

ARKANSAS DEPARTMENT OF TRANSPORTATION



SUBSURFACE INVESTIGATION

STATE JOB NO. 061687

FEDERAL AID PROJECT NO. NHPP-40-4(87)

HWY. 31 – EAST (S)

STATE HIGHWAY I-40 SECTION 41 & 42

IN LONOKE & PRAIRIE COUNTY

The information contained herein was obtained by the Department for design and estimating purposes only. It is being furnished with the express understanding that said information does not constitute a part of the Proposal or Contract and represents only the best knowledge of the Department as to the location, character and depth of the materials encountered. The information is only included and made available so that bidders may have access to subsurface information obtained by the Department and is not intended to be a substitute for personal investigation, interpretation and judgment of the bidder. The bidder should be cognizant of the possibility that conditions affecting the cost and/or quantities of work to be performed may differ from those indicated herein.



ARKANSAS DEPARTMENT OF TRANSPORTATION

ARDOT.gov | IDriveArkansas.com | Scott E. Bennett, P.E., Director

MATERIALS DIVISION

11301 West Baseline Road | P.O. Box 2261 | Little Rock, AR 72203-2261 | Phone: 501.569.2185 | Fax: 501.569.2368

January 24, 2019

TO: Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT: Job No. BB0608
Hwy. 31 – Prairie Co. Line (S)
Route 40 Section 41
Lonoke County

Attached is the requested pavement sounding data for the above referenced job. The project consists of milling and inlay approximately 10.7 miles of Interstate 40. Cores were taken at ½ mile increments alternating inside and outside lanes. Locations are measured from the centerline of the existing lanes and are noted as such on the logs.

Upon reviewing the pavement cores, no major distresses were observed. Alternatives to mill and inlay may be considered for pavement preservation. If mill and inlay is the preferred method; it is recommended that 2 inches of asphalt be milled from the travel lanes and shoulders in order to restore the desired cross section before paving.

Listed below is the additional information requested for use in developing the plans:

1. The Qualified Products List (QPL) indicates that Aggregate Base Course (Class CL-7) is available from commercial producers located in the vicinity of Sweet Home.

2. Asphalt Concrete Hot Mix

<u>Type</u>	<u>Asphalt Cement %</u>	<u>Mineral Aggregate %</u>
Surface Course	4.9	95.1
Binder Course	4.0	96.0
Base Course	3.6	96.4

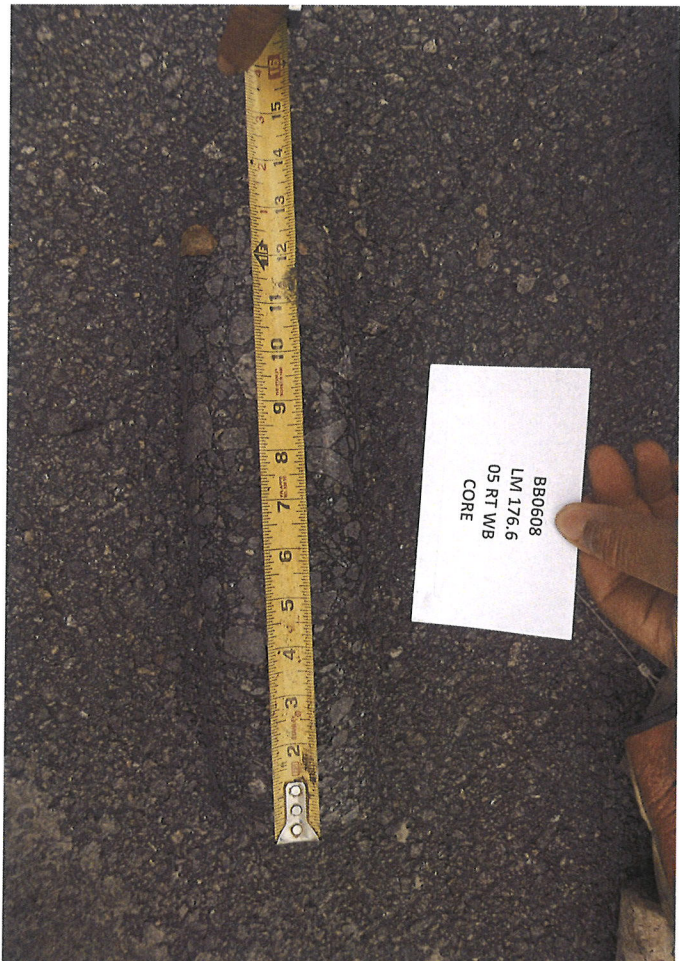
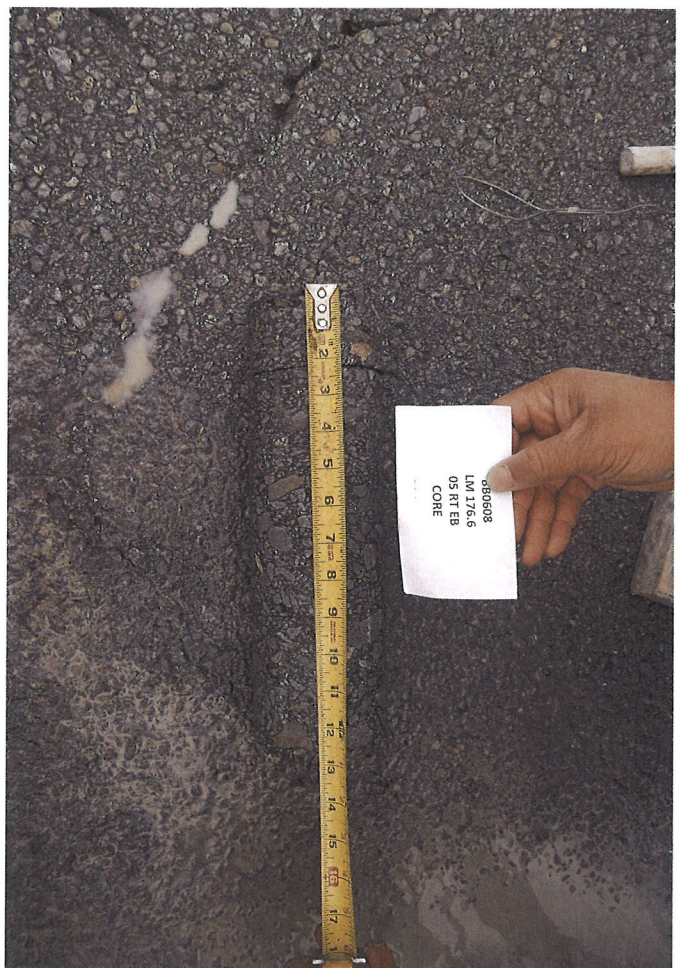


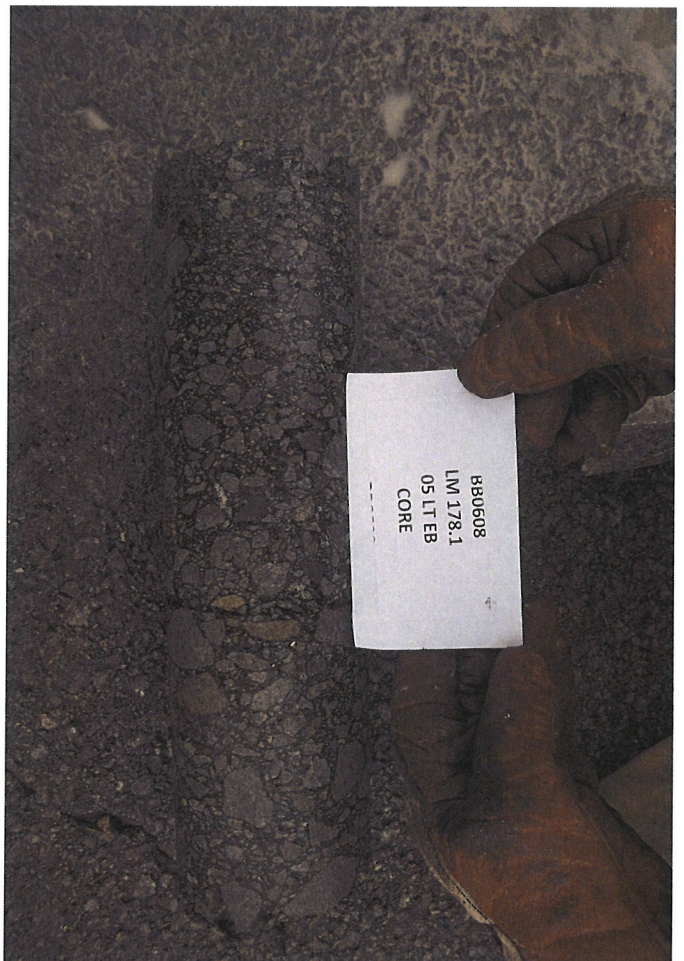
Michael C. Benson
Materials Engineer

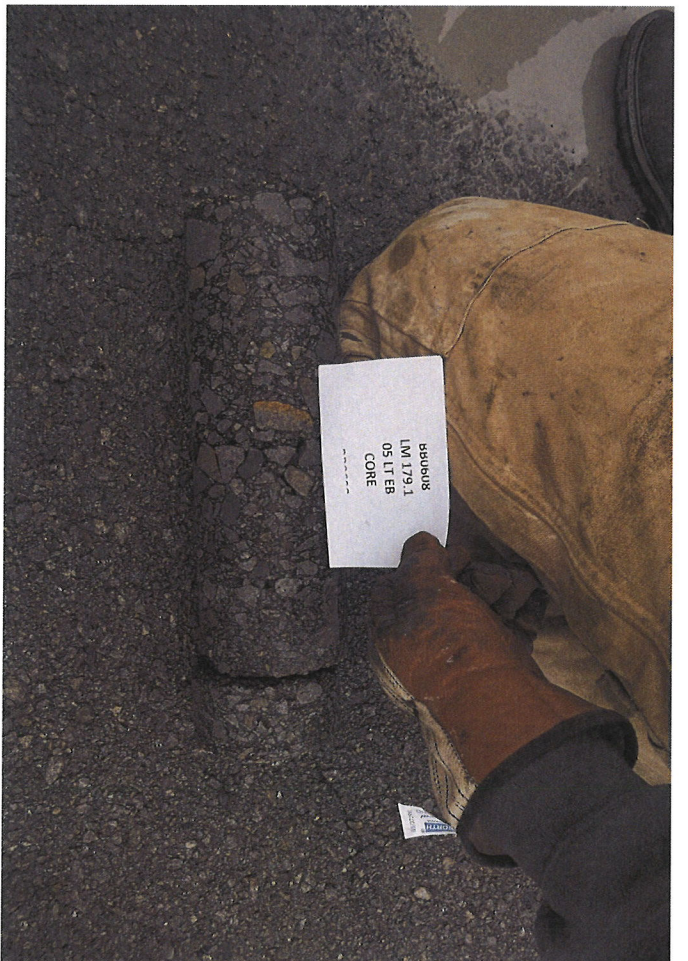
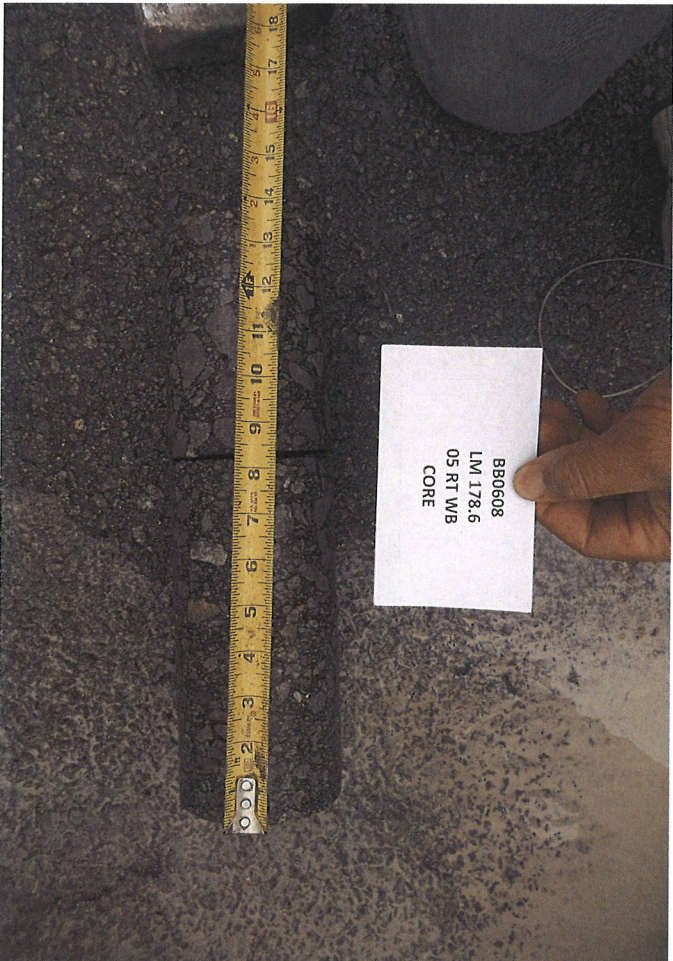
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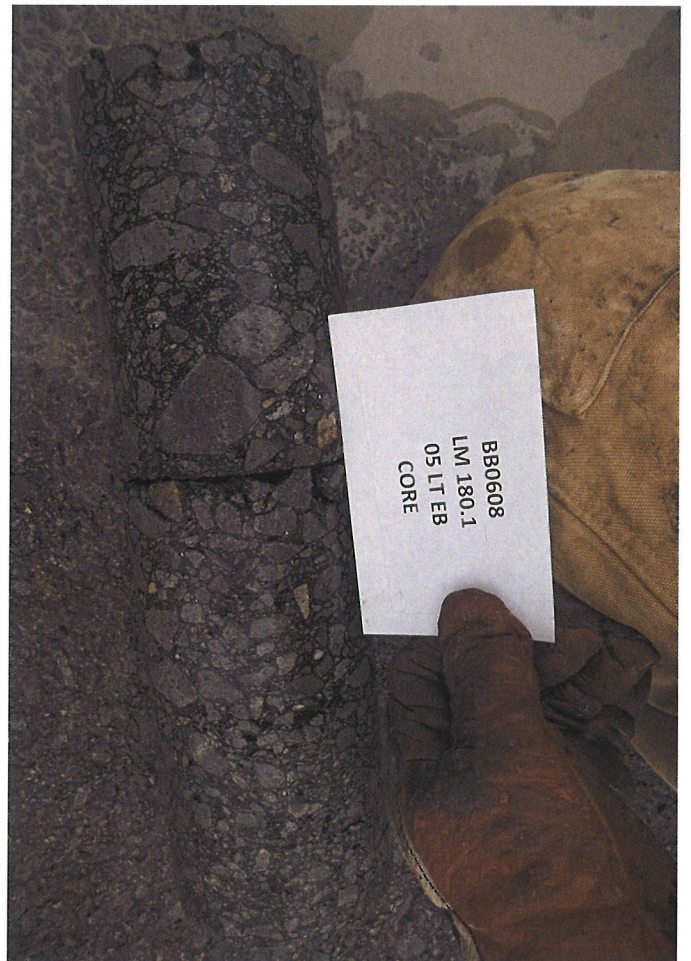
cc: State Constr. Eng. – Master File Copy
District 6 Engineer
System Information and Research Div.
G. C. File

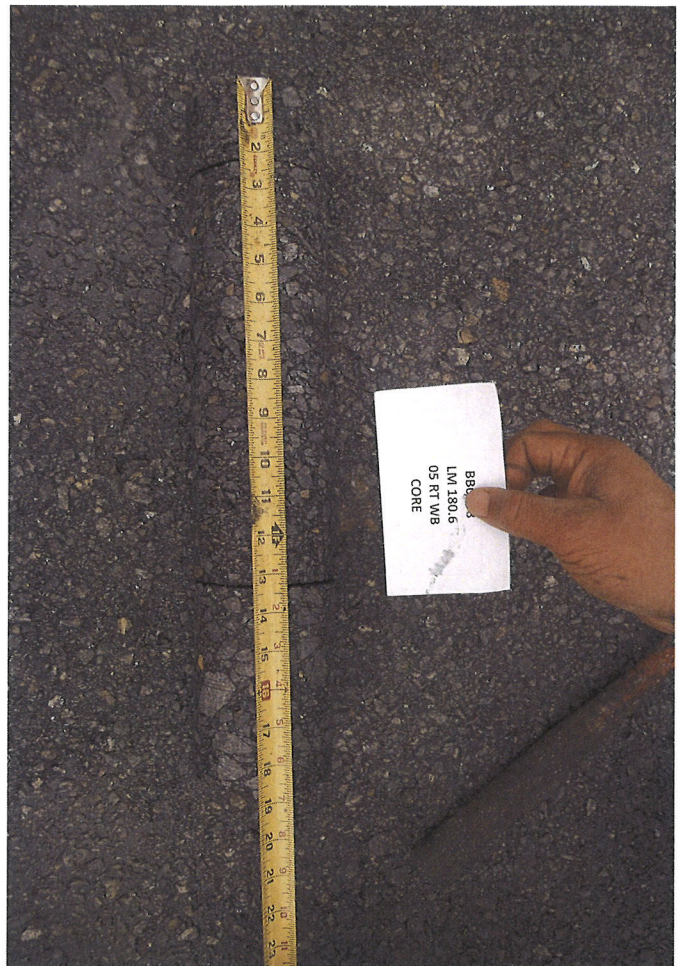




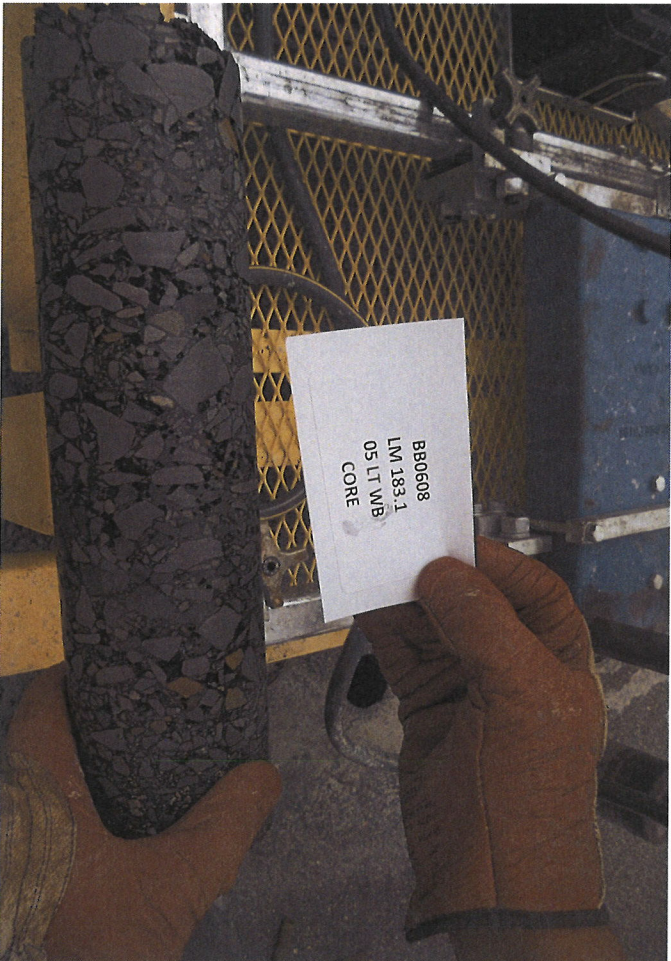


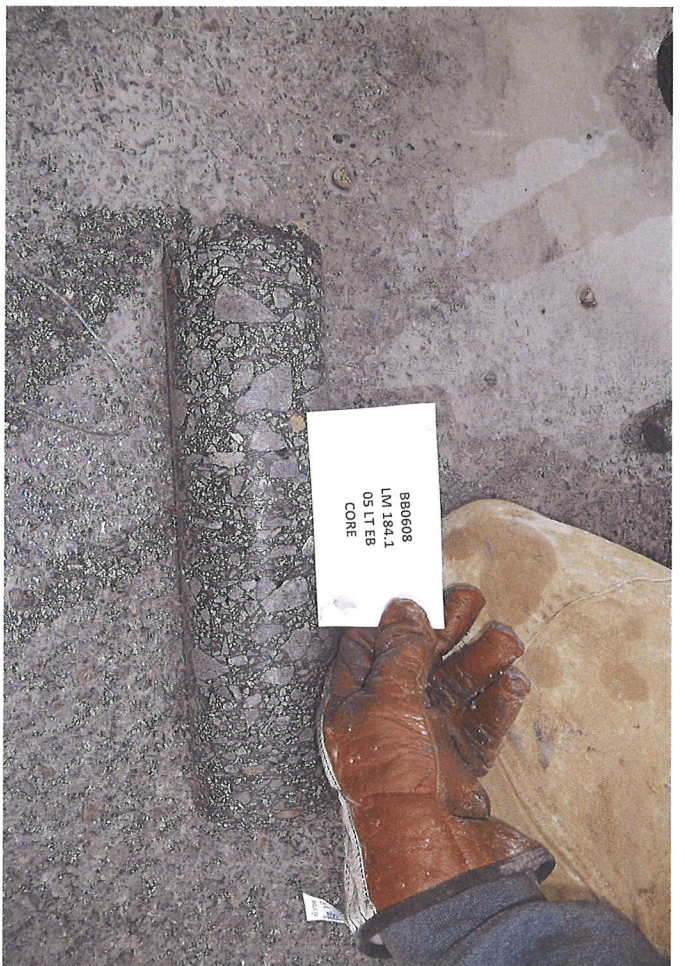




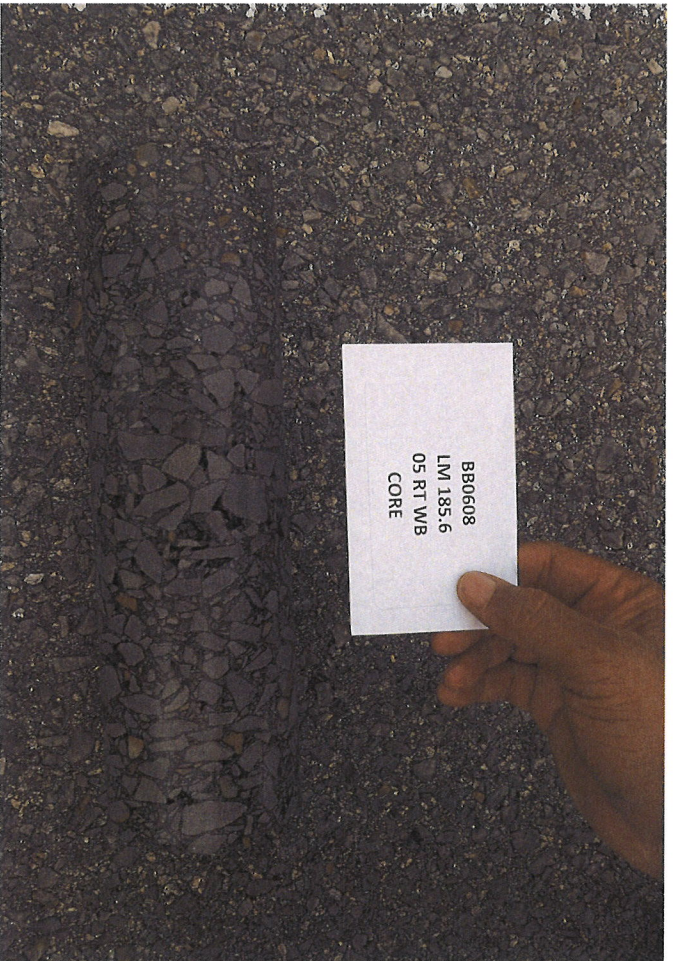
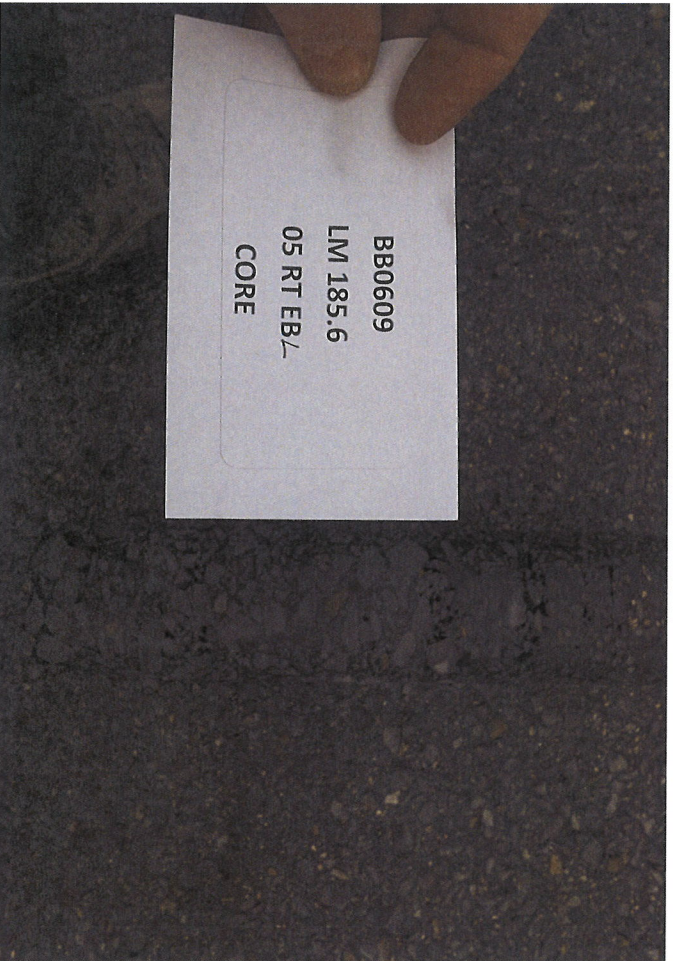
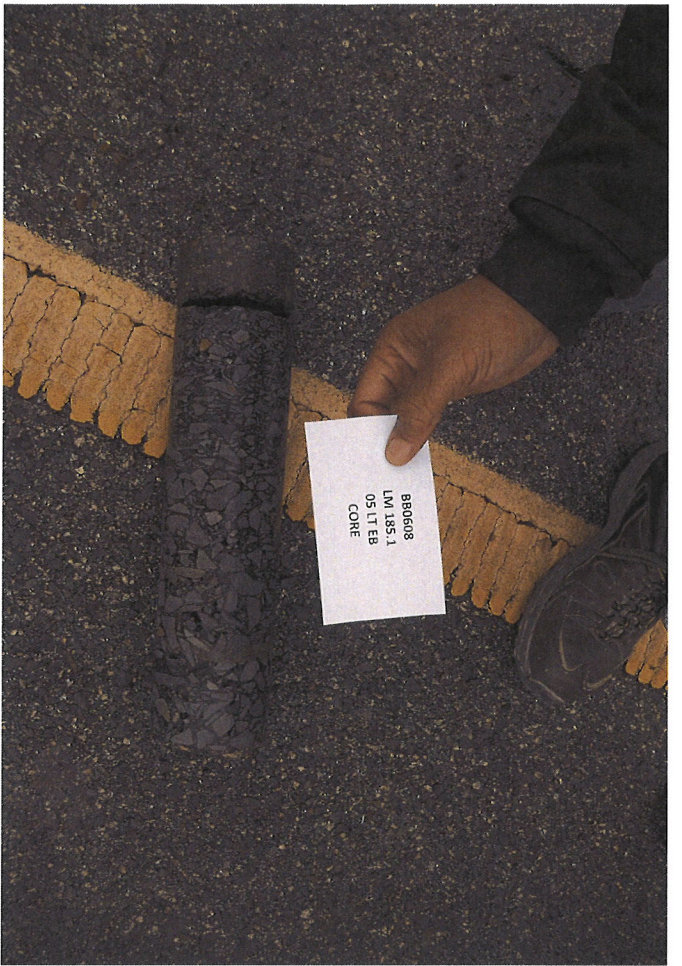












ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE	- 01/24/19	SEQUENCE NO.	- 1
JOB NUMBER	- BB0608	MATERIAL CODE	- PSO
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 43
SUPPLIER NAME	- STATE	DISTRICT NO.	- 06
NAME OF PROJECT	- HWY. 31 - PRAIRIE CO. LINE		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- LONOKE, COUNTY	DATE SAMPLED	- 01/22/19
SAMPLED BY	- FRAZIER, BATES	DATE RECEIVED	- 01/23/19
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/23/19
MATERIAL DESC.	- PAVEMENT SOUNDINGS ONLY		

LAB NUMBER	-	20190199	-	20190200	-	20190201	
SAMPLE ID	-		-		-		
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	LM 175.0	-	LM 175.0	-	LM 175.6	
LOCATION	-	05 LT EB	-	05 LT WB	-	05 RT EB	
DEPTH IN FEET	-		-		-		
MAT'L COLOR	-		-		-		
MAT'L TYPE	-		-		-		
LATITUDE DEG-MIN-SEC	-	34 48 14.80	-	34 48 15.70	-	34 48 15.70	
LONGITUDE DEG-MIN-SEC	-	91 52 51.40	-	91 52 51.00	-	91 52 13.80	
% PASSING	2 IN.	-	-	-	-	-	
	1 1/2 IN.	-	-	-	-	-	
	3/4 IN.	-	-	-	-	-	
	3/8 IN.	-	-	-	-	-	
	NO. 4	-	-	-	-	-	
	NO. 10	-	-	-	-	-	
	NO. 40	-	-	-	-	-	
	NO. 80	-	-	-	-	-	
	NO. 200	-	-	-	-	-	
LIQUID LIMIT	-		-		-		
PLASTICITY INDEX	-		-		-		
AASHTO SOIL	-		-		-		
UNIFIED SOIL	-		-		-		
% MOISTURE CONTENT	-		-		-		
ACHM SC	(IN)	-	4.5W	-	4.0W	-	8.5W
ACHM BC	(IN)	-	12.5W	-	12.0W	-	5.0W
		-		-		-	
		-		-		-	
		-		-		-	
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REMARKS - W=MULTIPLE LAYERS, X=STRIPPED
- LOCATION MEASURED FROM CENTER LINE OF EXISTING LANE
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AASHTO TESTS : T24 T88 T89 T90 T265
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE	- 01/23/19	SEQUENCE NO.	- 6
JOB NUMBER	- BB0608	MATERIAL CODE	- PSO
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 43
SUPPLIER NAME	- STATE	DISTRICT NO.	- 06
NAME OF PROJECT	- HWY. 31 - PRAIRIE CO. LINE		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- LONOKE, COUNTY	DATE SAMPLED	- 01/22/19
SAMPLED BY	- FRAZIER, BATES	DATE RECEIVED	- 01/23/19
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/23/19
MATERIAL DESC.	- PAVEMENT SOUNDINGS ONLY		

LAB NUMBER	-	20190214	-	20190215	-	20190216	
SAMPLE ID	-	-	-	-	-	-	
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	LM 178.6	-	LM 179.1	-	LM 179.1	
LOCATION	-	05 RT WB	-	05 LT EB	-	05 LT WB	
DEPTH IN FEET	-	-	-	-	-	-	
MAT'L COLOR	-	-	-	-	-	-	
MAT'L TYPE	-	-	-	-	-	-	
LATITUDE DEG-MIN-SEC	-	34 47 57.70	-	34 47 55.70	-	34 47 56.50	
LONGITUDE DEG-MIN-SEC	-	91 49 6.20	-	91 48 35.70	-	91 48 34.20	
% PASSING	2	IN.	-	-	-	-	
	1 1/2	IN.	-	-	-	-	
	3/4	IN.	-	-	-	-	
	3/8	IN.	-	-	-	-	
	NO. 4	-	-	-	-	-	
	NO. 10	-	-	-	-	-	
	NO. 40	-	-	-	-	-	
	NO. 80	-	-	-	-	-	
	NO. 200	-	-	-	-	-	
LIQUID LIMIT	-	-	-	-	-	-	
PLASTICITY INDEX	-	-	-	-	-	-	
AASHTO SOIL	-	-	-	-	-	-	
UNIFIED SOIL	-	-	-	-	-	-	
% MOISTURE CONTENT	-	-	-	-	-	-	
ACHM SC	(IN)	-	4.5W	-	6.0W	-	3.5W
ACHM BC	(IN)	-	9.5W	-	7.5W	-	9.5W
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED
- LOCATION MEASURED FROM CENTER LINE OF EXISTING LANE
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AASHTO TESTS : T24 T88 T89 T90 T265

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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE	- 01/24/19	SEQUENCE NO.	- 8
JOB NUMBER	- BB0608	MATERIAL CODE	- PSO
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 43
SUPPLIER NAME	- STATE	DISTRICT NO.	- 06
NAME OF PROJECT	- HWY. 31 - PRAIRIE CO. LINE		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- LONOKE, COUNTY	DATE SAMPLED	- 01/22/19
SAMPLED BY	- FRAZIER, BATES	DATE RECEIVED	- 01/23/19
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/23/19
MATERIAL DESC.	- PAVEMENT SOUNDINGS ONLY		

LAB NUMBER	- 20190220	- 20190221	- 20190222
SAMPLE ID	-	-	-
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- LM 180.1	- LM 180.6	- LM 180.6
LOCATION	- 05 LT WB	- 05 RT EB	- 05 RT WB
DEPTH IN FEET	-	-	-
MAT'L COLOR	-	-	-
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 34 47 55.80	- 34 47 53.80	- 34 47 54.80
LONGITUDE DEG-MIN-SEC	- 91 47 31.90	- 91 47 3.10	- 91 47 .40
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 -	-	-
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 -	-	-
LIQUID LIMIT	-	-	-
PLASTICITY INDEX	-	-	-
AASHTO SOIL	-	-	-
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	-	-	-
ACHM SC	(IN) - 3.75W	- 5.0W	- 4.0W
ACHM BC	(IN) - 10.0W	- 8.5W	- 7.0W
ACHM SC	(IN) - ---	- ---	- 2.5
ACHM BC	(IN) - ---	- ---	- 5.5
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED
- LOCATION MEASURED FROM CENTER LINE OF EXISTING LANE
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AASHTO TESTS : T24 T88 T89 T90 T265
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE	- 01/23/19	SEQUENCE NO.	- 12
JOB NUMBER	- BB0608	MATERIAL CODE	- PSO
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 43
SUPPLIER NAME	- STATE	DISTRICT NO.	- 06
NAME OF PROJECT	- HWY. 31 - PRAIRIE CO. LINE		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- LONOKE, COUNTY	DATE SAMPLED	- 01/22/19
SAMPLED BY	- FRAZIER, BATES	DATE RECEIVED	- 01/23/19
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/23/19
MATERIAL DESC.	- PAVEMENT SOUNDINGS ONLY		

LAB NUMBER	- 20190232	- 20190233	- 20190234
SAMPLE ID	-	-	-
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- LM 183.1	- LM 183.6	- LM 183.6
LOCATION	- 05 LT WB	- 05 RT EB	- 05 RT WB
DEPTH IN FEET	-	-	-
MAT'L COLOR	-	-	-
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 34 48 6.10	- 34 48 8.20	- 34 48 9.70
LONGITUDE DEG-MIN-SEC	- 91 44 24.50	- 91 43 56.20	- 91 43 52.20
% PASSING			
	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 -	-	-
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 -	-	-
LIQUID LIMIT	-	-	-
PLASTICITY INDEX	-	-	-
AASHTO SOIL	-	-	-
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	-	-	-
ACHM SC	(IN) - 4.25W	- 4.5W	- 4.25W
ACHM BC	(IN) - 11.0W	- 9.0WX	- 12.50W
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED
- LOCATION MEASURED FROM CENTER LINE OF EXISTING LANE
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE	- 01/23/19	SEQUENCE NO.	- 13
JOB NUMBER	- BB0608	MATERIAL CODE	- PSO
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 43
SUPPLIER NAME	- STATE	DISTRICT NO.	- 06
NAME OF PROJECT	- HWY. 31 - PRAIRIE CO. LINE		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- LONOKE, COUNTY	DATE SAMPLED	- 01/22/19
SAMPLED BY	- FRAZIER, BATES	DATE RECEIVED	- 01/23/19
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/23/19
MATERIAL DESC.	- PAVEMENT SOUNDINGS ONLY		

LAB NUMBER	-	20190235	-	20190236	-	20190237	
SAMPLE ID	-		-		-		
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	LM 184.1	-	LM 184.1	-	LM 184.6	
LOCATION	-	05 LT EB	-	05 LT WB	-	05 RT EB	
DEPTH IN FEET	-		-		-		
MAT'L COLOR	-		-		-		
MAT'L TYPE	-		-		-		
LATITUDE DEG-MIN-SEC	-	34 48 9.10	-	34 48 9.90	-	34 48 8.30	
LONGITUDE DEG-MIN-SEC	-	91 43 21.80	-	91 43 19.10	-	91 42 50.00	
% PASSING	2 IN.	-	-	-	-	-	
	1 1/2 IN.	-	-	-	-	-	
	3/4 IN.	-	-	-	-	-	
	3/8 IN.	-	-	-	-	-	
	NO. 4	-	-	-	-	-	
	NO. 10	-	-	-	-	-	
	NO. 40	-	-	-	-	-	
	NO. 80	-	-	-	-	-	
	NO. 200	-	-	-	-	-	
LIQUID LIMIT	-		-		-		
PLASTICITY INDEX	-		-		-		
AASHTO SOIL	-		-		-		
UNIFIED SOIL	-		-		-		
% MOISTURE CONTENT	-		-		-		
ACHM SC	(IN)	-	3.5W	-	4.0W	-	4.5W
ACHM BC	(IN)	-	10.5W	-	10.5W	-	9.25W
		-		-		-	
		-		-		-	
		-		-		-	
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REMARKS - W=MULTIPLE LAYERS, X=STRIPPED
- LOCATION MEASURED FROM CENTER LINE OF EXISTING LANE
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AASHTO TESTS : T24 T88 T89 T90 T265
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