

I-470 LOT 13A

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Quist Engineering, Inc
 Civil Engineering for Residential &
 Commercial Site Development
 824 W. Columbus St.
 Lee's Summit, Missouri 64063
 Phone: (816) 550-5675
 email: wquist@quistengineering.com

COPYRIGHT © 2019

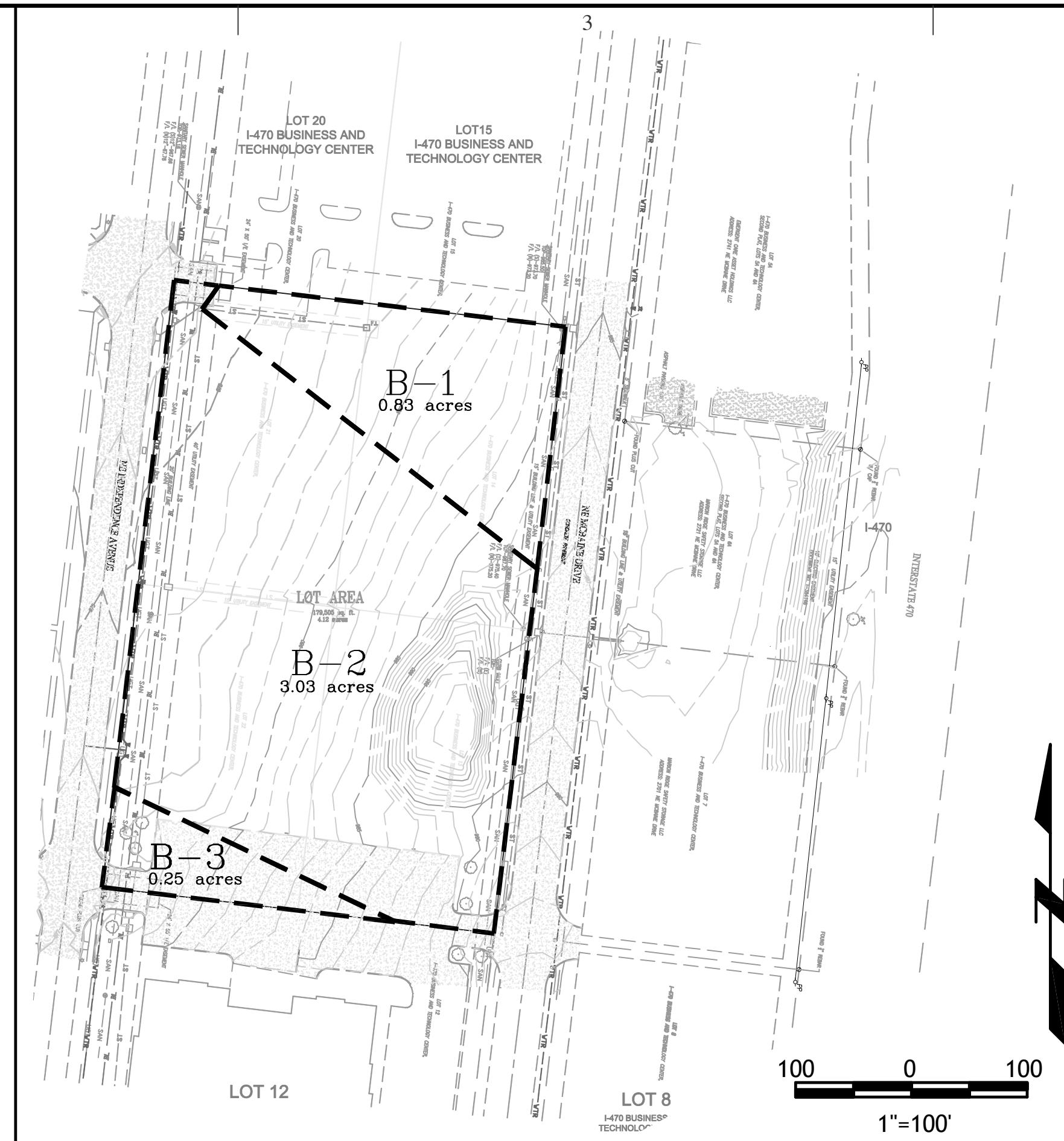
1ST ISSUE
 6-20-19

REVISIONS
 7-24-19
 8-7-19

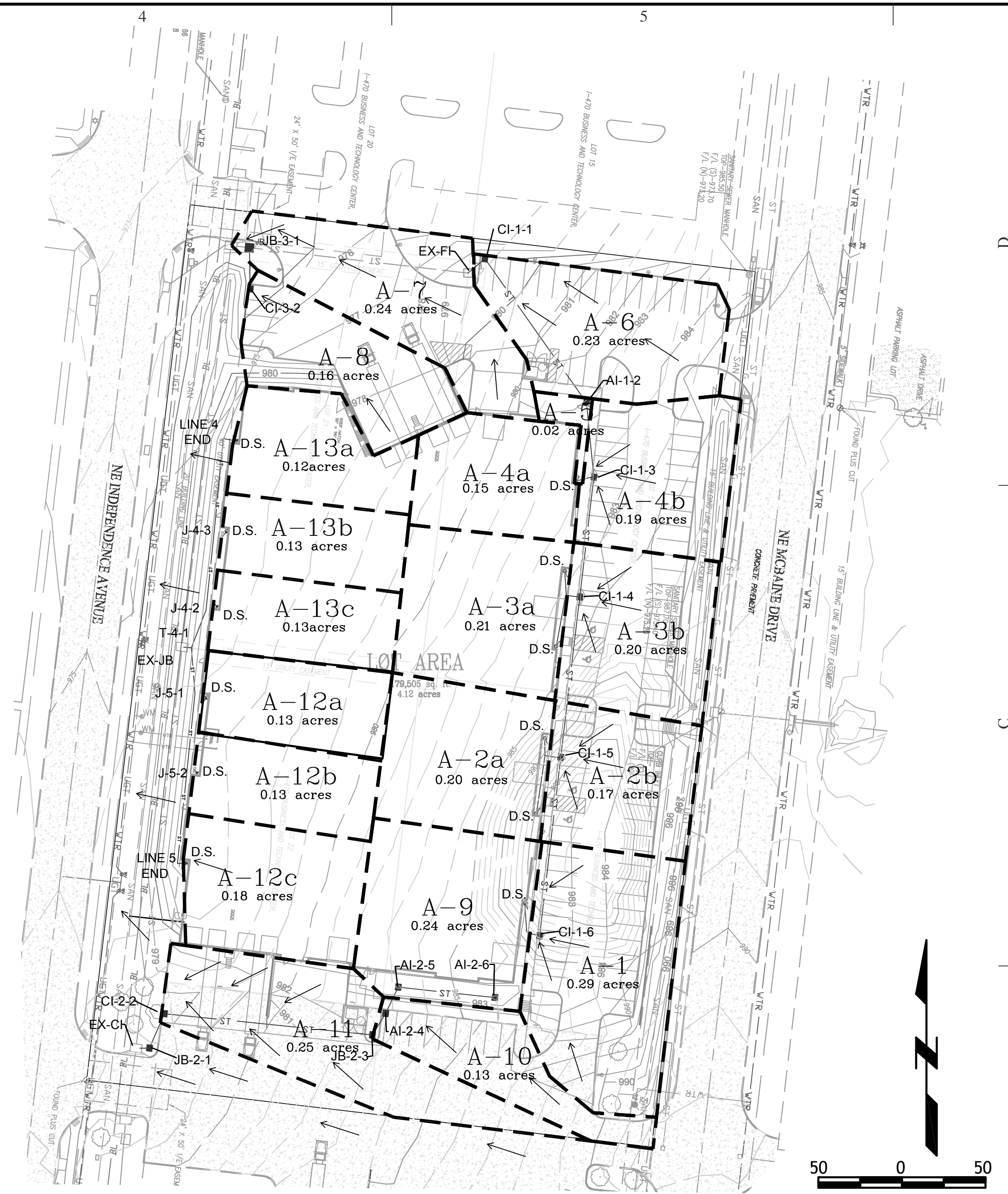
SHEET NO.

C400

JOB NO.
 E18-337



PRE-DEVELOPMENT



POST-DEVELOPMENT

STORM SEWER CALCULATIONS TABLE

Line	Sewer Location		Drainage Area to Inlet			Time of Flow		Rainfall Runoff Flow										Elevation			Sewer Characteristics										Velocity stats	
	From	To	Designation	Area	Coef	TC	1100 Intensity	125 Intensity	110 Intensity	Inlet 100yr K*1*C*A	Inlet 25yr K*1*C*A	Inlet 10yr K*1*C*A	Additional Flow Lines	Additional cfs	In-pipe 100yr K*1*C*A	In-pipe 25yr K*1*C*A	In-pipe 10yr K*1*C*A	Inlet	Top elevation	Coverage	Pipe Size (in)	FLin	Flout	segment length	slope	pipe area	Pipe Capacity (cfs)	100yr overflow	V 10ys	V 100 yr		
LINE 1	CI-1-6	CI-1-5	A-1, A-9	0.49	0.60	5.00	10.32	8.53	7.35	3.79	2.76	2.16			3.79	2.76	2.16	CI-1-6	982.00	1.20	12.00	979.80	978.70	107.54	1.02	0.79	3.60	YES	2.75	4.83		
	CI-1-5	CI-1-4	A-2b, A-2a	0.37	0.60	5.00	10.32	8.53	7.35	2.86	2.08	1.63			6.66	4.84	3.79	CI-1-5	982.70	2.95	15.00	978.50	977.80	96.62	0.72	1.23	5.50	YES	3.09	5.43		
	CI-1-4	CI-1-3	A-3b, A-3a	0.41	0.60	5.00	10.32	8.53	7.35	3.17	2.31	1.81			9.83	7.15	5.60	CI-1-4	982.60	3.60	18.00	977.50	976.60	72.09	1.25	1.77	11.73	NO	3.17	5.57		
	CI-1-3	AI-1-2	A-4b, A-4a	0.34	0.60	5.00	10.32	8.53	7.35	2.63	1.91	1.50			12.46	9.06	7.10	CI-1-3	982.70	4.60	24.00	976.10	975.50	44.85	1.34	3.14	26.15	NO	2.26	3.97		
	AI-1-2	CI-1-1	A-5	0.02	0.60	5.00	10.32	8.53	7.35	0.15	0.11	0.09			12.62	9.18	7.19	AI-1-2	982.40	5.20	24.00	975.20	974.50	105.32	0.66	3.14	18.43	NO	2.29	4.02		
CI-1-1	EX-FI	A-6	0.23	0.60	5.00	10.32	8.53	7.35	1.78	1.29	1.01			14.40	10.47	8.21	CI-1-1	979.40	3.10	24.00	974.30	974.00	13.32	2.25	3.14	33.93	NO	2.61	4.59			
LINE 2	AI-2-6	AI-2-5	A-9b	0.04	0.60	10.00	8.59	7.05	6.08	0.26	0.19	0.15			0.26	0.19	0.15	AI-2-6	982.00	2.00	12.00	979.00	978.20	58.14	1.38	0.79	4.18	NO	0.19	0.33		
	AI-2-5	AI-2-4	N/A	0.00	0.60	5.00	10.32	8.53	7.35	0.00	0.00	0.00			0.26	0.19	0.15	AI-2-5	982.33	3.33	12.00	978.00	977.70	17.45	1.72	0.79	4.67	NO	0.19	0.33		
	AI-2-4	JB-2-3	A-10	0.13	0.60	5.00	10.32	8.53	7.35	1.01	0.73	0.57			1.26	0.92	0.72	AI-2-4	982.29	3.79	12.00	977.50	977.20	15.09	1.99	0.79	5.02	NO	0.92	1.61		
	JB-2-3	CI-2-2	N/A	0.00	0.60	5.00	10.32	8.53	7.35	0.00	0.00	0.00			1.26	0.92	0.72	JB-2-3	983.20	5.20	12.00	977.00	973.20	125.08	3.04	0.79	6.21	NO	0.92	1.61		
	CI-2-2	JB-2-1	A-11	0.25	0.60	5.00	10.32	8.53	7.35	1.94	1.41	1.10			3.20	2.33	1.82	CI-2-2	977.40	3.40	12.00	973.00	972.70	22.48	1.33	0.79	4.11	NO	2.32	4.08		
JB-2-1	EX-CI	N/A	0.00	0.60	5.00	10.32	8.53	7.35	0.00	0.00	0.00			3.20	2.33	1.82	JB-2-1	978.00	4.50	12.00	972.50	972.00	5.72	8.74	0.79	10.53	NO	2.32	4.08			
LINE 3	CI-3-2	JB-3-1	A-8	0.16	0.85	7.00	9.55	7.87	6.78	1.62	1.18	0.92			1.62	1.18	0.92	CI-3-1	974.30	2.30	12.00	971.00	968.00	24.60	12.20	0.79	12.44	NO	1.18	2.07		
LINE 4	END	J-4-2	A-13a,	0.12	0.60	5.00	10.32	8.53	7.35	0.93	0.68	0.53			0.93	0.68	0.53	END	982.00	3.33	8.00	978.00	977.20	61.89	1.29	0.35	1.37	NO	1.52	2.66		
	J-4-2	T-4-1	A-13b, A-13c	0.26	0.60	5.00	10.32	8.53	7.35	2.01	1.46	1.15			2.94	2.14	1.68	J-4-2	982.00	3.80	12.00	977.20	976.55	78.45	0.83	0.79	3.24	NO	2.14	3.75		
	T-4-1	EX-FI	N/A		0.60	5.00	10.32	8.53	7.35	0.00	0.00	0.00	LINE 5 25yr	1.46	4.40	3.60	3.14	J-4-1	982.00	4.45	12.00	976.55	976.50	4.63	1.08	0.79	3.70	YES	4.00	5.61		
LINE 5	END	J-5-1	A-12c	0.18	0.60	5.00	10.32	8.53	7.35	1.39	1.01	0.79			1.39	1.01	0.79	END	982.00	3.33	8.00	978.00	977.30	59.23	1.18	0.35	1.31	YES	2.28	3.99		
	J-5-1	J-4-1	A-12a, A-12b	0.26	0.60	5.00	10.32	8.53	7.35	2.01	1.46	1.15			3.41	2.48	1.94	J-5-1	982.00	3.70	12.00	977.30	976.55	76.04	0.99	0.79	3.54	NO	2.47	4.34		

SITE STORM DRAINAGE PLAN AND CALCULATIONS