

**State Study No. 157**

**Evaluation of DRM System  
for Reflective Crack Prevention**

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16. Abstract Reflective cracking in asphalt pavements presents a serious problem for highway agencies worldwide. A new interlayer membrane system, DRM, which is a proprietary system consisting of a sealant and an emulsion, was constructed by the Mississippi Department of Transportation (MDOT) for evaluation as a reflective crack relief layer. This report details the construction process and product evaluation.					
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This report was prepared by Mr. Dylan T. Gordy and Mr. Jordan S. Whittington of MDOT's Research Division. Mr. Gordy worked on the study collecting pre-construction data as well as overseeing the project during time of construction and initial performance. Mr. Whittington later compiled the data from the long term monitoring and product evaluation while providing the results and discussion.

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During the period of this study, the Executive Director of MDOT was Mr. Larry "Butch" Brown. The Deputy Executive Director / Chief Engineer was Mr. James Kopf, P.E., followed by Mr. Harry Lee James, P.E.

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## **Chapter 1 – Project Introduction**

This report will evaluate a product known as Distress Resistant Membrane (DRM) and its performance in the prevention/retardation of reflective cracks in flexible pavements. DRM is a proprietary system constructed with proprietary equipment and is manufactured by Highway Preservation Systems Ltd. in Hamilton, OH.

The participants on this project were T. L. Wallace Inc., Ergon Highway Preservation Systems Inc., and personnel representing various divisions and offices of the Mississippi Department of Transportation (MDOT).

DRM consists of a “three part system” that combines a sealant, emulsion, and small aggregate. The sealant contains high grade base asphalt modified with highly elastomeric polymers. The emulsion consists of a combination of asphalt binders and high molecular weight polymers. Aggregates are then added to the top of the emulsion to help protect the emulsion and keep it in place.

Reflective cracking is an undesirable distress associated with flexible pavements laid on top of jointed concrete or flexible pavements with soil cement bases. This form of distress has significant impact on ride quality for traveling public as well as the structural integrity of overlaid pavements. In an attempt to preserve the condition of asphalt pavements; a cost effective pre-construction treatment for the prevention of reflective cracking in pavements is desired. With this in mind, MDOT is evaluating DRM as a treatment for reflective cracking.



## Chapter 2 – Study on Highway 4

A 7.7 mile section of Mississippi Highway 4 in Marshall County was selected for the location of this evaluation. This portion of Mississippi Highway 4 is a two lane facility with 12' wide lanes and gravel shoulders, originally constructed in 1981. Original construction consisted of six inches of asphalt placed on top of a six inch thick cement treated base. The project was divided into 3 sections to facilitate the evaluation of reflective crack prevention treatments. These sections are shown in Figure 1 and described below.

Section One is 3.6 miles (7.2 lane miles) in length and was constructed by milling and removing 3 inches of the existing asphalt surface, overlaying the milled surface with a DRM interlayer, and finally overlaying the DRM interlayer with 4 inches (2 lifts) of dense graded PG 67-22 hot mix asphalt (HMA).

Section Two is 3.3 miles (6.6 lane miles) in length and was constructed by milling and removing 3 inches of the existing asphalt surface and overlaying the milled surface with 4 inches (2 lifts) of dense graded PG 67-22 HMA.

Section Three is 0.8 miles (1.6 lane mile) in length and was constructed by milling 3 inches of the existing asphalt surface. The millings were allowed to remain in place and were overlaid with 4 inches (2 lifts) of dense graded PG 67-22 HMA.

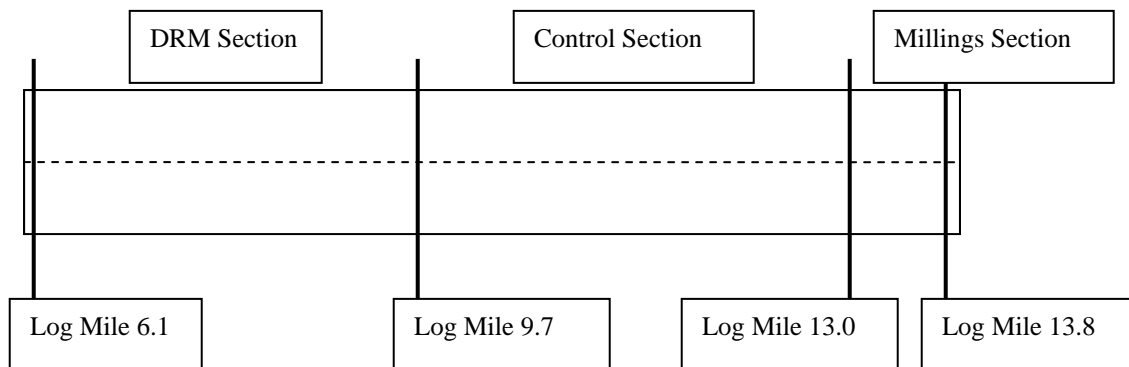


Figure 1 - Test Section Layout

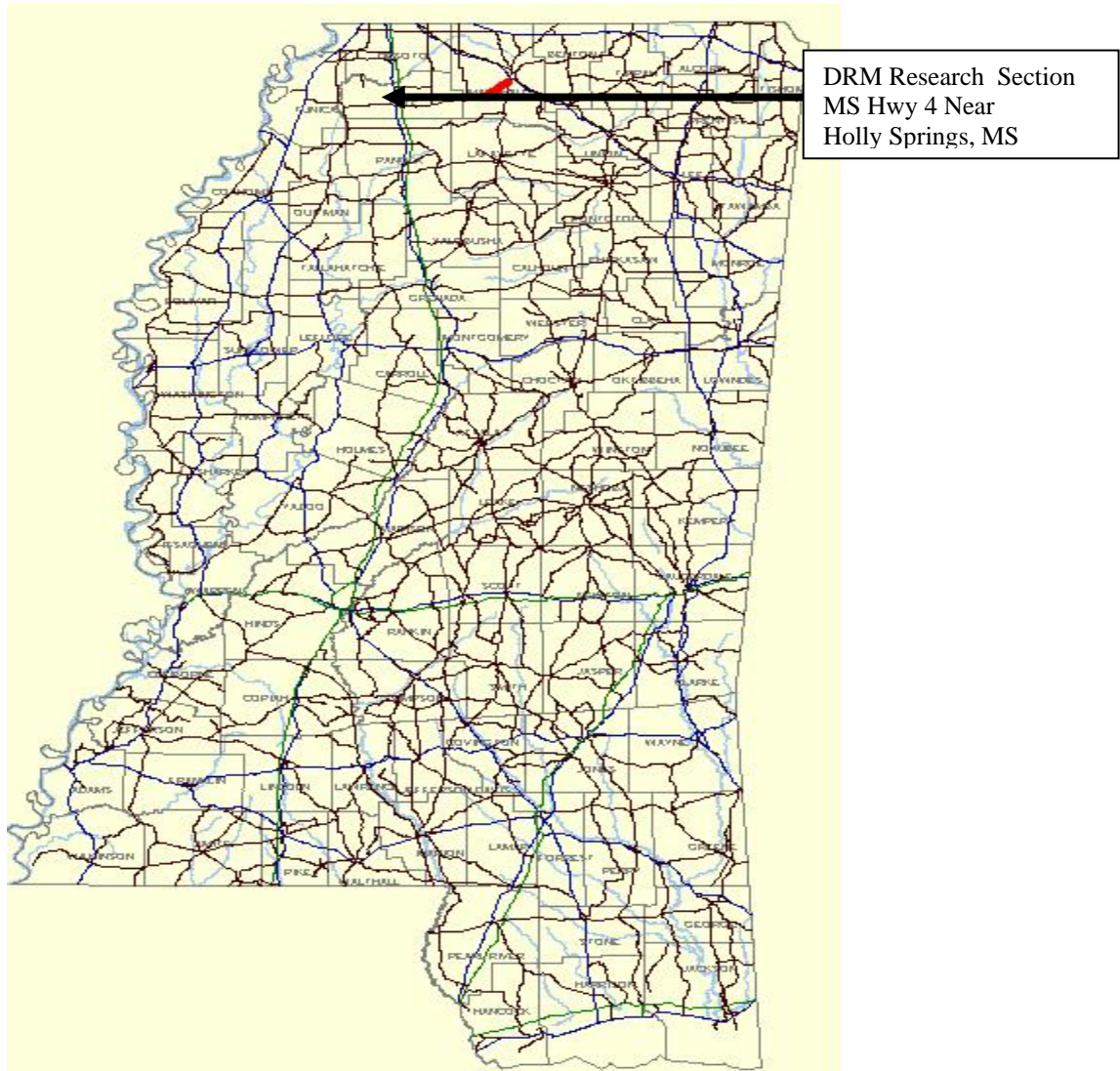


Figure 2 – Project Location

Cracking found throughout the 7.5 mile research test section is shown in Figure 3 on the following page. Although it appears so at first glance, there is no jointed concrete under the flexible pavement. Transverse cracking in research section originated in the base course as a result of the high amount of cement that was utilized during stabilization of the base material. A complete condition report for this section of Highway 4 can be found in Appendix A. Traffic levels are projected to reach a cumulative 1.1 million ESALs after 20 years annually with a projected design ADT of 3300 and 13% truck traffic. Traffic count data is provided in Appendix B.



Figure 3 – DRM Section Prior to Construction

The existing reflective cracks in the test section of roadway were typically 0.50 to 1.00 inches in width, and had propagated from the soil cement base course through the entire six inch asphalt layer. Cracks along with a reference scale are shown in Figures 4 and 5 on the following page. The average pavement condition rating (PCR) for pre-construction DRM test section was 73.8 with an average International Roughness Index (IRI) value of 2.35 mm/m. The pavement condition for the control section was in the worst shape with an average PCR of 60.5 and an average IRI of 3.27 mm/m before construction. The millings left in place section was the best section initially, with an average PCR of 77.7 and an average IRI of 2.02 mm/m.





Figure 4 –Existing Reflective Crack Width



Figure 5 – Existing Reflective Crack Depth

### **Chapter 3 – Construction of DRM system**

The first step in the construction of DRM was to mill some of the existing pavement. Pavement was milled to a depth of three inches. This operation is shown in Figures 6 and 7. The existing pavement consisted of 6 inches cement treated base with three inches of BC - 1 HMAC, and three additional inches of SC -1 HMAC. Milling removed most of the SC - 1 HMAC. Milling, although not required for use of DRM, cleans the cracks and gives the roadway a rougher surface better enabling DRM to bond with the pavement. In addition to cleaning cracks, milling exposes the cracks at a deeper level leaving less volume for the sealant to fill, and allowing the DRM sealant deeper penetration into the cracks. (See Figure 10)



Figure 6 – Milling





Figure 7 – Continued Milling



Figure 8 – Test Section After Milling

Once all milling was completed as shown in Figure 8, the application of the DRM system began. First, the roadway was swept clear of debris to provide a relatively clean surface for application of the DRM. Sweeping is shown on the following page in Figure 9.



Figure 9 – Cleaning the Milled Surface

Once the surface was clean, the DRM system was placed. DRM is a one pass system in which the sealant, emulsion, and aggregate are applied in succession using one rig as shown in Figures 10 and 11. Sealant is spread into a thin film using a spreader box. The spreader box is filled with sealant and pulled over the surface of the milled pavement to create an even film. This process is shown in Figures 12 and 13. Next the emulsion is sprayed on top of the sealant using several spray nozzles as shown in Figure 14. Finally the aggregate is fed into a spreader and spread evenly on top of the emulsion. This is shown in Figures 15, 16, and 17.

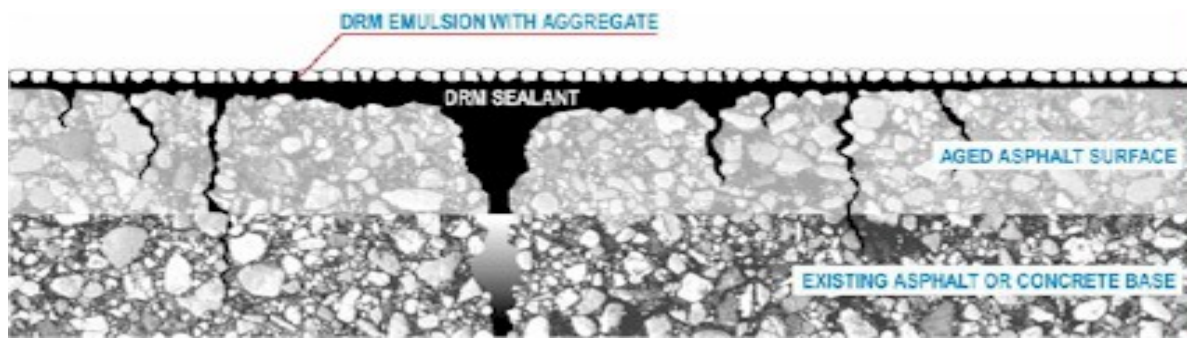


Figure 10 – How DRM Works





Figure 11 – DRM Rig



Figure 12 – Application of DRM Sealant





Figure 13 – Spreader Box Full of Sealant



Figure 14 – Application of DRM Emulsion



Figure 15 – Aggregate Fed into Spreader



Figure 16 – Aggregate Being Spread





Figure 17 – Sealant, Emulsion, and Aggregate

Small pneumatic tire rollers are used to seat the aggregate into the sealant and emulsion as shown in figures 18 and 19. After the aggregate has been seated, the crack locations are still slightly visible. The cracks, however, are completely filled with sealant which is covered by emulsion and aggregate. This can be seen in Figures 20 and 21.



Figure 18 – Rolling the DRM



Figure 19 – More Rolling





Figure 20 – Before DRM



Figure 21 – After DRM and Rolling

Once rolling is completed, traffic can be allowed back on the roadway immediately if necessary. Traffic does not put excessive stress or wear on the DRM, especially for a short period of time. DRM is also marketed for use as a chip seal to cover badly distressed roads. In the case of this research project, traffic was put on the exposed DRM for a period of approximately 60 days. Aggregate was monitored for delamination during the 60 day period; however, there was no reportable instance of delamination.

The DRM section, the control section (no DRM), and the millings left in place section were then overlaid. The entire 7.7 mile test section was overlaid with two lifts of PG 67-22 Hot Mix Asphalt. Asphalt mix design specifications can be found in Appendix C. The first lift was a 19-mm NMAAS mix placed 2.5 inches thick and the second lift was a 9.5-mm NMAAS mix placed 1.5 inches thick to provide 4 inches of HMA.

## **Chapter 4 – Results and Discussion**

The Research Division of MDOT monitored this study by collecting pavement management data including IRI and PCR measurements along with video images used to identify pavement distresses. Images of the pavement sections were collected using MDOT's "Automated Road and Pavement Condition Surveys" van as built by Pathway Services, Inc. Once images were collected, they were brought into the office and analyzed using Path View II software from Pathway Services, Inc. Images were displayed on the computer screen and tools within the software were used to map and measure each distress. These measured distresses were used to perform PCR calculations.

Seven 500 foot sample segments were selected for monitoring in the DRM section, six 500 foot sample segments were selected for monitoring in the control section, and two 500 foot sample segments were selected for monitoring in the millings in place section. The test sections in this research project were monitored for five years.

IRI data for each of the research sections can be found in Tables 1a, 1b, and 1c on the next page, followed by Tables 2a, 2b, and 2c that contain all PCR data for the research sections.

Table 1a – IRI for DRM Section

<b>IRI DRM Section (mm/m)</b>						
<b>Sample</b>	<b>Pre-Treatment</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2008</b>
<b>1</b>	1.74	0.77	0.78	0.81	0.88	0.79
<b>2</b>	2.61	0.93	0.96	1.03	1.07	1.03
<b>3</b>	2.47	0.86	0.86	0.93	0.97	0.92
<b>4</b>	2.57	1.05	1.00	1.05	1.01	1.06
<b>5</b>	2.84	1.06	1.00	1.06	1.04	1.09
<b>6</b>	2.04	0.84	0.84	0.83	0.80	0.90
<b>7</b>	2.15	0.93	0.91	1.00	1.06	1.02
<b>Avg</b>	<b>2.35</b>	<b>0.92</b>	<b>0.91</b>	<b>0.96</b>	<b>0.98</b>	<b>0.97</b>

Table 1b - IRI for Control Section

<b>IRI Control Section (mm/m)</b>						
<b>Sample</b>	<b>Pre-Treatment</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2008</b>
<b>8</b>	3.54	1.01	1.02	1.08	1.10	1.12
<b>9</b>	3.55	0.73	0.74	0.75	0.76	0.78
<b>10</b>	3.96	0.76	0.78	0.76	0.80	0.85
<b>11</b>	2.62	1.18	1.17	1.14	1.07	1.17
<b>12</b>	2.95	0.83	0.84	0.86	0.93	0.92
<b>13</b>	3.01	0.97	1.00	0.99	0.91	1.06
<b>Avg</b>	<b>3.27</b>	<b>0.91</b>	<b>0.93</b>	<b>0.93</b>	<b>0.93</b>	<b>0.98</b>

Table 1c – IRI for Millings Section

<b>IRI Millings Section (mm/m)</b>						
<b>Sample</b>	<b>Pre-Treatment</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2008</b>
<b>14</b>	2.08	0.74	0.67	0.74	0.81	0.87
<b>15</b>	1.95	0.84	0.81	0.82	0.85	0.89
<b>Avg</b>	<b>2.02</b>	<b>0.79</b>	<b>0.74</b>	<b>0.78</b>	<b>0.83</b>	<b>0.88</b>



Table 2a – PCR for DRM Section

<b>PCR DRM Section</b>						
<b>Sample</b>	<b>Pre-Treatment</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2008</b>
<b>1</b>	79.7	93.85	93.77	93.53	92.97	93.42
<b>2</b>	72.5	92.57	92.33	91.77	91.45	91.51
<b>3</b>	69.8	93.13	93.13	92.57	92.25	91.11
<b>4</b>	66.3	91.61	92.01	91.61	91.93	90.47
<b>5</b>	68.8	91.53	92.01	91.53	91.69	90.3
<b>6</b>	80.2	93.29	93.29	93.37	93.61	92.41
<b>7</b>	79.3	92.57	92.73	92.01	91.53	91.05
<b>Avg</b>	<b>73.80</b>	<b>92.65</b>	<b>92.75</b>	<b>92.34</b>	<b>92.20</b>	<b>91.47</b>

Table2b - PCR for Control Section

<b>PCR Control Section</b>						
<b>Sample</b>	<b>Pre-Treatment</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2008</b>
<b>8</b>	49.8	91.93	91.85	91.37	91.21	91.05
<b>9</b>	59.5	94.17	94.09	94.01	93.93	89.6
<b>10</b>	52.6	93.93	93.77	93.93	93.21	91.88
<b>11</b>	71.7	90.57	90.65	90.89	91.32	89.79
<b>12</b>	71.1	93.37	93.29	93.13	92.3	89.47
<b>13</b>	58.5	92.25	92.01	92.09	92.73	91.11
<b>Avg</b>	<b>60.53</b>	<b>92.70</b>	<b>92.61</b>	<b>92.57</b>	<b>92.45</b>	<b>90.48</b>

Table 2c – PCR for Millings Section

<b>PCR Millings Section</b>						
<b>Sample</b>	<b>Pre-Treatment</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2008</b>
<b>14</b>	80.6	94.09	94.65	94.09	92.72	90.08
<b>15</b>	74.8	93.29	93.53	93.45	93.21	91.37
<b>Avg</b>	<b>77.7</b>	<b>93.69</b>	<b>94.09</b>	<b>93.77</b>	<b>92.965</b>	<b>90.73</b>

The average PCR and IRI values for each of the test sections improved substantially after construction as compared with pre-construction data. This was to be expected due to the fact that four inches of new un-cracked asphalt was laid on the road surface. Overall, each of the three sections performed as expected when conducting these analyses. The IRI increased as the pavement sections aged while the PCR decreased during that same time. One comparison to note is that the 2008 PCR value for the DRM section of 91.47 was slightly higher than the Control sections value of 90.48 and the Millings section value of 90.73. This could indicate an increase in performance for the DRM section, however this difference is minimal. Further monitoring would be required to determine if the DRM section continued to out-perform the Control and Millings sections at any level of significance.

The main focus of this study was to see if the DRM could be used to prevent reflective cracking. Tables 3 and 4 provide a cracking distress summary for each sample in each test section in years 2006 and 2008 respectively with Tables 5 and 6 providing the average section cracking distress summary. Note that no distresses were observed in any section until the 2006 survey.

Table 3 – 2006 Pavement Distresses

July 2006 Recorded Distresses (Feet)					
		Trans Low	Long Low	Trans Med	Long Med
<b>DRM</b>	<b>Sample 1</b>	-	-	-	-
	<b>Sample 2</b>	-	-	-	-
	<b>Sample 3</b>	-	-	-	-
	<b>Sample 4</b>	-	-	-	-
	<b>Sample 5</b>	-	-	-	-
	<b>Sample 6</b>	-	-	-	-
	<b>Sample 7</b>	-	-	-	-
<b>Control</b>	<b>Sample 8</b>	-	-	-	-
	<b>Sample 9</b>	-	-	-	-
	<b>Sample 10</b>	48	18	-	-
	<b>Sample 11</b>	12	17	-	-
	<b>Sample 12</b>	28	-	-	-
	<b>Sample 13</b>	-	-	-	-
<b>Mill</b>	<b>Sample 14</b>	6	-	48	-
	<b>Sample 15</b>	-	-	-	-

Table 4 – 2008 Pavement Distresses

March 2008 Recorded Distresses (Feet)					
		Trans Low	Long Low	Trans Med	Long Med
<b>DRM</b>	Sample 1	29	12	-	-
	Sample 2	11	-	14	-
	Sample 3	57	127	23	23
	Sample 4	39	101	-	31
	Sample 5	83	70	-	-
	Sample 6	6	-	24	-
	Sample 7	35	125	-	-
<b>Control</b>	Sample 8	20	93	46	25
	Sample 9	61	26	84	-
	Sample 10	111	119	62	105
	Sample 11	73	68	24	-
	Sample 12	71	10	63	-
	Sample 13	83	18	51	-
<b>Mill</b>	Sample 14	8	-	111	-
	Sample 15	13	-	-	-

Table 5 – Average Transverse

Average Transverse Cracking Per Sample (Feet)		
	2006	2008
<b>DRM</b>	0	45.9
<b>Control</b>	14.7	124.8
<b>Millings</b>	27	66

Table 6 – Average Longitudinal

Average Longitudinal Cracking Per Sample (Feet)		
	2006	2008
<b>DRM</b>	0	69.9
<b>Control</b>	5.9	77.3
<b>Millings</b>	0	0

The data collected for 2006 showed no distresses for the DRM section, while some had appeared in each of the other sections. However 20 months later in 2008, distresses had begun to show in the DRM section as well. This meant the DRM system did not prevent cracking from occurring; it only prolonged the time taken for cracks to appear.

Even with slower appearance of cracking in the DRM section, it is hard to draw an absolute conclusion on the performance of the DRM material due to the lack of project level data from before construction. Detailed crack mapping from pre-construction would have allowed for a comparison to those cracks that had appeared years after construction. Unfortunately this data was not available.

At a cost of \$2.03 per square yard (in year 2002), the DRM system does not appear to be an economical product for the prevention of cracking as it only delayed the appearance of cracks for a period of less than 20 months as compared to a typical mill and overlay.

**APPENDIX A**

**INITIAL PAVEMENT MANAGEMENT DATA  
MS HWY. 4 NEAR HOLLY SPRINGS, MS**

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:  
 Len(ft): 40872 D:E P:A Survey:11/14/01 09:04  
 Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18  
 Sample 1 Starts at 1498 feet Ends at 2000 feet Length = 502 feet  
 Starts at 6.356 M.P. Ends at 6.451 M.P. PMT = A

1. Sample Distress Features

Line Numb	Feature Name	Severity Type	Starts At	Count Numb	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	TransLow	Low	1498	1	0	12	0	CEN	No
2	TransLow	Low	1505	1	0	12	0	CEN	No
3	TransLow	Low	1507	1	0	12	0	CEN	No
4	TransLow	Low	1512	1	0	12	0	CEN	No
5	TransLow	Low	1519	1	0	12	0	CEN	No
6	Alligator	Low	1498	1	25	1	25	RWP	No
7	TransLow	Low	1523	1	0	8	0	CEN	No
8	TransLow	Low	1529	1	0	11	0	CEN	No
9	TransLow	Low	1531	1	0	12	0	CEN	No
10	TransLow	Low	1544	1	0	12	0	CEN	No
11	TransLow	Low	1554	1	0	12	0	CEN	No
12	TranMed	Med	1589	1	0	12	0	CEN	No
13	Longit	Low	1498	1	91	0	0	LE	No
14	TransLow	Low	1603	1	0	12	0	CEN	No
15	TransLow	Low	1621	1	0	12	0	CEN	No
16	TranMed	Med	1647	1	0	12	0	CEN	No
17	TransLow	Low	1656	1	0	12	0	CEN	No
18	TransLow	Low	1656	1	0	12	0	CEN	No
19	Longit	Low	1603	1	53	0	0	LE	No
20	TransLow	Low	1660	1	0	12	0	CEN	No
21	Alligator	Low	1647	1	16	1	17	LWP	No
22	TransLow	Low	1684	1	0	12	0	CEN	No
23	TransLow	Low	1703	1	0	12	0	CEN	No
24	TransLow	Low	1707	1	0	12	0	CEN	No
25	TransLow	Low	1728	1	0	12	0	CEN	No
26	TransLow	Low	1739	1	0	12	0	CEN	No
27	Longit	Low	1666	1	81	0	0	LE	No
28	TransLow	Low	1763	1	0	12	0	CEN	No
29	Alligator	Low	1756	1	7	1	7	LWP	No
30	TransLow	Low	1770	1	0	9	0	CEN	No
31	Alligator	Low	1765	1	12	1	12	LWP	No
32	TransLow	Low	1786	1	0	6	0	RWP	No
33	TransLow	Low	1862	1	0	11	0	CEN	No
34	TransLow	Low	1870	1	0	12	0	CEN	No
35	Longit	Low	1826	1	47	0	0	LE	No
36	TransLow	Low	1879	1	0	12	0	CEN	No
37	TransLow	Low	1889	1	0	12	0	CEN	No
38	Alligator	Low	1882	1	9	1	9	LWP	No
39	TransLow	Low	1891	1	0	12	0	CEN	No
40	TransLow	Low	1912	1	0	12	0	CEN	No
41	TransLow	Low	1921	1	0	12	0	CEN	No
42	Alligator	Low	1912	1	19	1	19	LWP	No

43	TranMed	Med	1940	1	0	12	0	CEN	No
44	Alligator	Low	1955	1	8	1	8	RWP	No
45	TransLow	Low	1986	1	0	7	0	CEN	No
46	TransLow	Low	1993	1	0	8	0	CEN	No
47	TransLow	Low	1997	1	0	12	0	CEN	No
48	Longit	Low	1879	1	121	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 2.00 (m/km)  
 IRI RWP = 1.47 (m/km)  
 AVG IRI = 1.74 (m/km)  
 AVG HRI = 1.37 (m/km)  
 AVG RUT = 0.07 (inch)  
 TEX LWP = 0.03 (inch)  
 TEX RWP = 0.03 (inch)  
 TEX CEN = 0.06 (inch)  
 AVG TEX = 0.04 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	7	96	96	(sqft)	2.9
2	Longitudinal	Low	5	393	391	(feet)	2.3
3	Transverse	Low	33	371	370	(feet)	4.4
4	Transverse	Med	3	36	36	(feet)	0.8

Total Deduct Points = 10.5    Distress Rating = 92.5    PCR = 79.7

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 2 Starts at 2999 feet Ends at 3498 feet Length = 499 feet

Starts at 6.640 M.P. Ends at 6.735 M.P. PMT = A

1. Sample Distress Features

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	TransLow	Low	3017	1	0	12	0	CEN	No
2	TransLow	Low	3029	1	0	12	0	CEN	No
3	Alligator	Low	3017	1	11	1	11	LWP	No
4	TransLow	Low	3031	1	0	9	0	CEN	No
5	TransLow	Low	3038	1	0	5	0	LWP	No
6	TransLow	Low	3040	1	0	12	0	CEN	No
7	TransLow	Low	3054	1	0	12	0	CEN	No
8	TransLow	Low	3062	1	0	12	0	CEN	No
9	TransLow	Low	3075	1	0	12	0	CEN	No
10	TransLow	Low	3087	1	0	12	0	CEN	No
11	TransLow	Low	3091	1	0	12	0	CEN	No
12	TransLow	Low	3098	1	0	12	0	CEN	No
13	TransLow	Low	3116	1	0	12	0	CEN	No
14	TransLow	Low	3122	1	0	8	0	CEN	No
15	TransLow	Low	3129	1	0	12	0	CEN	No
16	TransLow	Low	3143	1	0	12	0	CEN	No
17	TransLow	Low	3157	1	0	8	0	CEN	No
18	TransLow	Low	3161	1	0	12	0	CEN	No
19	TransLow	Low	3168	1	0	6	0	RWP	No
20	TransLow	Low	3175	1	0	12	0	CEN	No
21	TransLow	Low	3192	1	0	12	0	CEN	No
22	TransLow	Low	3196	1	0	12	0	CEN	No
23	Longit	Low	3185	1	22	0	0	LE	No
24	TransLow	Low	3213	1	0	7	0	LWP	No
25	TransLow	Low	3231	1	0	12	0	CEN	No
26	TransLow	Low	3240	1	0	12	0	EN	No
27	TranMed	Med	3252	1	0	12	0	CEN	No
28	TransLow	Low	3259	1	0	7	0	CEN	No
29	TransLow	Low	3273	1	0	12	0	CEN	No
30	TransLow	Low	3277	1	0	12	0	CEN	No
31	TransLow	Low	3282	1	0	12	0	CEN	No
32	TransLow	Low	3296	1	0	12	0	CEN	No
33	TransLow	Low	3307	1	0	12	0	CEN	No
34	TransLow	Low	3321	1	0	12	0	CEN	No
35	TransLow	Low	3332	1	0	12	0	CEN	No
36	TransLow	Low	3349	1	0	12	0	CEN	No
37	TransLow	Low	3366	1	0	12	0	CEN	No
39	TransLow	Low	3377	1	0	12	0	CEN	No
40	Longit	Low	3363	1	27	0	0	LE	No
41	TransLow	Low	3394	1	0	6	0	RWP	No
42	TransLow	Low	3401	1	0	12	0	CEN	No
43	TransLow	Low	3409	1	0	6	0	LWP	No
44	TransLow	Low	3419	1	0	12	0	CEN	No
45	TransLow	Low	3426	1	0	12	0	CEN	No



46	TransLow	Low	3465	1	0	12	0	CEN	No
47	TransLow	Low	3489	1	0	12	0	CEN	No
48	TransLow	Low	3496	1	0	12	0	CEN	No
49	Longit	Low	3412	1	86	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 2.57 (m/km)  
 IRI RWP = 2.65 (m/km)  
 AVG IRI = 2.61 (m/km)  
 AVG HRI = 2.23 (m/km)  
 AVG RUT = 0.17 (inch)  
 TEX LWP = 0.04 (inch)  
 TEX RWP = 0.04 (inch)  
 TEX CEN = 0.06 (inch)  
 AVG TEX = 0.05 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	1	11	11	(sqft)	0.0
2	Longitudinal	Low	3	136	136	(feet)	0.8
3	Transverse	Low	44	477	478	(feet)	5.4
4	Transverse	Med	1	12	12	(feet)	0.3
5	Rutting	Low	1	15	15	(%)	5.2

Total Deduct Points = 11.7    Distress Rating = 91.7    PCR = 72.5

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 3 Starts at 6781 feet Ends at 7280 feet Length = 499 feet

Starts at 7.356 M.P. Ends at 7.451 M.P. PMT = A

**1. Sample Distress Features**

Line Numb	Feature Name	Severity Type	Starts At	Count Numb	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	Longit	Low	6781	1	4	0	0	LE	No
2	TranMed	Med	6785	1	0	12	0	CEN	No
3	TranMed	Med	6794	1	0	12	0	CEN	No
4	Patch	Med	6785	1	18	4	68	RE	No
5	Alligator	Med	6785	1	18	4	68	RWP	No
6	TranMed	Med	6808	1	0	12	0	CEN	No
7	TransLow	Low	6820	1	0	12	0	CEN	No
8	Longit	Low	6820	1	10	0	0	LE	No
9	TranMed	Med	6833	1	0	12	0	CEN	No
10	TransLow	Low	6850	1	0	12	0	CEN	No
11	TransLow	Low	6859	1	0	11	0	CEN	No
12	Longit	Low	6854	1	15	0	0	LE	No
13	TransLow	Low	6873	1	0	12	0	CEN	No
14	Longit	Low	6878	1	11	0	0	LE	No
15	TransLow	Low	6896	1	0	12	0	CEN	No
16	TransLow	Low	6914	1	0	12	0	CEN	Yes
17	TransLow	Low	6924	1	0	7	0	CEN	No
18	TransLow	Low	6930	1	0	12	0	CEN	No
19	TransLow	Low	6949	1	0	12	0	CEN	No
20	Longit	Low	6896	1	56	0	0	LE	No
21	TransLow	Low	6990	1	0	12	0	CEN	Yes
22	TransLow	Low	7015	1	0	12	0	CEN	No
23	TransLow	Low	7024	1	0	7	0	RWP	No
24	TranMed	Med	7038	1	0	12	0	CEN	No
25	TransLow	Low	7063	1	0	12	0	CEN	No
26	TranMed	Med	7084	1	0	12	0	CEN	No
27	TransLow	Low	7101	1	0	6	0	CEN	No
28	TransLow	Low	7115	1	0	12	0	CEN	No
29	Longit	Low	6997	1	122	0	0	LE	No
30	TransLow	Low	7137	1	0	12	0	CEN	No
31	TransLow	Low	7140	1	0	5	0	LWP	No
32	TransLow	Low	7153	1	0	12	0	CEN	No
33	TransLow	Low	7161	1	0	12	0	CEN	No
34	TransLow	Low	7168	1	0	12	0	CEN	No
35	Longit	Low	7147	1	38	0	0	LE	No
36	TranMed	Med	7192	1	0	12	0	CEN	No
37	Alligator	Low	7185	1	8	1	9	LWP	No
38	TransLow	Low	7213	1	0	12	0	CEN	No
39	TranMed	Med	7231	1	0	12	0	CEN	No
40	TransLow	Low	7249	1	0	12	0	CEN	No
41	TranMed	Med	7270	1	0	12	0	CEN	No
42	Longit	Low	7213	1	60	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 2.24 (m/km)  
IRI RWP = 2.71 (m/km)  
AVG IRI = 2.47 (m/km)  
AVG HRI = 2.25 (m/km)  
AVG RUT = 0.10 (inch)  
TEX LWP = 0.05 (inch)  
TEX RWP = 0.06 (inch)  
TEX CEN = 0.06 (inch)  
AVG TEX = 0.05 (inch)  
AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	1	9	9	(sqft)	0.0
2	Alligator	Med	1	68	68	(sqft)	8.2
3	Longitudinal	Low	8	314	315	(feet)	1.9
4	Transverse	Low	22	240	241	(feet)	3.0
5	Transverse	Med	9	108	108	(feet)	2.4
6	Patch	Med	1	68	68	(sqft)	2.7

Total Deduct Points = 18.2    Distress Rating = 87.1    PCR = 69.8

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 4 Starts at 8279 feet Ends at 8781 feet Length = 502 feet

Starts at 7.640 M.P. Ends at 7.735 M.P. PMT = A

1. Sample Distress Features

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	TransLow	Low	8286	1	0	12	0	CEN	No
2	Longit	Low	8279	1	11	0	0	LE	No
3	TranMed	Med	8311	1	0	12	0	CEN	No
4	TransLow	Low	8342	1	0	12	0	CEN	No
5	TransLow	Low	8350	1	0	12	0	CEN	No
6	Longit	Low	8294	1	65	0	0	LE	No
7	TranMed	Med	8360	1	0	12	0	CEN	No
8	TransLow	Low	8380	1	0	12	0	CEN	No
9	TransLow	Low	8394	1	0	12	0	CEN	No
10	TranMed	Med	8411	1	0	12	0	CEN	No
11	TransLow	Low	8420	1	0	6	0	LWP	No
12	TransLow	Low	8422	1	0	6	0	LWP	No
13	TransLow	Low	8425	1	0	6	0	LWP	No
14	Alligator	Low	8404	1	25	1	31	LWP	No
15	Longit	Low	8422	1	7	0	0	LE	No
16	Alligator	Low	8434	1	6	1	6	LWP	No
17	TranMed	Med	8439	1	0	12	0	CEN	No
18	TransLow	Low	8446	1	0	11	0	CEN	No
19	TransLow	Low	8454	1	0	12	0	CEN	No
20	Alligator	Low	8446	1	18	1	21	LWP	No
21	TransLow	Low	8464	1	0	12	0	CEN	No
22	Alligator	Low	8464	1	7	1	7	RWP	No
23	TransLow	Low	8481	1	0	12	0	CEN	No
24	Alligator	Med	8464	1	24	4	98	LWP	No
25	TransLow	Low	8488	1	0	8	0	CEN	No
26	TranMed	Med	8499	1	0	12	0	CEN	No
27	Alligator	Low	8488	1	15	1	15	LWP	No
28	TransLow	Low	8509	1	0	8	0	CEN	No
29	TransLow	Low	8516	1	0	11	0	CEN	No
30	Longit	Low	8516	1	8	0	0	LE	No
31	TranMed	Med	8524	1	0	12	0	CEN	No
32	TransLow	Low	8538	1	0	12	0	CEN	No
33	TranMed	Med	8551	1	0	12	0	CEN	No
34	Alligator	Low	8544	1	11	1	11	LWP	No
35	TransLow	Low	8562	1	0	12	0	CEN	No
36	TransLow	Low	8564	1	0	12	0	CEN	No
37	Alligator	Low	8562	1	10	1	11	RWP	No
38	TranMed	Med	8571	1	0	12	0	CEN	No
39	TransLow	Low	8573	1	0	12	0	CEN	No
40	TranMed	Med	8576	1	0	12	0	CEN	No
41	Alligator	Low	8573	1	10	1	11	LWP	No
42	TranMed	Med	8585	1	0	12	0	CEN	No
43	TranMed	Med	8594	1	0	12	0	CEN	No
44	TransLow	Low	8604	1	0	6	0	LWP	No

45	Alligator	Med	8597	1	7	2	14	LWP	No
46	Longit	Low	8604	1	4	0	0	LE	No
47	TranMed	Med	8611	1	0	12	0	CEN	No
48	Alligator	Low	8608	1	12	1	12	LWP	No
49	TranMed	Med	8634	1	0	12	0	CEN	No
50	Longit	Low	8624	1	15	0	0	LE	No
51	TransLow	Low	8641	1	0	5	0	RWP	No
52	TransLow	Low	8645	1	0	12	0	CEN	No
53	TransLow	Low	8648	1	0	6	0	RWP	No
54	TransLow	Low	8652	1	0	6	0	RWP	No
55	TransLow	Low	8652	1	0	6	0	RWP	No
56	TranMed	Med	8659	1	0	12	0	CEN	No
57	TransLow	Low	8666	1	0	12	0	CEN	No
58	TranMed	Med	8690	1	0	12	0	CEN	No
59	TransLow	Low	8719	1	0	12	0	CEN	No
60	TransLow	Low	8736	1	0	12	0	CEN	No
61	TransLow	Low	8749	1	0	12	0	CEN	No
62	TransLow	Low	8774	1	0	12	0	CEN	No
63	Longit	Low	8659	1	115	0	0	LE	No
64	TransLow	Low	8775	1	0	5	0	RWP	No
65	TransLow	Low	8781	1	0	5	0	RWP	No

## 2. Sensor Data Summary

IRI LWP = 2.72 (m/km)  
 IRI RWP = 2.42 (m/km)  
 AVG IRI = 2.57 (m/km)  
 AVG HRI = 2.16 (m/km)  
 AVG RUT = 0.12 (inch)  
 TEX LWP = 0.05 (inch)  
 TEX RWP = 0.06 (inch)  
 TEX CEN = 0.07 (inch)  
 AVG TEX = 0.06 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	9	124	124	(sqft)	4.0
2	Alligator	Med	2	112	112	(sqft)	10.6
3	Longitudinal	Low	7	225	224	(feet)	1.4
4	Transverse	Low	32	309	308	(feet)	3.7
5	Transverse	Med	15	180	179	(feet)	3.8

Total Deduct Points = 23.5    Distress Rating = 83.4    PCR = 66.3

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 5 Starts at 12060 feet Ends at 12561 feet Length = 501 feet

Starts at 8.356 M.P. Ends at 8.451 M.P. PMT = A

**1. Sample Distress Features**

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	TranMed	Med	12063	1	0	12	0	CEN	No
2	TranMed	Med	12084	1	0	12	0	CEN	No
3	TransLow	Low	12098	1	0	12	0	CEN	No
4	TransLow	Low	12105	1	0	6	0	CEN	No
5	TranMed	Med	12108	1	0	12	0	CEN	No
6	TranMed	Med	12129	1	0	12	0	CEN	No
7	Longit	Low	12060	1	90	0	0	LE	No
8	TranHig	Hig	12150	1	0	12	0	CEN	No
9	TranMed	Med	12160	1	0	12	0	CEN	No
10	TransLow	Low	12167	1	0	9	0	CEN	No
11	TransLow	Low	12174	1	0	12	0	CEN	No
12	TransLow	Low	12178	1	0	12	0	CEN	No
13	Longit	Low	12160	1	21	0	0	LE	No
14	Alligator	Low	12162	1	19	1	26	RWP	No
15	TranMed	Med	12199	1	0	12	0	CEN	No
16	TransLow	Low	12220	1	0	12	0	CEN	No
17	TransLow	Low	12237	1	0	12	0	CEN	No
18	TransLow	Low	12244	1	0	3	0	RE	No
19	TranHig	Hig	12248	1	0	12	0	CEN	No
20	Alligator	Low	12241	1	17	1	17	RWP	No
21	TransLow	Low	12269	1	0	7	0	LWP	No
22	Longit	Low	12199	1	73	0	0	LE	No
23	TranMed	Med	12279	1	0	12	0	CEN	No
24	TransLow	Low	12297	1	0	12	0	CEN	No
25	TransLow	Low	12314	1	0	12	0	CEN	No
26	TransLow	Low	12342	1	0	12	0	CEN	No
27	TransLow	Low	12348	1	0	12	0	CEN	No
28	TranMed	Med	12362	1	0	12	0	CEN	No
29	TranMed	Med	12383	1	0	12	0	CEN	No
30	Longit	Low	12279	1	105	0	0	LE	No
31	Longit	Med	12383	1	14	0	0	LE	No
32	TransLow	Low	12404	1	0	12	0	CEN	No
33	TransLow	Low	12439	1	0	12	0	CEN	No
34	TransLow	Low	12467	1	0	12	0	CEN	No
35	TranMed	Med	12496	1	0	12	0	CEN	No
36	Alligator	Low	12499	1	7	1	8	RWP	No
37	Longit	Low	12401	1	119	0	0	LE	No
38	TranMed	Med	12520	1	0	12	0	CEN	No
39	TranMed	Med	12530	1	0	12	0	CEN	No
40	TranMed	Med	12540	1	0	12	0	CEN	No
41	TranMed	Med	12548	1	0	12	0	CEN	No
42	Longit	Med	12520	1	41	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 2.92 (m/km)  
IRI RWP = 2.76 (m/km)  
AVG IRI = 2.84 (m/km)  
AVG HRI = 2.57 (m/km)  
AVG RUT = 0.14 (inch)  
TEX LWP = 0.06 (inch)  
TEX RWP = 0.06 (inch)  
TEX CEN = 0.08 (inch)  
AVG TEX = 0.07 (inch)  
AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	3	51	51	(sqft)	0.7
2	Longitudinal	Low	5	407	406	(feet)	2.4
3	Longitudinal	Med	2	55	55	(feet)	0.9
4	Transverse	Low	16	169	168	(feet)	2.1
5	Transverse	Med	14	168	168	(feet)	3.6
6	Transverse	Hig	2	24	24	(feet)	2.3
7	Rutting	Low	1	7	7	(%)	3.4

Total Deduct Points = 15.3    Distress Rating = 89.1    PCR = 68.8

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I  
 Len(ft): 40872 D:E P:A Survey:11/14/01 09:04  
 Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18  
 Sample 6 Starts at 13561 feet Ends at 14060 feet Length = 499 feet  
 Starts at 8.640 M.P. Ends at 8.735 M.P. PMT = A

**1. Sample Distress Features**

Line Num	Feature Name	Severity Type	Starts At	Count Numb	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	TransLow	Low	13568	1	0	12	0	CEN	No
2	TransLow	Low	13583	1	0	12	0	CEN	No
3	TransLow	Low	13589	1	0	12	0	CEN	No
4	TranMed	Med	13641	1	0	12	0	CEN	No
5	TranMed	Med	13673	1	0	12	0	CEN	No
6	TranMed	Med	13719	1	0	12	0	CEN	No
7	TransLow	Low	13756	1	0	12	0	CEN	No
8	TranMed	Med	13798	1	0	12	0	CEN	No
9	TransLow	Low	13851	1	0	12	0	CEN	No
10	TranMed	Med	13896	1	0	12	0	CEN	No
11	TranMed	Med	13923	1	0	12	0	CEN	No
12	TranMed	Med	13958	1	0	12	0	CEN	No
13	TransLow	Low	14000	1	0	12	0	CEN	No
14	Longit	Low	13561	1	439	0	0	LE	No
15	TranMed	Med	14014	1	0	12	0	CEN	No
16	TransLow	Low	14049	1	0	12	0	CEN	No

**2. Sensor Data Summary**

IRI LWP = 2.04 (m/km)  
 IRI RWP = 2.04 (m/km)  
 AVG IRI = 2.04 (m/km)  
 AVG HRI = 1.87 (m/km)  
 AVG RUT = 0.10 (inch)  
 TEX LWP = 0.06 (inch)  
 TEX RWP = 0.06 (inch)  
 TEX CEN = 0.09 (inch)  
 AVG TEX = 0.07 (inch)  
 AVG FAU = 0.00 (inch)

**3. Distress Summary and PCR Calculation**

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Longitudinal	Low	1	439	440	(feet)	2.6
2	Transverse	Low	7	84	84	(feet)	1.1
3	Transverse	Med	8	96	96	(feet)	2.1

Total Deduct Points = 5.8 Distress Rating = 95.8 PCR = 80.2



Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I  
 Len(ft): 40872 D:E P:A Survey:11/14/01 09:04  
 Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18  
 Sample 7 Starts at 17342 feet Ends at 17840 feet Length = 498 feet  
 Starts at 9.357 M.P. Ends at 9.451 M.P. PMT = A

**1. Sample Distress Features**

Line Num	Feature Name	Severity Type	Starts At	Count	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	TransLow	Low	17359	1	0	12	0	CEN	No
2	Longit	Low	17342	1	29	0	0	LE	No
3	TransLow	Low	17376	1	0	6	0	RWP	No
4	TransLow	Low	17388	1	0	12	0	CEN	No
5	TransLow	Low	17415	1	0	12	0	CEN	No
6	TranMed	Med	17436	1	0	12	0	CEN	No
7	Longit	Low	17388	1	59	0	0	LE	No
8	TransLow	Low	17456	1	0	5	0	RWP	No
9	TransLow	Low	17463	1	0	12	0	CEN	No
10	TransLow	Low	17470	1	0	12	0	CEN	No
11	Longit	Low	17463	1	11	0	0	LE	No
12	TransLow	Low	17484	1	0	12	0	CEN	No
13	TransLow	Low	17498	1	0	12	0	CEN	No
14	TransLow	Low	17533	1	0	12	0	CEN	No
15	TransLow	Low	17544	1	0	6	0	CEN	No
16	Longit	Low	17509	1	56	0	0	LE	No
17	TransLow	Low	17565	1	0	12	0	CEN	No
18	TransLow	Low	17576	1	0	6	0	CEN	No
19	TranMed	Med	17592	1	0	12	0	CEN	No
20	TranMed	Med	17620	1	0	12	0	CEN	No
21	TransLow	Low	17659	1	0	12	0	CEN	No
22	TranMed	Med	17683	1	0	12	0	CEN	No
23	Longit	Low	17582	1	105	0	0	LE	No
24	TransLow	Low	17693	1	0	12	0	CEN	No
25	TranMed	Med	17719	1	0	12	0	CEN	No
26	TransLow	Low	17749	1	0	12	0	CEN	No
27	TransLow	Low	17763	1	0	12	0	CEN	No
28	Longit	Low	17753	1	17	0	0	LE	No
29	TranMed	Med	17802	1	0	12	0	CEN	No
30	TranMed	Med	17826	1	0	12	0	CEN	No

**2. Sensor Data Summary**

IRI LWP = 1.85 (m/km)  
 IRI RWP = 2.45 (m/km)  
 AVG IRI = 2.15 (m/km)  
 AVG HRI = 2.04 (m/km)  
 AVG RUT = 0.12 (inch)  
 TEX LWP = 0.05 (inch)  
 TEX RWP = 0.06 (inch)  
 TEX CEN = 0.08 (inch)  
 AVG TEX = 0.06 (inch)  
 AVG FAU = 0.00 (inch)

### 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Longitudinal	Low	6	275	277	(feet)	1.7
2	Transverse	Low	17	179	180	(feet)	2.3
3	Transverse	Med	7	84	84	(feet)	1.9

Total Deduct Points = 5.8    Distress Rating = 95.8    PCR = 79.3

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I  
 Len(ft): 40872 D:E P:A Survey:11/14/01 09:04  
 Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18  
 Sample 8 Starts at 18840 feet Ends at 19342 feet Length = 502 feet  
 Starts at 9.640 M.P. Ends at 9.735 M.P. PMT = A

1. Sample Distress Features

Line Num	Feature Name	Severity Type	Starts At	Count	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	Longit	Low	18854	1	10	0	0	LE	No
2	TransLow	Low	18871	1	0	12	0	CEN	No
3	Longit	Low	18878	1	14	0	0	LE	No
4	TransLow	Low	18892	1	0	12	0	CEN	No
5	TranMed	Med	18910	1	0	12	0	CEN	No
6	TransLow	Low	18941	1	0	12	0	CEN	No
7	TranMed	Med	18966	1	0	12	0	CEN	No
8	TransLow	Low	18993	1	0	12	0	CEN	No
9	TransLow	Low	19008	1	0	12	0	CEN	No
10	TransLow	Low	19015	1	0	12	0	CEN	No
11	Longit	Low	18993	1	24	0	0	LE	No
12	TranMed	Med	19038	1	0	12	0	CEN	No
13	TranMed	Med	19049	1	0	12	0	CEN	No
14	Longit	Low	19038	1	14	0	0	LE	No
15	TranMed	Med	19066	1	0	12	0	CEN	No
16	TranMed	Med	19077	1	0	12	0	CEN	No
17	Alligator	Med	19066	1	18	4	74	LWP	No
18	TransLow	Low	19091	1	0	12	0	CEN	No
19	TranMed	Med	19108	1	0	12	0	CEN	No
20	Alligator	Med	19063	1	45	4	186	RWP	No
21	TransLow	Low	19115	1	0	4	0	RE	No
22	TranMed	Med	19126	1	0	12	0	CEN	No
23	Alligator	Low	19108	1	18	1	18	RWP	No
24	TranMed	Med	19143	1	0	12	0	CEN	No
25	TranMed	Med	19146	1	0	12	0	CEN	No
26	Alligator	Low	19143	1	11	1	11	RWP	No
27	Alligator	Med	19143	1	11	4	45	RWP	No
28	TranMed	Med	19161	1	0	12	0	CEN	No
29	Alligator	Low	19154	1	10	1	10	LWP	No
30	TranMed	Med	19167	1	0	12	0	CEN	No
31	TransLow	Low	19172	1	0	4	0	LE	No
32	TransLow	Low	19175	1	0	12	0	CEN	No
33	Alligator	Low	19167	1	15	1	17	LWP	No
34	TransLow	Low	19182	1	0	12	0	CEN	No
35	TransLow	Low	19188	1	0	12	0	CEN	No
36	TranMed	Med	19199	1	0	12	0	CEN	No
37	Alligator	Med	19154	1	45	4	182	RWP	No
38	TranMed	Med	19203	1	0	12	0	CEN	No
39	TranMed	Med	19206	1	0	12	0	CEN	No
40	TranMed	Med	19213	1	0	12	0	CEN	No
41	TranMed	Med	19216	1	0	12	0	CEN	No
42	TranMed	Med	19223	1	0	12	0	CEN	No
43	Alligator	Med	19203	1	28	4	114	RWP	No
44	Alligator	Med	19182	1	49	4	199	LWP	No

45	TransLow	Low	19233	1	0	12	0	CEN	No
46	Alligator	Low	19231	1	7	1	7	RWP	No
47	Longit	Low	19233	1	11	0	0	LE	No
48	TranMed	Med	19244	1	0	12	0	CEN	No
49	Alligator	Low	19231	1	13	1	14	LWP	No
50	TranMed	Med	19247	1	0	12	0	CEN	No
51	TranMed	Med	19251	1	0	12	0	CEN	No
52	Alligator	Med	19244	1	12	4	49	RWP	No
53	TranMed	Med	19259	1	0	12	0	CEN	No
54	TranMed	Med	19261	1	0	12	0	CEN	No
55	TranMed	Med	19268	1	0	12	0	CEN	No
56	Alligator	Low	19266	1	10	2	20	RWP	No
57	Alligator	Med	19244	1	33	4	134	LWP	No
58	TransLow	Low	19280	1	0	7	0	CEN	No
59	TranMed	Med	19289	1	0	12	0	CEN	No
60	Longit	Low	19277	1	16	0	0	LE	No
61	Alligator	Low	19277	1	16	1	17	RWP	No
62	TranMed	Med	19300	1	0	4	0	RE	No
63	Longit	Low	19293	1	7	0	0	CEN	No
64	TransLow	Low	19305	1	0	8	0	CEN	No
65	Alligator	Med	19300	1	5	2	7	RWP	No
66	TranMed	Med	19307	1	0	12	0	CEN	No
67	TransLow	Low	19314	1	0	12	0	CEN	No
68	TranMed	Med	19321	1	0	12	0	CEN	No
69	TranMed	Med	19331	1	0	12	0	CEN	No
70	Longit	Med	19293	1	40	0	0	LE	No
71	TransLow	Low	19338	1	0	12	0	CEN	No
72	Alligator	Med	19310	1	28	2	65	RWP	No

## 2. Sensor Data Summary

IRI LWP = 2.88 (m/km)  
 IRI RWP = 4.20 (m/km)  
 AVG IRI = 3.54 (m/km)  
 AVG HRI = 2.76 (m/km)  
 AVG RUT = 0.18 (inch)  
 TEX LWP = 0.06 (inch)  
 TEX RWP = 0.07 (inch)  
 TEX CEN = 0.07 (inch)  
 AVG TEX = 0.07 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	8	115	114	(sqft)	3.7
2	Alligator	Med	10	1054	1051	(sqft)	24.7
3	Longitudinal	Low	7	96	96	(feet)	0.5
4	Longitudinal	Med	1	40	40	(feet)	0.6
5	Transverse	Low	17	178	178	(feet)	2.3
6	Transverse	Med	29	340	339	(feet)	6.8
7	Rutting	Low	1	20	20	(%)	5.9

Total Deduct Points = 44.4    Distress Rating = 69.6    PCR = 49.8

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I  
 Len(ft): 40872 D:E P:A Survey:11/14/01 09:04  
 Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18  
 Sample 9 Starts at 22620 feet Ends at 23119 feet Length = 499 feet  
 Starts at 10.356 M.P. Ends at 10.451 M.P. PMT = A

1. Sample Distress Features

Line Num	Feature Name	Severity Type	Starts At	Count	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	TransLow	Low	22627	1	0	12	0	CEN	No
2	TransLow	Low	22631	1	0	12	0	CEN	No
3	Longit	Low	22620	1	11	0	0	LE	No
4	TransLow	Low	22636	1	0	12	0	CEN	No
5	Alligator	Low	22631	1	8	1	10	RWP	No
6	Alligator	Low	22620	1	18	1	23	LWP	No
7	TranMed	Med	22645	1	0	12	0	CEN	No
8	Longit	Med	22638	1	13	0	0	LE	No
9	TransLow	Low	22652	1	0	5	0	RWP	No
10	TransLow	Low	22659	1	0	12	0	CEN	No
11	TransLow	Low	22662	1	0	12	0	CEN	No
12	TransLow	Low	22666	1	0	12	0	CEN	No
13	Longit	Low	22652	1	17	0	0	LE	No
14	TransLow	Low	22676	1	0	12	0	CEN	No
15	TransLow	Low	22683	1	0	12	0	CEN	No
16	TranMed	Med	22690	1	0	12	0	CEN	No
17	TranMed	Med	22700	1	0	12	0	CEN	No
18	TransLow	Low	22707	1	0	12	0	CEN	No
19	TranMed	Med	22712	1	0	12	0	CEN	No
20	TranMed	Med	22715	1	0	12	0	CEN	No
21	TranMed	Med	22718	1	0	12	0	CEN	No
22	Alligator	Low	22712	1	13	1	15	RWP	No
23	TranMed	Med	22728	1	0	12	0	CEN	No
24	Alligator	Low	22735	1	7	1	7	RWP	No
25	TranMed	Med	22746	1	0	12	0	CEN	No
26	TransLow	Low	22757	1	0	12	0	CEN	No
27	TranMed	Med	22763	1	0	12	0	CEN	No
28	TransLow	Low	22774	1	0	12	0	CEN	No
29	TransLow	Low	22777	1	0	12	0	CEN	No
30	TranHig	Hig	22781	1	0	12	0	CEN	No
31	TransLow	Low	22785	1	0	12	0	CEN	No
32	TransLow	Low	22787	1	0	4	0	RWP	No
33	TranMed	Med	22792	1	0	12	0	CEN	No
34	TranMed	Med	22801	1	0	12	0	CEN	No
35	TransLow	Low	22805	1	0	4	0	RE	No
36	TransLow	Low	22808	1	0	9	0	CEN	No
37	TransLow	Low	22812	1	0	9	0	CEN	No
38	Alligator	Med	22801	1	17	2	30	RWP	No
39	Longit	Low	22676	1	143	0	0	LE	No
40	TranMed	Med	22824	1	0	12	0	CEN	No
41	Alligator	Med	22819	1	15	3	44	RWP	No
42	TransLow	Low	22834	1	0	12	0	CEN	No
43	TranMed	Med	22836	1	0	12	0	CEN	No
44	Longit	Low	22834	1	10	0	0	LE	No

45	TransLow	Low	22847	1	0	6	0	CEN	No
46	TransLow	Low	22850	1	0	5	0	CEN	No
47	TransLow	Low	22859	1	0	12	0	CEN	No
48	TranMed	Med	22882	1	0	12	0	CEN	No
49	TranMed	Med	22913	1	0	12	0	CEN	No
50	TransLow	Low	22937	1	0	12	0	CEN	No
51	Longit	Low	22861	1	83	0	0	LE	No
52	TransLow	Low	22959	1	0	12	0	CEN	No
53	TransLow	Low	22979	1	0	12	0	CEN	No
54	Longit	Low	22966	1	17	0	0	LE	No
55	TranMed	Med	22997	1	0	12	0	CEN	No
56	TransLow	Low	23031	1	0	12	0	CEN	No
57	TranMed	Med	23057	1	0	12	0	CEN	No
58	TransLow	Low	23080	1	0	12	0	CEN	No
59	Longit	Low	23007	1	73	0	0	LE	No
60	TranMed	Med	23105	1	0	12	0	CEN	No
61	Longit	Med	23080	1	28	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 2.56 (m/km)  
 IRI RWP = 4.54 (m/km)  
 AVG IRI = 3.55 (m/km)  
 AVG HRI = 3.12 (m/km)  
 AVG RUT = 0.14 (inch)  
 TEX LWP = 0.06 (inch)  
 TEX RWP = 0.08 (inch)  
 TEX CEN = 0.08 (inch)  
 AVG TEX = 0.07 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	4	54	54	(sqft)	0.8
2	Alligator	Med	2	74	75	(sqft)	8.6
3	Longitudinal	Low	7	354	355	(feet)	2.1
4	Longitudinal	Med	2	41	41	(feet)	0.7
5	Transverse	Low	27	282	283	(feet)	3.5
6	Transverse	Med	18	216	216	(feet)	4.6
7	Transverse	Hig	1	12	12	(feet)	0.9
8	Rutting	Low	1	5	5	(%)	2.6

Total Deduct Points = 23.8    Distress Rating = 83.3    PCR = 59.5

Mississippi DOT Survey 2002 - Distress Features Database Report

DISTRESS FEATURES DATABASE REPORT

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 10 Starts at 24120 feet Ends at 24620 feet Length = 500 feet

Starts at 10.640 M.P. Ends at 10.735 M.P. PMT = A

1. Sample Distress Features

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	TransLow	Low	24125	1	0	12	0	CEN	No
2	TransLow	Low	24141	1	0	12	0	CEN	No
3	TranMed	Med	24158	1	0	12	0	CEN	No
4	Longit	Low	24125	1	39	0	0	LE	No
5	TransLow	Low	24181	1	0	5	0	RWP	No
6	TransLow	Low	24185	1	0	7	0	CEN	No
7	TransLow	Low	24192	1	0	12	0	CEN	No
8	TransLow	Low	24195	1	0	5	0	RE	No
9	TransLow	Low	24197	1	0	6	0	RWP	No
10	TransLow	Low	24199	1	0	3	0	RWP	No
11	TransLow	Low	24202	1	0	8	0	CEN	No
12	TranMed	Med	24216	1	0	12	0	CEN	No
13	TransLow	Low	24244	1	0	12	0	CEN	No
14	TranMed	Med	24262	1	0	12	0	CEN	No
15	TransLow	Low	24276	1	0	0	0	CEN	No
16	TransLow	Low	24279	1	0	0	0	CEN	No
17	TransLow	Low	24283	1	0	0	0	CEN	No
18	TransLow	Low	24294	1	0	0	0	CEN	No
19	Alligator	Low	24294	1	12	1	12	RWP	No
20	TranMed	Med	24318	1	0	12	0	CEN	No
21	Longit	Low	24192	1	126	0	0	LE	No
22	Alligator	Med	24318	1	7	4	28	RWP	No
23	TranMed	Med	24328	1	0	12	0	CEN	No
24	TransLow	Low	24335	1	0	12	0	CEN	No
25	Alligator	Low	24325	1	10	1	10	RWP	No
26	Longit	Low	24335	1	7	0	0	LE	No
27	TransLow	Low	24342	1	0	5	0	RWP	No
28	TranMed	Med	24352	1	0	12	0	CEN	No
29	Alligator	Med	24352	1	5	4	19	RWP	No
30	Longit	Med	24352	1	17	0	0	LE	No
31	TransLow	Low	24369	1	0	12	0	CEN	No
32	TransLow	Low	24374	1	0	6	0	RWP	No
33	TransLow	Low	24383	1	0	12	0	CEN	No
34	Longit	Low	24376	1	21	0	0	LE	No
37	TranMed	Med	24411	1	0	12	0	CEN	No
38	TranMed	Med	24422	1	0	12	0	CEN	No
39	TranMed	Med	24434	1	0	12	0	CEN	No
40	Longit	Med	24397	1	46	0	0	LE	No
41	Alligator	Med	24422	1	21	5	96	RWP	No
42	TranMed	Med	24450	1	0	12	0	CEN	No
43	Longit	Low	24443	1	10	0	0	LE	No
44	TransLow	Low	24457	1	0	11	0	CEN	No
45	Alligator	Low	24450	1	8	2	12	RWP	No
46	TranMed	Med	24467	1	0	12	0	CEN	No

47	TransLow	Low	24478	1	0	12	0	CEN	No
48	Alligator	Med	24470	1	8	4	27	LWP	No
49	Alligator	Med	24457	1	23	4	93	RWP	No
50	TranMed	Med	24488	1	0	12	0	CEN	No
51	Longit	Med	24481	1	21	0	0	LE	No
52	TranMed	Med	24509	1	0	12	0	CEN	No
53	TranMed	Med	24533	1	0	12	0	CEN	No
54	TranMed	Med	24561	1	0	12	0	CEN	No
55	Longit	Low	24509	1	57	0	0	LE	No
56	TransLow	Low	24571	1	0	6	0	CEN	No
57	TranMed	Med	24578	1	0	12	0	CEN	No
58	TransLow	Low	24590	1	0	12	0	CEN	No
59	TransLow	Low	24597	1	0	12	0	CEN	No
60	Alligator	Low	24578	1	18	1	18	LWP	No
61	TranMed	Med	24608	1	0	12	0	CEN	No
62	Alligator	Med	24608	1	10	4	35	LWP	No
63	Alligator	Med	24608	1	10	4	34	RWP	No

## 2. Sensor Data Summary

IRI LWP = 3.59 (m/km)  
 IRI RWP = 4.32 (m/km)  
 AVG IRI = 3.96 (m/km)  
 AVG HRI = 3.55 (m/km)  
 AVG RUT = 0.17 (inch)  
 TEX LWP = 0.08 (inch)  
 TEX RWP = 0.08 (inch)  
 TEX CEN = 0.08 (inch)  
 AVG TEX = 0.08 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	4	52	52	(sqft)	0.7
2	Alligator	Med	8	346	346	(sqft)	17.0
3	Longitudinal	Low	6	260	260	(feet)	1.6
4	Longitudinal	Med	3	84	84	(feet)	1.3
5	Transverse	Low	24	181	181	(feet)	2.3
6	Transverse	Med	18	216	216	(feet)	4.5
7	Rutting	Low	1	17	17	(%)	5.5

Total Deduct Points = 32.9    Distress Rating = 77.1    PCR = 52.6



Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 11 Starts at 27899 feet Ends at 28401 feet Length = 502 feet

Starts at 11.356 M.P. Ends at 11.451 M.P. PMT = A

**1. Sample Distress Features**

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	Longit	Low	27899	1	12	0	0	LE	No
2	TranMed	Med	27914	1	0	12	0	CEN	No
3	TransLow	Low	27923	1	0	9	0	CEN	No
4	TransLow	Low	27937	1	0	12	0	CEN	No
5	Longit	Low	27927	1	14	0	0	LE	No
6	TranMed	Med	27951	1	0	12	0	CEN	No
7	Alligator	Low	27941	1	15	1	17	RWP	No
8	Alligator	Low	27937	1	25	1	27	LWP	No
9	TransLow	Low	27979	1	0	12	0	CEN	No
10	TransLow	Low	27981	1	0	12	0	CEN	No
11	TranMed	Med	28000	1	0	12	0	CEN	No
12	TranMed	Med	28028	1	0	12	0	CEN	No
13	Alligator	Low	28028	1	18	1	18	LWP	No
14	TransLow	Low	28056	1	0	12	0	CEN	No
15	TransLow	Low	28077	1	0	12	0	CEN	No
16	Alligator	Low	28053	1	27	1	27	LWP	No
17	TranMed	Med	28095	1	0	12	0	CEN	No
18	TranMed	Med	28127	1	0	12	0	CEN	No
19	TransLow	Low	28143	1	0	12	0	CEN	No
20	Alligator	Low	28092	1	61	1	82	LWP	No
21	TransLow	Low	28160	1	0	12	0	CEN	No
22	TransLow	Low	28192	1	0	12	0	CEN	No
23	TransLow	Low	28213	1	0	6	0	RWP	No
24	TransLow	Low	28216	1	0	12	0	CEN	No
25	Alligator	Low	28213	1	10	1	10	LWP	No
26	TransLow	Low	28230	1	0	12	0	CEN	Yes
27	TranMed	Med	28248	1	0	12	0	CEN	No
28	Longit	Low	28223	1	32	0	0	LE	No
29	TranMed	Med	28280	1	0	12	0	CEN	No
30	TransLow	Low	28293	1	0	12	0	CEN	No
31	Alligator	Low	28261	1	38	1	42	LWP	No
32	TranMed	Med	28322	1	0	12	0	CEN	No
33	Longit	Low	28300	1	25	0	0	LE	No
34	Longit	Med	28321	1	11	0	0	RE	No
35	TranMed	Med	28345	1	0	12	0	CEN	No
36	TransLow	Low	28359	1	0	12	0	CEN	No
37	TransLow	Low	28364	1	0	12	0	CEN	No
38	TranMed	Med	28376	1	0	12	0	CEN	No
39	TransLow	Low	28394	1	0	12	0	CEN	No
40	Longit	Low	28345	1	56	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 2.40 (m/km)  
IRI RWP = 2.84 (m/km)  
AVG IRI = 2.62 (m/km)  
AVG HRI = 2.33 (m/km)  
AVG RUT = 0.09 (inch)  
TEX LWP = 0.07 (inch)  
TEX RWP = 0.07 (inch)  
TEX CEN = 0.07 (inch)  
AVG TEX = 0.07 (inch)  
AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	7	221	221	(sqft)	6.9
2	Longitudinal	Low	5	139	138	(feet)	0.8
3	Longitudinal	Med	1	11	11	(feet)	0.2
4	Transverse	Low	16	183	182	(feet)	2.3
5	Transverse	Med	11	132	132	(feet)	2.9

Total Deduct Points = 13.0    Distress Rating = 90.7    PCR = 71.7

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 12 Starts at 29401 feet Ends at 29899 feet Length = 498 feet

Starts at 11.640 M.P. Ends at 11.735 M.P. PMT = A

**1. Sample Distress Features**

Line Numb	Feature Name	Severity Type	Starts At	Count Numb	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	TransLow	Low	29415	1	0	12	0	CEN	No
2	TransLow	Low	29443	1	0	12	0	CEN	No
3	TransLow	Low	29475	1	0	12	0	CEN	No
4	TransLow	Low	29491	1	0	12	0	CEN	No
5	Longit	Low	29411	1	84	0	0	LE	No
6	TranMed	Med	29516	1	0	12	0	CEN	No
7	TranMed	Med	29528	1	0	12	0	CEN	No
8	Longit	Low	29523	1	8	0	0	LE	No
9	TranMed	Med	29572	1	0	12	0	CEN	No
10	Longit	Low	29551	1	21	0	0	LE	No
11	TranMed	Med	29576	1	0	12	0	CEN	No
12	Longit	Low	29576	1	13	0	0	LE	No
13	TranMed	Med	29592	1	0	12	0	CEN	No
14	Alligator	Low	29579	1	20	1	21	RWP	No
15	TranMed	Med	29620	1	0	12	0	CEN	No
16	Longit	Low	29592	1	70	0	0	LE	No
17	TranMed	Med	29663	1	0	12	0	CEN	No
18	Alligator	Low	29663	1	10	1	11	RWP	No
19	TransLow	Low	29684	1	0	12	0	CEN	No
20	TranMed	Med	29702	1	0	12	0	CEN	No
21	TranMed	Med	29714	1	0	6	0	LWP	No
22	TransLow	Low	29728	1	0	12	0	CEN	No
23	TranMed	Med	29746	1	0	12	0	CEN	No
24	Alligator	Low	29746	1	10	1	10	RWP	No
25	Longit	Low	29702	1	54	0	0	LE	No
26	Block	Low	29756	1	73	12	879	CEN	No
27	Alligator	Low	29829	1	5	1	5	RWP	No
28	TransLow	Low	29837	1	0	12	0	CEN	No
29	TransLow	Low	29840	1	0	5	0	RWP	No
30	TransLow	Low	29855	1	0	12	0	CEN	No
31	TransLow	Low	29861	1	0	5	0	CEN	No
32	Longit	Low	29829	1	38	0	0	LE	No
33	TransLow	Low	29868	1	0	0	0	CEN	No
34	TransLow	Low	29871	1	0	12	0	CEN	No
35	TranMed	Med	29896	1	0	7	0	CEN	No
36	Longit	Low	29889	1	11	0	0	CEN	No
37	Longit	Low	29875	1	24	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 2.87 (m/km)  
IRI RWP = 3.04 (m/km)  
AVG IRI = 2.95 (m/km)  
AVG HRI = 2.64 (m/km)  
AVG RUT = 0.08 (inch)  
TEX LWP = 0.06 (inch)  
TEX RWP = 0.06 (inch)  
TEX CEN = 0.10 (inch)  
AVG TEX = 0.08 (inch)  
AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	4	47	47	(sqft)	0.4
2	Block	Low	1	879	882	(sqft)	2.9
3	Longitudinal	Low	9	323	324	(feet)	1.9
4	Transverse	Low	12	118	119	(feet)	1.5
5	Transverse	Med	11	122	122	(feet)	2.7

Total Deduct Points = 9.4    Distress Rating = 93.2    PCR = 71.1

Mississippi DOT Survey 2002 - Distress Features Database Report

DISTRESS FEATURES DATABASE REPORT

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 13 Starts at 33179 feet Ends at 33679 feet Length = 500 feet

Starts at 12.356 M.P. Ends at 12.451 M.P. PMT = A

1. Sample Distress Features

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	TransLow	Low	33189	1	0	12	0	CEN	No
2	Longit	Low	33179	1	13	0	0	LE	No
3	TransLow	Low	33200	1	0	8	0	CEN	No
4	TransLow	Low	33206	1	0	12	0	CEN	No
5	TransLow	Low	33213	1	0	6	0	LWP	No
6	TransLow	Low	33217	1	0	9	0	CEN	No
7	TransLow	Low	33224	1	0	12	0	CEN	No
8	TransLow	Low	33233	1	0	12	0	CEN	No
9	Longit	Low	33179	1	59	0	0	LE	No
10	TransLow	Low	33238	1	0	6	0	LWP	No
11	Alligator	Low	33244	1	5	1	5	LWP	No
12	TranMed	Med	33249	1	0	12	0	CEN	No
13	Longit	Low	33227	1	28	0	0	CEN	No
14	Alligator	Med	33249	1	6	2	12	LWP	No
15	TransLow	Low	33259	1	0	6	0	LWP	No
16	TranMed	Med	33261	1	0	12	0	CEN	No
17	Alligator	Med	33254	1	11	3	30	LWP	No
18	TransLow	Low	33268	1	0	9	0	CEN	No
19	Longit	Low	33266	1	10	0	0	LE	No
20	TransLow	Low	33275	1	0	12	0	CEN	No
21	TranMed	Med	33282	1	0	12	0	CEN	No
22	Alligator	Med	33254	1	28	2	60	RWP	No
23	TransLow	Low	33286	1	0	8	0	CEN	No
24	TransLow	Low	33289	1	0	5	0	RWP	No
25	TransLow	Low	33298	1	0	12	0	CEN	No
26	TransLow	Low	33312	1	0	12	0	CEN	No
27	Longit	Low	33289	1	28	0	0	LE	No
28	TransLow	Low	33321	1	0	12	0	CEN	Yes
29	TransLow	Low	33328	1	0	6	0	LWP	No
30	TransLow	Low	33342	1	0	12	0	CEN	No
31	TranMed	Med	33346	1	0	12	0	CEN	No
32	TransLow	Low	33356	1	0	5	0	CEN	No
33	Alligator	Low	33345	1	11	2	24	LWP	No
34	TranMed	Med	33366	1	0	12	0	CEN	No
35	TransLow	Low	33380	1	0	9	0	CEN	No
36	TransLow	Low	33387	1	0	9	0	CEN	No
37	Longit	Low	33328	1	67	0	0	LE	No
38	TranMed	Med	33395	1	0	12	0	CEN	No
39	TranMed	Med	33422	1	0	12	0	CEN	No
40	TransLow	Low	33436	1	0	12	0	CEN	No
41	TransLow	Low	33450	1	0	7	0	LWP	No
42	TransLow	Low	33454	1	0	5	0	CEN	No
43	TranMed	Med	33463	1	0	12	0	CEN	No
44	TransLow	Low	33486	1	0	6	0	CEN	No

45	TransLow	Low	33500	1	0	12	0	CEN	No
46	Longit	Low	33486	1	13	0	0	LE	No
47	TransLow	Low	33509	1	0	12	0	CEN	No
48	Longit	Low	33512	1	11	0	0	LE	No
49	TranMed	Med	33526	1	0	12	0	CEN	No
50	TransLow	Low	33530	1	0	7	0	CEN	No
51	Alligator	Med	33528	1	6	3	14	LWP	No
52	TransLow	Low	33544	1	0	12	0	CEN	No
53	Longit	Low	33533	1	28	0	0	LE	No
54	TransLow	Low	33561	1	0	12	0	CEN	No
55	TransLow	Low	33568	1	0	7	0	RWP	No
56	TranMed	Med	33579	1	0	12	0	CEN	No
57	Longit	Low	33568	1	14	0	0	LE	No
58	Alligator	Low	33282	1	300	1	300	RWP	No
59	TranMed	Med	33596	1	0	12	0	CEN	No
60	TransLow	Low	33610	1	0	6	0	CEN	No
61	TransLow	Low	33621	1	0	6	0	CEN	No
62	TransLow	Low	33631	1	0	9	0	CEN	No
63	Longit	Low	33596	1	49	0	0	CEN	No
64	TranHig	Hig	33645	1	0	12	0	CEN	No
65	TranMed	Med	33659	1	0	12	0	CEN	No
66	Alligator	Med	33645	1	14	5	63	RWP	No
67	TranMed	Med	33673	1	0	12	0	CEN	No
68	Longit	Low	33589	1	91	0	0	LE	No
69	Longit	Med	33653	1	26	0	0	CEN	No

## 2. Sensor Data Summary

IRI LWP = 2.57 (m/km)  
 IRI RWP = 3.45 (m/km)  
 AVG IRI = 3.01 (m/km)  
 AVG HRI = 2.58 (m/km)  
 AVG RUT = 0.13 (inch)  
 TEX LWP = 0.06 (inch)  
 TEX RWP = 0.07 (inch)  
 TEX CEN = 0.09 (inch)  
 AVG TEX = 0.08 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	3	329	329	(sqft)	9.1
2	Alligator	Med	5	179	179	(sqft)	13.0
3	Longitudinal	Low	12	409	409	(feet)	2.4
4	Longitudinal	Med	1	26	26	(feet)	0.4
5	Transverse	Low	34	305	305	(feet)	3.7
6	Transverse	Med	13	156	156	(feet)	3.4
7	Transverse	Hig	1	12	12	(feet)	0.9

Total Deduct Points = 32.9    Distress Rating = 77.1    PCR = 58.5

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 14 Starts at 34680 feet Ends at 35181 feet Length = 501 feet

Starts at 12.640 M.P. Ends at 12.735 M.P. PMT = A

**1. Sample Distress Features**

Line Num	Feature Name	Severity Type	Starts At	Count	Length (feet)	Width (feet)	Area (sqft)	Loc Ln	Seal Cond
1	TransLow	Low	34687	1	0	12	0	CEN	No
2	Longit	Low	34680	1	7	0	0	LE	No
3	TransLow	Low	34722	1	0	12	0	CEN	No
4	Alligator	Low	34722	1	17	1	17	RWP	No
5	Longit	Low	34739	1	11	0	0	CEN	No
6	Longit	Low	34722	1	34	0	0	LE	No
7	TranMed	Med	34756	1	0	12	0	CEN	No
8	TransLow	Low	34806	1	0	12	0	CEN	No
9	Longit	Low	34777	1	45	0	0	LE	No
10	TransLow	Low	34822	1	0	12	0	CEN	No
11	TranMed	Med	34857	1	0	12	0	CEN	No
12	TransLow	Low	34899	1	0	12	0	CEN	No
13	TransLow	Low	34910	1	0	12	0	CEN	No
14	TransLow	Low	34934	1	0	12	0	CEN	No
15	TransLow	Low	34959	1	0	12	0	CEN	No
16	Longit	Low	34910	1	55	0	0	LE	No
17	Longit	Low	34976	1	32	0	0	LE	No
18	TranMed	Med	35010	1	0	12	0	CEN	No
19	TranMed	Med	35017	1	0	12	0	CEN	No
20	Longit	Low	35021	1	5	0	0	LE	No
21	TransLow	Low	35063	1	0	12	0	CEN	No
22	TranMed	Med	35112	1	0	12	0	CEN	No
23	TransLow	Low	35150	1	0	12	0	CEN	No
24	Longit	Low	35129	1	25	0	0	LE	No
25	TranMed	Med	35178	1	0	12	0	CEN	No
26	TransLow	Low	35181	1	0	6	0	RWP	No
27	Longit	Low	35168	1	13	0	0	LE	No

**2. Sensor Data Summary**

IRI LWP = 2.09 (m/km)  
 IRI RWP = 2.07 (m/km)  
 AVG IRI = 2.08 (m/km)  
 AVG HRI = 1.90 (m/km)  
 AVG RUT = 0.10 (inch)  
 TEX LWP = 0.05 (inch)  
 TEX RWP = 0.06 (inch)  
 TEX CEN = 0.06 (inch)  
 AVG TEX = 0.05 (inch)  
 AVG FAU = 0.00 (inch)

### 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	1	17	17	(sqft)	0.0
2	Longitudinal	Low	9	227	227	(feet)	1.4
3	Transverse	Low	11	126	125	(feet)	1.6
4	Transverse	Med	6	72	72	(feet)	1.6

Total Deduct Points = 4.6    Distress Rating = 96.7    PCR = 80.6



Mississippi DOT Survey 2002 - Distress Features Database Report

DISTRESS FEATURES DATABASE REPORT

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 15 Starts at 37962 feet Ends at 38460 feet Length = 498 feet

Starts at 13.262 M.P. Ends at 13.356 M.P. PMT = A

1. Sample Distress Features

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	TranMed	Med	37969	1	0	12	0	CEN	No
2	Alligator	Low	37993	1	8	1	8	RWP	No
3	TransLow	Low	38004	1	0	12	0	CEN	No
4	Longit	Low	38015	1	10	0	0	LE	No
5	Alligator	Low	38025	1	10	1	10	RWP	No
6	TranMed	Med	38035	1	0	12	0	CEN	No
7	Alligator	Low	38039	1	7	1	7	RWP	No
8	TransLow	Low	38046	1	0	12	0	CEN	No
9	Longit	Low	38039	1	7	0	0	LE	No
10	Alligator	Low	38046	1	4	1	5	LWP	No
11	TranMed	Med	38053	1	0	12	0	CEN	No
12	Alligator	Med	38050	1	10	3	29	RWP	No
13	TransLow	Low	38071	1	0	12	0	CEN	No
14	Alligator	Low	38066	1	5	1	5	RWP	No
15	TransLow	Low	38084	1	0	5	0	RWP	No
16	Alligator	Low	38084	1	4	1	4	RWP	No
17	TranMed	Med	38091	1	0	12	0	CEN	No
18	Alligator	Low	38085	1	6	1	6	LWP	No
19	TransLow	Low	38098	1	0	3	0	RWP	No
20	TransLow	Low	38106	1	0	12	0	CEN	No
21	TransLow	Low	38116	1	0	12	0	CEN	No
22	Alligator	Low	38112	1	7	1	7	RWP	No
23	TranMed	Med	38130	1	0	12	0	CEN	No
24	TransLow	Low	38144	1	0	12	0	CEN	No
25	TransLow	Low	38150	1	0	5	0	RWP	No
26	Alligator	Low	38123	1	32	1	35	RWP	No
27	Alligator	Low	38167	1	4	1	4	RWP	No
28	TransLow	Low	38178	1	0	12	0	CEN	No
29	Longit	Low	38155	1	30	0	0	LE	No
30	TransLow	Low	38192	1	0	10	0	CEN	No
31	Alligator	Low	38192	1	10	1	11	RWP	No
32	TransLow	Low	38204	1	0	12	0	CEN	No
33	Longit	Low	38204	1	14	0	0	LE	No
34	TranMed	Med	38234	1	0	12	0	CEN	No
35	TransLow	Low	38255	1	0	12	0	CEN	No
36	Longit	Low	38238	1	19	0	0	LE	No
37	TransLow	Low	38268	1	0	12	0	CEN	No
38	TranMed	Med	38301	1	0	12	0	CEN	No
39	TransLow	Low	38317	1	0	6	0	RWP	No
40	TransLow	Low	38322	1	0	7	0	LWP	No
41	Alligator	Low	38317	1	5	1	6	RWP	No
42	TranMed	Med	38335	1	0	12	0	CEN	No
43	TransLow	Low	38369	1	0	12	0	CEN	No
44	Alligator	Low	38369	1	14	1	16	RWP	No

45	TranMed	Med	38395	1	0	12	0	CEN	No
46	Longit	Low	38268	1	130	0	0	LE	No
47	TransLow	Low	38408	1	0	12	0	CEN	No
48	TransLow	Low	38425	1	0	4	0	LE	No
49	TransLow	Low	38443	1	0	12	0	CEN	No
50	Alligator	Low	38432	1	14	1	15	RWP	No
51	Alligator	Low	38450	1	10	1	10	RWP	No
52	Longit	Low	38446	1	14	0	0	LE	No

## 2. Sensor Data Summary

IRI LWP = 1.73 (m/km)  
 IRI RWP = 2.17 (m/km)  
 AVG IRI = 1.95 (m/km)  
 AVG HRI = 1.80 (m/km)  
 AVG RUT = 0.12 (inch)  
 TEX LWP = 0.05 (inch)  
 TEX RWP = 0.06 (inch)  
 TEX CEN = 0.07 (inch)  
 AVG TEX = 0.06 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	15	149	150	(sqft)	4.9
2	Alligator	Med	1	29	29	(sqft)	4.9
3	Longitudinal	Low	7	224	225	(feet)	1.4
4	Transverse	Low	20	195	196	(feet)	2.5
5	Transverse	Med	9	108	109	(feet)	2.4

Total Deduct Points = 16.0    Distress Rating = 88.6    PCR = 74.8

Mississippi DOT Survey 2002 - Distress Features Database Report

**DISTRESS FEATURES DATABASE REPORT**

Proj: 112 Co:47 Road Name: 4 Begin (MP) 6.072 End (MP) 13.813 M:I

Len(ft): 40872 D:E P:A Survey:11/14/01 09:04

Set: 227 Start Image:00:39:18:08 End Image:00:47:28:18

Sample 16 Starts at 39461 feet Ends at 39959 feet Length = 498 feet

Starts at 13.546 M.P. Ends at 13.640 M.P. PMT = A

1. Sample Distress Features

Line	Feature	Severity	Starts	Count	Length	Width	Area	Loc	Seal
Numb	Name	Type	At	Numb	(feet)	(feet)	(sqft)	Ln	Cond
1	TransLow	Low	39470	1	0	8	0	CEN	No
2	TransLow	Low	39472	1	0	12	0	CEN	No
3	TranMed	Med	39480	1	0	12	0	CEN	No
4	TransLow	Low	39484	1	0	12	0	CEN	No
5	TransLow	Low	39487	1	0	7	0	CEN	No
6	TranHig	Hig	39489	1	0	12	0	CEN	No
7	TranMed	Med	39498	1	0	12	0	CEN	No
8	Alligator	Med	39461	1	37	4	148	RWP	No
9	TranMed	Med	39503	1	0	12	0	CEN	No
10	TranMed	Med	39510	1	0	12	0	CEN	No
11	Alligator	Med	39498	1	16	4	65	RWP	No
12	TransLow	Low	39519	1	0	5	0	LWP	No
13	Alligator	Med	39498	1	21	4	73	LWP	No
14	TranMed	Med	39522	1	0	12	0	CEN	No
15	TranMed	Med	39533	1	0	12	0	CEN	No
16	TransLow	Low	39537	1	0	7	0	CEN	No
17	TranMed	Med	39552	1	0	12	0	CEN	No
18	Longit	Low	39542	1	14	0	0	LE	No
19	Alligator	Low	39547	1	9	1	9	LWP	No
20	TranMed	Med	39575	1	0	12	0	CEN	No
21	TransLow	Low	39587	1	0	9	0	CEN	No
22	TranMed	Med	39591	1	0	12	0	CEN	No
23	Alligator	Low	39556	1	46	2	93	LWP	No
24	TranMed	Med	39603	1	0	12	0	CEN	No
25	TransLow	Low	39631	1	0	12	0	CEN	No
26	TransLow	Low	39642	1	0	7	0	CEN	No
27	Alligator	Low	39638	1	9	1	9	LWP	No
28	TranMed	Med	39673	1	0	12	0	CEN	No
29	TransLow	Low	39684	1	0	12	0	CEN	No
30	TransLow	Low	39691	1	0	12	0	CEN	No
31	Alligator	Low	39684	1	12	1	14	RWP	No
32	TranMed	Med	39696	1	0	12	0	CEN	No
33	Alligator	Low	39684	1	12	1	14	LWP	No
34	TranMed	Med	39705	1	0	12	0	CEN	No
35	TranMed	Med	39717	1	0	12	0	CEN	No
36	Alligator	Med	39698	1	30	4	108	LWP	No
37	TransLow	Low	39740	1	0	5	0	LWP	No
38	TranMed	Med	39747	1	0	12	0	CEN	No
39	TransLow	Low	39756	1	0	5	0	LWP	No
40	Alligator	Low	39747	1	19	1	24	LWP	No
41	TransLow	Low	39766	1	0	12	0	CEN	No
42	TransLow	Low	39789	1	0	5	0	LWP	No
43	TransLow	Low	39793	1	0	12	0	CEN	No
44	TransLow	Low	39800	1	0	12	0	CEN	No

45	TransLow	Low	39805	1	0	12	0	CEN	No
46	Alligator	Low	39793	1	14	1	16	LWP	No
47	TransLow	Low	39813	1	0	12	0	CEN	No
48	TransLow	Low	39842	1	0	12	0	CEN	No
49	TransLow	Low	39863	1	0	6	0	CEN	No
50	TransLow	Low	39868	1	0	12	0	CEN	No
51	TransLow	Low	39880	1	0	12	0	CEN	No
52	Longit	Low	39837	1	47	0	0	CEN	No
53	TransLow	Low	39889	1	0	12	0	CEN	No
54	TransLow	Low	39901	1	0	6	0	CEN	No
55	Alligator	Low	39899	1	4	1	4	LWP	No
56	TransLow	Low	39906	1	0	12	0	CEN	No
57	Longit	Low	39889	1	19	0	0	CEN	No
58	TranMed	Med	39914	1	0	12	0	CEN	No
59	Alligator	Low	39908	1	7	1	7	LWP	No
60	Alligator	Low	39908	1	7	1	7	RWP	No
61	TransLow	Low	39921	1	0	12	0	CEN	No
62	TransLow	Low	39931	1	0	5	0	LWP	No
63	Alligator	Low	39921	1	10	1	10	LWP	No
64	TransLow	Low	39945	1	0	12	0	CEN	No
65	TransLow	Low	39954	1	0	12	0	CEN	No

## 2. Sensor Data Summary

IRI LWP = 2.41 (m/km)  
 IRI RWP = 3.47 (m/km)  
 AVG IRI = 2.94 (m/km)  
 AVG HRI = 2.66 (m/km)  
 AVG RUT = 0.09 (inch)  
 TEX LWP = 0.06 (inch)  
 TEX RWP = 0.07 (inch)  
 TEX CEN = 0.08 (inch)  
 AVG TEX = 0.07 (inch)  
 AVG FAU = 0.00 (inch)

## 3. Distress Summary and PCR Calculation

Num	Feature	Sev	Qty	Extent	NrmExt	Unit	Pnts
1	Alligator	Low	11	207	208	(sqft)	6.5
2	Alligator	Med	4	395	396	(sqft)	17.8
3	Longitudinal	Low	3	80	80	(feet)	0.4
4	Transverse	Low	30	291	292	(feet)	3.6
5	Transverse	Med	16	192	193	(feet)	4.1
6	Transverse	Hig	1	12	12	(feet)	0.9
7	Rutting	Low	1	4	4	(%)	2.4

Total Deduct Points = 35.7    Distress Rating = 75.3    PCR = 57.5

**APPENDIX B**  
**TRAFFIC COUNT DATA**

Termini: MS 4 - Galena to MS 7					
Year	Projected ADT	Average 18 KIP Axle Loads Per 1,000 Vehicles		Cumulative Thousands Of 18K ESALS From Base Year	
		Rigid	Flex	Rigid	Flex
2001	2,000	1,445	935	0	0
2011	2,600	1,445	935	791	513
2021	3,300	1,445	935	1,802	1,168

Year 2021 Design Data		
DHV	D % Of DHV	Trucks % Of ADT
360	50	13

Cumulative total ESALS represents one direction only.

**APPENDIX C**  
**ASPHALT MIX DESIGN DATA**

Mississippi Department of Transportation										
Approval of Bituminous Mix Design Course by Materials Div.										
ST 19mm										
TMD-042g	MDOT # 9772807		Date: 5/9/2002							
Rev.06/2000	Proj. No : 46-0060-03-019-10/103335-301000		Contractor: LEHMAN-ROBERTS CO		Sub Contr.					
	County : MARSHALL		Test Data: Review of Design		From Proj.:					
	Dist. No. : 2		From Lab No:							
Type Mix: = ST 19mm										
TYPE	RAM	1'-5/8	5/8	MFG	CS	#601	HL	AGG	JOB	SPECS.
MTL	PLANT 5	MS&GR	MS&GR	SAND	MS&GR	LST	FALCO	BLEND	MIX	
SOURCE	PRIVATE	BATESVILLE	BATESVILLE	BATESVILLE	BATESVILLE	CHEROKEE	AL			DESIGN
% USED	15	8	34	20	12	10	1	%	%	RANGE
								PASSING	PASSING	
1.5"/37.5mm	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100	
1.0"/25.0mm	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100	100
3/4"/19.0mm	100.0	63.3	100.0	100.0	100.0	100.0	100.0	96.3	96	90-100
1/2"/12.5mm	92.0	6.5	91.0	100.0	100.0	100.0	100.0	88.2	88	89 Max
3/8"/9.5mm	87.0	3.3	76.0	96.0	100.0	100.0	100.0	81.4	81	
#4/4.75mm	68.0	1.7	42.0	57.0	99.0	99.0	100.0	58.8	59	
#8/2.36mm	55.0	1.3	22.0	27.0	94.0	77.0	100.0	41.2	41	18-55
#16/1.18mm	40.0	1.1	14.0	17.0	79.0	42.0	100.0	28.9	29	
#30/600mm	37.0	1.0	9.0	9.0	61.0	21.0	100.0	20.9	21	
#60/300mm	21.0	0.9	6.0	6.0	12.0	13.0	99.0	10.2	10	
#100/150mm	12.4	0.7	4.2	4.0	6.0	10.0	98.0	6.8	7	
#200/875mm	9.9	0.4	3.2	3.7	0.5	8.7	97.0	5.2	5.2	4.0-9.0
								%AC	4.65	
Gsa	2.656	2.616	2.637	2.639	2.660	2.676	2.274	2.641	MIX TEMP	300
Gsb	2.580	2.487	2.527	2.479	2.609	2.597	2.274	2.535	VOIDS	4.0
%CR #4	94.2	96.2	98.6	90.2	0.0	100.0	100.0	96.0	VMA	13.1
HUMPRATIO	>>>>>>	>>>>>>	>>>>>>	>>>>>>	>>>>>>	>>>>>>	>>>>>>	43.6	VFA	69
%CLAY					0.8			0.1	Gmm	2.406
PI #40 MTL					NP				Gsb	2.535
%ABS MOIST	1.11	1.96	1.65	2.45	0.73	1.14	0.00	1.58	Pba(mix)	0.55
	Comp. Temp. = 293-303 F		Mixing Temp. = 315-326 F							
ANTI STRIP	NONE	RATE	% By Wgt of AC.							
AC SOURCE	MARATHON P087-22	TSR	93.8	FIE =	0.9	FAA =				
	Ni 7		Nd 68		Nm 104					
REMARKS:	% Rap used =	15	% AC (Rap) =	4.97	% AC (Add) =	3.90	% AC (Total) =	4.65		
			MT-59 <5%							
The percentage of asphalt cement used with the above blend of mineral aggregates for the										
Course is 3.90										
MARATHON P087-22 ST 19mm										



Mississippi Department of Transportation										
Approval of Bituminous Mix Design Course by Materials Div.										
ST 9.5mm										
TMD-042cg								Date:	5/28/2002	
Rev.06/2000								Sub Contr.:		
MDOT #	9772830							From Proj.:		
Proj. No :	46-0060-03-019-10/103335-301000							Contractor:	LEHMAN-ROBERTS CO	
County :	MARSHALL							From Lab No.:		
Dist. No. :	2							Test Data:	Review of Design	
Type Mix:	= ST 9.5mm									
TYPE MTL	RAM	1/2 CR GR	MFG SAND	CS	#901 LST	HL		AGG BLEND	JOB MIX	SPECS.
AGG SOURCE	PLANT 5 PRIVATE	MS&GR BATESVILLE	MS&GR BATESVILLE	MS&GR BATESVILLE	VULCAN CHEROKEE	ARK LIME				DESIGN RANGE
% USED	10	45	28	8	8	1		% PASSING	% PASSING	
1.5"/37.5mm	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100	
1.0"/25.0mm	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100	
3/4"/19.0mm	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100	
1/2"/12.5mm	92.0	100.0	100.0	100.0	100.0	100.0		99.2	99	100
3/8"/9.5mm	87.0	89.3	96.0	100.0	100.0	100.0		92.8	93	90-100
#4/4.75mm	68.0	53.7	52.0	99.0	99.0	100.0		62.4	62	89 Max
#8/2.36mm	55.0	31.5	27.0	94.0	77.0	100.0		41.9	42	22-70
#16/1.18mm	40.0	19.5	17.0	79.0	42.0	100.0		28.2	28	
#30/600mm	37.0	12.1	9.0	61.0	21.0	100.0		19.2	19	
#50/300mm	21.0	7.8	6.0	12.0	13.0	99.0		10.3	10	
#100/150mm	12.4	5.1	4.0	6.0	10.0	98.0		6.9	7	
#200/075mm	9.9	3.7	3.7	0.5	8.7	97.0		5.4	5.4	4.0-9.0
								%AC	5.70	
Gsa	2.656	2.635	2.639	2.660	2.676	2.274	1.000	2.639	MIX TEMP	300
Gsb	2.580	2.537	2.479	2.609	2.597	2.274	1.000	2.532	VOIDS	4.0
%CR #4	94.3	95.6	90.2	0.0	100.0	100.0	0.0	93.4	VMA	15.4
HUMPRATIO	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	>>>>>	37.9	VFA	74
%CLAY				0.4				0.0	Gmm	2.367
PI #40 MTL				NP					Gsb	2.532
%ABS MOIST	1.11	1.47	2.45	0.73	1.14	0.00	0.00	1.61	Pba(mix)	0.52
	Comp.Temp.= 293-303 F		Mixing Temp.= 315-326 F						Pbe	5.18
ANTI STRIP	NONE	RATE	% By Wgt of AC.						D/B	1.04
AC SOURCE	MARATHON PORT-22	TSR	94.5	F/E=	0.8	FAA=	43.2		Gse	2.566
	Ni 7		Nd 68		Nm 104				Gb	1.036
REMARKS:	% Rap used =	10	% AC (Rap) =	4.97	% AC( Add) =	5.20	% AC (Total) =	5.70		
	MT-59 <5%									
The percentage of asphalt cement	MARATHON PORT-22 used with the above blend of mineral aggregates for the								ST	9.5mm
Course is	5.20									

## **APPENDIX D**

### **COST FOR DRM APPLICATION**

### **Cost Information**

MDOT paid \$100,000 for 36,960 linear feet of DRM on MS Hwy 4 near Holly Springs, MS.

(Traffic Control for this operation was supplied by MDOT)

36,960 linear feet x 12.0' width equates to 443,520 sq. feet

443,520 sq. feet = 49,280 sq. yds.

Cost to MDOT = \$2.03 per square yard for DRM