ARKANSAS DEPARTMENT OF TRANSPORTATION

SUBSURFACE INVESTIGATION

STATE JOB NO. 061439

FEDERAL AID PROJECT NO. HSIP-0026(32)

HWY. 7 – DEERPARK RD. (SAFETY IMPVTS.) (S)

STATE HIGHWAY 5 **SECTION** 6

IN GARLAND **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 STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

January 26, 2016

TO: Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT: Job No. 061439
Hwy. 7 – Hwy. 128 (Safety Impvts.) (S)
Route 5 Section 6
Garland County

Transmitted herewith are the requested Soil Survey, Strength Data, and Resilient Modulus test results for the above referenced job. The project consists of widening two 1.9 mile sections of Highway 7 to three lanes. Samples were obtained in the existing travel lanes, shoulders and ditch line. Some ditch and shoulder locations could not be sampled due to utility conflicts, photos of the utility markings are included with the test results.

Based on laboratory results of samples obtained, the subgrade soils consist primarily of low plasticity clayey sands. Cross sections are not currently available, but it is anticipated that the construction grade line will closely match that of the existing roadway. The subgrade soils are expected to provide a stable working platform with conventional processing if the weather is favorable during construction. Rock was encountered at several locations within the project limits, Table 1 below list the location and depth to rock. Undercut, embankment and cut slope recommendations will be made when plans are further developed and cross sections become available.

Table 1 Location of Rock

Station	Location from centerline	Depth (ft.)
148+00	6' Lt	3.5
212+00	14' Lt	2.5
237+00	6', 14' Lt	3.5, 3.0
269+00	14' Rt	2.5

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 Malvern.

2. Asphalt Concrete Hot Mix

Type	Asphalt Cement %	Mineral Aggregate %
Surface Course	4.9	95.1
Binder Course	4.2	95.8
Base Course	3.8	96.2

Michael C. Benson
Materials Engineer

MCB:pt:bjj
Attachment
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 STRENGTH TEST REPORT ***

DATE - 01/25/2016
JOB NUMBER - 061439

SEQUENCE NO. - 1
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

JOB NAME - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)

STATION LIMITS	R-VALUE AT 240 psi
BEGIN JOB - END JOB	10
RESILIENT MODULUS	
STA.261+00	4970
STA.293+00	5815

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.	061439	**Material Code**	SSRVPS
Date Sampled:	1/20/16	**Station No.:**	261+00
Date Tested:	January 20, 2016	**Location:**	18' LT
Name of Project:	HWY. 7 - HWY. 128 (SAFETY IMPVTS) (S)		
County:	**Code:** 26 **Name:** GARLAND		
Sampled By:	DICKERSON	**Depth:**	0-5'
Lab No.:	20154100	**AASHTO Class:**	A-4(0)
Sample ID:	RV915	**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	3.95
Middle	3.92
Bottom	3.94
Average	3.94
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.04
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.04
Initial Area, Ao (sq. in):	12.10
Initial Volume, AoLo (cu. in):	97.31

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3284.10

4. Soil Properties:

Optimum Moisture Content (%):	15.5
Maximum Dry Density (pcf):	111.2
95% of MDD (pcf):	105.6
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3284.10
Compaction Moisture content (%):	15.3
Compaction Wet Density (pcf):	128.59
Compaction Dry Density (pcf):	111.52
Moisture Content After Mr Test (%):	15.3

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

7. Resilient Modulus, Mr: 5955(Sc)^-0.27433(S3)^0.48394

8. Comments _____

9. Tested By: C.GARRETT **Date:** January 20, 2016

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

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

Job No.	061439	**Material Code**	SSRVPS
Date Sampled:	1/20/16	**Station No.:**	261+00
Date Tested:	January 20, 2016	**Location:**	18' LT
Name of Project:	HWY. 7 - HWY. 128 (SAFETY IMPVTS) (S)		
County:	**Code:** 26 **Name:** GARLAND		
Sampled By:	DICKERSON	**Depth:**	0-5'
Lab No.:	20154100	**AASHTO Class:**	A-4(0)
Sample ID:	RV915	**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	24.9	22.1	2.8	2.1	1.8	0.2	0.00123	0.00015	11,905
Sequence 2	6.0	4.0	46.6	43.8	2.9	3.9	3.6	0.2	0.00275	0.00034	10,559
Sequence 3	6.0	6.0	68.9	65.2	3.7	5.7	5.4	0.3	0.00458	0.00057	9,467
Sequence 4	6.0	8.0	91.5	85.3	6.1	7.6	7.1	0.5	0.00684	0.00085	8,291
Sequence 5	6.0	10.0	114.4	105.9	8.6	9.5	8.7	0.7	0.00913	0.00114	7,705
Sequence 6	4.0	2.0	24.6	21.8	2.8	2.0	1.8	0.2	0.00147	0.00018	9,836
Sequence 7	4.0	4.0	45.8	42.9	2.9	3.8	3.5	0.2	0.00359	0.00045	7,946
Sequence 8	4.0	6.0	66.6	63.7	2.9	5.5	5.3	0.2	0.00600	0.00075	7,044
Sequence 9	4.0	8.0	89.5	84.3	5.2	7.4	7.0	0.4	0.00847	0.00105	6,610
Sequence 10	4.0	10.0	112.2	104.5	7.7	9.3	8.6	0.6	0.01101	0.00137	6,304
Sequence 11	2.0	2.0	24.2	21.4	2.8	2.0	1.8	0.2	0.00194	0.00024	7,340
Sequence 12	2.0	4.0	44.1	41.2	2.9	3.6	3.4	0.2	0.00473	0.00059	5,792
Sequence 13	2.0	6.0	63.6	60.6	2.9	5.3	5.0	0.2	0.00780	0.00097	5,166
Sequence 14	2.0	8.0	85.8	81.4	4.4	7.1	6.7	0.4	0.01073	0.00133	5,040
Sequence 15	2.0	10.0	107.8	101.0	6.8	8.9	8.3	0.6	0.01350	0.00168	4,970

TESTED BY C.GARRETT DATE January 20, 2016

REVIEWED BY _____ DATE _____

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

MATERIALS DIVISION

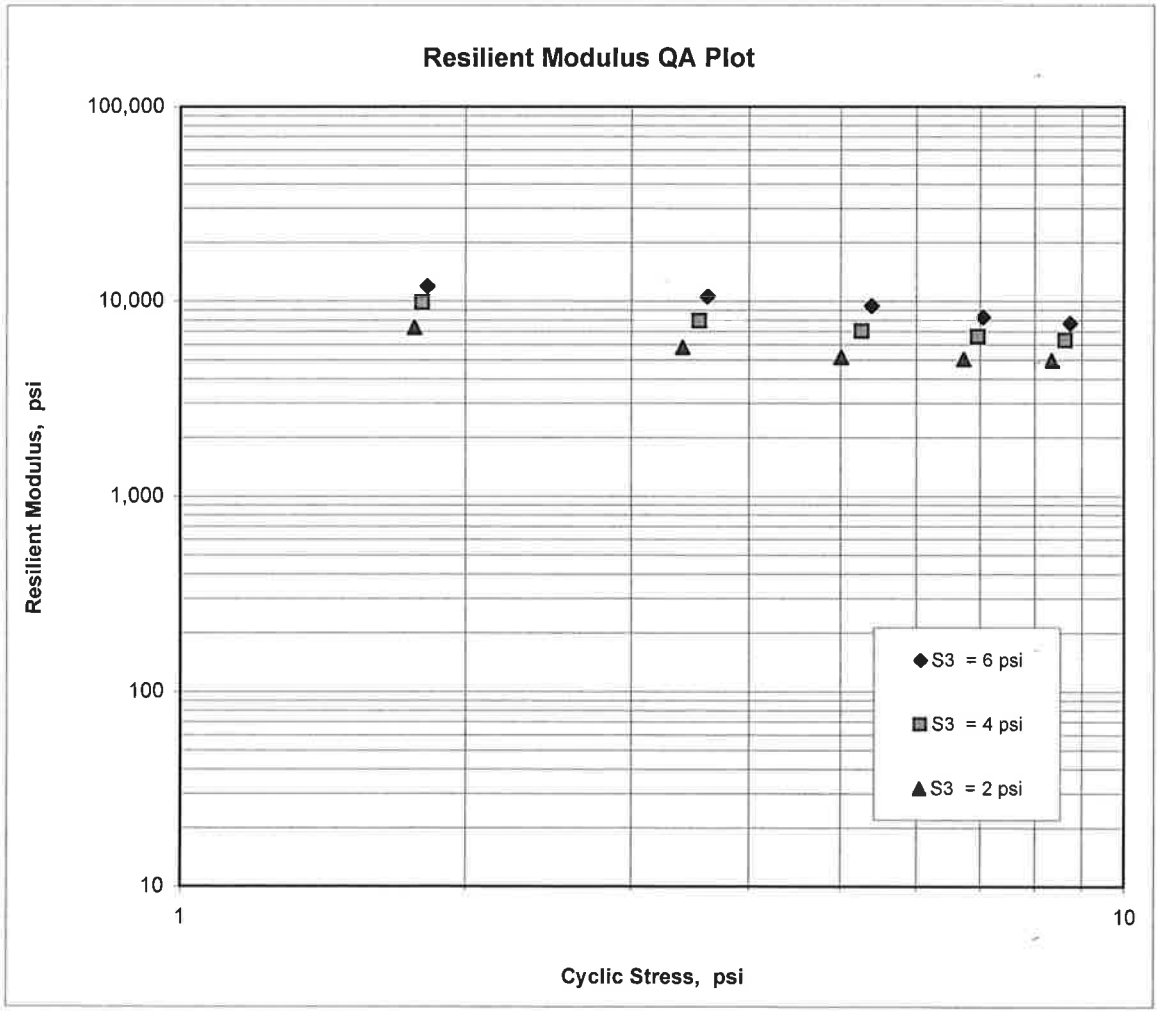
AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS

RECOMPACTED / THINWALL TUBE SAMPLES

Job No.	061439	**Material Code**	SSRVPS
Date Sampled:	1/20/16	**Station No.:**	261+00
Date Tested:	January 20, 2016	**Location:**	18' LT
Name of Project:	HWY. 7 - HWY. 128 (SAFETY IMPVTS) (S)		
County:	**Code:** 26 **Name:** GARLAND		
Sampled By:	DICKERSON	**Depth:**	0-5'
Lab No.:	20154100	**AASHTO Class:**	A-4(0)
Sample ID:	RV915	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

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

K1 =	5,955
K2 =	-0.27433
K5 =	0.48394
R^2 =	0.98



ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

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

Job No.	061439	**Material Code**	SSRVPS
Date Sampled:	1/20/16	**Station No.:**	293+00
Date Tested:	January 20, 2016	**Location:**	27' LT
Name of Project:	HWY. 7 - HWY. 128 (SAFETY IMPVTS) (S)		
County:	**Code:** 26 **Name:** GARLAND		
Sampled By:	DICKERSON	**Depth:**	0-5'
Lab No.:	20154101	**AASHTO Class:**	A-4(0)
Sample ID:	RV916	**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	3.95
Middle	3.93
Bottom	3.93
Average	3.94
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.04
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.04
Initial Area, Ao (sq. in):	12.10
Initial Volume, AoLo (cu. in):	97.31

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3129.70

4. Soil Properties:

Optimum Moisture Content (%):	14.7
Maximum Dry Density (pcf):	112.2
95% of MDD (pcf):	106.6
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3129.70
Compaction Moisture content (%):	14.4
Compaction Wet Density (pcf):	122.54
Compaction Dry Density (pcf):	107.12
Moisture Content After Mr Test (%):	14.4

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

7. Resilient Modulus, Mr: 6255(Sc)^-0.20459(S3)^0.45876

8. Comments _____

9. Tested By: C.GARRETT **Date:** January 20, 2016

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

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

Job No.	061439	**Material Code**	SSRVPS
Date Sampled:	1/20/16	**Station No.:**	293+00
Date Tested:	January 20, 2016	**Location:**	27' LT
Name of Project:	HWY. 7 - HWY. 128 (SAFETY IMPVTS) (S)		
County:	**Code:** 26 **Name:** GARLAND		
Sampled By:	DICKERSON	**Depth:**	0-5'
Lab No.:	20154101	**AASHTO Class:**	A-4(0)
Sample ID:	RV916	**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	0.00120	0.00015	12,317
Sequence 2	6.0	4.0	47.0	44.3	2.7	3.9	3.7	0.2	0.00256	0.00032	11,499
Sequence 3	6.0	6.0	69.3	65.7	3.5	5.7	5.4	0.3	0.00415	0.00052	10,518
Sequence 4	6.0	8.0	92.5	86.5	6.0	7.6	7.1	0.5	0.00604	0.00075	9,510
Sequence 5	6.0	10.0	115.6	107.1	8.5	9.6	8.8	0.7	0.00787	0.00098	9,038
Sequence 6	4.0	2.0	24.8	22.1	2.7	2.0	1.8	0.2	0.00141	0.00018	10,431
Sequence 7	4.0	4.0	46.0	43.3	2.7	3.8	3.6	0.2	0.00325	0.00040	8,844
Sequence 8	4.0	6.0	66.9	64.1	2.8	5.5	5.3	0.2	0.00525	0.00065	8,110
Sequence 9	4.0	8.0	90.5	85.4	5.2	7.5	7.1	0.4	0.00736	0.00092	7,699
Sequence 10	4.0	10.0	113.6	105.7	7.8	9.4	8.7	0.6	0.00940	0.00117	7,472
Sequence 11	2.0	2.0	24.4	21.5	2.9	2.0	1.8	0.2	0.00182	0.00023	7,857
Sequence 12	2.0	4.0	44.5	41.5	2.9	3.7	3.4	0.2	0.00423	0.00053	6,521
Sequence 13	2.0	6.0	64.6	61.6	3.0	5.3	5.1	0.2	0.00678	0.00084	6,036
Sequence 14	2.0	8.0	86.8	82.4	4.4	7.2	6.8	0.4	0.00932	0.00116	5,870
Sequence 15	2.0	10.0	109.5	102.5	7.0	9.0	8.5	0.6	0.01171	0.00146	5,815

TESTED BY C.GARRETT DATE January 20, 2016

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.	061439	**Material Code**	SSRVPS
Date Sampled:	1/20/16	**Station No.:**	293+00
Date Tested:	January 20, 2016	**Location:**	27' LT
Name of Project:	HWY. 7 - HWY. 128 (SAFETY IMPVTS) (S)		
County:	**Code:** 26 **Name:** GARLAND		
Sampled By:	DICKERSON	**Depth:**	0-5'
Lab No.:	20154101	**AASHTO Class:**	A-4(0)
Sample ID:	RV916	**Material Type (1 or 2):**	2
LATITUDE:		**LONGITUDE:**	

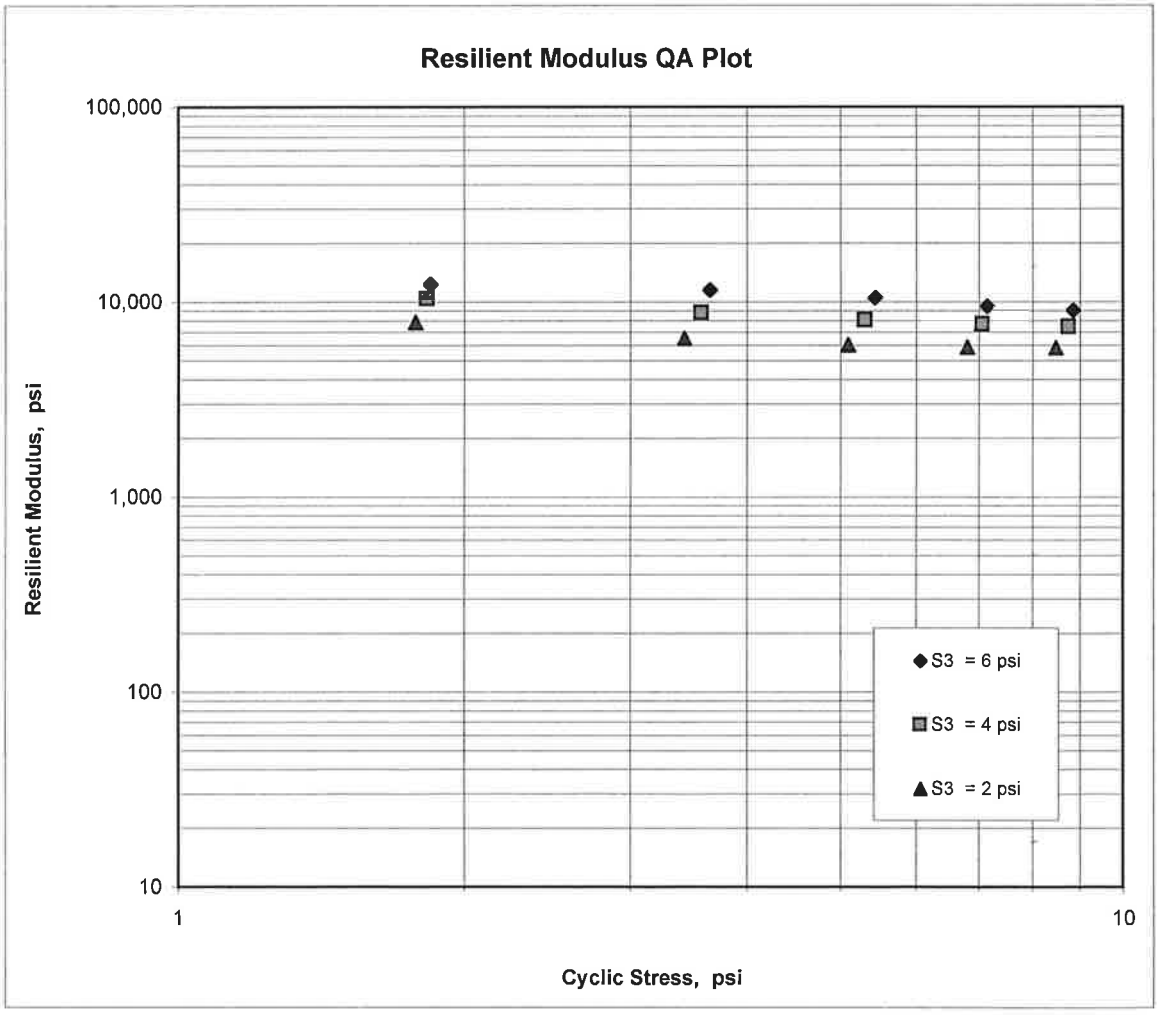
$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 = 6,255

K2 = -0.20459

K5 = 0.45876

R^2 = 0.99



JOB NAME: HWY.7 - HWY.128 (SAFETY IMPVTS)(S)

COUNTY NO. 26 **DATE TESTED** 1/22/2016

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				S	I	E	V	E S					
261+00	18' LT	0-5	BROWN	98	93	82	77	72	27	07	A-4(3)	RV915	
293+00	27' LT	0-5	BROWN	98	95	86	79	71	27	06	A-4(3)	RV916	
124+00	06' RT	0-5	BROWN	95	87	76	70	64	21	5	A-4(1)	S865	7.9
132+00	06' LT	0-5	BROWN	86	71	51	44	38	20	4	A-4(0)	S866	9.5
132+00	14' LT	0-5	RED	71	51	45	45	39	25	10	A-4(1)	S867	10
140+00	06' RT	0-5	BROWN	97	84	65	58	51	20	05	A-4(0)	S868	11
140+00	14' RT	0-5	BROWN	91	81	67	60	55	22	07	A-4(1)	S869	11.9
148+00	06' LT	0-3.5Z	BROWN	93	79	58	51	45	22	07	A-4(0)	S870	9.4
156+00	06' RT	0-5	BROWN	95	90	81	75	71	27	11	A-6(5)	S871	21.3
156+00	14' RT	0-5	BROWN	96	85	70	64	59	20	5	A-4(0)	S872	21.7
164+00	06' LT	0-5	BROWN	97	89	76	69	62	25	12	A-6(4)	S873	20.3
164+00	15' LT	0-5	BROWN	94	88	74	64	54	24	08	A-4(2)	S874	17.2
172+00	06' RT	0-5	BROWN	97	84	67	58	49	29	14	A-6(3)	S875	9.5
172+00	14' RT	0-5	BROWN	97	94	86	78	70	22	6	A-4(2)	S876	17.8
180+00	06' LT	0-5	BROWN	91	83	72	66	61	27	11	A-6(4)	S877	15.3
180+00	14' LT	0-5	BROWN	96	87	75	69	64	27	10	A-4(4)	S878	17.1
188+00	06' RT	0-5	BROWN	98	91	81	75	70	23	05	A-4(1)	S879	18
188+00	14' RT	0-5	BROWN	95	81	73	68	64	24	06	A-4(2)	S880	19.3
196+00	06' LT	0-5	BROWN	97	85	68	62	55	22	06	A-4(1)	S881	16.5
196+00	14' LT	0-5	BROWN	88	76	63	58	54	22	05	A-4(0)	S882	16.4
204+00	06' RT	0-5	BROWN	97	91	73	65	58	26	08	A-4(2)	S883	21.4
204+00	14' RT	0-5	BROWN	97	92	79	70	61	25	05	A-4(1)	S884	23
212+00	06' LT	0-5	BROWN	98	93	85	80	75	38	17	A-6(12)	S885	23.4
212+00	14' LT	0-2.5Z	GRAY	93	81	55	44	39	30	12	A-6(1)	S886	18.4
221+00	06' RT	0-5	BROWN	98	93	82	75	68	34	13	A-6(7)	S887	26.4
221+00	15' RT	0-5	GRAY	89	70	49	41	36	28	11	A-6(1)	S888	14.9

comments: W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

Monday, January 25, 2016

STAM.	LOC.	DEPTH	COLOR	S	I	E	V	E	S	L.L.	P.I.	SOIL CLASS	LAB #.	MOISTURE
221+00	27' RT	0-5	BR/GR	94	83	68	60	54		29	8	A-4(3)	S889	15.7
229+00	06' LT	0-5	BROWN	97	93	83	76	71		29	8	A-4(5)	S890	14.2
229+00	14' LT	0-5	BROWN	99	97	92	88	84		35	12	A-6(9)	S891	17.7
229+00	18' LT	0-5	BROWN	94	90	83	79	74		32	10	A-4(6)	S892	18
237+00	06' RT	0-3.5Z	BROWN	92	83	68	63	57		35	11	A-6(4)	S893	12.9
237+00	14' LT	0-3.0Z	GRAY	94	86	71	63	57		31	8	A-4(3)	S894	12.6
245+00	06' LT	0-5	BROWN	95	90	83	79	76		30	10	A-4(6)	S895	20.7
245+00	14' LT	0-5	BROWN	89	75	55	47	40		28	9	A-4(1)	S896	20
253+00	06' RT	0-5	BR/GR	91	79	66	61	55		31	12	A-6(3)	S897	20.7
253+00	14' RT	0-5	BROWN	70	63	52	47	43		29	9	A-4(1)	S898	21
261+00	06' LT	0-5	RED	99	96	84	77	72		25	7	A-4(5)	S899	19.7
261+00	14'LT	0-5	RED	95	85	71	65	61		25	7	A-4(3)	S900	20.6
261+00	18' LT	0-5	BROWN	99	94	79	73	69		29	9	A-4(5)	S901	19.4
269+00	06' RT	0-5	RED	99	94	87	84	80		48	28	A-7-6(11)	S902	30.6
269+00	14' RT	0-2.5Z	RED	62	51	42	38	36					S903	19.7
277+00	06' LT	0-5	BROWN	96	89	76	70	64		31	9	A-4(5)	S904	15.3
277+00	14' LT	0-5	BROWN	96	86	71	64	58		32	10	A-4(4)	S905	12.1
285+00	06' RT	0-5	BROWN	97	89	73	67	62		25	7	A-4(3)	S906	17.3
285+00	14' RT	0-5	BROWN	91	83	73	67	62		27	2	A-4(4)	S907	23.8
293+00	06' LT	0-5	BROWN	93	86	71	64	58		25	6	A-4(3)	S908	17.3
293+00	14' LT	0-5	BROWN	93	77	59	53	49		27	7	A-4(2)	S909	20.4
293+00	27' LT	0-5	BROWN	95	86	72	66	60		25	6	A-4(3)	S910	16.9
301+00	06' RT	0-5	BROWN	99	98	94	92	87		31	10	A-4(8)	S911	23.9
301+00	14' RT	0-5	BROWN	100	99	98	96	89		28	7	A-4(8)	S912	24.6
309+00	15' LT	0-5	BROWN	90	91	78	70	63		25	7	A-4(4)	S913	18.4
309+00	22' LT	0-5	GRAY	97	86	73	49	43		24	4	A-4(1)	S914	22.3

comments: W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

JOB: 061439
JOB NAME: HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
COUNTY NO. 26

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

DATE TESTED
1/13/2016

PAVEMENT SOUNDINGS

STA.#	LOC.					
24+00	06' RT	CHIP SEAL	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7
		.25	6.0WX	--	6.0	--
32+00	06' LT	CHIP SEAL	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7
		--	5.0WX	--	6.0	7.0
32+00	14' LT	CHIP SEAL	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7
		--	4.25W	5.0	--	--
40+00	06' RT	ACHMSC	PCCP	AGG.BASE CRS CL-7		
		6.0WX	6.0	--		
40+00	14' RT	ACHMSC	PCCP	AGG.BASE CRS CL-7		
		9.50	--	6.0		
48+00	06' LT	ACHMSC	PCCP	AGG.BASE CRS CL-7		
		6.0WX	5.0	7.0		
56+00	06' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		6.0WX	--	6.0	--	
56+00	14' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		9.0W	--	--	8.0	
64+00	15' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		3.50W	6.50	--	8.0	
64+00	06' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		3.0W	7.0	6.0	8.0	
72+00	14' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		4.0	6.0	--	6.0	
72+00	06' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		6.0WX	--	6.0	--	
80+00	06' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		6.50WX	--	7.0	7.0	
80+00	14' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		8.0W	8.0	--	--	
88+00	14' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		4.0	5.50	--	7.0	
88+00	06' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		6.0WX	--	8.0	--	
96+00	06' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7	
		5.50WX	--	6.50	8.0	

comments: W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

Monday, January 25, 2016

STA.#	LOC.	PAVEMENT SOUNDINGS			
96+00	14' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7
		4.0	**5.5**	**--**	**8.0**
204+00	06' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7
		8.0W	**--**	**5.50**	**--**
204+00	14' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7
		5.50W	**6.0**	**--**	**6.0**
212+00	06' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS CL-7
		11.0WX	**--**	**5.0**	**--**
212+00	14' LT	ACHMSC	ACHMBC	AGG.BASE CRS CL-7	
		6.50	**--**	**7.0**	
221+00	06' RT	ACHMSC	ACHMBC	AGG.BASE CRS CL-7	
		3.50W	**5.0**	**8.0**	
221+00	15' RT	ACHMSC	ACHMBC	AGG.BASE CRS CL-7	
		4.0	**--**	**9.0**	
221+00	27' RT	ACHMSC	ACHMBC	PCCP	
		--	**--**	**--**	
229+00	18' LT	ACHMSC	ACHMBC	PCCP	
		--	**--**	**--**	
229+00	06' LT	ACHMSC	ACHMBC	PCCP	
		6.0WX	**--**	**7.0**	
229+00	14' LT	ACHMSC	ACHMBC	PCCP	
		4.0	**6.50**	**--**	
237+00	06' RT	ACHMSC	ACHMBC	PCCP	
		6.5WX	**--**	**6.0**	
237+00	14' LT	ACHMSC	ACHMBC	PCCP	
		4.0	**7.0**	**--**	
245+00	06' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS.CL7
		5.5WX	**--**	**8.5**	**--**
245+00	14' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS.CL7
		5.0W	**5.5**	**--**	**6.0**
253+00	06' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS.CL7
		6.0WX	**--**	**7.0**	**--**
253+00	14' RT	ACHMSC	ACHMBC	PCCP	AGG.BAS CRS.CL7
		4.0	**6.5**	**--**	**--**
261+00	06' LT	ACHMSC	ACHMBC	PCCP	AGG.BAS CRS.CL7
		4.5WX	**--**	**6.5**	**--**
261+00	14'LT	ACHMSC	ACHMBC	PCCP	AGG.BAS CRS.CL7
		--	**--**	**--**	**9.0**

comments: W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

PAVEMENT SOUNDINGS

STA.#	LOC.				
261+00	18' LT	ACHMSC	PCCP		
		--	--		
269+00	06' RT	ACHMSC	PCCP		
		6.5	**7.0**		
269+00	14' RT	ACHMSC	PCCP		
		8.5W	--		
277+00	14' LT	CHIP SEAL	ACHMSC	PCCP	AGG.BASE CRS. CL7
		--	**10W**	--	**6.0**
277+00	06' LT	CHIP SEAL	ACHMSC	PCCP	AGG.BASE CRS. CL7
		--	**5.0WX**	**6.5**	--
285+00	06' RT	CHIP SEAL	ACHMSC	PCCP	AGG.BASE CRS. CL7
		0.20	**5.5**	**6.5W**	--
285+00	14' RT	ACHMSC	ACHMBC	PCCP	
		3.5W	**6.0**	--	
293+00	06' LT	ACHMSC	ACHMBC	PCCP	
		4.0WX	--	**7.0**	
293+00	14' LT	ACHMSC	ACHMBC	PCCP	
		4.0	**7.5**	--	
293+00	27' LT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS.CL7
		--	--	--	--
301+00	06' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS.CL7
		5.5W	--	**7.0**	--
301+00	14' RT	ACHMSC	ACHMBC	PCCP	AGG.BASE CRS.CL7
		3.5W	**6.0**	--	**7.0**
309+00	22' LT	ACHMSC	AGG.BASE CRS. CL7		
		--	--		
309+00	15' LT	ACHMSC	AGG.BASE CRS. CL7		
		9.5	**7.0**		

comments: W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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

DATE - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
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 - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/13/16

LAB NUMBER	20154049	20154050	20154051
SAMPLE ID	S865	S866	S867
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	124+00	132+00	132+00
LOCATION	06' RT	06' LT	14' LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	RED
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 34 43.50	34 34 49.10	34 34 49.20
LONGITUDE DEG-MIN-SEC	92 58 51.80	92 58 44.90	92 58 45.00
% PASSING 2 IN.			
1 1/2 IN.			100
3/4 IN.	100	100	99
3/8 IN.	99	98	88
NO. 4	95	86	71
NO. 10	87	71	51
NO. 40	76	51	45
NO. 80	70	44	45
NO. 200	64	38	39
LIQUID LIMIT	21	20	25
PLASTICITY INDEX	5	4	10
AASHTO SOIL	A-4(1)	A-4(0)	A-4(1)
UNIFIED SOIL			
% MOISTURE CONTENT	7.9	9.5	10.0
CHIP SEAL (IN)	.25	--	--
ACHMSC (IN)	6.0WX	5.0WX	4.25W
ACHMBC (IN)	--	--	5.0
PCCP (IN)	6.0	6.0	--
AGG.BASE CRS CL-7 (IN)	--	7.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
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 - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154052	20154053	20154054
SAMPLE ID	S868	S869	S870
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	140+00	140+00	148+00
LOCATION	06' RT	14' RT	06' LT
DEPTH IN FEET	0-5	0-5	0-3.5Z
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 34 54.00	34 34 54.00	34 34 57.90
LONGITUDE DEG-MIN-SEC	92 58 37.40	92 58 37.50	92 58 28.70
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			100
3/8 IN.	100	100	99
NO. 4	97	91	93
NO. 10	84	81	79
NO. 40	65	67	58
NO. 80	58	60	51
NO. 200	51	55	45
LIQUID LIMIT	20	22	22
PLASTICITY INDEX	05	07	07
AASHTO SOIL	A-4(0)	A-4(1)	A-4(0)
UNIFIED SOIL			
% MOISTURE CONTENT	11.0	11.9	9.4
ACHMSC (IN)	6.0WX	9.50	6.0WX
PCCP (IN)	6.0	--	5.0
AGG.BASE CRS CL-7 (IN)	--	6.0	7.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/14/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
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 - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154055	20154056	20154057
SAMPLE ID	S871	S872	S873
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	156+00	156+00	164+00
LOCATION	06' RT	14' RT	06' LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 2.40	34 35 2.40	34 35 8.40
LONGITUDE DEG-MIN-SEC	92 58 21.40	92 58 21.40	92 58 14.70
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			
3/8 IN.	100	100	100
NO. 4	95	96	97
NO. 10	90	85	89
NO. 40	81	70	76
NO. 80	75	64	69
NO. 200	71	59	62
LIQUID LIMIT	27	20	25
PLASTICITY INDEX	11	5	12
AASHTO SOIL	A-6(5)	A-4(0)	A-6(4)
UNIFIED SOIL			
% MOISTURE CONTENT	21.3	21.7	20.3
ACHMSC (IN)	6.0WX	9.0W	3.0W
ACHMBC (IN)	--	--	7.0
PCCP (IN)	6.0	--	6.0
AGG.BASE CRS CL-7 (IN)	--	8.0	8.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 18
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 12/12/16

LAB NUMBER	20154058	20154059	20154060
SAMPLE ID	S874	S875	S876
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	164+00	172+00	172+00
LOCATION	15' LT	06' RT	14' RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 8.40	34 35 13.20	34 35 13.10
LONGITUDE DEG-MIN-SEC	92 58 14.90	92 58 7.20	92 58 7.20
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		100
3/8 IN.	99	100	99
NO. 4	94	97	97
NO. 10	88	84	94
NO. 40	74	67	86
NO. 80	64	58	78
NO. 200	54	49	70
LIQUID LIMIT	24	29	22
PLASTICITY INDEX	08	14	6
AASHTO SOIL	A-4(2)	A-6(3)	A-4(2)
UNIFIED SOIL			
% MOISTURE CONTENT	17.2	9.5	17.8
ACHMSC (IN)	3.50W	6.0WX	4.0
ACHMBC (IN)	6.50	--	6.0
PCCP (IN)	--	6.0	--
AGG.BASE CRS CL-7 (IN)	8.0	--	6.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/14/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 5
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154061	20154062	20154063
SAMPLE ID	S877	S878	S879
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	180+00	180+00	188+00
LOCATION	06' LT	14' LT	06' RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 18.90	34 35 19.00	34 35 24.20
LONGITUDE DEG-MIN-SEC	92 58 .40	92 58 .40	92 57 54.50
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		
3/8 IN.	99	100	100
NO. 4	91	96	98
NO. 10	83	87	91
NO. 40	72	75	81
NO. 80	66	69	75
NO. 200	61	64	70
LIQUID LIMIT	27	27	23
PLASTICITY INDEX	11	10	05
AASHTO SOIL	A-6(4)	A-4(4)	A-4(1)
UNIFIED SOIL			
% MOISTURE CONTENT	15.3	17.1	18.0
ACHMSC (IN)	6.50WX	8.0W	6.0WX
ACHMBC (IN)	--	8.0	--
PCCP (IN)	7.0	--	8.0
AGG.BASE CRS CL-7 (IN)	7.0	--	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 6
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154064	20154065	20154066
SAMPLE ID	S880	S881	S882
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	188+00	196+00	196+00
LOCATION	14' RT	06' LT	14' LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 24.20	34 35 30.80	34 35 30.90
LONGITUDE DEG-MIN-SEC	92 57 54.40	92 57 47.90	92 57 47.90
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			100
3/8 IN.	100	100	99
NO. 4	95	97	88
NO. 10	81	85	76
NO. 40	73	68	63
NO. 80	68	62	58
NO. 200	64	55	54
LIQUID LIMIT	24	22	22
PLASTICITY INDEX	06	06	05
AASHTO SOIL	A-4(2)	A-4(1)	A-4(0)
UNIFIED SOIL			
% MOISTURE CONTENT	19.3	16.5	16.4
ACHMSC (IN)	4.0	5.50WX	4.0
ACHMBC (IN)	5.50	--	5.5
PCCP (IN)	--	6.50	--
AGG.BASE CRS CL-7 (IN)	7.0	8.0	8.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 7
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154067	20154068	20154069
SAMPLE ID	S883	S884	S885
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	204+00	204+00	212+00
LOCATION	06' RT	14' RT	06' LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 37.50	34 35 37.50	34 35 44.40
LONGITUDE DEG-MIN-SEC	92 57 42.30	92 57 42.30	92 57 37.50
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		
3/8 IN.	99	100	100
NO. 4	97	97	98
NO. 10	91	92	93
NO. 40	73	79	85
NO. 80	65	70	80
NO. 200	58	61	75
LIQUID LIMIT	26	25	38
PLASTICITY INDEX	08	05	17
AASHTO SOIL	A-4(2)	A-4(1)	A-6(12)
UNIFIED SOIL			
% MOISTURE CONTENT	21.4	23.0	23.4
ACHMSC (IN)	8.0W	5.50W	11.0WX
ACHMBC (IN)	--	6.0	--
PCCP (IN)	5.50	--	5.0
AGG.BASE CRS CL-7 (IN)	--	6.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 8
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154070	20154071	20154072
SAMPLE ID	S886	S887	S888
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	212+00	221+00	221+00
LOCATION	14' LT	06' RT	15' RT
DEPTH IN FEET	0-2.5Z	0-5	0-5
MAT'L COLOR	GRAY	BROWN	GRAY
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 44.40	34 35 49.90	34 35 49.90
LONGITUDE DEG-MIN-SEC	92 57 37.50	92 57 30.10	92 57 30.10
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		100
3/8 IN.	96	100	99
NO. 4	93	98	89
NO. 10	81	93	70
NO. 40	55	82	49
NO. 80	44	75	41
NO. 200	39	68	36
LIQUID LIMIT	30	34	28
PLASTICITY INDEX	12	13	11
AASHTO SOIL	A-6(1)	A-6(7)	A-6(1)
UNIFIED SOIL			
% MOISTURE CONTENT	18.4	26.4	14.9
ACHMSC (IN)	6.50	3.50W	4.0
ACHMBC (IN)	--	5.0	--
AGG.BASE CRS CL-7 (IN)	7.0	8.0	9.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 9
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154073	20154074	20154075
SAMPLE ID	S889	S890	S891
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	221+00	229+00	229+00
LOCATION	27' RT	06' LT	14' LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BR/GR	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 49.80	34 35 51.60	34 35 51.70
LONGITUDE DEG-MIN-SEC	92 57 30.00	92 57 21.20	92 57 21.30
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100	100	100
3/8 IN.	99	99	99
NO. 4	94	97	99
NO. 10	83	93	97
NO. 40	68	83	92
NO. 80	60	76	88
NO. 200	54	71	84
LIQUID LIMIT	29	29	35
PLASTICITY INDEX	8	8	12
AASHTO SOIL	A-4(3)	A-4(5)	A-6(9)
UNIFIED SOIL			
% MOISTURE CONTENT	15.7	14.2	17.7
ACHMSC (IN)	--	6.0WX	4.0
ACHMBC (IN)	--	--	6.50
PCCP (IN)	--	7.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 10
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154076	20154077	20154078
SAMPLE ID	S892	S893	S894
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	229+00	237+00	237+00
LOCATION	18' LT	06' RT	14' LT
DEPTH IN FEET	0-5	0-3.5Z	0-3.0Z
MAT'L COLOR	BROWN	BROWN	GRAY
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 51.70	34 35 55.10	34 35 55.10
LONGITUDE DEG-MIN-SEC	92 57 21.30	92 57 12.80	92 57 12.80
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		
3/8 IN.	95	100	100
NO. 4	94	92	94
NO. 10	90	83	86
NO. 40	83	68	71
NO. 80	79	63	63
NO. 200	74	57	57
LIQUID LIMIT	32	35	31
PLASTICITY INDEX	10	11	8
AASHTO SOIL	A-4(6)	A-6(4)	A-4(3)
UNIFIED SOIL			
% MOISTURE CONTENT	18.0	12.9	12.6
ACHMSC (IN)	--	6.5WX	4.0
ACHMBC (IN)	--	--	7.0
PCCP (IN)	--	6.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 11
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154079	20154080	20154081
SAMPLE ID	S895	S896	S897
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	245+00	245+00	253+00
LOCATION	06' LT	14' LT	06' RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BR/GR
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 56.70	34 35 56.80	34 35 57.60
LONGITUDE DEG-MIN-SEC	92 57 3.50	92 57 3.50	92 56 53.80
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.		100	100
3/8 IN.	100	99	99
NO. 4	95	89	91
NO. 10	90	75	79
NO. 40	83	55	66
NO. 80	79	47	61
NO. 200	76	40	55
LIQUID LIMIT	30	28	31
PLASTICITY INDEX	10	9	12
AASHTO SOIL	A-4(6)	A-4(1)	A-6(3)
UNIFIED SOIL			
% MOISTURE CONTENT	20.7	20.0	20.7
ACHMSC (IN)	5.5WX	5.0W	6.0WX
ACHMBC (IN)	--	5.5	--
PCCP (IN)	8.5	--	7.0
AGG.BASE CRS.CL7 (IN)	--	6.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 12
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154082	20154083	20154084
SAMPLE ID	S898	S899	S900
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	253+00	261+00	261+00
LOCATION	14' RT	06' LT	14'LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	RED	RED
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 57.50	34 35 57.50	34 35 57.70
LONGITUDE DEG-MIN-SEC	92 56 53.80	92 56 44.00	92 56 43.90
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		100
3/8 IN.	79	100	99
NO. 4	70	99	95
NO. 10	63	96	85
NO. 40	52	84	71
NO. 80	47	77	65
NO. 200	43	72	61
LIQUID LIMIT	29	25	25
PLASTICITY INDEX	9	7	7
AASHTO SOIL	A-4(1)	A-4(5)	A-4(3)
UNIFIED SOIL			
% MOISTURE CONTENT	21.0	19.7	20.6
ACHMSC (IN)	4.0	4.5WX	--
ACHMBC (IN)	6.5	--	--
PCCP (IN)	--	6.5	--
AGG.BAS CRS.CL7 (IN)	--	--	9.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 13
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154085	20154086	20154087
SAMPLE ID	S901	S902	S903
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	261+00	269+00	269+00
LOCATION	18' LT	06' RT	14' RT
DEPTH IN FEET	0-5	0-5	0-2.5Z
MAT'L COLOR	BROWN	RED	RED
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 57.80	34 35 57.80	34 35 57.80
LONGITUDE DEG-MIN-SEC	92 56 44.00	92 56 34.70	92 56 34.70
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			100
3/8 IN.	100	100	84
NO. 4	99	99	62
NO. 10	94	94	51
NO. 40	79	87	42
NO. 80	73	84	38
NO. 200	69	80	36
LIQUID LIMIT	29	48	
PLASTICITY INDEX	9	28	
AASHTO SOIL	A-4(5)	A-7-6(11)	
UNIFIED SOIL			
% MOISTURE CONTENT	19.4	30.6	19.7
ACHMSC (IN)	--	6.5	8.5W
PCCP (IN)	--	7.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/14/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 14
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154088	20154089	20154090
SAMPLE ID	S904	S905	S906
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	277+00	277+00	285+00
LOCATION	06' LT	14' LT	06' RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 35 59.50	34 35 59.60	34 36 .80
LONGITUDE DEG-MIN-SEC	92 56 25.10	92 56 25.10	92 56 15.20
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			
3/8 IN.	100	100	100
NO. 4	96	96	97
NO. 10	89	86	89
NO. 40	76	71	73
NO. 80	70	64	67
NO. 200	64	58	62
LIQUID LIMIT	31	32	25
PLASTICITY INDEX	9	10	7
AASHTO SOIL	A-4(5)	A-4(4)	A-4(3)
UNIFIED SOIL			
% MOISTURE CONTENT	15.3	12.1	17.3
CHIP SEAL (IN)	--	--	0.20
ACHMSC (IN)	5.0WX	10W	5.5
PCCP (IN)	6.5	--	6.5W
AGG.BASE CRS. CL7 (IN)	--	6.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/14/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 15
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154091	20154092	20154093
SAMPLE ID	S907	S908	S909
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	285+00	293+00	293+00
LOCATION	14' RT	06' LT	14' LT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 36 .80	34 36 3.50	34 36 3.60
LONGITUDE DEG-MIN-SEC	92 56 15.20	92 56 6.30	92 56 6.30
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.	100		
3/8 IN.	95	100	100
NO. 4	91	93	93
NO. 10	83	86	77
NO. 40	73	71	59
NO. 80	67	64	53
NO. 200	62	58	49
LIQUID LIMIT	27	25	27
PLASTICITY INDEX	2	6	7
AASHTO SOIL	A-4(4)	A-4(3)	A-4(2)
UNIFIED SOIL			
% MOISTURE CONTENT	23.8	17.3	20.4
ACHMSC (IN)	3.5W	4.0WX	4.0
ACHMBC (IN)	6.0	--	7.5
PCCP (IN)	--	7.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/14/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 16
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06
DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154094	20154095	20154096
SAMPLE ID	S910	S911	S912
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	293+00	301+00	301+00
LOCATION	27' LT	06' RT	14' RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	BROWN	BROWN	BROWN
MAT'L TYPE			
LATITUDE DEG-MIN-SEC	34 36 3.70	34 36 7.40	34 36 7.30
LONGITUDE DEG-MIN-SEC	92 56 6.40	92 55 58.80	92 55 58.80
% PASSING 2 IN.			
1 1/2 IN.			
3/4 IN.			
3/8 IN.	100	100	
NO. 4	95	99	100
NO. 10	86	98	99
NO. 40	72	94	98
NO. 80	66	92	96
NO. 200	60	87	89
LIQUID LIMIT	25	31	28
PLASTICITY INDEX	6	10	7
AASHTO SOIL	A-4(3)	A-4(8)	A-4(8)
UNIFIED SOIL			
% MOISTURE CONTENT	16.9	23.9	24.6
ACHMSC (IN)	--	5.5W	3.5W
ACHMBC (IN)	--	--	6.0
PCCP (IN)	--	7.0	--
AGG.BASE CRS.CL7 (IN)	--	--	7.0

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/13/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
SAMPLE FROM - TEST HOLE
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

SEQUENCE NO. - 19
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2014
SUPPLIER ID. - 1
COUNTY/STATE - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/12/16

LAB NUMBER	20154097	20154098
SAMPLE ID	S913	S914
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY
STATION	309+00	309+00
LOCATION	15' LT	22' LT
DEPTH IN FEET	0-5	0-5
MAT'L COLOR	BROWN	GRAY
MAT'L TYPE		
LATITUDE DEG-MIN-SEC	34 36 12.40	34 36 12.40
LONGITUDE DEG-MIN-SEC	92 55 48.80	92 55 48.80
% PASSING 2 IN.		
1 1/2 IN.		
3/4 IN.		
3/8 IN.	100	100
NO. 4	90	97
NO. 10	91	86
NO. 40	78	73
NO. 80	70	49
NO. 200	63	43
LIQUID LIMIT	25	24
PLASTICITY INDEX	7	4
AASHTO SOIL	A-4(4)	A-4(1)
UNIFIED SOIL		
% MOISTURE CONTENT	18.4	22.3
ACHMSC (IN)	9.5	--
AGG.BASE CRS. CL7 (IN)	7.0	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED, Z=AUGER REFUSAL

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 - 01/19/16
JOB NUMBER - 061439
FEDERAL AID NO.- TO BE ASSIGNED
PURPOSE - SOIL SURVEY SAMPLE
SPEC. REMARKS - NO SPECIFICATION CHECK
SUPPLIER NAME - STATE
NAME OF PROJECT - HWY.7 - HWY.128 (SAFETY IMPVTS)(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - GARLAND COUNTY
SAMPLED BY - D.DICKERSON
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 - 26
DISTRICT NO. - 06

DATE SAMPLED - 12/03/15
DATE RECEIVED - 12/07/15
DATE TESTED - 01/22/16

LAB NUMBER	20154100	20154101
SAMPLE ID	RV915	RV916
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY
STATION	261+00	293+00
LOCATION	18' LT	27' LT
DEPTH IN FEET	0-5	0-5
MAT'L COLOR	BROWN	BROWN
MAT'L TYPE		
LATITUDE DEG-MIN-SEC	34 35 57.80	34 36 3.70
LONGITUDE DEG-MIN-SEC	92 56 44.00	92 56 6.40
% PASSING 2 IN.		
1 1/2 IN.		
3/4 IN.		
3/8 IN.	100	100
NO. 4	98	98
NO. 10	93	95
NO. 40	82	86
NO. 80	77	79
NO. 200	72	71
LIQUID LIMIT	27	27
PLASTICITY INDEX	07	06
AASHTO SOIL	A-4(3)	A-4(3)
UNIFIED SOIL		
% MOISTURE CONTENT		

REMARKS -

AASHTO TESTS : T24 T88 T89 T90 T265

ARKANSAS DEPARTMENT OF TRANSPORTATION
ArDOT.gov | IDriveArkansas.com | Lorie H. Tudor, 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

September 14, 2021

TO: Mr. Rick Ellis, Bridge Engineer

SUBJECT: Job No. 061439
Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)
Garland County
Route 5, Section 6

Provided herein is a summary of subsurface conditions obtained for widening an existing bridge on Arkansas Highway 5 in Garland County. The existing bridge over South Fork Saline River is a 180.0-ft. long, 42.8-ft. wide (out-to-out width) structure. The proposed work consists of widening the existing bridge on both sides to an out-to-out width of 53 ft. 6 in. The widened bridge will utilize the same C.L. Bridge & Const. The bridge is comprised of six (6), 30-ft. reinforced concrete spans. Existing end slopes are expected to be utilized to the extent possible, with minor reshaping of the existing slopes and re-distribution / re-application of dumped riprap. It is understood only a summary of subsurface conditions is desired and foundation recommendations are not requested by Bridge Division for this project.

A subsurface investigation was requested on July 23, 2021 by Bridge Division to verify subsurface conditions shown on the existing bridge Plans. The results of field investigation are presented in Attachment A. These include a Plan of Borings showing the boring locations, boring logs, a Legend interpreting the boring logs, and rock core pictures of the borings.

The laboratory test results of uniaxial compressive tests on rock cores, are presented in Attachment B. Geological Strength Index (GSI) and Rock Mass Rating (RMR) of the rock cores, as evaluated by licensed Professional Geologists, are also included in Attachment B.

Selected pictures of the job site is included as Attachment C. The particle size through which 50% of particles by weight passing, D_{50}, is summarized below in Table 1. Detailed particle size distribution curve used for D_{50} determination is included in Attachment C.

Table 1: Summary of D_{50} for Scour Analysis

Creek Name	Station and Offset	Sample Type	Location	D_{50}, mm
South Fork Saline River	166+83, 16 ft. Lt.	Bulk	Creek Bank	2.5

The site geology in the alignment for the South Fork Saline River Bridge is mapped within the Womble Formation. The Womble Formation consists primarily of black shale with thin layers of limestone, silty sandstone, and some chert. Cleavage, at an angle to bedding, frequently displays ribboned cleavage surfaces. The sandstones are dark-gray, compact, fine-grained, occasionally conglomeratic, and may be phosphatic. These sandstones are generally present in the lower part of the formation. Dense, blue-gray limestone usually occurs near the top of the formation in thin to medium beds. Black chert is present as thin layers at the top of the formation. Large milky quartz veins often fill fractures in the formation. The formation rests conformably on the underlying Blakely Sandstone and ranges from 500 to 1200 ft. in thickness. Horizontally

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bedded shale was observed in a ditch on the north bank of the river channel. The observed shale was highly weathered and approximately 2 ft. below the surface. Weathered shale was also exposed in the channel under the bridge. Sediment load observed in the channel consists of sand, gravel, cobbles and boulders. There is an overall decrease in fractures and slickensides observed in the rock core with depth. Mapped faults are located to the north and the south of the project alignment and other unmapped faults in the area are likely.

A Generalized Subsurface Profile is included in Attachment D to aid in visualizing subsurface conditions. In light of the natural variations in stratigraphy and subsurface conditions, slight deviation from those illustrated on the profile should be anticipated.

In light of the average subsurface conditions as revealed by the borings, a **Seismic Site Class C (Very Dense Soil and Soft Rock Profile)** is calculated for the project site. Utilizing the Seismic Site Class C and the approximate GPS coordinates of the project site, the following design peak ground acceleration coefficient (A_S), design short-period spectral acceleration coefficient (S_{DS}), as well as design long-period spectral acceleration coefficient (S_{D1}), are determined. These seismic coefficients are summarized in Table 2. Design Response Spectrum is presented in Attachment E.

Table 2: Summary of Design Ground Motion Acceleration Response Coefficients

Design Acceleration Coefficient	Value, g
A_S (Site PGA)	0.109
S_{DS} (0.2 sec)	0.248
S_{D1} (1 sec)	0.120

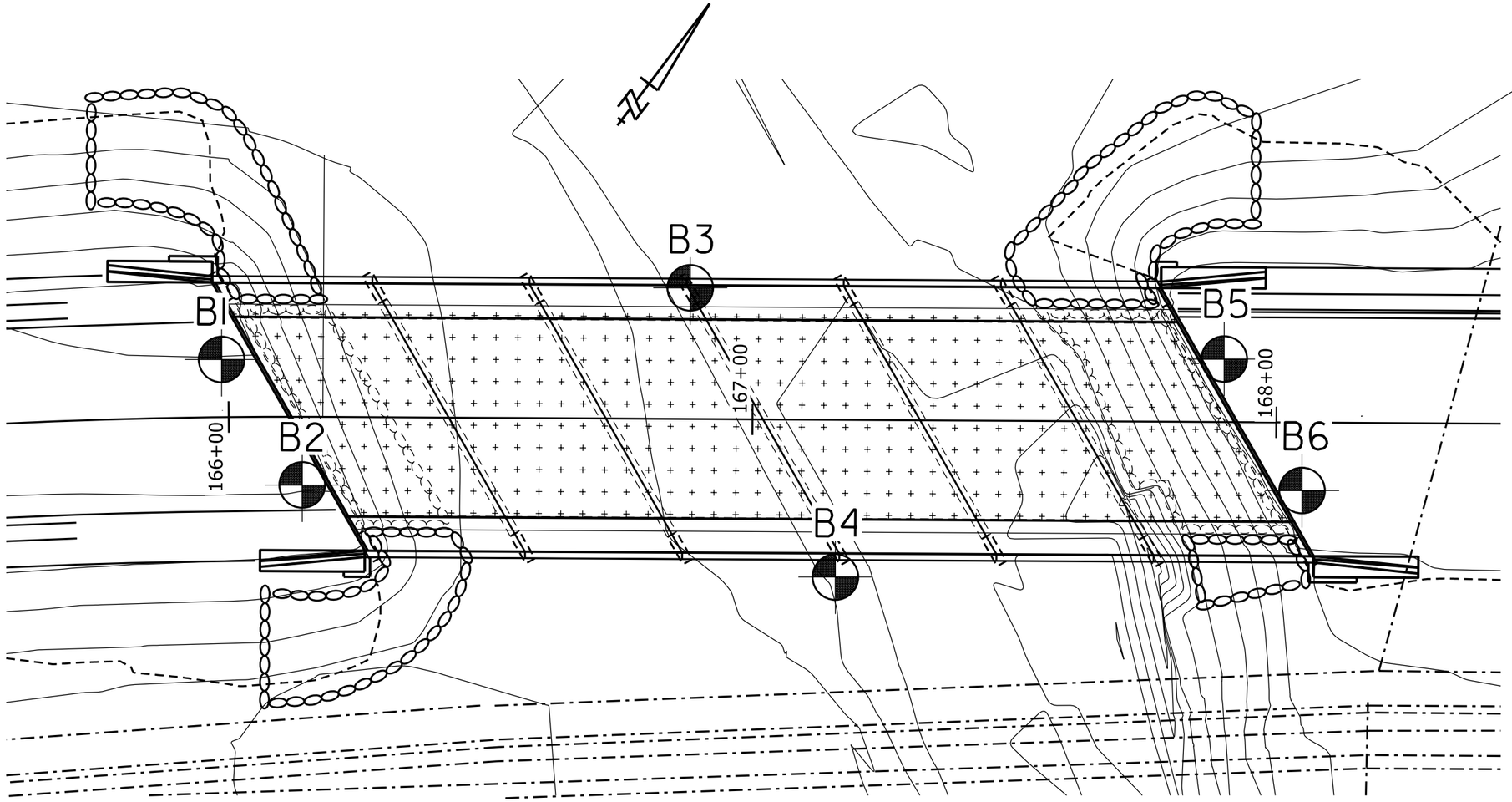
For the design long-period spectral acceleration coefficient (S_{D1}) of 0.120, a **Seismic Performance Zone 1** is considered applicable to the project site.

Jonathan A. Annable
Materials Engineer

JAA:yz:mlg:pwc
cc: State Construction Engineer
District 6 Engineer
G. C. File

Attachment A

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	AR			
JOB NO.		061439		
PLAN OF BORINGS				



SOUTH FORK SALINE RIVER			
BORING	STATION	OFFSET	ELEVATION
B1	165+99	11 LT	540.20
B2	166+14	13 RT	538.39
B3	166+88	25 LT	524.74
B4	167+16	30 RT	525.31
B5	167+90	12 LT	539.67
B6	168+05	13 RT	538.80

PLAN OF BORINGS

HWY. 7 - DEERPARK RD. (SAFETY IMPVTS.)(S)
ROUTE 5, SECTION 6
GARLAND COUNTY
SOUTH FORK SALINE RIVER

JOB NO. 061439 | SHEET 1/1

ARKANSAS DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION - GEOTECHNICAL SEC.

BORING NO. 1
PAGE 1 OF 1

JOB NO. 061439 Garland County
JOB NAME: Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)
Route 5, Section 6
STATION: 165+99
LOCATION: 11' Left of Construction Centerline
LOGGED BY: Anthony Nicholson

DATE: September 1, 2021
TYPE OF DRILLING:
Hollow Stem Auger - Diamond Core
EQUIPMENT: CME 75

HAMMER CORRECTION FACTOR: N/A

COMPLETION DEPTH: 31.6

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 540.2	SOIL GROUP	MOISTURE CONTENT (%) ● PL + – – – – – – – – + LL (10 20 30 40 50 60 70)	PERCENT PASSING NO. 200 SIEVE	NO. OF BLOWS PER 6-IN.	% TCR	% RQD
			Asphalt and Base						
5			Moist, Loose, Brown Sand with Gravel				2 2-4		
10							3 4-6		
15			Wet, Medium Dense, Brown Sand with Gravel				3 6-8		
20			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Weathered, Medium Hard, Frequent Fractures, Gray				15 (1")	79	0
25			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Unweathered, Hard, Occasional Fractures, Gray					96	90
30								94	68
35			Boring Terminated						

REMARKS: * Water was encountered at approximately 14.0 feet below ground level.

ARKANSAS DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION - GEOTECHNICAL SEC.

BORING NO. 2
PAGE 1 OF 2

JOB NO. 061439 Garland County
JOB NAME: Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)
Route 5, Section 6
STATION: 166+14
LOCATION: 13' Right of Construction Centerline
LOGGED BY: Anthony Nicholson

DATE: September 1, 2021
TYPE OF DRILLING:
Hollow Stem Auger - Diamond Core
EQUIPMENT: CME 75

HAMMER CORRECTION FACTOR: N/A

COMPLETION DEPTH: 36.9

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 538.4	SOIL GROUP	MOISTURE CONTENT (%) ● PL + LL (10 20 30 40 50 60 70)	PERCENT PASSING NO. 200 SIEVE	NO. OF BLOWS PER 6-IN.	% TCR	% RQD
			Ashpalt and Base						
5			Moist, Medium Dense, Brown Sand with Gravel				6 7-4		
10			Wet, Very Loose, Brown Sandy Gravel				2 2-1		
			Wet, Soft, Brown Sandy Clay*						
15			Wet, Loose, Brown Sand with Gravel				3 3-5		
20			Wet, Very Dense, Brown Sand with Gravel				5 15 (2")		
			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Weathered, Medium Hard with Soft Layers, Frequent Fractures, Gray					70	0
25			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Slightly Weathered, Medium Hard, Frequent Fractures, Gray					50	24
30								98	90
			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Unweathered, Hard, Gray						
35								100	88

REMARKS: *A water was encountered at approximately 14.0 feet below ground level.

ARKANSAS DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION - GEOTECHNICAL SEC.

BORING NO. 2
PAGE 2 OF 2

JOB NO. 061439 Garland County
JOB NAME: Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)
Route 5, Section 6
STATION: 166+14
LOCATION: 13' Right of Construction Centerline
LOGGED BY: Anthony Nicholson

DATE: September 1, 2021
TYPE OF DRILLING:
Hollow Stem Auger - Diamond Core
EQUIPMENT: CME 75

HAMMER CORRECTION FACTOR: N/A

COMPLETION DEPTH: 36.9

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	SOIL GROUP	MOISTURE CONTENT (%) PL + – – – – – – – – + LL 10 20 30 40 50 60 70	PERCENT PASSING NO. 200 SIEVE	NO. OF BLOWS PER 6-IN.	% TCR	% RQD
			SURFACE ELEVATION: 538.4						
			Boring Terminated						
40									
45									
50									
55									
60									
65									
70									

REMARKS: *A water was encountered at approximately 14.0 feet below ground level.

ARKANSAS DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION - GEOTECHNICAL SEC.

BORING NO. 3
PAGE 1 OF 1

JOB NO. 061439 Garland County
JOB NAME: Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)
Route 5, Section 6
STATION: 166+88
LOCATION: 25' Left of Construction Centerline
LOGGED BY: Stanley Bates and Brandon McKinney

DATE: August 23, 2021
TYPE OF DRILLING:
Hollow Stem Auger - Diamond Core
EQUIPMENT: Acker 2
HAMMER CORRECTION FACTOR: N/A

COMPLETION DEPTH: 29.3

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 524.7	SOIL GROUP	MOISTURE CONTENT (%) PL + LL (10 20 30 40 50 60 70)	PERCENT PASSING NO. 200 SIEVE	NO. OF BLOWS PER 6-IN.	% TCR	% RQD
5			Sand with Gravel						
10			SHALE - Highly Weathered, Medium Hard, Dark Gray				60 (5") 30 60 (5")		
15			SHALE - Weathered, Medium Hard, Dark Gray				3 13-60 (10")	96	69
20			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Unweathered, Hard, Frequent Fractures, Gray					8 92	0 50
25			No Recovery*					0	0
30			Boring Terminated						
35									

REMARKS: *No core recovered from 24.3 to 29.3 feet due to blocked off core barrel.

ARKANSAS DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION - GEOTECHNICAL SEC.

BORING NO. 4
PAGE 1 OF 1

JOB NO. 061439 Garland County
JOB NAME: Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)
Route 5, Section 6
STATION: 167+16
LOCATION: 30' Right of Construction Centerline
LOGGED BY: Stanley Bates

DATE: August 24, 2021
TYPE OF DRILLING:
Hollow Stem Auger - Diamond Core
EQUIPMENT: Acker 2

HAMMER CORRECTION FACTOR: N/A

COMPLETION DEPTH: 24.8

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 525.3	SOIL GROUP	MOISTURE CONTENT (%) ● PL + — — — — — — — — + LL 10 20 30 40 50 60 70	PERCENT PASSING NO. 200 SIEVE	NO. OF BLOWS PER 6-IN.	% TCR	% RQD
5			Sandy Clay						
10			SHALE - Highly Weathered, Very Soft, Brown and Gray*				13 9-10		
15			SHALE - Weathered, Medium Hard, Gray				60 (6")	100	100
20			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Unweathered, Hard, Frequent Fractures and Slickensides, Gray					94	80
25								100	72
30			Boring Terminated						
35									

REMARKS: *A water was encountered at approximately 8.5 feet below ground level.

ARKANSAS DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION - GEOTECHNICAL SEC.

BORING NO. 5
PAGE 1 OF 1

JOB NO. 061439 Garland County
JOB NAME: Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)
Route 5, Section 6
STATION: 167+90
LOCATION: 12' Left of Construction Centerline
LOGGED BY: Coty Campbell

DATE: August 31, 2021
TYPE OF DRILLING:
Hollow Stem Auger - Diamond Core
EQUIPMENT: Acker 2

HAMMER CORRECTION FACTOR: N/A

COMPLETION DEPTH: 28.6

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 539.7	SOIL GROUP	MOISTURE CONTENT (%) ● PL + LL (10 20 30 40 50 60 70)	PERCENT PASSING NO. 200 SIEVE	NO. OF BLOWS PER 6-IN.	% TCR	% RQD
			Ashpalt						
5			Moist, Very Dense, Brown Silty Sand with Gravel				10 32-22		
10			Moist, Medium Dense, Brown Silty Sand with Gravel				8 7-8		
15			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Weathered, Medium Hard, Frequent Fractures and Slickensides, Dark Gray*				40 (5")	100	0
20			SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Unweathered, Hard, Occasional Fractures, Gray					100	100
25								100	74
30			Boring Terminated						
35									

REMARKS: * Total water loss at approximately 18.6 feet below ground level.

ARKANSAS DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION - GEOTECHNICAL SEC.

BORING NO. 6
PAGE 1 OF 1

JOB NO. 061439 Garland County
JOB NAME: Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)
Route 5, Section 6
STATION: 168+05
LOCATION: 13' Right of Construction Centerline
LOGGED BY: Coty Campbell

DATE: September 1, 2021
TYPE OF DRILLING:
Hollow Stem Auger - Diamond Core
EQUIPMENT: Acker 2
HAMMER CORRECTION FACTOR: N/A

COMPLETION DEPTH: 33.8

SURFACE ELEVATION: 538.8

DEPTH FT.	DESCRIPTION OF MATERIAL	SOIL GROUP	NO. OF BLOWS PER 6-IN.	% TCR	% RQD
	Asphalt				
5	Moist, Dense, Brown Silty Sand with Gravel		14 17-17		
10	Moist, Loose, Brown Silty Sand with Gravel		5 4-5		
15	Moist, Very Dense, Brown Silty Sand with Gravel		2 16-40		
	SHALE - Weathered, Medium Hard, Gray			100	0
20	SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Slightly Weathered, Medium Hard With Hard Layers, Frequent Fractures and Slickensides, Dark Gray*			74	0
25	QUARTZ AND CALCITE				
	SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Unweathered, Hard, Frequent Fractures and Slickensides, Dark Gray			100	76
30	SHALE WITH FREQUENT CALCITE SEAMS AND LAYERS - Unweathered, Hard, Occasional Fractures, Gray			100	100
35	Boring Terminated				

MOISTURE CONTENT (%) ●
PL + – – – – – – – – + LL
10 20 30 40 50 60 70

PERCENT PASSING NO. 200 SIEVE

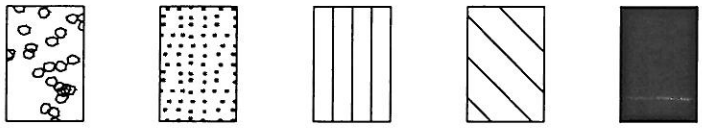
REMARKS: * Total water loss at approximately 18.8 feet below ground level.

LEGEND

SOIL TYPES

(SHOWN IN SYMBOL COLUMN)

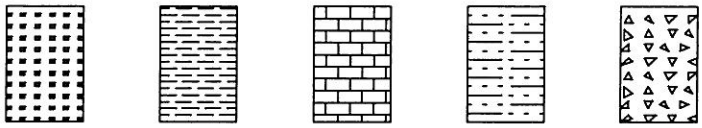
(PREDOMINANT TYPE SHOWN HEAVY)



GRAVEL | SAND | SILT | CLAY | ORGANIC MATTER

ROCK TYPES

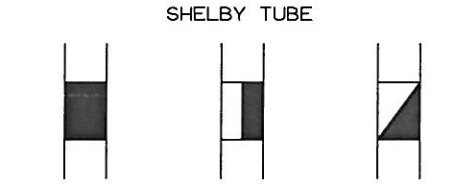
(SHOWN IN SYMBOL COLUMN)



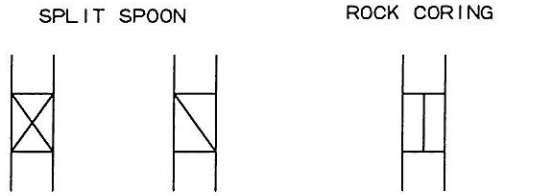
SANDSTONE | SHALE or SILTSTONE | LIMESTONE or DOLOMITE | ALTERNATING LAYERS of SHALE and SANDSTONE | OTHER

SAMPLER TYPES

(SHOWN IN SAMPLE COLUMN)



UNDISTURBED SAMPLE RECOVERY | DISTURBED SAMPLE RECOVERY | NO RECOVERY



SAMPLE RECOVERY | NO RECOVERY | % RECOVERY INDICATED ON LOGS

TERMS DESCRIBING CONSISTENCY OR CONDITION

GRANULAR SOIL		CLAY		CLAY-SHALE		SHALE	
'N' Value	Density	'N' Value	Consistency	'N' Value	Consistency	'N' Value	Consistency
0-4	Very Loose	0-1	Very Soft	0-1	Very Soft		
5-10	Loose	2-4	Soft	2-4	Soft	31-60	Soft
11-30	Medium Dense	5-8	Medium Stiff	5-8	Medium Stiff	Over 60	
31-50	Dense	9-15	Stiff	9-15	Stiff	More than 2'	
Over 50	Very Dense	16-30	Very Stiff	16-30	Very Stiff	Penetration	
		31-60	Hard	31-60	Hard	in 60 Blows:	Medium Hard
		Over 60	Very Hard	Over 60	Very Hard	Less than 2'	
						Penetration	
						in 60 Blows:	Hard

1. Ground water elevations indicated on boring logs represent ground water elevations at date or time shown on boring log. Absence of water surface implies that no ground water data is available but does not necessarily mean that ground water will not be encountered at locations or within the vertical reaches of these borings.
2. Borings represent subsurface conditions at their respective locations for their respective depths. Variations in conditions between or adjacent to boring locations may be encountered.
3. Terms used for describing soils according to their texture or grain size distribution are in accordance with the Unified Soil Classification System.

Standard Penetration Test – Driving a 2.0" O.D., 1-3/8" I.D. sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30 inches. It is customary to drive the spoon 6.0 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and performing the test are recorded for each 6 inches of penetration on the drill log. The field "N" Value (N_f) can be obtained by adding the bottom two numbers for example: $\frac{6}{8-9} \Rightarrow 8+9=17 blows/ft$. The "N" Value corrected to 60% efficiency (N_{60}) can be obtained by multiplying N_f by the hammer correction factor published on the boring log.

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 165+99, 11’ Lt.
Depth, ft: 19.1-26.6

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 165+99, 11’ Lt.
Depth, ft: 26.6-31.6

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 166+14, 13’ Rt.
Depth, ft: 19.9-26.9

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 166+14, 13' Rt.
Depth, ft: 26.9-36.9

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 166+88, 25' Lt.
Depth, ft: 11.9-24.3

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 167+16, 30’ Rt.
Depth, ft: 10.8-19.8

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 167+16, 30’ Rt.
Depth, ft: 19.8-24.8

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: Sta. 167+90, 12’ Lt.
Depth, ft: 14.7-23.6

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: 167+90, 12’ Lt.
Depth, ft: 23.6-28.6

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: 168+05, 13’ Rt.
Depth, ft: 16.8-23.8

ROCK CORE PHOTO

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Station and Offset, ft: 168+05, 13' Rt.
Depth, ft: 23.8-33.8

Attachment B

Rock Core Unconfined Compression Test Summary

Project Number: 061439
Project Name: Hwy. 7 - Deerpark Rd. (Safety Impts.)(S)
Date Tested: 9-13-2021

Station	Location	Sample No.	Depth (ft)	Diameter (in)	Height (in)	Total Load (lbs)	Correction Factor	Stress (psi)	Remarks
165+99	11' Lt CL	1	23.8	1.74	3.52	5,920		2,489	
165+99	11' Lt CL	2	25.4	1.76	3.51	10,420		4,283	
166+14	13' Rt CL	3	28.4	1.76	3.45	5,090		2092	
166+88	25' Lt CL	4	22.3	1.75	3.52	8,440		3549	
166+89	25' Lt CL	5	23.3	1.74	3.55	7,880		3313	
167+16	30' Rt CL	6	13.4	1.74	3.45	3,730		1568	
167+16	30' Rt CL	7	14.1	1.74	3.45	3,220		1354	
167+16	30' Rt CL	8	20.5	1.75	3.15	5,240		2308	
167+90	12' Lt CL	9	22.5						Broke
167+90	12' Lt CL	10	27.1	1.76	3.50	15,930		6547	
168+05	13' Rt CL	11	29.4						Broke
168+06	13' Rt CL	12	32.4	1.76	3.49	10,400		4274	

* Please note any broken samples, fractures or other characteristics of sample in Remarks.

ROCK MASS RATING SUMMARY GSI 80

JOB # 61439

SAMPLE #1

Station/Location	165+99, 11' LT CL
Depth (ft)	23.8
	Relative Rating
Uniaxial Compressive Strength	2
RQD	17
Spacing of Joints	20
Condition of Joints	6
Groundwater Conditions	7
Sum	*52*
Class Number	**III**
Description	**FAIR ROCK**

SAMPLE #2

Station/Location	165+99, 11' LT CL
Depth (ft)	25.4
	Relative Rating
Uniaxial Compressive Strength	4
RQD	13
Spacing of Joints	20
Condition of Joints	6
Groundwater Conditions	7
Sum	*50*
Class Number	**III**
Description	**FAIR ROCK**

SAMPLE #3

Station/Location	166+14, 13' RT CL
Depth (ft)	28.4
	Relative Rating
Uniaxial Compressive Strength	2
RQD	17
Spacing of Joints	20
Condition of Joints	25
Groundwater Conditions	7
Sum	*71*
Class Number	**II**
Description	**GOOD ROCK**

SAMPLE #4

Station/Location	166+88, 25' LT CL
Depth (ft)	22.3
	Relative Rating
Uniaxial Compressive Strength	2
RQD	13
Spacing of Joints	20
Condition of Joints	20
Groundwater Conditions	7
Sum	*62*
Class Number	**II**
Description	**GOOD ROCK**

SAMPLE #5

Station/Location	166+88, 25' LT CL
Depth (ft)	23.3
	Relative Rating
Uniaxial Compressive Strength	2
RQD	13
Spacing of Joints	20
Condition of Joints	20
Groundwater Conditions	7
Sum	*62*
Class Number	**II**
Description	**GOOD ROCK**

SAMPLE #6

Station/Location	167+16, 30' RT CL
Depth (ft)	13.4
	Relative Rating
Uniaxial Compressive Strength	2
RQD	17
Spacing of Joints	20
Condition of Joints	25
Groundwater Conditions	7
Sum	*71*
Class Number	**II**
Description	**GOOD ROCK**

SAMPLE #7

Station/Location	167+16, 30' RT CL
Depth (ft)	14.1
	Relative Rating
Uniaxial Compressive Strength	1
RQD	17
Spacing of Joints	20
Condition of Joints	25
Groundwater Conditions	7
Sum	*70*
Class Number	**II**
Description	**GOOD ROCK**

SAMPLE #8

Station/Location	167+16, 30' RT CL
Depth (ft)	20.5
	Relative Rating
Uniaxial Compressive Strength	2
RQD	13
Spacing of Joints	20
Condition of Joints	25
Groundwater Conditions	7
Sum	*67*
Class Number	**II**
Description	**GOOD ROCK**

ROCK MASS RATING SUMMARY GSI 80

JOB # 61439

SAMPLE #9

Station/Location	167+90, 12' LT CL
Depth (ft)	22.5
	Relative Rating
Uniaxial Compressive Strength	Broke
RQD	
Spacing of Joints	
Condition of Joints	
Groundwater Conditions	
Sum	
Class Number	
Description	

SAMPLE #10

Station/Location	167+90, 12' LT CL
Depth (ft)	27.1
	Relative Rating
Uniaxial Compressive Strength	4
RQD	13
Spacing of Joints	20
Condition of Joints	20
Groundwater Conditions	7
Sum	*64*
Class Number	**II**
Description	**GOOD ROCK**

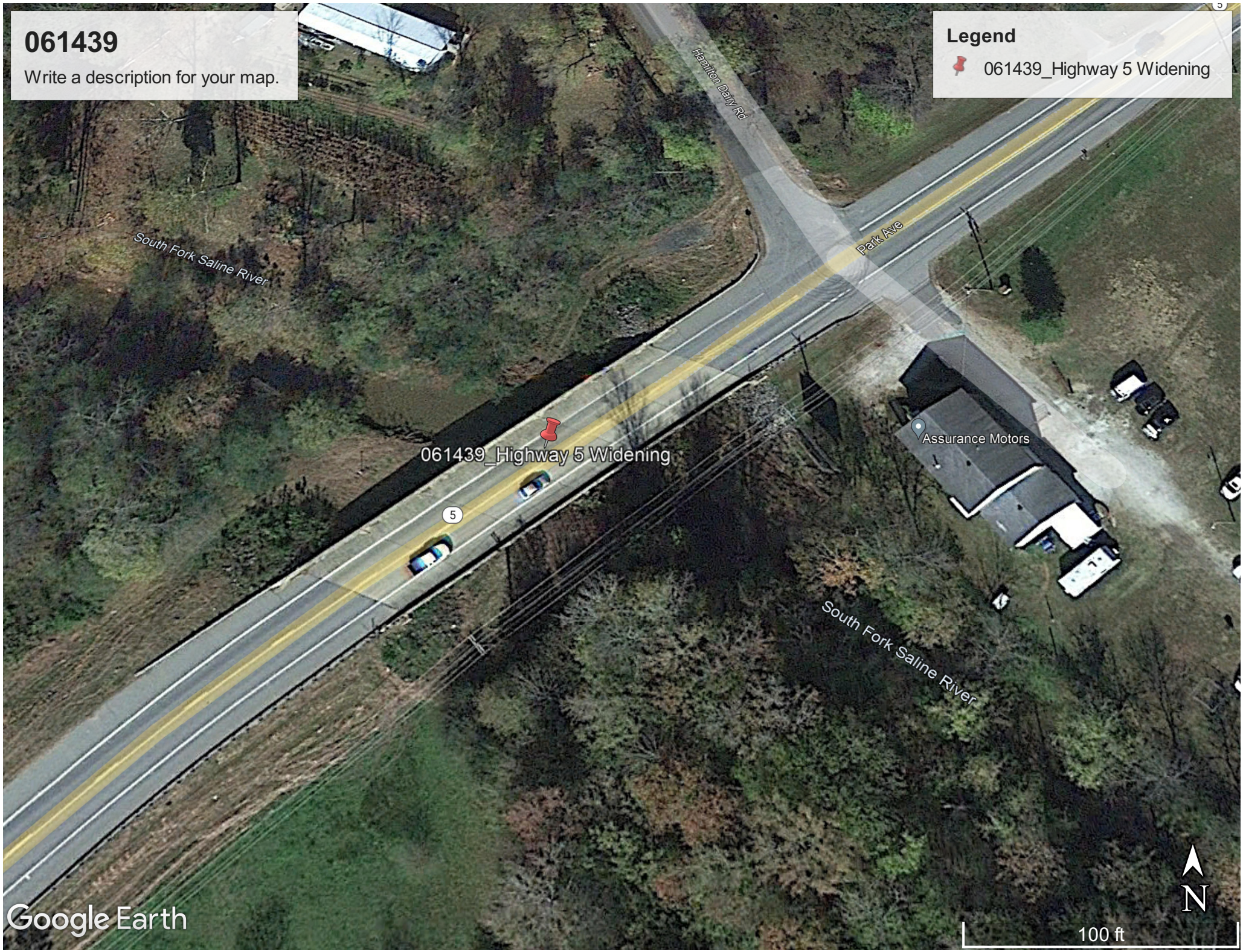
SAMPLE #11

Station/Location	168+05, 13' RT CL
Depth (ft)	29.4
	Relative Rating
Uniaxial Compressive Strength	Broke
RQD	
Spacing of Joints	
Condition of Joints	
Groundwater Conditions	
Sum	
Class Number	
Description	

SAMPLE #12

Station/Location	168+05, 13' RT CL
Depth (ft)	32.4
	Relative Rating
Uniaxial Compressive Strength	4
RQD	20
Spacing of Joints	25
Condition of Joints	25
Groundwater Conditions	7
Sum	*81*
Class Number	**I**
Description	**VERY GOOD ROCK**

Attachment C


061439
Write a description for your map.
Legend
061439_Highway 5 Widening
Hamilton Dairy Rd
Park Ave
South Fork Saline River
Assurance Motors
061439_Highway 5 Widening
5
South Fork Saline River
Google Earth
N
100 ft

SITE PICTURES

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

East Side of Bridge (August 2021)
Looking South from the North

SITE PICTURES

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

East Side of Bridge (August 2021)
Looking North from the South

SITE PICTURES

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

West Side of Bridge (August 2021)
Looking South from the North

SITE PICTURES

Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

West Side of Bridge (August 2021)
Looking South from the North

SITE PICTURES

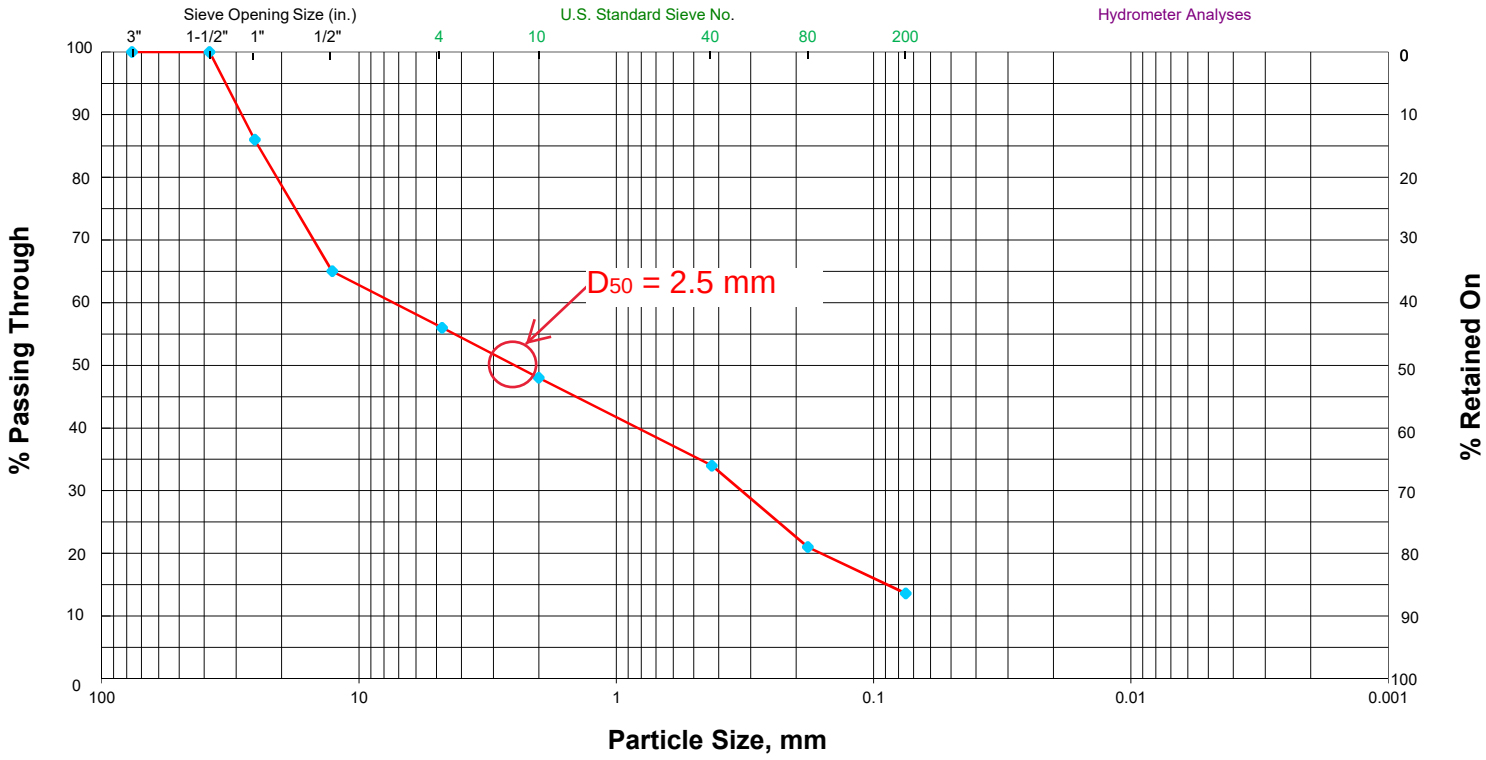
Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Bents 1 through 5 (August 2021)
Looking South from the North

SITE PICTURES

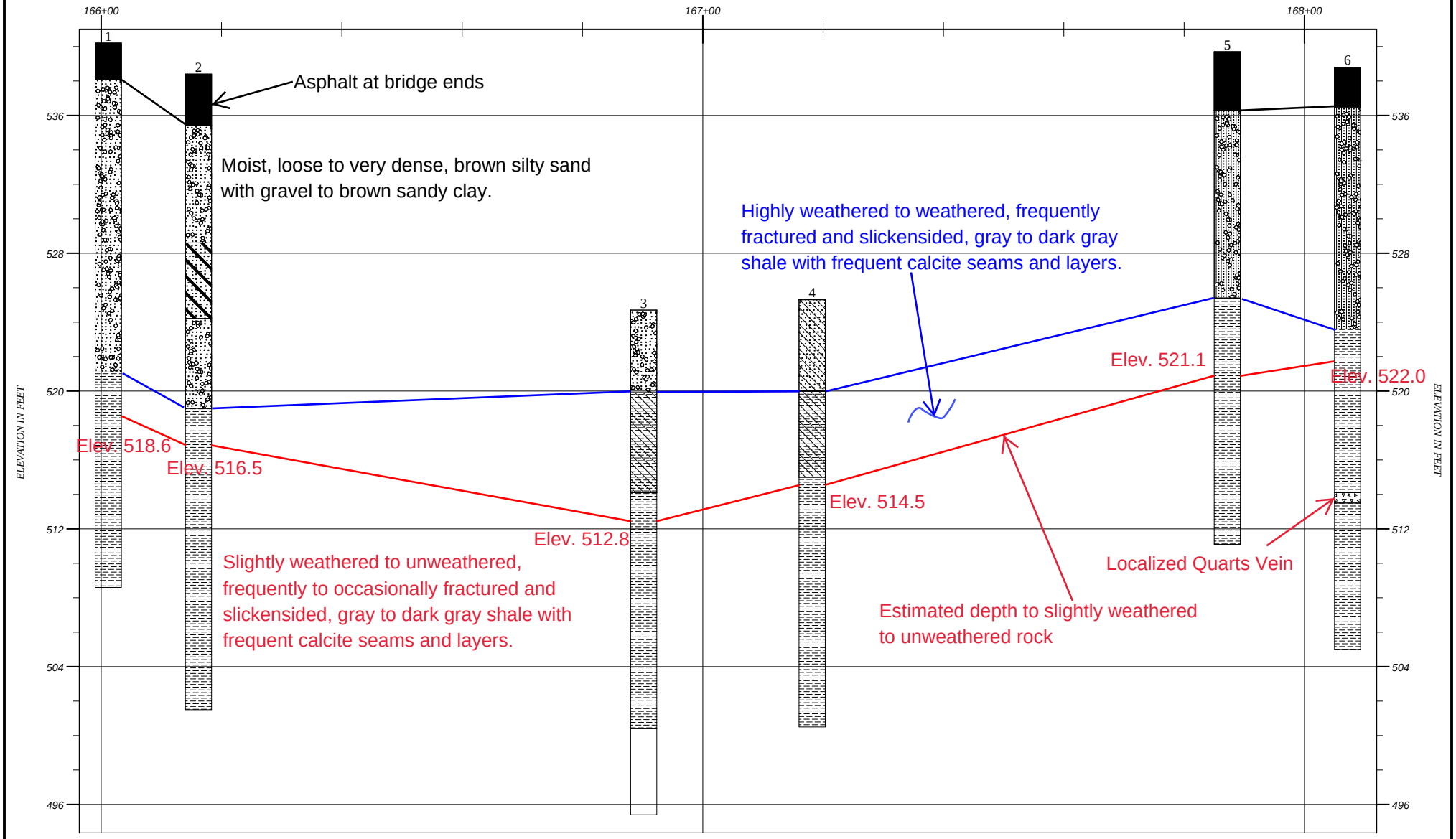
Job No.: 061439
Job Name: Hwy. 7 – Deerpark Rd. (Safety Impvts.) (S)

Scour around Footing and Exposed Shale (June 2021)
Left Column – Bent 5



Particle Size Distribution Curve

Attachment D



Plan View

Strata symbols

- Coal/Asphalt
- sand and gravel
- shale/siltstone
- sandy clay
- shale with clay seams
- cavity
- clayey sand
- silty sand with gravel
- chert/novaculite/quartz

GENERALIZED SUBSURFACE PROFILE

HORIZONTAL SCALE: N.T.S. VERTICAL SCALE: N.T.S.	DRAWN BY/APPROVED BY	DATE DRAWN 9/7/2021

Hwy. 7 - Deerpark Rd. (Safety Impvts.) (S)

PROJECT NO. 061439
Garland County

FIGURE NUMBER

Attachment E

Title:	061439
Latitude:	34.586212
Longitude:	-92.969995
Site Class	C

Get USGS Data

PGA:	0.091
F_{PGA}:	1.2
A_S:	0.109
S_S:	0.207
F_A:	1.2
S_{DS}:	0.248
S_1:	0.071
F_V:	1.7
S_{D1}:	0.12
S_{Dc}:	A
T_S:	0.485
T_0:	0.097