

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

	BY	DATE
REFERENCES NOTED		
REFERENCES CHECKED		

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

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	ID #	INLET (Q10)			Q10	
															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%

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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	