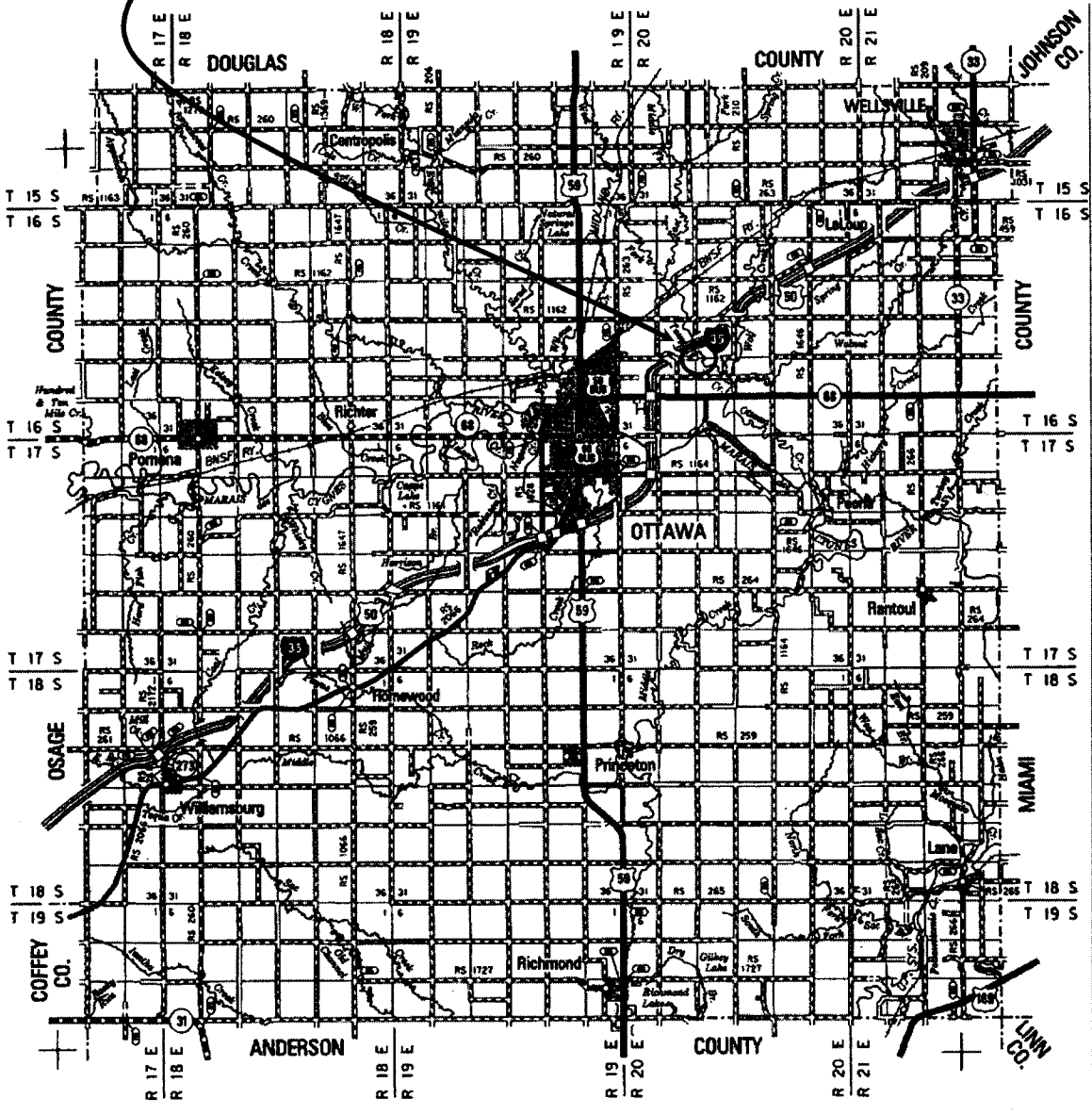


20-16-20E

E/2 SE

Project 59-30 K-7889-01
Relocated Nevada Road
over Tauy Creek



Franklin County

KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO. 59-30	SOUNDING NO. 1	SHEET 1 OF 2
BRIDGE STA. 53+95.00	PROJ. NO. K-7889-01	BRIDGE NO. 1892 (102)
SITE NAME Relocated Nevada Rd over Taub Creek		HOLE STA. 55+21.8 Rt
GEOLOGIST Denesha	SCALE (1 unit = 2 feet)	DATE 5/18/05
DRILLER J. Burns	RIG TYPE CME-55	TOP HOLE ELEV. 892.96
GW ELEV. H N/A	TOTAL DEPTH 53.0	M/B ELEV. 876.86

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	STANDARD PENETRATION TEST (SPT)	
							N COUNT	ELEVATION
				893	T.H.E. = 892.96			
	Sall Mantle	[Diagonal Hatching]		891	Mantle - Dark brown, with some fine sand. Lower portion clayey and very soft with some silt. Limestone gravel present near the base.			
			889					
			887	0.8		886.16		
			885					
				883				
				881		0.58	881.06	
				879				
			16.6	877	876.36			
	Captain Creek Limestone Member	[Brick Pattern]		875	Limestone - blue-gray to light and dark gray to white. Some shaley seams present. Limestone is nodular with numerous algal mats, very fossiliferous. Vertical joints filled with crystalline calcite exist in upper beds.			
			873	333.5		873.06		
			871					
			869	660		868.66		
				867				
			27.1	865	865.86			
	Vilas	[Horizontal Hatching]		865	Shale - very dark gray to black, hard. A very thin (0.5 ft) algal limestone present near bottom of member.			



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO. 59-30	SOUNDING NO. 1	SHEET 2 OF 2
BRIDGE STA 53+95.00	PROJ. NO. K-7889-01	BRIDGE NO. 18.92 (102)
SITE NAME Relocated Nevada Rd over Tany Creek		HOLE STA. 55+21.8 Rt

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	STANDARD PENETRATION TEST (SPT)																																																																						
							N COUNT	ELEVATION																																																																					
	Shale Mbr	4	34.0	863	Shale-continued	1,11		862.26																																																																					
	Spring Hill Limestone Member	5		859	858.96 Limestone-gray, upper portion is coarse grained and wavy bedded with some shaly seams, fucosilinids are also present. The lower beds are fine grained tan to light gray with shale seams.	352.5		856.56																																																																					
		6		857			264	850.76																																																																					
		7		855																																																																									
		8		853																																																																									
		8		851																																																																									
		8		849																																																																									
		8		847																																																																									
			52.2	845		630		845.96																																																																					
			50.9	843	842.76 Shale-black with fucosilinids																																																																								
			53.0	841	Limestone-gray with shale breaks TD= 53.0	53		842.56																																																																					
				839	*- Hickory Creek Shale Member																																																																								
	Merriam Limestone Member																																																																												
					<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Core</th> <th>Depth</th> <th>Elev.</th> <th>Cut</th> <th>Rec</th> <th>%</th> <th>RQD</th> </tr> </thead> <tbody> <tr><td>1</td><td>16.6</td><td>876.86</td><td>2.0</td><td>2.0</td><td>100</td><td>80</td></tr> <tr><td>2</td><td>18.1</td><td>874.86</td><td>5.0</td><td>5.0</td><td>100</td><td>100</td></tr> <tr><td>3</td><td>23.1</td><td>869.86</td><td>5.0</td><td>5.0</td><td>100</td><td>86</td></tr> <tr><td>4</td><td>28.0</td><td>864.96</td><td>5.0</td><td>5.2</td><td>104</td><td>90</td></tr> <tr><td>5</td><td>33.0</td><td>859.96</td><td>5.0</td><td>5.0</td><td>100</td><td>90</td></tr> <tr><td>6</td><td>38.0</td><td>854.96</td><td>5.0</td><td>5.0</td><td>100</td><td>96</td></tr> <tr><td>7</td><td>43.0</td><td>849.96</td><td>5.0</td><td>5.0</td><td>100</td><td>95</td></tr> <tr><td>8</td><td>48.0</td><td>844.96</td><td>5.0</td><td>5.0</td><td>100</td><td>100</td></tr> <tr><td>Total</td><td>53.0</td><td>839.96</td><td>37.0</td><td>37.2</td><td>100</td><td>-</td></tr> </tbody> </table>	Core	Depth	Elev.	Cut	Rec	%	RQD	1	16.6	876.86	2.0	2.0	100	80	2	18.1	874.86	5.0	5.0	100	100	3	23.1	869.86	5.0	5.0	100	86	4	28.0	864.96	5.0	5.2	104	90	5	33.0	859.96	5.0	5.0	100	90	6	38.0	854.96	5.0	5.0	100	96	7	43.0	849.96	5.0	5.0	100	95	8	48.0	844.96	5.0	5.0	100	100	Total	53.0	839.96	37.0	37.2	100	-		
Core	Depth	Elev.	Cut	Rec	%	RQD																																																																							
1	16.6	876.86	2.0	2.0	100	80																																																																							
2	18.1	874.86	5.0	5.0	100	100																																																																							
3	23.1	869.86	5.0	5.0	100	86																																																																							
4	28.0	864.96	5.0	5.2	104	90																																																																							
5	33.0	859.96	5.0	5.0	100	90																																																																							
6	38.0	854.96	5.0	5.0	100	96																																																																							
7	43.0	849.96	5.0	5.0	100	95																																																																							
8	48.0	844.96	5.0	5.0	100	100																																																																							
Total	53.0	839.96	37.0	37.2	100	-																																																																							

Nevada Road over Tauy Creek

Project No. 59-30 K-7889-01

Note: All measurements are in English

	<u>Elevation</u>	<u>Depth</u>		
Core Hole #1	892.96	0.00	Soil mantle, dark brown.	
Sta. 55+21	887.96	5.00	Pushed shelby #1. 5.0 to 6.8.	
8 Rt of centerline			Silty clay, medium brown, some fine sand.	
	886.16	6.80	Soil mantle, brown, very silty.	Mantle
Date Drilled 5/19/05	882.96	10.00	Pushed shelby #2. 10.0 to 11.9.	
Geologist: Carrie Denesha			Clayey gray and brown, very soft.	
Driller: Jim Burns	881.96	11.00	Soil mantle, gray brown, silty to clayey.	
	876.86	16.10	Begin coring.	
Core # 1	876.86	16.10	Goop, limestone gravel and clay.	
16.1 to 18.1 ft.	876.36	16.60	Limestone, tan and blue-gray, 2 shaly breaks	
Cut 2.0 ft.	874.86	18.10	End Core 1.	Captain Creek Ls. Member
Recovered 2.0 ft. RQD = 80%				
Core # 2	874.86	18.10	Limestone, dark gray limestone nodules in tan matrix.	
18.1 to 23.1 ft.	874.66	18.30	Limestone, light gray, vertical joints with CaCO ₃ , fossiliferous.	
Cut 5.0 ft.	872.86	20.10	Limestone, dark gray, nodules, fossiliferous, algal mats.	
Recovered 5.0 ft.	870.96	22.00	Limestone, light gray, algal, fossiliferous.	
RQD = 100%	869.86	23.10	End Core 2.	
			Sample 1 19.4 to 19.9 Limestone.	
Core # 3	869.86	23.10	Limestone, light gray, algal, fossiliferous.	
23.1 to 28.0 ft.	869.26	23.70	Limestone, shaly, gray.	
Cut 5.0 ft.	868.26	24.70	Shale, dark gray.	
Recovered 5.0 ft.	867.46	25.50	Limestone, gray-white.	
RQD = 86%	865.86	27.10	Shale, dark gray, hard.	
	864.96	28.00	End Core 3.	Vilas Shale Fm.
			Sample 2 23.7 to 24.3 Limestone gray.	
Core # 4	864.96	28.00	Shale, dark gray, hard.	
28.0 to 33.0 ft.	860.76	32.20	Shale, black, hard.	
Cut 5.0 ft.	860.46	32.50	Limestone, dark gray, algal.	
Recovered 5.2 ft.	859.96	33.00	End core 4.	
RQD = 90%			Sample 3 29.6 to 30.2 Shale.	

Nevada Road over Tauy Creek
Project No. 59-30 K-7889-01

	<u>Elevation</u>	<u>Depth</u>		
Core # 5	859.96	33.00	Shale, dark gray.	Vilas Shale Fm.
33.0 to 38.0 ft.	858.96	34.00	Limestone, shaly, wavy bedded, fussionids.	
Cut 5.0 ft.	858.66	34.30	Limestone, some shale seams, gray, wavy bedded.	
Recovered 5.0 ft.	857.56	35.40	Limestone, coarse grained, few shaly seams.	
RQD = 90%	854.96	38.00	End core 5.	Spring Hill Ls. Mbr.
			Sample 4 35.7 to 36.4 Limestone.	
Core # 6	854.96	38.00	Limestone, coarse grained, shaly seams.	
38.0 to 43.0 ft.	849.96	43.00	End core 6.	
Cut 5.0 ft.				
Recovered 5.0 ft.			Sample 5 41.6 to 42.2 Limestone.	
RQD = 96%				
Core # 7	849.96	43.00	Limestone, coarse grained, few shaly seams.	
43.0 to 48.0 ft.	848.86	44.10	Limestone, gray, fine grained, shaly seams.	
Cut 5.0 ft.	847.26	45.70	Limestone, tan-gray, shale seams.	
Recovered 5.0 ft.	844.96	48.00	End Core 7.	
RQD = 95%			Sample 6 46.6 to 47.0 Limestone.	
Core # 8	844.96	48.00	Limestone, light gray,	
48.0 to 53.0 ft.	843.06	49.90	Limestone, very shaly.	
Cut 5.0 ft.	842.76	50.20	Shale, black, abundant fussionids.	Hickory Creek Shale Mbr
Recovered 5.0 ft.	842.06	50.90	Limestone, with shale breaks.	Merriam Ls. Mbr
RQD = 100%	839.96	53.00	End core 8. Total depth.	
			Sample 7 49.9 to 50.4 Shale, dark gray-black.	

Kansas Department of Transportation

Report of sample of geology cores

Laboratory No. 05-1706

Date Reported: 6/23/2005

Date Received: 5/19/2005


Specification N°	AASHTO T-208	Quantity:	7
Source of Material	59-30 K-7889-01	County:	Franklin
Sampled from	59-30 K-7889-01		
Submitted by:	Denesha		
Identification marks:	Tags on samples		
Project or POV	59-30 K-7889-01		
Description of site:			
Type of Construction	Bridge Foundation		

TEST RESULTS

Core No.	Station	Offset (FT)	Depth (FT)	Description	Unconfined	Elastic	Dry	Moisture	
					Compression	Modulus	Density	Percent	
					Qu (psf)	E (psf)	γ_d (pcf)	w %	
S-1	55+20	5FT RT	19.4-19.9	Captain Creek LS, white w/shale	330	667000	125000000	145	6.1
S-2	"	"	23.7-24.3	Captain Creek LS, gray	660	1320000	193000000	162	1.4
S-3	"	"	29.6-30.7	Vilas shale, dk gray, clayey	111	2220	68900	118	17.1
S-4	"	"	35.7-36.4	LS, Springhill, coarse, crystalline	352	705000	132000000	161	1.9
S-5	"	"	41.6-42.2	Springhill LS, tan w/shale seams	254	528000	80400000	159	2.3
S-6	"	"	46.6-47.0	Springhill tan-gray LS	630	1260000	207000000	158	3.0
S-7	"	"	49.7-50.4	Hickory Creek SH, dk gray	53	106000	13800000	151	4.4
SH-1	"	"	5.0-6.8	SiCl- med. brn w/fine sand		1600	52600	104	18.5
SH-2	"	"	10.0-11.9	SiCl- mottled gray, tan		1170	9550	102	23.7

See attached routine test results

cc: L.S. Ingram
 R. Fuller
 R. Henthorne
 Soil Section
 File 18-3

Reported by: 

Title: Robert A. Fuller; Soils Engineer

