

G:\CIVIL\99257\DWG\DRNG\DRNG2.DWG F:\ Oct 19 09:13:47 2001

	BY	DATE
REFERENCES NOTED		
REFERENCES CHECKED		

G:\CIVIL\99257\DWG\DRNG\DRNG2.DWG

FHWA REG NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	87-N-0200-01	2001	65	78

DRAINAGE ANALYSIS SUMMARY
21st Street

EXISTING														ID #	INLET (Q10)			Q10	
Area ID	Area hectare	Accum. Area hectare	C10	C100	Elev Max (m)	Elev Min (m)	Flow Length (m)	Tc10 min	Tc100 min	I10 mm/hr	I100 mm/hr	Q10 cms	Q100 cms		Inlet Size m	Qi cms	Qb cms	Pipe Size mm	Min Slope %
A1	29.54		0.28	0.41	68.34	61.57	822.96	82	69	53.34	88.39	1.21	2.95	5.00	1.22x1.37 area	1.21	1.21	900	0.25%
A2	1.09		0.52	0.61	67.06	61.57	259.08	24	20	109.47	165.86	0.17	0.30						
B	18.98		0.75	0.81	69.80	59.89	457.20	19	16	122.68	187.20	4.81	7.92	2.0	4.57	1.56	1.56	750	0.25%
C	1.21		0.62	0.76	62.79	58.52	246.89	20	15	116.84	187.20	0.24	0.48						
D	5.18		0.52	0.61	67.06	58.52	548.64	38	32	84.07	132.59	0.62	1.15						
E	1.01		0.52	0.61	67.06	60.96	320.04	27	23	101.09	155.70	0.15	0.26						
F	1.72		0.44	0.54	68.58	60.96	341.38	30	26	95.50	149.86	0.20	0.38						
G	5.75		0.52	0.61	68.70	66.75	502.92	58	49	65.79	106.17	0.54	1.02						
C+D		6.4	0.54	0.65	67.06	58.52	548.64	37	30	86.61	139.45	0.82	1.60	1.00	3.05	0.82	0.82	0.65 m2	0.50%
E+F		2.7	0.52	0.61	68.58	60.96	341.38	27	23	102.87	159.00	0.40	0.73	3.00	3.05	0.40	0.40	Exist	Exist
A2+G		6.8	0.52	0.61	68.70	61.57	585.22	43	36	79.50	125.22	0.78	1.44	4.00	3.05	0.78	0.78	1200	0.70%
A+G		35.3	0.32	0.44	68.34	61.57	822.96	78	66	55.12	90.68	1.71	3.88					1200	0.70%
A+E+F+G		38.0	0.33	0.45	68.34	61.57	822.96	77	65	55.63	91.44	1.92	4.31					1220	0.70%
B+C+D		25.4	0.71	0.77	69.80	59.89	457.20	21	18	114.30	177.80	5.67	9.56					2.44x0.91 RCB	0.30%

KANSAS DEPARTMENT OF TRANSPORTATION			
21ST STREET NORTH DRAINAGE ANALYSIS SUMMARY			
PROJ. NO. 87-N-0200-01		SEDGWICK CO.	
MKEC ENGINEERING CONSULTANTS, INC.			
WICHITA, KANSAS			
DESIGNED BY: DFL		CHECKED BY: GJA	
DRAWN BY: GJR		DATE: JUNE 2001 SHEET 65 OF 78	