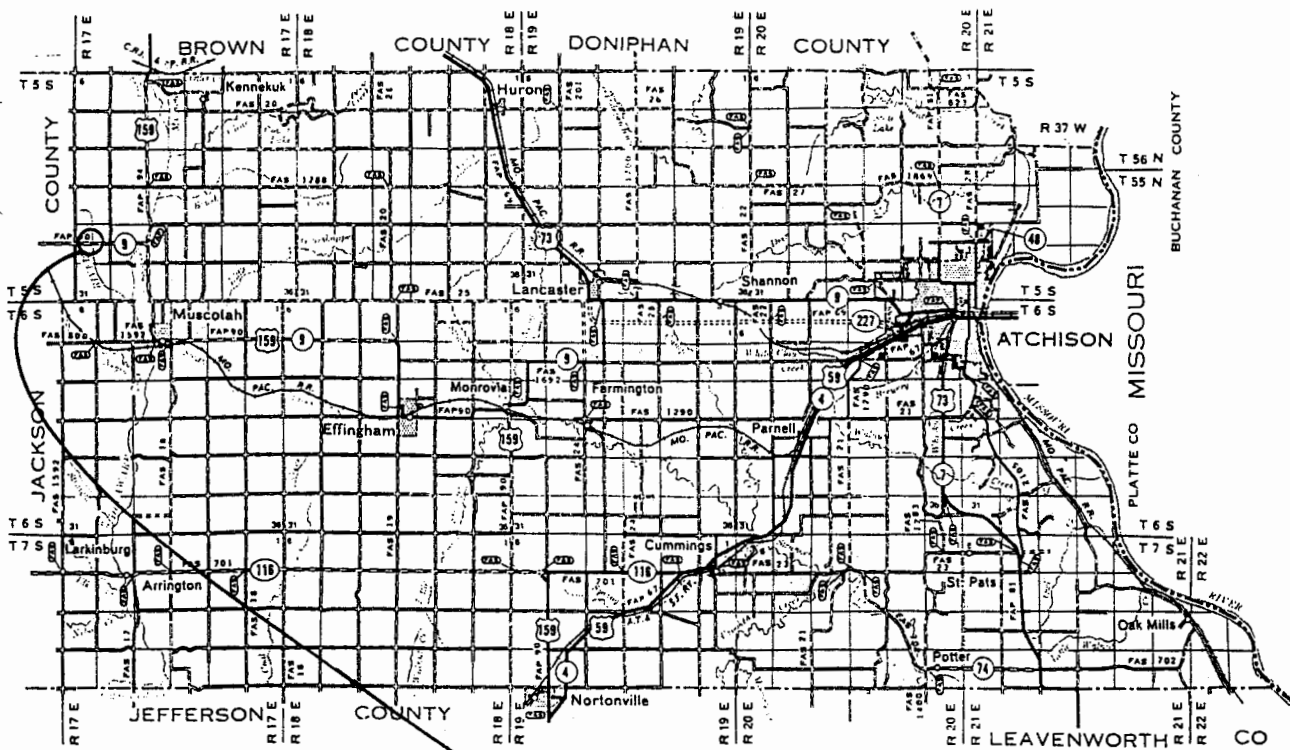


Kansas Department of Transportation

BRIDGE FOUNDATION GEOLOGY REPORT

2CBØ



30-5-17E

9-3 K-4004-01
Br. No. 00.48
Atchison County

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY Atchison

PROJECT NO. 9-3-K-4004-01

BRIDGE NO. 00.48

DESCRIPTION K-9 over the Delaware River

STA. 26+44, 20 L+

GEOLOGIST D.L. Thompson

VERTICAL SCALE 1"=5'

DATE 11/8/90

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS CD # 1	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
				0°	963.6				
					960	Clay, silty, brown to gray-brown Lower 2° sand to gravel			
				8°	955				955.6
				9°			.581		953.8
					950				
				15°					948.6
				17°			.714		946.6
				19°	945	944.6			
				20°					942.6
				21°			1.35		941.3
					940				
				25°					938.6
				26°			.563		937.3
					935				
				32°	930	930.9			
					930	Limestone, badly weathered, shaly to impure			
				35°	928.0	Shale, gray, upper 0.5 limy			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Atchison* PROJECT NO. *9-3-1K-4004-01* BRIDGE NO. *00.48*DESCRIPTION *K-9 over the Delaware River* STA. *26+44, 20 L+*GEOLOGIST *D. L. Thompson* VERTICAL SCALE *1" = 5'* DATE *11/8/90*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS CD # 1	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						<i>Limestone, Badly weathered</i>			
		1		<i>35⁴</i>	<i>929.6</i>				
					<i>925</i>	<i>Shale, gray, upper 0.5 limy</i>	<i>929.8</i>	<i>3.6</i>	
		2			<i>920</i>		<i>920.5</i>	<i>9.29</i>	
		3			<i>915</i>		<i>917.0</i>	<i>12.1</i>	
		4					<i>912.6</i>	<i>19.6</i>	
		5			<i>910</i>		<i>910.4</i>	<i>3.67</i>	
		6		<i>55⁷</i>	<i>907.9</i>		<i>908.3</i>	<i>3.57</i>	
				<i>57²</i>	<i>906.4</i>	<i>Coal</i>			
		7		<i>59⁹</i>	<i>905</i>	<i>Shale, dark gray to black</i>			
					<i>903.7</i>	<i>Gradational contact with limestone</i>	<i>904.4</i>	<i>22.8</i>	
						<i>Limestone, light gray, shaly</i>	<i>902.4</i>	<i>13.5</i>	
		8		<i>63³</i>	<i>900</i>		<i>900.3</i>		
						<i>Shale, light gray, limy</i>	<i>897.4</i>	<i>58.2</i>	
		9			<i>895</i>				
				<i>70⁵</i>	<i>893.1</i>	<i>TD</i>			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Atchison*PROJECT NO. *9-3-K-4004-01*BRIDGE NO. *00.48*DESCRIPTION *K-9 over the Delaware River*STA. *26+44, 20 L+*GEOLOGIST *D. L. Thompson*VERTICAL SCALE *NA*DATE *11/8/90*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						Cone #3 42'-46'9" Corad 48 Recov. 48 921.5 42.1 Shale, gray to dark gray Very Firm 1.0 1.1 1.1 0.25 0.2 0.25 916.7 0.9 46.9 Sample # 2 42'-43'05" Sample # 3 45'-46'55" RQD = 85.4%			
						Cone #4 46'-49'9" Corad 30 Recov. 30 916.7 46.9 Shale, dark gray, Firm 1.5 1.0 913.7 0.5 49.9 RQD = 100%			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY AitchisonPROJECT NO. 9-3-K-4004-01BRIDGE NO. 00.48DESCRIPTION K-9 over the Delaware RiverSTA. 26+44, 20 LrGEOLOGIST D.L. ThompsonVERTICAL SCALE NADATE 11/8/90

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						Core # 5 49⁹-53⁶ Core 3⁷ Recov. 3⁷ 913.7 49.9 Sample # 4 Shale, gray 50³-51⁰ Firm 0.85 1.2 Shale, gray, clayey 0.3 0.45 Sample # 5 0.4 52⁸-53² 910.0 0.6 53.6 RQD = 94.6 % Core # 6 53⁶-57² Core 3⁶ Recov. 3⁶ 910.0 53.6 0.15 Shale, gray, clayey 0.15 Sample # 6 54⁵-55²⁵ 907.9 1.8 55.7 0.35 0.15 0.2 0.2 0.1 906.4 0.35 57² RQD = 50 %			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Atchison*

PROJECT NO. 9-3-K-4009-01

BRIDGE NO. 00.48

DESCRIPTION *K-9 over the Delaware River*

STA. 26+44.20 L+

GEOLOGIST *D. L. Thompson*

VERTICAL SCALE NA

DATE *11/8/90*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						Core #7 57²-61⁷ Core #4⁵ Recov. 4⁵ 906.4 57² RQD = 91.1% Shale, dark gray to black (Sample #7) 58²-59¹ Shale, limy gradational to limestone - 59⁹ Limestone, shaly (Sample #8) 60³-61¹ 901.9 1.8 61⁷ Core #8 61⁷-66⁴ Core #4⁷ Recov. 4⁷ 901.9 61⁷ RQD = 66% Limestone, light gray, shaly Shale, gray, limy Shale, (Sample #9) light gray 65⁶-66² 66⁴			

KANSAS DEPARTMENT OF TRANSPORTATION

COUNTY *Atchison*

PROJECT NO. 9-3-K4004-01

BRIDGE NO. 00.48

DESCRIPTION *K-9 over the Delaware River*

STA. 26+44, 204+

GEOLOGIST *D.L. Thompson*VERTICAL SCALE *NA*DATE *11/8/90*

BIT TYPE & NO.	GEOLOGIC NAME	GEOLOGIC COLUMN	GROUNDWATER ELEVATION	DEPTH	ELEVATION	GEOLOGIC DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
								BLOWS	ELEV.
						Core # 9 66⁺-70⁺ Core 4' Recov. 4' 897.2 66⁺ 0.8 Shale, gray, limy 0.3 895.4 0.7 68.2 0.1 Shale, gray 0.8 0.3 893.1 1.1 70.5 TD ROD = 82.9 90			