



Date: May 6, 2019

Hand Delivered

Attention: Mr. Frank Palka
Manager of Approvals
Engineering Department

City of Barrie
70 Collier Street
Barrie, ON, L4M 4T5

Dear Mr. Palka:

Subject: Application for Draft Plan Redline Revision

BEMP Holdings 2 LP – BEMP II Subdivision, Hewitt's Secondary Plan
Stormwater Management and Servicing Compliance Brief
Our File: LAW-06129(11)

We are pleased to provide the following stormwater management and servicing compliance brief in support of the BEMP Holdings 2 LP's proposed BEMP II Subdivision Application for Redline Revision to the approved Draft Plan. The Redline Revision proposes an increase in the subdivision's residential unit density from Draft Plan Approval of 288 singles, 32 townhomes and 196 mixed use units (total of 1,325 people) to 304 singles, 47 townhomes and 164-493 mixed use units (total of 1,336 to 1,886 people) and the mixed use area (2.87 hectares to 4.11 hectares).

The proposed development is located within the Hewitt's Secondary Plan Area, bounded by Maplevue Drive East to the north, Seline Crescent (part of the LJ Maplevue Subdivision) to the west and the proposed Lockmaple Subdivision to the south and east. A Subwatershed Impact Study (SIS), dated November 3rd, 2017, was completed in support of the Hewitt's Secondary Plan Area, and subsequently approved by the City of Barrie and Lake Simcoe Region Conservation Authority. The proposed BEMP II Subdivision shares services with the Lockmaple Subdivision, and as such, the Conformity Plan/Functional Servicing Report submission for the Lockmaple Subdivision (submitted March 2017 by The Jones Consulting Group Ltd.) with the SIS has been used as a basis for the current analysis.

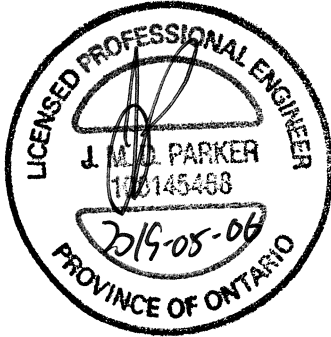
The proposed stormwater management plan and design established for the Lockmaple Subdivision, utilizing the SIS as the basis, identifies the proposed BEMP II Subdivision as draining to the proposed Stormwater Management Facility [SWMF] 4A and associated Low Impact Development(s) [LID]. We have reviewed the impact of a higher imperviousness on the proposed SWMF 4A and LID design(s), and note that the proposed facility and LID(s) can accommodate the proposed increase in density for the BEMP II Subdivision.

Furthermore, we have reviewed the impact of the proposed increase in density on the sanitary and water servicing infrastructure and note that the proposed increase in density and mixed use (commercial) area for the BEMP II Subdivision can be accommodated through the existing and proposed municipal infrastructure identified in the Lockmaple Subdivision and SIS servicing scenarios. Refer to the enclosed design Tables 1 through 6 for the Draft Plan Redline Revision estimated population and corresponding sanitary effluent projections for increased residential density and commercial area.

Please contact the undersigned if you have any questions of concerns.

Respectfully submitted,

The Jones Consulting Group Ltd.



Jim Parker, P.Eng
Project Engineer



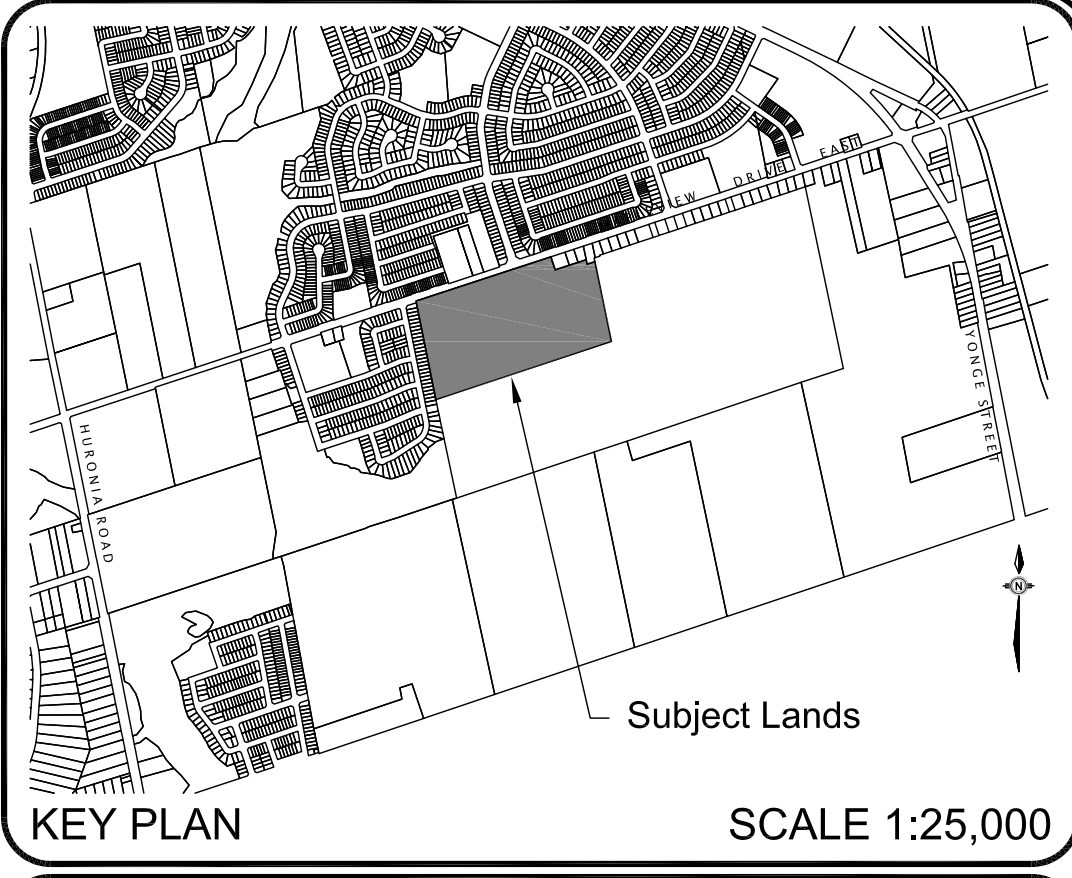
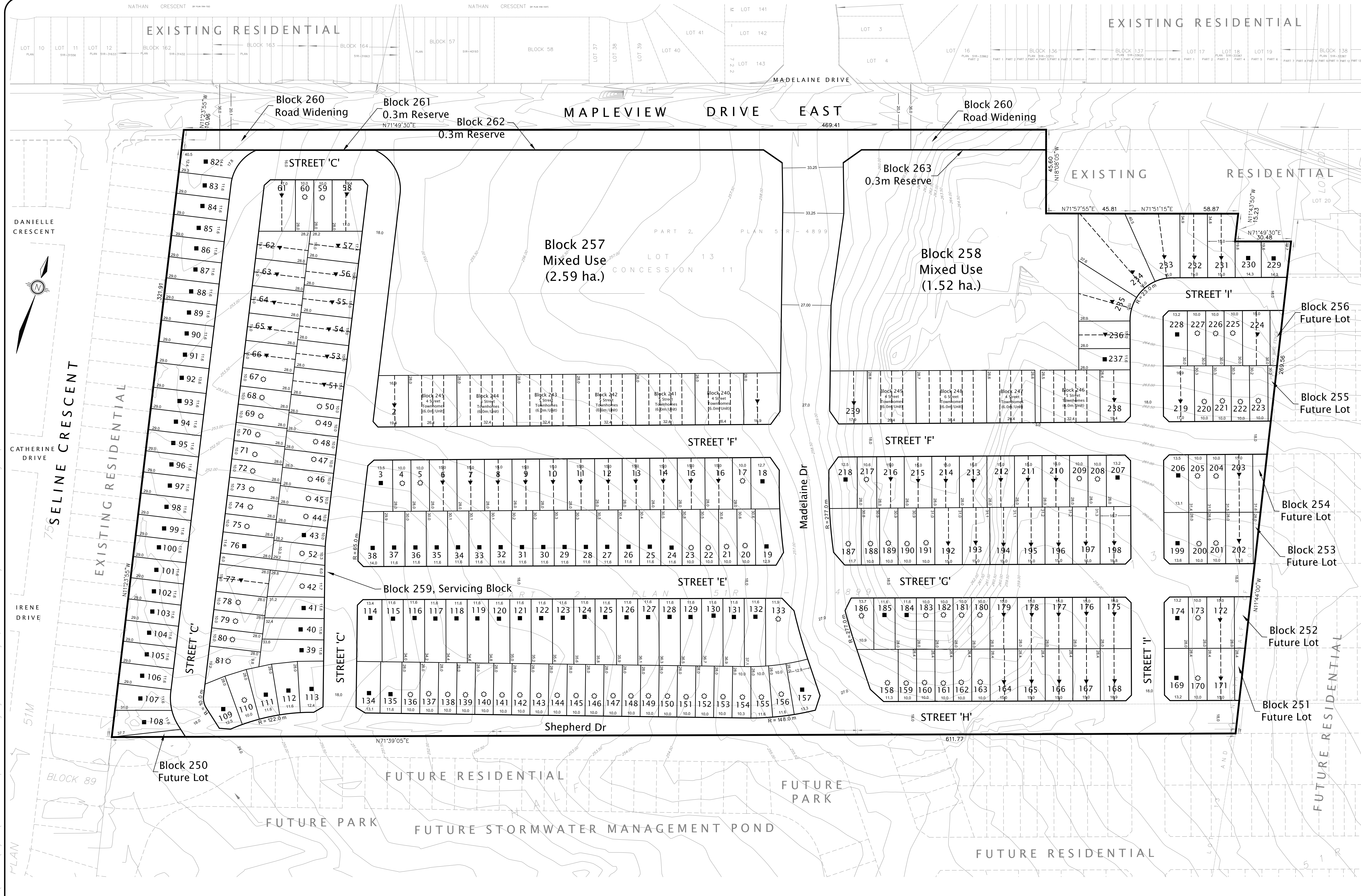
Duncan Richardson, P.Eng
Partner, Manager of Engineering

c. Joel Lawton, Bryan Richardson, Alfio Manarin, Eric Lawton, BEMP Holdings 2 LP

Enclosures:

- Revised Draft Plan of Subdivision, BEMP II Subdivision, prepared by The Jones Consulting Group Ltd., dated April 30, 2019;
- Redline Revision to Approved Draft Plan of Subdivision, BEMP II Subdivision, prepared by The Jones Consulting Group Ltd., dated April 29, 2019;
- Draft Plan of Subdivision, Lockmaple Subdivision, prepared by The Jones Consulting Group Ltd., dated March 26, 2019, and
- Design Tables 1 to 6, prepared by The Jones Consulting Group Ltd., dated May, 2019.

G:\Planning Drawings\LAW-06129\Bemp-II-19-05-06.dwg Layout:DP Plotted May 06, 2019 @ 10:43:00 by mchardeta The Jones Consulting Group Ltd.



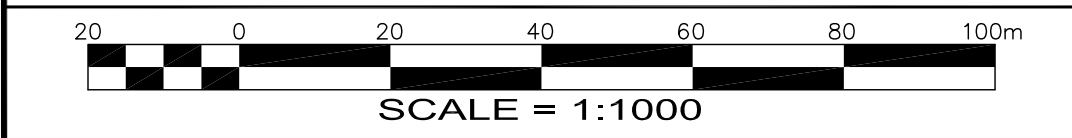
Revised Draft Plan of Subdivision to Draft Approved Plan of Subdivision
Part of Lot 13, Concession 11
Former Township of Innisfil, Now in the City of Barrie

2019
OWNER'S CERTIFICATE
I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

DATE _____ BEMP Holdings 2 Inc.
DATE _____ Honeyfield Bemp 2 Limited
SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

APRIL 30, 2019
DATE _____ DINO ASTRI, O.L.S.
ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT
a) SHOWN ON DRAFT PLAN
b) SHOWN ON DRAFT PLAN
c) SHOWN ON KEY PLAN
d) RESIDENTIAL & MIXED USE
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT PLAN
h) MUNICIPAL PIPED WATER TO BE PROVIDED
i) SANDY/CLAY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) SHOWN ON DRAFT PLAN

STATISTICS			
RESIDENTIAL LOT BREAKDOWN			
13.7 m Singles	n/a	28 units	
11.6 m Singles	88 units	n/a	
11.5 m Singles	n/a	140 units	
10.0 m Singles	86 units	n/a	
10.4 m Singles	n/a	80 units	
9.0 m Singles	n/a	40 units	
15.0 m Semi Detached (7.5 m/unit)	130 units	n/a	
(LOTS 1 - 239)			
SUB TOTAL	8.86 ha. 304 units	288 units	
Street Townhomes (6.0m)	0.86 ha. 47 units	32 units	
Future Lots & Blocks (BLOCKS 250 - 256)	0.09 ha. 3 units		
Mixed Use (40 - 120 uph) (BLOCKS 257 & 258)	4.11 ha. 164 - 493 units	196 units	
Servicing Block (BLOCK 259)	0.03 ha.		
Widening & Reserve (BLOCKS 260 - 263)	0.52 ha.		
Roads (MAJOR COLLECTOR, MADELAINE DRIVE) (MINOR COLLECTOR, SHEPHERD DRIVE) (LOCAL STREETS 'C' - 'I')	4.98 ha.		
TOTAL	19.45 ha. 518 - 847 units	516 units	



BEMP II
REVISED DRAFT PLAN OF SUBDIVISION TO DRAFT APPROVED PLAN OF SUBDIVISION

Date Issued: MAY 6, 2019
Checked By: RD
Project No.: LAW-06129
Drawn By: m.c.r.
Drawing Name: LAW-06129-Bemp-II-19-05-06.dwg



BEMP II
CITY OF BARRIE



**Redline Revised Plan to
Draft Approved Plan of Subdivision**
Part of Lot 13, Concession 11
Former Township of Innisfil, Now in the
City of Barrie
2018

OWNER'S CERTIFICATE

I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

DATE	BEMP Holdings 2 Inc.
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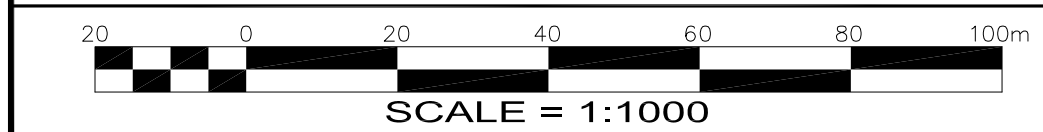
DATE _____ Honeyfield Bemp 2 Limited

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE
SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS
ARE ACCURATELY AND CORRECTLY SHOWN.

DATE _____ DINO ASTRI, O.L.S.
ONTARIO LAND SURVEYORS

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT	
a) SHOWN ON DRAFT PLAN	g) SHOWN ON DRAFT PLAN
b) SHOWN ON DRAFT PLAN	h) MUNICIPAL PIPED WATER TO BE PROVIDED
c) SHOWN ON KEY PLAN	i) SANDY/CLAY LOAM
d) RESIDENTIAL & MIXED USE	j) SHOWN ON DRAFT PLAN
e) SHOWN ON DRAFT PLAN	k) ALL MUNICIPAL SERVICES TO BE PROVIDED
f) SHOWN ON DRAFT PLAN	l) SHOWN ON DRAFT PLAN

STATISTICS		DA RR 2 (April 29, 2019)	Drift Approved Plan (January 25, 2019)
RESIDENTIAL LOT BREAKDOWN			
★ 13.7 m Singles	n/a	28 units	
11.6 m Singles ■	88 units	n/a	
■ 11.5 m Singles	n/a	140 units	
10.0 m Singles ◊	86 units	n/a	
◊ 10.4 m Singles	n/a	80 units	
▼ 9.0 m Singles	n/a	40 units	
15.0 m Semi Detached (7.5 m/unit) ▼	130 units	n/a	
(LOTS 1 - 288) (LOTS 1 - 230)			
SUB TOTAL	8.86 ha. 304 units	10.04 ha. 288 units	
STREET TOWNHOMES (6.0m) (BLOCKS 290 - 299) (BLOCKS 240 - 249)	0.86 ha. 47 units	0.62 ha. 32 units	
FUTURE LOTS & BLOCKS (BLOCKS 296 - 303) (BLOCKS 250 - 259)	0.09 ha. 3 units	0.12 ha.	
MIXED USE (40 - 120 uph) (BLOCKS 294 & 295) (BLOCKS 252 & 258)	4.11 ha. 164 - 493 units	2.87 ha. 196 units	
SERVICING BLOCK (BLOCK 304) (BLOCK 259)	0.03 ha.	0.04 ha.	
WIDENING & RESERVE (BLOCKS 305 & 306) (BLOCKS 260 - 263)	0.52 ha.	0.66 ha.	
ROADS (MAJOR COLLECTOR, STREET "A") (MADELAINE DRIVE) (MINOR COLLECTOR, STREET "B") (SHEPHERD DRIVE) (LOCAL STREETS "C" - "T")	4.98 ha.	5.11 ha.	
TOTAL	19.45 ha. 518 - 847 units	19.45 ha. 516 units	



BEMP II

DRAFT PLAN OF SUBDIVISION



Date Issued:	JAN. 25/2017
Checked By:	RD
Project No.:	LAW-06129
Drawn By:	m.c.r.
Drawing Name:	

LAW-06129-Bemp-II-DA-RR-2-19-04-29.dwg

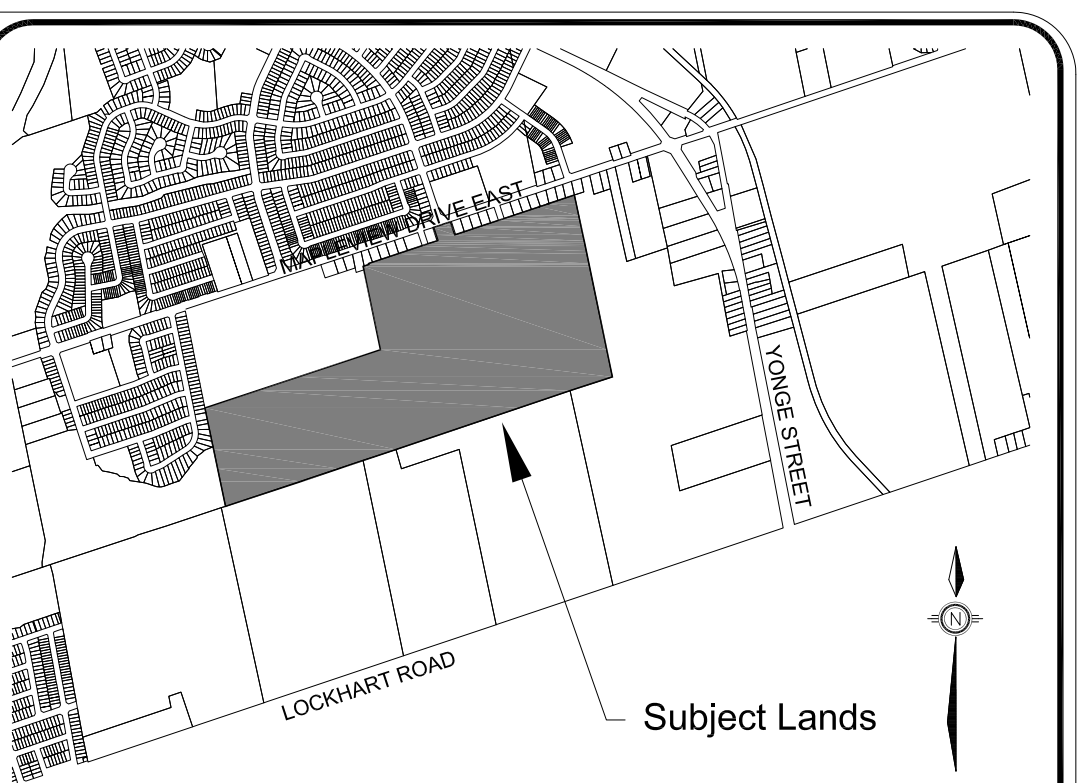
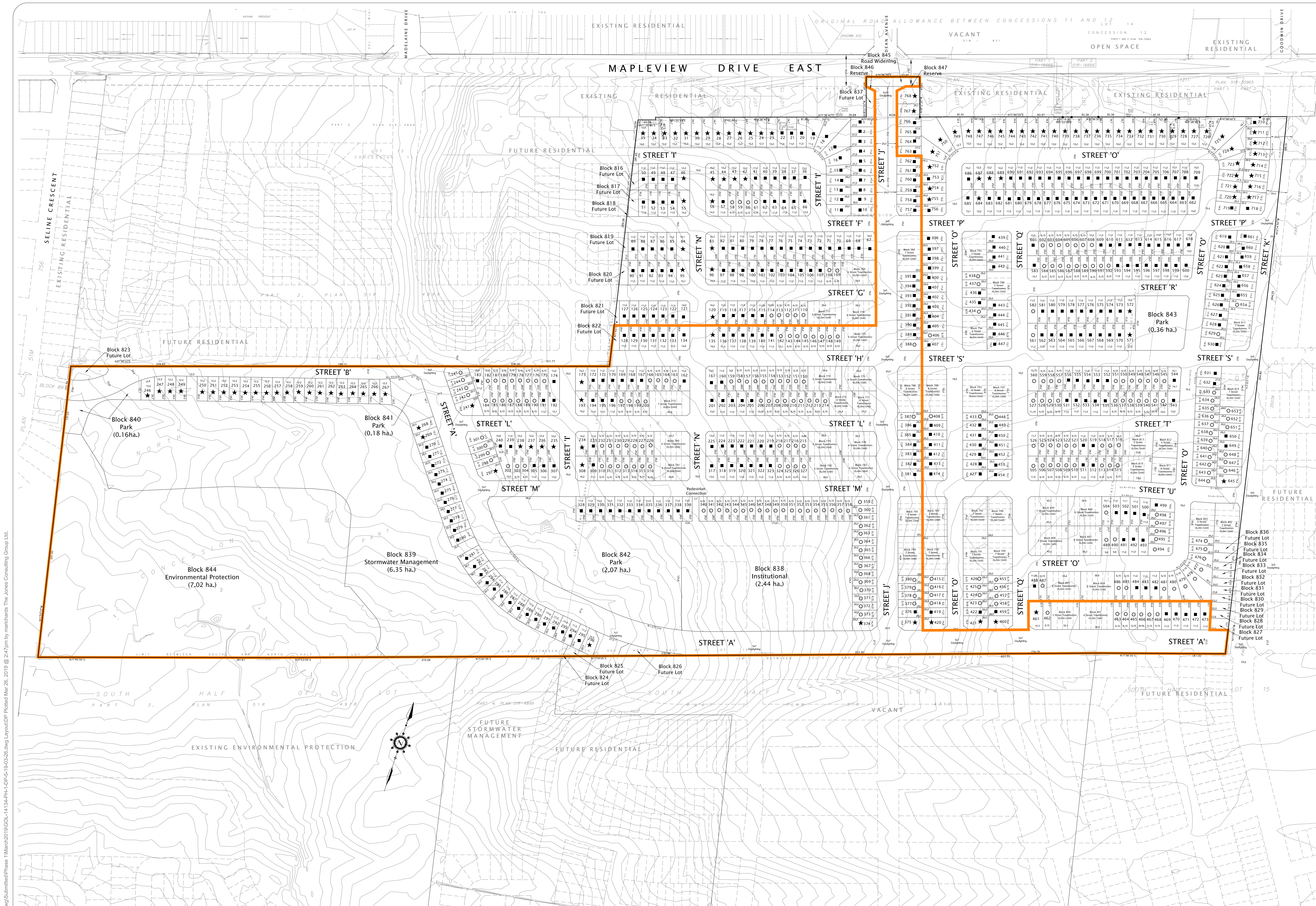


SCHEDULE OF REVISIONS		
DATE	DESCRIPTION	DRAWN
OCT. 2/18	ADJUSTMENT TO PLAN FOR GRADING	m.c.r.
APRIL 25/19	OVERALL CHANGES / REDLINE OVERLAY	m.c.r.
APRIL 29/19	MINOR REVISION DUE TO ENG COMMENTS	m.c.r.

BEMP II

CITY OF BARRIE

- Phase 1 = 129 Units April 29, 2019 Plan



KEY PLAN SCALE 1:25,000

Draft Plan of Subdivision

Part of Lot 13, and Part of Lot 14, Concession 11
Former Township of Innisfil, Now in the
City of Barrie
2019

OWNER'S CERTIFICATE
I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

DATE LOCKMAPLE INNISFIL INVESTMENTS LTD.

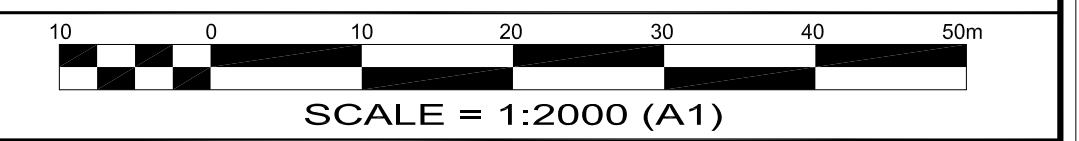
SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE JD BARNES
ONTARIO LAND SURVEYORS

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT
a) SHOWN ON DRAFT PLAN
b) SHOWN ON DRAFT PLAN
c) SHOWN ON KEY PLAN
d) RESIDENTIAL, INSTITUTIONAL
SWM, EP, OPEN SPACE
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT PLAN
h) MUNICIPAL PIPED WATER TO BE PROVIDED
i) CLAY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) SHOWN ON DRAFT PLAN

DRAFT PLAN SUBMISSION		
	REVISED DRAFT PLAN MAY 2018	DP3 JAN18 DRAFT PLAN NOV. 2017
STATISTICS		
RESIDENTIAL LOT BREAKDOWN		
★12.2m SINGLES	118 units	110 units
★11.0m SINGLES	393 units	393 units
★9.15m SINGLES	257 units	269 units
(LOTS 1 - 768)		
SUB TOTAL	24.63 ha. 768 units	772 units
STREET TOWNHOMES (6.0m)	5.54 ha. 294 units	291 units
(BLOCKS 769 - 815)		
FUTURE LOTS	0.54 ha. 10 units	10 units
(BLOCKS 816 - 837)		
INSTITUTIONAL	2.44 ha.	
(BLOCK 838)		
STORMWATER MANAGEMENT POND	6.35 ha.	
(BLOCKS 839)		
PARKS	2.77 ha.	
(BLOCKS 840 - 843)		
ENVIRONMENTAL PROTECTION	7.02 ha.	
(BLOCKS 844)		
ROAD WIDENING & RESERVES	0.07 ha.	
(BLOCKS 845 - 847)		
ROADS	16.14 ha.	
(MAJOR COLLECTOR, STREET 'A') (MINOR COLLECTORS, STREETS 'B', 'J', & 'K') (LOCAL, STREETS 'F', 'I', & 'O' - 'U')		
TOTAL	65.49 ha. 1072 units	1073 units

Phase 1 = 396 Units



DRAFT PLAN OF SUBDIVISION



Date Issued: MARCH 26, 2019
Checked By: RD
Project No.: GOL-14134
Drawn By: m.c.r.
Drawing Name:
GOL-14134-PH-1-DP-5-19-03-26.dwg



JONES
CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Maplevue Drive East, Unit 1, Barrie, Ontario, L4N 0W5
Phone: 705-734-2538 Fax: 705-734-1056
www.jonesconsulting.com

Table 1. Conformity Plan Land Use Statistics

Plan Reference	Property Owner (Development Name)	Residential Lot Breakdown	Area (ha)	Units	Design Population
A	BEMP Holdings 2 LP	Single Family Residential ¹ .		283.00	885.79
	(BEMP II)	Medium Density - Street Townhomes		32.00	74.88
		High Density - Mixed Use		196.00	327.32
		Commercial	2.87		
Sub-Total			19.44	511.00	
B	BEMP Holdings 1 Inc.	Single Family Residential		266.00	832.58
	(BEMP I)	Medium Density - Street Townhomes		37.00	86.58
		High Density - Mixed Use		72.00	120.24
			36.59	375.00	
C	Lockmaple Innisfil Investments Ltd.	Single Family Residential ² .		763.00	2,388.19
	(Lockmaple)	Medium Density - Street Townhomes		337.50	789.75
		High Density - Mixed Use			0.00
			65.56	1,100.50	
D	Lockhart Innisfil Investments (II) Ltd.	Single Family Residential		92.00	287.96
	(Lockmaple)	Medium Density - Street Townhomes / Back-to-back Townhomes		54.00	126.36
		High Density - Mixed Use		107.00	178.69
			51.85	253.00	
E	Rainsong Land Development Ltd.	Single Family Residential		600.50	1,879.57
		Medium Density - Street Townhomes / Back-to-back Townhomes		154.00	360.36
					0.00
			50.15	754.50	
F	Van Der Hayden - Lockhart	Single Family Residential		52.50	164.33
		Medium Density - Street Townhomes / Back-to-back Townhomes			0.00
		High Density - Mixed Use			0.00
			3.18	52.50	
G	Sobey's Capital Incorporated	Single Family Residential			0.00
		Medium Density - Street Townhomes / Back-to-back Townhomes			0.00
		High Density - Mixed Use			0.00
			8.26	TBD	
-	Other	Single Family Residential			0.00
		Medium Density - Street Townhomes / Back-to-back Townhomes			0.00
		High Density - Mixed Use			0.00
				TBD	
Total			237.90	3,046.50	

Notes:

1 Table Reference: LAW-06129 FSR, 2017, Table 1.1

Table 2. BEMP II Development Draft Plan of Subdivision Land Use Statistics

Residential Lot Breakdown	Area (ha)	Units
11.6m (or greater) Singles		88
10.0m Singles		86
15.0m Semi-Detached		130
Sub-Total	8.86	304
6.0m Street Townhomes	0.86	47
Mixed Use	4.11	164-493
Future Lots	0.09	3
Servicing Block	0.03	
Widening and Reserve	0.52	
Roads	4.98	
Total	19.45	518-847

Notes:

- ¹ Table Reference: LAW-06129 FSR, 2017, Table 1.2 - updated May 2019 based on the Revised Draft Plan of Subdivision, dated April 30, 2019.

Table 3. Lockmaple Development Draft Plan of Subdivision Land Use Statistics

Residential Lot Breakdown	Area (ha)	Units
12.2m Singles		118
11.0m Singles		393
9.5m Singles		257
Sub-Total	24.63	768
6.0m Street Townhomes	5.54	294
Future Lots	0.54	10
Institutional	2.44	
Stormwater Management Pond	6.35	
Parks	2.77	
Environmental Protection	7.02	
Road Widening	0.07	
Roads	16.14	
Total	65.50	1,072

Notes:

- 1 Table Reference: LAW-06129 FSR, 2017, Table 1.3 - updated May 2019 based on the Draft Plan of Subdivision, dated March 26, 2019.

Table 4. Sanitary Design Criteria

Development Type	Design Population	Sanitary Demand	City Reference
Single Family Residential	3.13 persons/unit	225 L/day/person peaking factor of 2 - 4	3.3.1.1
Medium Density - Street Townhomes	2.34 persons/unit		
High Density - Mixed Use	1.67 persons/unit		
Commercial / Institutional		28 cu.m/day/ha peaking factor of 2	3.3.2.1
Commercial - Equivalent Population ¹	50 persons/ha		Region of Peel
Extraneous Flows		0.1 L/sec/ha of gross area	3.3.4

Notes:

¹ Region of Peel Public Works Design, Specifications & Procedures, Linear Infrastructure, Sanitary Sewer Design Criteria, dated July 2009. Section 2.1 Population Equivalents based on Land Use.

The 50 persons per hectare is a conservative estimate. Based on 28 cu.m/ha, the actual equivalent population is 31.1 persons per hectare using the Peak Domestic Sewage Flow equation ($Q_p = P \times q \times M / 86.4$ where, Q_p =peak residential sewage flow (28cu.m/ha=0.32L/s), P =Design population in thousands, q =average domestic flow per capita (225L/s), M =Peaking Factor (4).

² Table Reference: LAW-06129 FSR, 2017, Table 4.1 - updated May 2019

Table 2. BEMP II Development Draft Plan of Subdivision Land Use Statistics

Table 5. Design Population (Latest Draft Plan of Subdivisions and Conformity Plan)

Conformity Plan Reference	Property Owner (Development Name)	Residential Lot Breakdown	Area (ha)	Units	Design Population
A	BEMP Holdings 2 LP	Single Family Residential ¹ .		307.00	960.9
	(BEMP II)	Medium Density - Street Townhomes		47.00	110.0
		High Density - Mixed Use ² .		493.00	823.3
		Commercial - Equivalent Population ³ .	4.11		205.5
Sub-Total			19.45	847.00	2,099.7
C	Lockmaple Innisfil Investments Ltd.	Single Family Residential ⁴ .		778.00	2,435.1
	(Lockmaple)	Medium Density - Street Townhomes		294.00	688.0
		High Density - Mixed Use			0.0
Sub-Total			65.50	1,072.00	3,123.1
D	Lockhart Innisfil Investments (II) Ltd.	Single Family Residential		288.70	903.6
	(Lockhart)	Medium Density - Street Townhomes / Back-to-back Townhomes			0.0
		High Density - Mixed Use			0.0
Sub-Total			19.71	288.70	903.6
E	Rainsong Land Development Ltd.	Single Family Residential		600.50	1,879.6
		Medium Density - Street Townhomes / Back-to-back Townhomes		154.00	360.4
		High Density - Mixed Use			0.0
Sub-Total			36.15	754.50	2,239.9
-	Other - Irving	Single Family Residential		111.60	349.3
		Medium Density - Street Townhomes / Back-to-back Townhomes		892.80	2,089.2
					0.0
Sub-Total			27.90	1,004.40	2,438.5
Total			168.71	3,966.60	10,804.8

Notes:

¹ BEMP II Single Family Residential includes three (3) Future Blocks. Statistics have been updated based on the Revised Draft Plan of Subdivision, dated April 25, 2019.

² The number of units listed for BEMP II Subdivision's Mixed Use Block is a range of 164-493. For the purpose of this calculation, the greater end of the range has been used.

³ Region of Peel Public Works Design, Specifications & Procedures, Linear Infrastructure, Sanitary Sewer Design Criteria, dated July 2009. Section 2.1 Population Equivalents based on Land Use. See Table 4.

⁴ Lockmaple Single Family Residential includes ten (10) Future Blocks. Statistics have been updated based on the Draft Plan of Subdivision, dated March 26, 2019.

⁵ Table Reference: LAW-06129 FSR, 2017, Table 4.2 - updated May 2019

Table 6. Projected Sanitary Flows

Conformity Plan Reference	Property Owner (Development Name)	Area (ha)	Design Pop.	M	Res. Flow (L/s)	Com. / Inst. Flow (L/s)	Extran. Flow (L/s)	Total Peak Flow (L/s)
A	BEMP Holdings 2 LP (BEMP II)	19.45	2,099.7	3.6	19.52		1.95	21.46
	Commercial ¹							
C	Lockmaple Innisfil Investments Ltd. (Lockmaple)	63.06	3,123.1	3.4	27.88		6.31	34.18
	Institutional	2.44		2.0		1.58	0.24	1.83
D	Lockhart Innisfil Investments (II) Ltd. (Lockhart)	19.71	903.6	3.8	9.01		1.97	10.98
E	Rainsong Land Development Ltd.	33.72	2,239.9	3.5	20.69		3.37	24.06
	Commercial	2.43		2.0		1.58	0.24	1.82
-	Other - Irving	27.90	2,438.5	3.5	22.34		2.79	25.13
Total		168.71	10,804.8		99.43	3.16	16.87	119.45

Table 2. BEMP II Development Draft Plan of Subdivision Land Use Statistics

Notes:

- 1 The estimated commercial sanitary effluent has been included in the residential flows. Refer to Table 4 for additional details.
- 2 Table Reference: LAW-06129 FSR, 2017, Table 4.3 - updated May 2019
- 3 The SIS Sanitary Sewer Plan (1 of 3) (dated September 7, 2016) shows that the BEMP II lands are part of a 139.2 hectare central catchment connecting to Patrick Drive at Seline Crescent. Based on the estimated flow rates, the total combined discharge flow for the land west of Yonge Street is **184 L/s**.