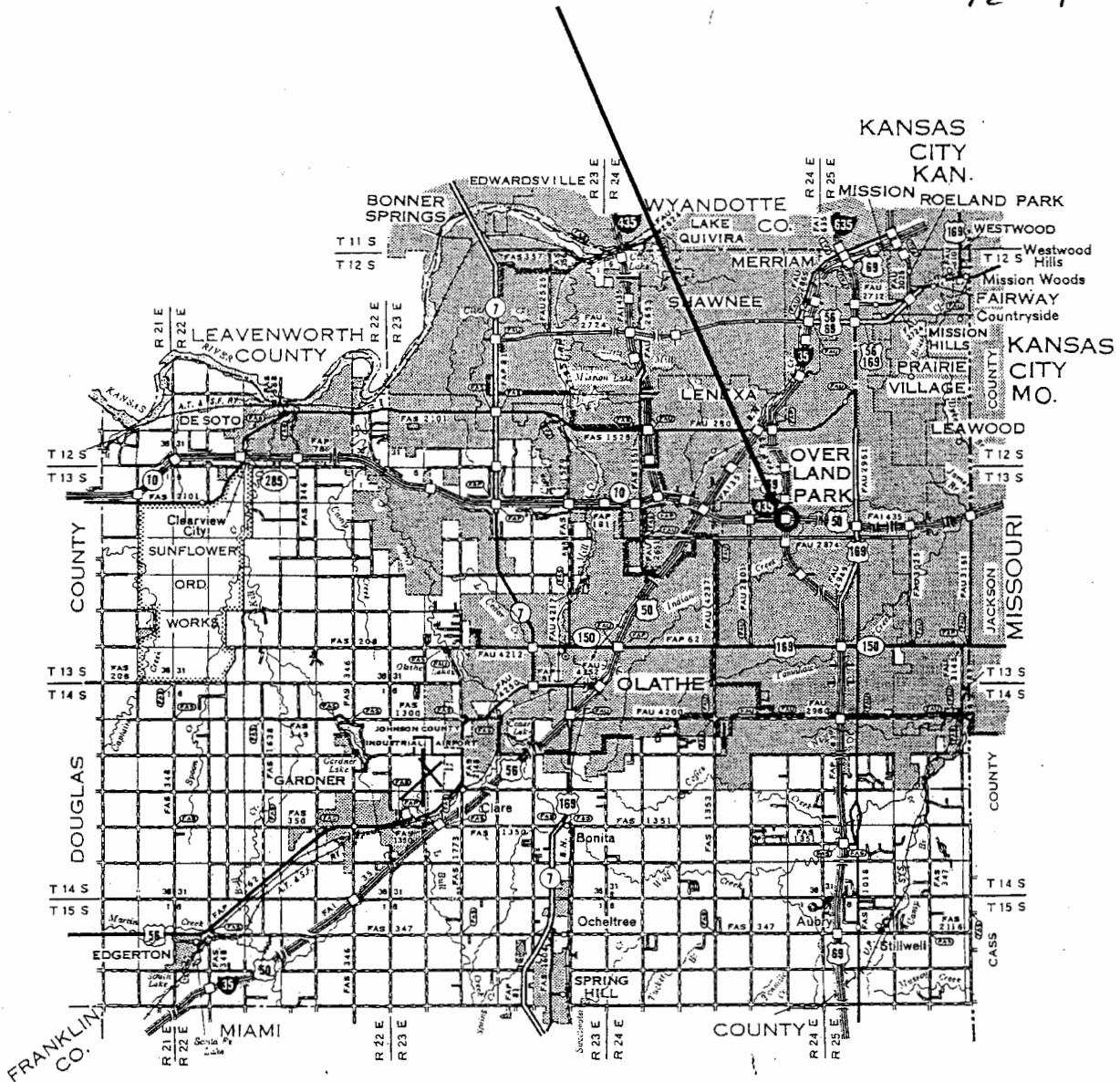


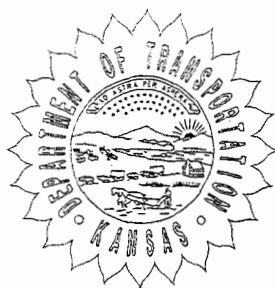
435-46 K-8262-01
Flyover ramp 69S-435E
Bridge No. 69-46-14.35(341)

11-13-24E
E/2 E/2



Johnson County

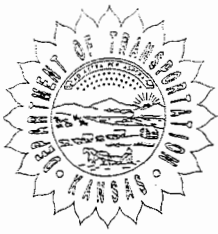
KANSAS DEPARTMENT OF TRANSPORTATION



RTE./CO. 435-46	SOUNDING NO. CD#3	SHEET 1 OF 2
BRIDGE STA. 13+623.400 (339)	PROJ. NO. 435-46 K-8262-01	BRIDGE NO. 69-46-14.56(339)
SITE NAME RAMP 69S-435E over RAMP 103rd-69S		HOLE 13+715.800, BL Ramp 69S-435E over Ramp 103rd-69S*
GEOLOGIST ROCKY CROW	SCALE 1:100 (10mm=1m)	DATE 10/01/2003
DRILLER JIM BURNS	RIG TYPE CME-55	TOP HOLE ELEV. 296.168
GW ELEV. 293.068	TOTAL DEPTH 28.31	M/B ELEV. 289.398

*13+715.800, BL Ramp 69S-435E over Ramp 103rd-69S = 13+715.800, BL Ramp 69S-435E

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION TEST (SPT)	
							N COUNT	ELEVATION
8" Hollow Stem Augers				296.168				
				296	Soil mantle, silty clay, tan/gray, moist			
				295				
				294				
				293				
				292		40		292.51
				291				
				290				
			6.77	289.398				
				289	Shale, olive-gray & yellow/olive, laminated			
Diamond	Liberty Memorial Formation			288		1140		287.70
				287		420		286.66
				286				
				285		1640		285.08
			11.92	284.248				
				284	Shale, gray, laminated	2830		283.70
				283		2820		282.91
						4090		282.06



KANSAS DEPARTMENT OF TRANSPORTATION

RTE./CO. 435-46	SOUNDING NO. CD*3	SHEET 2 OF 2
BRIDGE STA. 13+623.400 (339)	PROJ. NO. 435-46 K-8262-01	BRIDGE NO. 69-46-14.56(339)
SITE NAME RAMP 69S-435E over RAMP 103rd-69S		HOLE 13+715.800, BL Ramp 69S-435E over Ramp 103rd-69S *

*13+715.800, BL Ramp 69S-435E over Ramp 103rd-69S = 13+715.800, BL Ramp 69S-435E

BIT TYPE	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION TEST (SPT)	
							N COUNT	ELEVATION
Diamond	Liberty Memorial Shale Formation		14.93	281.238	Shale, gray, laminated			
				281	Shale, sandy, gray very firm, laminated	3220		280.35
				280				
				279		2940		278.92
				278				
				277		4000		277.43
				276		830		276.02
	Raytown Ls Mbr		20.76	275.408	Limestone, shaly, high-energy with fossil debris becoming Limestone, hard, gray, fossiliferous, wavy-bedded with stylolitic seams	2000		275.54
				275		44420		274.56
				274		50040		273.55
	Muncie Ck Member			273				
			23.80	272.368	Limestone, hard, gray	56560		271.73
	Chanute Formation		24.75	271.418	Shale, v. limy, fossil debris			
			24.93	271.238	Limestone, hard, gray, fossiliferous			
			25.33	270.838	Shale, hard, gray, sandy, laminated limy			
				270		8360		269.35
				269				
			27.77	268.398	Sandstone, shaly, many thin light & dark laminae, carbonaceous	1200		268.19
			28.31	267.858				
				267				