

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

Manning 0.013

LOCATION			AREA (Ha)																FLOW						SEWER DATA										
			2 YEAR				5 YEAR				10 YEAR				100 YEAR				Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO		
Location	From Node	To Node	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	Conc. (min)	2 Year (mm/h)	5 Year (mm/h)	10 Year (mm/h)	100 Year (mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full			
	310	313	0.26	0.70	0.51	0.51													10.00	76.81	104.19	122.14	178.56	39	375	375	PVC	0.30	82.5	96.0323	0.8695	1.5814	0.409		
To Anemone Mews, Pipe 313 - 320						0.51				0.00	0.00							0.00	0.00	11.58															
	310	513	0.29	0.70	0.56	0.56													10.00	76.81	104.19	122.14	178.56	43	375	375	PVC	0.30	89.5	96.0323	0.8695	1.7156	0.450		
To Mineral Street, Pipe 513 - 520						0.56				0.00	0.00							0.00	0.00	11.72															
	511	604	0.16	0.78	0.35	0.35													10.00	76.81	104.19	122.14	178.56	27	450	450	CONC	0.20	67.5	127.5033	0.8017	1.4033	0.209		
To Pollination Place, Pipe 604 - 606						0.35				0.00	0.00							0.00	0.00	11.40															
	511	513	0.42	0.78	0.91	0.91													10.00	76.81	104.19	122.14	178.56	70	375	375	PVC	0.30	112.5	96.0323	0.8695	2.1564	0.728		
To Mineral Street, Pipe 513 - 520						0.91				0.00	0.00							0.00	0.00	12.16															
Conservancy Drive																																			
	200	309			0.00	0.00	0.11	0.70	0.22	0.22									10.00	76.81	104.19	122.14	178.56	23	300	300	PVC	0.35	36.0	57.2089	0.8093	0.7413	0.400		
To Anemone Mews, Pipe 309 - 313						0.00				0.22	0.22							0.00	0.00	10.74															
	307	510	0.21	0.54	0.32	0.32	0.18	0.75	0.38	0.38									10.00	76.81	104.19	122.14	178.56	64	450	450	CONC	0.25	51.0	142.5531	0.8963	0.9483	0.450		
To Mineral Street, Pipe 510 - 513						0.32				0.38	0.38							0.00	0.00	10.95															
	508	602			0.00	0.00	0.07	0.78	0.15	0.15									10.00	76.81	104.19	122.14	178.56	16	300	300	PVC	0.35	64.0	57.2089	0.8093	1.3179	0.276		
To Pollination Place, Pipe 602 - 604						0.00				0.15	0.15							0.00	0.00	11.32															
	508	510			0.00	0.00	0.12	0.78	0.26	0.26									10.00	76.81	104.19	122.14	178.56	124	525	525	CONC	0.20	117.0	192.3297	0.8885	2.1948	0.642		
To Mineral Street, Pipe 510 - 513						0.00				0.26	0.26							0.00	0.00	12.19															
	601	602			0.00	0.00	0.16	0.80	0.36	0.36									10.00	76.81	104.19	122.14	178.56	37	300	300	PVC	1.00	32.5	96.7008	1.3680	0.3959	0.383		
To Pollination Place, Pipe 602 - 604						0.00				0.36	0.36							0.00	0.00	10.40															
	711	712			0.00	0.00	0.12	0.71	0.24	0.24									10.00	76.81	104.19	122.14	178.56	25	300	300	PVC	0.35	21.5	57.2089	0.8093	0.4427	0.431		
To Crowfoot Lane (LANE 1), Pipe 712 - 713						0.00				0.24	0.24							0.00	0.00	10.44															
	7170	707			0.00	0.00			0.00	0.00									10.00	76.81	104.19	122.14	178.56	0	375	375	PVC	0.30	62.5	96.0323	0.8695	1.1980	0.000		
To Ephemeral Crescent, Pipe 707 - 708						0.00				0.00	0.00							0.00	0.00	11.20															
	307	308			0.00	0.00	0.35	0.73	0.71	0.71									10.00	76.81	104.19	122.14	178.56	74	375	375	PVC	0.50	53.5	123.9771	1.1225	0.7944	0.597		
	308	309	0.13	0.54	0.20	0.20													10.79	73.88	100.18	117.41	171.61	110	525	525	CONC	0.25	67.0	215.0311	0.9933	1.1242	0.510		
To Anemone Mews, Pipe 309 - 313						0.20				0.95	0.95							0.00	0.00	11.92															
	601	705			0.00	0.00			0.00	0.00									10.00	76.81	104.19	122.14	178.56	0	300	300	PVC	0.45	40.0	64.8688	0.9177	0.7264	0.000		
Contribution From Les Emmerson Drive (N), Pipe 704 - 705						3.44				0.10	0.10							0.00	0.00	13.52															
	705	707			0.00	3.44	0.18	0.67	0.34	0.44									13.52	65.49	88.66	103.85	151.70	264	675	675	CONC	0.15	58.5	325.5584	0.9098	1.0717	0.812		
To Ephemeral Crescent, Pipe 707 - 708						3.44				0.44	0.44							0.00	0.00	14.59															
Les Emmerson Drive (S)																																			
	303	507	0.22	0.54	0.33	0.33													10.00	76.81	104.19	122.14	178.56	60	600	600	CONC	0.15	69.0	237.8056	0.8411	1.3673	0.253		
To Mineral Street, Pipe 507 - 510						0.33				0.00	0.00							0.00	0.00	11.37															
	303	306	0.33	0.70	0.64	0.81													10.00	76.81	104.19	122.14	178.56	62	375	375	PVC	0.35	102.0	103.7267	0.9392	1.8101	0.602		
To Anemone Mews, Pipe 306 - 3090						0.81				0.00	0.00							0.00	0.00	11.81															

Definitions:
 Q = 2.78 AIR, where
 Q = Peak Flow in Litres per second (L/s)
 A = Areas in hectares (ha)
 I = Rainfall Intensity (mm/h)
 R = Runoff Coefficient

Notes:
 1) Ottawa Rainfall-Intensity Curve
 2) Min. Velocity = 0.80 m/s

Designed:	R.B.	PROJECT:	BARRHAVEN CONSERVANCY EAST, PHASE 3 AND 4		
Checked:	W.L.	LOCATION:	City of Ottawa		
Dwg. Reference:	File Ref:	Date:	Sheet No.		
Stm Tributary Area Plan Dwg No. 4	20-1180	05 Apr 2024	SHEET 3 OF 6		

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
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Manning 0.013

LOCATION			AREA (Ha)																FLOW							SEWER DATA									
			2 YEAR				5 YEAR				10 YEAR				100 YEAR				Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO		
Location	From Node	To Node	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	Conc. (min)	2 Year (mm/h)	5 Year (mm/h)	10 Year (mm/h)	100 Year (mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full			
	305	306	0.29	0.72	0.58	0.58			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	45	450	450	CONC	0.25	91.5	142.5531	0.8963	1.7014	0.313		
To Anemone Mews, Pipe 306 - 3090						0.58			0.00	0.00			0.00	0.00			0.00	0.00	11.70																
	504	704	0.70	0.80	1.56	1.56			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	120	675	675	CONC	0.15	20.0	325.5584	0.9098	0.3664	0.367		
To Les Emmerson Drive (N), Pipe 704 - 705						1.56			0.00	0.00			0.00	0.00			0.00	0.00	10.37																
	505	507	0.49	0.80	1.09	1.09			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	84	675	675	PVC	0.15	20.0	325.5584	0.9098	0.3664	0.257		
To Mineral Street, Pipe 507 - 510						1.09			0.00	0.00			0.00	0.00			0.00	0.00	10.37																
Les Emmerson Drive (N)																																			
	300	503			0.00	0.00			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	0	450	450	CONC	0.25	37.0	142.5531	0.8963	0.6880	0.000		
To Mineral Street, Pipe 503 - 507						0.00			0.00	0.00			0.00	0.00			0.00	0.00	10.69																
	300	301	0.28	0.73	0.57	0.57			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	44	450	450	CONC	0.20	67.0	127.5033	0.8017	1.3929	0.342		
	301	302	0.20	0.73	0.41	0.97			0.00	0.00			0.00	0.00			0.00	0.00	11.39	71.84	97.37	114.11	166.76	70	600	600	CONC	0.15	66.5	237.8056	0.8411	1.3178	0.294		
To Anemone Mews, Pipe 302 - 306						0.97			0.00	0.00			0.00	0.00			0.00	0.00	12.71																
	500	501	0.41	0.78	0.89	0.89			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	68	450	450	CONC	0.20	109.0	127.5033	0.8017	2.2660	0.536		
			0.09	0.71	0.18	1.07			0.00	0.00			0.00	0.00			0.00	0.00																	
	501	503	0.17	0.78	0.37	1.44			0.00	0.00			0.00	0.00			0.00	0.00	12.27	69.08	93.57	109.64	160.20	99	525	525	CONC	0.17	65.0	177.3192	0.8191	1.3226	0.559		
To Mineral Street, Pipe 503 - 507						1.44			0.00	0.00			0.00	0.00			0.00	0.00	13.59																
	500	701	0.30	0.78	0.65	0.65			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	50	375	375	PVC	0.30	52.5	96.0323	0.8695	1.0063	0.520		
	701	702			0.00	0.65			0.00	0.00			0.00	0.00			0.00	0.00	11.01	73.15	99.16	116.22	169.85	48	375	375	PVC	0.30	17.5	96.0323	0.8695	0.3354	0.495		
			0.15	0.60	0.25	0.90			0.00	0.00			0.00	0.00			0.00	0.00																	
	702	704	0.16	0.80	0.36	1.26			0.00	0.00			0.00	0.00			0.00	0.00	11.34	72.01	97.60	114.38	167.16	90	450	450	CONC	0.20	52.0	127.5033	0.8017	1.0810	0.710		
Contribution From Les Emmerson Drive (S), Pipe 504 - 704						1.56			0.00	0.00			0.00	0.00			0.00	0.00	10.37																
					0.00	2.81	0.05	0.75	0.10	0.10			0.00	0.00			0.00	0.00																	
	704	705	0.29	0.78	0.63	3.44			0.00	0.10			0.00	0.00			0.00	0.00	12.42	68.61	92.93	108.88	159.08	246	675	675	CONC	0.14	58.0	314.5193	0.8789	1.0998	0.782		
To Conservancy Drive, Pipe 705 - 707						3.44			0.00	0.10			0.00	0.00			0.00	0.00	13.52																
Anemone Mews																																			
Contribution From Les Emmerson Drive (N), Pipe 301 - 302						0.97			0.00	0.00			0.00	0.00			0.00	0.00	12.71																
	302	306	0.17	0.75	0.35	1.33			0.00	0.00			0.00	0.00			0.00	0.00	12.71	67.76	91.77	107.51	157.07	90	600	600	CONC	0.15	62.5	237.8056	0.8411	1.2385	0.379		
Contribution From Les Emmerson Drive (S), Pipe 303 - 306						0.81			0.00	0.00			0.00	0.00			0.00	0.00	11.81																
Contribution From Les Emmerson Drive (S), Pipe 305 - 306						0.58			0.00	0.00			0.00	0.00			0.00	0.00	11.70																
	306	3090	0.16	0.74	0.33	3.05			0.00	0.00			0.00	0.00			0.00	0.00	13.95	64.36	87.11	102.03	149.03	196	600	600	CONC	0.15	48.0	237.8056	0.8411	0.9512	0.826		
	3090	309			0.00	3.05			0.00	0.00			0.00	0.00			0.00	0.00	14.90	62.00	83.88	98.23	143.45	189	675	675	CONC	0.15	10.0	325.5584	0.9098	0.1832	0.581		
Contribution From Conservancy Drive, Pipe 200 - 309						0.00			0.00	0.22			0.00	0.00			0.00	0.00	10.74																
Contribution From Conservancy Drive, Pipe 308 - 309						0.20			0.00	0.95			0.00	0.00			0.00	0.00	11.92																
			0.11	0.54	0.16	3.41			0.00	1.17			0.00	0.00			0.00	0.00																	
			0.11	0.56	0.18	3.58			0.00	1.17			0.00	0.00			0.00	0.00																	
	309	313	0.13	0.56	0.20	3.78			0.00	1.17			0.00	0.00			0.00	0.00	15.08	61.57	83.29	97.54	142.43	331	825	825	CONC	0.10	62.5	453.9246	0.8492	1.2267	0.728		
Contribution From Peninsula Road, Pipe 204 - 313						0.07			0.00	0.00			0.00	0.00			0.00	0.00	10.85																
Contribution From Peninsula Road, Pipe 310 - 313						0.51			0.00	0.00			0.00	0.00			0.00	0.00	11.58																
			0.04	0.77	0.08	4.44			0.00	1.17			0.00	0.00			0.00	0.00																	
			0.12	0.54	0.19	4.62			0.00	1.17			0.00	0.00			0.00	0.00																	
	313	320	0.22	0.54	0.32	4.95			0.00	1.17			0.00	0.00			0.00	0.00	16.31	58.84	79.55	93.14	135.98	384	900	900	CONC	0.11	60.0	600.4123	0.9438	1.0596	0.640		
To Sapling Grove, Pipe 320 - 325						4.95			0.00	1.17			0.00	0.00			0.00	0.00	17.37																
Syringa Court																																			
	315	515			0.00	0.00			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	0	375	375	PVC</								

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LOCATION			AREA (Ha)																FLOW						SEWER DATA										
			2 YEAR				5 YEAR				10 YEAR				100 YEAR				Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO		
Location	From Node	To Node	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	Conc. (min)	2 Year (mm/h)	5 Year (mm/h)	10 Year (mm/h)	100 Year (mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full			
	315	316			0.00	0.00			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	0	300	300	PVC	1.00	12.0	96.7008	1.3680	0.1462	0.000		
	316	317	0.32	0.69	0.62	0.62			0.00	0.00			0.00	0.00			0.00	0.00	10.15	76.25	103.43	121.24	177.23	47	450	450	CONC	0.20	70.5	127.5033	0.8017	1.4657	0.368		
	317	319	0.21	0.69	0.39	1.01			0.00	0.00			0.00	0.00			0.00	0.00	11.61	71.12	96.39	112.95	165.05	72	600	600	CONC	0.15	68.0	237.8056	0.8411	1.3475	0.302		
To Sapling Grove, Pipe 319 - 320					1.01					0.00				0.00				0.00	12.96																
Sapling Grove																																			
	208	325	0.13	0.64	0.24	0.24			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	18	300	300	PVC	0.75	38.5	83.7453	1.1848	0.5416	0.219		
To Ainsworth Crescent, Pipe 325 - 326					0.24					0.00				0.00				0.00	10.54																
			0.10	0.60	0.17	0.17			0.00	0.00			0.00	0.00			0.00	0.00																	
	523	606	0.18	0.78	0.39	0.56			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	43	375	375	PVC	0.30	72.5	96.0323	0.8695	1.3897	0.446		
To Pollination Place, Pipe 606 - 607					0.56					0.00				0.00				0.00	11.39																
	606	606			0.00	0.00	1.32	0.40	1.47	1.47			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	153	600	600	CONC	0.15	11.0	237.8056	0.8411	0.2180	0.643		
To Pollination Place, Pipe 606 - 607					0.00					1.47				0.00				0.00	10.22																
	523	524	0.19	0.78	0.41	0.41			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	32	300	300	PVC	0.35	45.0	57.2089	0.8093	0.9267	0.553		
	524	520	0.27	0.60	0.45	0.86			0.00	0.00			0.00	0.00			0.00	0.00	10.93	73.42	99.54	116.66	170.51	63	525	525	CONC	0.30	62.5	235.5548	1.0881	0.9573	0.269		
To Gallium Crescent, Pipe 520 - 521					0.86					0.00				0.00				0.00	11.88																
	519	519	0.29	0.55	0.44	0.44			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	34	450	450	CONC	0.30	62.5	156.1591	0.9819	1.0609	0.218		
Contribution From Syringa Court, Pipe 516 - 519					1.09					0.00				0.00				0.00	13.88																
	519	520	0.27	0.66	0.50	2.03			0.00	0.00			0.00	0.00			0.00	0.00	13.88	64.54	87.35	102.32	149.45	131	750	750	CONC	0.11	54.5	369.2322	0.8358	1.0868	0.355		
To Gallium Crescent, Pipe 520 - 521					2.03					0.00				0.00				0.00	14.97																
Contribution From Syringa Court, Pipe 317 - 319					1.01					0.00				0.00				0.00	12.96																
	319	320	0.20	0.66	0.37	1.38			0.00	0.00			0.00	0.00			0.00	0.00	12.96	67.04	90.79	106.36	155.38	92	825	825	CONC	0.10	54.5	453.9246	0.8492	1.0697	0.203		
Contribution From Anemone Mews, Pipe 313 - 320					4.95					1.17				0.00				0.00	17.37																
			0.15	0.65	0.26	6.59			0.00	1.17			0.00	0.00			0.00	0.00																	
	320	325	0.16	0.55	0.24	6.83			0.00	1.17			0.00	0.00			0.00	0.00	17.37	56.69	76.61	89.68	130.91	477	975	975	CONC	0.11	64.0	743.2733	0.9955	1.0715	0.641		
To Ainsworth Crescent, Pipe 325 - 326					6.83					1.17				0.00				0.00	18.44																
Ainsworth Crescent																																			
	320	321	0.12	0.54	0.18	0.18			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	35	375	375	PVC	0.30	74.5	96.0323	0.8695	1.4280	0.360		
			0.14	0.70	0.27	0.45			0.00	0.00			0.00	0.00			0.00	0.00																	
			0.25	0.50	0.34	0.80			0.00	0.00			0.00	0.00			0.00	0.00																	
	321	322	0.39	0.72	0.77	1.57			0.00	0.00			0.00	0.00			0.00	0.00	11.43	71.72	97.21	113.92	166.48	112	525	525	CONC	0.20	79.0	192.3297	0.8885	1.4820	0.585		
	322	323			0.00	1.57			0.00	0.00			0.00	0.00			0.00	0.00	12.91	67.18	90.98	106.58	155.71	105	525	525	CONC	0.20	14.0	192.3297	0.8885	0.2626	0.548		
	323	330	0.11	0.57	0.17	1.74			0.00	0.00			0.00	0.00			0.00	0.00	13.17	66.45	89.97	105.39	153.96	115	600	600	CONC	0.15	53.5	237.8056	0.8411	1.0602	0.485		
To Storm Outlet 3, Pipe 330 - HW3					1.74					0.00				0.00				0.00	14.23																
Contribution From Sapling Grove, Pipe 208 - 325					0.24					0.00				0.00				0.00	10.54																
Contribution From Sapling Grove, Pipe 320 - 325					6.83					1.17				0.00				0.00	18.44																
	325	326	0.11	0.70	0.21	7.28			0.00	1.17			0.00	0.00			0.00	0.00	18.44	54.68	73.87	86.46	126.18	485	975	975	CONC	0.10	68.5	708.6833	0.9492	1.2028	0.684		
			0.21	0.55	0.31	7.59			0.00	1.17			0.00	0.00			0.00	0.00																	
			0.23	0.71	0.45	8.05			0.00	1.17			0.00	0.00			0.00	0.00																	
	326	327	0.35	0.50	0.48	8.53			0.00	1.17			0.00	0.00			0.00	0.00	19.64	52.61	71.04	83.14	121.31	532	975	975	CONC	0.10	76.0	708.6833	0.9492	1.3345	0.751		
To Storm Outlet 3, Pipe 327 - 330					8.53					1.17				0.00				0.00	20.98																
Storm Outlet 3																																			
Contribution From Ainsworth Crescent, Pipe 326 - 327					8.53					1.17				0.00				0.00	20.98																
	327	330	0.26	0.63	0.45	8.98			0.00	1.17			0.00	0.00			0.00	0.00	20.98	50.51	68.17	79.77	116.37	533	975	975	CONC	0.10	7.5	708.6833	0.9492	0.1317	0.753		
Contribution From Ainsworth Crescent, Pipe 323 - 330					1.74					0.00				0.00				0.00	14.23																
	330	HW3			0.00	10.72			0.00	1.17			0.00	0.00																					

STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Local Roads Return Frequency = 2 years
 Collector Roads Return Frequency = 5 years
 Arterial Roads Return Frequency = 10 years

Manning 0.013

LOCATION			AREA (Ha)																FLOW						SEWER DATA										
			2 YEAR				5 YEAR				10 YEAR				100 YEAR				Time of	Intensity	Intensity	Intensity	Intensity	Peak Flow	DIA. (mm)	DIA. (mm)	TYPE	SLOPE	LENGTH	CAPACITY	VELOCITY	TIME OF	RATIO		
Location	From Node	To Node	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	AREA (Ha)	R	Indiv. 2.78 AC	Accum. 2.78 AC	Conc. (min)	2 Year (mm/h)	5 Year (mm/h)	10 Year (mm/h)	100 Year (mm/h)	Q (l/s)	(actual)	(nominal)	(%)	(m)	(l/s)	(m/s)	LOW (min)	Q/Q full			
	710	1301			0.00	0.00			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	0	300	300	PVC	0.35	44.5	57.2089	0.8093	0.9164	0.000		
	1301	1302			0.00	0.00			0.00	0.00			0.00	0.00			0.00	0.00	10.92	73.46	99.59	116.72	170.59	0	300	300	PVC	0.35	9.5	57.2089	0.8093	0.1956	0.000		
	1302	1304	0.16	0.71	0.32	0.32			0.00	0.00			0.00	0.00			0.00	0.00	11.11	72.78	98.66	115.63	168.99	23	375	375	CONC	0.27	23.0	91.1042	0.8249	0.4647	0.252		
To Deciduous Crescent, Pipe 1304 - 1309					0.32				0.00				0.00				0.00		11.58																
Deciduous Crescent																																			
			0.08	0.60	0.13	0.13			0.00	0.00			0.00	0.00			0.00	0.00																	
			0.22	0.78	0.48	0.61			0.00	0.00			0.00	0.00			0.00	0.00																	
	706	1306	0.24	0.60	0.40	1.01			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	78	375	375	PVC	0.30	69.0	96.0323	0.8695	1.3226	0.808		
To Storm Outlet 13, Pipe 1306 - 1309					1.01				0.00				0.00				0.00		11.32																
					0.00	0.00	0.04	0.72	0.08	0.08			0.00	0.00			0.00	0.00																	
			0.12	0.60	0.20	0.20			0.00	0.08			0.00	0.00			0.00	0.00																	
	706	707	0.21	0.78	0.46	0.66			0.00	0.08			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	59	375	375	PVC	0.30	65.5	96.0323	0.8695	1.2555	0.611		
To Ephemeral Crescent, Pipe 707 - 708					0.66				0.08				0.00				0.00		11.26																
					0.00	0.00	0.03	0.79	0.07	0.07			0.00	0.00			0.00	0.00																	
			0.00	0.00	0.00	0.00	0.05	0.55	0.08	0.14			0.00	0.00			0.00	0.00																	
	716	717	0.23	0.78	0.50	0.50			0.00	0.14			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	53	375	375	PVC	0.27	66.0	91.1042	0.8249	1.3335	0.583		
To Ephemeral Crescent, Pipe 717 - 718					0.50				0.14				0.00				0.00		11.33																
	716	1304	0.26	0.78	0.56	0.56			0.00	0.00			0.00	0.00			0.00	0.00	10.00	76.81	104.19	122.14	178.56	43	300	300	PVC	0.35	69.5	57.2089	0.8093	1.4312	0.757		
Contribution From Ambit Lane (LANE 2), Pipe 1302 - 1304					0.32				0.00				0.00				0.00		11.58																
	1304	1309	0.16	0.60	0.27	1.15			0.00	0.00			0.00	0.00			0.00	0.00	11.58	71.24	96.54	113.13	165.33	82	450	450	CONC	0.20	59.0	127.5033	0.8017	1.2266	0.641		
To Storm Outlet 13, Pipe 1309 - HW13					1.15				0.00				0.00				0.00		12.80																
Storm Outlet 13																																			
Contribution From Deciduous Crescent, Pipe 706 - 1306					1.01				0.00				0.00				0.00		11.32																
	1306	1309	0.12	0.78	0.26	1.27			0.00	0.00			0.00	0.00			0.00	0.00	11.32	72.07	97.69	114.48	167.31	92	450	450	CONC	0.20	11.5	127.5033	0.8017	0.2391	0.718		
Contribution From Deciduous Crescent, Pipe 1304 - 1309					1.15				0.00				0.00				0.00		12.80																
	1309	HW13			0.00	2.42			0.00	0.00			0.00	0.00			0.00	0.00	12.80	67.49	91.40	107.08	156.44	163	600	600	CONC	0.15	5.5	237.8056	0.8411	0.1090	0.686		
Borrisokane Road																																			
	800	801			0.00	0.00			0.00	0.00	2.71	0.80	6.03	6.03			0.00	0.00	10.00	76.81	104.19	122.14	178.56	736	1200	1200	CONC	0.10	68.5	1232.8868	1.0901	1.0473	0.597		
	801	802			0.00	0.00			0.00	0.00	0.54	0.77	1.16	7.18			0.00	0.00	11.05	73.00	98.97	115.99	169.52	833	1200	1200	CONC	0.10	70.0	1232.8868	1.0901	1.0702	0.676		
	802	803			0.00	0.00			0.00	0.00	0.40	0.80	0.89	8.07			0.00	0.00	12.12	69.53	94.20	110.37	161.27	891	1200	1200	CONC	0.10	70.0	1232.8868	1.0901	1.0702	0.723		
	803	804			0.00	0.00			0.00	0.00	0.62	0.80	1.38	9.45			0.00	0.00	13.19	66.40	89.91	105.32	153.86	995	1200	1200	CONC	0.10	70.0	1232.8868	1.0901	1.0702	0.807		
	804	805			0.00	0.00			0.00	0.00			0.00	9.45			0.00	0.00	14.26	63.58	86.03	100.76	147.17	952	1200	1200	CONC	0.10	70.0	1232.8868	1.0901	1.0702	0.772		
To Storm Outlet 8, Pipe 805 - 806					0.00				0.00				9.45				0.00		15.33																
Storm Outlet 8																																			
Contribution From Borrisokane Road, Pipe 804 - 805					0.00				0.00				9.45				0.00		15.33																
	805	806			0.00	0.00			0.00	0.00	0.21	0.80	0.47	9.92			0.00	0.00	15.33	61.00	82.51	96.62	141.09	958	1200	1200	CONC	0.10	27.5	1232.8868	1.0901	0.4204	0.777		
	806	HW8			0.00	0.00			0.00	0.00			0.00	9.92			0.00	0.00	15.75	60.06	81.21	95.10	138.85	943	1200	1200	CONC	0.10	8.5	1232.8868	1.0901	0.1300	0.765		

Definitions:
 Q = 2.78 AIR, where
 Q = Peak Flow in Litres per second (L/s)
 A = Areas in hectares (ha)
 I = Rainfall Intensity (mm/h)
 R = Runoff Coefficient

Notes:
 1) Ottawa Rainfall-Intensity Curve
 2) Min. Velocity = 0.80 m/s

Designed:	R.B.	PROJECT:	BARRHAVEN CONSERVANCY EAST, PHASE 3 AND 4
Checked:	W.L.	LOCATION:	City of Ottawa
Dwg. Reference:	File Ref:	Date:	Sheet No.
Stm Tributary Area Plan Dwg No. 4	20-1180	05 Apr 2024	SHEET 6 OF 6