

SUBSURFACE INVESTIGATION

STATE JOB NO.		080457		
FEDERAL AID PROJECT NO.		CMF-STPU-0023(44)		
		PASS & REALIGN. (MAYF	LOWER) (S)	
STATE HIGHWAY	89	SECTION	4 & 5	
IN		FAULKNER		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.



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

February 6, 2020

TO: Mr. Rick Ellis, Bridge Engineer

SUBJECT: Job No. 080457 UPRR Overpass & Realign. (Mayflower) (S) Faulkner County Route 89 Sections 4 & 5

Transmitted herewith is a revision to the subsurface investigation report dated January 30, 2020 for the above referenced project. This revision corrects the MSE wall locations. Please replace the first three pages of the previous report with the attached documents.

Michael C. Benson Materials Engineer

MCB:rpt:mlg

cc: State Construction Engineer - Master File Copy District 8 Engineer G.C. File



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Transmitted herewith are a brief summary of the geology and site conditions, rock core unconfined compression test summary, RMR, rock core unit weight summary, and the logs of the borings conducted for the structures and approaches of the above referenced project. The samples obtained by the Standard Penetration Tests were brought to the laboratory and visually classified by experienced lab personnel to confirm the field identifications.

This project consists of realigning the Highway 89 Bridge over I-40 and constructing a new section of Highway 89, beginning west of Mayflower and connecting to the realigned I-40 overpass. This will require the construction of two new structures.

I-40 Overpass

The new I-40 overpass will be constructed north of the existing. Three of the twelve requested borings were inaccessible due to steep slopes, utility conflicts, and access limitations. The borings that were not obtained are located at: 184+14 100' Rt. of C.L. Construction, 185+22 C.L. Construction, and 186+15 77' Rt. of C.L. Construction.

Based on the depth at which bedrock was encountered and correspondence with Bridge Design, it is anticipated that all bents will be founded on piling. Preboring may be necessary in order to achieve minimum penetration requirements.

Mechanically stabilized earthen walls are to be utilized at the bridge ends. MSE Wall C will be located at the west bridge end and MSE Wall D will be located at the east bridge end. It is anticipated that both walls will be approximately 20 feet in height. Several borings were obtained along the length of the walls in the vicinity of the wall face. The boring logs indicate soft clay material near the surface of the proposed MSE Wall D in the vicinity of station 186+18 40' Right of Construction Centerline. The problem area is part of a drainage ditch for the existing structure. It is recommended that this material be undercut to elevation 273.5 ft. and replaced with material meeting the requirements of Class 7 of Section 303 of the Standard Specifications for Highway Construction, edition 2014. The limits of excavation should extend from station 186+18 20' right to 186+18 60' right of construction centerline, 5 feet beyond the face of the wall to the back of the reinforcement zone. The excavation limits are shown in the attached Figure 1. Once this material has been replaced and compacted the MSE walls for this bridge should be designed based on the values provided in Table 1.

TABLE 1 – Mechanically Stabilized Earthen Walls Bearing Capacity Recommendations

MSE Wall	Factored Bearing Resistance (ksf)	Founding Elevation (ft.)
С	10	275-276
D	8	277-278

UPRR/Highway 365 Overpass

This bridge will span Highway 365, UPRR, and N Main Street. There currently is no structure at this location. It will be aligned with the new Hwy. 89 Bridge over I-40. Three of the twenty requested borings were inaccessible due to utility conflicts and access limitations. The easternmost borings had to be offset due to utility conflicts. The borings that were not obtained are located at: 180+60 C.L. Construction, 180+63 40' Lt. of C.L. Construction, and 177+21 78' Rt. of C.L. Construction.

Based on the depth at which bedrock was encountered and correspondence with Bridge Division, it is anticipated that all bents will be founded on pilling. If piling is utilized, preboring may be necessary to achieve minimum penetration requirements. However, based on the depth, type, and quality of bedrock encountered drilled shafts would be a viable foundation alternative. Drilled Shafts socketed in competent Shale should be designed based on the values provided in Table 2.

Nominal Shaft Side	Factored Shaft Side	Nominal Shaft Tip	Factored Shaft Tip
Resistance (ksf)	Resistance (ksf)	Resistance (ksf)	Resistance (ksf)
32.7	18	156	

Mechanically stabilized earthen walls are to be utilized at the bridge ends. MSE Wall A will be located at the west bridge end and MSE Wall B will be located at the east bridge end. It is anticipated that both walls will be approximately 20 feet in height. Several borings were obtained along the length of both walls in the vicinity of the wall face. The MSE walls for this bridge should be designed based on the properties provided in Table 3.

TABLE 3 – Mechanically Stabilized Earthen Walls Bearing Capacity Recommendations

MSE Wall	Factored Bearing Resistance (ksf)	Founding Elevation (ft.)		
A	9	282-283		
В	10	286-287		

If you have any questions concerning these recommendations, please contact the Geotechnical Section.

LA. Am Michael C. Benson

Materials Engineer

MCB:rpt:mlg

cc: State Construction Engineer - Master File Copy District 8 Engineer G.C. File



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Mechanically stabilized earthen walls are to be utilized at the bridge ends. MSE Wall C will be located at the west bridge end and MSE Wall D will be located at the east bridge end. It is anticipated that both walls will be approximately 20 feet in height. Several borings were obtained along the length of the walls in the vicinity of the wall face. The boring logs indicate soft clay material near the surface of the proposed MSE Wall D in the vicinity of station 186+18 40' Right of Construction Centerline. The problem area is part of a drainage ditch for the existing structure. It is recommended that this material be undercut to elevation 273.5 ft. and replaced with material meeting the requirements of Class 7 of Section 303 of the Standard Specifications for Highway Construction, edition 2014. The limits of excavation should extend from station 186+18 20' right to 186+18 60' right of construction centerline, 5 feet beyond the face of the wall to the back of the reinforcement zone. The excavation limits are shown in the attached Figure 1. Once this material has been replaced and compacted the MSE walls for this bridge should be designed based on the values provided in Table 1.

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Resistance (ksf)	Resistance (ksf)	Resistance (ksf)	Resistance (ksf)	
32.7	18	156		

Mechanically stabilized earthen walls are to be utilized at the bridge ends. MSE Wall A will be located at the west bridge end and MSE Wall B will be located at the east bridge end. It is anticipated that both walls will be approximately 20 feet in height. Several borings were obtained along the length of both walls in the vicinity of the wall face. The MSE walls for this bridge should be designed based on the properties provided in Table 3.

TABLE 3 – Mechanically Stabilized Earthen Walls Bea	aring Capacity Recommendations
---	--------------------------------

MSE Wall	Factored Bearing Resistance (ksf)	Founding Elevation (ft.)			
A	9	282-283			
В	10	286-287			

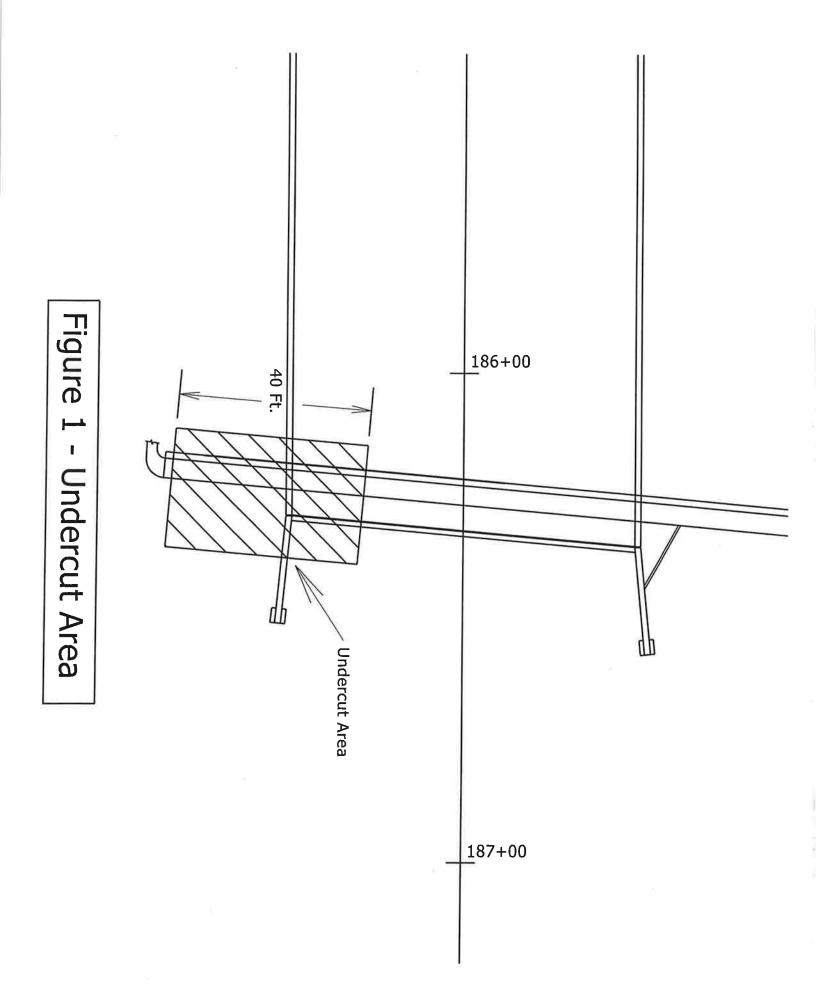
If you have any questions concerning these recommendations, please contact the Geotechnical Section.

A. Amul Michael C. Benson

Materials Engineer

MCB:rpt:mlg

cc: State Construction Engineer - Master File Copy District 8 Engineer G.C. File



<u>GEOLOGY AND SITE CONDITIONS</u> Job No. 080457 UPRR Overpass & Realign. (Mayflower) (S) <u>Faulkner County</u> Route 89 Sections 4 & 5

Site Conditions

There are two proposed structures for this project that are part of a new alignment for Hwy. 89. The new alignment extends from the existing Hwy. 89 west of the intersection of a local surface road, Snuggs Circle, on the west side of the City of Mayflower and passes around the north side of the city, crossing over Interstate 40, connecting back with existing Hwy 89 to the east of the existing Interstate 40 overpass. The first proposed structure (**UPRR/Hwy. 365 Overpass**) is planned to cross over, from west to east, North Main Street, the Union Pacific Railroad, and Hwy. 365. A fuel station is currently located at the proposed east end of this overpass. Overhead power lines parallel the east side of Hwy. 365.

The second proposed structure (**I-40 Overpass**) is planned to cross over Interstate 40, north of the existing Hwy. 89 overpass. The existing overpass is a four span structure composed of reinforced concrete columns and decking supported by five steel beams. A buried telecommunication parallels the north side of the overpass.

Site Geology

The project alignment is located in the mapped outcrop of the upper part of the Atoka Formation of Pennsylvanian age (Pau). This unit is a sequence of marine, mostly tan to gray silty sandstones and grayish-black shales. The unit locally contains discontinuous streaks of coal and coaly shale. The Atoka encountered at the job site consists primarily of well-indurated shale.

Much of the soil overlying bedrock at the proposed job site is a product of the weathering of the bedrock into sand, silt, and clay and have elevated n-values. Shale was encountered at depths ranging from 8.5 to 15.3 feet below ground level (bgl) in borings for the UPRR/Hwy. 365 Overpass. At the I-40 Overpass, shale was encountered at depths ranging from 10.0 to 15.2 feet below ground level (bgl), except at Station 184+18, 60' Right of Construction Centerline and Station 186+18, 40' Right of Construction Centerline, where shale was encountered at 20.3 feet bgl and not encountered at total depth of 26.5 feet bgl, respectively. The increased depth to bedrock in the boring at Station 186+18, 40' Right of Construction Centerline is due to excavations related to the burying of the telecommunication line that parallels the north side of the existing Interstate 40 Overpass.

Subsurface Conditions

Based on the results of the boring at Station 186+18 (UPRR/Hwy. 365 Overpass), the subsurface stratigraphy may be generalized as follows:

0 to 5.0 Feet:	Consists of moist, very soft, brown clay with sand.
5.0 to 10.0 Feet:	Varies from moist, stiff, reddish brown clay with sand to medium dense, brown sandy silt .
10.0 to 26.5 Feet:	Consists of moist, very stiff to hard, reddish brown clay to clay with sand .

Based on the results of the borings at stations 177+29 to 180+49 (UPRR/Hwy. 365 Overpass), the subsurface stratigraphy may be generalized as follows:

- 0 to 2.5 Feet: Varies from dry to moist, soft to very hard, brown to reddish clay to sandy clay to medium dense to very dense loose brown and gray sand with silty sand.
- 2.5 to 10.0 Feet: Varies from dry to moist, very stiff to very hard, reddish brown clay to sandy clay to medium dense to very dense, reddish brown sand to sand with silt to sand with clay. Many samples in this zone contain gravel.
- 10.0 to 20.3 Feet: Varies from dry to moist, very stiff to very hard, light gray to reddish brown clay to clay with shale fragments to dense to very dense, reddish brown sand with silt and gravel to sand with clay and gravel to highly weathered, soft to medium hard, reddish brown to brown shale. One boring encountered a sandstone layer within the soil approximately 1.8' thick, highly weathered, poorly cemented, reddish brown.
- 20.3 to 25.3 Feet: Consists of highly weathered to unweathered, soft to medium hard, brown and gray to dark gray **shale** with occasional fractures.
- 25.3 to 44.6 Feet: Consists of slightly weathered to unweathered, medium hard, dark gray **shale** with occasional fractures.

Based on the results of the borings at stations 184+21 to 186+29 (I-40 Overpass), the subsurface stratigraphy may be generalized as follows:

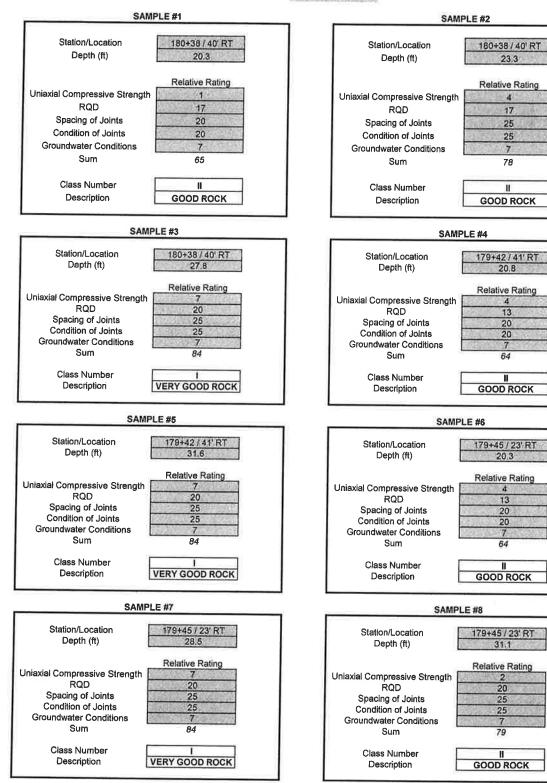
- 0 to 8.5 Feet: Consists of dry to moist, soft to very hard, reddish brown, clay to sandy clay to very loose to medium dense brown sand with silt to sandy silt.
- 8.5 to 15.3 Feet: Varies from dry to moist, very stiff to very hard, reddish brown and gray **clay** to medium dense to dense brown **sandy silt** to highly weathered to weathered, soft to medium hard, reddish brown to dark gray **shale**.
- 15.3 to 25.0 Feet: Consists of highly weathered to unweathered, soft to medium hard, brown to dark gray **shale** with occasional fractures.
- 25.0 to 39.7 Feet: Consists of unweathered, medium hard, dark gray **shale** with occasional fractures.

Rock Core Unconfined Compression Test Summary

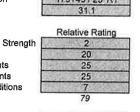
Project Number:080457Project Name:UPRR Overpass & Realign. (Mayflower) (S)Date Tested:12/4/2019 & 12/18/2019

Station	Location	Sample No.	Depth (ft.)	Diameter (in)	Height (in)	Total Load (lbs.)	Correction Factor	Stress (psi)	Remarks
180+38	40' Rt	1	20.3	1.75	3.53	3,530	1.00	1,468	
180+38	40' Rt	2	23.3	1.75	3.56	13,830	1.00	5,750	
180+38	40' Rt	3	27.8	1.75	3.53	18670	1.00	7,762	
179+42	41' Rt	4	20.8	1.75	3.55	17,180	1.00	7,143	
179+42	41' Rt	5	31.6	1.75	3.64	19,220	1.00	7,991	
179+45	23' Rt	6	20.3	1.75	3.50	10,050	1.00	4,178	
179+45	23' Rt	7	28.5	1.75	3.53	20,640	1.00	8,581	
179+45	23' Rt	8	31.1	1.75	3.54	5,580	1.00	2,320	
179+49	5.5' Rt	9	18.7	1.75	3.59	5,120	1.00	2,129	
179+49	5.5' Rt	10	29.0	1.75	3.55	3,190	1.00	1,326	
179+52	12' Lt	11	16.9	1.75	3.53	3,480	1.00	1,447	
179+52	12' Lt	12	20.5	1.75	3.52	7,070	1.00	2,939	
179+52	12' Lt	13	28.1	1.75	3.60	13,930	1.00	5,791	
179+56	30' Lt	14	19.7	1.75	3.50	7,780	1.00	3,235	
179+56	30' Lt	15	29.4	1.75	3.57	12,620	1.00	5,247	
178+09	41' Rt	16	19.9	1.75	4.33	17,960	1.00	7,467	
178+09	41' Rt	17	27.4	1.76	4.27	17,540	1.00	7,210	
178+09	41' Rt	18	31.8	1.76	3.73	25,230	1.00	10,371	
178+14	23' Rt	19	18.4	1.76	4.18	13,030	1.00	5,356	
178+14	23' Rt	20	23.9	1.75	4.11	14,720	1.00	6,120	
178+14	23' Rt	21	29.5	1.76	3.88	23,610	1.00	9,705	
178+14	23' Rt	22	34.0	1.75	4.37	19,500	1.00	8,107	
178+16	5.5' Rt	23	16.8	1.75	4.10	23,870	1.00	9,924	
178+16	5.5' Rt	24	22.7	1.76	4.36	12,320	1.00	5,064	
178+16	5.5' Rt	25	29.8	1.75	4.42	19,810	1.00	8,236	
178+20	12' Lt	26	17.0	1.74	4.31	13,340	1.00	5,610	
178+20	12' Lt	27	23.5	1.76	4.28	12,230	1.00	5,027	
178+20	12' Lt	28	31.3	1.76	4.42	12,910	1.00	5,307	
178+25	30' Lt	29	17.3	1.76	4.07	11,940	1.00	4,908	
178+25	30' Lt	30	23.4	1.76	4.08	10,810	1.00	4,443	
178+25	30' Lt	31	27.7	1.76	4.18	12,620	1.00	5,187	

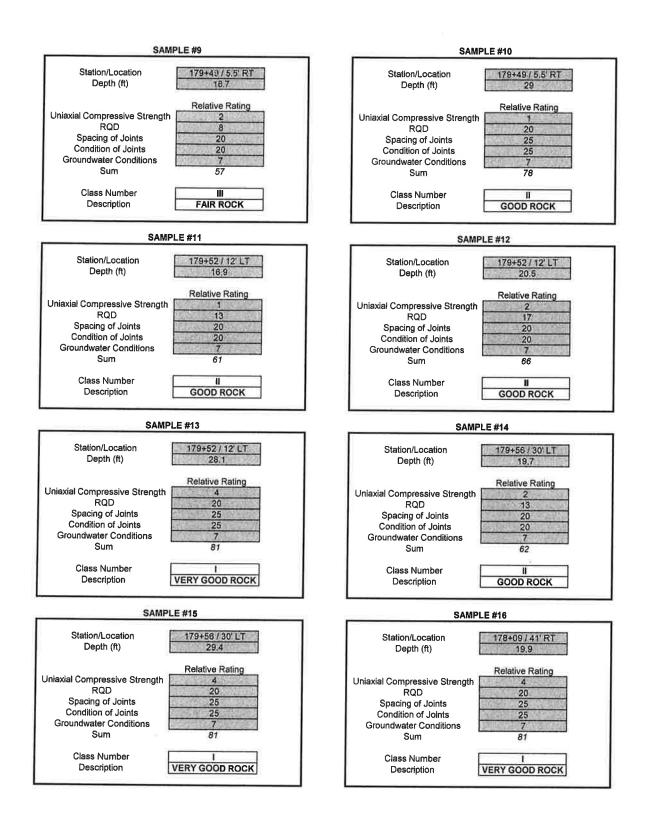
ROCK MASS RATING SUMMARY JOB # 080457

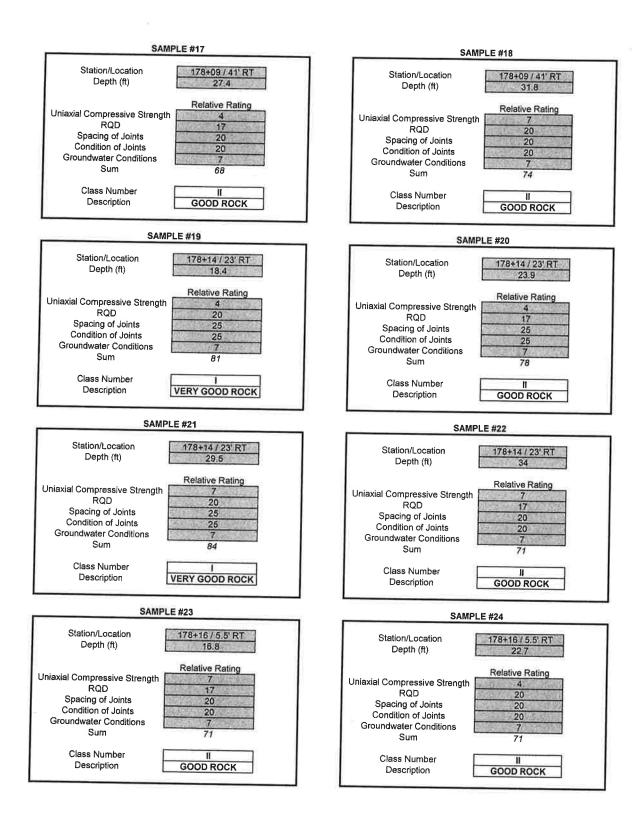


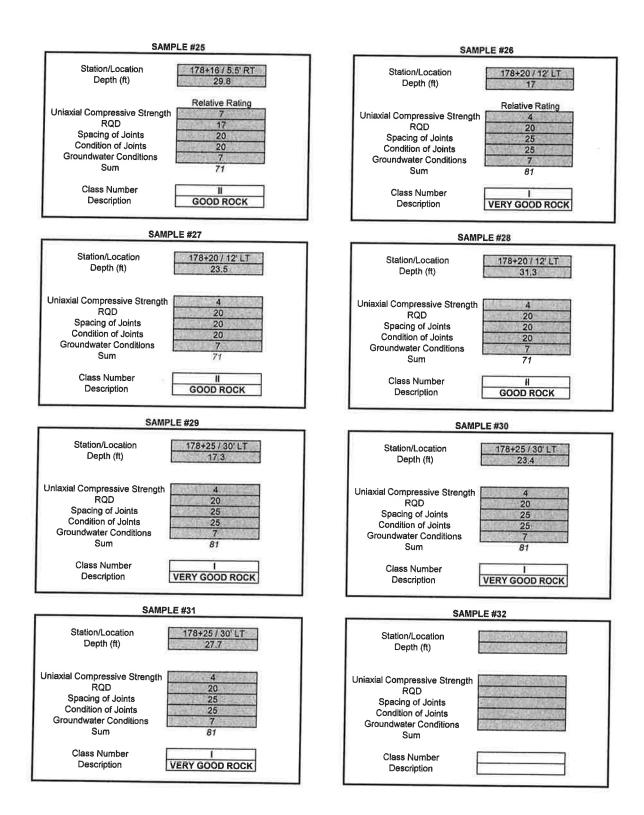
179+45/23' RT



GOOD ROCK







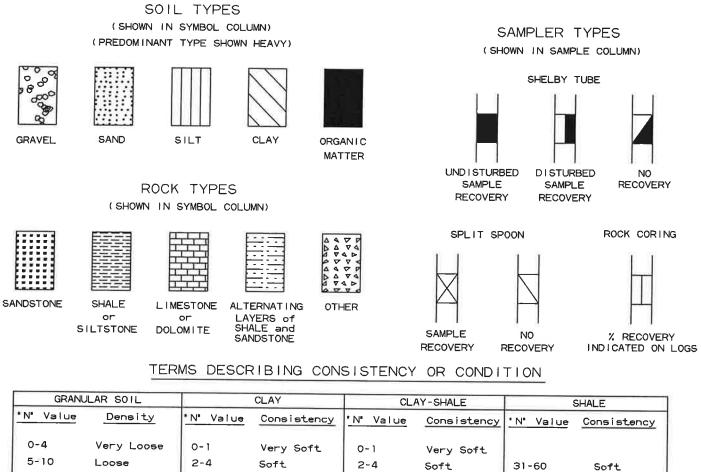
Rock Core Unit Weight Summary

Project Number:080457Project Name:UPRR Overpass & Realign. (Mayflower) (S)Date Tested:1/21/2020

Station	Location	Sample No.	Depth (ft.)	Diameter (in.)	Height (in.)	Weight (lbs.)	Unit Weight (pcf)	Remarks
186+21	20' Rt	1	31.2	1.75	3.94	0.926	169	I-40 Overpass
186+21	20' Rt	2	38.0	1.75	3.40	0.794	168	I-40 Overpass
184+21	20' Rt	3	23.5	1.75	5.30	1.235	167	I-40 Overpass
184+21	20' Rt	4	32.6	1.75	4.79	1.119	168	I-40 Overpass
184+21	20' Lt	5	22.8	1.75	4.26	0.996	168	I-40 Overpass
184+21	20' Lt	6	28.7	1.75	3.69	0.866	169	I-40 Overpass
180+38	40' Rt	7	24.4	1.75	5.03	1.166	167	UPRR Overpass
180+38	40' Rt	8	32.1	1.75	4.16	0.954	165	UPRR Overpass
179+49	5.5' Rt	9	21.3	1.74	6.63	1.516	166	UPRR Overpass
179+49	5.5' Rt	10	27.8	1.75	4.56	1.070	169	UPRR Overpass
178+16	5.5' Rt	11	19.5	1.75	5.65	1.317	167	UPRR Overpass
178+16	5.5' Rt	12	29.3	1.75	5.15	1.202	168	UPRR Overpass
177+37	C.L.	13	20.0	1.75	3.60	0.836	167	UPRR Overpass
177+37	C.L.	14	29.0	1.75	4.92	1.143	167	UPRR Overpass
								125

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

LEGEND



11		-		tory ourc		Very SUIC	
	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'
	0ver 50	Very Dense	16-30	Very Stiff	16-30	Very Stiff	Penetration
		1	31-60	Hard	31-60	Hard	in 60 Blows, Medium Har
			0ver 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, and 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: $\frac{6}{8-9} \Rightarrow 8+9 = 17blows / ft$. The "N" Value corrected to 60% efficiency (Ne) can be obtained by multiplying N by the last of the second second

efficiency (N_{60}) can be obtained by multiplying N_f by the hammer correction factor published on the boring log.

		DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN PAGE	IG NO		- 2					
OB NO.	_	080457 Faulkner County		DATE:				mbe	r 9, 2	019		
OB NAME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE O	FDR				, <i>2</i>	017		
		Route 89 Sections 4 & 5						r - D	iamo	nd Cor	·e	
STATION:		177+29		EQUIPN			U		ker 20			
OCATION:		39' Right of Construction Centerline										
		itanley Bates		HAMM	ER CO	DRRECT	FION I	FACT	OR:	N	/A	
	_	DEPTH: 39.7										
D s	S											
	A M							Ē	S		%	%
т М	P	DESCRIPTION OF MATERIAL	SOIL				H	U.F	NO NO	· / ·	r	R
H B	Ĺ		GROUP	2	ST.		E	CR C	BL	z	C R	Q
	Е			PLASTIC LIMIT	% MOIST.	II II	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.	ĸ	D
=T, L	S	SURFACE ELEVATION: 289.0		LIN LIN	N %	LIQUID	DR	LBS	N N	PEF		
5												
	\rightarrow	Dry, Medium Dense, Brown Sandy Silt							7			
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10												
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		Dy, Dense, Reddish Brown Silty Sand										
15			24									
	\times	SHALE - Weathered, Medium Hard, Brown and							22			
		Gray							60 (4"			
	T								(4	′ -		
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20	-											
										9	8	98
	11											
5												
		SHALE Unweathered Medium Hard Dark									1	
· - 553		SHALE - Unweathered, Medium Hard, Dark Gray										
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	OF 2			
JOB NAME: UPRR Overpass & Realign. (Mayflower) (S) TYPE OF DRILLIN Route 89 Sections 4 & 5 Hollow Stem	Auger - D	Diamond	Core	0
STATION: 177+29 EQUIPMENT: LOCATION: 39' Right of Construction Centerline HAMMER CORRECT LOGGED BY: Stanley Bates HAMMER CORRECT		ker 2094	N/A	
COMPLETION DEPTH: 39.7	CHONTAC	IOK.	11//1	
D S S E Y A P M P T B L H O E FT. L S SURFACE ELEVATION: 289.0 289.0	LIMIT DRY WEIGHT LBS PER CU.FT.	NO. OF BLOWS	% T C R	% R Q D
SHALE - Unweathered, Medium Hard, Occasional Fractures, Dark Gray			100	80
Boring Terminated				
REMARKS: UPRR & Hwy 365 overpass				

	DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN							
JOB NO.	080457 Faulkner County		PAGE	1	_	7 2		01 L m	2010	_
JOB NAME:	UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		DATE: TYPE O Holl		ILLING	:		and 10, iamono		
STATION: LOCATION:	177+37 Construction Centerline		EQUIPN			ugei		ker 209		
	Stanley Bates		HAMMI	ER CC	RREC	FION 1	FACT	OR	N/A	
	N DEPTH: 38.9							U.N.		
DSA PMP TBL FT.CS	DESCRIPTION OF MATERIAL	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	% T C R R	% R Q D
	SURFACE ELEVATION: 286.7		PL. LIN	1%	FE	DR	LB	ON R	<u> </u>	
	Dry, Medium Dense, Brown Sandy Silt					1		7 8-10	-	
	SHALE - Highly Weathered, Medium Hard, Reddish Brown							15 50-57		
-	SHALE - Weathered, Medium Hard, Brown and Gray							60 (4")		
·	SHALE - Unweathered, Medium Hard, Dark Gray								100	96
20	SHALE - Unweathered, Medium Hard, Occasional Fractures, Dark Gray								99	87
								×	100	97
0	SHALE - Unweathered, Medium Hard, Dark Gray								100	100

MATE	ERIA	LS	DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN PAGE	IG NO 2		2					
JOB N			080457 Faulkner County		DATE:		Dec		er 9 a	and 1	0, 20	019	_
IOB N.	AME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE C	F DR					í		
			Route 89 Sections 4 & 5		Holl	ow S	tem A	uger	- D	iamo	nd C	Core	
STATI			177+37		EQUIPM	IENT	ł		Acl	ker 2	094		
LOCA			Construction Centerline										
			tanley Bates		HAMM	ER CC	DRRECT	TON	FACT	OR:		N/A	_
			DEPTH: 38.9		1		1						_
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P	Y	M						Ц	$\mathrm{FT}_{\mathbb{N}}$	NS		%	%
Т	M B	Р	DESCRIPTION OF MATERIAL	SOIL GROUP		- 20		GH	CU.	2		T	R
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FT.	Ľ	E S			PLASTIC	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
- I.,		3	SURFACE ELEVATION: 286.7	_	27	%	EE	Ä	LB	ž	PE		
												100	10
40			Boring Terminated										
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EMA	RKS:	UF	PRR & Hwy 365 overpass										

	DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN PAGE			2					
			DATE:				mha	r10, 2	010		-
IOB NO.							mbei	10, 2	019		
IOB NAME:	UPRR Overpass & Realign. (Mayflower) (S)		TYPE O				D	•	10.		
	Route 89 Sections 4 & 5				tem A	ugei				re	
STATION:			EQUIPM	1ENT	:		Ac	ker 20	J94		
	39' Left of Construction Centerline										
	Stanley Bates		HAMMI	ER CC	DRRECT	TION :	FACT	OR:	N	I/A	
COMPLETIC	ON DEPTH: 39.2										-
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							T	\$		%	
	DESCRIPTION OF MATERIAL	SOIL				H	U.F	MO		т	
		GROUP		E I		DE	S	BLO		C	
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FT. L			PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
F 1.7 C	SURFACE ELEVATION: 287.3			%	122		1	Z	<u> </u>	_	-
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5	Moist, Medium Dense, Brown Sandy Silt							3			
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	Dry, Hard, Reddish Brown Clay										
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	SHALE - Weathered, Medium Hard, Brown and							42 (1			
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JOB N JOB N	10.		080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S)		DATE: TYPE C		I	Decer	mber	r10, 2	2019		
			Route 89 Sections 4 & 5		Holl	ow S	Stem A					Core	
STATI LOCA			177+45 39' Left of Construction Centerline		EQUIPM	MENT	1 4) *)		Ac	ker 2	094		
LOGG	ED BY	(: S	tanley Bates		НАММ	ER CO	ORRECT	TION	FACT	OR:		N/A	
COM D		ION S	I DEPTH: 39.2	Т	T	1		r	_		-		
E P	S Y M	A M	DESCRIPTION OF MATERIAL	SOIL				HT .	J.FT.	SMO		% T	% R
T H	B O L	P L E		GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	C R	Q D
FT,		S	SURFACE ELEVATION: 287.3		PLA	% N	LIQ	DR	LBS	NO.	PER		
			SHALE - Unweathered, Medium Hard, Occasional Fractures, Dark Gray									98	82
40			Boring Terminated										
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JOB NO.		DIVISION - GEOTECHNICAL SEC.	_	PAGE	1		1					
JOB NO. JOB NAME:		080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		DATE: TYPE O	F DR				: 11, 2 low St			er
STATION:		177+53		EQUIPN	1ENT	:		Ac	ker 2()94		
	Y: S	78' Left of Construction Centerline Stanley Bates		HAMM	ER CO	ORRECT	TION	FACT	OR:		N/A	
COMPLET	ION	DEPTH: 25.1										
D E P T H O FT.	S A M P L E S	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 286.9	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	% R Q D
— —	X	Moist, Very Loose, Brown Sandy Silt			•				1 1-1			
 5	X	Moist, Medium Dense, Brown Sandy Silt							3 7-6			
— — — — — — — — — — — — — — — — — — —	X	Dry, Medium Dense, Brown Sandy Silt							7 6-6 6 9-12			
	X	SHALE - Highly Weathered, Soft, Reddish Brown							14 16-3			
	\times	SHALE - Weathered, Medium Hard, Brown and Gray							20 60 (4") 33 60 (4")			
 25		SHALE - Unweathered, Hard, Dark Gray							60 (1")			
		Boring Terminated							20 (1")	⅃		
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0												
5 EMARKS:	UF MS	PRR & Hwy 365 overpass SE Boring										_

JOB NO. 080457 Faulkner County I JOB NAME: UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 STATION: 178+09 I LOCATION: 41' Right of Construction Centerline I LOGGED BY: Stanley Bates I COMPLETION DEPTH: 38.7 D S S K A	PAGE DATE: TYPE O. Hollo EQUIPM HAMME	ow S 1ent	I ILLING Stem A	i:		er 2, 2	2019		_
JOB NAME: UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 STATION: 178+09 LOCATION: 41' Right of Construction Centerline LOGGED BY: Stanley Bates COMPLETION DEPTH: 38.7	TYPE O. Holle EQUIPM	ow S 1ent	ILLING Stem A	i:		r 2, 2	.019		
LOCATION: 41' Right of Construction Centerline LOGGED BY: Stanley Bates COMPLETION DEPTH: 38.7 D S S E S A			:		r - D	iamo	nd C	ore	
COMPLETION DEPTH: 38.7	HAMME	ER CC			Ac	ker 2	094		
D S S A			DRRECT	TION	FACT	OR:]	N/A	_
E V A				T		T			
PTMPDESCRIPTION OF MATERIALSOIL GROUPTBLHOEFT.LSSURFACE ELEVATION: 285.8	PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	% R Q D
5 Moist, Very Stiff, Brown Clay		6				6 1			
10 SHALE - Highly Weathered, Medium Hard, Light Brown						14 20-1			
15 SHALE - Weathered, Medium Hard, Brown and Gray SHALE - Slightly Weathered, Medium Hard,						10 34-6 (7"			
20 SHALE - Unweathered, Medium Hard, Dark Gray							-	91 96	0 92
								100	89
30 SHALE - Unweathered, Medium Hard, Occasional Fractures, Dark Gray							1	100	82
35									
EMARKS: UPRR & Hwy 365 overpass								J,	

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JOB N JOB N	0.	(i 	080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		DATE: TYPE C)F DR	1	Dece		r 2, 2			
STATI LOCA	ON: TION:		178+09 41' Right of Construction Centerline		EQUIPN			luger		ker 2			
.0GG	ED BY	/: S	tanley Bates DEPTH: 38.7		HAMM	ER CO	DRRECT	TION	FACT	OR:		N/A	
D	_	S	DEPTH: 38./		1			-					1
Е Р Т Н	S Y M B O L	A M P L E	DESCRIPTION OF MATERIAL	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	9 F C I
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			DIVISION - GEOTECHNICAL SEC.		PAGE	1		7 2					
JOB N			080457 Faulkner County		DATE:				mbe	r 3, 2	019		
JOB N	IAME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE C								
			Route 89 Sections 4 & 5				Stem A	luge				Core	
STATI			178+14		EQUIPM	1ENT	:		Ac	ker 2	094		
LOCA			23' Right of Construction Centerline										
		_	tanley Bates		HAMM	ER CC	DRRECT	TION	FACT	OR:		N/A	
	PLET		I DEPTH: 39.3					r—					
D	s	S											
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15	777	\geq								35			
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REMA	RKS:	U	PRR & Hwy 365 overpass										

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OCATION:	178+14 23' Right of Construction Centerline Stanley Bates		EQUIPN					ker 2			
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D S A P M M T B L T, L S	DESCRIPTION OF MATERIAL	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	9 F C I
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JOB N		_	DIVISION - GEOTECHNICAL SEC. 080457 Faulkner County		PAGE	1		2			010	_	_
JOB N			080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S)		DATE:				mbe	r 3, 2	019		
10D IN	a xivita.		Route 89 Sections 4 & 5		TYPE O		ILLING		. D	iame	nd Ca	P/S	
STATI	ION:		178+16	1	EQUIPM			ruge		ker 2		re	
LOCA			5.5' Right of Construction Centerline		LQUIN	a Ein I			AC.	KCI Z	J94		
			tanley Bates		HAMMI	ERCO	DRRECT	LION	FACT	OR	N	I/A	
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FT.	L		SURFACE ELEVATION: 285.5		PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.		
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ME: N: ON: DBY: LETIC S Y M B O	S DIVISION - GEOTECHNICAL SEC. 080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 178+16 5.5' Right of Construction Centerline Stanley Bates ON DEPTH: 39.3 DESCRIPTION OF MATERIAL	SOIL	PAGE DATE: TYPE O Holl EQUIPN HAMMI	ow S 1ent	I LLING tem A	uger	- Di Ack	iamo cer 2	nd C		
N: D BY: DETIC S Y M B O	Route 89 Sections 4 & 5 178+16 5.5' Right of Construction Centerline Stanley Bates DN DEPTH: 39.3 DESCRIPTION OF MATERIAL	SOIL	Holl equipn	ow S 1ent	tem A	uger	Ack	cer 2		Core	
ON: DBY: LETIC S Y M B O	178+16 5.5' Right of Construction Centerline Stanley Bates ON DEPTH: 39.3 DESCRIPTION OF MATERIAL	SOIL	EQUIPN	(ENT:			Ack	cer 2		ore	
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S Y M B O	DESCRIPTION OF MATERIAL	SOIL	1					OR:	1	N/A	_
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			PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	R	D
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	DIVISION - GEOTECHNICAL SEC.080457Faulkner CountyUPRR Overpass & Realign. (Mayflower) (S)Route 89Sections 4 & 5		PAGE DATE:	1		7 2	mho	r 4, 20	10	
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Y: 1	178+20 12' Left of Construction Centerline		EQUIPM	IENT:			Acl	ker 20	94	
	Froy Frazier		HAMMI	ER CC	RRECT	TION	FACT	OR:	N/A	<u> </u>
T	N DEPTH: 39.5	1	1							
S A M P L E S	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 285.6	SOIL GROUP		% MOIST.	JIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	A C R	% R C D
X	Dry, Very Stiff, Brown Clay with Sand							7 12-1	6	
X	SHALE - Highly Weathered, Soft, Light Brown								5	
	SHALE - Weathered, Medium Hard, Brown and Gray							36 (2")	-	
	SHALE - Unweathered Medium Hard Derk								94	9
	Gray								100	99
									97	91
	SHALE - Unweathered, Medium Hard, Occasional Fractures, Dark Gray								100	98
	PLES	PL SURFACE ELEVATION: 285.6 Dry, Very Stiff, Brown Clay with Sand SHALE - Highly Weathered, Soft, Light Brown SHALE - Weathered, Medium Hard, Brown and Gray SHALE - Unweathered, Medium Hard, Dark Gray SHALE - Unweathered, Medium Hard, Dark Gray	P L SOIL GROUP SOIL SOIL GROUP SURFACE ELEVATION: 285.6 Dry, Very Stiff, Brown Clay with Sand SHALE - Highly Weathered, Soft, Light Brown SHALE - Weathered, Medium Hard, Brown and Gray SHALE - Unweathered, Medium Hard, Dark Gray SHALE - Unweathered, Medium Hard, Dark SHALE - Unweathered, Medium Hard, Dark Gray SHALE - Unweathered, Medium Hard, Dark	P L SOIL GROUP S SURFACE ELEVATION: 285.6 Dry, Very Stiff, Brown Clay with Sand SHALE - Highly Weathered, Soft, Light Brown SHALE - Weathered, Medium Hard, Brown and Gray SHALE - Unweathered, Medium Hard, Dark Gray SHALE - Unweathered, Medium Hard, Dark Gray SHALE - Unweathered, Medium Hard, Dark Gray	P L SOIL GROUP GROUP USVA GROUP USVA Dry, Very Stiff, Brown Clay with Sand Image: Constraint of the second	P L SOIL SOIL GROUP S SURFACE ELEVATION: 285.6 ROUP ROUP ROUP Dry, Very Stiff, Brown Clay with Sand SHALE - Highly Weathered, Soft, Light Brown SHALE - Weathered, Medium Hard, Brown and Gray SHALE - Unweathered, Medium Hard, Dark SHALE - Unweathered, Medium Hard, Dark SHALE - Unweathered, Medium Hard, Dark SHALE - Unweathered, Medium Hard, Dark Image: Shale - Unweathered, Medium Hard, Dark Image: Shale - Unweathered, Medium Hard, Dark SHALE - Unweathered, Medium Hard, Oark SHALE - Unweathered, Medium Hard, Dark Image: Shale - Unweathered, Medium Hard, Dark Image: Shale - Unweathered, Medium Hard, Dark SHALE - Unweathered, Medium Hard, Oark Image: Shale - Unweathered, Medium Hard, Dark Image: Shale - Unweathered, Medium Hard, Dark SHALE - Unweathered, Medium Hard, Oark Image: Shale - Unweathered, Medium Hard, Dark Image: Shale - Unweathered, Medium Hard, Oark SHALE - Unweathered, Medium Hard, Oark Image: Shake - Unweathered, Medium Hard, Oark Image: Shake - Unweathered, Medium Hard, Oark SHALE - Unweathered, Medium Hard, Oark Image: Shake - Unweathered, Medium Hard, Oark Image: Shake - Unweathered, Medium Hard, Oark	P L SOL GROUP SOL GR	P USSCRIPTION OF MATERIAL SOIL SOIL UNIT UNIT <td< td=""><td>P DESCRIPTION OF MATERIAL SOIL GROUP OULUNIT SOIL SURFACE ELEVATION: 285.6 OULUNIT OULUNIT Dry, Very Stiff, Brown Clay with Sand Image: Construction of the second second</td><td>P DESCRIPTION OF WATERIAL SOIL GROUP UIL UIL STATUT OUT TO BAR 000 WATERIAL SOIL SURFACE ELEVATION: 285.6 UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL STATUT UIL</td></td<>	P DESCRIPTION OF MATERIAL SOIL GROUP OULUNIT SOIL SURFACE ELEVATION: 285.6 OULUNIT OULUNIT Dry, Very Stiff, Brown Clay with Sand Image: Construction of the second	P DESCRIPTION OF WATERIAL SOIL GROUP UIL UIL STATUT OUT TO BAR 000 WATERIAL SOIL SURFACE ELEVATION: 285.6 UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL UIL STATUT UIL STATUT UIL

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AME:		UPRR Overpass & Realign. (Mayflower) (S)			OF DR				- 19 4			
				Holl	ow S	Stem -	Dia	none	d Coi	e		
				EQUIPN	MENT	:		Ac	ker 2	094		
	_			HAMM	ER CO	DRRECT	TION	FACT	COR:		N/A	_
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	A											
		DESCRIPTION OF MATERIAL	SOU					.FT.	MS		%	
В			GROUP	U	L.		GIG	SCL	BLO	÷		
	E			STIC	OIS	<u>g</u> e	M	PER	OF I	9-IV	R	1
L	S	SURFACE ELEVATION: 285.6		PLA	W %	LIQI	DRY	LBS	NO.	PER		
											99	9
		Boring Terminated	-	-	_							
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			-									
NO:	U٢	RR & HWy 365 overpass										
	O. AME: ON: TION: ED B ^V PLET S Y M B O L	O. AME: IION: ED BY: T PLETION S A M P L E S C A M P L E S	O. 080457 Faulkner County AME: UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 ON: 178+20 TION: 12' Left of Construction Centerline ED BY: Troy Frazier PLETION DEPTH: 39.5 S A M P B L O E	0. 080457 Faulkner County AME: UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 ON: 178+20 FION: 12' Left of Construction Centerline ED BY: Troy Frazier PLETION DEPTH: 39.5 S S Y M M P DESCRIPTION OF MATERIAL SOIL GROUP S SURFACE ELEVATION: 285.6 Boring Terminated	0. 080457 Faulkner County DATE AME: UPRR Overpass & Realign. (Mayflower) (S) TYPE (Holl Route 89 Sections 4 & 5 Holl CIN: 178+20 EQUIP TION: 12' Left of Construction Centerline EQUIP ED BY: Troy Frazier HAMM PLETION DEPTH: 39.5 SOIL SOIL S S A SOIL SOIL L E SURFACE ELEVATION: 285.6 SOIL	0. 080457 Faulkner County DATE AME UPRR Overpass & Realign. (Mayflower) (S) TYPE OF DR Route 89 Sections 4 & 5 Hollow S CON: 178+20 EQUIPMENT TON: 12' Left of Construction Centerline EQUIPMENT DED BY: Troy Frazier HAMMER CC VETION DEPTH: 39.5 San A DESCRIPTION OF MATERIAL SOIL S S A DESCRIPTION: 285.6 SOIL B SURFACE ELEVATION: 285.6 Soil Soil	0. 080457 Faulkner County DaTE AME: UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 DaTE N: 178+20 Four Destriction Centerline DION: 12/Left of Construction Centerline EOUIPMENT: PLETION DEPTH: 39.5 AMMER CORRECT S S A P L S SURFACE ELEVATION: 285.6 Boring Terminated Image: Signal	0. 080457 Faulkner County AME: UPRR Overpass & Realign. (Mayflower) (S) DATE: Dece Route 89 Sections 4 & 5 Hollow Stem - Dial COLL 178+20 EQUIPMENT: TRON: 12' Left of Construction Centerline EQUIPMENT: ED BY: Toy: Frazier HAMMER CORRECTION PLETION DEPTH: 39.5 S S S S S SURFACE ELEVATION: 285.6	0. 080457 Faulkner County DATE: December AME: UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 TYPE OF DRULLING: Hollow Stem - Diamon DOUPMENT: AC Hollow Stem - Diamon DBW: Toy Frazier Addition Centerline BOIL DBW: Toy Frazier Addition Centerline BOIL DESCRIPTION OF MATERIAL SOIL SOIL GROUP S S A DESCRIPTION OF MATERIAL SOIL S S SURFACE ELEVATION: 285.6 SOIL GROUP	0. 080467 Faulkner County AME: UPRR Overpass & Realign, (Mayflower) (S) DATE: December 4, 3 Route 89 Sections 4 & 5 TYPE OF DRULLING: Hollow Stem - Diamond Colections and the section of the	0. 080457 Faulkner County AMB: UPRR Overpass & Reaign. (Mayflower) (S) DATE: December 4, 2019 Route 89 Sections 4 & 5 December 4, 2019 T78+20 Troy Frazier Acker 2094 DITO: 12' Left of Construction Centerline Acker 2094 ED BY: Troy Frazier Acker 2094 JETION DEPTH: 39.5 Strandom Construction Centerline Sy A DESCRIPTION OF MATERIAL SOIL B L SURFACE ELEVATION: 285.6	0. 080457 Faulkner County AME: UPRR Overpass & Realign. (Mayflower) (S) Date: December 4, 2019 Route 89 Sections 4 & 5 T78+20 Type of paulation Date: December 4, 2019 TON: 12'Left of Construction Centerline Date: December 4, 2019 Type of paulation DEDSY Troy Frazier Acker 2094 Advert 2094 MMMER CORRECTION PACTOR: N/A PLETION DEPTH: 19.5 SurFace Elevation: 285.6 Soft, GROUP Uput States of the stat

			DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN								
JOB N	_	_	Division - GEOTECHNICAL SEC. D80457 Faulkner County		PAGE DATE:	1		F 2	mbo	er 4, 2	2010		_
JOB N			UPRR Overpass & Realign. (Mayflower) (S)		TYPE C)F DR			mbe	1 4 , 2	2019		
			Route 89 Sections 4 & 5				Stem A		r - D	iamo	ond C	Core	
STATI	ION:		178+25		EQUIPN			0		ker 2			
LOCA			30' Left of Construction Centerline										
		_	roy Frazier		HAMM	ER CO	DRREC	TION	FACI	FOR:		N/A	_
	PLEI		DEPTH: 39.2		1		T	1			_	_	_
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P	Y M	M	DESCRIPTION OF MATERIAL					H	FT.	WS		%	%
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н	Ō	L E			Цй г	UIS]	19 -	WE	PER	OFE	Q-IN	R	D
FT ₂	L		SURFACE ELEVATION: 285.5		PLASTIC LIMIT	% MOIST	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.		
	XX					٥`				4	<u>д</u>	-	
 10	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	\times	Dry, Very Stiff, Brown and Gray Clay with Sand							ہ 13) -17		
		X	SHALE - Highly Weathered, Medium Hard, Light Brown							1 27-	7 -37		
			SHALE							3 (1	0 ")		
<u>20</u>			SHALE - Unweathered, Medium Hard, Dark Gray									92 98	92 94
25			SHALE - Unweathered, Medium Hard, Occasional Fractures, Dark Gray									99	98
<u>30</u>			SHALE - Unweathered, Medium Hard, Dark Gray									98	94
35													
-	RKS:	UF	PRR & Hwy 365 overbass							_		_	
EMA	RKS:	UF	PRR & Hwy 365 overpass										

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-		-	DIVISION - GEOTECHNICAL SEC.		PAGE	2		_		- 01 772			_
JOB N			080457 Faulkner County		DATE:				mbei	r 4, 2	019		
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE O				D		-10		
OTATI	ON		Route 89 Sections 4 & 5 178+25				tem A	uger		ker 2		ore	
STATI			30' Left of Construction Centerline		EQUIPM	IENI;			Act	Kel 2	094		
and the second sec			roy Frazier		HAMMI	RCC	RRFCT	ION	FACT	OR		N/A	
			DEPTH: 39.2		TH WHIT	an e e	THE P			011			-
D		S			T	1	<u> </u>				1		
E	S	A											
P	Y M	M	DESCRIPTION OF MATERIAL	SOIL				<u></u>	J.FT	MS		% T	% R
Т	B	P		GROUP		L_			CC	BLC		C	Q
н	Ō				DITS T	OIS	E F	M	PER	OF 1	6-IN	R	D
FT.	L	E S	SURFACE ELEVATION: 285.5		PLASTIC LIMIT	% MOIST	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
<u> </u>		H	SURFACE ELEVATION. 285.5			6				4	Р	-	
-			SHALE - Unweathered, Medium Hard,										
			Occasional Fractures, Dark Gray										
			05039-50-504507, 331										
								_	_			00	00
40			Boring Terminated									99	82
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70							1						
and the second se		2. 1	JPRR & Hwy 365 overpass				<u> </u>						
). (ITTA A HWY 505 OVELPASS										
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		-	DIVISION - GEOTECHNICAL SEC.		PAGE	1	_	7 1	-				_
JOB N			080457 Faulkner County		DATE:				mbei	: 25, 2	2019		
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		TYPE O								
07.47			A film dependence i com serve ser				tem A	luge			004		
STAT			180+34.5		EQUIPM	1ENT			Ac	ker 20	094		
THE PROPERTY IS	TION:		80' Right of Construction Centerline						n. 07	10.0		NT/A	
		_	tanley Bates		HAMM	ERCU	DRRECT	TION	FACI	OR:		N/A	-
	PLET	_	DEPTH: 25.1		<u> </u>	r	<u> </u>						
D E	S	S A											
P	Y	Ŵ							FT	S		%	%
ΙŤ	M	P	DESCRIPTION OF MATERIAL	SOIL		72		H.	D.	5		Т	R
н	B	L		GROUP	12	ST.		AEI	ER (18 H	Ż	C R	Q D
	L	Е			AST	% MOIST.	55	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	<u> 3</u> 6-	ĸ	D
FT	L .	S	SURFACE ELEVATION: 289.6		PLASTIC LIMIT	% N	LIQUID	DR	LB	2 Z	PER 6-IN.		
	XX		Asphalt	ĺ.	1								
	\mathbb{N}												
	\mathbb{N}		Dry, Hard, Reddish Brown Sandy Clay with										
	\mathbb{N}	X	Some Gravel							24-			
	\mathbf{N}	$\langle - \rangle$								24-	30		
5										1!	5		
<u> </u>	$\left \right\rangle$	Х	Dry, Very Hard, Reddish Brown and Light Gray							27-			
	\sim	()	Clay with Some Gravel										
	Near S	\bigtriangledown								2	7		
		\bigtriangleup	Dry, Very Hard, Reddish Brown Sandy Clay with							43-			
10	\mathbf{x}		Gravel							(11	")		
	11	\bigtriangledown								14			
	\sim	\bigtriangleup								28-	40		
	\sim		Dry, Very Hard, Reddish Brown Clay with Some										
<u> </u>	\sim	\bigvee	Gravel							20			
	\sim	\bigtriangleup								41-	56		
15	$\overline{7}$									39			
	<i>44</i>	X								6			
	<i>777</i>	Į į								(4	")		
	<i>777</i>								0				
	5555							[
20	7773		SHALE - Highly Weathered, Medium Hard,										
	<i>7773</i>	\geq	Brown and Gray							60			
	7 <i>7</i> 75									(4'	")		
	<i>111</i>												
	111												
	111												
25	<i>\$177</i>												
			SHALE (No sample recovered)							2!	5		
			Boring Terminated										
30													
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35													
REM/	ARKS	: U	PRR & Hwy 365 overpass										
			ISE Boring										
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-			DIVISION - GEOTECHNICAL SEC.		PAGE	1	_	2					
JOB N			080457 Faulkner County		DATE:		N	over	nber	25,2	2019		
JOB N.	AME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE O				_				
			Route 89 Sections 4 & 5				tem A	ugei				ore	
STATI			180+38		EQUIPM	1ENT:			Ac	ker 2	094		
LOCA			40' Right of Construction Centerline									T/A	
		-	tanley Bates		HAMMI	ER CC	RRECT	TION	FACT	OR:	1	N/A	
rr	PLET	_	DEPTH: 39.4					-					
D E P T H	S Y M B O	S A M P L E	DESCRIPTION OF MATERIAL	SOIL GROUP	PLASTIC LIMIT	% MOIST.	limit	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	% R Q D
ET:	L		SURFACE ELEVATION: 289.8		TA	W 9	ŊĂ	RY N	BS	Ō.	ER		
	~	—	Asphalt			è.				~	<u> </u>		
		X	Moist, Very Hard, Reddish Brown Clay with Some Gravel							2: 40-	56		
		X	Dry, Very Hard, Brown and Light Gray Clay						0	11 61 (5	0		
10	14	\geq	¬ SHALE - Highly Weathered, Medium Hard,							6	0		
			Brown and Gray							(5	")		
			SHALE - Weathered with Highly Weathered Layers, Medium Hard, Brown and Gray									100	12
20			SHALE - Slightly Weathered, Medium Hard,								Î		
			Dark Gray									96	80
25												96	90
30			SHALE - Unweathered, Medium Hard, Dark Gray									100	92
and the second se	RKS	: U	PRR & Hwy 365 overpass										

					BORIN								
			DIVISION - GEOTECHNICAL SEC.		PAGE	2		2			0.0.0		-
JOB N			080457 Faulkner County		DATE:				nber	25,	2019)	
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		TYPE O							• 211 (mar.).	
orter	001						tem A	uger				ore	
STATI			180+38		EQUIPM	IENT			Ac	ker 2	094		
LOCA			40' Right of Construction Centerline									N1/A	
			T DEPTH: 39.4		HAMM	ER CC	DRRECT	TON	FACT	OR:	_	N/A	_
	PLET		DEPTH: 39.4		1		1	-	-		-		_
D	s	S											
E P	Y	A M							T.	\sim		%	%
Τ	M	P	DESCRIPTION OF MATERIAL	SOIL				E	U.I	0		Т	R
Ĥ	B	Ĺ		GROUP	2	ST.		E	CR C	B	ż	C	Q
	0	E			IT	% MOIST.	55	×) PE	OF	t 6-]	R	D
FT,	L	S	SURFACE ELEVATION: 289.8		PLASTIC LIMIT	% N	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
	蠿												
												96	96
40													
_40			Boring Terminated										
	ł.												
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<u> </u>													
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REMA	RKS	: U	PRR & Hwy 365 overpass										
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1. South States and States and States		DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN	ig no 1		2 1					
JOB NO.		080457 Faulkner County		PAGE DATE:	1			nbei	25,	2019)	
JOB NAME		UPRR Overpass & Realign. (Mayflower) (S)		ТҮРЕ О								
		Route 89 Sections 4 & 5				tem A	uge				Core	
STATION: LOCATION		180+49 77' Left of Construction Centerline		EQUIPN	<i>I</i> ENT	:		Ac	ker 2	094		
		Stanley Bates		HAMM	ER CO	ORRECT	TION	FACT	OR:		N/A	
		DEPTH: 22.3									_	
D s	S											
F Y	AM							FT	SN		%	%
	P	DESCRIPTION OF MATERIAL	SOIL GROUP		74		GH	CU.	FO/		T C	R
H O	LE		GROUF	TIC	DIST		MEI	PER	OF B	NI-5	R	Q D
FT.		SURFACE ELEVATION: 289.6		PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
		Asphalt			- ^				2	<u> </u>		
$\vdash \mathbb{N}$												
$\vdash \neg $												
		Moiet Hard Brown and Light Crow Clay										
5]	Moist, Hard, Brown and Light Gray Clay										
-N	∇								5			
$\vdash \uparrow$	\checkmark								33-	-23		
\vdash									1	0		
-	arphi	Dry, Very Hard, Brown and Light Gray Clay							33-	-60		
10									(10 E			
\vdash -//	٧X	Dry, Hard, Brown and Light Gray Clay							15-			
\vdash -//		Dry, Hard, blown and Light Gray Clay										
	\mathbb{X}											
15	עמער	SHALE - Highly Weathered, Brown										
<i>112</i>		SHALE - Highly Weathered, Medium Hard,	8						3			
	ANN	Brown and Gray							6 (4	0.")		
		SHALE - Weathered, Medium Hard, Brown and							τ.	<i>'</i>		
		Gray										
20												
		SHALE - Slightly Weathered, Medium Hard,										
		Dark Gray										
		Boring Terminated										
25												
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	S: L	IPRR & Hwy 365 overpass		.								
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JOB N		-	DIVISION - GEOTECHNICAL SEC. 080457 Faulkner County		PAGE DATE:	1		2 (over	nha	13,2	2010		_
JOB N			UPRR Overpass & Realign. (Mayflower) (S)		DATE: TYPE O	FDRI			noei	15,	2019		
10B N	MINE.		Route 89 Sections 4 & 5				tem A		r - D	iamo	nd C	ore	
STATI	ION:		179+42		EQUIPN					ker 2			
LOCA			41' Right of ConstructionCenterline										
			tanley Bates		HAMM	ER CC	RRECT	TION	FACT	OR:		N/A	
COM	PLET	ION	DEPTH: 38.6										
D		s								Ĩ			
E	S Y	Α							P	0		0/	%
P	м	М	DESCRIPTION OF MATERIAL	SOIL				HT	U.F	No No		% T	% R
T H	В	P		GROUP		E		EIG	RC	BL	ż	C	Q
	0	E			ITS	IOIS		DRY WEIGHT	PE	NO. OF BLOWS	I-9	R	D
FT,	L	s	SURFACE ELEVATION: 288.7		PLASTIC LIMIT	% MOIST.	LIQUID	DR	LBS PER CU.FT	NO.	PER 6-IN.		
	des		n			<u> </u>							
	500 9												
\Rightarrow													
	ga d		Moist, Dense, Reddish Brown Sand with Silt and										
5	30.0	\bigtriangledown	Gravel								0		
	100.00	\bigtriangleup								21-	-23		
	arge "												
	49. CO												
10										2	3		
	777	Å			0						-49		
			SHALE - Highly Weathered, Medium Hard,							(1)	0")		
	ジジ		Brown										
	947 2472												
15	<i>44</i>		SHALE - Highly Weathered, Medium Hard,							6	0		
	777		Brown and Dark Gray							(5			
	<i>146</i>		SHALE - Highly Weathered, Medium Hard with									94	0
	££		Soft Layers, Brown and Dark Gray									34	v
	<i>44</i>												
20	777		SHALE - Weathered, Medium Hard, Dark Gray										
20			· · · · · · · · · · · · · · · · · · ·										
			SHALE - Unweathered, Medium Hard, Dark									99	66
\vdash –			Gray										
			8										
25													
			SHALE - Unweathered, Medium Hard,									99	85
			Occasional Fractures, Dark Gray										
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			SHALE - Unweathered, Medium Hard, Dark										_
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a second s	ARKS		IPRR & Hwy 365 overpass			4							-
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D. ME: DN: ION: DBY: LETI S Y M B O	ON SAMPLE	DIVISION - GEOTECHNICAL SEC. 200457 Faulkner County JPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 179+42 H1' Right of ConstructionCenterline tanley Bates DEPTH: 38.6 DESCRIPTION OF MATERIAL		PAGE DATE: TYPE O Holl EQUIPN HAMMI	ow S 1ent:	N LLING tem A	uger	- D Acl		ond C 094		
ION: D BY LETI Y M B O	St ON S A M P L E	11' Right of ConstructionCenterline anley Bates DEPTH: 38.6		EQUIPN	IENT:			Ac		094		
S Y M B O	ON S A M P L E	DEPTH: 38.6		наммі	ER CC	RRECT	'ION I	- ACT				
S Y M B O	S A M L E							AUI	OR;		N/A	
M B O	P L E	DESCRIPTION OF MATERIAL										
-	- L		SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	% R Q D
	S	SURFACE ELEVATION: 288.7	_	PL/	% N	LIC	DR	LB	NO	PEF		
											98	9
		Boring Terminated										
1/0												
		S: UP	Boring Terminated									

	DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN PAGE	G NO		- 2					
JOB NO.	080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		DATE: TYPE O	F DR	Nove	embe			-		_
LOCATION:	179+45 23' Right of Construction Centerline		EQUIPN	IENT		-	Ac	ker (
LOGGED BY: S	N DEPTH: 38.1		HAMMI	ER CO	DRRECT	rion :	FACT	OR:]	N/A	
D S A P M P T B		SOIL GROUP				GHT	CU.FT.	LOWS		% T C	% R
	SURFACE ELEVATION: 288.0	UKUUF	PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.	R	Q D
5 	Dry, Very Dense, Reddish Brown Sand with Silt and Some Gravel						5	54 40 (4'	4 5 ")		
	SHALE - Highly Weathered, Medium Hard, Brown							60 (5'	') 		
	SHALE - Highly Weathered, Medium Hard with Soft Layers, Brown and Gray							51 49 (2'	ε 1	100	0
20	SHALE - Weathered, Medium Hard, Brown and Gray									400	
	SHALE - Unweathered, Medium Hard, Dark Gray									100	56
 25	SHALE - Unweathered, Medium Hard, Occasional Fractures, Dark Gray									96	80
 30 	SHALE - Unweathered, Medium Hard, Dark									100	10
35	Gray										
REMARKS: U	PRR & Hwy 365 overpass										

			DEPARTMENT OF TRANSPORTATION		BORIN								
			DIVISION - GEOTECHNICAL SEC.		PAGE	2				783700 8 1		010	-
JOB N			080457 Faulkner County		DATE:		Nove		r 13	and	14, 2	019	
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		TYPE O		tem A		D	iama	nd (ore	
STATI	ONI		179+45		EQUIPN			ugei		ker (ore	
LOCA			23' Right of Construction Centerline		EQUIFN	and the first of t	6		A	KCI (774		
			tanley Bates		HAMM	ER CC	ORRECT	TON I	FACT	OR:		N/A	
		_	DEPTH: 38.1										-
D		S			1		1			-			
E	S Y	A							. 8				
P	M	Μ	DESCRIPTION OF MATERIAL	SOIL				Ę	J.FT	SWC		% T	% R
Т Н	В	P		GROUP	ő	⊢°		EIG	SCI	BLO	ż	C	Q
	0	L E			Ĕ E	OIS	191	8	PEJ	OF	6-N	R	D
FT.	L	S	SURFACE ELEVATION: 288.0		PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
		T							_	_		100	100
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40													
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REMA	RKS	: U	PRR & Hwy 365 overpass										
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		_	DIVISION - GEOTECHNICAL SEC.	_	PAGE	1		2	1.	. 1.0 /	2010		_
JOB N JOB N			080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S)		DATE: TYPE O				nber	18,2	2019		
JOBIN	AWE.		Route 89 Sections 4 & 5				tem A		• - D	iamo	nd C	ore	
STATI	ION:		179+49		EQUIPN					ker 2			
LOCA	TION:		5.5' Right of Construction Centerline										
			tanley Bates		HAMM	ER CC	ORRECT	TION	FACT	OR:		N/A	_
COM	PLET	ION	DEPTH: 38.1										
D	s	S											
E P	Y	A M							FT.	SN		%	%
T	M	P	DESCRIPTION OF MATERIAL	SOIL				GHJ	cu.l	2		T	R
н	B O	L		GROUF	E.	IST	<u>e</u> ,	WEI	ER	F B	Ż	C R	Q D
FT.	Ľ	E S			PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.		
<u> </u>	~	3	SURFACE ELEVATION: 287.8			%				Z	Ā	-	
	\sim												
	\sim												
	\sim												
			Dry, Hard, Reddish Brown and Light Gray Clay							1	1		
5	\sim	riangle	Dry, Hard, Reddish Brown and Light Gray Clay							25-	-26		
	\sim												
	\sim												
	\sim												
10	<i>199</i>	\times		-						3			
	<i>444</i>									6 (5	0		
	£££		SHALE - Highly Weathered, Medium Hard,								'		
	£773		Brown										
	1775 1												
15		\ge	SHALE - Highly Weathered, Medium Hard,							5			
	111		Brown and Gray SHALE - Weathered with Highly Weathered							4 (1	")		
	<i>111</i>		Layers, Medium Hard with Soft Layers, Brown									97	13
	转		and Gray										
				1									
20													
			SHALE - Slightly Weathered, Medium Hard, Dark Gray									94	36
			Dark Gray										
	輽												
25													
												100	80
30			SHALE - Unweathered, Medium Hard,									100	06
			Occasional Fractures, Dark Gray									100	96
35													
	ARKS	· 1	IPRR & Hwy 365 overpass	I	1			1	_				_
		. 0											

). 15 OF	2					
	_	_	VISION - GEOTECHNICAL SEC.						mhat	• 18,	2010		-
JOB NO.			0457 Faulkner County		DATE:		IN ILLING		IIIUCI	10,	2019		
JOB NAM	ME:		RR Overpass & Realign. (Mayflower) (S)				stem A		r - D	iamo	nd (ore	
			ute 89 Sections 4 & 5		EQUIP			uge		ker 2			
STATION		179			EQUIP	NIGNI	-		110	KOI Z	071		
			' Right of Construction Centerline Ney Bates		HAMN	IFR CO	DRRECT	LION	FACI	OR:		N/A	
			EPTH: 38.1		TH WIN	ER et	JILLEO						-
		s			1		1	1		1			1
D E	3	A							.80				
n l	T	M	DESCRIPTION OF MATERIAL	SOIL				H	J.FJ	M		% T	
т		P		GRO	JP			IGI	С С	BLC	7	C	
н		Ŀ				OIS'	1gh	M	PEF	OF	6-II	R	
FT.	Ē	E S SI	URFACE ELEVATION: 287.8		PLASTIC	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
E1.		5 5	URFACE ELEVATION. 207.8					+		-	<u> </u>	100	Ì
		-+	Boring Terminated		-	-	-	-		-	-		1
40			Louing romatice										
40													
45													
45													
50													
55													
60													
65													
70													_
/11		- II.	RR & Hwy 365 overpass										1

VATERIAL	S DIVISION - GEOTECHNICAL SEC.		PAGE	1		_					_
OB NO.	080457 Faulkner County		DATE:				nber	19,2	2019		
OB NAME:	UPRR Overpass & Realign. (Mayflower) (S)		TYPE O								
	Route 89 Sections 4 & 5		Holle	ow S	tem A	uger				ore	
STATION:	179+52		EQUIPM	IENT:			Acl	ker 20	094		
	12' Left of Construction Centerline										
	Stanley Bates		HAMMI	ER CC	RRECT	ION	FACT	OR:]	N/A	
	DN DEPTH: 37.5	0									
			1								Γ
	S A										
						ы	FT	NS		%	
	DESCRIPTION OF MATERIAL	SOIL				E	Ъ.	Q		Т	
		GROUP		ST.		Ē	.R (BI	zl	C	
			T	0	15 E	Å	PE	l q		R	ľ
	S SURFACE ELEVATION: 286.4		PLASTIC	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.		
				l °`			H	-			F
[1]											
											l
1/1-								6			l
//	Moist, Very Hard, Reddish Brown Clay							10-			l
5	₹							'0-	52		
N_{-}		1						1			
17								0	_		
- (3)	\leq							3			
10								(5	, 		
144	SHALE - Highly Weathered, Medium Hard,								'		
111	Brown										l
111											
7755		_						6	0		1
	SHALE - Highly Weathered, Medium Hard,							(5			t
15 222	Brown and Gray SHALE - Weathered with Highly Weathered							`	1		
										100	I
<i>111</i>	Layers, Medium Hard with Soft Layers,										
- 777	Occasional Fractures, Brown and Gray							1			ł
20	SHALE - Slightly Weathered, Medium Hard,							1		100	
	Occasional Fractures, Dark Gray							1			
								1			
		_						1			+
222											
25	SHALE - Unweathered, Medium Hard,									94	
	Occasional Fractures, Dark Gray				1						
										-	4
					1						
30	SHALE - Unweathered, Medium Hard, Dark									100	,
	Gray										
										× .	
											1
2223										1	
35	SHALE - Unweathered, Medium Hard,										
											-

			DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN PAGE	G NC 2		2					
JOB N		_	080457 Faulkner County		DATE:			oven	nber	19,3	2019	ð:	-
JOB N			UPRR Overpass & Realign. (Mayflower) (S)		TYPE O	F DRI				10			
			Route 89 Sections 4 & 5		Holl	ow S	tem A					ore	
STAT	ON:		179+52		EQUIPM	IENT:			Ack	cer 2	094		
LOCA			12' Left of Construction Centerline									NT/A	
-			tanley Bates		HAMM	ER CC	RRECT	'ION F	FACT	OR:		N/A	-1
	PLET		DEPTH: 37.5		T				_				_
D	S	S A							2				
E P	Y	M	DESCRIPTION OF MATERIAL	0.017				H	I.FT	WS		% T	% D
Т	M B	Ρ	DESCRIPTION OF MATERIAL	SOIL GROUI		<u></u> _		IGF	G	BLO		T C	R Q
н	ō	L E			STIC	OIS'	Q E	M	PER	OF]	6-IV	R	D
FT.	L		SURFACE ELEVATION: 286.4		PLASTIC	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.		
		T	Occasional Fractures, Dark Gray						_		_	100	94
					_				_		_		
			Boring Terminated										
40													
			4										
							2						
45													
50													
55													
60													
60													
-													
65													
70													
	ARKS	5: L	IPRR & Hwy 365 overpass										
							_		_		_	_	

			EPARTMENT OF TRANSPORTATION		BORIN								
MATE	ERIA	-	DIVISION - GEOTECHNICAL SEC.		PAGE	1	OF	_	1	20.5	010	_	-
JOB N			080457 Faulkner County		DATE:				nber	20, 2	2019		
JOB N	AME:		JPRR Overpass & Realign. (Mayflower) (S)		TYPE O		tem A		. n	amo	nd C	ora	
9477-0316	124715		Route 89 Sections 4 & 5					uger		cer 20		ore	
STATI			179+56		EQUIPM	IENI:			Au	xei 20	J7 4		
LOCA			30' Left of Construction Centerline		HAMMI		DDECT	IONI	FACT	OR.	ו	N/A	
the second s	_		tanley Bates		HAMMI	KUU	JKKEC I	ION	FACT	OK.		1721	-
	PLEI	_	DEPTH: 38.7		1	_		-	-	-	-	T	
D E P T H	S Y M B O -	S A M P L E	DESCRIPTION OF MATERIAL	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	% R Q D
$FT_{\rm e}$	L	S	SURFACE ELEVATION: 287.4		LIP	%]	E E	DR	LB	ž	PE		
		X	Dry, Very Hard, Reddish Brown Clay							11 34-	.35		
<u> 10 </u>		X	Dry, Very Hard, Brown and Light Gray Clay							35- (1	-60		
15	272	\times	SHALE - Highly Weathered, Medium Hard,							5			
10	777		Brown and Gray SHALE - Highly Weathered, Soft, Brown and							4 (1			
	775		SHALE - Highly Weathered, Soft, Brown and							``	1	100	7
			Gray SHALE - Weathered, Medium Hard, Brown and Gray									100	'
20			SHALE - Slightly Weathered, Medium Hard, Dark Gray									100	66
<u>25</u> 												90	90
30			SHALE - Unweathered, Medium Hard, Dark Gray									93	93
35													
REM	ARK	S: L	JPRR & Hwy 365 overpass										
		_								_	_	_	-

			DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN PAGE	IG NO 2		2					
JOB N	0.	1	080457 Faulkner County		DATE:	-	_		nber	20,	2019		_
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		TYPE O		LLING: tem A		D		nd (
STATI	ON:		179+56		EQUIPN			uger		ker 2		ore	
LOCA			30' Left of Construction Centerline									2510	
		_	tanley Bates		HAMM	ER CC	ORREC1	'ION I	FACT	OR:		N/A	-
D	s	S											
E P	Y	A M							Ë	S		%	%
Т	M B	P	DESCRIPTION OF MATERIAL	SOIL GROUP				IGHT	CU.I	TOW		T C	R Q
н	0	L E				% MOIST.	E E	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	R	D
FT,	L	L (1	SURFACE ELEVATION: 287.4		PLASTI	W %	LIQUID	DRY	LBS	NO.	PER		
												99	99
												99	99
40			Boring Terminated										
45													
50													
55													
60													
65													
70													
кема	KKS	U	PRR & Hwy 365 overpass										
	_							_			-		

ARK	ANSA	S	DEPARTMENT OF TRANSPORTATION		BORIN	IG NO	o <u>.</u> 18					
MAT	ERIA	SI	DIVISION - GEOTECHNICAL SEC.		PAGE	1		_	_			_
JOB N	О,		080457 Faulkner County		DATE:				mber	r 6, 201	9	
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE C							
		()	Route 89 Sections 4 & 5		Holl	ow S	tem A	uger				
STATI	ION:		184+18		EQUIP	MENT			Acl	ker 2094	ł	
LOCA			60' Right of Construction Centerline									
		_	tanley Bates		HAMM	ER CO	DRRECT	'ION I	FACT	OR:	N/A	
COM	PLET	ION	DEPTH: 25.4						_		1	
D	s	S										
E	Ŷ	A						L_	FT.	SN	%	%
P T	M	M P	DESCRIPTION OF MATERIAL	SOIL				HB	CU.	0	T	R
н́	B	Ľ		GROUI	' ິ ₂	ST.		Æ	ER (IB Z	C R	Q D
	0	E			PLASTIC	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS		
FT,		S	SURFACE ELEVATION: 280.5		LIN	%	LIN	DR	LB	DN DFF		
		\bigtriangledown	Maint Madium Dance Brown Sand with Silt and							4		
		\bigtriangleup	Moist, Medium Dense, Brown Sand with Silt and Some Gravel							8-8		
										47		
	8 ⁴⁰ -	\mathbf{N}								17 18-24	e 1	
5	82 7	>								10-24		
	Se e		Moist, Dense, Reddish Brown Sand with Silt and Gravel and Cobbles							12		
	0 000	Х	Graver and Cobbles							16-28		
	190	()										
	See.	\bigtriangledown								18		
		\bigtriangleup								30-26		
10	8		Moist, Very Dense, Reddish Brown Sand with							24		
	0.00	\geq	Silt and Gravel							31 60		
										(2")		
	epi la (22		
	1111	Х	Moist, Dense, Reddish Brown Sand with Clay							24-16	÷	
15	VII.	\square	and Some Gravel									
	ÌÌÌÌ	\bigtriangledown		1						7		
		\bigtriangleup								20-38		
			Moist, Very Dense, Reddish Brown Sand with									
			Silt and Some Gravel									
20												
20	111									53		
F -	222	$ \ \ \ \ \ \ \ \ \ \ \ \ \ $								47		
	112		SHALE - Highly Weathered, Medium Hard,							(2")		
	777		Brown and Dark Gray									
	11											
25	111				_	_		_		0.0	1	
	-		SHALE (No complexities recovered)							60 (1")		
L -	-		(No sample was recovered) Boring Terminated									
	1											
L												
30	-											
35	1											
	ARK	5: N	ASE Boring									
		~	.									_
		_										

					BORIN								
		-	DIVISION - GEOTECHNICAL SEC.		PAGE	1	OF		mba	r 5, 2	010		-
JOB N			080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S)	- 1	DATE: TYPE O				mbe.	[J , Z	019		
JOB N	AME:		Route 89 Sections 4 & 5				tem A		• - D	amo	nd C	ore	
STATI			184+21		EQUIPM			ugei		cer 20		010	
LOCA			20' Right of Construction Centerline		EQUIFI	ICIN I			1101	101 21	071		
			tanley Bates		HAMMI		RRECT	ION	FACT	OR-		N/A	
			DEPTH: 44.6		11/11/19/1	JI CC	RICECT		inei	OIL,			-
	FLET		DEF1H. 44.0		1						- 1		
D E	s	S A											
P	Y	ĥ						H	FT.	MS		%	%
Τ	M	P	DESCRIPTION OF MATERIAL	SOIL GROUP				E	CU	FO I		T C	R Q
н	B O	L		GROUP	IIC.	IST	le,	MEI	ER	F B	Ę	R	Ď
		E			PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
FT,	_	S	SURFACE ELEVATION: 280.0		E E	%	EE	ā	LE				_
	\sim	X								3			
	\sim	$ \rightarrow $	Moist, Very Stiff, Reddish Brown Clay							7-'	14		
	\sim												
	18	\bigtriangledown								3			
5		\bigtriangleup								39-	-29		
										3	2		
		X								28-			
	\$%?	$ \rightarrow$	Dry Vary Dance, Reddich Brown Sand with										
	2018	\bigtriangledown	Dry, Very Dense, Reddish Brown Sand with Clay and Gravel							2	9		
<u> </u>		А								31-	-30		
10													
	1996	\times								3			
	118									6 (5	0 ")		
	1.19	_								3			
	5775	Х	SHALE - Highly Weathered, Medium Hard,							39-			
15	5555	$ \rightarrow $	Brown and Gray							(1			
		\geq								6 (5	0		
	1117									(5	5")		
	111		SHALE WITH OCCASIONAL CLAY LAYERS -									100	0
	777		Highly Weathered, Medium Hard with Occasional Soft Layers, Brown and Gray									100	0
20	<i>44</i>		Occasional Con Layers, Drown and Oray										
20			SHALE - Slightly Weathered, Medium Hard,	1									
			\Dark Gray										
			SHALE - Unweathered, Medium Hard, Dark									95	92
			Gray										-
25				-									
													70
												96	76
30			SHALE - Unweathered, Medium Hard,				1						
			Occasional Fractures, Dark Gray										
												100	73
35						<u> </u>		1		<u> </u>			_
REM	ARKS												
	_	_			_	_							

			DEPARTMENT OF TRANSPORTATION		BORIN								
		_	DIVISION - GEOTECHNICAL SEC.		PAGE	2	OF	_		. 5 0	010	_	-
JOB N			080457 Faulkner County		DATE:				mbe	r 5, 2	019		
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		TYPE O		tem A			iomo	nd C	ore	
00.00	~		 A MARK MENO PARA / A MARKAMAN A MARKA / MARKAMAN 		EQUIPM			uger		ker 20		ore	
STATI			184+21		EQUIPN	IENI:			Au		094		
LOCA			20' Right of Construction Centerline tanley Bates		HAMMI		RRECT		FACT	OR ·		N/A	
			DEPTH: 44.6			IN CO	AUCE I	10111		UR.	_		-1
	FLEI	_	DEF 111. 44.0	1	T			-	-	-			
D E	S	S A							20				
P	Y	M	DESCRIPTION OF MATERIAL					E	.FT	WS		%	%
Τ	M	Ρ	DESCRIPTION OF MATERIAL	SOIL GROUP		7.003		EE	CU			T C	R Q
н	B O	L				ISI	le L	ME	ER	E E	Z	R	Ď
	L	E			PLASTIC LIMIT	% MOIST.	LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
FT	_	S	SURFACE ELEVATION: 280.0		LI	%	EE	ā	E	Ž	PI		
												99	86
40			SHALE - Unweathered, Medium Hard, Dark										
			Gray										
												100	100
					_								
45			Boring Terminated										
50													
				l.									
												l í	
55	İ												
<u> </u>	1												
<u> </u>													
60													
	Į												
	Į												
65													
	1												
	1												
70	1												
REM	ARK	S:											
		_											

	DEPARTMENT OF TRANSPORTATION		BORIN								
	DIVISION - GEOTECHNICAL SEC.		PAGE	1		_			0.01	0	-
	080457 Faulkner County		DATE:				er 4	and 5	, 201	9	
	UPRR Overpass & Realign. (Mayflower) (S)		TYPE O						10		
	Route 89 Sections 4 & 5				tem A	uger				re	
STATION:			EQUIPM	IENT:			Act	cer 20)94		
	20' Left of Construction Centerline									T / A	
LOGGED BY: S			HAMMI	ER CC	RRECT	TION I	FACT	OR:	N	I/A	-
COMPLETION	N DEPTH: 39.7		<u>γ</u>		·						_
E Y A							FT.	NS		%	%
	DESCRIPTION OF MATERIAL	SOIL				Η	CÚ.	20		T	R
		GROUP	IC I	IST.		AEI	ER	F B]	z	C R	Q D
			PLASTIC LIMIT	% MOIST	LIQUID LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		
FT. LS	SURFACE ELEVATION: 279.9		LIN	%	EE	DR	LB				_
\equiv \blacksquare	Moist, Medium Dense, Reddish Brown Sand with Silt with Some Gravel							4 10-			
×	Dry, Very Dense, Reddish Brown Sand with Silt with Some Gravel							29 50-			
	Dry, Very Dense, Reddish Brown Sand with Silt							20 24-			
	Dry, Very Dense, Reddish Brown Sand with Silt with Some Gravel							44 58-			
	Dry, Very Hard, Reddish Brown and Gray Clay with Gravel							56- (10	60		
	Dry, Very Hard, Brown Clay SHALE - Highly Weathered, Medium Hard, Brown and Gray							70 (5			
13								60 (2		_	-
	SHALE WITH FREQUENT CLAY LAYERS - Highly Weathered, Soft, Brown and Dark Gray							(2		95	0
20	SHALE - Weathered, Medium Hard, Dark Gray SHALE - Slightly Weathered, Medium Hard, Dark Gray								-		
										99	62
25											
										100	100
30	SHALE - Unweathered, Medium Hard, Dark Gray				-					100	100
35 REMARKS:	-										

			DEPARTMENT OF TRANSPORTATION DIVISION - GEOTECHNICAL SEC.		BORIN PAGE	G NC 2		2					
JOB N JOB N	0.	(080457 Faulkner County UPRR Overpass & Realign. (Mayflower) (S)		DATE: TYPE O	F DRI	Nov	emb					
STATI	ON:		Route 89 Sections 4 & 5 184+21		EQUIPM			ugei		cer 2			
LOCA	TION:		20' Left of Construction Centerline									. . / .	
			tanley Bates		HAMM	ER CO	RRECT	'ION I	FACT	OR:		N/A	-
		_	DEPTH: 39.7		1			[- 1				
D E P T H FT.	S Y M B O L	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 279.9	SOIL GROUF	PLASTIC	% MOIST.	LIQUID LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% T C R	% R Q D
		T											
												100	100
40			Boring Terminated										
			_										
45													
50													
55													
	-												
	1												
60													
L -			~										
65													
Ľ]												
E													
⊢ -													
70													
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		DEPARTMENT OF TRANSPORTATION		BORIN								
MATERIA	_	DIVISION - GEOTECHNICAL SEC.		PAGE	1	OF	_	1	4.0	010	_	-
JOB NO.		080457 Faulkner County		DATE:				mbei	r 4, 2	019		
JOB NAME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE O								
		Route 89 Sections 4 & 5				tem A	uget		~	004		
STATION:		184+28		EQUIPN	1ENT:			Ack	cer 20	094		
LOCATION		60' Left of Construction Centerline										
		tanley Bates		HAMM	ERCC	DRRECT	TON	FACT	OR:		N/A	-
COMPLET	TION	DEPTH: 24.3				1		_	_	_	_	_
D s	S											
	A							ET	SN		%	%
	M P	DESCRIPTION OF MATERIAL	SOIL				B	D.	Q		T	R
			GROUI) D	ST.		Æ	ER (BI	z	C R	Q D
	Ē			AST	% MOIST.	55	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	86	K	2
FT, L	s	SURFACE ELEVATION: 279.7		PLASTIC LIMIT	% N	LIQUID	DR	LB	^o z	PER 6-IN.		
	\mathbb{N}	Moist, Medium Dense, Reddish Brown Sand							3	3		
		with Silt and Some Gravel							12-			
	\mathbb{N}	Moist, Very Dense, Reddish Brown Sand with							2 29-			
	$ \Delta$	Silt and Some Gravel							29-	.20		
									2	0		
5	IX								34-			
	F	Dry, Very Dense, Reddish Brown Sand with Silt										
	\triangleright	and Some Gravel							3	1		
									6	0		
										5")		
10	\mathbf{X}	D. Mary Hand Baddish Prever Clay with Shalo	1							0		
800	8	Dry, Very Hard, Reddish Brown Clay with Shale Fragments								0 !")		
- 33	3		-							5		
	₹×	×								0		
	22									5")		
15									1	9		
10 222		SHALE - Highly Weathered, Medium Hard,								0		
	1 U	Brown							(4	¥")		
	ALM I											
<u> </u>	NY.											
	ALM I											
20	\sim								(5	50 5")		
	1111											
	1111	SHALE - Weathered, Medium Hard, Dark Gray										
	1111											
	1111											
25	-	Boring Terminated			-				1	36 1")		
30												
<u> </u>												
35								_		_	1	
REMARK	S:											
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ARK	ANSA	S	DEPARTMENT OF TRANSPORTATION		BORIN	G NC							
and the second sec			DIVISION - GEOTECHNICAL SEC.		PAGE	1	OF						
JOB N			080457 Faulkner County		DATE:				ber 2	29, 20)19		
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5		TYPE O Holl		tem A						
STATI	ON		184+37		EQUIPN			ugei		ker 20	094		
LOCA			100' Left of Construction Centerline		LQUIII								
100000000000000			on McCollum / Daniel Dickerson		HAMM	ER CC	RRECT	TION	FACT	OR:		N/A	_
COM	PLET	ION	DEPTH: 24.1			_							
D	s	S											
E P	Ŷ	A M							ET.	SN		%	%
I F I	М	P	DESCRIPTION OF MATERIAL	SOIL				GH	cU.J	Γο		T C	R
H H	B O	L		GROUP		IST	e.	WEI	ER	F B.	Ż	R	Q D
	L	E		2	PLASTIC	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.		
FT,		S	SURFACE ELEVATION: 279.5			%	23			Z 1:	_		
	\mathbb{N}	riangle								50-	50		
	\sim	1	Dry, Very Hard, Reddish Brown Sandy Clay with Some Organic Matter							(10)")		
	$\langle \rangle$		Some Organic Matter										
	\sim									2	9		
5	$\backslash \backslash$	riangle	Dry, Very Hard, Reddish Brown Sandy Clay							39-	59		
	\mathbb{N}							1.1			_		
	\mathbf{N}	\times	Moist, Very Hard, Reddish Brown and Gray							3 43-			
<u> </u>	\sim	$\left(- \right)$	Sandy Clay							(1	1")		
10	17	\bigtriangledown								2			
	\sim	\bigtriangleup	Moist, Very Hard, Light Gray Clay							53- (10			
	\sum									6			
	111	\preceq								6	0		
							l.			(5	")		
15		\times	SHALE - Highly Weathered, Medium Hard,							3			
			Brown							6 (5	")		
	<i>44</i> 2												
	£\$\$\$										_		
20										6 (1	")		
			SHALE (no sample recovered)										
		_	SHALE		_	<u> </u>				1 6	0 1		
25			Boring Terminated							Lú	°		
			J A										
30													
							1						
35													
REM	ARKS	5					1						
		~~											

ARKANSAS DEPARTMENT OF TRANSPORTATION BORING NO. 23 MATERIALS DIVISION - GEOTECHNICAL SEC. PAGE 1 OF 1 JOB NO. 080457 Faulkner County DATE: October 22, 2019 JOB NAME: UPRR Overpass & Realign. (Mayflower) (S) Route 89 Sections 4 & 5 TYPE OF DRILLING: Hollow Stem Auger STATION: 186+18 EQUIPMENT: Acker 2094	
JOB NAME: UPRR Overpass & Realign. (Mayflower) (S) TYPE OF DRILLING: Route 89 Sections 4 & 5 Hollow Stem Auger STATION: 186+18 EQUIPMENT:	
Route 89 Sections 4 & 5 Hollow Stem Auger STATION: 186+18 EQUIPMENT: Acker 2094	
STATION: 186+18 EQUIPMENT: Acker 2094	
LOCATION: 40' Right of Construction Centerline	
LOGGED BY: Don McCollum and Troy Frazier HAMMER CORRECTION FACTOR: N/	4
COMPLETION DEPTH: 26.5	<u> </u>
	T
P M M DESCRIPTION OF MATERIAL SOIL H H SOIL	
	Q
P T M DESCRIPTION OF MATERIAL SOIL SOIL<	D
H B L GROUP DIA III O III III III O III IIII III III	
Moist, Very Soft, Brown Clay with Sand 0	
5	
Moist, Stiff, Brown Clay with Sand	
— — Moist, Medium Dense, Brown Sandy Silt	
Moist, Stiff, Reddish Brown and Gray Sandy	
— — Moist, Hard, Reddish Brown Clay with Trace	
20 5	
Moist, Very Stiff, Reddish Brown Clay with Some	
Shale Fragments	
25	
Moist, Very Stiff, Reddish Brown Clay with Sand	1
and Some Shale Fragments 6-11	
Boring Terminated	
30	
	1
35	
REMARKS:	-l

ARK	ANSA	S	DEPARTMENT OF TRANSPORTATION		BORIN	G NO). 24	_		_			_
MAT	ERIA	LSI	DIVISION - GEOTECHNICAL SEC.		PAGE	1							_
JOB N	ю.		080457 Faulkner County		DATE:		Octo	ober	22 a	ind 23	3, 201	9	
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE O								
			Route 89 Sections 4 & 5				tem A	ugei				ore	
STATI	ION:		186+21		EQUIPN	1ENT			Acl	ker 20)94		
LOCA			20' Right of Construction Centerline									T / A	
		_	on McCollum and Troy Frazier		HAMM	ER CO	ORRECT	TION	FACT	OR:	N	I∕A	-
COM	PLET	ION	DEPTH: 44.2		T								_
D	s	S											
E	Ŷ	A							E	S		%	%
P T	М	M P	DESCRIPTION OF MATERIAL	SOIL				HE	- DC	NO'		T	R
НΗ	B	Ĺ		GROUF	<u>,</u>	ST.		E	ER (BI	z	C R	Q D
	0	Ē			AST	% MOIST.	55	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.		D
FT,	L	S	SURFACE ELEVATION: 280.6		PLASTIC	% N	LIQUID	DR	LB	02	PEI		
	$\overline{\Lambda}$	\bigtriangledown	Moist, Soft, Brown Clay with Some Organic		1					0			
	\mathbb{N}	$ \bigtriangleup $	Moist, Son, Brown Clay with Some Organic Matter							1-	3		
	\sum												
		X								6 9-1			
5		$ \land$	Dry, Medium Dense, Reddish Brown Sandy Silt							9-1			
5		\bigtriangledown	Dry, Very Stiff, Reddish Brown Clay							5			
	hin	\bigtriangleup								10-	14		
			Dry, Medium Dense, Reddish Brown Sand								.		
	199	\mathbb{N}	Dry, Medium Dense, Reddish Brown Clayey							14			
	$\langle \rangle \rangle$	$ \bigtriangleup $	Sand							15	-9		
10	120		Dry, Very Stiff, Reddish Brown Clay with Shale							8			
	2.8	Х	Fragments							14-			
			SANDSTONE - Highly Weathered, Poorly										
	190	$\overline{}$	Cemented, Reddish Brown							5			
	8	\wedge	Dry, Hard, Reddish Brown Clay with Shale							13-	29		
15	82		Fragments										
	777	Х								19 79-			
	<i>444</i>	$ \rightarrow $								(7	")		
	117		SHALE - Highly Weathered, Medium Hard,							Ì			
	777		Brown										
20	<i>77</i>												
	777	\geq		ļ						6	o -		_
	777									(5	")		
	<i>44</i>		SHALE - Weathered with Frequent Highly									94	0
	777		Weathered Layers, Medium Hard with										
	111		Occasional Soft Layers, Brown and Dark Gray								-		_
25	977												
												98	32
			Υ.										
30			SHALE - Slightly Weathered, Medium Hard,				1						
			Occasional Fractures, Dark Gray			1							
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				-			1					_	_
35	PHE						1	I		1			_
REM	ARKS) :											
						_		_	_	_	_	_	_

MATERIALS DIVISION - GEOTECHNICAL SEC. PAGE 2 OF 2 JOB NO. 080457 Faulkner County DATE: October 22 and 23, 2019 JOB NAME: UPRR Overpass & Realign. (Mayflower) (S) TYPE OF DRILLING: Hollow Stem Auger - Diamond Cord STATION: 186+21 EQUIPMENT: Acker 2094 LOCATION: 20' Right of Construction Centerline HAMMER CORRECTION FACTOR: N/	
JOB NAME: UPRR Overpass & Realign. (Mayflower) (S) TYPE OF DRILLING: Route 89 Sections 4 & 5 Hollow Stem Auger - Diamond Cord STATION: 186+21 EQUIPMENT: LOCATION: 20' Right of Construction Centerline	
Route 89 Sections 4 & 5 Hollow Stem Auger - Diamond Cord STATION: 186+21 EQUIPMENT: Acker 2094 LOCATION: 20' Right of Construction Centerline Acker 2094	:
STATION: 186+21 EQUIPMENT: Acker 2094 LOCATION: 20' Right of Construction Centerline EQUIPMENT: Acker 2094	
LOCATION: 20' Right of Construction Centerline	
TRAMINER CORRECTION FACTOR 11/	Α
COMPLETION DEPTH: 44.2	
	%
P M M T M DESCRIPTION OF MATERIAL	R
	Q
P Y M DESCRIPTION OF MATERIAL SOIL SOIL L SOIL SOIL <td>D</td>	D
P Y X P M M T B L H O L FT. S SURFACE ELEVATION: 280.6 SOIL	
	78
	, 70
40 SHALE - Unweathered, Medium Hard, 40 Cccasional Fractures, Dark Gray	
40 Occasional Fractures, Dark Gray	
	2 44
45 Boring Terminated	
50	
55	
<u>65</u>	
70	
REMARKS:	

					BORIN								
		_	DIVISION - GEOTECHNICAL SEC.		PAGE	1		_					_
JOB N			080457 Faulkner County		DATE:				23 a	ind 24	, 20	19	
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE O								
00.00			Route 89 Sections 4 & 5				tem A	ugei			0.4		
STAT			186+25		EQUIPM	1ENT:			Ac	ker 20)94		
			40' Left of Construction Centerline										
			tanley Bates		HAMMI	ER CC	ORRECT	TION	FACT	'OR:		N/A	-
	PLET	-	DEPTH: 25.5	·		_							_
D	s	S											
E P	Y	A							Ē	S		%	0
г Т	M	M P	DESCRIPTION OF MATERIAL	SOIL				H	U.F	0		T	Í
н	В			GROUP	0	Ē		EIG	RC	BL	z	С	(
	0	Ē			IT T	OIS	18 E		ΡE	OF	6-L	R	Ι
FT:	L	s	SURFACE ELEVATION: 280.6		PLASTIC	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	PER 6-IN.		
	XX	\bigtriangledown				٥́				7	_		-
	\mathbf{N}	ert	Moist, Very Stiff, Brown Clay with Sand and							7-1			
	$\overline{7}$		Some Organic Matter										
	\mathbf{N}	\mathbb{N}								17			
	$\langle \rangle$	\bowtie	Dry, Hard, Reddish Brown Clay with Sand							24-2	25		
5	\mathbf{X}												
		Х								18 46-			
		$ \rightarrow$	Dry, Very Dense, Reddish Brown Sandy Silt							40-	⁵⁰		
	Sec.									18			
		Х	Dry, Very Hard, Reddish Brown Sandy Clay with							37-1			
-	80.8	$ \rightarrow $	Gravel								``		
10	100									32			
	8	\bigtriangleup	Dry, Very Hard, Reddish Brown Clay with Shale							56-4	44		
	2		Fragments							(10	")		
	66.63	\times								40)		
	<i>144</i>									10			
15	<i>555</i>									(5"	ן י		
10	£555	\ge								21			
	<i>5555</i>		SHALE - Highly Weathered, Medium Hard,							64-3	36		
	5555	1000	Brown							(8"			
	<i>111</i>												
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20	狩技												
	<i>44</i>	\times		í.						23		- (
	5755	\square								88-2 (7"	22		
	<i>555</i>		SHALE - Highly Weathered, Medium Hard,							()	′		
	5 <i>555</i>		Brown and Gray										
	777												
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		$ \frown $	SHALE - Weathered, Medium Hard, Dark Gray									-	-
			Boring Terminated							60 (2"			
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ARK	ANS	\S I	DEPARTMENT OF TRANSPORTATION		BORIN	IG NO	26	_	_				
			DIVISION - GEOTECHNICAL SEC.	_	PAGE	IG NO		7 1					
JOB N			080457 Faulkner County		DATE:				ber 2	28, 20	19		_
JOB N	AME:		UPRR Overpass & Realign. (Mayflower) (S)		TYPE OF DRILLING: Hollow Stem Auger								
			Route 89 Sections 4 & 5		Holl	ow S	tem A	uge	•				
STAT	ION:		186+29		EQUIPM	1ENT			Ac	ker 20)94		
LOCATION: 80' Left of Construction Centerline LOGGED BY: Troy Frazier HAMMER CORRECTION FACT													
	HAMM	ER CO	ORRECT	TION	FACT	OR:		N/A	_				
	PLET		DEPTH: 25.2										
P	s	S											
E P	Y	A M							£	S		%	%
Τ	M	P	DESCRIPTION OF MATERIAL	SOIL				HE	DU.I	NO		Т	R
ЬĤ	B	Ĺ		GROUP	12	ST.		EIC	SR C	BL	ż	C R	Q D
	0	Е			AST	% MOIST.	15	DRY WEIGHT	LBS PER CU.FT	NO. OF BLOWS	5	ĸ	D
FT,		S	SURFACE ELEVATION: 279.7		PLASTIC LIMIT	% N	LIQUID	DR	LB	02	PER 6-IN.		
	\mathbb{N}	\mathbf{N}	Moist, Very Stiff, Reddish Brown Clay with Some							4			
	\mathbb{N}	\square	Organic Matter							6-1	9		
			-							25	;		
		X								40-3			
5	land												
		\ge	Dry, Very Dense, Reddish Brown Sand		1					42			
										60 (2"			
	NOR									30			
		${ m imes}$	Dry Very Hard Candy Clay with Crowel							60			
10	80.8		Dry, Very Hard, Sandy Clay with Gravel							(5")		
	222	\times								21			
	777	\frown	SHALE - Highly Weathered, Medium Hard,							60			
	777		Reddish Brown							(4"	I		
	777	\geq								60 (5"			
	111									(0	′		
15	117	\triangleleft								50			
	9772 1975	\frown								60			
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	222												
	775		SHALE - Highly Weathered, Medium Hard,										
20	111		Brown										
1	111	\frown								60 (5"	5		
	£££2												
	5775												
	<i>111</i>												
25	5555												
		~	Boring Terminated							60 (2"	, t		
			v							L12			
30													
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35		_	10. Ouerrage							_			_
KEM/	ARKS		40 Overpass SE Boring										
		171				_					_		



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

August 13, 2018

TO: Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT: Job No. 080457 UPRR Overpass & Realign. (Mayflower) (S) Route 89 Section 4 Faulkner County

Transmitted herewith is the requested Soil Survey, strength data and Resilient Modulus test results for the above referenced job. The project consists of realigning the Highway 89 overpass and building a new bridge over the Union Pacific Railroad. Samples were taken in the existing travel lanes, ditch line and along the new location.

Based on laboratory results of samples obtained, the subgrade soils consist of low plasticity clayey sand. The subgrade soils are expected to provide a stable working platform with conventional processing if the weather is favorable during construction.

Based on currently available cross sections there are three embankments with a maximum height of 30 feet. The embankments will be constructed in areas that are currently wooded and it is expected that soil remediation will be required at these locations. Embankment recommendations will be provided in the subsurface investigation report.

Ramp 2

The proposed 3:1 cut slopes are acceptable as shown on the cross sections.

Exit Ramp

The maximum embankment height is approximately 10 feet. All soft unstable organic material should be undercut prior to embankment construction, anticipated to be no more than 2 feet. The embankment may be constructed using locally available unspecified material utilizing a 3:1 slope configuration.

The proposed 3:1 cut slopes are acceptable as shown in the currently available cross sections.

Highway 365

The construction grade line closely matches that of the existing roadway. Prior to embankment construction in the ditch line all soft unstable organic material should be undercut, anticipated to be no more than two feet. The embankments may be constructed with locally available unspecified material utilizing the 3:1 slope configuration shown in the currently available cross sections.

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 near Maumelle.

Job Number 080457 August 13, 2018

2. Asphalt Concrete Hot Mix

Туре	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.5	94.5
Binder Course	4.4	95.6
Base Course	4.0	96.0

Michael C. Benson Materials Engineer

MCB:pt:bjj

Attachment

State Constr. Eng. – Master File Copy District 8 Engineer CC: 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 - 08/03/2018 SEQUENCE NO. - 1 JOB NUMBER - 080457 MATERIAL CODE - SSRV SPEC. YEAR - 2014 SUPPLIER ID. - 1 COUNTY/STATE - 23 DISTRICT NO. - 08 JOB NAME - UPRR OVERPASS & REALIGN. (MAYFLOWER) (S) STATION LIMITS R-VALUE AT 240 psi * BEGIN JOB - END JOB 9 RESILIENT MODULUS 6308 STA. 7790+00

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. Date Sampled: Date Tested: Name of Project:	080457 7/3/18 July 31, 2018 UPRR OVERPASS & REALIGN. (MAYFLOWE	Material Code Station No.: Location: ER)(S)	e SSRVPS 7790+00 CL	
County: Sampled By:	Code: 23 Name: FAULKNER DICKERSON/FRAZIER	Depth:		0-5
Lab No.:	20181585	AASHTO Clas	SS:	A-6 (5)
Sample ID: LATITUDE:	RV361	Material Type LONGITUDE	(1 or 2):	2
1. Testing Inform	nation:			
_	Preconditioning - Permanent Strain > 5% (Y=	Yes or N= No)		Ν
	Testing - Permanent Strain > 5% (Y=Yes or N	I=No)		Ν
	Number of Load Sequences Completed (0-15)		15
2. Specimen Info	ormation:			
	Specimen Diameter (in):			
	Тор			3.94
	Middle			3.95
	Bottom			3.95
	Average			3.95
	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):			12.16
	Initial Volume, AoLo (cu. in):			97.52
3. Soil Specimer	n Weight:			
	Weight of Wet Soil Used (g):			3337.40
4. Soil Properties	5:			
•	Optimum Moisture Content (%)			14.0
	Maximum Dry Density (pcf):			116.5
	95% of MDD (pcf):			110.7
	In-Situ Moisture Content (%):			N/A
5. Specimen Pro	perties:			
	Wet Weight (g):			3337.40
	Compaction Moisture content (%):			14.2
	Compaction Wet Density (pcf):			130.40
	Compaction Dry Density (pcf):			114.19
	Moisture Content After Mr Test (%):			14.1
6. Quick Shear T	est (Y=Yes, N=No, N/A=Not Applicable):			#VALUE!
7. Resilient Modu	ulus, Mr:		9850(Sc)^-0.29710	(\$3)^0.29939
8. Comments				
9. Tested By:	GW	ate: July 31, 2018		

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIALS DIVISION

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

Job No.	080457	Material Code	SSRVPS
Date Sampled:	7/3/18	Station No.:	00+06/2
Date Tested:	July 31, 2018	Location:	CL
Name of Project:	UPRR OVERPASS & REALIGN. (MAYFLOWER)(S)		
County:	Code: 23 Name: FAULKNER		
Sampled By:	DICKERSON/FRAZIER	Depth:	0-5
Lab No.:	20181585	AASHTO Class:	A-6 (5)
Sample ID:	RV361	Material Type (1 or 2): 2	5
LATITUDE:		LONGITUDE:	

Kesilient	Recov Def. Strain Modulus	and 2		చ	s _r in/in	ε _r in/in 3 0.00014 13	چہ in/in 0.00014 0.00029	_د in/in 0.00014 0.00029 0.00049	£ر in/in 0.00014 0.00029 0.00049 0.00049	³ in/in 0.00014 0.00029 0.00029 0.00029 0.00077 0.00106	⁵ , in/in 0.00014 0.00029 0.00049 0.00049 0.00049 0.00016 0.00016	sr in/in 0.00014 0.00029 0.00049 0.00049 0.00049 0.00016 0.00016 0.00035	 ⁶ in/in in/in 0.00014 0.00029 0.00049 0.00049 0.00049 0.00016 0.00035 0.00058 	 ⁵ in/in 0.00014 0.00029 0.00049 0.00049 0.00049 0.00016 0.00035 0.00036 0.00086 	 ^{8,} in/in 0.00014 0.00029 0.00029 0.00049 0.00049 0.00016 0.00016 0.00035 0.00036 0.00086 0.00016 	ε, in/in 0.00014 0.00029 0.00049 0.00049 0.00049 0.00016 0.00016 0.00016 0.00035 0.00036 0.00036 0.00019 0.00019	 ⁵ in/in 0.00014 0.00029 0.00049 0.00049 0.00016 0.00016 0.00035 0.00035 0.00035 0.00035 0.00019 0.00019 0.00019 0.00019 	⁶ , in/in 0.00014 0.00029 0.00049 0.00049 0.00016 0.00016 0.00016 0.00035 0.00035 0.00035 0.00035 0.00042 0.00042 0.00069	⁵ in/in 0.00014 0.00029 0.00049 0.00049 0.00049 0.00016 0.00016 0.00035 0.00035 0.00035 0.00035 0.00019 0.00069 0.00069
_	Applied F	Stress		Scontact	S _{contact} psi	S _{contact} psi 0.2	S _{contact} psi 0.2 0.2	S _{contact} psi 0.2 0.3	S _{contact} psi 0.2 0.3 0.5	S _{contact} psi 0.2 0.3 0.5 0.7	S _{contact} psi 0.2 0.3 0.5 0.7 0.2	S _{contact} psi 0.2 0.3 0.5 0.5 0.2 0.2 0.2	S _{contact} psi 0.2 0.3 0.5 0.7 0.2 0.2 0.2	S _{contact} psi 0.2 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2	S _{contact} psi 0.2 0.3 0.5 0.7 0.2 0.2 0.2 0.4 0.6	S _{contact} psi 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.6 0.6	S _{contact} psi 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	S _{contact} psi 0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.6 0.6 0.2 0.2 0.2 0.2	S _{contact} psi 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2
Actual	Applied	Stress		S _{cvclic}	S _{cyclic} psi	S _{cyclic} psi 1.8	S _{cyclic} psi 1.8 3.7	S _{cyclic} psi 1.8 3.7 5.4	S _{cyclic} psi 1.8 3.7 5.4 7.1	S _{cyclic} psi 1.8 3.7 5.4 7.1 8.7	S _{cyclic} psi 1.8 3.7 5.4 7.1 8.7 8.7 1.8	S _{cyclic} psi 3.7 3.7 7.1 7.1 8.7 1.8 3.6	S _{cyclic} psi 1.8 3.7 5.4 7.1 7.1 8.7 3.6 3.6 5.4	S _{cyclic} psi 3.7 3.7 7.1 7.1 7.1 8.7 1.8 3.6 5.4 7.0	S _{cyclic} psi 1.8 3.7 5.4 7.1 8.7 3.6 3.6 7.0 8.6 8.6	S _{cyclic} psi 1.8 3.7 5.4 7.1 8.7 3.6 5.4 5.4 5.4 7.0 8.6 8.6 1.8	S _{cyclic} psi 1.8 3.7 5.4 7.1 7.1 7.1 7.0 7.0 8.6 7.0 8.6 7.0 3.6 3.6	S _{syelic} psi 1.8 3.7 5.4 5.4 7.1 8.7 7.0 7.0 8.6 8.6 3.6 3.6 3.6 5.3	S _{syelic} psi 1.8 3.7 5.4 7.1 7.1 8.7 7.0 7.0 7.0 8.6 8.6 3.6 3.6 8.6 6.9
Actual	Applied	Axial	Clicco	Cmax	psi	psi	о ^{тах} 2.1 3.9	C _{max} ps: 3.9 5.7	C _{max} psi 3.9 5.7 7.6	psi 2.1 3.9 7.6 7.6 9.4	C _{max} 2.1 5.7 7.6 9.4 2.1	psi 2.1 2.1 2.1 2.1 3.9 3.9	C _{max} 5.7 3.9 2.1 2.1 5.6 5.6	Psi psi 3.9 2.1 2.1 7.5 7.5 7.5 7.5	Psi psi 3.9 3.9 3.9 3.9 3.9 3.9 3.9 3.9 3.9 3.9	Psi psi 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1	Psi 2.1 2.1 2.1 2.1 2.1 3.0 2.1 3.8 3.8	psi psi 2.4 2.1 2.1 2.1 2.1 3.8 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	Psi psi 3.9 2.1 2.1 2.1 2.1 2.1 2.1 7.5 7.2
Actual	Applied	Load	Pcontact	į	lbs	2.8	2.8 2.8	lbs 2.8 3.6	lbs 2.8 3.6 6.1	lbs 2.8 3.6 6.1 8.5	lbs 2.8 3.6 6.1 8.5 2.8	lbs 2.8 3.6 6.1 8.5 2.8 2.8	lbs 2.8 3.6 6.1 8.5 2.8 2.8 2.8 2.8	lbs 2.8 3.6 6.1 8.5 2.8 2.8 2.8 2.8 2.8 2.8 2.8	lbs 2.8 3.6 6.1 8.5 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 7.6	lbs 2.8 3.6 6.1 2.8 8.5 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8	bs 2.8 3.6 6.1 8.5 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8	lbs 2.8 3.6 6.1 8.5 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8	bs 2.8 2.8 3.6 6.1 6.1 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8
Actual	Applied Cvclic Load	Cyclic Load	Pevelic	sq		22.4	22.4 44.6	22.4 44.6 66.2	22.4 44.6 66.2 86.4	22.4 44.6 66.2 86.4 106.1	22.4 44.6 66.2 86.4 106.1 22.3	22.4 44.6 66.2 86.4 106.1 22.3 44.1	22.4 44.6 66.2 86.4 106.1 22.3 44.1 65.3	22.4 44.6 66.2 86.4 106.1 44.1 65.3 85.6	22.4 44.6 66.2 86.4 106.1 22.3 65.3 85.6 105.0	22.4 44.6 66.2 86.4 106.1 106.1 22.3 65.3 85.6 105.0 22.2	22.4 44.6 66.2 86.4 106.1 106.1 44.1 65.3 85.6 105.0 22.2 85.6 43.6	22.4 44.6 66.2 86.4 106.1 106.1 22.3 65.3 85.6 105.0 22.2 22.2 64.2 64.2	22.4 44.6 66.2 86.4 106.1 106.1 44.1 65.3 85.6 105.0 22.2 22.2 83.7 83.7
Actual	Applied Max Avial		P _{max}	lbs		25.2	25.2 47.4	25.2 47.4 69.9	25.2 47.4 69.9 92.5	25.2 47.4 69.9 92.5 114.6	25.2 47.4 69.9 92.5 114.6 25.2	25.2 47.4 69.9 92.5 114.6 25.2 47.0	25.2 47.4 69.9 92.5 114.6 25.2 25.2 68.1	25.2 47.4 69.9 92.5 114.6 25.2 25.2 68.1 68.1 90.8	25.2 47.4 69.9 92.5 114.6 25.2 68.1 90.8 112.6	25.2 47.4 69.9 92.5 114.6 25.2 68.1 68.1 90.8 112.6 25.0	25.2 47.4 69.9 92.5 114.6 25.2 68.1 90.8 112.6 25.0 25.0	25.2 47.4 69.9 92.5 114.6 25.2 68.1 90.8 112.6 25.0 25.0 67.0	25.2 47.4 69.9 92.5 114.6 25.2 68.1 90.8 112.6 68.1 90.8 112.6 68.1 80.0
	Maximum Axial	Stress	S _{cyclic}	psi		2.0	2.0	2.0 4.0 6.0	2.0 4.0 6.0 8.0	2.0 4.0 6.0 8.0	2.0 4.0 6.0 8.0 10.0	2.0 4.0 8.0 10.0 2.0 4.0	2.0 4.0 6.0 8.0 10.0 4.0 6.0	2.0 2.0 6.0 7.0 2.0 2.0 6.0 8.0 8.0	2.0 4.0 6.0 8.0 2.0 4.0 6.0 8.0 8.0	2.0 4.0 6.0 8.0 4.0 6.0 8.0 8.0 2.0	2.0 4.0 6.0 8.0 4.0 70.0 8.0 8.0 70.0 4.0	2.0 4.0 6.0 8.0 6.0 6.0 8.0 8.0 70.0 6.0 8.0 8.0	2.0 6.0 6.0 7.0 8.0 6.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0
	Contining		လိ	psi		6.0	6.0 6.0	6.0 6.0	6.0 6.0 6.0	6.0 6.0 6.0 6.0	6.0 6.0 6.0 6.0 6.0 4.0	6.0 6.0 6.0 6.0 4.0 4.0	6.0 6.0 6.0 6.0 7.0 4.0 4.0	6.0 6.0 6.0 6.0 4.0 4.0 4.0	6.0 6.0 6.0 6.0 6.0 4.0 4.0 4.0 4.0	6.0 6.0 6.0 6.0 4.0 4.0 4.0 2.0	6.0 6.0 6.0 6.0 4.0 4.0 4.0 4.0 2.0 2.0	6.0 6.0 6.0 6.0 6.0 4.0 4.0 4.0 2.0 2.0 2.0	6.0 6.0 6.0 6.0 4.0 4.0 4.0 4.0 2.0 2.0 2.0 2.0
	PARAMETER		DESIGNATION	UNIT		Sequence 1	Sequence 1 Sequence 2	Sequence 1 Sequence 2 Sequence 3	Sequence 1 Sequence 2 Sequence 3 Sequence 4	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 5	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 5 Sequence 6	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 6 Sequence 6 Sequence 7	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 6 Sequence 8 Sequence 8	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 6 Sequence 6 Sequence 8 Sequence 8 Sequence 9	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 6 Sequence 6 Sequence 8 Sequence 9 Sequence 10	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 5 Sequence 6 Sequence 7 Sequence 9 Sequence 10 Sequence 10	Sequence 1 Sequence 2 Sequence 3 Sequence 4 Sequence 6 Sequence 6 Sequence 8 Sequence 10 Sequence 10 Sequence 11 Sequence 12	Sequence 1 Sequence 2 Sequence 2 Sequence 4 Sequence 5 Sequence 6 Sequence 7 Sequence 10 Sequence 10 Sequence 11 Sequence 12 Sequence 13	Sequence 1 Sequence 2 Sequence 3 Sequence 5 Sequence 6 Sequence 6 Sequence 7 Sequence 10 Sequence 11 Sequence 12 Sequence 13 Sequence 13 Sequence 13

July 31, 2018

DATE

GW

TESTED BY REVIEWED BY

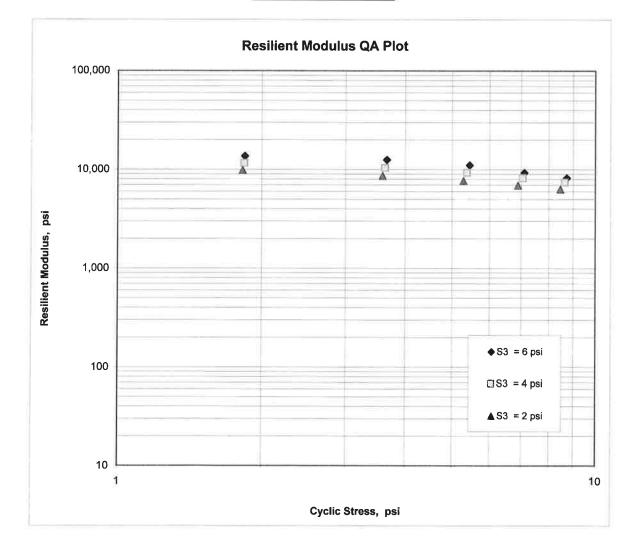
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIALS DIVISION

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

Job No.	080457	Material Code SSRVPS
Date Sampled:	7/3/18	Station No.: 7790+00
Date Tested:	July 31, 2018	Location: CL
Name of Project:	UPRR OVERPASS & REAL	IGN. (MAYFLOWER)(S)
County:	Code: 23 Name:	FAULKNER
Sampled By:	DICKERSON/FRAZIER	Depth: 0-5
Lab No.:	20181585	AASHTO Class: A-6 (5)
Sample ID:	RV361	Material Type (1 or 2): 2
LATITUDE:		LONGITUDE:

 $M_R = K1 (S_C)^{K_2} (S_3)^{K_5}$

K1 =	9,850	
K2 =	-0.29710	
K5 =	0.29939	
$R^2 =$	0.95	



JOB: 080457

COUNTY NO. 23 DATE TESTED

Arkansas State Highway Transporation Department

JOB NAME: UPRR OVERPASS & REALIGN. (MAYFLOWER)(S)

Materials Division Michael Benson, Materials Engineer

STA.#	LOC. DEPTH	COLOR	#4	#10	# 40 E	#80	#200 E S	<i>L.L</i> .	<i>P.I</i> .	SOIL CLASS	<i>LAB</i> #:	%MOISTURE
7790+0	CL CON 0-5	RD/BR	89	85	79	70	56	28	15	A-6(5)	RV361	
0100+0	06 RT 0-5	BROWN	100	現在が			91	28	12	A-6(9)	S351	21.9
0100+0	24 RT 0-5	BROWN	98	96	91	84	78	21	08	A-4(3)	S352	21.2
0124+0	06 LT 0-5	RD/BR	100	98	97	88	78	37	23	A-6(16)	S353	24
0124+0	24 LT 0-5	BROWN	99	94	88	81	72	26	11	A-6(5)	S354	15.3
0138+0	05 RT 0-5	BROWN	100	99	98	92	86	27	12	A-6(8)	S355	21.8
0138+0	15 RT 0-5	BROWN	96	94	91	87	82	30	13	A-6(9)	S356	21.9
0194+5	06 LT 0-5	RD/BR	100	99	97	93	89	38	25	A-6(21)	S357	25.9
0304+0	CL CON 0-5	BROWN		100			91	44	31	A-7-6(28)	S358	27.5
7789+0	CL CON 0-5	RD/BR	99	97	94	86	80	35	17	A-6(12)	S359	14.4
7790+0	CL CON 0-5	RD/BR	97	93	88	70	47	ND	NP	A-4(0)	S360	20.8

8/3/2018

JOB: C JOB NAME: U	080457 UPRR OVERPASS	JOB: 080457 JOB NAME: UPRR OVERPASS & REALIGN. (MAYFLOWER)(S)	VER)(S)	Arkansas State Highway Transpor Materials Division	Arkansas State Highway Transporation Department Materials Division	DATE TESTED 8/3/2018
COUNTY NO.	23			Michael Benson	Michael Benson, Materials Engineer	
STA.# LOC.				PAVEMENT SOUNDINGS	OUNDINGS	
06 RT	ACHMSC 5.5W	ACHMBC 2.0	PCCP 6.5	AGG.BASE CRS CL-7 3.0	Ľ	
24 RT	ACHINSC 	ACHMBC 	PCCP	AGG.BASE CRS CL-7	2	
06 LT	ACHMSC 5.5W	ACHMBC 3.5X	РССР 7.5	AGG.BASE CRS CL-7 	2	
24 LT	ACHMSC	AGG.BASE CRS CL-7				
05 RT	ACHMSC 2.75W	AGG.BASE CRS CL-7 7.0	2-			
15 RT	ACHMSC -	AGG.BASE CRS CL-7	-7			
06 LT	ACHMSC 2.0	CHIP SEAL 0.25	ACHMSC 5.0WX	ACHMBC 2.0	AGG.BASE CRS CL-7 10.0	
CO	CL CON ACHMSC	CHIP SEAL	ACHMSC	ACHMBC	AGG.BASE CRS CL-7	
Ő	CL CON ACHMSC	CHIP SEAL	ACHMSC	ACHMBC	AGG.BASE CRS CL-7	

Tuesday, August 07, 2018

comments: W=MULTIPLE LAYERS, X=STRIPPED

Page I of I

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION MICHAEL BENSON, MATERIALS ENGINEER *** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT *** DATE - 08/03/18 SEQUENCE NO. - 1 JOB NUMBER - 080457 MATERIAL CODE - SSRVPS FEDERAL AID NO.- TO BE ASSIGNED SPEC. YEAR - 2014 PURPOSE - SOIL SURVEY SAMPLE SUPPLIER ID. - 1 SPEC. REMARKS - NO SPECIFICATION CHECK COUNTY/STATE - 23 SUPPLIER NAME - STATE DISTRICT NO. - 08 NAME OF PROJECT - UPRR OVERPASS & REALIGN. (MAYFLOWER)(S) PROJECT ENGINEER - NOT APPLICABLE PIT/QUARRY - ARKANSAS - FAULKNER, COUNTY LOCATION DATE SAMPLED - 07/03/18 SAMPLED BY - BUIE/FRAZIER DATE RECEIVED - 07/24/18 SAMPLE FROM - TEST HOLE DATE TESTED - 08/03/18 MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS - 20181577 - S353 LAB NUMBER - 20181575 - 20181576 - S352 - S353 SAMPLE ID - S351 TEST STATUS - INFORMATION ONLY - INFORMATION ONLY - INFORMATION ONLY -0100+00 -0100+00- 0124+00 STATION - 24 RT -- 06 LT _ 24 RT _ 0-5 - 06 RT LOCATION DEPTH IN FEET - 0-5 0 - 5_ BROWN _ RD/BR - BROWN MAT'L COLOR MAT'L TYPE _ _ LATITUDE DEG-MIN-SEC - 34 58 6.80 - 34 58 6.80 - 34 58 29.50 92 25 17.20 LONGITUDE DEG-MIN-SEC - 92 25 17.40 92 25 10.30 2 % PASSING IN. -1 1/2 IN. -----3/4 IN. ------3/8 IN. -100 ÷ -NO. 4 -98 100 100 --NO. 10 -96 98 -NO. 40 -91 97 NO. 80 -84 88 NO. 200 -91 78 78 37 21 LIOUID LIMIT _ 28 23 PLASTICITY INDEX _ 12 08 --AASHTO SOIL _ A-6(9) A-4(3) A-6(16) UNIFIED SOIL _ ----24.0 % MOISTURE CONTENT -21.2 21.9 ACHMSC (IN) -5.5W -----5.5W ----_ ACHMBC (IN) -2.0 ------3.5X -_ PCCP (IN) -7.5 6.5 ------_ (IN) _ AGG.BASE CRS CL-7 3.0 --------_ ---

REMARKS 📼 W=MULTIPLE LAYERS, X=STRIPPED

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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION MICHAEL BENSON, MATERIALS ENGINEER *** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT *** DATE - 08/03/18 SEQUENCE NO. - 2 JOB NUMBER - 080457 MATERIAL CODE - SSRVPS FEDERAL AID NO.- TO BE ASSIGNED SPEC. YEAR - 2014 PURPOSE - SOIL SURVEY SAMPLE SUPPLIER ID. - 1 SPEC. REMARKS - NO SPECIFICATION CHECK COUNTY/STATE - 23 SUPPLIER NAME - STATE DISTRICT NO. - 08 NAME OF PROJECT - UPRR OVERPASS & REALIGN. (MAYFLOWER)(S) PROJECT ENGINEER - NOT APPLICABLE PIT/QUARRY - ARKANSAS - FAULKNER, COUNTY LOCATION DATE SAMPLED - 07/03/18 SAMPLED BY - BUIE/FRAZIER DATE RECEIVED - 07/24/18 SAMPLE FROM - TEST HOLE DATE TESTED - 08/03/18 MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS - 20181579 = 20181580 - S355 = S356 LAB NUMBER - 20181578 - 20181579 SAMPLE ID - S354 TEST STATUS - INFORMATION ONLY - INFORMATION ONLY - INFORMATION ONLY - 0138+00 - 0138+00 STATION - 0124+00 - 05 RT - 15 RT LOCATION - 24 LT 0-5 -- 0-5 0-5 DEPTH IN FEET ---BROWN BROWN - BROWN MAT'L COLOR MAT'L TYPE -LATITUDE DEG-MIN-SEC - 34 58 29.50 - 34 58 20.90 - 34 58 21.00 LONGITUDE DEG-MIN-SEC - 92 25 10.50 92 25 15.00 92 25 15.10 % PASSING 2 IN. - $1 \ 1/2 \ IN. -$ _ -_ 3/4 IN. -_ 3/8 IN. - 100 100 -NO. 4 - 99 100 96 _ -94 99 94 NO. 10 -NO. 40 -88 98 91 NO. 80 -81 92 87 NO. 200 -72 86 82 LIQUID LIMIT _ 26 - 27 30 - 11 - 12 PLASTICITY INDEX 13 _ AASHTO SOIL _ A-6(5) A-6(8) A - 6(9)UNIFIED SOIL _ -1% MOISTURE CONTENT -21.9 15.3 21.8 (IN) -----____ ACHMSC _ 2.75W -_ AGG.BASE CRS CL-7 (IN) ------7.0 ____ _ -_ ----_ -_ REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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ARKANSAS STATE HIGHWAY AND TRANSPORTATI MATERIALS	
MICHAEL BENSON, MATER *** SOIL SURVEY / PAVEMENT	
DATE - 08/10/18 JOB NUMBER - 080457 FEDERAL AID NO TO BE ASSIGNED PURPOSE - SOIL SURVEY SAMPLE SPEC. REMARKS - NO SPECIFICATION CHECK SUPPLIER NAME - STATE NAME OF PROJECT - UPRR OVERPASS & REALIGN. PROJECT ENGINEER - NOT APPLICABLE PIT/QUARRY - ARKANSAS LOCATION - FAULKNER, COUNTY SAMPLED BY - BUIE/FRAZIER SAMPLE FROM - TEST HOLE	SEQUENCE NO 3 MATERIAL CODE - SSRVPS SPEC. YEAR - 2014 SUPPLIER ID 1 COUNTY/STATE - 23 DISTRICT NO 08 (MAYFLOWER)(S) DATE SAMPLED - 07/03/18 DATE RECEIVED - 07/24/18 DATE TESTED - 08/03/18
MATERIAL DESC SOIL SURVEY - R VALUE- PAV	
SAMPLE ID - S357	- 20181582 - 20181583 - S358 - S359 - INFORMATION ONLY - INFORMATION ONLY - 0304+00 - 7590+71 - CL CONST - CL CONST - 0-5 - 0-5 - BROWN - RD/BR
LATITUDE DEG-MIN-SEC - 34 58 14.90 LONGITUDE DEG-MIN-SEC - 92 24 57.30	- 34 58 10.30 - 34 58 20.50 92 25 12.50 92 25 8.50
<pre>% PASSING 2 IN 1 1/2 IN 3/4 IN 3/8 IN NO. 4 - 100 NO. 10 - 99 NO. 40 - 97 NO. 80 - 93 NO. 200 - 89</pre>	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
LIQUID LIMIT - 38 PLASTICITY INDEX - 25 AASHTO SOIL - A-6(21) UNIFIED SOIL - % MOISTURE CONTENT - 25.9	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
ACHMSC(IN) -2.0CHIP SEAL(IN) -0.25ACHMSC(IN) -5.0WXACHMBC(IN) -2.0AGG.BASE CRS CL-7(IN) -10.0	

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED --

AASHTO TESTS : T24 T88 T89 T90 T265

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		MATERIALS D	IVISION	- LITTLE ROCK, ARKANSAS
		G BENSON, MATERI RVEY / PAVEMENT :		REPORT ***
DATE - 08/10/13 JOB NUMBER - 080457 FEDERAL AID NO TO BE AS PURPOSE - SOIL SU SPEC. REMARKS - NO SPEC SUPPLIER NAME - STATE NAME OF PROJECT - UPRR PROJECT ENGINEER - NOT A PIT/QUARRY - ARKANSAS	SSIGNE RVEY S IFICAT DVERPF	SAMPLE TION CHECK ASS & REALIGN. (
LOCATION - FAULKNER, SAMPLED BY - BUIE/FRAZI SAMPLE FROM - TEST HOLE MATERIAL DESC SOIL SU	ER		MENT SOUNDING	DATE SAMPLED - 07/03/18 DATE RECEIVED - 07/24/18 DATE TESTED - 08/03/18
				_
LAB NUMBER			-	
		360	-	-
TEST STATUS	- IN	FORMATION ONLY	_	_
		540+53	-	-
		CONST	-	-
	0-		-	-
MAT'L COLOR	- RE)/BR	-	-
MAT'L TYPE	-	24 52 22 22	-	-
LATITUDE DEG-MIN-SEC LONGITUDE DEG-MIN-SEC			-	-
% PASSING 2 IN.	æ :		-	-
1 1/2 IN.	÷		-	-
3/4 IN.	<u>7</u>		-	-
3/8 IN.	- 1	00	-	-
NO. 4	-	97	-	-
NO. 10	.e.	93	-	_
NO. 40		88	-	-
NO. 80	-	70	-	-
NO. 200	2 	47		
LIQUID LIMIT	- I	ND	-	-
PLASTICITY INDEX		NP	5 <u>4</u> 7	-
AASHTO SOIL	i j	A-4(0)	200	-
UNIFIED SOIL			2 — 2	-
% MOISTURE CONTENT	Ξ.	20.8		_
				-
	-		-	_
	-		-	_
	-			-
			-	-
	2 - - 1		-	-
	(_)			-
			중한 1421	-
REMARKS - W=MULTIPLE LA -	YERS,	X=STRIPPED		

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION MICHAEL BENSON, MATERIALS ENGINEER *** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT *** DATE - 08/10/18 JOB NUMBER - 080457 SEQUENCE NO. - 1 MATERIAL CODE - RV FEDERAL AID NO.- TO BE ASSIGNED SPEC. YEAR - 2014 PURPOSE - SOIL SURVEY SAMPLE SUPPLIER ID. - 1 SPEC. REMARKS - NO SPECIFICATION CHECK COUNTY/STATE - 23 SUPPLIER NAME - STATE DISTRICT NO. - 08 NAME OF PROJECT - UPRR OVERPASS & REALIGN. (MAYFLOWER)(S) PROJECT ENGINEER - NOT APPLICABLE PIT/QUARRY - ARKANSAS LOCATION - FAULKNER, COUNTY DATE SAMPLED - 07/03/18 SAMPLED BY - BUIE/FRAZIER DATE RECEIVED - 07/24/18 SAMPLE FROM - TEST HOLE DATE TESTED - 08/03/18 MATERIAL DESC. - SOIL SURVEY - RESISTANCE R-VALUE ACTUAL RESULTS LAB NUMBER - 20181585 -SAMPLE ID - RV361 -- INFORMATION ONLY -TEST STATUS STATION - 7604+53 -- CL CONST - 0-5 LOCATION DEPTH IN FEET – RD/BR MAT'L COLOR _ MAT'L TYPE _ LATITUDE DEG-MIN-SEC - 34 58 28.20 -LONGITUDE DEG-MIN-SEC - 92 25 5.30 % PASSING 2 IN. -1 1/2 IN. -3/4 IN. - 100 3/8 IN. - 96 NO. 4 - 89 _ NO. 10 - 85 -NO. 40 - 79 NO. 80 - 70 _ NO. 200 - 56 - 28 LIQUID LIMIT -PLASTICITY INDEX - 15 -AASHTO SOIL - A-6(5) -UNIFIED SOIL _ % MOISTURE CONTENT ---REMARKS = W=MULTIPLE LAYERS, X=STRIPPED

--AASHTO TESTS : T24 T88 T89 T90 T265