INLET DESIGN CALCULATIONS

PROJECT NAME: CARUTH LAKE, PHASE 6 — BY: N.K.

LINE NAME: N/A — DATE: 7/7/03

No.	Inlet Location/Comments	Design Storm Frequency (yrs.)	AREA RUNOFF Q = CIA: Time of Conc. (min.)	Intensity I (in./hr.)	Runoff Coeff. "C"	Area (ac.)	"Q" (c.f.s.)	Carry-Over From Upstream Inlet (c.f.s.)	Total Gutter Flow (c.f.s.)	Gutter Capacity (c.f.s.)	Gutter Slope (%)	Crown Type	SELECTED INLET: Length "Li" (Feet)	Inlet Capacity (c.f.s.)	Type	Carry-Over To Downstream Inlet (c.f.s.)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1A	STA. 0+61.97 HIDDEN LAKES WAY (14.5' RT.)	100	10	9.8	0.50	1.90	9.31	0	7.50	9.41	0.60	6" PARABOLIC	10	7.50	C.I.	1.81	
1B	STA. 2+28.77 HIDDEN LAKES WAY (14.5' LT.)	100	10	9.8	0.50	1.84	9.02	0	9.02	17.17	2.00	6" PARABOLIC	15	10.80	C.I.	0	
1C	STA. 7+85.00 ALLEY "5" (6.5' LT.)	100	10	9.8	0.50	2.41	11.81	0	11.81	–	SAG	5" INVERT	10	21.00	C.I.	0	1
1D	STA. 6+13.00 HIDDEN LAKES WAY (14.5' RT.)	100	10	9.8	0.50	1.45	7.11	0	7.11	9.41	0.60	6" PARABOLIC	10	7.50	C.I.	0	
1E	STA. 0+51.00 BLUE BROOK DRIVE (14.5' RT.)	100	10	9.8	0.50	1.07	5.24	0	5.24	21.24	3.06	6" PARABOLIC	10	6.00	C.I.	0	
1F	STA. 8+02.70 ALLEY "2" (6.5' LT.)	100	10	9.8	0.50	0.77	3.77	0	3.77	15.62	4.40	5" INVERT	10	4.90	C.I.	0	
1G	STA. 8+00 HIDDEN LAKES WAY (14.5' LT.)	100	10	9.8	0.50	0.67	3.28	5.54	8.82	9.41	0.60	6" PARABOLIC	15	10.30	C.I.	0	
1H	UNDEVELOPED AREA	100	20	8.3	0.35	1.91	5.54	–	–	–	–	–	–	–	–	–	
1J	STA. 0+51.36 ALLEY "7" (6.5' RT.)	100	10	9.8	0.50	0.64	3.14	0	3.14	17.94	5.80	5" INVERT	10	4.80	C.I.	0	1
1K	STA. 3+21.98 BAY LINE DRIVE (14.5' LT.)	100	10	9.8	0.50	1.10	5.39	0	5.39	–	SAG	6" PARABOLIC	5	12.80	C.I.	0	
1L	STA. 3+33.58 BAY LINE DRIVE (14.5' RT.)	100	10	9.8	0.50	2.04	10.00	0	10.00	–	SAG	6" PARABOLIC	5	12.80	C.I.	0	
1M	STA. 7+87.07 ALLEY "8" (6.5' RT.)	100	10	9.8	0.50	1.06	5.19	0	5.19	8.49	1.30	5" INVERT	10	5.60	–	0	
1N	STA. 16+04.78 WHITE WATER LANE (14.5' RT.)	100	10	9.8	0.50	1.36	6.66	0	6.66	10.86	0.80	6" PARABOLIC	10	7.50	C.I.	0	
1P	STA. 16+04.78 WHITE WATER LANE (14.5' LT.)	100	10	9.8	0.50	0.68	3.33	0	3.33	10.86	0.80	6" PARABOLIC	10	7.50	C.I.	0	
1Q	STA. 4+51.06 ALLEY"7" (6.00' LT.)	100	10	9.8	0.50	0.11	0.54	0	0.54	–	SAG	5" INVERT	5	12.80	C.I.	0	1
2A	STA. 4+64.00 WATERSEDGE DRIVE (14.5' LT.)	100	10	9.8	0.50	0.67	3.28	0	3.28	–	SAG	6" PARABOLIC	5	12.80	C.I.	0	
2B	STA. 4+64.00 WATERSEDGE DRIVE (14.5' RT.)	100	10	9.8	0.50	1.82	8.92	1.81	10.73	–	SAG	6" PARABOLIC	5	12.80	C.I.	0	
3A	STA. 0+48.89 ALLEY "5" (6.5' RT.)	100	10	9.8	0.50	0.25	1.22	0	1.22	14.13	3.60	5" INVERT	5	2.25	C.I.	0	
3B	STA. 1+69.35 WATERSEDGE DRIVE (14.5' RT.)	100	10	9.8	0.50	1.86	9.11	0	9.11	14.11	1.35	6" PARABOLIC	15	9.3	C.I.	0	
4A	STA. 0+40.24 ALLEY "6" (6.5' RT.)	100	10	9.8	0.50	0.84	4.12	0	4.12	13.53	3.30	5" INVERT	10	5.00	C.I.	0	
4B	STA. 0+81.28 ALLEY "4" (6.5' LT.)	100	10	9.8	0.50	1.41	6.91	0	6.91	10.79	2.10	5" INVERT	15	8.80	C.I.	0	
5A	STA. 12+37.94 WATERSEDGE DRIVE (14.5' LT.)	100	10	9.8	0.50	0.45	2.21	0	2.21	–	SAG	6" PARABOLIC	5	12.80	C.I.	0	
5B	STA. 12+37.94 WATERSEDGE DRIVE (14.5' RT.)	100	10	9.8	0.50	2.95	14.46	0	14.46	–	SAG	6" PARABOLIC	10	25.00	C.I.	0	
5C	STA. 7+80.00 ALLEY "6" (6.5' LT.)	100	10	9.8	0.50	1.81	8.87	0	8.87	–	SAG	5" INVERT	5	10.50	C.I.	0	
6A	STA. 0+38.53 HIGHBLUFF LANE (14.5' LT.)	100	10	9.8	0.50	0.37	1.81	0	1.81	21.54	2.82	6" PARABOLIC	5	2.60	C.I.	0	
6B	STA. 0+64.76 HIGHBLUFF LANE (14.5' RT.)	100	10	9.8	0.50	1.65	8.09	0	8.09	21.54	2.82	6" PARABOLIC	15	9.90	C.I.	0	
7A	STA. 6+84.21 HAMPTON BAY DRIVE (14.5' LT.)	100	10	9.8	0.50	0.56	2.74	0	2.74	9.41	0.60	6" PARABOLIC	5	3.10	C.I.	0	
7B	STA. 6+61.13 HAMPTON BAY DRIVE (14.5' RT.)	100	10	9.8	0.50	2.37	11.61	0	11.61	9.41	0.60	6" PARABOLIC	15	13.00	C.I.	0	
7C	STA. 0+47.71 ALLEY "2" (6.5' RT.)	100	10	9.8	0.50	0.72	3.53	0	3.53	15.08	4.10	5" INVERT	10	5.00	C.I.	0	
X	–	100	10	9.8	0.50	3.69	18.08	0	18.08	–	–	TO CREEK	–	–	–	–	

NOTE:

1. 100-YR DESIGN FREQUENCY SHALL NOT EXCEED A DEPTH OF 1 1/2" OVER TOP OF CURB IN STREET.
2. 100-YR DESIGN FREQUENCY SHALL NOT EXCEED THE CAPACITY OF ALLEY PAVEMENT.
4. PONDING DEPTH OF CURB INLET AT LOW POINT ON STREET IS 0.62'
5. PONDING DEPTH OF CURB INLET AT LOW POINT ON ALLEY IS 0.50'

BENCHMARK:
"X" CHISELED IN ℄ OF ALLEY EAST OF MORNINGSTAR DRIVE WITHIN 3RD LOT NORTH OF MIDNIGHT PASS.
ELEV. 513.26

BENCHMARK:
PK NAIL IN ℄ OF CARUTH LANE & ALLEY INTER-SECTION 150"± EAST OF MORNINGSTAR DRIVE.
ELEV. 491.68

NO.	DATE	REVISION	N.K.	APPROV.
1	8/30/04	REVISED DRAINAGE CALCULATIONS		

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STATE OF TEXAS — MD. NAIM UDDIN KHAN — 87776 — REGISTERED PROFESSIONAL ENGINEER

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M.B. JONES SURVEY, ABSTRACT NO. 122
CITY OF ROCKWALL
ROCKWALL COUNTY, TEXAS

LUMBERMEN'S INVESTMENT CORPORATION
5495 BELTLINE ROAD #225
DALLAS, TEXAS 75240

DRAINAGE CALCULATIONS PHASE 6A

Scale : 1"=100' | Date : 3/24/04
Designed By : NK
Drawn By : MS
Checked By : NK
File : 14654ANDAM.DWG
Project No. : 14654.01

SHEET 3A OF 57

mk