved Goal (%)	95.16	92.69	92.22	91.8	89.27
	Achieved Average CS	95	93	91	88	86
Hamilton	Achieved Goal (%)	91.19	86.16	83.3	81.89	80.41
	Achieved Average CS	91	89	86	84	82
Hill	Achieved Goal (%)	82.9	81.05	80.65	79.68	76.61
	Achieved Average CS	87	85	84	82	79
Limestone	Achieved Goal (%)	86.72	83.84	83.71	86.66	87.58
	Achieved Average CS	89	87	86	87	85
McLennan	Achieved Goal (%)	83.32	81.32	80.57	76.29	75.95
	Achieved Average CS	88	86	84	81	80

(Left vertical label: Counties in Waco District)

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Bosque (96.24%) while the worst was Hill (82.90%).

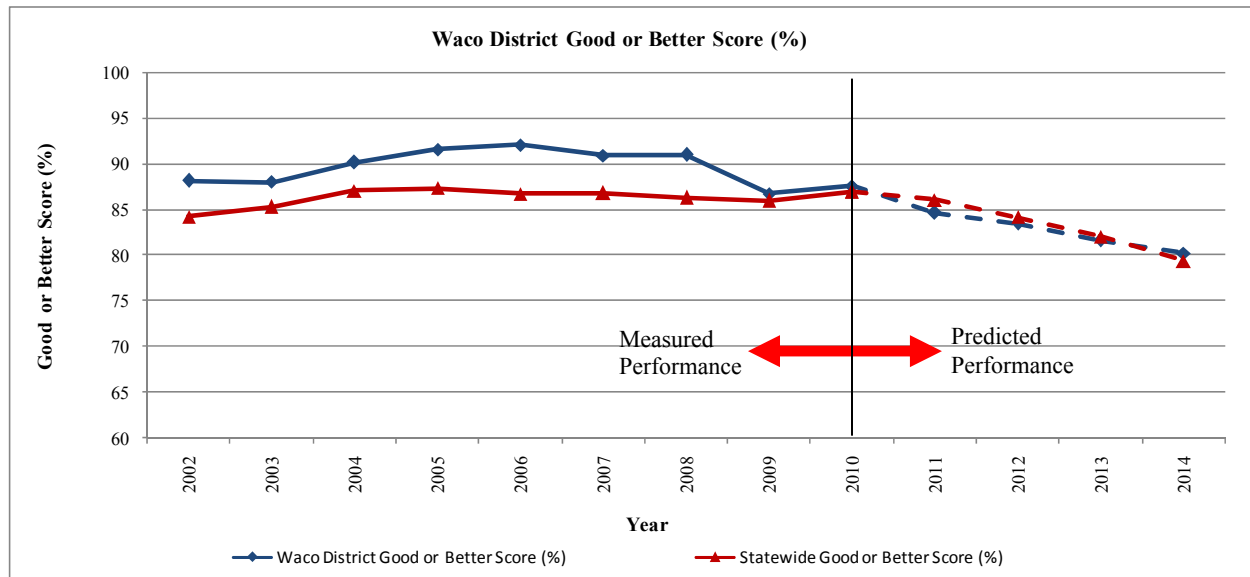**III.   Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements**

Figure 75. Waco District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Wichita Falls District

I. Summary of FY 2010–FY 2013 Treatments

Total Center line miles   = 2,857
Total Lane miles   = 6,249

FY 2010 Plan total treatments = **366.6 lane miles** = 5.9% of system lane miles
FY 2011 Plan total treatments = **2,038.1 lane miles** = 32.6% of system lane miles
FY 2012 Plan total treatments = **1,877.4 lane miles** = 30.0% of system lane miles
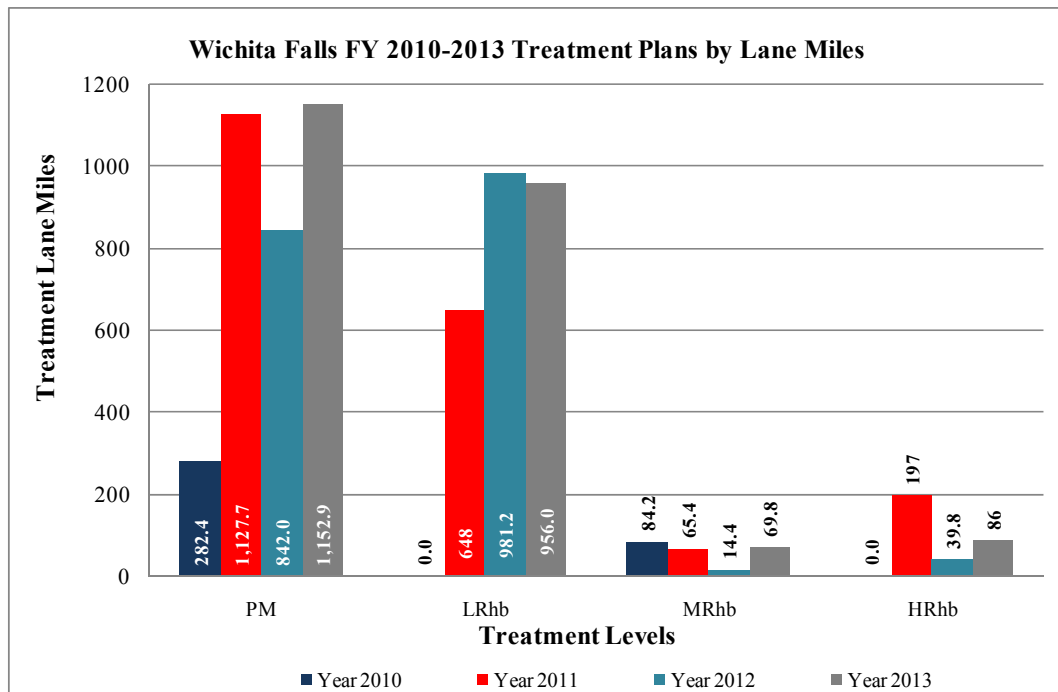FY 2013 Plan total treatments = **2,264.7 lane miles** = 36.2% of system lane miles

Figure 76. Wichita Falls District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 197.0, 39.8, and 86.0 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 84.2, 65.4, 14.4, and 69.8 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 648.0, 981.2, and 956.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 282.4, 1127.7, 842.0, and 1152.9 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 366.6 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 = 1841.1 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 1841.1 lane miles or approximately 29.5% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 1837.6 lane miles + 197.0 lane miles of Heavy Rehab treatments from FY 2011 = 2034.6 lane miles or approximately 32.6% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 2178.7 lane miles + 39.8 lane miles of Heavy Rehab treatments from FY 2012 = 2218.5 lane miles or approximately 35.5% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 77.
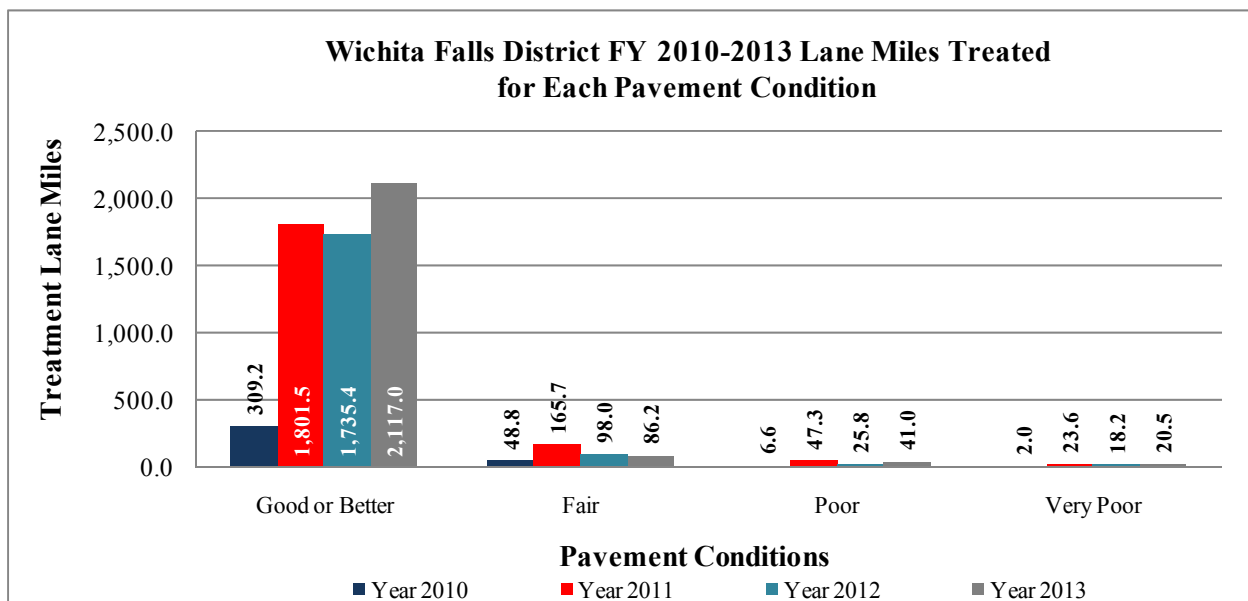

Figure 77. Wichita Falls District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

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

		Base Year	Analysis Years			
		2010	2011	2012	2013	2014
Wichita Falls District	**Achieved Goal (%)**	**93.18**	**91.81**	**92**	**92.71**	**92.53**
	Achieved Average CS	**94**	**92**	**91**	**91**	**90**
Counties in Wichita Falls District — **Archer**	Achieved Goal (%)	97.05	96.24	96.65	95.54	94.66
	Achieved Average CS	96	94	93	92	92
Baylor	Achieved Goal (%)	91.31	91.41	92.82	92.58	95.59
	Achieved Average CS	95	93	93	92	92
Clay	Achieved Goal (%)	97.33	96.43	94.66	93.5	94.17
	Achieved Average CS	97	94	92	91	91
Cooke	Achieved Goal (%)	90.39	89.6	90.14	91.87	92.42
	Achieved Average CS	92	90	90	90	90
Montague	Achieved Goal (%)	91.71	88.83	89.26	91.74	90.58
	Achieved Average CS	93	91	89	90	88
Throckmorton	Achieved Goal (%)	94.59	95.64	93.37	92.21	94.65
	Achieved Average CS	94	93	91	91	92
Wichita	Achieved Goal (%)	88.85	85.78	86.38	87.29	85.06
	Achieved Average CS	91	87	88	87	85
Wilbarger	Achieved Goal (%)	95.45	94.3	94.02	95	93.77
	Achieved Average CS	96	94	92	92	91
Young	Achieved Goal (%)	95.4	94.56	96.36	98.17	98.96
	Achieved Average CS	94	92	95	95	94

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Clay (97.33%) while the worst was Wichita (88.85%).

III. Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements
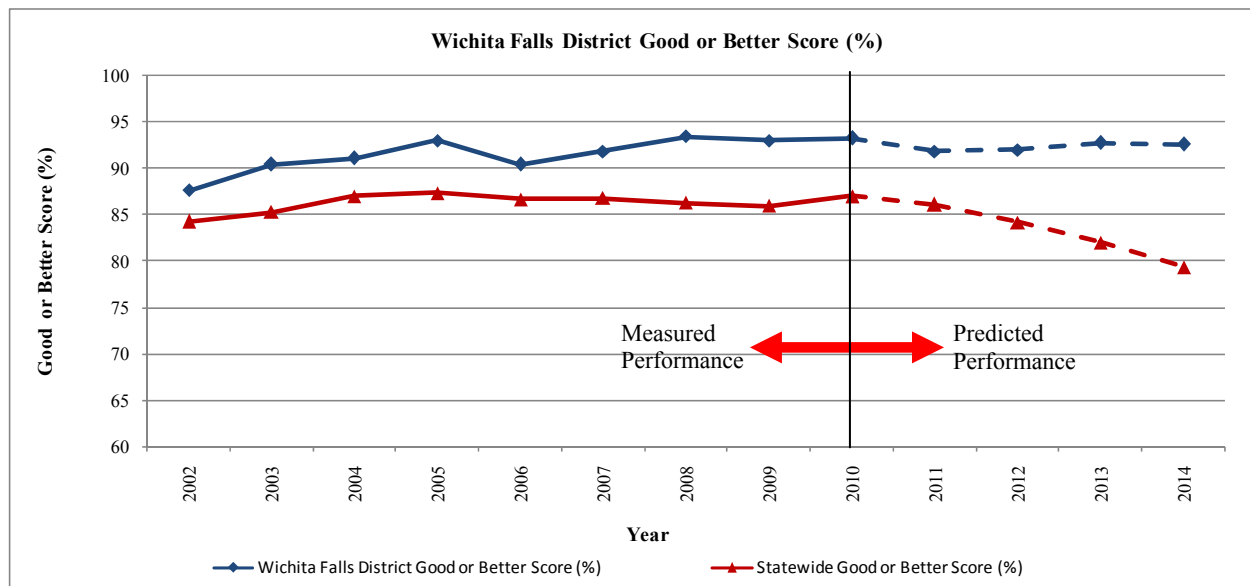

Figure 78. Wichita Falls District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.

Yoakum District

I. Summary of FY 2010–FY 2013 Treatments
Total Center line miles = 3,836
Total Lane miles = 7,821

FY 2010 Plan total treatments = **733.6 lane miles** = 9.4% of system lane miles
FY 2011 Plan total treatments = **795.5 lane miles** = 10.2% of system lane miles
FY 2012 Plan total treatments = **811.0 lane miles** = 10.4% of system lane miles
FY 2013 Plan total treatments = **836.7 lane miles** = 10.7% of system lane miles
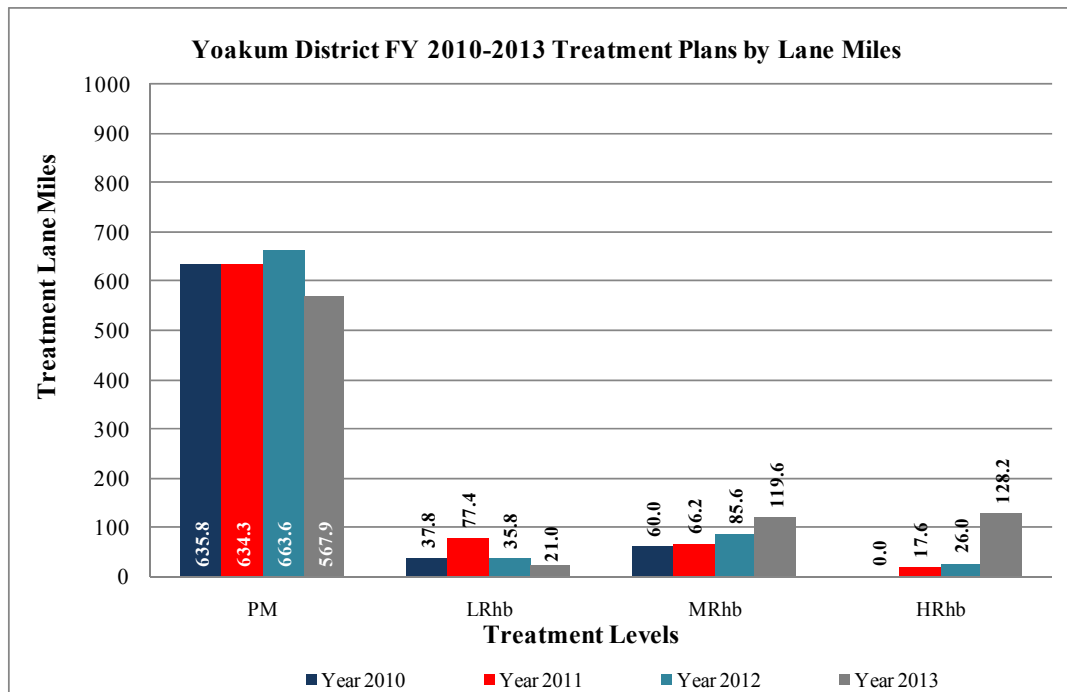

Figure 79. Yoakum District Treatment Plans for FY 2010–2013

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 2010, FY 2011, FY 2012, and FY 2013 are 0.0, 17.6, 26.0, and 128.2 lane miles respectively.

- The Medium Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 60.0, 66.2, 85.6, and 119.6 lane miles respectively.

- The Light Rehabilitation treatments planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 37.8, 77.4, 35.8, and 21.0 lane miles respectively.

- The Preventive Maintenance planned for FY 2010, FY 2011, FY 2012, and FY 2013 are 635.8, 634.3, 663.6, and 567.9 lane miles respectively.

The total number of Treatment lane miles that will improve Condition Score in FY 2011 = 733.6 lane miles or approximately 9.4% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2012 = 777.9 lane miles + 0.0 lane miles of Heavy Rehab treatments from FY 2010 = 777.9 lane miles or approximately 9.9% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2013 = 785.0 lane miles + 17.6 lane miles of Heavy Rehab treatments from FY 2011 = 802.6 lane miles or approximately 10.3% of the total system.

The total number of Treatment lane miles that will improve Condition Score in FY 2014 = 708.5 lane miles + 26.0 lane miles of Heavy Rehab treatments from FY 2012 = 734.5 lane miles or approximately 9.4% of the total system.

The lane miles treated for each pavement condition (Good or Better, Fair, Poor and Very Poor) are summarized in Figure 80.
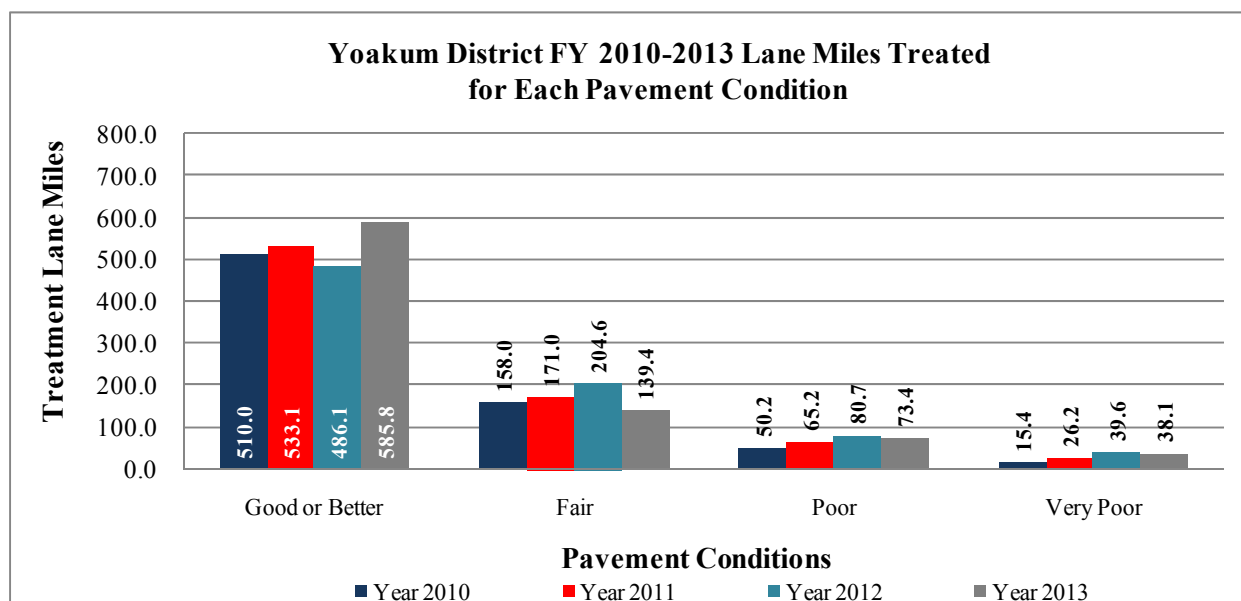

Figure 80. Yoakum District FY 2010–2013 Lane Miles Treated for Each Pavement Condition

II. Summary of FY 2011–FY 2014 Percentage of "Good or Better" Pavements and Condition Score

Table 29. Pavement Performance Summary for Yoakum District and Counties

			Base Year	Analysis Years			
			2010	2011	2012	2013	2014
Yoakum District		Achieved Goal (%)	87.86	86.1	84.97	83.94	81.36
		Achieved Average CS	90	88	87	85	82
Counties in Yoakum District	Austin	Achieved Goal (%)	91.69	90.97	89.63	88.16	84.76
		Achieved Average CS	92	90	89	88	86
	Calhoun	Achieved Goal (%)	89.23	87.76	87.52	90.47	85.9
		Achieved Average CS	91	90	88	89	85
	Colorado	Achieved Goal (%)	92.34	91.42	89.39	87.17	82.8
		Achieved Average CS	93	91	88	85	82
	Dewitt	Achieved Goal (%)	80.28	77.06	79.92	79.71	78.21
		Achieved Average CS	88	85	85	83	81
	Fayette	Achieved Goal (%)	89.82	87.51	85.07	82.4	80.74
		Achieved Average CS	91	89	86	84	82
	Gonzales	Achieved Goal (%)	87.9	84.98	82.4	79.44	78.46
		Achieved Average CS	90	88	86	83	81
	Jackson	Achieved Goal (%)	87	82.09	83.97	80.77	76.73
		Achieved Average CS	89	87	86	84	81
	Lavaca	Achieved Goal (%)	81.76	78.84	76.61	80.79	83.88
		Achieved Average CS	87	85	83	83	83
	Matagorda	Achieved Goal (%)	91.6	93.21	92.21	93.73	90.61
		Achieved Average CS	93	92	90	89	87
	Victoria	Achieved Goal (%)	87.78	85.11	81.72	81.47	76.86
		Achieved Average CS	89	87	85	84	81
	Wharton	Achieved Goal (%)	86.8	87.62	87.6	83.99	79.97
		Achieved Average CS	90	88	87	84	81

Based on the analysis results presented in Table 1, at the end of the 4-year planning horizon the county in best condition was Colorado (92.34%) while the worst was Dewitt (80.28%).

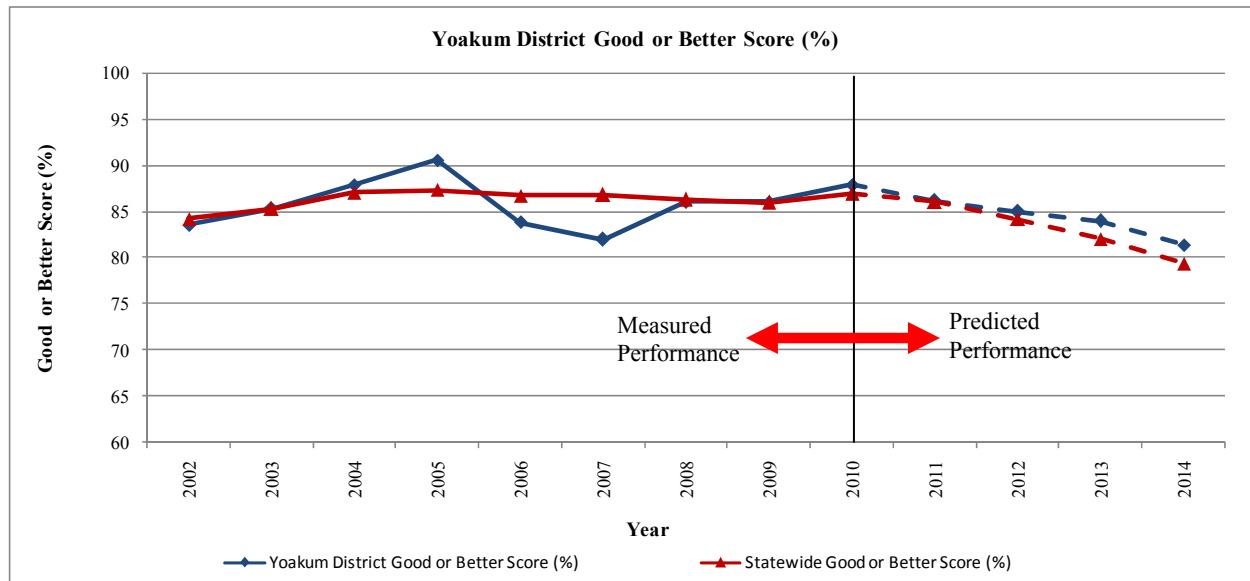## III.   Summary of FY 2002–FY 2014 Percentage of "Good or Better" Pavements

Figure 81. Yoakum District Overall Pavement Performance of FY 2002–FY 2014

For FY 2002 to FY 2010 the solid line data points are based on measured values from TxDOT's PMIS. The dashed line data points from FY 2010 until FY 2014 are projected values from the analysis conducted by CTR.