



2019-06-27

18M-01030

Town of Oakville  
1225 Trafalgar Road  
Oakville, ON L6J 5A6

**Subject: Municipal Servicing – Functional Servicing Reliance Letter  
Ballantry (Oak Park 3) Inc. – Renaissance Phase 3  
Block 15 on 20M-1032, Oak Park  
Town of Oakville**

On behalf of our clients, Ballantry (Oak Park 3) Inc., we are pleased to submit this letter related to the municipal servicing in support of the Zoning By-Law Application for the above noted site. The proposed site is located west of Oak Park Boulevard between Oak Walk Drive and Hays Boulevard, north of an existing high-density development.

As part of the Oak Park Phase 7 works, the municipal services that service this proposed site were constructed on Hays Boulevard. In support of the proposed application we have reviewed the adequacy of the existing municipal services.

#### **Storm Sewers**

The site is located within the Uptown Core “West System” as designed by Marshall Macklin Monaghan (formerly MMM Group, now WSP) and approved by the Town in 1997. Lands within the west system do not require on-site SWM controls as both minor and major drainage is conveyed to the SWM facility on Central Park Drive. The storm sewer was designed for 0.43 ha of land and a run-off coefficient of 0.75, which is consistent with the proposed plan.

Storm drainage from the block will discharge to the existing storm connection to the existing 450mm storm sewer on Hays Boulevard, which was designed to convey drainage from this block. The sewer has been adequately sized for this purpose.

#### **Wastewater Sewers**

The site was originally designated as an High Density Residential use as designed by Marshall Macklin Monaghan (now WSP) and approved by the Region in 1997. The original use allowed for an equivalent population of 193 people with an average flow rate of 275 L/p/d, which equaled 0.614 L/s.

The currently proposed plan includes residential units and ground floor commercial/ retail.

##### Residential

185 units < 75 m<sup>2</sup> (810 ft<sup>2</sup>) @ 1.5 ppu = 278 p

41 units > 75 m<sup>2</sup> (810 ft<sup>2</sup>) @ 2.0 ppu = 80 p

Total = 358 p @ 275 L/p/d = 1.139 L/s



#### Commercial/Retail

0.1089 ha floor space @ 164 p/ha = 18 p

18 p @ 260 L/p/ha = 0.055 L/s

**Total Average Flow = 1.194 L/s**

The peaking factor for the original versus current scenario within Georgian Drive is effectively unchanged as the population upstream is approximately 7500 people. There is an increase in population of 1.6% and a peak flow increase of 0.26%.

Sanitary drainage from the block will discharge to the existing sanitary connection to the existing 300mm sanitary sewer on Hays Boulevard, which was designed to convey drainage from this block. The sewer has been adequately sized for this purpose.

The increased population of 179 people has a limited impact on the peak flow as the total population tributary to Central Park Drive is approximately 11,500 people.

The increase in flow has no noticeable effect on the sewer on Central Park Drive which was and remains between 35 - 45% of capacity. Once leg of sewer upstream from Central Park on Georgian Drive does increase in flow capacity from 68% to 70% due to the slope of the pipe. The immediate upstream and downstream pipes are all below 50% of capacity. As such the increase population has no impact on the effectiveness of the system.

#### **Watermain**

A strong network of watermains has been constructed through-out Oak Park within the Region of Halton's Zone 4. A 400mm watermain exists along the Oak Park Boulevard frontage and water service for the development will be provided from the existing water connections from the existing 300mm watermain on Oak Walk Drive. Both of these watermains are looped by a network of watermains within Oak Park, most of which are 300mm diameter in size. The building elevation is such that the water pressures will be near the maximum of the Zone 4 watermain system.

We trust that this submission is complete and to your satisfaction. Should you have questions or concerns during your review, please call me at 905-882-7316 so that we can provide any additional input that you require in a timely manner.

Yours truly,

**WSP CANADA GROUP LIMITED**

Michael E. Oldham, P.Eng.  
Senior Director, Land Development

SUBDIVISION: RIVER OAKS SUBDIVISIONS

$$I = \frac{491.7}{(tc+0.19)^{0.65}}$$



Existing  
Proposed

# TOWN OF OAKVILLE

## STORM SEWER DESIGN SHEET

SHEET NO.: 1 OF 1

PROJECT NO.: 10-88009 n= 0.013

DESIGNED BY: SMW DATE REVISED: June-21-2019

CONSULTANT : WSP Canada Group Ltd.

DRAINAGE AREA PLAN NO.: 10-88009-201B / -202B

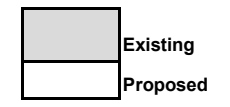
LOCATION	FROM MH	TO MH	AREA (ha)	ACCUM AREA (ha)	RUNOFF CO-EFFICIENT	AxR	ACCUM. AxR	Inlet T <sub>c</sub> minutes	INTENSITY (mm/hr)	EXPECTED FLOW (m³/s)	INVERT ELEVATIONS		FALL (m)	LENGTH (m)	GRADIENT (%)	PIPE SIZE (mm)	CAPACITY (m³/s)	VELOCITY (m/s)	TIME OF FLOW (min)	
											UPPER MH	LOWER MH								
MILLWOOD DRIVE	Ext	DICB MH1.	10.61	10.61	0.25	2.65	2.65	10.00	108.76	0.801										
MILLWOOD DRIVE	DICB. MH1	129	0.14	10.75	0.80	0.11	2.76	10.00	108.76	0.834				17.5	0.91	750	1.062	2.40	0.12	
MILLWOOD DRIVE	DICB. MH2	129	0.25	11.00	0.80	0.20	2.96	10.00	108.76	0.895				22.6	2.57	600	0.984	3.48	0.11	
MILLWOOD DRIVE	129	138	0.12	11.12	0.80	0.10	3.06	10.12	107.93	0.917				69.8	0.96	825	1.406	2.63	0.44	
MILLWOOD DRIVE	139	138	0.64	11.76	0.80	0.51	3.57	10.00	108.76	1.079				14.4	2.00	675	1.189	3.32	0.07	
MILLWOOD DRIVE	138	123	0.10	10.85	0.80	0.08	2.84	10.56	105.02	0.829				59.8	0.99	825	1.428	2.67	0.37	
OAK WALK DRIVE	127	126	0.18	0.18	0.80	0.14	0.14	10.00	108.76	0.044				46.8	1.09	375	0.183	1.66	0.47	
OAK WALK DRIVE	128	126	1.80	1.80	0.80	1.44	1.44	10.00	108.76	0.435				13.9	3.81	525	0.839	3.88	0.06	
OAK WALK DRIVE	126	123	0.64	2.62	0.80	0.51	2.10	10.47	105.61	0.615				108.5	0.57	750	0.841	1.90	0.95	
OAK WALK DRIVE	125	124	0.22	0.22	0.80	0.18	0.18	10.00	108.76	0.053				91.6	1.00	600	0.614	2.17	0.70	
OAK WALK DRIVE	140	124	0.41	0.62	0.75	0.31	0.31	10.00	108.76	0.093				10.7	1.68	525	0.557	2.58	0.07	
OAK WALK DRIVE	141	124	1.49	1.49	0.78	1.16	1.16	10.00	108.76	0.351				13.7	1.68	525	0.557	2.58	0.09	
OAK WALK DRIVE	124	123	0.99	3.32	0.75	0.74	2.39	10.70	104.14	0.691				95.1	0.59	825	1.103	2.06	0.77	
MILLWOOD DRIVE	123	TEE 122	0.12	16.91	0.80	0.10	7.42	11.47	99.63	2.054				67.5	0.46	1200	2.644	2.34	0.48	
MILLWOOD DRIVE	TEE 122	137	0.12	17.03	0.80	0.10	7.52	11.95	97.04	2.027				56.6	0.58	1200	2.969	2.63	0.36	
MILLWOOD DRIVE	137	121	0.10	17.13	0.80	0.08	7.60	12.31	95.22	2.010				23.7	1.18	1200	4.235	3.74	0.11	
POST ROAD	134	133	0.4	0.40	0.80	0.32	0.32	10.00	108.76	0.097				93.5	1.00	600	0.614	2.17	0.72	
POST ROAD	PLUG	133	2.06	2.06	0.80	1.65	1.65	10.00	108.76	0.498				13.5	1.00	675	0.841	2.35	0.10	
POST ROAD	133	132	1.64	4.10	0.80	1.31	3.28	10.72	104.05	0.948				68.1	0.69	750	0.925	2.09	0.54	
POST ROAD	132	5	1.13	5.23	0.70	0.79	4.07	11.26	100.82	1.140				70.8	0.34	975	1.307	1.75	0.67	
HAYS BOULEVARD	5	130	0.59	5.82	0.80	0.47	4.54	11.93	97.14	1.226				145.0	0.46	975	1.520	2.04	1.19	
BLOCK 3 SOUTH	DICB MH1	130	0.91	0.91	0.80	0.73	0.73	10.00	108.76	0.220				16.0	1.00	600	0.614	2.17	0.12	
HAYS BOULEVARD	130	121	0.00	6.73	0.80	0.00	5.27	13.12	91.42	1.339				34.5	0.66	975	1.821	2.44	0.24	
BLOCK 4 SOUTH	DICB MH2	118	0.97	0.97	0.75	0.73	0.73	10.00	108.76	0.220				16.0	4.00	600	1.228	4.34	0.06	
HAYS BOULEVARD	121	118	0.18	25.01	0.80	0.14	13.74	13.36	90.38	3.450				55.4	0.47	1350	3.659	2.56	0.36	
Block Connection	Plug	120	0.43	0.43	0.75	0.32	0.32	10.00	108.76	0.097				14.0	2.00	300	0.137	1.93	0.12	
HAYS BOULEVARD	120	135	0.29	0.72	0.80	0.23	0.23	10.12	107.93	0.070				91.9	1.02	450	0.288	1.81	0.85	
HAYS BOULEVARD	135	118	0.02	0.74	0.80	0.02	0.25	10.97	102.54	0.071				11.0	0.91	525	0.410	1.90	0.10	
GEORGIAN DRIVE	118	117	0.23	25.98	0.25	0.06	14.05	13.72	88.85	3.467				56.1	0.37	1500	4.300	2.43	0.38	
GEORGIAN DRIVE	117	EX. 111	1.75	27.73	0.25	0.44	14.48	14.10	87.29	3.512				67.1	0.30	1500	3.872	2.19	0.51	

THE REGIONAL MUNICIPALITY OF HALTON

SHEET No.: 1

SANITARY DESIGN SHEET

PROJECT No.: 10-88009  
 PROJECT NAME: SILWELL DEVELOPMENTS LIMITED, RIVER OAKS SUBDIVISIONS  
 CONSULTANT: WSP Canada Group Ltd.



DATE: 24-Jun-19  
 DESIGNED BY: EL  
 CHECKED BY: MEO

STREET	Manhole		Length in metres	Tributary Area (Hectares)										Tributary Population								Q Average L/s	K Average	Peaking Factor M	Q Peak Dry L/s	Total Infiltration L/s	Q Total L/s	SEWER					REMARKS
	From	To		Increment					Accumulated					Increment				Accumulated										Size (mm)	Slope (m/m)	Q (L/s)	V (m/s)		
				Res.	Comm.	Inst.	Other	Total	Res.	Comm.	Inst.	Other	Total	Res.	Comm.	Inst.	Total	Res.	Comm.	Inst.	Total										Full Flow	Act. Flow	
OAK WALK DRIVE	144A	143A	11.3	0.00	1.02	0.00	0.00	1.02	0.00	1.02	0.00	0.00	1.02	0	1458	0	1458	0	1458	0	1458	2.531	0.80	3.688	7.469	0.292	7.761	250	1.15	82.903	1.689	0.507	
OAK WALK DRIVE	143A	142A	58.1	0.44	0.00	0.00	0.00	0.44	0.44	1.02	0.00	0.00	1.46	163	0	0	163	163	1458	0	1621	3.050	0.86	3.655	9.590	0.418	10.008	300	1.01	126.338	1.787	0.536	
OAK WALK DRIVE	142A	139A	55.8	0.58	1.10	0.00	0.00	1.68	1.02	2.12	0.00	0.00	3.14	215	0	0	215	378	1458	0	1836	3.734	0.86	3.614	11.675	0.898	12.573	300	0.91	119.921	1.697	0.509	
OAK WALK DRIVE	141A	140A	73.5	0.48	1.42	0.00	0.00	1.90	0.48	1.42	0.00	0.00	1.90	178	2029	0	2207	178	2029	0	2207	4.089	0.85	3.552	12.354	0.543	12.897	300	1.16	135.395	1.915	0.785	
OAK WALK DRIVE	140A	139A	88.1	0.68	1.29	0.00	0.00	1.97	1.16	2.71	0.00	0.00	3.87	252	1843	0	2095	430	3872	0	4302	8.091	0.86	3.305	22.994	1.107	24.101	300	1.36	146.603	2.074	0.850	
MILLWOOD DRIVE	139A	138A	67.6	0.00	0.00	0.00	0.00	0.00	2.18	4.83	0.00	0.00	7.01	0	0	0	0	808	5330	0	6138	11.825	0.86	3.161	32.232	2.005	34.237	300	0.64	100.569	1.423	0.583	
MILLWOOD DRIVE	138A	137A	72.8	0.13	0.00	0.00	0.00	0.13	2.31	4.83	0.00	0.00	7.14	0	0	0	0	808	5330	0	6138	11.825	0.86	3.161	32.326	2.042	34.368	300	0.58	95.739	1.354	0.704	
Block Connection	Plug	136A	13.0	0.41	0.02	0.00	0.00	0.43	0.41	0.02	0.00	0.00	0.43	358	18	0	376	358	18	0	376	1.171	0.99	4.035	4.680	0.123	4.803	300	2.00	177.782	2.515	0.755	
HAYS BOULEVARD	136A	135A	96.1	0.31	0.00	0.00	0.00	0.31	0.72	0.02	0.00	0.00	0.74	0	0	0	0	358	18	0	376	1.171	0.99	4.035	4.698	0.212	4.910	300	1.65	161.479	2.284	0.685	
POST ROAD	149A	148A	91.0	1.89	0.00	0.00	0.31	2.20	1.89	0.00	0.00	0.31	2.20	539	0	0	539	539	18	0	539	1.747	1.00	3.957	6.913	0.629	7.542	250	1.30	88.144	1.796	0.539	
POST ROAD	148A	147A	72.5	1.56	0.00	0.00	0.36	1.92	3.45	0.00	0.00	0.67	4.12	445	0	0	445	984	18	0	1002	3.163	1.00	3.799	12.018	1.178	13.197	250	0.60	59.882	1.220	0.366	
POST ROAD	147A	5A	71.3	0.00	0.00	0.00	0.00	0.00	3.45	0.00	0.00	0.67	4.12	0	0	0	0	984	18	0	1002	3.163	1.00	3.799	12.018	1.178	13.197	250	0.46	52.433	1.068	0.320	
EXTERNAL				0.94	0.00	0.00	0.60	1.54	0.94	0.00	0.00	0.60	1.54	268	0	0	268	268	0	0	268												
BLOCK 3 SOUTH	100A	145A	11.5	0.89	0.00	0.00	0.00	0.89	0.89	0.00	0.00	0.00	0.89	493	0	0	493	493	0	0	493	1.569	1.00	3.977	6.241	0.255	6.496	250	2.00	109.330	2.227	2.316	
HAYS BOULEVARD	145A	137A	82.5	0.37	0.00	0.00	0.00	0.37	1.26	0.00	0.00	0.00	1.26	0	0	0	0	493	0	0	493	1.569	1.00	3.977	6.241	0.360	6.601	300	2.00	177.782	2.515	1.031	
HAYS BOULEVARD	137A	135A	66.3	0.14	0.00	0.00	0.00	0.14	3.71	4.83	0.00	0.00	8.54	0	0	0	0	1301	5330	0	6631	13.394	0.89	3.129	37.173	2.442	39.616	300	0.50	88.891	1.258	1.308	
BLOCK 4 SOUTH	101A	135A	13.5	0.91	0.00	0.00	0.00	0.91	0.91	0.00	0.00	0.00	0.91	495	0	0	495	495	0	0	495	1.576	1.00	3.976	6.265	0.260	6.525	250	2.00	109.330	2.227	2.316	
GEORGIAN DRIVE	135A	134A	59.7	0.11	0.00	0.00	1.47	1.58	5.45	4.85	0.00	1.47	11.77	0	0	0	0	2154	5348	0	7502	16.141	0.91	3.077	44.994	3.366	48.361	300	0.30	68.855	0.974	1.013	
GEORGIAN DRIVE	134A	111A	76.4	0.15	0.00	0.00	0.00	0.15	5.60	4.85	0.00	1.47	11.92	0	0	0	0	2154	5348	0	7502	16.141	0.91	3.077	45.062	3.409	48.471	300	0.76	109.592	1.550	1.612	
Central Park Drive (Phase I)	115A	114A	62.4	0.15	0.00	0.00	0.14	0.29	0.15	11.26	1.31	5.38	18.10	56			56	56	2725	926	3707	6.517	0.80	3.363	17.583	5.177	22.760	300	0.50	88.891	1.258	1.044	
Central Park Drive (Phase I)	114A	111A	78.1	0.13	0.00	0.00	0.15	0.28	0.28	11.26	1.31	5.53	18.38	48			48	104	2725	926	3755	6.670	0.80	3.358	18.014	5.257	23.270	300	0.46	85.261	1.206	1.013	
GEORGIAN DRIVE (Phase I)	196A	113A	44.5	0.64	0.00	0.00	0.14	0.78	0.64	0.00	0.00	0.14	0.78	239			239	239	0	0	239	0.761	1.00	4.119	3.133	0.223	3.356	300	1.00	125.711	1.778	0.729	
GEORGIAN DRIVE (Phase I)	113A	112A	51.9	0.10	0.00	0.00	0.24	0.34	0.74	0.00	0.00	0.38	1.12	82			82	321	0	0	321	1.022	1.00	4.066	4.154	0.320	4.474	300	0.50	88.891	1.258	0.604	
GEORGIAN DRIVE (Phase I)	112A	111A	31.2	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.38	1.12	0			0	321	0	0	321	1.022	1.00	4.066	4.154	0.320	4.474	300	0.50	88.891	1.258	0.604	
Central Park Drive	111A	110A	25.9	0.00	0.00	0.00	0.05	0.05	6.62	16.11	1.31	7.43	31.47	19	0	0	19	2598	8073	926	11597	23.892	0.86	2.891	59.052	9.000	68.053	375	0.50	161.170	1.459	1.386	
Central Park Drive (Phase I)	111A	110A	25.9				0.05	0.05	6.62	16.11	1.31	7.48	31.52	19			19	2617	8073	926	11616	23.953	0.83	2.890	57.579	9.015	66.593	375	0.69	189.332	1.714	1.47	
Central Park Drive (Phase I)	110A	190	30.8				0.00	0.00	6.62	16.11	1.31	7.48	31.52	0			0	2617	8073	926	11616	23.953	0.83	2.890	57.579	9.015	66.593	375	0.69	189.332	1.714	1.47	
Central Park Drive (Phase I)	190A	109A	31.2	0.10			0.10	0.20	6.72	16.11	1.31	7.58	31.72	37			37	2654	8073	926	11653	24.071	0.83	2.888	57.895	9.072	66.967	375	0.50	161.170	1.459	1.33	
Central Park Drive (Phase I)	109A	108A	64.9				0.14	0.14	6.72	16.11	1.31	7.72	31.86				0	2654	8073	926	11653	24.071	0.83	2.888	57.834	9.112	66.946	375	0.43	149.463	1.353	1.27	
Central Park Drive (Phase I)	108A	103A	21.9				0.05	0.05	6.72	16.11	1.31	7.77	31.91				0	2654	8073	926	11653	24.071	0.83	2.888	57.834	9.126	66.960	375	0.60	176.553	1.599	1.41	