

DATE PLOTTED: 5/3/2018 2:08 PM ; LAST SAVE DATE: 5/3/2018 2:03 PM

H:\projects\2004\04078A2 - Whispering Woods Phase 1\dwg\04078 - Street & Storm Plans.dwg

DATE: 05/03/2018		STORM SEWER PIPE AND STRUCTURE TABLE																														
TITLE: WHISPERING WOODS, LEE'S SUMMIT, MO																																
JOB #: 04078																																
DESIGN CONDITIONS: PUBLIC - 10 YEAR STORM EVENT																																
STRUCTURES		RUNOFF CALCULATIONS										PIPE DESIGN																				
FROM	TO	DIRECT AREA (ACRES)	TOTAL AREA (ACRES)	C	KC (K=1.0)	Tc (MIN)	FLOW TIME (MIN)	INTENSITY (IN/HR)	DESIGN Q (CFS)	DESCRIPTION	PIPE LENGTH (L.F.)	PIPE SLOPE (%)	PIPE DIA (IN)	Q FULL (CFS)	PIPE AREA (SQ.FT.)	V FULL (F/S)	DESIGN V (F/S)	Hw/D	MH TOP ELEVATION	UPSTREAM FLOWLINE	DOWNSTREAM FLOWLINE	DOWNSTREAM WATER ELEVATION	FRICTION HEAD (h f)	ENTRY LOSS COEFFICIENT (k)	ACTUAL ENTRY LOSS (k)	ENTRY LOSS (h m)	h f + h m (FT)	HW, INLET CONTROL	HW, OUTLET CONTROL	HYDRAULIC GRADE ELEV.	HYDRAULIC GRADE (MAX)	Comments
D-2	C-7, D-1	0.42	0.42	0.66	0.66	5.00		7.35	2.04	Curb Inlet	34.00	2.61	15	13.60	1.23	11.09	6.60	0.77	981.96	977.45	976.56	978.51	0.02	0.40	1.00	0.68	0.70	978.42	979.21	979.21	980.46	
E-2	C-6, E-1	2.16	2.16	0.66	0.66	5.00	0.09	7.35	2.04	Curb Inlet	129.37	1.86	24	40.22	3.14	12.80	8.88	0.89	975.27	970.19	967.78	968.63	0.17	0.40	1.00	1.23	1.39	971.97	970.19	971.97	973.77	
F-2	C-4, F-1	0.35	0.35	0.66	0.66	5.00	0.42	7.35	1.70	Curb Inlet	98.29	1.77	18	18.22	1.77	10.31	3.94	0.69	988.62	964.23	962.49	960.92	0.02	0.40	1.00	0.24	0.26	965.27	964.23	965.27	967.12	
C-7, D-1	C-6, E-1	1.12	7.90	0.66	0.66	5.00	0.27	7.35	5.44	Curb Inlet	250.70	3.60	36	164.96	7.07	23.34	15.36	1.00	981.84	975.50	966.47	968.63	0.42	0.40	0.40	1.46	1.89	978.51	975.50	978.51	980.34	
C-6, E-1	C-5	0.71	9.03	0.66	0.66	5.00	0.03	7.35	3.45	Curb Inlet	34.00	8.76	36	257.32	7.07	36.40	21.90	1.10	972.25	965.34	962.36	965.34	0.07	0.40	0.40	2.98	3.05	968.63	968.39	968.63	970.75	
C-5	C-4, F-1	0.30	9.68	0.66	0.66	5.00	0.19	7.35	1.46	Curb Inlet	157.36	2.39	36	134.41	7.07	19.01	13.92	1.16	972.25	961.86	958.10	960.92	0.39	0.40	0.40	1.20	1.59	965.34	962.51	965.34	970.75	
C-4, F-1	C-3	0.66	10.69	0.66	0.66	5.00	0.10	7.35	3.20	Curb Inlet	58.97	0.92	42	125.79	9.62	13.07	9.97	0.94	967.48	957.62	957.08	959.85	0.08	0.40	0.40	0.62	0.69	960.92	960.54	960.92	965.98	
C-3	C-2	0.40	11.09	0.66	0.66	7.54	0.32	6.64	48.62	Curb Inlet	156.64	0.51	48	133.72	12.57	10.64	8.05	0.82	966.75	956.57	955.77	958.53	0.11	0.40	0.40	0.40	0.51	959.85	959.04	959.85	965.25	
C-2	C-1	0.00	11.09	0.66	0.66	5.00		7.35	0.00	Curb Inlet	282.14	0.46	48	126.99	12.57	10.11	7.73	0.82	982.07	955.27	953.97	957.84	0.19	0.40	0.40	0.37	0.56	958.53	958.40	958.53	960.57	
G-5, N-1	G-4	0.36	3.14	0.66	0.66	5.00	0.51	6.56	48.03	Curb Inlet	329.87	2.47	24	46.34	3.14	14.75	10.70	1.08	991.97	982.43	974.28	975.98	0.79	0.40	0.40	0.71	1.50	984.59	982.43	984.59	990.47	
G-4	G-3	0.31	3.45	0.66	0.66	5.00	0.04	6.76	15.40	Curb Inlet	35.76	4.67	24	63.72	3.14	20.28	13.78	1.15	978.42	973.68	972.01	972.55	0.10	0.40	0.40	1.18	1.28	975.98	973.83	975.98	976.92	
G-3	G-2	0.43	3.88	0.66	0.66	5.00	0.09	6.75	2.09	Curb Inlet	79.54	4.51	24	62.62	3.14	19.93	14.04	1.27	978.40	970.00	966.41	964.88	0.28	0.40	0.40	1.22	1.50	972.55	970.00	972.55	976.90	
G-2	G-1	0.06	3.94	0.66	0.66	5.00	0.21	6.73	17.49	Curb Inlet	156.39	3.24	24	53.08	3.14	16.90	12.47	1.29	976.43	962.31	957.24	957.84	0.56	0.40	0.40	0.97	1.52	964.88	962.31	964.88	974.93	
A-3	A-2	0.86	0.86	0.66	0.66	5.00	0.16	7.35	4.17	Curb Inlet	40.00	0.50	24	20.85	3.14	6.64	4.29	0.71	959.64	953.29	953.09	954.15	0.01	0.40	1.00	0.29	0.29	954.70	954.44	954.70	958.14	
A-2	A-1	0.43	1.29	0.66	0.66	5.00	0.14	7.31	6.22	Curb Inlet	43.62	0.62	24	23.22	3.14	7.39	5.17	0.75	959.50	952.65	952.38	953.70	0.02	0.40	0.40	0.17	0.19	954.15	953.89	954.15	958.00	
A1 - 2	A1 -1	0.50	0.50	0.66	0.66	5.00	0.28	7.35	2.43	FES	106.90	2.08	18	19.75	1.77	11.17	6.28	0.72	956.45	954.66	952.44	953.70	0.03	0.40	1.00	0.61	0.65	955.74	954.66	955.74	954.95	

Date: 05/03/2018

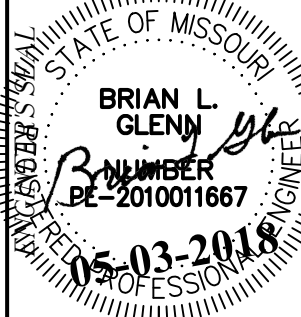
Slope #	Inlet	Area Number	Area (Acres)	Street Slope (ft/ft)	Max Gutter Flow	Gutter Flow, cfs (+bypass)		Cross Slope (%)	Gutter Spread (ft)		Inlet Length (ft)	Curb Type (A or B)	Inlet Intercept		Inlet Bypass	
						Q-10 yr	Q- 100 yr		10 yr	100 yr			10-Year	100-Year	10-Year	100-Year
1	A-3 (W)	1	0.07	2.18	5.84	0.34	0.60	2	3.97	4.90	5	A	0.33	0.56	0.01	0.03
2	A-3 (E)	2	1.17	6.16	9.81	5.68	9.96	2	9.40	11.60	5	A	1.96	2.08	3.71	7.88
-	A-3 (low pt)	21	1.24	0	-	6.02	10.56	2	-	-	5	A	6.02	10.56	0.00	0.00
1	A-2 (W)	3	0.07	2.18	5.84	0.34	0.60	2	3.97	4.90	5	A	0.33	0.56	0.01	0.03
2	A-2 (E)	4	0.55	6.16	9.81	2.67	4.68	2	7.08	8.74	5	A	1.52	1.88	1.15	2.80
-	A-2 (low pt)	22	0.62	0	-	3.01	5.28	2	-	-	5	A	3.01	5.28	0.00	0.00
4	B-2 (N)	5	0.29	1.84	5.36	1.67	4.26	2	7.44	10.58	5	A	1.43	2.87	0.24	1.39
3	B-2 (S)	6	0.45	3.64	7.54	2.18	3.83	2	7.25	8.95	5	A	1.57	2.19	0.61	1.64
-	B-2 (low pt)	23	0.74	0	-	3.85	8.09	2	-	-	5	A	3.85	8.09	0.00	0.00
4	B-1 (N)	7	0.19	1.84	5.36	2.29	6.13	2	8.38	12.13	5	A	1.85	3.52	0.44	2.61
3	B-1 (S)	8	0.38	3.64	7.54	1.84	3.24	2	6.80	8.40	5	A	1.40	2.01	0.45	1.23
-	B-1 (low pt)	24	0.57	0	-	4.13	9.36	2	-	-	5	A	4.13	9.36	0.00	0.00
8	C-7, D-1	9	1.12	3.78	7.68	6.94	13.43	2	11.10	14.22	5	A	2.68	2.93	4.25	10.50
8	C-6, E-1	10	0.71	3.78	7.68	7.70	16.55	2	11.54	15.38	5	A	2.75	2.95	4.95	13.60
8	C-5	11	0.30	3.78	7.68	3.05	6.79	2	8.16	11.01	5	A	1.92	2.67	1.13	4.12
5	C-4, F-1	12	0.21	1	3.95	2.15	5.91	2	9.18	13.42	5	A	1.89	4.13	0.26	1.79
4	C-3	13	0.40	1.84	5.36	4.21	8.57	2	10.54	13.75	5	A	2.85	4.06	1.36	4.51
8	D-2	14	0.71	3.78	7.68	3.73	6.92	2	8.79	11.09	5	A	2.13	2.68	1.60	4.24
6	F-2 (N)	16	0.46	5.62	9.37	2.23	3.92	2	6.74	8.32	5	A	1.42	1.86	0.81	2.06
5	F-2 (S)	17	0.44	1	3.95	2.14	3.75	2	9.16	11.31	5	A	1.88	2.98	0.26	0.77
-	F-2 (low pt)	25	0.90	0	-	4.37	7.66	2	-	-	5	A	4.37	7.66	0.00	0.00
15	G-4	18	0.31	2	5.59	1.95	3.86	2	7.78	10.04	5	A	1.61	2.64	0.34	1.22
15	G-3	19	0.43	2	5.59	2.21	4.03	2	8.14	10.21	5	A	1.77	2.71	0.44	1.32
6	G-2	20	0.86	5.62	9.37	4.17	7.32	2	8.52	10.52	5	A	1.90	2.16	2.27	5.17

Thursday, May 3, 2018 2:03:46 PM

WHISPERING WOODS
LEE'S SUMMIT, JACKSON COUNTY, MO
STREET & STORM SEWER PLANS
DRAINAGE CALCS

DESIGNED
BLG
DRAWN
JRT
SCALE
NOTED
DATE
09-01-2018
JOB NO.
04078
SHEET

24 OF 29



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SURVEYING CERTIFICATE NO.: MO LS-2000151303-D KS: LS-138

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