APPENDIX B

PEAK FLOW RESULTS (ONSITE)

Doyle Drive Reconstruction
Preliminary Drainage Design
Onsite Event Peak Flow
1/27/2009

Water Quality Treatment Unit Basin Storage Volume (in.) = 0.7

BMP Area	Subshed	Shed Area (acres)	Peak Flows (cfs)			[3]Water Quality Volume (cf)
			[1]25-year	[1]100-year	[2]WQF	
2	AS1	0.69	2.6	3.2	0.13	1753
	AS2	0.31	1.2	1.4	0.06	788
	AS3	0.29	1.1	1.3	0.06	737
	AS5	0.41	1.5	1.9	0.08	1042
	AS6	0.71	2.6	3.3	0.13	1804
	Total	2.41	9.0	11.2	0.46	6124
5, 6	BS1	0.16	0.6	0.7	0.03	407
	BS2	0.21	0.8	1.0	0.04	534
	BS3	0.26	1.0	1.2	0.05	661
	BS4	0.27	1.0	1.3	0.05	686
	BS5a	0.18	0.7	0.8	0.03	457
	BS5b	0.26	1.0	1.2	0.05	661
	BS7	0.34	1.3	1.6	0.06	864
	BS8	0.33	1.2	1.5	0.06	839
	BS9	0.22	0.8	1.0	0.04	559
	BS10	0.23	0.9	1.1	0.04	584
	BS11	0.33	1.2	1.5	0.06	839
	BS12	0.34	1.3	1.6	0.06	864
	BS13	0.33	1.2	1.5	0.06	839
	BS14	0.33	1.2	1.5	0.06	839
	BS15	0.22	0.8	1.0	0.04	559
	BS16	0.16	0.6	0.7	0.03	407
	BS17	0.42	1.6	2.0	0.08	1067
	BS18	0.28	1.0	1.3	0.05	711
	BS19	0.34	1.3	1.6	0.06	864
	BS20	0.33	1.2	1.5	0.06	839
	BS21	0.39	1.5	1.8	0.07	991
	BS22	0.51	1.9	2.4	0.10	1296
	BS23	0.42	1.6	2.0	0.08	1067
	BS24	0.27	1.0	1.3	0.05	686
	BS25	0.21	0.8	1.0	0.04	534
	BS26	0.23	0.9	1.1	0.04	584
	BS27	0.25	0.9	1.2	0.05	635
	BS28a	0.20	0.8	0.9	0.04	508
	BS28b	0.22	0.8	1.0	0.04	559
	BS29	0.20	0.8	0.9	0.04	508
	BS30	0.23	0.9	1.1	0.04	584
	BS31	0.28	1.0	1.3	0.05	711
	BS32	0.12	0.5	0.6	0.02	305
	BS33	0.09	0.3	0.4	0.02	229
	BS34	0.08	0.3	0.4	0.02	203
	BS35	0.27	1.0	1.3	0.05	686
	BS36	0.27	1.0	1.3	0.05	686
	BS37	0.18	0.7	0.8	0.03	457

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BMP Area	Subshed	Shed Area (acres)	Peak Flows (cfs)			[3]Water Quality Volume (cf)
			[1]25-year	[1]100-year	[2]WQF	
5, 6	BS38	0.27	1.0	1.3	0.05	686
	BS39	0.22	0.8	1.0	0.04	559
	BS40	0.35	1.3	1.6	0.07	889
	BS41	0.19	0.7	0.9	0.04	483
	BS42	0.13	0.5	0.6	0.02	330
	BS43	0.27	1.0	1.3	0.05	686
	BS44	0.14	0.5	0.7	0.03	356
	Total	11.53	43.1	53.5	2.19	29298
8, 9	DS1	0.31	1.2	1.4	0.06	788
	DS2	0.31	1.2	1.4	0.06	788
	DS3	0.31	1.2	1.4	0.06	788
	DS4	0.40	1.5	1.9	0.08	1016
	DS5	0.32	1.2	1.5	0.06	813
	DS6	0.34	1.3	1.6	0.06	864
	DS7	0.33	1.2	1.5	0.06	839
	DS8	0.33	1.2	1.5	0.06	839
	DS9	0.25	0.9	1.2	0.05	635
	DS10	0.17	0.6	0.8	0.03	432
	Total	3.07	11.4	14.2	0.58	7801
10	ES1	0.16	0.6	0.7	0.03	407
	ES2	0.4	1.5	1.9	0.08	1016
	ES3	0.47	1.8	2.2	0.09	1194
	ES4	0.1	0.4	0.5	0.02	254
	ES5	0.19	0.7	0.9	0.04	483
	ES6	0.24	0.9	1.1	0.05	610
	ES7	0.06	0.2	0.3	0.01	152
	ES8	0.18	0.7	0.8	0.03	457
	ES9	0.11	0.4	0.5	0.02	280
	ES10	0.11	0.4	0.5	0.02	280
	ES11A	0.06	0.2	0.3	0.01	152
	ES11B	0.06	0.2	0.3	0.01	152
	ES12A	0.06	0.2	0.3	0.01	152
	ES12B	0.06	0.2	0.3	0.01	152
	ES14	0.27	0.2	0.3	0.05	686
	ES15	0.37	1.4	1.7	0.07	940
	ES17	0.37	1.4	1.7	0.07	940
	ES18	0.36	1.3	1.7	0.07	915
	ES20a	0.25	0.9	1.2	0.05	635
	ES20b	0.17	0.6	0.8	0.03	432
	ES21	0.2	0.8	0.9	0.04	508
	ES22a	0.24	0.9	1.1	0.05	610
	ES22b	0.13	0.5	0.6	0.02	330

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BMP Area	Subshed	Shed Area (acres)	Peak Flows (cfs)			[3]Water Quality Volume (cf)
			[1]25-year	[1]100-year	[2]WQF	
10	ES19	0.24	0.9	1.1	0.05	610
	FS1	0.22	0.8	1.0	0.04	559
	FS2	0.17	0.6	0.8	0.03	432
	FS3	0.22	0.8	1.0	0.04	559
	FS4	0.11	0.4	0.5	0.02	280
	FS5a	0.12	0.5	0.6	0.02	305
	FS5b	0.21	0.8	1.0	0.04	534
	FS6	0.28	1.0	1.3	0.05	711
	FS7	0.22	0.6	0.8	0.04	559
	FS8	0.22	0.8	1.0	0.04	559
	FS9	0.11	0.4	0.5	0.02	280
	FS10a	0.17	0.6	0.8	0.03	432
	FS10b	0.26	1.0	1.2	0.05	661
	FS11	0.09	0.3	0.4	0.02	229
	FS12	0.13	0.5	0.6	0.02	330
	FS13	0.12	0.5	0.6	0.02	305
	FS14	0.27	1.0	1.3	0.05	686
	FS15	0.09	0.3	0.4	0.02	229
	FS16	0.12	0.5	0.6	0.02	305
	FS17	0.14	0.5	0.7	0.03	356
	FS18	0.14	0.5	0.7	0.03	356
	FS19	0.13	0.5	0.6	0.02	330
	FS20	0.19	0.7	0.9	0.04	483
	Total	8.59	30.88	38.7	1.63	21827

1) Event peak flows were calculated in StormCad Version 8 using the Rational Method and an assumed time of concentration of 5 minutes.

2) Water Quality Flow was calculated using the Rational Method, Q=CiA, with an intensity of 0.2 in/hr for water quality flow in Region 2 (San Francisco) as found in the Caltrans Storm Water Quality Handbook Section 2.4.2.2.

3) Water Quality Volume was calculated using the unit basin storage volume, taken from the Basin Sizer version 1.46 program using the Caltrans Method, Downtown San Francisco rain gauges with a 48-hour drawdown time.