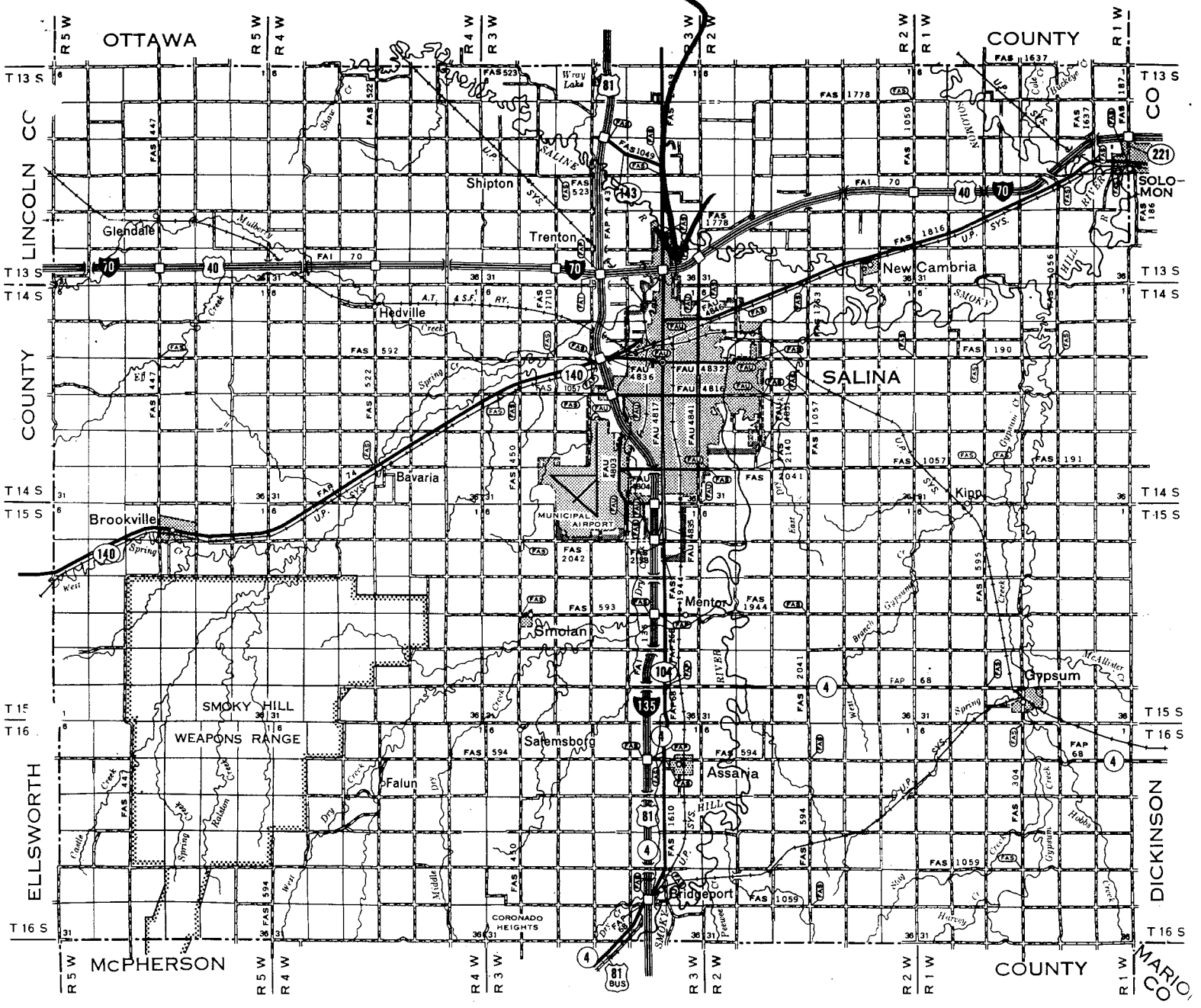


QC2

Mulberry Creek



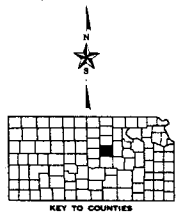
LEGEND

**ROADS AND ROADWAY FEATURES**

PRIMITIVE ROAD	-----
UNIMPROVED ROAD	-----
GRADED AND DRAINED ROAD	=====
SOIL SURFACED ROAD	=====
GRAVEL OR STONE ROAD - NOT GRADED OR DRAINED	=====
GRAVEL OR STONE ROAD - GRADED AND DRAINED	=====
GRAVEL OR STONE ROAD WITH STABILIZED SURFACE	=====
BITUMINOUS ROAD - LOW TYPE	=====
PAVED ROAD	=====
DIVIDED HIGHWAY	=====
HIGHWAY WITH FULL CONTROL OF ACCESS AND INTERCHANGE	=====

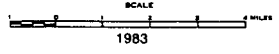
**ROAD SYSTEM DESIGNATION**

FEDERAL-AID INTERSTATE HIGHWAY SYSTEM	FAI
FEDERAL-AID PRIMARY HIGHWAY SYSTEM	FAP
FEDERAL-AID SECONDARY HIGHWAY SYSTEM	FAS
INTERSTATE NUMBERED HIGHWAY	40, 140, 155
U.S. NUMBERED HIGHWAY	81
STATE HIGHWAY SYSTEM OR STATE NUMBERED HIGHWAY	4, 68, 1059
END OF DESIGNATED SYSTEM OR MARKED ROUTE	81 BUS



GENERAL HIGHWAY MAP  
**SALINE COUNTY**  
**KANSAS**

PREPARED BY THE  
 KANSAS DEPARTMENT OF TRANSPORTATION  
 BUREAU OF TRANSPORTATION PLANNING  
 IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION



FA SYSTEM REVISED TO MAR. 15, 1988

# KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO. 70-85	SOUNDING NO. 1	SHEET 1 OF
BRIDGE STA 8+483.713	PROJ. NO. K-2863-01	BRIDGE NO. 17.46
SITE NAME E.B. I-70 over Mulberry Creek		HOLE STA 8+505.8, R+20.3m
GEOLOGIST Hutchison	SCALE: 1:200 (40mm = 1 Meter)	DATE 11-12-97
DRILLER Bergman	RIG TYPE B-61	TOP HOLE ELEV. 368.014
GROUNDWATER ELEV 363.533	TOTAL DEPTH	M/B ELEV.

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION kPa	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV
			0°	348.014				
			1.829	346.17	Clay, silty brown	34.568		366.795
			4.877	363.137	Silt, with some clay binder, orange-brown	47.686		364.966
			10.668	357.346	Clay bound sand, saturated to sand with clay lenses	64.157	4	363.198 362.68
			25.328	342.685	Sand, some clay lenses to light gravel		4	356.889
Wellington Fm.				340	Shale, light olive-gray to maroon.	337.626, 96.618.		339.149 338.128

SOUNDING NO. 1		PROJECT NO. 70-85-K-2863-d		SHEET 2 OF 2				
DATE 11-12-97		RTE/CO. 70-85		TOTAL DEPTH 30.755				
THE 368,014								
BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV
		2	30.785	337.229 TD	Shale Gray			
				336	<p><u>Core Descriptions</u></p> <p>Cone # 1 28.194 to 29.261  Cut 1.067  Recov. 0.975  RQD = 91.38%  Sample # 1 28.682 to 28.865</p> <p>- Shale olive-gray with some maroon. - May be reworked material -</p> <hr/> <p>29.261 to 29.352 lost due to washing out hole.</p> <hr/> <p>Cone # 2 29.352 to 30.745  Cut 1.393  Recov. 0.823  RQD = 30%  Sample # 2 29.748 to 29.886</p> <p>- Shale, light gray, clayey</p>			

KANSAS DEPARTMENT OF TRANSPORTATION

Report of sample of Geology Cores

Laboratory No. 97-5439

Date Rep'td. Nov. 21, 1997

Date Rec'd. Nov. 19, 1997

Specification No. AASHTO T 208-92 Quantity - - -

Source of material Project

Sample from Project

Submitted by Randy Billinger, Lawrence Geology Office

Identification marks Tags with samples

Project or POV 70-85 K-2863-01

Type of construction Bridge Replacement, I-70 over Mulberry Creek (EB)

TEST RESULTS

Sample No.	Station	Dist.ft. CL	Depth ft.	Description	Qu. t.s:f.	Sample p.c.f. by Dry Wt.	Moisture (% of Dry Wt.)
1	No Stationing		941-947	T.H.E. Shale, Gray	3.526	101.8	24.7
2	"	"	976-9805	Shale, Gray	1.009	113.9	18.7

$3.526 \text{ TSF} = 337.626 \text{ KPa}$   
 $1.009 \text{ TSF} = 96.618 \text{ KPa}$

cc: L.S. Ingram  
 G.R. Koontz  
 D. Thompson  
 J.J. Brennan  
 Soil Section  
 File

Reported by *James J. Brennan*

Title James J. Brennan, Soils Engineer

KANSAS DEPARTMENT OF TRANSPORTATION

Report of sample of Geology Cores

Laboratory No. 97-5557

Date Rep'td. December 17, 1997

Date Rec'd. Nov. 26, 1997

Specification No. AASHTO T-89, 90, 100, 208, ASTM D422

Source of material Project

Sample from Project

Submitted by Delmar Thompson, Lawrence Geology Office

Identification marks Tags with samples

Project or POV 70-85 K-2863-01

Type of construction Bridge I-70 over Mulberry Creek

TEST RESULTS

Sample No.	Station	Dist.ft. CL	Depth ft.	Description	Qu. t.s.f.	Sample <del>p.c.f.</del> by Dry Wt. $\frac{1g}{m^3}$	Moisture (% of Dry Wt.)
SH-1	CD #1		20-40	Silty Clay	0.361	1364.8	30.4
SH-2	"		80-100	Silt with Clay	0.498	1537.8	22.7
SH-3	"		140-158	Silt with Clay	0.67	1571.5	26.4

85.202 pcf  
16.00 pcf  
98.106 pcf

See attached routine analysis test results.

cc: L.S. Ingram  
G.R. Koontz  
D. Thompson  
J.J. Brennan  
Soil Section  
File

Reported by *James J. Brennan*

Title James J. Brennan, Soils Engineer