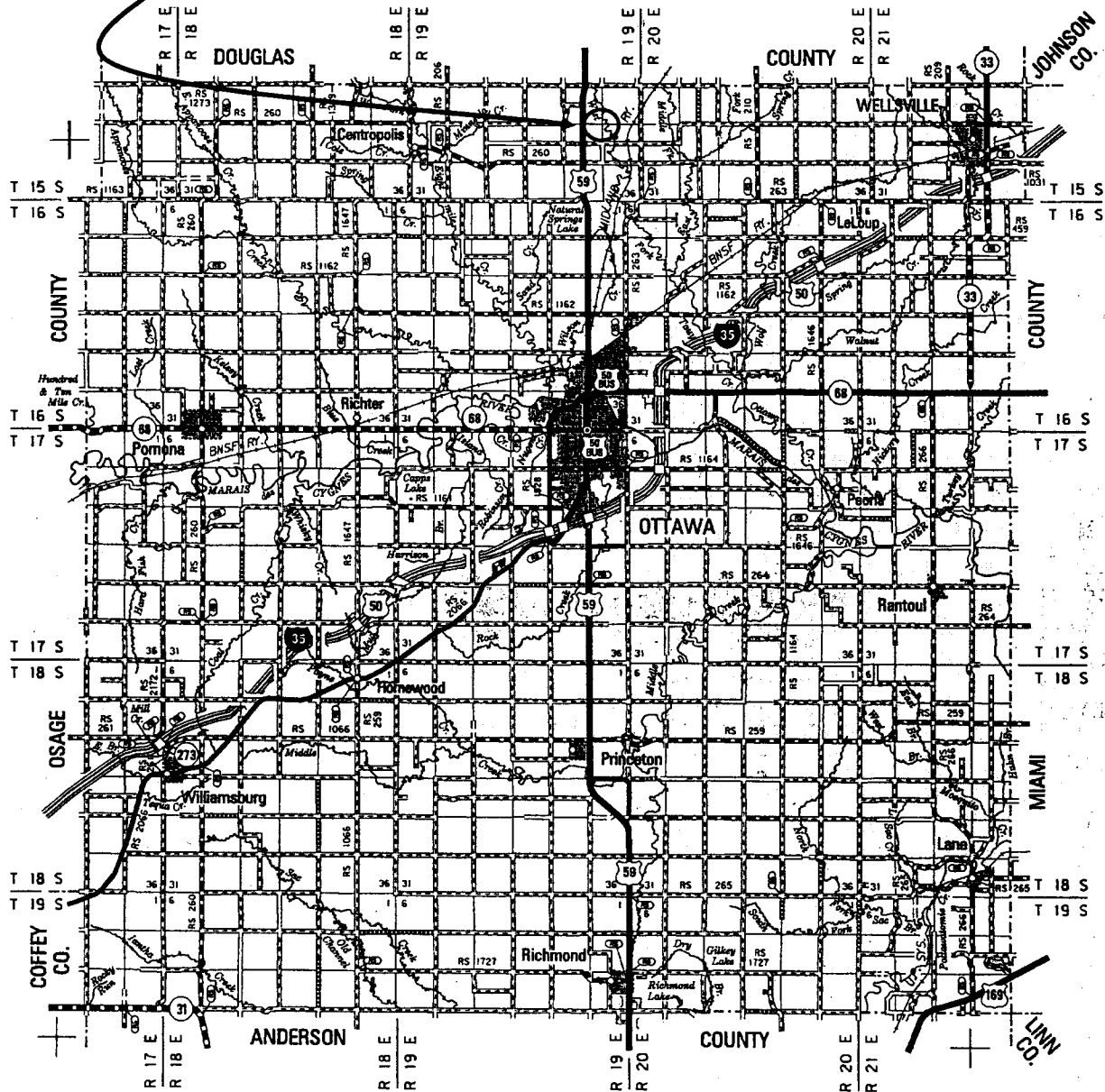


Project 59-30 K-7889-01
US-59 over West Fork Taury Creek

14-15-19E
SW SE



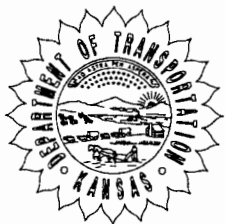
Franklin County



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	59-30	SOUNDING NO.	CD #1	SHEET 1 OF 3
BRIDGE STA.	370+00.00; 30.0' Rt. 370+00.00; 30.0' Lt.	PROJ. NO.	K-7889-01	BRIDGE NO. 59-30-24.83(120) 59-30-24.82(119)
SITE NAME	US-59 over North Branch Taoy Creek			HOLE STA 369+68.0; 67.0 Lt.
GEOLOGIST	R. Crow	SCALE	1 unit = 2 feet	DATE June 16, 2004
DRILLER	J. Burns	RIG TYPE	CME-75	TOP HOLE ELEV. 948.74
GW ELEV.	44 940.34	TOTAL DEPTH	68.6	M/B ELEV. 927.44

BIT TYPE	GEOLOGIC MEMBER	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	ELASTIC MODULUS (tsf)	ELEVATION
			0.00		T.H.E. = 948.74			
				948	Silty clay, tan to brown.			948
				946				946
				944				944
				942		Shelby #1 0.485	26.9	942
				940				940
			10.00	938.74				941.74
				938	Gravel, silty, brown.			938
			11.80	936.94		Shelby #2 0.150	0.233	936.94
				936	Gravel, silty, sandy, free water present.			936
				934				934
				932				932
				930				930
			21.30	927.44				928
				926	Shale, gray.			926
			24.20	924.54		3.00	81.5	925.14
				924	Shale, gray.			924
			26.10	922.64				922
			26.50	922.24	Coal, shaley in top portion.			922
				920.24	Shale, gray.			921.14
			28.50	920	Shale, black, organic nearly coal.	13.7	780	920



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	59-30	SOUNDING NO.	CD *1	SHEET 2 OF 3
BRIDGE STA.	370+00.00; 30.0' Rt. 370+00.00; 30.0' Lt.	PROJ.NO.	K-7889-01	BRIDGE NO. 59-30-24.83(120) 59-30-24.82(119)
SITE NAME	US-59 over North Branch Taoy Creek			HOLE STA 369+68.0; 67.0 Lt.

BIT TYPE	GEOLOGIC MEMBER	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	ELASTIC MODULUS (tsf)	ELEVATION
Core Barrel	Vinland Sh. Mbr.		2	28.90	919.84 Shale, black, organic nearly coal. Shale, gray, limy nodules.			
			3	918		8.50	117	918
								917.84
				32.90	916			916
	Weston Sh. Mbr.		4	33.80	914.94 Shale, gray.			
				34.20	914			
				34.70	914.54 Limestone, blue-gray, granular. 914.04 Limestone, blue-gray, granular, foss., shaley. Shale, gray-green, limestone nodules in middle portion, more clayey in basal portion.			914
			5	912		1.93	55.5	912
								912.04
				38.70	910			910
					910.04 Shale, gray, clayey, laminar, limestone nodules in middle and basal portions.			910
			6	908				908
						2.02	99.0	906.84
				906				906
				43.60	905.14			
			7	44.20	904.54 Shale, gray with limy nodules. Shale, gray, swelling, lower portion v. limy with few limestone nodules, thin shaley limestone bed at 45.8' with a thickness of 0.2'.			904
			8	902				902
						1.54	36.6	901.04
				48.70	900			900
					900.04 Shale, gray, laminar, limy.			900
			9	898		3.62	94.0	898
								897.44
				896				896
				53.20	895.54			
			10	54.10	894.64 Shale, gray, laminar, limy. Shale, gray, limy, occasional limestone nodules.			894
						2.32	67.0	893.74
			11	892				892
				58.60	890			890
					890.14 Shale, gray, limy, occasional limestone nodules.			888.74
			12	888		11.8	565	888
				886				886



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO.	59-30	SOUNDING NO.	CD #1	SHEET 3 OF 3
BRIDGE STA.	370+00.00; 30.0' Rt. 370+00.00; 30.0' Lt.	PROJ.NO.	K-7889-01	BRIDGE NO. 59-30-24.83(120) 59-30-24.82(119)
SITE NAME	US-59 over North Branch Taw Creek			HOLE STA 369+68.0; 67.0 Lt

BIT TYPE	GEOLOGIC MEMBER	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION (tsf)	ELASTIC MODULUS (tsf)	ELEVATION
Core Barrel	Weston Shale Mbr.		12 63.10	885.64	Shale, gray, limy, occasional limestone nodules.			
			13 64.10	884.64	Shale, dark gray, hard, laminar.	41.3	4335	884.64
			14	882	Shale, gray, hard, laminar.			882
			68.60	880.14	TD = 68.60'	4.60	1495	880.14
				878				878
				876				876
				874				874
				872				872
				870				870
				868				868
				866				866
				864				864
				862				862
				860				860
				858				858
				856				856
				854				854
				852				852

Core	Depth	Elev.	Cut	Rec	%	RQD
1	21.30	927.44	2.9	2.9	100	52%
2	24.20	924.54	4.7	4.4	93.6	75%
3	28.90	919.84	4.0	4.7	118	97%
4	32.90	915.84	1.3	1.2	92.3	92%
5	34.20	914.54	4.5	5.0	111	86%
6	38.70	910.04	4.9	5.0	102	100%
7	43.60	905.14	0.6	0.6	100	100%
8	44.20	904.54	4.5	5.0	111	100%
9	48.70	900.04	4.5	4.6	102	78%
10	53.20	895.54	0.9	1.0	111	100%
11	54.10	894.64	4.5	5.0	111	100%
12	58.60	890.14	4.5	4.5	100	100%
13	63.10	885.64	1.0	1.1	110	100%
14	64.10	884.64	4.5	4.5	100	78%
Total	68.60	880.14	47.3	49.5	105	XXX

59-30 K-7889-01

59-30-24.82(119) & 59-30-24.83(120)

US-59 over North Branch Taub Creek
Franklin County

Page 1 of 2

CH #1

369+68.00; 67.0 Lt.

Date: June 16, 2004

T.H.E. = 948.74

Driller: J. Burns

Geologist: R. Crow

<i>Elevation</i>	<i>Meters</i>	<i>Feet</i>	<i>Description</i>
948.74	0.00	0.00	Silty Clay, brown.
943.74	1.52	5.00	withd, sandy silt tan
941.74	2.13	7.00	SiCL Brn sandy
938.74	3.05	10.00	Silty Gravel Brn
936.94	3.60	11.80	Silty Sandy gravel free water
927.44	6.49	21.30	BEGIN CORE

Core #1

21.30 - 24.20

Cut: 2.9

Rec: 2.9

927.44	6.49	21.30	Shale gray
924.54	7.38	24.20	END CORE #1

RQD = 52%

Core #2

24.20 - 28.90

Cut: 4.7

Rec: 4.4

924.54	7.38	24.20	Shale gray
922.64	7.96	26.10	Shaly Coal grading into coal
922.24	8.08	26.50	Shale gray
920.24	8.69	28.50	Black shale organic nearly coal
919.84	8.81	28.90	END CORE #2

RQD = 75%

Core #3

28.90 - 32.90

Cut: 4.0

Rec: 4.7

919.84	8.81	28.90	Shale gray Limy Nodules
917.54	9.51	31.20	Shale v. nodular
916.44	9.85	32.30	Shale gray limy
915.84	10.03	32.90	END CORE #3

RQD = 97%

Core #4

32.90 - 34.20

Cut: 1.3

Rec: 1.2

915.84	10.03	32.90	Shale gray
914.94	10.30	33.80	LS Blue gray granular
914.64	10.39	34.10	END CORE #4

RQD = 92%

Core #5

34.20 - 38.70

Cut: 4.5

Rec: 5.0

914.54	10.42	34.20	LS Blue/gray granular fossil debris shaly
914.04	10.58	34.70	Shale gray green
911.44	11.37	37.30	Shale w ls nodules
910.84	11.55	37.90	Shale gray clayey
910.04	11.80	38.70	END CORE #5

RQD = 86%

Core #6

38.70 - 43.60

Cut: 4.9

Rec: 5.0

910.04	11.80	38.70	Shale gray clay
907.74	12.50	41.00	Shale laminar gray
906.54	12.86	42.20	Shale w/ limy nodules
906.24	12.95	42.50	Shale gray clay
905.14	13.29	43.60	END CORE #6

RQD = 100%

Core #7

43.60 - 44.20

Cut: 0.6

Rec: 0.6

905.14	13.29	43.60	Shale gray w/ limy nodules
904.54	13.47	44.20	END CORE #7

RQD = 100%

Core #8

44.20 - 48.70

Cut: 4.5

Rec: 5.0

904.54	13.47	44.20	Shale gray swelling
902.94	13.96	45.80	LS, thin shaly
902.74	14.02	46.00	Shale gray v. limy few LS nodules
900.04	14.84	48.70	END CORE #8

RQD = 100%

Core #9

48.70 - 53.20

Cut: 4.5

Rec: 4.6

900.04	14.84	48.70	Shale gray laminar limy
895.54	16.22	53.20	END CORE #9

RQD = 78%

Core #10

53.20 - 54.10

Cut: 0.9

Rec: 1.0

895.54	16.22	53.20	Shale gray laminar limy
894.64	16.49	54.10	END CORE #10

RQD = 100%

Core #11

54.10 - 58.60

Cut: 4.5

Rec: 5.0

894.64	16.49	54.10	Shale gray limy occasional LS nodules
890.14	17.86	58.60	END CORE #11

RQD = 100%

Core #12

58.60 - 63.10

Cut: 4.5

Rec: 4.5

890.14	17.86	58.60	Shale same as above
885.64	19.23	63.10	END CORE #12

RQD = 100%

Core #13

63.10 - 64.10

Cut: 1.0

Rec: 1.1

885.64	19.23	63.10	Shale dk gray hard laminar
884.64	19.54	64.10	END CORE #13

RQD = 100%

Core #14

64.10 - 68.60

Cut: 4.5

Rec: 4.5

884.64	19.54	64.10	Shale gray hard laminar
880.14	20.91	68.60	END CORE #14

RQD = 78%

TD = 880.14 20.91 68.60

Kansas Department of Transportation

Report of sample of Shelby Tubes & Geology Cores

Specification N°:	AASHTO T-208	Laboratory N°:	04-2094
Source of Material	59-30 K-7889-01	Date Reported:	7/8/2004
Sampled from	59-30 K-7889-01	Date Received:	6/16/2004
Submitted by:	Rocky Crow	Quantity:	2 Tubes, 11 Cores
Identification marks:	Tags on Samples	County:	Franklin
Project or POV	59-30 K-7889-01		
Description of site:			
Type of Construction	Bridge Foundation		

TEST RESULTS

Core N°	Station	Offset Feet	Depth Feet	Description	Unconfined Compression Qu (psf)	Elastic Modulus E (psf)	Dry Density γ_d (lb/ft ³)	Moisture Percent % γ_d
SA-1			23.2-23.7	Shale, Gray	345 ^F 6000	1.63E+05	125	11.8
SA-2			27.2-27.7 921.5	Shale, Gray	13,745 ^F 27400	1.56E+06	134	9.2
SA-3			30.3-30.9	Shale, Dark Gray	2,535 ^F 17000	2.34E+05	131	10.4
SA-4			36.1-36.7	Shale, Dark Gray	245 ^F 3860	1.11E+05	127	12.3
SA-5			41.3-41.9	Shale, Gray	245 ^F 4040	1.98E+05	134	9.7
SA-6			47.1-47.7	Shale, Gray	1,545 ^F 3070	7.31E+04	119	14.6
SA-7			50.8-51.3	Shale, Gray	7230	1.88E+05	128	11.4
SA-8			54.5-55.0	Shale, Dark Gray	4650	1.34E+05	123	12.9
SA-9			59.5-60.0	Shale, Gray	23500	1.13E+06	134	8.8
SA-10			63.6-64.1	Shale, Gray	82600	8.67E+06	140	8.5
SA-11			66.9-67.7	Shale, Dark Gray	9200	2.99E+06	138	8.5
SH-1			5.2-7.0	Brown Silty Clay	970	5.38E+04	99	16.4
SH-2			10.1-11.8	Brown Silty Clay, Very Wet	300	4.66E+02	106	23.8

See attached routine test results

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

Reported by: _____

Title: Robert A. Fuller P.E.
Soils Engineer

STATE OF KANSAS
DEPARTMENT OF TRANSPORTATION

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	59-30 K-7889-01	2006	1	

PROJ. NO. 59-30 K-7889-01
K788-0(901)

GRADING
BRIDGES
FENCING
SEEDING

Scale = 1" : 4,000'

$\frac{D}{1-01} =$
 $\frac{3-01}{}$
 Sec 23 T 153 R 1E

11. (120) ans **SE**

State Furnished
Borrow
for Wetlands?

NOTE: TRAFFIC TO BE CARRIED THRU CONSTRUCTION.
FOR CONSTRUCTION SEQUENCE SEE SH. NO. 141

PLANS PREPARED AND SUBMITTED BY:
GEORGE BUTLER ASSOCIATES, INC.
LENEXA KANSAS

RECOM. FOR APPROVAL-DATE [REDACTED]

[REDACTED]

CHIEF, BUREAU OF DESIGN
KANSAS DEPARTMENT OF TRANSPORTATION

APPROVED - DATE [REDACTED]

[REDACTED]

STATE TRANSPORTATION ENGINEER
KANSAS DEPARTMENT OF TRANSPORTATION

RECOM. FOR APPROVAL-DATE [REDACTED]
[REDACTED]
ENGINEER
FEDERAL HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
APPROVED - DATE [REDACTED]
[REDACTED]
DIVISION ADMINISTRATOR
FEDERAL HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION

FEB 23 2005

<u>Volume I</u>	
1	Title Sheet
2 - 5	Typical Sections
6 - 40	Plan & Profile Sheets
41 - 86	Interchange Details
87	Miscellaneous Details
88	Drainage Data Sheet
89 - 130	Bridge Sheets
131 - 140	Fencing Plans
141	Construction Sequencing
142 - 144	Drainage Area Sheets

Volume 2
XS-1 - XS-260 Cross Sections

Volume 3
XS-261 - XS-417 Cross Sections

DESIGN DESIGNATION

AADT (2007) = 6900
 AADT (2027) = 10500
 DHV = 11%
 D = 60/40
 T = 7%
 V = 70 mph
 C of A = FULL
 Clear Zone = 34'

CONVENTIONAL SIGNS

COUNTY LINE		CENTER LINE OF PROJECT	
CITY LIMITS		TERRACE	
STATE OR NATIONAL LINE		CULVERTS	
TOWNSHIP, SECTION or GRANT LINE		DROP INLET & STORM SEWER	
PROPERTY LINE		ACCESS CONTROL	
HIGHWAY FENCE		POWER POLE	
EXISTING FENCE		TELEPHONE POLE	
GUARD FENCE		MARSH	
CONSTRUCTION LIMITS		HEDGE	
RIGHT OF WAY LINE		TREES	
TRAVELED WAY		PROFILE ELEVATION	
RAILROADS		STREAM or CREEK	

GROSS LENGTH OF PROJECT	39,322.54	FT.
EXCEPTIONS	None	
ADDITIONS	None	
NET LENGTH OF PROJECT	39,322.54	FT.
NET LENGTH OF BRIDGES	1511.00	FT.
NET LENGTH OF ROAD	37,811.54	FT.