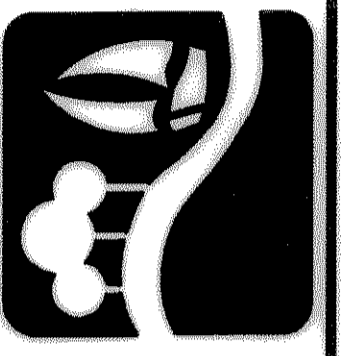


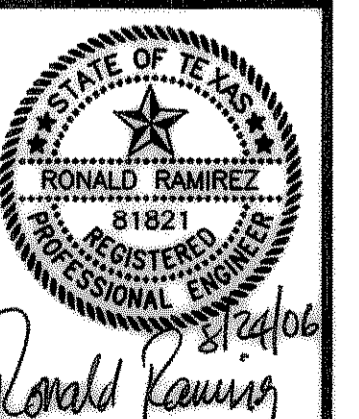
RECORD DRAWING 08/04/06

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**ROCKWALL
TECHNOLOGY
PARK
PHASE II**

**STORM DRAIN
CALCULATIONS**



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**SHEET NO.
D201**

INLET CALCULATIONS (NO OVERLAND CONTRIBUTIONS)

INLET No.	DISCHARGES TO LATERAL	DESIGN STORM FREQUENCY (years)	TIME OF CONC. (min)	RAINFALL INTENSITY (in/hr)	DRAINAGE AREA (acres)	DRAINAGE AREA CA	FROM DRAINAGE AREA (cfs)	CARRY-OVER (cfs)	TOTAL GUTTER FLOW (cfs)	GUTTER SLOPE (%)	STREET SECTION	CROWN (ft/ft)	DEPTH OF FLOW (ft)	PONDED WIDTH (ft)	INLET LENGTH (ft)	FLOW COLLECTED (cfs)	FLOW BYPASSED (cfs)	REMARKS
A1	A1	100	10.0	9.80	0.42	0.38	3.7	0.0	3.7	1.22	TRIANGULAR	0.0208	0.21	10.5	5.0	2.9	0.8	
A2	A2	100	10.0	9.80	0.45	0.41	4.0	0.0	4.0	1.26	TRIANGULAR	0.0208	0.21	10.7	5.0	2.9	1.1	
A3	A3	100	10.0	9.80	0.45	0.41	4.0	0.8	4.8	1.20	TRIANGULAR	0.0208	0.23	11.6	5.0	3.1	1.7	
A4	A4	100	10.0	9.80	0.49	0.44	4.3	1.1	5.4	1.20	TRIANGULAR	0.0208	0.24	12.1	5.0	3.2	2.2	
A5	A5	100	10.0	9.80	0.46	0.41	4.1	1.7	5.7	0.78	TRIANGULAR	0.0208	0.27	13.5	10.0	5.7	0.0	
A6	A6	100	10.0	9.80	0.47	0.42	4.2	2.2	6.3	0.78	TRIANGULAR	0.0208	0.28	14.0	10.0	6.1	0.2	
A7	A7	100	10.0	9.80	0.63	0.57	5.6	0.2	5.8	-	TRIANGULAR	0.0208	0.40	-	15.0	5.8	0.0	
A8	A8	100	10.0	9.80	0.67	0.60	5.9	0.0	5.9	-	TRIANGULAR	0.0208	0.40	-	15.0	5.9	0.0	
A9	A9	100	10.0	9.80	0.46	0.41	4.1	0.0	4.1	1.09	TRIANGULAR	0.0208	0.22	11.1	5.0	3.0	1.1	
A10	A10	100	10.0	9.80	0.42	0.38	3.7	0.0	3.7	1.09	TRIANGULAR	0.0208	0.21	10.7	5.0	2.9	0.8	
A11	A11	100	10.0	9.80	0.52	0.47	4.6	0.8	5.4	-	TRIANGULAR	0.0208	0.44	-	20.0	5.4	0.0	
A12	A12	100	10.0	9.80	0.50	0.45	4.4	1.1	5.5	-	TRIANGULAR	0.0208	0.44	-	20.0	5.5	0.0	
C1	C1	100	10.0	9.80	0.57	0.51	5.0	0.0	5.0	0.84	TRIANGULAR	0.0208	0.25	12.6	5.0	3.3	1.7	
C2	C2	100	10.0	9.80	0.58	0.52	5.1	0.0	5.1	0.84	TRIANGULAR	0.0208	0.26	12.8	5.0	3.3	1.8	
C3	C3	100	10.0	9.80	0.72	0.65	6.3	1.7	8.1	0.84	TRIANGULAR	0.0208	0.30	15.1	5.0	3.8	4.3	
C4	C4	100	10.0	9.80	0.72	0.65	6.3	1.8	8.2	0.84	TRIANGULAR	0.0208	0.30	15.1	5.0	3.8	4.4	
C5	C5	100	10.0	9.80	0.72	0.65	6.3	4.3	10.6	0.68	TRIANGULAR	0.0208	0.35	17.4	10.0	7.8	2.8	
C6	C6	100	10.0	9.80	0.72	0.65	6.3	4.4	10.7	0.68	TRIANGULAR	0.0208	0.35	17.5	10.0	7.8	2.9	
C7	C7	100	10.0	9.80	0.62	0.56	5.5	2.9	8.4	0.68	TRIANGULAR	0.0208	0.32	15.9	10.0	7.0	1.4	
C8	C8	100	10.0	9.80	0.62	0.56	5.5	4.2	9.7	0.68	TRIANGULAR	0.0208	0.34	16.8	10.0	7.5	2.2	
C9	C9	100	10.0	9.80	0.58	0.52	5.1	2.2	7.3	-	TRIANGULAR	0.0208	0.51	-	10.0	7.3	0.0	
C10	C10	100	10.0	9.80	0.56	0.50	4.9	0.0	4.9	-	TRIANGULAR	0.0208	0.44	-	10.0	4.9	0.0	

INLET CALCULATIONS (NO SITE DETENTION)

INLET No.	DISCHARGES TO LATERAL	DESIGN STORM FREQUENCY (years)	TIME OF CONC. (min)	RAINFALL INTENSITY (in/hr)	DRAINAGE AREA (acres)	DRAINAGE AREA CA	FROM DRAINAGE AREA (cfs)	CARRY-OVER (cfs)	TOTAL GUTTER FLOW (cfs)	GUTTER SLOPE (%)	STREET SECTION	CROWN (ft/ft)	DEPTH OF FLOW (ft)	PONDED WIDTH (ft)	INLET LENGTH (ft)	FLOW COLLECTED (cfs)	FLOW BYPASSED (cfs)	REMARKS
A1	A1	100	10.0	9.80	0.00	0.38	3.7	0.0	3.7	1.22	TRIANGULAR	0.0208	0.21	10.5	5.0	2.9	0.8	
A2	A2	100	10.0	9.80	0.00	0.41	4.0	0.0	4.0	1.26	TRIANGULAR	0.0208	0.21	10.7	5.0	2.9	1.1	
A3	A3	100	10.0	9.80	0.00	1.91	18.7	0.8	19.5	1.20	TRIANGULAR	0.0208	0.39	19.7	5.0	4.9	14.6	
A4	A4	100	10.0	9.80	0.00	1.91	18.7	1.1	19.8	1.20	TRIANGULAR	0.0208	0.40	19.8	5.0	4.9	14.9	
A5	A5	100	10.0	9.80	0.00	0.41	4.1	14.6	18.7	0.78	TRIANGULAR	0.0208	0.42	20.9	10.0	9.7	9.0	
A6	A6	100	10.0	9.80	0.00	0.42	4.2	14.9	19.0	0.78	TRIANGULAR	0.0208	0.42	21.1	10.0	9.7	9.3	
A7	A7	100	10.0	9.80	0.00	2.44	23.9	9.3	33.3	-	TRIANGULAR	0.0208	0.76	-	15.0	33.3	0.0	
A8	A8	100	10.0	9.80	0.00	2.44	23.9	9.0	32.9	-	TRIANGULAR	0.0208	0.76	-	15.0	32.9	0.0	
A9	A9	100	10.0	9.80	0.00	1.39	13.6	0.0	13.6	1.09	TRIANGULAR	0.0208	0.35	17.5	5.0	4.4	9.2	
A10	A10	100	10.0	9.80	0.00	1.39	13.6	0.0	13.6	1.09	TRIANGULAR	0.0208	0.35	17.5	5.0	4.4	9.2	
A11	A11	100	10.0	9.80	0.00	0.46	4.5	9.2	13.7	-	TRIANGULAR	0.0208	0.62	-	20.0	13.7	0.0	
A12	A12	100	10.0	9.80	0.00	0.46	4.5	9.2	13.7	-	TRIANGULAR	0.0208	0.62	-	20.0	13.7	0.0	
C1	C1	100	10.0	9.80	0.00	0.51	5.0	0.0	5.0	0.84	TRIANGULAR	0.0208	0.25	12.6	5.0	3.3	1.7	
C2	C2	100	10.0	9.80	0.00	0.52	5.1	0.0	5.1	0.84	TRIANGULAR	0.0208	0.25	12.7	5.0	3.3	1.8	
C3	C3	100	10.0	9.80	0.00	2.03	19.9	1.7	21.6	0.84	TRIANGULAR	0.0208	0.44	21.8	5.0	5.4	16.2	
C4	C4	100	10.0	9.80	0.00	2.03	19.9	1.6	21.7	0.84	TRIANGULAR	0.0208	0.44	21.8	5.0	5.4	16.3	
C5	C5	100	10.0	9.80	0.00	1.47	14.4	16.2	30.6	0.68	TRIANGULAR	0.0208	0.52	25.9	10.0	11.9	18.7	
C6	C6	100	10.0	9.80	0.00	1.47	14.4	16.3	30.7	0.68	TRIANGULAR	0.0208	0.52	25.9	10.0	12.0	18.7	
C7	C7	100	10.0	9.80	0.00	1.16	11.4	18.7	30.1	0.68	TRIANGULAR	0.0208	0.51	25.7	10.0	11.7	18.4	
C8	C8	100	10.0	9.80	0.00	1.16	11.4	18.7	30.1	0.68	TRIANGULAR	0.0208	0.51	25.7	10.0	11.7	18.4	
C9	C9	100	10.0	9.80	0.00	1.22	12.0	18.4	30.4	-	TRIANGULAR	0.0208	0.87	-	10.0	30.4	0.0	
C10	C10	100	10.0	9.80	0.00	1.22	12.0	18.4	30.4	-	TRIANGULAR	0.0208	0.87	-	10.0	30.4	0.0	

STORM DRAIN CALCULATIONS - DISCOVERY BLVD. (C=0.35 SITE CONTRIBUTION ASSUMED FROM OVERLAND)

FROM	TO	LENGTH (ft)	*CA*	INLET TIME (min)	TOTAL *CA*	TIME AT UPSTREAM OF REACH (min)	DESIGN STORM FREQUENCY (yr)	RAINFALL INTENSITY (in/hr)	TOTAL FLOW (cfs)	STORM DRAIN DIAMETER (in)	VELOCITY (ft/s)	SLOPE OF FRICTION GRADIENT (ft/ft)	STRUCTURE LOSS COEFF. *Kj*	STRUCTURE LOSS UPSTREAM OF REACH (ft)	FLOW TIME IN DRAIN (min)	TIME AT DOWNSTREAM OF REACH (min)	H.G. AT UPSTREAM OF REACH (ft)	REMARKS
INLET A1	STA 17+12.81	35.80	0.30	10.0	0.30	10.0	100	9.80	2.9	18	1.6	0.0008	1.25	0.05	0.1	10.1	606.21	
STA 17+12.81	STA 17+00.81	12.00	-	-	0.30	10.1	100	9.79	2.9	18	1.6	0.0008	0.50	0.02	0.1	10.2	605.05	
INLET A2	STA 17+00.81	36.75	0.30	10.0	0.30	10.0	100	9.80	2.9	18	1.6	0.0008	1.25	0.05	0.1	10.1	606.06	
STA 17+00.81	STA 14+14.48	286.33	-	-	0.60	10.2	100	9.77	5.9	18	3.3	0.0032	0.50	0.15	0.7	10.9	605.02	
STA 14+14.48	STA 14+09.48	5.00	-	-	0.60	10.9	100	9.67	5.8	24	1.8	0.0007	0.50	0.00	0.0	10.9	601.33	
INLET A3	STA 14+09.48	36.30	0.32	10.0	0.32	10.0	100	9.80	3.1	18	1.8	0.0009	1.25	0.06	0.1	10.1	601.81	
STA 14+09.48	STA 13+99.85	9.63	-	-	0.92	10.9	100	9.67	8.9	24	2.8	0.0015	0.50	0.10	0.0	10.9	601.33	
INLET A4	STA 13+99.85	36.39	0.33	10.0	0.33	10.0	100	9.80	3.2	18	1.8	0.0009	1.25	0.06	0.1	10.1	601.69	
STA 13+99.85	STA 13+89.53	10.32	-	-	1.25	10.9	100	9.67	12.1	27	3.0	0.0015	0.50	0.08	0.0	10.9	601.19	
STA 13+89.53	STA 12+50	139.53	-	-	1.25	10.9	100	9.67	12.1	27	3.0	0.0015	0.50	0.07	0.3	11.2	601.05	
STA 12+50	STA 11+16.04	133.96	-	-	1.25	11.2	100	9.62	12.0	27	3.0	0.0015	0.25	0.04	0.7	11.9	599.72	
STA 11+16.04	STA 11+11.04	5.00	-	-	1.25	11.9	100	9.51	11.9	33	2.0	0.0005	0.40	0.02	0.0	11.9	599.49	
INLET A5	STA 11+11.04	36.37	0.58	10.0	0.58	10.0	100	9.80	5.7	18	3.2	0.0029	1.25	0.20	0.2	10.2	599.77	
STA 11+11.04	STA 11+01.04	10.00	-	-	1.83	11.9	100	9.51	17.4	33	2.9	0.0011	0.50	0.10	0.1	12.0	599.46	
INLET A6	STA 11+01.04	36.37	0.62	10.0	0.62	10.0	100	9.80	6.1	18	3.4	0.0034	1.25	0.23	0.2	10.2	599.70	
STA 11+01.04	STA 10+28.04	73.00	-	-	2.45	12.0	100	9.50	23.3	33	3.9	0.0019	0.50	0.17	0.3	12.3	599.35	
STA 10+28.04	STA 10+23.04	5.00	-	-	2.45	12.3	100	9.46	23.2	33	3.9	0.0019	0.40	0.09	0.0	12.3	599.04	
STA 10+23.04	STA 8+64.98	158.06	-	-	2.45	12.3	100	9.46	23.2	33	3.9	0.0019	0.50	0.12	0.7	13.0	598.93	
STA 8+64.98	STA 8+59.98	5.00	-	-	2.45	13.0	100	9.35	22.9	36	3.2	0.0012	0.50	0.04	0.0	13.0	598.51	
INLET A7	STA 8+59.98	36.16	0.59	10.0	0.59	10.0	100	9.80	5.8	24	1.8	0.0007	1.25	0.07	0.3	10.3	598.56	
STA 8+59.98	STA 8+																	