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ROCKWALL TECHNOLOGY PARK PHASE III

100 YR INLET CALCULATIONS

STATE OF TEXAS
 RONALD RAMIREZ
 81821
 REGISTERED PROFESSIONAL ENGINEER
 4/7/09
 WIER & ASSOCIATES, INC.
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SHEET NO. D202

100 YR. STORM INLET AND STREET FLOW CALCULATIONS

STREET STA	INLET NO.	CONTRIBUTING DRAINAGE AREA	DESIGN STORM FREQUENCY (yr)	TIME OF CONC (min)	RAINFALL INTENSITY (in/hr)	DRAINAGE AREA (Ac)	C FACTOR	CxA	CA INTERCEPTED	GUTTER FLOW (cfs)	GUTTER SLOPE (%)	STREET SECTION	CROWN	DEPTH OF FLOW AT INLET (ft)	WIDTH OF FLOW IN STREET @ GUTTER (ft)	INLET LENGTH (ft)	FLOW COLLECTED (cfs)	FLOW BYPASSED (cfs)	REMARKS
17+07.40 DISCOVERY	A1	A1	100	10	9.80	0.28	0.90	0.25	0.25	2.5	1.42	TRIANGULAR	0.5	0.18	8.8	5	2.4	0.10	ON GRADE INLET / PH III
17+07.40 DISCOVERY	A1*	A1*	100	10	9.80	0.32	0.83	0.27	0.26	2.6	1.42	TRIANGULAR	0.5	0.18	8.9	5	2.5	0.10	ON GRADE INLET / PH III
16+91.39 DISCOVERY	A2	A2	100	10	9.80	0.31	0.90	0.28	0.26	2.7	1.42	TRIANGULAR	0.5	0.18	9.1	5	2.5	0.20	ON GRADE INLET / FUTURE
13+99.75 DISCOVERY	A3	A3	100	10	9.80	0.45	0.90	0.41	0.30	4	1.8	TRIANGULAR	0.5	0.20	10.1	5	2.9	1.10	ON GRADE INLET / PH III
13+99.75 DISCOVERY	A3*	A3*	100	10	9.80	0.50	0.83	0.42	0.31	4.3	1.8	TRIANGULAR	0.5	0.21	10.3	5	3	1.30	ON GRADE INLET / PH III
13+89.74 DISCOVERY	A4	A4	100	10	9.80	0.49	0.90	0.44	0.31	4.6	1.7	TRIANGULAR	0.5	0.21	10.7	5	3	1.60	ON GRADE INLET / FUTURE
11+01.17 DISCOVERY	A5	A5	100	10	9.80	0.46	0.90	0.41	0.53	5.2	0.78	TRIANGULAR	0.5	0.26	13	10	5.2	0.00	ON GRADE INLET / PH III
11+01.17 DISCOVERY	A5*	A5*	100	10	9.80	0.46	0.83	0.41	0.54	5.3	0.78	TRIANGULAR	0.5	0.26	13.1	10	5.3	0.00	ON GRADE INLET / PH III
10+91.17 DISCOVERY	A6	A6	100	10	9.80	0.47	0.90	0.42	0.58	5.7	0.78	TRIANGULAR	0.5	0.27	13.5	10	5.7	0.00	ON GRADE INLET / PH III
8+49.97 DISCOVERY	A7	A7	100	10	9.80	0.63	0.90	0.57	0.57	5.6	-	TRIANGULAR	0.5	0.27	-	15	5.6	0.00	SAG INLET / PH III
8+41.98 DISCOVERY	A8	A8	100	10	9.80	0.67	0.90	0.60	0.60	5.9	-	TRIANGULAR	0.5	0.28	-	15	5.9	0.00	SAG INLET / PH III
3+85.00 DISCOVERY	A9	A9	100	10	9.80	0.46	0.90	0.41	0.31	4.1	1.09	TRIANGULAR	0.5	0.22	11.1	5	3	1.10	EXISTING (PH. II)
3+75.00 DISCOVERY	A10	A10	100	10	9.80	0.42	0.90	0.38	0.30	3.7	1.09	TRIANGULAR	0.5	0.21	10.7	5	2.9	0.80	EXISTING (PH. II)
2+26.92 DISCOVERY	A11	A11	100	10	9.80	0.52	0.90	0.47	0.55	5.4	-	TRIANGULAR	0.5	0.27	-	20	5.4	0.00	EXISTING (PH. II)
2+18.92 DISCOVERY	A12	A12	100	10	9.80	0.50	0.90	0.45	0.56	5.5	-	TRIANGULAR	0.5	0.27	-	20	5.5	0.00	EXISTING (PH. II)
21+70.90 DISCOVERY	B1	B1	100	10	9.80	0.44	0.90	0.40	0.31	3.9	1.33	TRIANGULAR	0.5	0.23	11.7	5	3	0.90	ON GRADE INLET / FUTURE
21+70.90 DISCOVERY	B2	B2	100	10	9.80	0.44	0.90	0.40	0.31	3.9	1.33	TRIANGULAR	0.5	0.23	11.7	5	3	0.90	ON GRADE INLET / PH III
21+70.90 DISCOVERY	B2*	B2*	100	10	9.80	0.50	0.83	0.42	0.32	4.1	1.33	TRIANGULAR	0.5	0.24	12	5	3.1	1.00	ON GRADE INLET / PH III
24+52.90 DISCOVERY	B3	B3	100	10	9.80	0.44	0.90	0.40	0.49	4.8	1.33	TRIANGULAR	0.5	0.25	12.7	10	4.8	0.00	ON GRADE INLET / FUTURE
24+52.90 DISCOVERY	B4	B4	100	10	9.80	0.44	0.90	0.40	0.49	4.8	1.33	TRIANGULAR	0.5	0.25	12.7	10	4.8	0.00	ON GRADE INLET / PH III
24+52.90 DISCOVERY	B4*	B4*	100	10	9.80	0.50	0.83	0.42	0.52	5	1.33	TRIANGULAR	0.5	0.26	13	10	5	0.00	ON GRADE INLET / PH III
27+34.89 DISCOVERY	B5	B5	100	10	9.80	0.44	0.90	0.40	0.40	3.9	1.33	TRIANGULAR	0.5	0.23	11.7	10	3.9	0.00	ON GRADE INLET / FUTURE
27+34.89 DISCOVERY	B6	B6	100	10	9.80	0.44	0.90	0.40	0.40	3.9	1.33	TRIANGULAR	0.5	0.23	11.7	10	3.9	0.00	ON GRADE INLET / PH III
27+34.89 DISCOVERY	B6*	B6*	100	10	9.80	0.50	0.83	0.42	0.42	4.1	1.33	TRIANGULAR	0.5	0.24	12	10	4.1	0.00	ON GRADE INLET / PH III
13+93.36 SPRINGER	C1	C1	100	10	9.80	0.64	0.90	0.58	0.36	5.6	0.6	TRIANGULAR	0.5	0.28	14	5	3.5	2.10	ON GRADE INLET / FUTURE
14+23.86 SPRINGER	C2	C2	100	10	9.80	0.58	0.90	0.52	0.35	5.1	0.6	TRIANGULAR	0.5	0.27	13.5	5	3.4	1.70	ON GRADE INLET / PH III
10+83.86 SPRINGER	C3	C3	100	10	9.80	0.65	0.90	0.59	0.40	7.9	0.7	TRIANGULAR	0.5	0.31	15.5	5	3.9	4.00	ON GRADE INLET / EXISTING
10+73.86 SPRINGER	C4	C4	100	10	9.80	0.72	0.90	0.65	0.40	8.1	0.7	TRIANGULAR	0.5	0.31	15.6	5	3.9	4.20	ON GRADE INLET / EXISTING
7+33.86 SPRINGER	C5	C5	100	10	9.80	0.72	0.90	0.65	0.78	10.3	0.7	TRIANGULAR	0.5	0.34	17.1	10	7.6	2.70	ON GRADE INLET / EXISTING
7+23.86 SPRINGER	C6	C6	100	10	9.80	0.72	0.90	0.65	0.78	10.5	0.7	TRIANGULAR	0.5	0.34	17.2	10	7.6	2.90	ON GRADE INLET / EXISTING
4+33.48 SPRINGER	C7	C7	100	10	9.80	0.62	0.90	0.56	0.70	8.2	0.7	TRIANGULAR	0.5	0.31	15.7	10	6.9	1.30	ON GRADE INLET / EXISTING
4+23.48 SPRINGER	C8	C8	100	10	9.80	0.62	0.90	0.56	0.71	8.4	0.7	TRIANGULAR	0.5	0.32	15.8	10	7	1.40	ON GRADE INLET / EXISTING
1+62.40 SPRINGER	C9	C9	100	10	9.80	0.58	0.90	0.52	0.65	6.4	-	TRIANGULAR	0.5	0.29	-	10	6.4	0.00	SAG INLET / EXISTING
1+30.83 SPRINGER	C10	C10	100	10	9.80	0.56	0.90	0.50	0.65	6.3	-	TRIANGULAR	0.5	0.29	-	10	6.3	0.00	SAG INLET / EXISTING
20+37.61 SPRINGER	D1	D1	100	10	9.80	0.66	0.90	0.59	0.59	5.8	0.84	TRIANGULAR	0.5	0.30	15	10	5.8	0.00	ON GRADE INLET / PH III
20+37.61 SPRINGER	D2	D2	100	10	9.80	0.63	0.90	0.57	0.58	5.6	0.84	TRIANGULAR	0.5	0.29	14.7	10	5.6	0.00	ON GRADE INLET / FUTURE
22+87.61 SPRINGER	D3	D3	100	10	9.80	0.53	0.90	0.48	0.48	4.7	0.7	TRIANGULAR	0.5	0.29	14.3	10	4.7	0.00	ON GRADE INLET / PH III
22+87.61 SPRINGER	D4	D4	100	10	9.80	0.51	0.90	0.46	0.46	4.5	0.7	TRIANGULAR	0.5	0.28	14	10	4.5	0.00	ON GRADE INLET / FUTURE
4+50.62 NORTH SOUTH	E1	E1	100	10	9.80	0.44	0.90	0.40	0.40	3.9	-	TRIANGULAR	0.5	0.27	-	10	3.9	0.00	SAG INLET / FUTURE
4+50.62 NORTH SOUTH	E2	E2	100	10	9.80	1.05	0.90	0.94	0.95	9.3	-	TRIANGULAR	0.5	0.37	-	10	9.3	0.00	SAG INLET / PH III
25+18.04 SPRINGER	I1	I1	100	10	9.80	0.79	0.90	0.71	0.71	7	-	TRIANGULAR	0.5	0.33	-	10	7	0.00	SAG INLET / FUTURE
25+18.04 SPRINGER	I2	I2	100	10	9.80	0.74	0.90	0.67	0.66	6.5	-	TRIANGULAR	0.5	0.32	-	10	6.5	0.00	SAG INLET / PH III
9+92.48 NORTH SOUTH	P1	P1	100	10	9.80	0.38	0.90	0.34	0.34	3.3	-	TRIANGULAR	0.5	0.25	-	10	3.3	0.00	SAG INLET / FUTURE
9+92.48 NORTH SOUTH	P2	P2	100	10	9.80	1.02	0.90	0.92	0.91	9	-	TRIANGULAR	0.5	0.36	-	10	9	0.00	SAG INLET / PH III

SPECIAL NOTE: (*) DENOTES A TEMPORARY CONDITION WHERE A 10' STRIP NORTH OF DISCOVERY BLVD DRAINS INTO THE STORM DRAIN INLETS/SYSTEM.

RECORD DRAWING
4/07/2009
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