ARKANSAS DEPARTMENT OF TRANSPORTATION

SUBSURFACE INVESTIGATION

STATE JOB NO. 110645

FEDERAL AID PROJECT NO. NHPP-0019(42)

HWY. 306 STRS. & APPRS. (S)

STATE HIGHWAY 306 **SECTION** 5

IN CROSS **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

June 21, 2018

TO: Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT: Job No. 110645
Hwy. 306 Strs. & Apprs. (S)
Route 306 Section 5
Cross County

Transmitted herewith is the requested Soil Survey, strength data and Resilient Modulus test results for the above referenced job. The project consists of replacing three bridges on Highway 306. Samples were taken in the existing travel lanes and ditch line. The shoulders are not paved within the project limits.

Based on laboratory results of samples obtained, the subgrade soils consist primarily of highly plastic sandy clay. The subgrade soils are expected to provide a stable working platform with conventional processing if the weather is favorable during construction. The detour alignments all traverse agricultural fields.

Site 1
The detour alignment is north of the existing road and has a maximum embankment height of approximately 10 feet. Prior to embankment construction all soft unstable organic material should be undercut, anticipated to be no more than two feet. The embankment may be constructed with locally available material utilizing a 3:1 slope configuration.

Site 2
The detour alignment is south of the existing road and has a maximum embankment height of approximately 6 feet. This area contains standing water. Prior to embankment construction the area should be drained and all soft unstable organic material should be undercut, anticipated to be no more than two feet. The embankment may be constructed with locally available unspecified material utilizing a 3:1 slope configuration.

Site 3
The detour alignment is south of the existing road and has a maximum embankment height of 7 feet. This area may flood based on seasonal conditions. Prior to embankment construction all soft unstable organic material should be undercut, anticipated to be no more than two feet. The embankment may be constructed with locally available material utilizing a 3:1 slope configuration.

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 at the river port in West Memphis.

2. Asphalt Concrete Hot Mix

PG 64-22

Type	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.3	94.7
Binder Course	4.3	95.7
Base Course	4.0	96.0

PG 70-22

Type	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.3	94.7
Binder Course	4.3	95.7
Base Course	4.0	96.0

PG 76-22

Type	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.3	94.7
Binder Course	4.3	95.7
Base Course	3.8	96.2

Michael C. Benson
Materials Engineer

MCB:pt:bjj
Attachment
cc: State Constr. Eng. – Master File Copy
District 1 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 STRENGTH TEST REPORT ***

DATE - 06/12/2018
JOB NUMBER - 110645

SEQUENCE NO. - 1
MATERIAL CODE - SSRV
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 19
DISTRICT NO. - 01

JOB NAME - HWY. 306 STRS. & APPRS.(S)

STATION LIMITS	R-VALUE AT 240 psi
BEGIN JOB - END JOB	LESS THAN 5
RESILIENT MODULUS	
STA.105+00	5858
STA.310+00	6867

REMARKS -
-

AASHTO TESTS : T190

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS
RECOMPACTED SAMPLES

Job No.	110645	**Material Code**	SSRVPS
Date Sampled:	3/21/18	**Station No.:**	105+00
Date Tested:	May 15, 2018	**Location:**	18'RT
Name of Project:	HWY. 306 STRS. & APPRS. (S)		
County:	**Code:** 19 **Name:** CROSS		
Sampled By:	THORNTON/BATES	**Depth:**	0-5
Lab No.:	20180709	**AASHTO Class:**	A-6 (5)
Sample ID:	RV 183	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

1. Testing Information:

Preconditioning - Permanent Strain > 5% (Y=Yes or N= No)	N
Testing - Permanent Strain > 5% (Y=Yes or N=No)	N
Number of Load Sequences Completed (0-15)	15

2. Specimen Information:

Specimen Diameter (in):	
Top	3.94
Middle	3.95
Bottom	3.95
Average	3.95
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8
Initial Area, Ao (sq. in):	12.16
Initial Volume, AoLo (cu. in):	97.27

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3055.70

4. Soil Properties:

Optimum Moisture Content (%):	18.5
Maximum Dry Density (pcf):	102.5
95% of MDD (pcf):	97.4
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3055.70
Compaction Moisture content (%):	18.8
Compaction Wet Density (pcf):	119.69
Compaction Dry Density (pcf):	100.75
Moisture Content After Mr Test (%):	18.8

6. Quick Shear Test (Y=Yes, N=No, N/A=Not Applicable): #VALUE!

7. Resilient Modulus, Mr: 8829(Sc)^-0.25488(S3)^0.21075

8. Comments _____

_____

9. Tested By: GW **Date:** May 15, 2018

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS
RECOMPACTED SAMPLES

Job No.	110645	**Material Code**	SSRVPS
Date Sampled:	3/21/18	**Station No.:**	105+00
Date Tested:	May 15, 2018	**Location:**	18'RT
Name of Project:	HWY. 306 STRS. & APPRS. (S)		
County:	**Code:** 19 **Name:** CROSS		
Sampled By:	THORNTON/BATES	**Depth:**	0-5
Lab No.:	20180709	**AASHTO Class:**	A-6 (5)
Sample ID:	RV 183	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_{avg}	ε_r	M_r
UNIT	psi	psi	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi
Sequence 1	6.0	2.0	25.2	22.5	2.7	2.1	1.8	0.2	0.00138	0.00017	10,754
Sequence 2	6.0	4.0	47.3	44.6	2.7	3.9	3.7	0.2	0.00292	0.00036	10,048
Sequence 3	6.0	6.0	69.4	65.9	3.5	5.7	5.4	0.3	0.00486	0.00061	8,919
Sequence 4	6.0	8.0	91.7	85.7	6.0	7.5	7.0	0.5	0.00729	0.00091	7,738
Sequence 5	6.0	10.0	113.1	104.6	8.5	9.3	8.6	0.7	0.01002	0.00125	6,869
Sequence 6	4.0	2.0	25.1	22.3	2.8	2.1	1.8	0.2	0.00150	0.00019	9,802
Sequence 7	4.0	4.0	46.9	44.1	2.8	3.9	3.6	0.2	0.00332	0.00041	8,737
Sequence 8	4.0	6.0	67.7	64.9	2.8	5.6	5.3	0.2	0.00540	0.00067	7,912
Sequence 9	4.0	8.0	90.2	85.0	5.2	7.4	7.0	0.4	0.00787	0.00098	7,105
Sequence 10	4.0	10.0	112.0	104.4	7.6	9.2	8.6	0.6	0.01059	0.00132	6,489
Sequence 11	2.0	2.0	25.0	22.2	2.8	2.1	1.8	0.2	0.00176	0.00022	8,277
Sequence 12	2.0	4.0	46.6	43.8	2.8	3.8	3.6	0.2	0.00381	0.00048	7,571
Sequence 13	2.0	6.0	67.0	64.3	2.7	5.5	5.3	0.2	0.00607	0.00076	6,974
Sequence 14	2.0	8.0	88.4	84.2	4.2	7.3	6.9	0.3	0.00873	0.00109	6,345
Sequence 15	2.0	10.0	109.9	103.3	6.6	9.0	8.5	0.5	0.01160	0.00145	5,858

TESTED BY GW DATE May 15, 2018

REVIEWED BY _____ DATE _____

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

MATERIALS DIVISION

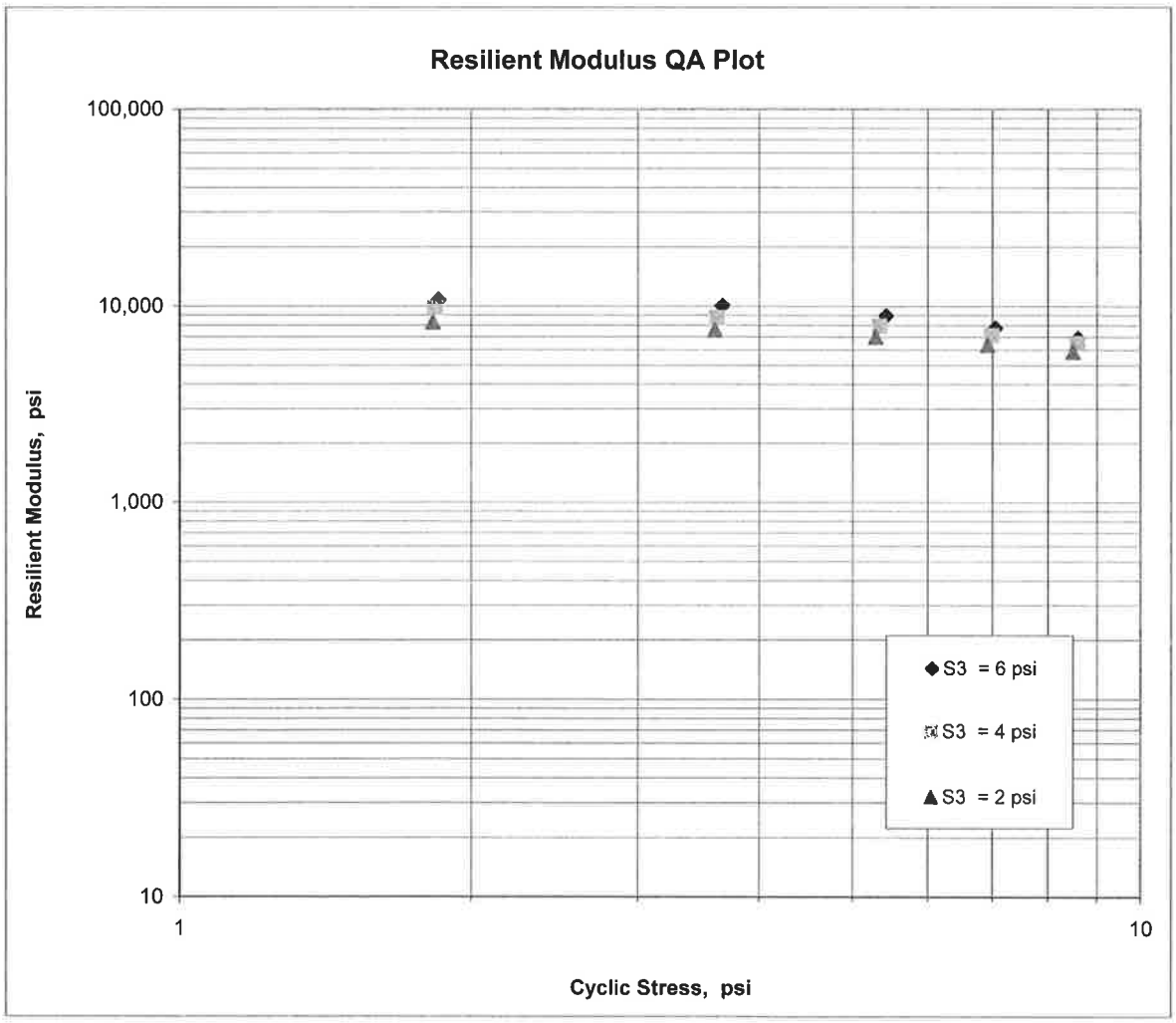
AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS

RECOMPACTED / THINWALL TUBE SAMPLES

Job No.	110645	**Material Code**	SSRVPS
Date Sampled:	3/21/18	**Station No.:**	105+00
Date Tested:	May 15, 2018	**Location:**	18'RT
Name of Project:	HWY. 306 STRS. & APPRS. (S)		
County:	**Code:** 19 **Name:** CROSS		
Sampled By:	THORNTON/BATES	**Depth:**	0-5
Lab No.:	20180709	**AASHTO Class:**	A-6 (5)
Sample ID:	RV 183	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	8,829
K2 =	-0.25488
K5 =	0.21075
R^2 =	0.93



ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS
RECOMPACTED SAMPLES

Job No.	110645	**Material Code**	SSRVPS
Date Sampled:	3/21/18	**Station No.:**	310+00
Date Tested:	May 15, 2018	**Location:**	18'LT
Name of Project:	HWY. 306 STRS. & APPRS. (S)		
County:	**Code:** 19 **Name:** CROSS		
Sampled By:	THORNTON/BATES	**Depth:**	0-5
Lab No.:	20180710	**AASHTO Class:**	A-7-6- (24)
Sample ID:	RV 184	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

1. Testing Information:

Preconditioning - Permanent Strain > 5% (Y=Yes or N= No)	N
Testing - Permanent Strain > 5% (Y=Yes or N=No)	N
Number of Load Sequences Completed (0-15)	15

2. Specimen Information:

Specimen Diameter (in):	
Top	3.94
Middle	3.93
Bottom	3.93
Average	3.93
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.02
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.02
Initial Area, Ao (sq. in):	12.08
Initial Volume, AoLo (cu. in):	96.86

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	2866.40

4. Soil Properties:

Optimum Moisture Content (%):	22.4
Maximum Dry Density (pcf):	95.1
95% of MDD (pcf):	90.3
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	2866.40
Compaction Moisture content (%):	22.7
Compaction Wet Density (pcf):	112.76
Compaction Dry Density (pcf):	91.90
Moisture Content After Mr Test (%):	22.7

6. Quick Shear Test (Y=Yes, N=No, N/A=Not Applicable): #VALUE!

7. Resilient Modulus, Mr: 10011(Sc)^-0.21359(S3)^0.13091

8. Comments _____

9. Tested By: GW **Date:** May 15, 2018

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS
RECOMPACTED SAMPLES

Job No.	110645	**Material Code**	SSRVPS
Date Sampled:	3/21/18	**Station No.:**	310+00
Date Tested:	May 15, 2018	**Location:**	18'LT
Name of Project:	HWY. 306 STRS. & APPRS. (S)		
County:	**Code:** 19 **Name:** CROSS		
Sampled By:	THORNTON/BATES	**Depth:**	0-5
Lab No.:	20180710	**AASHTO Class:**	A-7-6- (24)
Sample ID:	RV 184	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_{avg}	ε_r	M_r
UNIT	psi	psi	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi
Sequence 1	6.0	2.0	25.0	22.3	2.7	2.1	1.8	0.2	0.00137	0.00017	10,844
Sequence 2	6.0	4.0	46.9	44.2	2.7	3.9	3.7	0.2	0.00282	0.00035	10,387
Sequence 3	6.0	6.0	68.8	65.2	3.6	5.7	5.4	0.3	0.00464	0.00058	9,322
Sequence 4	6.0	8.0	90.8	84.8	6.0	7.5	7.0	0.5	0.00687	0.00086	8,198
Sequence 5	6.0	10.0	112.0	103.6	8.4	9.3	8.6	0.7	0.00949	0.00118	7,250
Sequence 6	4.0	2.0	24.9	22.1	2.8	2.1	1.8	0.2	0.00142	0.00018	10,335
Sequence 7	4.0	4.0	46.7	43.9	2.8	3.9	3.6	0.2	0.00307	0.00038	9,485
Sequence 8	4.0	6.0	67.7	64.9	2.8	5.6	5.4	0.2	0.00495	0.00062	8,706
Sequence 9	4.0	8.0	89.9	84.8	5.1	7.4	7.0	0.4	0.00710	0.00089	7,936
Sequence 10	4.0	10.0	111.5	104.0	7.5	9.2	8.6	0.6	0.00959	0.00120	7,205
Sequence 11	2.0	2.0	25.0	22.2	2.7	2.1	1.8	0.2	0.00164	0.00020	8,999
Sequence 12	2.0	4.0	46.6	43.9	2.7	3.9	3.6	0.2	0.00348	0.00043	8,383
Sequence 13	2.0	6.0	67.5	64.8	2.7	5.6	5.4	0.2	0.00542	0.00068	7,935
Sequence 14	2.0	8.0	89.0	84.9	4.1	7.4	7.0	0.3	0.00758	0.00095	7,434
Sequence 15	2.0	10.0	110.5	104.0	6.5	9.1	8.6	0.5	0.01006	0.00125	6,867

TESTED BY GW DATE May 15, 2018

REVIEWED BY _____ DATE _____

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS

RECOMPACTED / THINWALL TUBE SAMPLES

Job No.	110645	**Material Code**	SSRVPS
Date Sampled:	3/21/18	**Station No.:**	310+00
Date Tested:	May 15, 2018	**Location:**	18'LT
Name of Project:	HWY. 306 STRS. & APPRS. (S)		
County:	**Code:** 19 **Name:** CROSS		
Sampled By:	THORNTON/BATES	**Depth:**	0-5
Lab No.:	20180710	**AASHTO Class:**	A-7-6- (24)
Sample ID:	RV 184	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

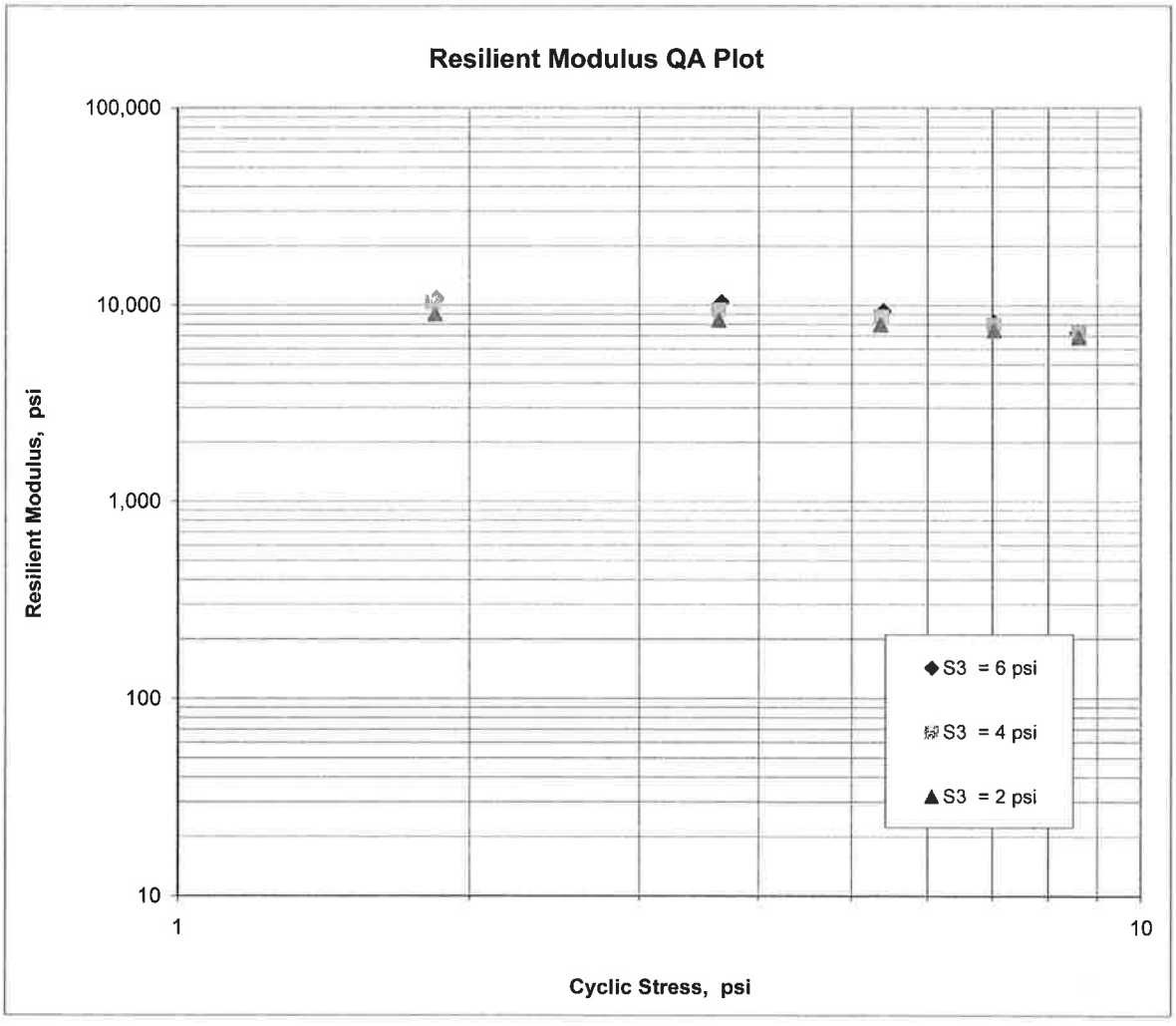
$$M_R = K1\ (S_C)^{K2}\ (S_3)^{K5}$$

K1 = 10,011

K2 = -0.21359

K5 = 0.13091

R^2 = 0.89



JOB: 110645

JOB NAME: HWY. 306 STRS. & APPRS.(S)

COUNTY NO. 19 **DATE TESTED** 5/8/2018

Arkansas State Highway Transporation Department

Materials Division

Michael Benson, Materials Engineer

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				S	I	E	V	E S					
105+00	18RT	0-5	BROWN	99	98	97	93	66	32	11	A-6(5)	RV183	
310+00	18LT	0-5	GRAY	98	95	91	87	82	55	26	A-7-6(24)	RV184	
105+00	05RT	0-5	BROWN	99	99	98	95	49	ND	NP	A-4(0)	S171	22.6
105+00	18RT	0-5	BROWN	99	98	94	87	44	ND	NP	A-4(0)	S172	23.7
110+00	05LT	0-5	GRAY	99	98	95	92	82	41	34	A-7-6(26)	S173	22.8
110+00	18LT	0-5	BROWN	84	76	68	62	54	27	12	A-6(3)	S174	24
205+00	05RT	0-5	GRAY	100				92	51	33	A-7-6(32)	S175	29.4
205+00	18RT	0-5	GRAY	100				94	71	51	A-7-6(53)	S176	32.2
210+00	05LT	0-5	GRAY					93	60	39	A-7-6(40)	S177	35.9
210+00	18LT	0-5	GRAY					90	53	30	A-7-6(30)	S178	35.2
305+00	05RT	0-5	GRAY	98	97	94	89	80	48	27	A-7-6(22)	S179	30.8
305+00	18RT	0-5	GRAY	98	97	92	86	76	52	29	A-7-6(22)	S180	26.9
310+00	05LT	0-5	GRAY	96	95	88	86	84	44	24	A-7-6(20)	S181	18
310+00	18LT	0-5	GRAY	100				92	59	38	A-7-6(38)	S182	33.7

comments: W=MULTIPLE LAYERS, X=STRIPPED

Friday, June 15, 2018

JOB: 110645
JOB NAME: HWY. 306 STRS. & APPRS.(S)

COUNTY NO. 19

Arkansas State Highway Transporation Department
Materials Division
Michael Benson, Materials Engineer

DATE TESTED
5/8/2018

PAVEMENT SOUNDINGS

STA.#	LOC.				
105+00	05RT	BST	ACHMSC	ACHMBC	AGG BASE CRS CL-7
		---	3.0	1.0	5.0
105+00	18RT	BST	ACHMSC	ACHMBC	AGG BASE CRS CL-7
		---	---	---	---
110+00	05LT	BST	ACHMSC	ACHMBC	AGG BASE CRS CL-7
		1.5X	---	---	3.0
110+00	18LT	BST	AGG BASE CRS CL-7		
		---	---		
205+00	05RT	BST	AGG BASE CRS CL-7		
		4.5W	5.0		
205+00	18RT	BST	AGG BASE CRS CL-7		
		---	---		
210+00	05LT	BST	ACHMBC	AGG BASE CRS CL-7	
		4.0W	---	5.0	
210+00	18LT	BST	ACHMBC	AGG BASE CRS CL-7	
		---	---	---	
305+00	05RT	BST	ACHMBC	AGG BASE CRS CL-7	
		4.0W	2.0	3.0	
305+00	18RT	BST			

310+00	05LT	BST			
		4.0W			
310+00	18LT	BST			
		---			

comments: W=MULTIPLE LAYERS, X=STRIPPED

Friday, June 15, 2018

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION
MICHAEL BENSON, MATERIALS ENGINEER
*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 06/14/18
JOB NUMBER - 110645
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY. 306 STRS. & APPRS.(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - CROSS, COUNTY
SAMPLED BY - THORNTON/BATES
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 1
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 19
DISTRICT NO. - 01

DATE SAMPLED - 03/21/18
DATE RECEIVED - 03/27/18
DATE TESTED - 05/08/18

LAB NUMBER	20180697	20180698	20180699
SAMPLE ID	S171	S172	S173
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	105+00	105+00	110+00
LOCATION	05RT	18RT	05LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	GRAY
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	35 10 48.70	35 10 48.60	35 10 48.70
LONGITUDE DEG-MIN-SEC	90 39 47.00	90 39 47.10	90 39 41.10
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			
3/8 IN.	100	100	100
NO. 4	99	99	99
NO. 10	99	98	98
NO. 40	98	94	95
NO. 80	95	87	92
NO. 200	49	44	82
LIQUID LIMIT	ND	ND	41
PLASTICITY INDEX	NP	NP	34
AASHTO SOIL	A-4(0)	A-4(0)	A-7-6(26)
UNIFIED SOIL			
% MOISTURE CONTENT	22.6	23.7	22.8
BST (IN)	---	---	1.5X
ACHMSC (IN)	3.0	---	---
ACHMBC (IN)	1.0	---	---
AGG BASE CRS CL-7 (IN)	5.0	---	3.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

AASHTO TESTS : T24 T88 T89 T90 T265

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION
MICHAEL BENSON, MATERIALS ENGINEER
*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 06/14/18
JOB NUMBER - 110645
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY. 306 STRS. & APPRS.(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - CROSS, COUNTY
SAMPLED BY - THORNTON/BATES
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 2
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 19
DISTRICT NO. - 01

DATE SAMPLED - 03/21/18
DATE RECEIVED - 03/27/18
DATE TESTED - 05/08/18

LAB NUMBER	20180700	20180701	20180702
SAMPLE ID	S174	S175	S176
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	110+00	205+00	205+00
LOCATION	18LT	05RT	18RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	GRAY	GRAY
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	35 10 48.80	35 10 46.80	35 10 46.70
LONGITUDE DEG-MIN-SEC	90 39 41.10	90 35 58.70	90 35 58.70
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		
3/8 IN.	95		
NO. 4	84	100	100
NO. 10	76		
NO. 40	68		
NO. 80	62		
NO. 200	54	92	94
LIQUID LIMIT	27	51	71
PLASTICITY INDEX	12	33	51
AASHTO SOIL	A-6(3)	A-7-6(32)	A-7-6(53)
UNIFIED SOIL			
% MOISTURE CONTENT	24.0	29.4	32.2
BST (IN)	---	4.5W	---
AGG BASE CRS CL-7 (IN)	---	5.0	---

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

AASHTO TESTS : T24 T88 T89 T90 T265

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION
MICHAEL BENSON, MATERIALS ENGINEER
*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 06/14/18
JOB NUMBER - 110645
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY. 306 STRS. & APPRS.(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - CROSS, COUNTY
SAMPLED BY - THORNTON/BATES
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 3
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 19
DISTRICT NO. - 01

DATE SAMPLED - 03/21/18
DATE RECEIVED - 03/27/18
DATE TESTED - 05/08/18

LAB NUMBER	20180703	20180704	20180705
SAMPLE ID	S177	S178	S179
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	210+00	210+00	305+00
LOCATION	05LT	18LT	05RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	GRAY	GRAY	GRAY
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	35 10 46.70	35 10 46.80	35 10 46.10
LONGITUDE DEG-MIN-SEC	90 35 52.70	90 35 52.70	90 35 4.70
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			
3/8 IN.	100	100	100
NO. 4			98
NO. 10			97
NO. 40			94
NO. 80			89
NO. 200	93	90	80
LIQUID LIMIT	60	53	48
PLASTICITY INDEX	39	30	27
AASHTO SOIL	A-7-6(40)	A-7-6(30)	A-7-6(22)
UNIFIED SOIL			
% MOISTURE CONTENT	35.9	35.2	30.8
BST (IN)	4.0W	---	4.0W
ACHMBC (IN)	---	---	2.0
AGG BASE CRS CL-7 (IN)	5.0	---	3.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

AASHTO TESTS : T24 T88 T89 T90 T265

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION
MICHAEL BENSON, MATERIALS ENGINEER
*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 06/14/18
JOB NUMBER - 110645
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY. 306 STRS. & APPRS.(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - CROSS, COUNTY
SAMPLED BY - THORNTON/BATES
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 4
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 19
DISTRICT NO. - 01

DATE SAMPLED - 03/21/18
DATE RECEIVED - 03/27/18
DATE TESTED - 05/08/18

LAB NUMBER	20180706	20180707	20180708
SAMPLE ID	S180	S181	S182
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	305+00	310+00	310+00
LOCATION	18RT	05LT	18LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	GRAY	GRAY	GRAY
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	35 10 46.00	35 10 46.10	35 10 46.20
LONGITUDE DEG-MIN-SEC	90 35 4.80	90 34 58.80	90 34 58.80
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.		100	
3/8 IN.	100	98	
NO. 4	98	96	100
NO. 10	97	95	
NO. 40	92	88	
NO. 80	86	86	
NO. 200	76	84	92
LIQUID LIMIT	52	44	59
PLASTICITY INDEX	29	24	38
AASHTO SOIL	A-7-6(22)	A-7-6(20)	A-7-6(38)
UNIFIED SOIL			
% MOISTURE CONTENT	26.9	18.0	33.7
BST (IN)	---	4.0W	---

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

AASHTO TESTS : T24 T88 T89 T90 T265

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION
MICHAEL BENSON, MATERIALS ENGINEER
*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 05/08/18
JOB NUMBER - 110645
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY. 306 STRS. & APPRS.(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - CROSS, COUNTY
SAMPLED BY - THORNTON/BATES
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - RESISTANCE R-VALUE ACTUAL RESULTS

SEQUENCE NO. - 1
MATERIAL CODE - RV
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 19
DISTRICT NO. - 01

DATE SAMPLED - 03/21/18
DATE RECEIVED - 03/27/18
DATE TESTED - 05/08/18

LAB NUMBER	20180709	20180710
SAMPLE ID	RV183	RV184
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY
STATION	105+00	310+00
LOCATION	18RT	18LT
DEPTH IN FEET	0-5	0-5
MAT'L COLOR	BROWN	GRAY
MAT'L TYPE		
LATITUDE DEG-MIN-SEC	35 10 48.60	35 10 46.20
LONGITUDE DEG-MIN-SEC	90 39 47.10	90 34 58.80
% PASSING 2 IN.		
1 1/2 IN.		
3/4 IN.		
3/8 IN.	100	100
NO. 4	99	98
NO. 10	98	95
NO. 40	97	91
NO. 80	93	87
NO. 200	66	82
LIQUID LIMIT	32	55
PLASTICITY INDEX	11	26
AASHTO SOIL	A-6(5)	A-7-6(24)
UNIFIED SOIL		
% MOISTURE CONTENT		

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

AASHTO TESTS : T24 T88 T89 T90 T265