Appendix D

Wastewater Model

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J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - September 2023 (Existing Conditions)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/cap/d
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/cap/d
Infilt. Allowance:	0.28	L/ha/s

Prepared by: M.L.
Checked by: B.P.
Downstream Runs

| STREET | MANHOLE NUMBER FROM | MANHOLE NUMBER TO | FROM MH - TO MH | EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units) | Multiple Dwellings (units) | Apart (units) | Vacant | Popul. (peop.) | Metered Residential (L/s) | Cumm. Popul. (peop.) | Cumm. Metered Residential (L/s) | Peaking Factor | Avg. Flow (l/s) | FUTURE RESIDENTIAL: Popul. (peop.) | Cumm. Popul. (peop.) | Peaking Factor | Avg. Flow | Peak Res. Flow (l/s) | SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | FUTURE ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | Cumm. Peak ICI Flow (l/s) | EXISTING EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | FUTURE EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | Pump Flow (l/s) | Total Peak Des. Flow (l/s) | Pump Correction Factor (l/s) | Total Peak Des. Flow with pump (l/s) | Q_d/Q_{full} % | Residual Capacity (l/s) | SEWER DATA: DIA. (mm) | Actual Dia. (mm) | DESIGN SLOPE (%) | ACTUAL SLOPE (%) | CAPAC. (l/s) | VEL. (m/s) | LENGTH (m) | Upstream Obvert (m) | Upstream Invert (m) | Downstream Obvert (m) | | Comments |
|---|---|---

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Prepared by: M.L.
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Downstream Runs

SANITARY CONTRIBUTION

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Cumm. Popul. (peop.)	Cumm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Cumm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	EXISTING ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
ROGER	855	850	855-850		77.33			157.81		157.8	4.00	0.64		0.0	4.00	0.00	2.56						1.50	0.000					1.50	0.000	1.500	0.000	1.03	0.288	0.288		0.000	0.000		2.845		2.845	12.92	19.174
	850	845	850-845							157.8	4.00	0.64		0.0	4.00	0.00	2.56						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	13.07	18.925
	845	840	845-840							157.8	4.00	0.64		0.0	4.00	0.00	2.56						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	13.59	18.085
	840	835	840-835							157.8	4.00	0.64		0.0	4.00	0.00	2.56						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	12.82	19.354
	835	830	835-830							157.8	4.00	0.64		0.0	4.00	0.00	2.56						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	11.39	22.126
RICHER	239	241	239-241							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.140		0.369			1.50	0.554					1.50	0.554	1.500	0.000	1.14	0.319	0.319		0.000	0.000		0.873		0.873	2.78	30.584
RICHER	241	870	241-870							0.0	4.00	0.00		0.0	4.00	0.00	0.00						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.000	0.319		0.000	0.000		0.873		0.873	2.49	34.269
RICHER	870	865	870-865							0.0	4.00	0.00		0.0	4.00	0.00	0.00	2.061		0.668			1.50	1.002					1.50	1.002	1.500	0.000	1.556	0.577	0.896		0.000	0.000		2.452		2.452	5.99	38.460
	865	860	865-860							0.0	4.00	0.00		0.0	4.00	0.00	0.00						1.50	0.000					1.50	0.000	1.500	0.000	1.556	0.00	0.000	0.896		0.000	0.000		2.452		2.452	6.88	33.200
	860	830	860-830							0.0	4.00	0.00		0.0	4.00	0.00	0.00						1.50	0.000					1.50	0.000	1.500	0.000	1.556	0.00	0.000	0.896		0.000	0.000		2.452		2.452	7.34	30.975
RICHER	830	815	830-815							157.8	4.00	0.64		0.0	4.00	0.00	2.56						1.50	0.000					1.50	0.000	1.500	0.000	1.556	0.00	0.000	1.184		0.000	0.000		5.297		5.297	15.94	27.930
LAFLECHE	267	246	267-246							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.716		0.232			1.50	0.348					1.50	0.348	1.500	0.000	0.348	0.72	0.200	0.200		0.000	0.000		0.549		0.549	1.18	46.111
LAFLECHE	246	825	246-825							0.0	4.00	0.00		0.0	4.00	0.00	0.00						1.50	0.000					1.50	0.000	1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.95	57.468
LAFLECHE	825	820	825-820							0.0	4.00	0.00		0.0	4.00	0.00	0.00						1.50	0.000					1.50	0.000	1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	1.57	34.431
	820	819	820-819							0.0	4.00	0.00		0.0	4.00	0.00	0.00						1.50	0.000					1.50	0.000	1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.76	71.244
	247	248	247-248			12.05		17.15		17.2	4.00	0.07		0.0	4.00	0.00	0.28						1.50	0.000					1.50	0.000	1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.28	26.795
	249	248	249-248			12.05		17.15		17.2	4.00	0.07		0.0	4.00	0.00	0.28						1.50	0.000					1.50	0.000	1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.34	25.583
	248	819	248-819							34.3	4.00	0.14		0.0	4.00	0.00	0.56						1.50	0.000					1.50	0.000	1.500	0.000	0.000	0.00	0.000	0.140		0.000	0.000		0.696		0.696	2.35	28.872
	819	815	819-815							34.3	4.00	0.14		0.0	4.00	0.00	0.56						1.50	0.000					1.50	0.000	1.500	0.000	0.348	0.00	0.000	0.341		0.000	0.000		1.245		1.245	4.27	27.909
ST. MARIE	900	890	900-890	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38						1.50	0.000					1.50	0.000	1.500	0.000	0.96	0.268	0.268		0.000	0.000		0.650		0.650	3.07	20.506
ST. MARIE	895	890	895-890	1.13				2.95		2.9	4.00	0.01		0.0	4.00	0.00	0.05						1.50	0.000					1.50	0.000	1.500	0.000	0.000	0.15	0.042	0.042		0.000	0.000		0.090		0.090	0.29	31.379
EASEMENT	890	885	890-885							26.5	4.00	0.11		0.0	4.00	0.00	0.43						1.50	0.000					1.50	0.000	1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	3.53	20.216
	885	875	885-875							26.5	4.00	0.11		0.0	4.00	0.00	0.43						1.50	0.000					1.50	0.000	1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	4.03	17.640
FAUCHER	880	875	880-875	13.51				35.36		35.4	4.00	0.14		0.0	4.00	0.00	0.57						1.50	0.000					1.50	0.000	1.500	0.000	1.13	0.318	0.318		0.000	0.000		0.891		0.891	2.54	34.209
FAUCHER	875	815	875-815							61.9	4.00	0.25		0.0	4.00	0.00	1.00						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.628		0.000	0.000		1.630		1.630	8.91	16.668
ISABELLE	815	810	815-810	4.50				11.79		265.8	4.00	1.08		0.0	4.00	0.00	4.31						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.43	0.122	2.274		0.000	0.000		8.485		8.485	25.50	24.788
ISABELLE	810B	810A	810B-810A		29.33			59.86		59.9	4.00	0.24		0.0	4.00	0.00	0.97						1.50	0.000					1.50	0.000	1.500	0.000	0.26	0.072	0.072		0.000	0.000		1.042		1.042	4.42	22.536
	810A	810	810A-810							59.9	4.00	0.24		0.0	4.00	0.00	0.97						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.072		0.000	0.000		1.042		1.042	3.97	25.197
ISABELLE	810	795	810-795	4.50				11.79		337.4	4.00	1.37		0.0	4.00	0.00	5.47						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.41	0.115	2.462		0.000	0.000		9.833		9.833	21.78	35.324
BOILEAU	805	800	805-800	11.26				29.47		29.5	4.00	0.12		0.0	4.00	0.00	0.48						1.50	0.000					1.50	0.000	1.500	0.000	1.10	0.307	0.307		0.000	0.000		0.785		0.785	3.12	24.403
	800	795	800-795							29.5	4.00	0.12		0.0	4.00	0.00	0.48						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.307		0.000	0.000		0.785		0.785	3.49	21.720
ISABELLE	795	765	795-765							366.9	4.00	1.49		0.0	4.00	0.00	5.94						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	2.769		0.000	0.000		10.618		10.618	26.78	29.036
SAUVE	790	785	790-785	13.51				35.36		35.4	4.00	0.14		0.0	4.00	0.00	0.57						1.50	0.000					1.50	0.000	1.500	0.000	1.67	0.469	0.469		0.000	0.000		1.042		1.042	2.73	37.161
	785	780	785-780							35.4	4.00	0.14		0.0	4.00	0.00	0.57						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	3.40	29.635
	780	775	780-775							35.4	4.00	0.14		0.0	4.00	0.00	0.57						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	2.27	44.868
	775	770	775-770	10.13				26.52		61.9	4.00	0.25		0.0	4.00	0.00	1.00						1.50	0.000					1.50	0.000	1.500	0.000	1.01	0.283	0.752		0.000	0.000		1.755		1.755	5.48	30.252
	770	765	770-765							61.9	4.00	0.25		0.0	4.00	0.00	1.00						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.752		0.000	0.000		1.755		1.755	5.00	33.327
ISABELLE	765	760	765-760	5.63				14.73		443.5	4.00	1.80		0.0	4.00	0.00	7.19						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.55	0.155	3.676		0.000	0.000		12.767		12.767	37.25	21.511
	760	735	760-735							443.5	4.00	1.80		0.0	4.00	0.00	7.19						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	3.676		0.000	0.000		12.767		12.767	37.77	21.031
GAGNE	755	750	755-750	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.56	0.156	0.156		0.000	0.000		0.490		0.490	2.16	22.157
	750	745	750-745							20.6	4.00	0.08		0.0	4.00	0.00	0.33						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.156		0.000	0.000		0.490		0.490	2.35	20.394
	745	740	745-740	10.13		0.86		27.74		48.4	4.00	0.20		0.0	4.00	0.00	0.78						1.50	0.000					1.50	0.000	1.500	0.000	1.01	0.282	0.438		0.000	0.000		1.222		1.222	7.31	15.491
	740	735	740-735							48.4	4.00	0.20		0.0	4.00	0.00	0.78						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.438		0.000	0.000		1.222		1.222	5.74	20.057
ISABELLE	735	730	735-730	5.63				14.73		506.6	3.97	2.05		0.0	3.97	0.00	8.15						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.54	0.153	4.267		0.000	0.000		14.321		14.321	37.56	23.805
	730	PS2	730-PS2							506.6	3.97	2.05		0.0	3.97	0.00	8.15						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	4.267		0.000	0.000		14.321		14.321	32.62	29.585
	PS2	725	PS2-725							506.6	3.97	2.05		0.0	3.97	0.00	8.15						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	4.267		0.000	0.000	20.500	14.321	6.179	20.500	0.00	14.48
	725	715	725-715							506.6	3.97	2.05		0.0	3.97	0.00	8.15						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	4.267		0.000	0.000		14.321	6.179	20.500	70.46	8.593
GAGNE	720	715	720-715	11.26				29.47		29.5	4.00	0.12		0.0	4.00	0.00	0.48						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.97	0.271	0.271		0.000	0.000		0.748		0.748	3.76	19.170
ISABELLE	715	710	715-710	3.38				8.84		544.9	3.95	2.21		0.0	3.95	0.00	8.73						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.36	0.101	4.638		0.000	0.000		15.272	6.179	21.451	54.64	17.810
	710	700	710-700							544.9	3.95	2.21		0.0	3.95	0.00	8.73						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	4.638		0.000	0.000		15.272	6.179	21.451	56.95	16.213
ALICE	705	700	705-700	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.52	0.147	0.147		0.000	0.000		0.385		0.385	1.80	21.016
ISABELLE	700	695	700-695	14.63				38.31		597.9	3.93	2.42		0.0	3.93	0.00	9.53						1.50	0.000					1.50	0.000	1.500	0.000	1.904	1.42	0.396	5.181		0.000	0.000		16.612	6.179	22.791	43.63	29.444
	695	675	695-675							597.9	3.93	2.42		0.0	3.93	0.00	9.53						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	5.181		0.000	0.000		16.612	6.179	22.791	66.71	11.376
ALICE	690	685	690-685	18.01				47.15		47.1	4.00	0.19		0.0	4.00	0.00	0.76						1.50	0.000					1.50	0.000	1.500	0.000	0.00	1.77	0.496	0.496		0.000	0.000		1.260		1.260	5.85	20.279
	685	680	685-680							47.1	4.00	0.19		0.0	4.00	0.00	0.76						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.496		0.000	0.000		1.260		1.260	6.03	19.650
	680	675	680-675	4.50				11.79		58.9	4.00	0.24		0.0	4.00	0.00	0.95						1.50	0.000					1.50	0.000	1.500	0.000	0.45	0.126	0.622		0.000	0.000		1.577		1.577	7.21	20.305
ISABELLE	675	665	675-665	4.50				11.79		668.7	3.91	2.71		0.0	3.91	0.00	10.58						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.46	0.128	5.931		0.000	0.000		18.415	6.179	24.594	72.86	9.159
ALBERT	670	665	670-665	12.38				32.41		32.4	4.00	0.13		0.0	4.00	0.00	0.53						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.95	0.265	0.265		0.000	0.000		0.790		0.790	3.64	20.883
ISABELLE	665	660	665-660	6.75				17.68		718.8	3.89	2.91		0.0	3.89	0.00	11.32						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.81	0.228	6.423		0.000	0.000		19.648	6.179	25.827	79.75	6.558
	660	620	660-620							718.8	3.89	2.91		0.0	3.89	0.00	11.32						1.50	0.000					1.50	0.000	1.500	0.000	1.904	0.00	0.000	6.423		0.000	0.000		19.648	6.179	25.827	66.04	13.279
	620	615	620-615	5.63				14.73		1255.8	3.73	5.09		0.0	3.73	0.00	19.00						1.50	0.000					1.50	0.000	1.500	0.000	4.994	0.80	0.224	12.910		0.000	0.000		36.899	13.323	50.222	116.20	-7.000
	615	535	615-535							1255.8	3.73	5.09		0.0	3.73	0.00	19.00						1.50	0.000					1.50	0.000	1.500	0.000	4.994	0.00	0.000	12.910		0.000	0.000		36.899	13.323	50.222	87.54	7.148
PERCY	610	600	610-600	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.43	0.121	0.121		0.000	0.000		0.311		0.311	0.80	38.475
PERCY	605	600	605-600	3.38				8.84		8.8	4.00	0.04		0.0	4.00	0.00	0.14						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.28	0.079	0.079		0.000	0.000		0.223		0.223	0.50	44.070
DESNOYERS	600	595	600-595	16.89		0.86		45.42		66.0	4.00	0.27		0.0	4.00	0.00	1.07						1.50	0.000					1.50	0.000	1.500	0.000	1.71	0.479	0.679		0.000	0.000		1.749		1.749	7.29	22.259
	595	590	595-590							66.0	4.00	0.27		0.0	4.00	0.00	1.07						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.679		0.000	0.000		1.749		1.749	5.37	30.836
	590	545	590-545							66.0	4.00	0.27		0.0	4.00	0.00	1.07						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.679		0.000	0.000		1.749		1.749	3.83	43.883
FLEURETTE STREET	580	570	580-570	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19						1.50	0.000					1.50	0.000	1.500	0.000	0.52	0.145	0.145		0.000	0.000		0.336		0.336	0.85	39.191
FLEURETTE CIRCLE	575	570	575-570	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38						1.50	0.000					1.50	0.000	1.500	0.000	1.13	0.317	0.317		0.000	0.000		0.699		0.699	1.21	57.259
FLEURETTE STREET	570	565	570-565							35.4	4.00	0.14		0.0	4.00	0.00	0.57						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.462		0.000	0.000		1.035		1.035	2.41	41.919
PERCY	585	565	585-565	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.80	0.225	0.225		0.000	0.000		0.559		0.559	1.71	32.044
PERCY	565	550	565-550	5.63			2.00	14.73		70.7	4.00	0.29		0.0	4.00	0.00	1.15						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.53	0.150	0.836		0.000	0.000		1.982		1.982	6.28	29.560
PERCY	560	555	560-555	12.38				32.41		32.4	4.00	0.13		0.0	4.00	0.00	0.53						1.50	0.000					1.50	0.000	1.500	0.000	0.00	1.01	0.282	0.282		0.000	0.000		0.807		0.807	2.59	30.394
	555	550	555-550							32.4	4.00	0.13		0.0	4.00	0.00	0.53						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	0.282		0.000	0.000		0.807		0.807	2.38	33.055
JEAN MARC	550	545	550-545							103.1	4.00	0.42		0.0	4.00	0.00	1.67						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.00	1.118		0.000	0.000		2.789		2.789	7.48	34.518
DESNOYERS	545	540	545-540	10.13				26.52		195.7	4.00	0.79		0.0	4.00	0.00	3.17						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.94	0.262	2.060		0.000	0.000		5.231		5.231	18.70	22.740
	540	535	540-535	7.88				20.63		216.3	4.00	0.88		0.0	4.00	0.00	3.51						1.50	0.000					1.50	0.000	1.500	0.000	0.00	0.95	0.265	2.325		0.000	0.000		5.830		5.830	18.33	25.970

SEWER DATA

STREET	FROM	TO	DIA. (mm)	Actual Dia. (mm)	DESIGN SLOPE (%)	ACTUAL SLOPE (%)	CAPAC. (l/s)	VEL. (m/s)	LENGTH (m)	Upstream Obvert (m)	Upstream Invert (m)	Downstream Obvert (m)		Comments
ROGER	855	850	200	203.20	0.401	0.414	22.019	0.679	31.39	63.22	63.020	63.09	62.890	
	850	845	200	203.20	0.400	0.405	21.770	0.671	12.35	63.05	62.850	63.00	62.800	
	845	840	200	203.20	0.383	0.374	20.930	0.645	37.41	62.95	62.750	62.81	62.610	
	840	835	200	203.20	0.389	0.421	22.199	0.685	11.88	62.76	62.560	62.71	62.510	
	835	830	200	203.20	0.411	0.533	24.971	0.770	39.43	62.66	62.460	62.45	62.250	
RICHER	239	241

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VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - September 2023 (Existing Conditions)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/cap/d
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/cap/d
Infilt. Allowance:	0.28	L/ha/s

Prepared by: M.L.
Checked by: B.P.
Downstream Runs

| STREET | MANHOLE NUMBER FROM | MANHOLE NUMBER TO | FROM MH - TO MH | EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units) | Multiple Dwellings (units) | Apart (units) | Vacant | Popul. (peop.) | Metered Residential (L/s) | Cumm. Popul. (peop.) | Cumm. Metered Residential (L/s) | Peaking Factor | Avg. Flow (l/s) | FUTURE RESIDENTIAL: Popul. (peop.) | Cumm. Popul. (peop.) | Peaking Factor | Avg. Flow | Peak Res. Flow (l/s) | SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | FUTURE ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | Cumm. Peak ICI Flow (l/s) | EXISTING EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | FUTURE EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | Pump Flow (l/s) | Total Peak Des. Flow (l/s) | Pump Correction Facto (l/s) | Total Peak Des. Flow with pump (l/s) | Q_p/Q_{des} % | Residual Capacity (l/s) | SEWER DATA: DIA. (mm) | Actual Dia. (mm) | DESIGN SLOPE (%) | ACTUAL SLOPE (%) | CAPAC. (l/s) | VEL. (m/s) | LENGTH (m) | Upstream Obvert (m) | Upstream Invert (m) | Downstream Obvert (m) | | Comments |
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VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - September 2023 (Existing Conditions)

SANITARY SEWER DESIGN SHEET

Prepared by: M.L.
Checked by: B.P.
Downstream Runs

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/cap/d
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/cap/d
Infilt. Allowance:	0.28	L/ha/s

| STREET | MANHOLE NUMBER FROM | MANHOLE NUMBER TO | FROM MH - TO MH | EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units) | Multiple Dwellings (units) | Apart (units) | Vacant | Popul. (peop.) | Metered Residential (L/s) | Cumm. Popul. (peop.) | Cumm. Metered Residential (L/s) | Peaking Factor | Avg. Flow (l/s) | FUTURE RESIDENTIAL: Popul. (peop.) | Cumm. Popul. (peop.) | Peaking Factor | Avg. Flow | Peak Res. Flow (l/s) | SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | FUTURE ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | Cumm. Peak ICI Flow (l/s) | EXISTING EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | FUTURE EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | Pump Flow (l/s) | Total Peak Des. Flow (l/s) | Pump Correction Facto (l/s) | Total Peak Des. Flow with pump (l/s) | Q_d/Q_{cap} % | Residual Capacity (l/s) | SEWER DATA: DIA. (mm) | Actual Dia. (mm) | DESIGN SLOPE (%) | ACTUAL SLOPE (%) | CAPAC. (l/s) | VEL. (m/s) | LENGTH (m) | Upstream Obvert (m) | Upstream Invert (m) | Downstream Obvert (m) | | Comments |
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VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - September 2023 (Existing Conditions)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/cap/d
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/cap/d
Infilt. Allowance:	0.28	L/ha/s

Prepared by: M.L.
Checked by: B.P.
Downstream Runs

| STREET | MANHOLE NUMBER FROM | TO | FROM MH - TO MH | EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units) | Multiple Dwellings (units) | Apart (units) | Vacant | Popul. (peop.) | Metered Residential (L/s) | Cumm. Popul. (peop.) | Cumm. Metered Residential (L/s) | Peaking Factor | Avg. Flow (l/s) | FUTURE RESIDENTIAL: Popul. (peop.) | Cumm. Popul. (peop.) | Peaking Factor | Avg. Flow | Peak Res. Flow (l/s) | SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | FUTURE ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | Cumm. Peak ICI Flow (l/s) | EXISTING EXTRANEOUS: Area (Ha) | Peak Extr Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | FUTURE EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | Pump Flow (l/s) | Total Peak Des. Flow (l/s) | Pump Correction Facto (l/s) | Total Peak Des. Flow with pump (l/s) | Q_r/Q_{full} % | Residual Capacity (l/s) | SEWER DATA: DIA. (mm) | Actual Dia. (mm) | DESIGN SLOPE (%) | ACTUAL SLOPE (%) | CAPAC. (l/s) | VEL. (m/s) | LENGTH (m) | Upstream Obvert (m) | Upstream Invert (m) | Downstream Obvert (m) | Comments |
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VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - September 2023 (Existing Conditions)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/cap/d
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/cap/d
Infilt. Allowance:	0.28	L/ha/s

Prepared by: M.L.
Checked by: B.P.
Downstream Runs

| STREET | MANHOLE NUMBER FROM | MANHOLE NUMBER TO | FROM MH - TO MH | EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units) | Multiple Dwellings (units) | Apart (units) | Vacant (units) | Popul. (peop.) | Metered Residential (L/s) | Cumm. Popul. (peop.) | Cumm. Metered Residential (L/s) | Peaking Factor | Avg. Flow (l/s) | FUTURE RESIDENTIAL: Popul. (peop.) | Cumm. Popul. (peop.) | Peaking Factor | Avg. Flow (l/s) | Peak Res. Flow (l/s) | SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | FUTURE ICI: Areas (ha): Commerc. | Industrial | Flows (l/s): Commerc. | Industrial | Peaking Factor | ICI Flow (l/s) | Cumm. Peak ICI Flow (l/s) | EXISTING EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | FUTURE EXTRANEOUS: Area (Ha) | Peak Extr. Flow (l/s) | Cumm. Peak Extr. Flow (l/s) | Pump Flow (l/s) | Total Peak Des. Flow (l/s) | Pump Correction Facto (l/s) | Total Peak Des. Flow with pump (l/s) | Q_p/Q_{full} % | Residual Capacity (l/s) | SEWER DATA: DIA. (mm) | Actual Dia. (mm) | DESIGN SLOPE (%) | ACTUAL SLOPE (%) | CAPAC. (l/s) | VEL. (m/s) | LENGTH (m) | Upstream Obvert (m) | Upstream Invert (m) | Downstream Obvert (m) | | Comments |
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VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - March 2023 (Exisitng - Future Proofed)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/capd
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/capd
Infilt. Allowance:	0.28	L/ha/s

Population Density (Future Development): 2.375

Prepared by: M.L.
Checked by: B.P.

Downstream Runs
Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	SANITARY CONTRIBUTION: EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	EXISTING ICI: Areas (ha): Commerc	Industrial	Flows (l/s): Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha): Commerc	Industrial	Flows (l/s): Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRAENOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRAENOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
RACINE	1210	1205	1210-1205							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.980		2.423	1.50	3.634						1.500	0.000	3.634	5.98	1.674	1.674		0.000	0.000		5.308		5.308	24.67	16.207
	1205	1200	1205-1200							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	3.634	0.00	0.000	1.674		0.000	0.000		5.308		5.308	24.80	16.100
	1200	1195	1200-1195							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	3.634	0.00	0.000	1.674		0.000	0.000		5.308		5.308	21.33	19.578
	1195	1190	1195-1190							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	3.634	0.00	0.000	1.674		0.000	0.000		5.308		5.308	16.19	27.482
	1190	1185	1190-1185							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.372		2.176	1.50	3.264						1.500	0.000	6.898	5.37	1.504	3.179		0.000	0.000		10.077		10.077	26.31	28.221
	1185	1170	1185-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	6.898	0.00	0.000	3.179		0.000	0.000		10.077		10.077	26.73	27.616
RACINE	1180	1175	1180-1175							0.0	4.00	0.00		0.0	4.00	0.00	0.00		1.450		0.587	1.50	0.881						1.500	0.000	0.881	1.45	0.406	0.406		0.000	0.000		1.287		1.287	5.76	21.044
	1175	1170	1175-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.881	0.00	0.000	0.406		0.000	0.000		1.287		1.287	5.84	20.736
INDUSTRIEL	1170	1165	1170-1165							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	7.779	0.00	0.000	3.585		0.000	0.000		11.364		11.364	39.86	17.147
	1165	1150	1165-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	7.779	0.00	0.000	3.585		0.000	0.000		11.364		11.364	39.60	17.334
INDUSTRIEL	1160	1155	1160-1155							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.344	1.809	0.436	0.733	1.50	1.753						1.500	0.000	1.753	3.15	0.883	0.883		0.000	0.000		2.636		2.636	10.43	22.625
	1155	1150	1155-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	1.753	0.00	0.000	0.883		0.000	0.000		2.636		2.636	5.77	43.011
INDUSTRIEL	1150	PS3	1150-PS3							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	9.532	0.00	0.000	4.468		0.000	0.000		14.000		14.000	43.54	18.157
INDUSTRIEL	PS3	1125	PS3-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	9.532	0.00	0.000	4.468		0.000	0.000	37.000	14.000	23.000	37.000	0.00	
INDUSTRIEL	1145	1140	1145-1140							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.561	0.986	0.182	0.399	1.50	0.872						1.500	0.000	0.872	1.55	0.433	0.433		0.000	0.000		1.305		1.305	5.37	23.024
INDUSTRIEL	1140	1135	1140-1135							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.872	0.00	0.000	0.433		0.000	0.000		1.305		1.305	5.48	22.493
INDUSTRIEL	1135	1130	1135-1130							0.0	4.00	0.00		0.0	4.00	0.00	0.00	4.125		1.337		1.50	2.005						1.500	0.000	2.877	4.12	1.155	1.588		0.000	0.000		4.465		4.465	18.77	19.327
	1130	1125	1130-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	2.877	0.00	0.000	1.588		0.000	0.000		4.465		4.465	18.45	19.734
RACINE	1125	1095	1125-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.634		0.529		1.50	0.794						1.500	0.000	13.203	1.63	0.457	6.513		0.000	0.000		19.717	23.000	42.717	63.38	24.680
RICHER	1120	1115	1120-1115							0.0	4.00	0.00		0.0	4.00	0.00	0.00	2.242		0.727		1.50	1.090						1.500	0.000	1.090	2.24	0.628	0.628		0.000	0.000		1.718		1.718	4.91	33.250
	1115	1110	1115-1110							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	1.090	0.00	0.000	0.628		0.000	0.000		1.718		1.718	5.27	30.872
LAFLECHE	1110	1105	1110-1105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.733		0.238		1.50	0.356						1.500	0.000	1.446	0.73	0.205	0.833		0.000	0.000		2.279		2.279	6.90	30.770
	1105	1100	1105-1100							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	1.446	0.00	0.000	0.833		0.000	0.000		2.279		2.279	2.56	86.903
	SOUTH417	1100	OUTH417-110							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.838		0.596		1.50	0.893						1.500	0.000	0.893	1.84	0.515	0.515		0.000	0.000		1.408		1.408	4.58	29.345
PRINCIPALE	1100	1095	1100-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	2.340	0.00	0.000	1.348		0.000	0.000		3.687		3.687	6.29	54.908
PRINCIPALE	1095	1094	1095-1094							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	15.543	0.00	0.000	7.861		0.000	0.000		23.404	23.000	46.404	0.00	-46.404
	1094	1090	1094-1090							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	15.543	0.00	0.000	7.861		0.000	0.000		23.404	23.000	46.404	0.00	-46.404
PRINCIPALE	244	1090	244-1090							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	
	1090	1085	1090-1085	2.25				5.89		5.9	4.00	0.02		0.0	4.00	0.00	0.10	3.031		0.982		1.50	1.473						1.500	0.000	17.016	3.03	0.849	8.709		0.000	0.000		25.821	23.000	48.821	77.96	13.880
	1085	1080	1085-1080							5.9	4.00	0.02		0.0	4.00	0.00	0.10					1.50	0.000						1.500	0.000	17.016	0.00	0.000	8.709		0.000	0.000		25.821	23.000	48.821	67.66	23.338
	1080	1070	1080-1070							5.9	4.00	0.02		0.0	4.00	0.00	0.10					1.50	0.000						1.500	0.000	17.016	0.00	0.000	8.709		0.000	0.000		25.821	23.000	48.821	76.23	15.225
PRINCIPALE	1075	1070	1075-1070							0.0	4.00	0.00		0.0	4.00	0.00	0.00		3.520		1.426	1.50	2.139						1.500	0.000	2.139	3.52	0.985	0.985		0.000	0.000		3.124		3.124	22.27	10.906
JEANNE MANCE	1070	1045	1070-1045	2.25		3.44		10.79		16.7	4.00	0.07		0.0	4.00	0.00	0.27					1.50	0.000						1.500	0.000	19.155	0.45	0.125	9.820		0.000	0.000		29.245	23.000	52.245	75.74	16.731
JEANNE MANCE	1050	1045	1050-1045	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19	0.530		0.172		1.50	0.258						1.500	0.000	0.258	0.53	0.148	0.148		0.000	0.000		0.597		0.597	1.81	32.347
ST. JOSEPH (SOUTH)	1065	1060	1065-1060	15.76	16.00			73.90		73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000						1.500	0.000	0.000	1.89	0.530	0.530		0.000	0.000		1.728		1.728	7.82	20.370
	1060	1055	1060-1055							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.55	18.487
	1055	1045	1055-1045							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.11	19.580
ST. JOSEPH (SOUTH)	1045	1040	1045-1040	10.13				26.52		128.9	4.00	0.52		0.0	4.00	0.00	2.09					1.50	0.000						1.500	0.000	19.412	1.12	0.314	10.812		0.000	0.000		32.313	23.000	55.314	38.63	87.875
	1040	1015	1040-1015							128.9	4.00	0.52		0.0	4.00	0.00	2.09					1.50	0.000						1.500	0.000	19.412	0.00	0.000	10.812		0.000	0.000		32.313	23.000	55.314	39.92	83.288
DUHAMEL	1020	1015	1020-1015	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000						1.500	0.000	0.000	0.68	0.190	0.190		0.000	0.000		0.381		0.381	1.76	21.230
PRINCIPALE	1030	1025	1030-1025	3.38		1.72		11.29		11.3	4.00	0.05		0.0	4.00	0.00	0.18					1.50	0.000						1.500	0.000	0.000	0.48	0.135	0.135		0.000	0.000		0.318		0.318	1.51	20.728
PRINCIPALE	1035	1025	1035-1025	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38	1.667		0.540		1.50	0.810						1.500	0.000	0.810	1.67	0.467	0.467		0.000	0.000		1.659		1.659	8.02	19.027
DUHAMEL	1025	1015	1025-1015	7.88		0.86		21.85		56.7	4.00	0.23		0.0	4.00	0.00	0.92					1.50	0.000						1.500	0.000	0.810	0.62	0.174	0.776		0.000	0.000		2.506		2.506	12.92	16.881
ST. JOSEPH (SOUTH)	1015	1010	1015-1010	18.01				47.15		244.5	4.00	0.99		0.0	4.00	0.00	3.96					1.50	0.000						1.500	0.000	20.223	1.18	0.332	12.110		0.000	0.000		36.296	23.000	59.296	42.71	79.544
	1010	1000	1010-1000							244.5	4.00	0.99		0.0	4.00	0.00	3.96					1.50	0.000						1.500	0.000	20.223	0.00	0.000	12.110		0.000	0.000		36.296	23.000	59.296	42.72	79.502
ST. ISIDORE (WEST)	1005	1000	1005-1000		5.33	12.05		28.04		28.0	4.00	0.11		0.0	4.00	0.00	0.45					1.50	0.000						1.500	0.000	0.000	0.54	0.150	0.150		0.000	0.000		0.604		0.604	2.49	23.630
ST. ISIDORE (WEST)	1000	520	1000-520							272.6	4.00	1.10		0.0	4.00	0.00	4.42					1.50	0.000						1.500	0.000	20.223	0.00	0.000	12.260		0.000	0.000		36.900	23.000	59.900	36.65	103.530
ST. ISIDORE (WEST)	655	650	655-650	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	1.72	0.483	0.483		0.000	0.000		1.295		1.295	5.96	20.416
	650	645	650-645							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.63	21.682
	645	635	645-635							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.70	21.409
PERCY	640	635	640-635	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000						1.500	0.000	0.000	0.71	0.200	0.200		0.000	0.000		0.534		0.534	1.51	34.753
ST. ISIDORE (WEST)	635	630	635-630	11.26		2.58		33.14		103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000						1.500	0.000	0.000	1.52	0.426	1.108		0.000	0.000		2.791		2.791	8.49	30.098
	630	627	630-627							103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000						1.500	0.000	0.000	0.00	0.000	1.108		0.000	0.000		2.791		2.791	8.74	29.159
	2100	2105	2100-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	26.547
	321	2105	321-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	6.357		2.060		1.50	3.090						1.500	0.000	3.090	6.36	1.780	1.780		0.000	0.000		4.870		4.870	21.29	18.003
	2105	2110	2105-2110	27.02				70.72		70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000						1.500	0.000	3.090	2.09	0.585	2.365		0.000	0.000		6.601		6.601	32.42	13.760
	2110	2115	2110-2115							70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000						1.500	0.000	3.090	0.00	0.000	2.365		0.000	0.000		6.601		6.601	29.32	15.915
	2185	2190	2185-2190	1.13				2.95		2.9	4.00	0.01		0.0	4.00	0.00	0.05					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.048		0.048	0.05	96.240
	2190	2195	2190-2195	15.76				41.25		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000						1.500	0.000	0.000	1.13	0.315	0.315		0.000	0.000		1.032		1.032	0.96	105.953
	2195	2115	2195-2115							44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.315		0.000	0.000		1.032		1.032	1.14	89.224
	2115	2150	2115-2150	4.50				11.79		126.7	4.00	0.51		0.0	4.00	0.00	2.05					1.50	0.000						1.500	0.000	3.090	0.28	0.079	2.759		0.000	0.000		7.902		7.902	6.79	108.532
	2100	2120	2100-2120	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000						1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	2.17	25.157
	2120	2125	2120-2125							20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.225		0.000	0.000		0.559		0.559	1.78	30.832
	2125	2130	2125-2130	22.51				58.93		79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	1.79	0.502	0.727		0.000	0.000		2.016		2.016	7.26	25.771
	2130	2135	2130-2135							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.39	19.483
	2135	2140	2135-2140							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.69	18.788
	2140	2145	2140-2145							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	6.37	29.638
	2145	2150	2145-2150	3.38				8.84		88.4	4.00	0.36		0.0	4.00	0.00	1.43					1.50	0.000						1.500	0.000	0.000	0.34	0.097	0.824		0.000	0.000		2.256		2.256	10.93	18.392
	2150	2165	2150-2165	13.51				35.36		250.5	4.00	1.01		0.0	4.00	0.00	4.06					1.50	0.000						1.500	0.000	3.090	0.67	0.188	3.771		0.000	0.000		10.920		10.920	9.61	102.674
	2155	2160	2155-2160	16.89				44.20		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000						1.500	0.000	0.000	0.86	0.240	0.240		0.000	0.000		0.956		0.956	3.56	25.880
	2000	2160	2000-2160	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	0.98	0.274	0.274		0.000	0.000		1.085		1.085	3.14	33.491
	2160	2165	2160-2165	6.75				17.68		112.0	4.00	0.45		0.0	4.00	0.00	1.81					1.50	0.000						1.500	0.000	0.000	0.39	0.108	0.622		0.000	0.000		2.436		2.436	9.75	22.560
	2165	2170	2165-2170							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	12.74	91.445
	2170	PS5	2170-PS5							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	13.69	84.173
QUARTIER DES BOISE - Area F (Partial)	PS5	2175	PS5-2175							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000	20.500	13.356	7.144	20.500	0.00	
	2175	2180	2175-2180	7.88				20.63		383.1	4.00	1.55		0.0	4.00	0.00	6.21					1.50	0.000						1.500	0.000	3.090	0.82	0.230	4.624		0.000	0.000		13.920	7.144	21.065	35.98	37.487
	2205	2180	2205-2180	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000						1.500	0.000	0.000	0.71	0.199	0.199		0.000	0.000		0.437		0.437	1.53	28.094
	2180	627	2180-627							397.8	4.00	1.61		0.0	4.00	0.00	6.45					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.822		0.000	0.000		14.358	7.144	21.502	41.21	30.679
	627	625	627-625	7.88				20.63		522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000						1.500	0.000	3.090	1.19	0.333	6.263		0.000	0.000		17.740	7.144	24.884	79.25	6.514
	625	620	625-620							522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000						1.500	0.000	3.090	0.00	0.000	6.263		0.000	0.000		17.740	7.144	24.884	74.28	8.627
ROGER	855	850	855-850		77.33			157.81		157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000						1.500	0.000	0.000	1.03	0.288	0.288		0.000	0.000		2.845		2.845	12.92	19.174
	850	845	850-845							157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	13.07	18.925
	845	840	845-840							157.8	4.00	0.64		0.0	4.00	0.00	2.56

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Cumm. Popul. (peop.)	Cumm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Cumm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{dwf} %	Residual Capacity (l/s)
RICHER	830	815	830-815							157.8		4.00	0.64	0.0	0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	1.556	0.00	0.000	1.184		0.000	0.000		5.297		5.297	15.94	27.930
LAFLECHE	267	246	267-246					0.0		0.0	4.00	0.00		0.0	0.0	4.00	0.00	0.00	0.716		0.232		1.50	0.348					1.500	0.000	0.348	0.72	0.200	0.200		0.000	0.000		0.549		0.549	1.18	46.111
LAFLECHE	246	825	246-825					0.0		0.0	4.00	0.00		0.0	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.95	57.468
LAFLECHE	825	820	825-820					0.0		0.0	4.00	0.00		0.0	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	1.57	34.431
	820	819	820-819					0.0		0.0	4.00	0.00		0.0	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.76	71.244
	247	248	247-248			12.05		17.15		17.2		4.00	0.07	0.0	0.0	4.00	0.00	0.28					1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.28	26.795
	249	248	249-248			12.05		17.15		17.2		4.00	0.07	0.0	0.0	4.00	0.00	0.28					1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.34	25.583
	248	819	248-819							34.3		4.00	0.14	0.0	0.0	4.00	0.00	0.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.140		0.000	0.000		0.696		0.696	2.35	28.872
	819	815	819-815							34.3		4.00	0.14	0.0	0.0	4.00	0.00	0.56					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.341		0.000	0.000		1.245		1.245	4.27	27.909
ST. MARIE	900	890	900-890	9.01				23.57		23.6		4.00	0.10	0.0	0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	0.96	0.268	0.268		0.000	0.000		0.650		0.650	3.07	20.506
ST. MARIE	895	890	895-890	1.13				2.95		2.9		4.00	0.01	0.0	0.0	4.00	0.00	0.05					1.50	0.000					1.500	0.000	0.000	0.15	0.042	0.042		0.000	0.000		0.090		0.090	0.29	31.379
EASEMENT	890	885	890-885					26.5		26.5		4.00	0.11	0.0	0.0	4.00	0.00	0.43					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	3.53	20.216
	885	875	885-875					26.5		26.5		4.00	0.11	0.0	0.0	4.00	0.00	0.43					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	4.03	17.640
FAUCHER	880	875	880-875	13.51				35.36		35.4		4.00	0.14	0.0	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.13	0.318	0.318		0.000	0.000		0.891		0.891	2.54	34.209
FAUCHER	875	815	875-815					61.9		4.00	0.25	0.0	0.0	4.00	0.00	1.00							1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.628		0.000	0.000		1.630		1.630	8.91	16.668
ISABELLE	815	810	815-810	4.50				11.79		265.8		4.00	1.08	0.0	0.0	4.00	0.00	4.31					1.50	0.000					1.500	0.000	1.904	0.43	0.122	2.274		0.000	0.000		8.485		8.485	25.50	24.788
ISABELLE	810B	810A	810B-810A		29.33			59.86		59.9		4.00	0.24	0.0	0.0	4.00	0.00	0.97					1.50	0.000					1.500	0.000	0.000	0.26	0.072	0.072		0.000	0.000		1.042		1.042	4.42	22.536
	810A	810	810A-810							59.9		4.00	0.24	0.0	0.0	4.00	0.00	0.97					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.072		0.000	0.000		1.042		1.042	3.97	25.197
ISABELLE	810	795	810-795	4.50				11.79		337.4		4.00	1.37	0.0	0.0	4.00	0.00	5.47					1.50	0.000					1.500	0.000	1.904	0.41	0.115	2.462		0.000	0.000		9.833		9.833	21.78	35.324
BOLEAU	805	800	805-800	11.26				29.47		29.5		4.00	0.12	0.0	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000		1.10	0.307	0.307		0.000	0.000		0.785		0.785	3.12	24.403
	800	795	800-795							29.5		4.00	0.12	0.0	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000		0.00	0.000	0.307		0.000	0.000		0.785		0.785	3.49	21.720
ISABELLE	795	765	795-765					366.9		366.9		4.00	1.49	0.0	0.0	4.00	0.00	5.94					1.50	0.000					1.500	0.000	1.904	0.00	0.000	2.769		0.000	0.000		10.618		10.618	26.78	29.036
SAUVE	790	785	790-785	13.51				35.36		35.4		4.00	0.14	0.0	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.67	0.469	0.469		0.000	0.000		1.042		1.042	2.73	37.161
	785	780	785-780							35.4		4.00	0.14	0.0	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	3.40	29.635
	780	775	780-775							35.4		4.00	0.14	0.0	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	2.27	44.868
	775	770	775-770	10.13				26.52		61.9		4.00	0.25	0.0	0.0	4.00	0.00	1.00					1.50	0.000					1.500	0.000	0.000	1.01	0.283	0.752		0.000	0.000		1.755		1.755	5.48	30.252
	770	765	770-765							61.9		4.00	0.25	0.0	0.0	4.00	0.00	1.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.752		0.000	0.000		1.755		1.755	5.00	33.327
ISABELLE	765	760	765-760	5.63				14.73		443.5		4.00	1.80	0.0	0.0	4.00	0.00	7.19					1.50	0.000					1.500	0.000	1.904	0.55	0.155	3.676		0.000	0.000		12.767		12.767	37.25	21.511
	760	735	760-735							443.5		4.00	1.80	0.0	0.0	4.00	0.00	7.19					1.50	0.000					1.500	0.000	1.904	0.00	0.000	3.676		0.000	0.000		12.767		12.767	37.77	21.031
GAGNE	755	750	755-750	7.88				20.63		20.6		4.00	0.08	0.0	0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.56	0.156	0.156		0.000	0.000		0.490		0.490	2.18	22.157
	750	745	750-745							20.6		4.00	0.08	0.0	0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.156		0.000	0.000		0.490		0.490	2.35	20.394
	745	740	745-740	10.13		0.86		27.74		48.4		4.00	0.20	0.0	0.0	4.00	0.00	0.78					1.50	0.000					1.500	0.000	0.000	1.01	0.282	0.438		0.000	0.000		1.222		1.222	7.31	15.491
	740	735	740-735							48.4		4.00	0.20	0.0	0.0	4.00	0.00	0.78					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.438		0.000	0.000		1.222		1.222	5.74	20.057
ISABELLE	735	730	735-730	5.63				14.73		506.6		3.97	2.05	0.0	0.0	3.97	0.00	8.15					1.50	0.000					1.500	0.000	1.904	0.54	0.153	4.267		0.000	0.000		14.321		14.321	37.56	23.805
	730	PS2	730-PS2							506.6		3.97	2.05	0.0	0.0	3.97	0.00	8.15					1.50	0.000					1.500	0.000	1.904	0.00	0.000	4.267		0.000	0.000		14.321		14.321	0.00	-14.321
	PS2	725	PS2-725							506.6		3.97	2.05	0.0	0.0	3.97	0.00	8.15					1.50	0.000					1.500	0.000	1.904	0.00	0.000	4.267		0.000	0.000	20.500	14.321	6.179	20.500	0.00	0.000
	725	715	725-715							506.6		3.97	2.05	0.0	0.0	3.97	0.00	8.15					1.50	0.000					1.500	0.000	1.904	0.00	0.000	4.267		0.000	0.000		14.321	6.179	20.500	70.46	8.593
GAGNE	720	715	720-715	11.26				29.47		29.5		4.00	0.12	0.0	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000	0.000	0.97	0.271	0.271		0.000	0.000		0.748		0.748	3.76	19.170
ISABELLE	715	710	715-710	3.38				8.84		544.9		3.95	2.21	0.0	0.0	3.95	0.00	8.73					1.50	0.000					1.500	0.000	1.904	0.36	0.101	4.638		0.000	0.000		15.272	6.179	21.451	54.64	17.810
	710	700	710-700							544.9		3.95	2.21	0.0	0.0	3.95	0.00	8.73					1.50	0.000					1.500	0.000	1.904	0.00	0.000	4.638		0.000	0.000		15.272	6.179	21.451	56.95	16.213
ALICE	705	700	705-700	5.63				14.73		14.7		4.00	0.06	0.0	0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.52	0.147	0.147		0.000	0.000		0.385		0.385	1.80	21.016
ISABELLE	700	695	700-695	14.63				38.31		597.9		3.93	2.42	0.0	0.0	3.93	0.00	9.53					1.50	0.000					1.500	0.000	1.904	1.42	0.396	5.181		0.000	0.000		16.612	6.179	22.791	43.63	29.444
	695	675	695-675							597.9		3.93	2.42	0.0	0.0	3.93	0.00	9.53					1.50	0.000					1.500	0.000	1.904	0.00	0.000	5.181		0.000	0.000		16.612	6.179	22.791	66.71	11.378
ALICE	690	685	690-685	18.01				47.15		47.1		4.00	0.19	0.0	0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	1.77	0.496	0.496		0.000	0.000		1.260		1.260	5.85	20.279
	685	680	685-680							47.1		4.00	0.19	0.0	0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.496		0.000	0.000		1.260		1.260	6.03	19.650
	680	675	680-675	4.50				11.79		58.9		4.00	0.24	0.0	0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.45	0.126	0.622		0.000	0.000		1.577		1.577	7.21	20.305
ISABELLE	675	665	675-665	4.50				11.79		668.7		3.91	2.71	0.0	0.0	3.91	0.00	10.58					1.50	0.000					1.500	0.000	1.904	0.46	0.128	5.931		0.000	0.000		18.415	6.179	24.594	72.86	9.159
ALBERT	670	665	670-665	12.38				32.41		32.4		4.00	0.13	0.0	0.0	4.00	0.00	0.53					1.50	0.000					1.500	0.000	0.000	0.95	0.265	0.265		0.000	0.000		0.790		0.790	3.64	20.883
ISABELLE	665	660	665-660	6.75				17.68		718.8		3.89	2.91	0.0	0.0	3.89	0.00	11.32					1.50	0.000					1.500	0.000	1.904	0.81	0.228	6.423		0.000	0.000		19.648	6.179	25.827	79.75	6.558
	660	620	660-620							718.8		3.89	2.91	0.0	0.0	3.89	0.00	11.32					1.50	0.000					1.500	0.000	1.904	0.00	0.000	6.423		0.000	0.000		19.648	6.179	25.827	66.04	13.279
	620	615	620-615	5.63				14.73		1255.8		3.73	5.09	0.0	0.0	3.73	0.00	19.00					1.50	0.000					1.500	0.000	4.994	0.80	0.224	12.910		0.000	0.000		36.899	13.323	50.222	64.09	28.145
	615	535	615-535							1255.8		3.73	5.09	0.0	0.0	3.73	0.00	19.00					1.50	0.000					1.500	0.000	4.994	0.00	0.000	12.910		0.000	0.000		36.899	13.323	50.222	48.28	53.798
PERCY	610	600	610-600	4.50				11.79		11.8		4.00	0.05	0.0	0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.43	0.121	0.121		0.000	0.000		0.311		0.311	0.80	38.475
PERCY	605	600	605-600	3.38				8.84		8.8		4.00	0.04	0.0	0.0	4.00	0.00	0.14					1.50	0.000					1.500	0.000	0.000	0.28	0.079	0.079		0.000	0.000		0.223		0.223	0.50	44.070
DESNOYERS	600	595	600-595	16.89		0.86		45.42		66.0		4.00	0.27	0.0	0.0	4.00	0.00	1.07					1.50	0.000					1.500	0.000	0.000	1.71	0.479	0.679		0.000	0.000		1.749		1.749	7.29	22.259
	595	590	595-590							66.0		4.00	0.27	0.0	0.0	4.00	0.00	1.07					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	5.37	30.838
	590	545	590-545							66.0		4.00	0.27	0.0	0.0	4.00	0.00	1.07					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	3.83	43.883
FLEURETTE STREET	580	570	580-570	4.50				11.79		11.8		4.00	0.05	0.0	0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.52	0.145	0.145		0.000	0.000		0.336		0.336	0.85	39.191
FLEURETTE CIRCLE	575	570	575-570	9.01				23.57		23.6		4.00	0.10	0.0	0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	1.13	0.317	0.317		0.000	0.000		0.699		0.699	1.21	57.259
FLEURETTE STREET	570	565	570-565							35.4		4.00	0.14	0.0	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.462		0.000	0.000		1.035		1.035	2.41	41.919
PERCY	585	565	585-565	7.88				20.63		20.6		4.00	0.08	0.0	0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	1.71	32.044
PERCY	565	550	565-550	5.63			2.00	14.73		70.7		4.00	0.29	0.0	0.0	4.00	0.00	1.15					1.50	0.000					1.500	0.000	0.000	0.53	0.150	0.836		0.000	0.000		1.982		1.982	6.28	29.560
PERCY	560	555	560-555	12.38				32.41		32.4		4.00	0.13	0.0	0.0	4.00	0.00	0.53					1.50	0.000					1.500	0.000	0.000	1.01	0.282	0.282		0.000	0.000		0.807		0.807	2.59	30.394
	555	550	555-550							32.4		4.00	0.13	0.0	0.0	4.00	0.00	0.53					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.282		0.000	0.000		0.807		0.807	2.38	33.055
JEAN MARC	550	545	550-545							103.1		4.00	0.42	0.0	0.0	4.00	0.00	1.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.118		0.000	0.000		2.789		2.789	7.48	34.518
DESNOYERS	545	540	545-540	10.13				26.52		195.7		4.00	0.79	0.0	0.0	4.00	0.00	3.17					1.50	0.000					1.500	0.000	0.000	0.94	0.262	2.060		0.000	0.000		5.231		5.231	18.70	22.740
	540	535	540-535	7.88				20.63		216.3		4.00	0.88	0.0	0.0	4.00	0.00	3.51					1.50	0.000					1.500	0.000	0.000	0.95	0.265	2.325		0.000	0.000		5.830		5.830	18.33	25.970
ST. ISIDORE (WEST)	535	530	535-530	16.89	2.67	0.86	1.00	50.87		1523.0		3.67	6.17	0.0	0.0	3.67	0.00	22.67	2.305		0.747		1.50	1.120					1.500	0.000	6.114	2.30	0.645	15.880		0.000	0.000		44.665	13.323	57.989	85.95	9.476
	530	525	530-525							1523.0		3.67	6.17	0.0	0.0	3.67	0.00	22.67					1.50	0.000					1.500	0.000	6.114	0.00	0.000	15.880		0.000	0.000		44.665	13.323	57.989	66.79	28.828
ST. ANNE	990	985	990-985	14.63				38.31		38.3		4.00	0.16	0.0	0.0	4.00	0.00	0.62					1.50	0.000					1.500	0.000	0.000	1.57	0.439	0.439		0.000	0.000		1.060		1.060	5.02	20.043
	985	980	985-980							38.3		4.00	0.16	0.0	0.0	4.00	0.00	0.62					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.439		0.000	0.000		1.060		1.060	5.08	19.806
	980	975	980-975	10.13				26.52		64.8		4.00	0.26	0.0	0.0	4.00	0.00	1.05					1.50	0.000					1.500	0.000	0.000	0.96	0.268	0.707		0.000	0.000		1.758		1.758	8.54	18.823
	975	970	975-970							64.8		4.00	0.26	0.0	0.0	4.00	0.00	1.05					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.707		0.000	0.000		1.758		1.758	8.69	18.462
	970	965	970-965	7.88	5.33			31.51		96.3		4.00	0.39	0.0	0.0	4.00	0.00	1.56					1.50	0.000					1.500	0.000	0.000	0.78	0.219	0.926		0.000	0.000		2.487		2.487	12.13	18.010
	965	905	965-905							96.3		4.00	0.39	0.0	0.0	4.00	0.00	1.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.926		0.000	0.000		2.487		2.487	9.33	24.168
FAUCHER	960	955	960-955	9.01				23.57		23.6		4.00	0.10	0.0	0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	0.91	0.255	0.255		0.000	0.000		0.637		0.637	2.55	24.369
	955	945	955-945							23.6		4.00	0.10	0.0	0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.255		0.000	0.000		0.637		0.637	2.95	20.979
COURT 'B'	950	945	950-945	4.50				11.79		11.8		4.00	0.05	0.0	0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.95	0.267	0.267		0.000	0.000		0.458		0.458	1.71	26.391
FAUCHER	945	940	945-940							35.4		4.00	0.14	0.0	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.90	0.252	0.774		0.000	0.000		1.347		1.347	6.42	19.632
	940	930	940-930	9.01				23.57		58.9		4.00	0.24	0.0	0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.774		0.000	0.000		1.729		1.729	7.90	20.165
COURT 'A'	935	930	935-930	6.75				17.68		17.7		4.00	0.07	0.0	0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.06	0.297	0.297		0.000	0.000		0.584		0.584	2.84	19.950
FAUCHER	930	925	930-925	9.01				23.57		100.2		4.00	0.41	0.0	0.0	4.00	0.00	1.62					1.50	0.000					1.500	0.000	0.000	0.92	0.258	1.329		0.000	0.000		2.953		2.953	13.66	18.671
	925	915	925-915							100.2		4.00	0.41	0.0	0.0	4.00	0.00	1.62					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.329		0.000	0.000		2.953		2.953	13.39	19.096
ALBERT	920	915	920-915	6.75				17.68		17.7		4.00	0.07	0.0	0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.73	0.206	0.206		0.000	0.000		0.492		0.492	2.29	21.032
EASEMENT	915	910	915-910							117.9		4.00	0.48	0.0	0.0	4.00	0.00	1.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.535		0.000	0.000		3.445		3.445	14.93	19.624
	910	905	910-905	5.63				14.73		132.6		4.00	0.54	0.0	0.0	4.00	0.00	2.15					1.50	0.000					1.500	0.000	0.000	0.35	0.097	1.632		0

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRAENOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRAENOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
STATION	520A	515	520A-515	6.75		0.86		18.90		18.9		4.00	0.08	0.0	4.00	0.00	0.31						1.50	0.000					1.500	0.000	0.000	0.58	0.162	0.162		0.000	0.000		0.469		0.469	0.57	81.915
ST. JOSEPH (NORTH)	515	505	515-505					2052.2				3.58	8.31	0.0	3.58	0.00	29.74						1.50	0.000					1.500	0.000	26.337	0.00	0.000	30.981		0.000	0.000		87.056	36.324	123.379	90.68	12.688
CARTIER	510	505	510-505	23.64	10.67	3.44		88.55		88.5		4.00	0.36	0.0	4.00	0.00	1.43						1.50	0.000					1.500	0.000	0.000	1.79	0.502	0.502		0.000	0.000		1.937		1.937	2.15	88.319
ST. JOSEPH (NORTH)	505	500	505-500					2140.7				3.56	8.67	0.0	3.56	0.00	30.90						1.50	0.000					1.500	0.000	26.337	0.00	0.000	31.484		0.000	0.000		88.716	36.324	125.040	94.11	7.823
	500	460	500-460					2140.7				3.56	8.67	0.0	3.56	0.00	30.90						1.50	0.000					1.500	0.000	26.337	0.00	0.000	31.484		0.000	0.000		88.716	36.324	125.040	88.05	16.977
LAVAL	495	485	495-485	5.63				14.73		14.7		4.00	0.06	0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	0.53	0.149	0.149		0.000	0.000		0.388		0.388	1.42	26.890
CARTIER	490	485	490-485	4.50				11.79		11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.40	0.112	0.112		0.000	0.000		0.303		0.303	1.44	20.781
LAVAL	485	480	485-480					26.5		26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.33	20.074
	480	465	480-465					26.5		26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.15	21.276
LAVAL	475	470	475-470	7.88		2.58		24.30		24.3		4.00	0.10	0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	1.37	0.384	0.384		0.000	0.000		0.778		0.778	3.55	21.144
	470	465	470-465					24.3		24.3		4.00	0.10	0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.384		0.000	0.000		0.778		0.778	3.60	20.825
DOLLARD	465	460	465-460	15.76				41.25		92.1		4.00	0.37	0.0	4.00	0.00	1.49						1.50	0.000					1.500	0.000	0.000	1.65	0.461	1.106		0.000	0.000		2.598		2.598	3.06	82.318
ST. JOSEPH (NORTH)	460	455	460-455	16.89	8.00	5.16		67.88		2300.7		3.54	9.32	0.0	3.54	0.00	32.97						1.50	0.000					1.500	0.000	26.337	2.07	0.580	33.170		0.000	0.000		92.478	36.324	128.802	75.15	42.589
	455	305B	455-305B							2300.7		3.54	9.32	0.0	3.54	0.00	32.97						1.50	0.000					1.500	0.000	26.337	0.00	0.000	33.170		0.000	0.000		92.478	36.324	128.802	67.78	61.239
DROUIN	450	445	450-445	4.50				11.79		11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	1.45	0.407	0.407		0.000	0.000		0.598		0.598	0.69	86.382
	445	440	445-440							11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		0.598		0.598	0.71	83.373
	440	435	440-435							11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		0.598		0.598	0.91	65.311
	435	430	435-430	24.76				64.82		76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	2.84	0.795	1.202		0.000	0.000		2.444		2.444	6.53	34.983
	430	425	430-425							76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		2.444		2.444	6.17	37.192
	425	395	425-395							76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		2.444		2.444	6.07	37.805
MARQUETTE	420	415	420-415	16.89				44.20		44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	1.68	0.471	0.471		0.000	0.000		1.188		1.188	2.68	43.151
	415	410	415-410							44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	3.03	37.972
	410	400	410-400							44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	2.97	38.792
JOLIETTE	405	400	405-400	10.13				26.52		26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	1.04	0.291	0.291		0.000	0.000		0.720		0.720	1.80	39.221
JOLIETTE	400	395	400-395					70.7		4.00	0.29	0.0	4.00	0.00	1.15								1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.762		0.000	0.000		1.908		1.908	4.95	36.646
DROUIN	395	PS4	395-PS4					147.3		4.00	0.60	0.0	4.00	0.00	2.39								1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000		4.352		4.352	12.11	31.583
(forcemain)	PS4	390	PS4-390					147.3		4.00	0.60	0.0	4.00	0.00	2.39								1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000	18.500	4.352	14.148	18.500	0.00	
LEVESQUES	390	385	390-385	7.88				20.63		168.0		4.00	0.68	0.0	4.00	0.00	2.72						1.50	0.000					1.500	0.000	0.000	1.53	0.427	2.391		0.000	0.000		5.113	14.148	19.261	34.93	35.884
	385	380	385-380							168.0		4.00	0.68	0.0	4.00	0.00	2.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.391		0.000	0.000		5.113	14.148	19.261	43.25	25.269
	380	375	380-375	25.89				67.77		235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	2.89	0.808	3.199		0.000	0.000		7.019	14.148	21.168	46.54	24.310
	375	370	375-370							235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		7.019	14.148	21.168	47.20	23.678
	370	365	370-365							235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		7.019	14.148	21.168	45.86	24.985
	365	335	365-335							235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		7.019	14.148	21.168	45.16	25.707
DROUIN	360	355	360-355	23.64				61.88		61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	3.12	0.873	0.873		0.000	0.000		1.876		1.876	3.65	49.532
	355	350	355-350							61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	4.09	43.974
	350	345	350-345							61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	3.83	47.159
LEVESQUES	345	340	345-340	5.63				14.73		76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.71	0.199	1.072		0.000	0.000		2.314		2.314	4.88	45.137
	340	335	340-335							76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.072		0.000	0.000		2.314		2.314	4.47	49.466
EASEMENT	335	330	335-330							312.3		4.00	1.27	0.0	4.00	0.00	5.06						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.272		0.000	0.000		9.333	14.148	23.481	51.19	22.386
	330	320	330-320	7.88				20.63		333.0		4.00	1.35	0.0	4.00	0.00	5.40						1.50	0.000					1.500	0.000	0.000	0.91	0.254	4.525		0.000	0.000		9.921	14.148	24.069	53.32	21.068
LAVAL	325	320	325-320	5.63				14.73		14.7		4.00	0.06	0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	1.10	0.309	0.309		0.000	0.000		0.547		0.547	1.89	28.361
LAVAL	320	315	320-315							347.7		4.00	1.41	0.0	4.00	0.00	5.63						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.834		0.000	0.000		10.468	14.148	24.616	50.05	24.569
MONTCALM	315	310	315-310	5.63		8.61		26.99		374.7		4.00	1.52	0.0	4.00	0.00	6.07	1.826		0.592			1.50	0.888					1.500	0.000	0.888	1.83	0.511	5.345		0.000	0.000		12.304	14.148	26.452	52.46	23.969
	310	305B	310-305B							374.7		4.00	1.52	0.0	4.00	0.00	6.07						1.50	0.000					1.500	0.000	0.888	0.00	0.000	5.345		0.000	0.000		12.304	14.148	26.452	65.72	13.798
MONTCALM	305A	305B	305A-305B	1.13		5.16		10.30		10.3		4.00	0.04	0.0	4.00	0.00	0.17						1.50	0.000					1.500	0.000	0.000	0.36	0.101	0.101		0.000	0.000		0.268		0.268	0.51	52.411
MONTCALM	305B	300	305B-300							2685.7		3.48	10.88	0.0	3.48	0.00	37.89						1.50	0.000					1.500	0.000	27.225	0.00	0.000	38.616		0.000	0.000		103.732	50.472	154.204	75.82	49.185
	300	290	300-290	4.50		6.02		20.36		2706.0		3.48	10.96	0.0	3.48	0.00	38.15	0.789		0.256			1.50	0.383					1.500	0.000	27.608	0.79	0.221	38.837		0.000	0.000		104.593	50.472	155.065	52.19	142.048
ST. THERESE	295	290	295-290	7.88		6.02		29.20		29.2		4.00	0.12	0.0	4.00	0.00	0.47						1.50	0.000					1.500	0.000	0.000	1.14	0.318	0.318		0.000	0.000		0.791		0.791	14.49	4.669
MONTCALM	290	255	290-255							2735.2		3.48	11.08	0.0	3.48	0.00	38.52						1.50	0.000					1.500	0.000	27.608	0.00	0.000	39.155		0.000	0.000		105.280	50.472	155.752	63.82	88.315
CARTIER	285	280	285-280	2.25				5.89		5.9		4.00	0.02	0.0	4.00	0.00	0.10	0.601		0.195			1.50	0.292					1.500	0.000	0.292	0.60	0.168	0.168		0.000	0.000		0.556		0.556	2.52	21.540
ST. JEAN	280	275	280-275	6.75				17.68		23.6		4.00	0.10	0.0	4.00	0.00	0.38	1.026		0.333			1.50	0.499					1.500	0.000	0.791	1.03	0.287	0.456		0.000	0.000		1.629		1.629	7.52	20.021
	275	265	275-265							23.6		4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.791	0.00	0.000	0.456		0.000	0.000		1.629		1.629	7.61	19.768
DOLLARD	270	265	270-265	4.50	2.67	3.44		22.13		22.1		4.00	0.09	0.0	4.00	0.00	0.36						1.50	0.000					1.500	0.000	0.000	0.55	0.155	0.155		0.000	0.000		0.514		0.514	2.46	20.380
ST. JEAN	265	260	265-260	7.88	2.67	26.68		64.05		109.8		4.00	0.44	0.0	4.00	0.00	1.78	1.356		0.440			1.50	0.659					1.500	0.000	1.450	1.36	0.380	0.991		0.000	0.000		4.219		4.219	19.37	17.565
	260	255	260-255							109.8		4.00	0.44	0.0	4.00	0.00	1.78						1.50	0.000					1.500	0.000	1.450	0.00	0.000	0.991		0.000	0.000		4.219		4.219	7.01	56.012
MONTCALM	255	90	255-90							2845.0		3.46	11.52	0.0	3.46	0.00	39.90						1.50	0.000					1.500	0.000	29.059	0.00	0.000	40.145		0.000	0.000		109.102	50.472	159.574	64.10	89.372
ST. ISIDORE (EAST)	250	245	250-245	5.63		0.86		15.96		16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	2.53	0.708	0.708		0.000	0.000		0.967		0.967	4.45	20.777
	245	240	245-240							16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	4.43	20.833
	240	235	240-235							16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	4.44	20.787
	235	230A	235-230A							16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	6.44	14.037
	230A	230	230A-230	7.88				20.63		36.6		4.00	0.15	0.0	4.00	0.00	0.59						1.50	0.000					1.500	0.000	0.000	1.84	0.515	1.223		0.000	0.000		1.816		1.816	7.74	21.649
	230	225	230-225							36.6		4.00	0.15	0.0	4.00	0.00	0.59						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.223		0.000	0.000		1.816		1.816	8.29	20.093
	225	215	225-215	10.13				26.52		63.1		4.00	0.26	0.0	4.00	0.00	1.02	2.472		0.801			1.50	1.202					1.500	0.000	1.202	2.47	0.692	1.915		0.000	0.000		4.139		4.139	19.05	17.584
BREBOEUF	220	215	220-215	9.01				23.57		23.6		4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.000	0.86	0.241	0.241		0.000	0.000		0.623		0.623	2.98	20.294
ST. ISIDORE (EAST)	215	205	215-205	3.38	8.00	2.58		28.84		115.5		4.00	0.47	0.0	4.00	0.00	1.87	0.738		0.239			1.50	0.359					1.500	0.000	1.560	0.74	0.207	2.363		0.000	0.000		5.795		5.795	27.97	14.925
PRINCIPALE	210	205	210-205	1.13		3.44		7.85		7.8		4.00	0.03	0.0	4.00	0.00	0.13						1.50	0.000					1.500	0.000	0.000	0.32	0.090	0.090		0.000	0.000		0.217		0.217	0.96	22.302
PRINCIPALE	205	165	205-165		2.67	7.75		16.47		139.8		4.00	0.57	0.0	4.00	0.00	2.27	2.376		0.770			1.50	1.155					1.500	0.000	2.715	2.38	0.665	3.118		0.000	0.000		8.099		8.099	37.63	13.426
	201	33	201-33	4.50	18.67	6.02		58.45		58.5		4.00	0.24	0.0	4.00	0.00	0.95	2.442		0.791			1.50	1.187					1.500	0.000	1.187	2.44	0.684	0.684		0.000	0.000		2.818		2.818	13.92	17.425
	33	200	33-200							58.5		4.00	0.24	0.0	4.00	0.00	0.95						1.50	0.000					1.500	0.000	1.187	0.00	0.000	0.684		0.000	0.000		2.818		2.818	13.92	17.425
LAURIER	200	195	200-195	11.26	2.67			34.91		93.4		4.00	0.38	0.0	4.00	0.00	1.51						1.50	0.000					1.500	0.000	1.187	0.57	0.160	0.844		0.000	0.000		3.543		3.543	15.40	19.466
	195	190	195-190	12.38		3.44		37.31		130.7		4.00	0.53	0.0	4.00	0.00	2.12						1.50	0.000					1.500	0.000	1.187	1.12	0.313	1.156		0.000	0.000		4.461		4.461	20.64	17.152
	190	185	190-185	27.02	2.67			76.16		206.8		4.00	0.84	0.0	4.00	0.00	3.35						1.50	0.000					1.500	0.000	1.187	2.03	0.568	1.725		0.000	0.000		6.263		6.263	30.32	14.393
	185	175	185-175							206.8		4.00	0.84	0.0	4.00	0.00	3.35						1.50	0.000					1.500	0.000	1.187	0.00	0.000	1.725		0.000	0.000		6.263		6.263	30.11	14.541
BREBOEUF	180	175	180-175	3.38				8.84		8.8		4.00	0.04	0.0	4.00	0.00	0.14						1.50	0.000					1.500	0.000	0.000	0.42	0.118	0.118		0.000	0.000		0.262		0.262	0.95	27.208
LAURIER	175	170	175-170	1.13		1.72		5.40		221.1		4.00	0.90	0.0	4.00	0.00	3.58	0.441		0.143			1.50	0.214					1.500	0.000	1.401	0.44	0.123	1.966		0.000	0.000		6.950		6.950	32.38	14.511
	170	165	170-165							221.1		4.00	0.90	0.0	4.00	0.00	3.58						1.50	0.000					1.500	0.000	1.401	0.00	0.000	1.966		0.000	0.000		6.950		6.950	32.39	14.506
PRINCIPALE	165	160	165-160							360.9		4.00	1.46	0.0	4.00	0.00	5.85						1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	0.000		15.049		15.049	45.61	17.944
	160	155	160-155							360.9		4.00	1.46	0.0	4.00	0.00	5.85						1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	0.000		15.049		15.049	45.84	17.782
	271	155	271-155							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	36.703
	155	150	155-150							360.9		4.00	1.46	0.0	4.00	0.00	5.85						1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	0.000		15.049		15.049	46.41	17.373
	150	115	150-115							360.9		4.00	1.46	0.0	4.00	0.00	5.85	1.428		0.463			1.50	0.694					1.500	0.000	4.811	1.43	0.400	5.484		0.000	0.000		16.143		16.143	49.29	16.611
BREBOEUF	145	140	145-140	10.13		6.02		35.10		35.1		4.00	0.14	0.0	4.00	0.00	0.57	2.187		0.709			1.50	1.063					1.500	0.000	1.063	2.19	0.612	0.612		0.000	0.000		2.244		2.244	10.64	18.837
	140	125	140-125							35.1		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	1.063	0.00	0.000	0.612		0.000	0.000		2.244		2.244	10.61	18.898
ARENA	135	130	135-130							0.0		4.00	0.00	0.0	4.00	0.00	0.00	1.274		0.413			1.50	0.619					1.500	0.000	0.619	1.27	0.357	0.357		0.000	0.000		0.976		0.976	3.92	23.946
	130	125	130-125							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.619	0.00	0.000	0.357		0.000	0.000		0.976		0.976	4.54	20.515
BREBOEUF	125	120	125-120							35.1		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	1.682	0.00	0.000	0.969		0.000	0.000		3.220		3.220	15.39	17.699
	49	48	49-48							0.0		4.00	0.00	0.0	4.00	0.00	0.00	5.200		1.685			1.50	2.528					1.500	0.000	2.528	5.20	1.456	1.456		0.000	0.000		3.984		3.984	19.68	16.259
	48	46	48-46							0.0		4.00	0.00	0.0	4.00	0.00	0.00					

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
	110	90	110-90					505.0			3.97	2.05		0.0	3.97	0.00	8.12					1.50	0.000					1.50	0.000	10.478	0.00	0.000	8.865		0.000	0.000		27.469		27.469	48.38	29.304
BREBOEUF	105	100	105-100	1.13		17.21		27.45		27.5	4.00	0.11		0.0	4.00	0.00	0.44					1.50	0.000					1.50	0.000	0.000	0.57	0.161	0.161		0.000	0.000		0.605		0.605	2.90	20.265
BREBOEUF	47	54	47-54					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
BREBOEUF	54	100	54-100					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
	100	95	100-95					27.5		0.0	4.00	0.11		0.0	4.00	0.00	0.44					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.161		0.000	0.000		0.605		0.605	2.90	20.299
MONTCALM	95	90	95-90	11.26	2.67			34.91		62.4	4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.50	0.000	0.000	0.70	0.196	0.357		0.000	0.000		1.367		1.367	1.24	108.719
PRINCIPALE	90	85	90-85	2.25				5.89		3418.2	3.39	13.85		0.0	3.39	0.00	46.99	1.836		0.595		1.50	0.893					1.50	0.000	40.430	1.84	0.514	49.882		0.000	0.000		137.303	50.472	187.775	85.17	32.699
	85	83	85-83					3418.2		3.39	13.85			0.0	3.39	0.00	46.99					1.50	0.000					1.50	0.000	40.430	0.00	0.000	49.882		0.000	0.000		137.303	50.472	187.775	78.11	52.630
	84	83	84-83	10.13	13.33	6.02		62.3		62.3	4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.50	0.000	0.000	0.92	0.258	0.258		0.000	0.000		1.268		1.268	3.72	32.812
	83	318	83-316					3480.5		3.39	14.10			0.0	3.39	0.00	47.75					1.50	0.000					1.50	0.000	40.430	0.00	0.000	50.140		0.000	0.000		138.321	50.472	188.793	74.64	64.140
	316	80	316-80					3480.5		3.39	14.10			0.0	3.39	0.00	47.75					1.50	0.000					1.50	0.000	40.430	0.00	0.000	50.140		0.000	0.000		138.321	50.472	188.793	71.13	76.637
	80	317	80-317					3480.5		3.39	14.10			0.0	3.39	0.00	47.75					1.50	0.000					1.50	0.000	40.430	0.00	0.000	50.140		0.000	0.000		138.321	50.472	188.793	98.68	2.529
	317	318	317-318					3480.5		3.39	14.10			0.0	3.39	0.00	47.75					1.50	0.000					1.50	0.000	40.430	0.00	0.000	50.140		0.000	0.000		138.321	50.472	188.793	74.73	63.848
	458	457	458-457					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	88.749
	457	115-7	457-4550					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	143.243
	464	461	464-461					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.433
	461	466	461-466					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	17.996
	466	459	466-459					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.031
	459	4550	459-4550					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.017
	4550	456	4550-456					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	77.063
	462	463	462-463					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.617
	463	456	463-456					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.818
	456	454	456-454					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	85.850
	454	453	454-453					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	92.384
	453	452	453-452					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	122.094
	452	451	452-451					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	55.862
	451	4500	451-4500					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	108.799
	4500	449	4500-449					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	97.374
	449	448	449-448					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	97.049
	448	447	448-447					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	96.980
	447	446	447-446					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	242.291
	446	471	446-471					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	148.790
	471	318	471-318					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	189.347
	318	PS1	318-PS1					3480.5		3.39	14.10			0.0	3.39	0.00	47.75					1.50	0.000	40.430	0.00	0.000	50.140		0.000	0.000		138.321	50.472	188.793	55.75	149.853
	1320	1330	1320-1330	6.75				17.68		17.7	4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.50	0.000	0.000	1.54	0.433	0.433		0.000	0.000		0.719		0.719	3.65	18.959
	1675	1680	1675-1680					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.138
	1680	1685	1680-1685					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.755
	1685	1690	1685-1690					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.023
	1690	1330	1690-1330					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.299
	1330	1340	1330-1340					17.7		4.00	0.07			0.0	4.00	0.00	0.29					1.50	0.000	0.000	0.00	0.000	0.433		0.000	0.000		0.719		0.719	3.52	19.692
	1340	1350	1340-1350	6.75				35.4		4.00	0.14			0.0	4.00	0.00	0.57					1.50	0.000	1.35	0.379	0.811		1.50	0.000	0.000	1.384	0.347	0.343		0.000	0.000		1.384		1.384	6.90	18.666
	1605	1610	1605-1610					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.161
	1610	1615	1610-1615					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.071
	1615	1620	1615-1620					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.828
	1620	1625	1620-1625					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.845
	1625	1630	1625-1630					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.716
	1630	1635	1630-1635					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.310
	1635	1640	1635-1640					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	28.133
	1655	1660	1655-1660					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.011
	1660	1665	1660-1665					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.617
	1665	1670	1665-1670					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.429
	1670	1640	1670-1640					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.420
	1640	1645	1640-1645					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.186
	1645	1650	1645-1650					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.300
	1650	1350	1650-1350					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.262
	1350	1360	1350-1360	2.25				5.89		41.3	4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000	0.000	0.00	0.032	0.091	0.902	0.000	0.000		1.570		1.570	7.18	20.289
	1360	1370	1360-1370					41.3		4.00	0.17			0.0	4.00	0.00	0.67					1.50	0.000	0.000	0.00	0.000	0.000	0.902	0.000	0.000		1.570		1.570	8.93	16.015
	1370	1380	1370-1380					41.3		4.00	0.17			0.0	4.00	0.00	0.67					1.50	0.000	0.000	0.00	0.000	0.000	0.902	0.000	0.000		1.570		1.570	7.65	18.948
	1300	1310	1300-1310					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.653
	1310	1380	1310-1380					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	21.357
PRINCIPALE	1380	1390	1380-1390					41.3		4.00	0.17			0.0	4.00	0.00	0.67					1.50	0.000	0.000	0.00	0.000	0.000		0.000	0.000		1.570		1.570	8.57	16.755
	1390	1400	1390-1400	2.25				5.89		47.1	4.00	0.19		0.0	4.00	0.00	0.76	1.299		0.421		1.50	0.632	0.000	0.00	0.632	1.30	0.364	1.266	0.000	0.000		2.661		2.661	12.55	18.540
	1700	1705	1700-1705	22.51				58.93		58.9	4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000	0.000	0.00	0.000	3.49	0.978	0.978	0.000	0.000		1.933		1.933	7.14	25.135
	1705	1710	1705-1710					58.9		4.00	0.24			0.0	4.00	0.00	0.95					1.50	0.000	0.000	0.00	0.000	0.00	0.978	0.978	0.000	0.000		1.933		1.933	9.48	18.466
	1710	1715	1710-1715					58.9		4.00	0.24			0.0	4.00	0.00	0.95					1.50	0.000	0.000	0.00	0.000	0.00	0.978	0.978	0.000	0.000		1.933		1.933	9.40	18.624
	1715	1400	1715-1400					58.9		4.00	0.24			0.0	4.00	0.00	0.95					1.50	0.000	0.000	0.00	0.000	0.00	0.978	0.978	0.000	0.000		1.933		1.933	7.06	25.434
	1400	1410	1400-1410	1.13				2.95		109.0	4.00	0.44		0.0	4.00	0.00	1.77					1.50	0.000	0.000	0.00	0.632	2.47	0.691	2.935	0.000	0.000		5.333		5.333	12.98	35.763
	1410	1420	1410-1420	1.13				2.95		112.0	4.00	0.45		0.0	4.00	0.00	1.81	1.169		0.379		1.50	0.568	0.000	0.00	1.200	1.17	0.327	3.262	0.000	0.000		6.276		6.276	16.11	32.671
	1720	1725	1720-1725	18.01				47.15		47.1	4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000	0.000	0.00	0.000	2.78	0.780	0.780	0.000	0.000		1.544		1.544	7.33	19.528
	1725	1730	1725-1730					47.1		4.00	0.19			0.0	4.00	0.00	0.76					1.50	0.000	0.000	0.00	0.000	0.00	0.780	0.780	0.000	0.000		1.544		1.544	7.77	18.331
	1730	1420	1730-1420					47.1		4.00	0.19			0.0	4.00	0.00	0.76					1.50	0.000	0.000	0.00	0.000	0.00	0.780	0.780	0.000	0.000		1.544		1.544	5.79	25.101
	1420	1430	1420-1430					159.1		4.00	0.64			0.0	4.00	0.00	2.58					1.50	0.000	1.200	0.00	0.000	4.042		0.000	0.000		7.820		7.820	18.28	34.954
	1430	1440	1430-1440	4.50				11.79		170.9	4.00	0.69		0.0	4.00	0.00	2.77					1.50	0.000	1.200	1.200	3.45	0.966	5.008	0.000	0.000		8.977		8.977	20.89	33.989
	1755	1750	1755-1750	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000	0.000	0.00	0.000	0.90	0.253	0.253	0.000	0.000		0.492		0.492	1.72	28.083
	1750	1745	1750-1745					14.7		4.00	0.06			0.0	4.00	0.00	0.24					1.50	0.000	0.000	0.00	0.000	0.00	0.253	0.253	0.000	0.000		0.492		0.492	1.92	25.091
	1745	1740	1745-1740	10.13				26.52		41.3	4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000	0.000	0.00	0.000	1.44	0.404	0.657	0.000	0.000		1.326		1.326	10.99	10.742
	1740	1735	1740-1735					41.3		4.00	0.17			0.0	4.00	0.00	0.67					1.50	0.000	0.000	0.00	0.000	0.00	0.657	0.657	0.000	0.000		1.326		1.326	6.50	19.078
	1735	1440	1735-1440					41.3		4.00	0.17			0.0	4.00	0.00	0.67					1.50	0.000	0.000	0.00	0.000	0.00	0.657	0.657	0.000	0.000		1.326		1.326	5.52	22.680
	1440	1450	1440-1450	2.25				5.89		218.0	4.00	0.88		0.0	4.00	0.00	3.53					1.50	0.000	1.200	0.00	0.156	0.56	0.156	5.821	0.000	0.000		10.554		10.554	22.98	35.370
Area C	1450	1460	1450-1460	4.50				11.79		229.8	4.00	0.93		0.0	4.00	0.00	3.72					1.50	0.000	1.200	1.200	0.94	0.264	6.085	0.000	0.000		11.009		11.009	25.50	32.161
	1755	1760	1755-1760					0.0		0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.00	0.000	0.000	0.000	0.000		0.000		0.000	0.00	30.836
	1760	1765	1760-1765					0.0		4.00	0.00			0.0	4.00	0.00	0.00					1.50	0.000	0.000	0.00	0.000	0.00	0.000	0.000	0.000	0.000		0.000		0.000	0.00	22.753
	1765	1770	1765-1770	6.75				17.68		17.7	4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000	0.000	0.00	0.000	1.01	0.283	0.283	0.000	0.000		0.570		0.570	2.05	27.169
	1770	1775	1770-1775					17.7		4.00	0.07			0.0	4.00	0.00	0.29					1.50	0.000	0.000	0.00	0.000	1.01	0.283	0.283	0.000	0.000		0.570		0.570	2.41	23.048
	1775	1460	1775-1460	3.38				8.84		26.5	4.00	0.11		0.0	4.00	0.00	0.43					1.50	0.000	0.000	0.00	0.000	0.32	0.091	0.374	0.000	0.000		0.804		0.804	4.10	18.820
	1460	1470	1460-1470	9.01				23.57		279.9	4.00	1.13		0.0	4.00	0.00	4.54					1.50	0.000	1.200	0.00	0.449	1.60	0.449	6.908	0.000	0.000		12.644		12.644	26.66	34.776
	1470	1480	1470-1480	9.01				23.57		303.5	4.00	1.23		0.0	4.00	0.00	4.92					1.50	0.000	1.200	0.00	0.000	2.17	0.608	7.516	0.000	0.000		13.633		13.633	29.50	32.576
	1480	1480A	1480-1480A	2.25			1.00	5.89		309.4	4.00	1.25		0.0	4.00	0.00	5.01					1.50	0.000	1.200	0.00	0.594	2.12	0.594	8.109	0.000	0.000		14.322		14.322	33.00	29.077
	1480A	1490	1480A-1490	3.38				8.84		318.2	4.00	1.29		0.0	4.00	0.00	5.16					1.50	0.000	1.200	0.00	0.000	0.95	0.267	8.376	0.000	0.000		14.733		14.733	34.97	27.397
	2070	2065	2070-2065	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000	0.000	0.00	0.000	3.88	1.087	1.087	0.000	0.000		1.278		1.278	4.98	24.377
	2065	2060	2065-2060					11.8		4.00	0.05			0.0	4.00	0.00	0.19					1.50	0.000	0.000	0.00	0.000	0.00	1.087	1.087	0.000	0.000		1.278		1.278	3.09	40.095
	2060	2055	2060-2055	2.25				5.89		17.7	4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000	0.000	3.16	0.880	4.04	0.880	1.971	0.000	0.000		2.258		2.258	5.93	35.793
	2055	2050	2055-2050					17.7		4.00	0.07			0.0

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STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA - Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant (units)	Popul. (peop.)	Metered Residential (L/s)	Cumm. Popul. (peop.)	Cumm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Cumm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION - EXISTING ICI - Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI - Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{cap} %	Residual Capacity (l/s)
	1835	1840	1835-1840							41.3		4.00	0.17	0.0	4.00	0.00	0.67						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.133		0.000	0.000		1.801		1.801	5.77	29.392
	1840	1845	1840-1845							41.3		4.00	0.17	0.0	4.00	0.00	0.67						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.133		0.000	0.000		1.801		1.801	5.93	28.553
	1995	2000	1995-2000							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	1.34	0.374	0.374		0.000	0.000		0.374		0.374	0.66	58.365
	2000	2005	2000-2005							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.532
	2005	1845	2005-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.743
	2025	2020	2025-2020							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	1.77	0.495	0.495		0.000	0.000		0.495		0.495	0.60	82.521
	2020	2015	2020-2015							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.05	46.770
	2015	2010	2015-2010							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.551
	2010	1845	2010-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.601
	1845	1850	1845-1850							41.3		4.00	0.17	0.0	4.00	0.00	0.67						1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.002		0.000	0.000		2.670		2.670	6.80	38.590
	1990	1985	1990-1985	13.51			14.00	35.36		35.4		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	1.74	0.488	0.488		0.000	0.000		1.061		1.061	2.72	37.886
	1985	1980	1985-1980		26.67		27.00	54.42		89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	1.65	0.462	0.950		0.000	0.000		2.405		2.405	5.43	41.893
	1980	1975	1980-1975							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.84	32.778
	1975	1970	1975-1970							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.80	32.952
	1970	1850	1970-1850							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	4.00	57.664
	1900	1905	1900-1905	6.75			11.00	17.68		17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	1.32	0.369	0.369		0.000	0.000		0.655		0.655	0.56	116.833
	1905	1910	1905-1910							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.11	30.467
	1910	1915	1910-1915							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.557
	1915	1920	1915-1920							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.535
	1920	1925	1920-1925	4.50			2.00	11.79		29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.65	0.182	0.551		0.000	0.000		1.028		1.028	3.40	29.225
	1925	1930	1925-1930							29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.99	33.366
	1930	1935	1930-1935							29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.14	47.007
	1935	1940	1935-1940	2.25				5.89		35.4		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	0.41	0.114	0.665		0.000	0.000		1.238		1.238	4.06	29.258
	1940	1945	1940-1945	12.38			7.00	32.41		67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	2.17	0.607	1.272		0.000	0.000		2.370		2.370	7.87	27.742
	1945	1950	1945-1950							67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.87	27.754
	1950	1955	1950-1955							67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.87	28.540
	1955	1960	1955-1960	11.26			12.00	29.47		97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	2.49	0.697	1.969		0.000	0.000		3.545		3.545	11.74	28.641
	1960	1965	1960-1965							97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	11.49	27.308
	1965	1850	1965-1850							97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	6.46	51.294
	1850	1855	1850-1855	1.13			1.00	2.95		231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.35	0.098	5.018		0.000	0.000		8.765		8.765	16.15	45.491
	1855	1860	1855-1860				8.00			231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	1.44	0.404	5.423		0.000	0.000		9.169		9.169	18.51	40.379
	1860	1865	1860-1865							231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.423		0.000	0.000		9.169		9.169	17.05	44.606
	1870	1865	1870-1865				5.00			0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.56	0.157	0.157		0.000	0.000		0.157		0.157	0.30	51.822
	1865	1875	1865-1875							231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	0.000		9.327		9.327	21.56	33.925
	1875	1880	1875-1880							231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	0.000		9.327		9.327	21.57	33.912
	1880	1885	1880-1885							231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	0.000		9.327		9.327	23.53	30.317
	1885	1890	1885-1890							231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	0.000		9.327		9.327	22.39	32.322
	1890	1520	1890-1520							231.2		4.00	0.94	0.0	4.00	0.00	3.75		1.870		0.758	1.50	1.136					1.500	0.000	1.136	1.87	0.524	6.104		0.000	0.000		10.987		10.987	23.31	36.142
	1520	PS6	1520-PS6							567.1		3.95	2.30	0.0	3.95	0.00	9.06						1.50	0.000					1.500	0.000	2.336	0.00	0.000	16.584		0.000	0.000		27.984		27.984	27.21	74.847

Reason for Upgrade	Upgrade due to Pump flow	Size Upgrade?	SEWER DATA: DIA. (mm)	Actual Dia. (mm)	DESIGN SLOPE (%)	ACTUAL SLOPE (%)	CAPAC. (l/s)	VEL. (m/s)	LENGTH (m)
			250	254.00	0.250	0.253	31.194	0.616	67.24
			250	254.00	0.240	0.239	30.352	0.599	41.78
			250	254.00	0.840	0.836	56.740	1.120	43.04
			250	254.00	0.600	0.596	47.906	0.945	38.57
			250	254.00	0.600	0.602	48.118	0.950	51.53
			250	254.00	0.420	1.791	83.016	1.638	33.51
			250	254.00	0.580	0.580	47.265	0.933	89.59
			250	254.00	0.600	0.600	48.046	0.948	31.68
			250	254.00	0.600	0.601	48.096	0.949	31.61
			250	254.00	0.400	0.400	39.260	0.775	87.39
			250	254.00	0.390	0.394	38.947	0.769	55.82
			250	254.00	0.510	0.510	44.297	0.874	25.50
			250	254.00	0.320	0.322	35.183	0.694	90.17
			250	254.00	0.320	0.325	35.356	0.698	52.34
			250	254.00	0.930	0.938	60.069	1.185	52.27
			250	254.00	0.250	3.586	117.488	2.319	17.57
			250	254.00	0.250	0.252	31.123	0.614	43.71
			250	254.00	0.250	0.253	31.212	0.616	43.46
			250	254.00	0.250	0.253	31.191	0.616	43.52
			250	254.00	0.240	0.238	30.253	0.597	46.26
			250	254.00	0.200	0.307	34.394	0.679	13.01
			250	254.00	0.240	0.600	48.035	0.948	16.68
			250	254.00	0.240	0.242	30.496	0.602	16.55
			250	254.00	0.240	0.236	30.112	0.594	72.16
			250	254.00	0.240	0.236	30.124	0.595	72.10
			250	254.00	0.250	0.248	30.910	0.610	36.25
			250	254.00	0.240	0.237	30.186	0.596	67.58
			250	254.00	0.250	0.247	30.853	0.609	64.69
			300	304.80	0.290	0.295	54.839	0.752	71.07
			300	304.80	0.290	0.289	54.256	0.744	24.20
			300	304.80	0.240	0.241	49.549	0.679	66.33
			300	304.80	0.280	0.284	53.775	0.737	66.87
			250	254.00	0.740	0.702	51.979	1.026	15.67
			300	304.80	0.100	0.184	43.252	0.593	48.96
			300	304.80	0.180	0.184	43.239	0.593	32.66
			300	304.80	0.180	0.154	39.644	0.543	19.43
			300	304.80	0.180	0.170	41.649	0.571	99.74
			300	304.80	0.210	0.218	47.129	0.646	96.22
			450	457.20	0.100	0.120	102.831	0.626	33.46

Upsize Diameter

Upstream Obvert (m)	Upstream Invert (m)	Downstream Obvert (m)		Comments
61.17	60.920	61.00	60.750	
61.00	60.750	60.90	60.650	
63.01	62.760	62.65	62.400	
62.65	62.400	62.42	62.170	
62.39	62.140	62.08	61.830	
63.00	62.750	63.60	63.350	
63.57	63.320	63.05	62.800	
63.02	62.770	62.83	62.580	
62.83	62.580	62.64	62.390	
60.90	60.650	60.55	60.300	
63.97	63.720	63.75	63.500	
63.69	63.440	63.56	63.310	
63.53	63.280	63.24	62.990	
63.24	62.990	63.07	62.820	
63.07	62.820	62.58	62.330	
62.67	62.420	62.04	61.790	
63.12	62.870	63.01	62.760	
63.01	62.760	62.90	62.650	
62.90	62.650	62.79	62.540	
62.73	62.480	62.62	62.370	
62.59	62.340	62.55	62.300	
62.65	62.400	62.55	62.300	
62.49	62.240	62.45	62.200	
62.39	62.140	62.22	61.970	
62.22	61.970	62.05	61.800	
62.05	61.800	61.96	61.710	
61.96	61.710	61.80	61.550	
61.80	61.550	61.64	61.390	
61.66	61.360	61.45	61.150	
60.55	60.250	60.48	60.180	
60.45	60.150	60.29	59.990	
60.29	59.990	60.10	59.800	
60.92	60.670	60.81	60.560	
60.04	59.740	59.95	59.650	
59.89	59.590	59.83	59.530	
59.77	59.470	59.74	59.440	
59.67	59.370	59.50	59.200	
59.50	59.200	59.29	58.990	
59.30	58.840	59.26	58.800	

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J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - March 2023 (0-5 years - Future Proofed)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/cap/d
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/cap/d
Infilt. Allowance:	0.28	L/ha/s

Population Density (Future Development): 2.375

Prepared by: M.L.
Checked by: B.P.

Downstream Runs
Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc	Industrial	Flows (l/s): Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc	Industrial	Flows (l/s): Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRA-NEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRA-NEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
RACINE	1210	1205	1210-1205							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.980		2.423	1.50	3.634					1.500	0.000	3.634	5.98	1.674	1.674		0.000	0.000		5.308		5.308	24.67	16.207
	1205	1200	1205-1200							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	3.634	0.00	0.000	1.674		0.000	0.000		5.308		5.308	24.80	16.100
	1200	1195	1200-1195							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000		0.19		0.077	1.500	0.115	3.749	0.00	0.000	1.674	1.3	0.365	0.365		5.788		5.788	23.26	19.098
	1195	1190	1195-1190							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	3.749	0.00	0.000	1.674		0.000	0.365		5.788		5.788	17.65	27.002
	1190	1185	1190-1185							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.372		2.176	1.50	3.264					1.500	0.000	7.014	5.37	1.504	3.179		0.000	0.365		10.557		10.557	27.57	27.741
	1185	1170	1185-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	7.014	0.00	0.000	3.179		0.000	0.365		10.557		10.557	28.01	27.136
RACINE	1180	1175	1180-1175							0.0	4.00	0.00		0.0	4.00	0.00	0.00		1.450		0.587	1.50	0.881					1.500	0.000	0.881	1.45	0.406	0.406		0.000	0.000		1.287		1.287	5.76	21.044
	1175	1170	1175-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.881	0.00	0.000	0.406		0.000	0.000		1.287		1.287	5.84	20.736
INDUSTRIEL	1170	1165	1170-1165							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	7.895	0.00	0.000	3.585		0.000	0.365		11.844		11.844	41.54	16.667
	1165	1150	1165-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	7.895	0.00	0.000	3.585		0.000	0.365		11.844		11.844	41.27	16.854
INDUSTRIEL	1160	1155	1160-1155							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.344	1.809	0.436	0.733	1.50	1.753					1.500	0.000	1.753	3.15	0.883	0.883		0.000	0.000		2.636		2.636	10.43	22.625
	1155	1150	1155-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	1.753	0.00	0.000	0.883		0.000	0.000		2.636		2.636	5.77	43.011
INDUSTRIEL	1150	PS3	1150-PS3							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	9.648	0.00	0.000	4.468		0.000	0.365		14.480		14.480	45.03	17.677
INDUSTRIEL	PS3	1125	PS3-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	9.648	0.00	0.000	4.468		0.000	0.365	37.000	14.480	22.520	37.000		
INDUSTRIEL	1145	1140	1145-1140							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.561	0.986	0.182	0.399	1.50	0.872					1.500	0.000	0.872	1.55	0.433	0.433		0.000	0.000		1.305		1.305	5.37	23.024
INDUSTRIEL	1140	1135	1140-1135							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.872	0.00	0.000	0.433		0.000	0.000		1.305		1.305	5.48	22.493
INDUSTRIEL	1135	1130	1135-1130							0.0	4.00	0.00		0.0	4.00	0.00	0.00	4.125		1.337		1.50	2.005					1.500	0.000	2.877	4.12	1.155	1.588		0.000	0.000		4.465		4.465	18.77	19.327
	1130	1125	1130-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	2.877	0.00	0.000	1.588		0.000	0.000		4.465		4.465	18.45	19.734
RACINE	1125	1095	1125-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.634		0.529		1.50	0.794					1.500	0.000	13.319	1.63	0.457	6.513		0.000	0.365		20.197	22.520	42.717	63.38	24.680
RICHER	1120	1115	1120-1115							0.0	4.00	0.00		0.0	4.00	0.00	0.00	2.242		0.727		1.50	1.090					1.500	0.000	1.090	2.24	0.628	0.628		0.000	0.000		1.718		1.718	4.91	33.250
	1115	1110	1115-1110							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	1.090	0.00	0.000	0.628		0.000	0.000		1.718		1.718	5.27	30.872
LAFLECHE	1110	1105	1110-1105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.733		0.238		1.50	0.356					1.500	0.000	1.446	0.73	0.205	0.833		0.000	0.000		2.279		2.279	6.90	30.770
	1105	1100	1105-1100							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	1.446	0.00	0.000	0.833		0.000	0.000		2.279		2.279	2.56	86.903
	SOUTH417	1100	OUTH417-110							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.838		0.596		1.50	0.893					1.500	0.000	0.893	1.84	0.515	0.515		0.000	0.000		1.408		1.408	4.58	29.345
PRINCIPALE	1100	1095	1100-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	2.340	0.00	0.000	1.348		0.000	0.000		3.687		3.687	6.29	54.908
PRINCIPALE	1095	1094	1095-1094							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	15.658	0.00	0.000	7.861		0.000	0.365		23.884	22.520	46.404	68.81	21.033
	1094	1090	1094-1090							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	15.658	0.00	0.000	7.861		0.000	0.365		23.884	22.520	46.404	72.79	17.342
PRINCIPALE	244	1090	244-1090							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	90.027
	1090	1085	1090-1085	2.25				5.89		5.9	4.00	0.02		0.0	4.00	0.00	0.10	3.031		0.982		1.50	1.473					1.500	0.000	17.132	3.03	0.849	8.709		0.000	0.365		26.301	22.520	48.821	77.86	13.880
	1085	1080	1085-1080							5.9	4.00	0.02		0.0	4.00	0.00	0.10					1.50	0.000					1.500	0.000	17.132	0.00	0.000	8.709		0.000	0.365		26.301	22.520	48.821	67.66	23.338
	1080	1070	1080-1070							5.9	4.00	0.02		0.0	4.00	0.00	0.10					1.50	0.000					1.500	0.000	17.132	0.00	0.000	8.709		0.000	0.365		26.301	22.520	48.821	76.23	15.225
PRINCIPALE	1075	1070	1075-1070							0.0	4.00	0.00		0.0	4.00	0.00	0.00		3.520		1.426	1.50	2.139					1.500	0.000	2.139	3.52	0.985	0.985		0.000	0.000		3.124		3.124	22.27	10.906
JEANNE MANCE	1070	1045	1070-1045	2.25		3.44		10.79		16.7	4.00	0.07		0.0	4.00	0.00	0.27					1.50	0.000					1.500	0.000	19.270	0.45	0.125	9.820		0.000	0.365		29.725	22.520	52.245	75.74	16.731
JEANNE MANCE	1050	1045	1050-1045	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19	0.530		0.172		1.50	0.258					1.500	0.000	0.258	0.53	0.148	0.148		0.000	0.000		0.597		0.597	1.81	32.347
ST. JOSEPH (SOUTH)	1065	1060	1065-1060	15.76	16.00			73.90		73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000					1.500	0.000	0.000	1.89	0.530	0.530		0.000	0.000		1.728		1.728	7.82	20.370
	1060	1055	1060-1055							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.55	18.487
	1055	1045	1055-1045							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.11	19.580
ST. JOSEPH (SOUTH)	1045	1040	1045-1040	10.13				26.52		128.9	4.00	0.52		0.0	4.00	0.00	2.09					1.50	0.000					1.500	0.000	19.528	1.12	0.314	10.812		0.000	0.365		32.793	22.520	55.314	38.63	87.875
	1040	1015	1040-1015							128.9	4.00	0.52		0.0	4.00	0.00	2.09					1.50	0.000					1.500	0.000	19.528	0.00	0.000	10.812		0.000	0.365		32.793	22.520	55.314	39.92	83.298
DUHAMEL	1020	1015	1020-1015	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.68	0.190	0.190		0.000	0.000		0.381		0.381	1.76	21.230
PRINCIPALE	1030	1025	1030-1025	3.38		1.72		11.29		11.3	4.00	0.05		0.0	4.00	0.00	0.18					1.50	0.000					1.500	0.000	0.000	0.48	0.135	0.135		0.000	0.000		0.318		0.318	1.51	20.728
PRINCIPALE	1035	1025	1035-1025	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38	1.667		0.540		1.50	0.810					1.500	0.000	0.810	1.67	0.467	0.467		0.000	0.000		1.659		1.659	8.02	19.027
DUHAMEL	1025	1015	1025-1015	7.88		0.86		21.85		56.7	4.00	0.23		0.0	4.00	0.00	0.92					1.50	0.000					1.500	0.000	0.810	0.62	0.174	0.776		0.000	0.000		2.506		2.506	12.92	16.881
ST. JOSEPH (SOUTH)	1015	1010	1015-1010	18.01				47.15		244.5	4.00	0.99		0.0	4.00	0.00	3.96					1.50	0.000					1.500	0.000	20.338	1.18	0.332	12.110		0.000	0.365		36.776	22.520	59.296	42.71	79.544
	1010	1000	1010-1000							244.5	4.00	0.99		0.0	4.00	0.00	3.96					1.50	0.000					1.500	0.000	20.338	0.00	0.000	12.110		0.000	0.365		36.776	22.520	59.296	42.72	79.502
ST. ISIDORE (WEST)	1005	1000	1005-1000		5.33	12.05		28.04		28.0	4.00	0.11		0.0	4.00	0.00	0.45					1.50	0.000					1.500	0.000	0.000	0.54	0.150	0.150		0.000	0.000		0.604		0.604	2.49	23.630
ST. ISIDORE (WEST)	1000	520	1000-520							272.6	4.00	1.10		0.0	4.00	0.00	4.42					1.50	0.000					1.500	0.000	20.338	0.00	0.000	12.260		0.000	0.365		37.380	22.520	59.900	36.65	103.530
ST. ISIDORE (WEST)	655	650	655-650	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	1.72	0.483	0.483		0.000	0.000		1.295		1.295	5.96	20.416
	650	645	650-645							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.63	21.682
	645	635	645-635							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.70	21.409
PERCY	640	635	640-635	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.71	0.200	0.200		0.000	0.000		0.534		0.534	1.51	34.753
ST. ISIDORE (WEST)	635	630	635-630	11.26		2.58		33.14		103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000					1.500	0.000	0.000	1.52	0.426	1.108		0.000	0.000		2.791		2.791	8.49	30.098
	630	627	630-627							103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.108		0.000	0.000		2.791		2.791	8.74	29.159
	2100	2105	2100-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	26.547
	321	2105	321-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	6.357		2.060		1.50	3.090					1.500	0.000	3.090	6.36	1.780	1.780		0.000	0.000		4.870		4.870	21.29	18.003
	2105	2110	2105-2110	27.02				70.72		70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000					1.500	0.000	3.090	2.09	0.585	2.365		0.000	0.000		6.601		6.601	32.42	13.760
	2110	2115	2110-2115							70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000					1.500	0.000	3.090	0.00	0.000	2.365		0.000	0.000		6.601		6.601	29.32	15.915
	2185	2190	2185-2190	1.13				2.95		2.9	4.00	0.01		0.0	4.00	0.00	0.05					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.048		0.048	0.05	96.240
	2190	2195	2190-2195	15.76				41.25		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000					1.500	0.000	0.000	1.13	0.315	0.315		0.000	0.000		1.032		1.032	0.96	105.953
	2195	2115	2195-2115							44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.315		0.000	0.000		1.032		1.032	1.14	89.224
	2115	2150	2115-2150	4.50				11.79		126.7	4.00	0.51		0.0	4.00	0.00	2.05					1.50	0.000					1.500	0.000	3.090	0.28	0.079	2.759		0.000	0.000		7.902		7.902	6.79	108.532
	2100	2120	2100-2120	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	2.17	25.157
	2120	2125	2120-2125							20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.225		0.000	0.000		0.559		0.559	1.78	30.832
	2125	2130	2125-2130	22.51				58.93		79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000					1.500	0.000	0.000	1.79	0.502	0.727		0.000	0.000		2.016		2.016	7.26	25.771
	2135	2140	2135-2140							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.39	19.483
	2140	2145	2140-2145							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.69	18.788
	2145	2150	2145-2150	3.38				8.84		88.4	4.00	0.36		0.0	4.00	0.00	1.43					1.50	0.000					1.500	0.000	0.000	0.34	0.097	0.824		0.000	0.000		2.256		2.256	6.37	29.638
	2150	2165	2150-2165	13.51				35.36		250.5	4.00	1.01		0.0	4.00	0.00	4.06					1.50	0.000					1.500	0.000	3.090	0.67	0.188	3.771		0.000	0.000		10.920		10.920	9.61	102.674
	2155	2160	2155-2160	16.89				44.20		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.240		0.000	0.000		0.956		0.956	3.56	25.880
	2200	2160	2200-2160	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	0.98	0.274	0.274		0.000	0.000		1.085		1.085	3.14	33.491
	2160	2165	2160-2165	6.75				17.68		112.0	4.00	0.45		0.0	4.00	0.00	1.81					1.50	0.000					1.500	0.000	0.000	0.39	0.108	0.622		0.000	0.000		2.436		2.436	9.75	22.560
	2165	2170	2165-2170							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	12.74	91.445
	2170	PS5	2170-PS5							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	13.69	84.173
QUARTIER DES BOISE - Area F (Partial)	PS5	2175	PS5-2175							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000	20.500	13.356	7.144	20.500		
	2175	2180	2175-2180	7.88				20.63		383.1	4.00	1.55		0.0	4.00	0.00	6.21					1.50	0.000					1.500	0.000	3.090	0.82	0.230	4.624		0.000	0.000		13.920	7.144	21.065	35.98	37.487
	2205	2180	2205-2180	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.71	0.199	0.199		0.000	0.000		0.437		0.437	1.53	28.094
	2180	627	2180-627							397.8	4.00	1.61		0.0	4.00	0.00	6.45					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.822		0.000	0.000		14.358	7.144	21.502	41.21	30.679
	627	625	627-625	7.88				20.63		522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000					1.500	0.000	3.090	1.19	0.333	6.263		0.000	0.000		17.740	7.144	24.884	79.25	6.514
	625	620	625-620							522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000					1.500	0.000	3.090	0.00	0.000	6.263		0.000	0.000		17.740	7.144	24.884	74.28	8.627
ROGER	855	850	855-850		77.33			157.81		157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	0.000	1.03	0.288	0.288		0.000	0.000		2.845		2.845	12.92	19.174
	850	845	850-845							157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	13.07	18.925
	845	840	845-840							157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	13.59	18.085
	840	835	840-835							157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
RICHER	830	815	830-815					157.8			4.00	0.64		230.4	4.00	0.93	6.29						1.50	0.000					1.500	0.000	1.994	0.00	0.000	1.184		0.000	0.000		9.468		9.468	28.49	23.759
LAFLECHE	267	246	267-246					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00	0.716		0.232		1.50	0.348					1.500	0.000	0.348	0.72	0.200	0.200		0.000	0.000		0.549		0.549	1.18	46.111
LAFLECHE	246	825	246-825					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.95	57.468
LAFLECHE	825	820	825-820					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	1.57	34.431
	820	819	820-819					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.76	71.244
	247	248	247-248			12.05		17.15		17.2	4.00	0.07	0.00	0.0	4.00	0.00	0.28					1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.28	26.795
	249	248	249-248			12.05		17.15		17.2	4.00	0.07	0.00	0.0	4.00	0.00	0.28					1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.34	25.583
	248	819	248-819					34.3			4.00	0.14	0.00	0.0	4.00	0.00	0.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.140		0.000	0.000		0.696		0.696	2.35	28.872
	819	815	819-815					34.3			4.00	0.14	0.00	0.0	4.00	0.00	0.56					1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.341		0.000	0.000		1.245		1.245	4.27	27.909
ST. MARIE	900	890	900-890	9.01				23.57		23.6	4.00	0.10	0.00	0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	0.96	0.268	0.268		0.000	0.000		0.650		0.650	3.07	20.506
ST. MARIE	895	890	895-890	1.13				2.95		2.9	4.00	0.01	0.00	0.0	4.00	0.00	0.05					1.50	0.000					1.500	0.000	0.000	0.15	0.042	0.042		0.000	0.000		0.090		0.090	0.29	31.379
EASEMENT	890	885	890-885					26.5			4.00	0.11	0.00	0.0	4.00	0.00	0.43					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	3.53	20.216
	885	875	885-875					26.5			4.00	0.11	0.00	0.0	4.00	0.00	0.43					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	4.03	17.640
FAUCHER	880	875	880-875	13.51				35.36		35.4	4.00	0.14	0.00	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.13	0.318	0.318		0.000	0.000		0.891		0.891	2.54	34.209
FAUCHER	875	815	875-815					61.9			4.00	0.25	0.00	0.0	4.00	0.00	1.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.628		0.000	0.000		1.630		1.630	8.91	16.668
ISABELLE	815	810	815-810	4.50				11.79		265.8	4.00	1.08		230.4	3.98	0.93	7.99					1.50	0.000					1.500	0.000	2.342	0.43	0.122	2.274		0.000	0.000		12.607		12.607	37.89	20.666
ISABELLE	810B	810A	810B-810A		29.33			59.86		59.9	4.00	0.24	0.00	0.0	4.00	0.00	0.97					1.50	0.000					1.500	0.000	0.000	0.26	0.072	0.072		0.000	0.000		1.042		1.042	4.42	22.536
	810A	810	810A-810							59.9	4.00	0.24	0.00	0.0	4.00	0.00	0.97					1.50	0.000					1.500	0.000	0.000	0.00	0.072	0.072		0.000	0.000		1.042		1.042	3.97	25.197
ISABELLE	810	795	810-795	4.50				11.79		337.4	4.00	1.37		230.4	3.95	0.93	9.07					1.50	0.000					1.500	0.000	2.342	0.41	0.115	2.462		0.000	0.000		13.878		13.878	30.73	31.280
BOILEAU	805	800	805-800	11.26				29.47		29.5	4.00	0.12	0.00	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000	0.000	1.10	0.307	0.307		0.000	0.000		0.785		0.785	3.12	24.403
	800	795	800-795							29.5	4.00	0.12	0.00	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.307		0.000	0.000		0.785		0.785	3.49	21.720
ISABELLE	795	765	795-765					366.9		366.9	4.00	1.49		230.4	3.93	0.93	9.52					1.50	0.000					1.500	0.000	2.342	0.00	0.000	2.769		0.000	0.000		14.627		14.627	36.89	25.027
SAUVE	790	785	790-785	13.51				35.36		35.4	4.00	0.14	0.00	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.67	0.469	0.469		0.000	0.000		1.042		1.042	2.73	37.161
	785	780	785-780							35.4	4.00	0.14	0.00	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	3.40	29.635
	780	775	780-775							35.4	4.00	0.14	0.00	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	2.27	44.868
	775	770	775-770	10.13				26.52		61.9	4.00	0.25	0.00	0.0	4.00	0.00	1.00					1.50	0.000					1.500	0.000	0.000	1.01	0.283	0.752		0.000	0.000		1.755		1.755	5.48	30.252
	770	765	770-765							61.9	4.00	0.25	0.00	0.0	4.00	0.00	1.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.752		0.000	0.000		1.755		1.755	5.00	33.327
ISABELLE	765	760	765-760	5.63				14.73		443.5	4.00	1.80		230.4	3.90	0.93	10.66					1.50	0.000					1.500	0.000	2.342	0.55	0.155	3.676		0.000	0.000		16.675		16.675	48.65	17.603
	760	735	760-735							443.5	4.00	1.80		230.4	3.90	0.93	10.66					1.50	0.000					1.500	0.000	2.342	0.00	0.000	3.676		0.000	0.000		16.675		16.675	49.34	17.122
GAGNE	755	750	755-750	7.88				20.63		20.6	4.00	0.08	0.00	0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.56	0.156	0.156		0.000	0.000		0.490		0.490	2.16	22.157
	750	745	750-745							20.6	4.00	0.08	0.00	0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.156		0.000	0.000		0.490		0.490	2.35	20.394
	745	740	745-740	10.13		0.86		27.74		48.4	4.00	0.20	0.00	0.0	4.00	0.00	0.78					1.50	0.000					1.500	0.000	0.000	1.01	0.282	0.438		0.000	0.000		1.222		1.222	7.31	15.491
	740	735	740-735							48.4	4.00	0.20	0.00	0.0	4.00	0.00	0.78					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.438		0.000	0.000		1.222		1.222	5.74	20.057
ISABELLE	735	730	735-730	5.63				14.73		506.6	3.97	2.05		230.4	3.88	0.93	11.59					1.50	0.000					1.500	0.000	2.342	0.54	0.153	4.267		0.000	0.000		18.197		18.197	47.73	19.929
	730	PS2	730-PS2							506.6	3.97	2.05		230.4	3.88	0.93	11.59					1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267		0.000	0.000		18.197		18.197	41.44	25.709
	PS2	725	PS2-725							506.6	3.97	2.05		230.4	3.88	0.93	11.59					1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267	20.500	0.000	0.000		18.197	2.303	20.500		14.48
	725	715	725-715							506.6	3.97	2.05		230.4	3.88	0.93	11.59					1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267		0.000	0.000		18.197	2.303	20.500	70.46	8.593
GAGNE	720	715	720-715	11.26				29.47		29.5	4.00	0.12	0.00	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000	0.000	0.97	0.271	0.271		0.000	0.000		0.748		0.748	3.76	19.170
ISABELLE	715	710	715-710	3.38				8.84		544.9	3.95	2.21		230.4	3.87	0.93	12.15					1.50	0.000					1.500	0.000	2.342	0.36	0.101	4.638		0.000	0.000		19.130	2.303	21.433	54.59	17.828
	710	700	710-700							544.9	3.95	2.21		230.4	3.87	0.93	12.15					1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.638		0.000	0.000		19.130	2.303	21.433	56.91	16.231
ALICE	705	700	705-700	5.63				14.73		14.7	4.00	0.06	0.00	0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.52	0.147	0.147		0.000	0.000		0.385		0.385	1.80	21.016
ISABELLE	700	695	700-695	14.63				38.31		597.9	3.93	2.42		230.4	3.85	0.93	12.92					1.50	0.000					1.500	0.000	2.342	1.42	0.396	5.181		0.000	0.000		20.445	2.303	22.749	43.55	29.486
	695	675	695-675							597.9	3.93	2.42		230.4	3.85	0.93	12.92					1.50	0.000					1.500	0.000	2.342	0.00	0.000	5.181		0.000	0.000		20.445	2.303	22.749	66.58	11.418
ALICE	690	685	690-685	18.01				47.15		47.1	4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	1.77	0.496	0.496		0.000	0.000		1.260		1.260	5.85	20.279
	685	680	685-680							47.1	4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.496		0.000	0.000		1.260		1.260	6.03	19.650
	680	675	680-675	4.50				11.79		58.9	4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.45	0.126	0.622		0.000	0.000		1.577		1.577	7.21	20.305
ISABELLE	675	665	675-665	4.50				11.79		668.7	3.91	2.71		230.4	3.83	0.93	13.95					1.50	0.000					1.500	0.000	2.342	0.46	0.128	5.931		0.000	0.000		22.219	2.303	24.522	72.65	9.231
ALBERT	670	665	670-665	12.38				32.41		32.4	4.00	0.13		0.0	4.00	0.00	0.53					1.50	0.000					1.500	0.000	0.000	0.95	0.265	0.265		0.000	0.000		0.790		0.790	3.64	20.883
ISABELLE	665	660	665-660	6.75				17.68		718.8	3.89	2.91		230.4	3.81	0.93	14.67					1.50	0.000					1.500	0.000	2.342	0.81	0.228	6.423		0.000	0.000		23.431	2.303	25.735	79.46	6.650
	660	620	660-620							718.8	3.89	2.91		230.4	3.81	0.93	14.67					1.50	0.000					1.500	0.000	2.342	0.00	0.000	6.423		0.000	0.000		23.431	2.303	25.735	65.81	13.371
	620	615	620-615	5.63				14.73		1255.8	3.73	5.09		230.4	3.68	0.93	22.17					1.50	0.000					1.500	0.000	5.432	0.80	0.224	12.910		0.000	0.000		40.511	9.448	49.958	63.75	28.409
	615	535	615-535							1255.8	3.73	5.09		230.4	3.68	0.93	22.17					1.50	0.000					1.500	0.000	5.432	0.00	0.000	12.910		0.000	0.000		40.511	9.448	49.958	48.03	54.062
PERCY	610	600	610-600	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.43	0.121	0.121		0.000	0.000		0.311		0.311	0.80	38.475
PERCY	605	600	605-600	3.38				8.84		8.8	4.00	0.04		0.0	4.00	0.00	0.14					1.50	0.000					1.500	0.000	0.000	0.28	0.079	0.079		0.000	0.000		0.223		0.223	0.50	44.070
DESNOYERS	600	595	600-595	16.89		0.86		45.42		66.0	4.00	0.27		0.0	4.00	0.00	1.07					1.50	0.000					1.500	0.000	0.000	1.71	0.479	0.679		0.000	0.000		1.749		1.749	7.29	22.259
	595	590	595-590							66.0	4.00	0.27		0.0	4.00	0.00	1.07					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	5.37	30.826
	590	545	590-545							66.0	4.00	0.27		0.0	4.00	0.00	1.07					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	3.83	43.883
FLEURETTE STREET	580	570	580-570	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.52	0.145	0.145		0.000	0.000		0.336		0.336	0.85	39.191
FLEURETTE CIRCLE	575	570	575-570	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	1.13	0.317	0.317		0.000	0.000		0.699		0.699	1.21	57.259
FLEURETTE STREET	570	565	570-565							35.4	4.00	0.14		0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.462		0.000	0.000		1.035		1.035	2.41	41.919
PERCY	585	565	585-565	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	1.71	32.044
PERCY	565	550	565-550	5.63			2.00	14.73		70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000					1.500	0.000	0.000	0.53	0.150	0.836		0.000	0.000		1.982		1.982	6.28	29.560
PERCY	560	555	560-555	12.38				32.41		32.4	4.00	0.13		0.0	4.00	0.00	0.53					1.50	0.000					1.500	0.000	0.000	1.01	0.282	0.282		0.000	0.000		0.807		0.807	2.59	30.394
	555	550	555-550							32.4	4.00	0.13		0.0	4.00	0.00	0.53					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.282		0.000	0.000		0.807		0.807	2.38	33.055
JEAN MARC	550	545	550-545							103.1	4.00	0.42		0.0	4.00	0.00	1.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.118		0.000	0.000		2.789		2.789	7.48	34.518
DESNOYERS	545	540	545-540	10.13				26.52		195.7	4.00	0.79		0.0	4.00	0.00	3.17					1.50	0.000					1.500	0.000	0.000	0.94	0.262	2.060		0.000	0.000		5.231		5.231	18.70	22.740
	540	535	540-535	7.88				20.63		216.3	4.00	0.88		0.0	4.00	0.00	3.51					1.50	0.000					1.500	0.000	0.000	0.95	0.265	2.325		0.000	0.000		5.830		5.830	18.33	25.970
ST. ISIDORE (WEST)	535	530	535-530	16.89	2.67	0.86	1.00	50.87		1523.0	3.67	6.17		230.4	3.63	0.93	25.78	2.305		0.747		1.50	1.120					1.500	0.000	6.552	2.30	0.645	15.880		0.000	0.000		48.211	9.448	57.658	85.47	9.806
	530	525	530-525							1523.0	3.67	6.17		230.4	3.63	0.93	25.78					1.50	0.000					1.500	0.000	6.552	0.00	0.000	15.880		0.000	0.000		48.211	9.448	57.658	66.41	29.158
ST. ANNE	990	985	990-985	14.63				38.31		38.3	4.00	0.16		0.0	4.00	0.00	0.62					1.50	0.000					1.500	0.000	0.000	1.57	0.439	0.439		0.000	0.000		1.060		1.060	5.02	20.043
	985	980	985-980							38.3	4.00	0.16		0.0	4.00	0.00	0.62					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.439		0.000	0.000		1.060		1.060	5.08	19.806
	980	975	980-975	10.13				26.52		64.8	4.00	0.26		0.0	4.00	0.00	1.05					1.50	0.000					1.500	0.000	0.000	0.96	0.268	0.707		0.000	0.000		1.758		1.758	8.54	18.823
	975	970	975-970							64.8	4.00	0.26		0.0	4.00	0.00	1.05					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.707		0.000	0.000		1.758		1.758	8.69	18.462
	970	965	970-965	7.88	5.33			31.51		96.3	4.00	0.39		0.0	4.00	0.00	1.56					1.50	0.000					1.500	0.000	0.000	0.78	0.219	0.926		0.000	0.000		2.487		2.487	12.13	18.010
	965	905	965-905							96.3	4.00	0.39		0.0	4.00	0.00	1.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.926		0.000	0.000		2.487		2.487	9.33	24.168
FAUCHER	960	955	960-955	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	0.91	0.255	0.255		0.000	0.000		0.637		0.637	2.55	24.369
	955	945	955-945							23.6	4.00	0.10		0.0	4.00	0.00	0.38					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.255		0.000	0.000		0.637		0.637	2.95	20.979
COURT 'B'	950	945	950-945	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.95	0.267	0.267		0.000	0.000		0.458		0.458	1.71	26.391
FAUCHER	945	940	945-940							35.4	4.00	0.14		0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.90	0.252	0.774		0.000	0.000		1.347		1.347	6.42	19.632
	940	930	940-930	9.01				23.57		58.9	4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.774		0.000	0.000		1.729		1.729	7.90	20.165
COURT 'A'	935	930	935-930	6.75				17.68		17.7	4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.06	0.297	0.297		0.000	0.000		0.584		0.584	2.84	19.950
FAUCHER	930	925	930-925	9.01				23.57		100.2	4.00	0.41		0.0	4.00	0.00	1.62					1.50	0.000					1.500	0.000	0.000	0.92	0.258	1.329		0.000	0.000		2.953		2.953	13.66	18.671
	925	915	925-915							100.2	4.00	0.41		0.0	4.00	0.00	1.62					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.329		0.000	0.000		2.953		2.953	13.39	19.096
ALBERT	920	915	920-915	6.75				17.68		17.7	4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.73	0.206	0.206		0.000	0.000		0.492		0.492	2.29	21.032
EASEMENT	915	910	915-910							117.9	4.00	0.48		0.0	4.00	0.00	1.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.535		0.000	0.000		3.445		3.445	14.93	19.624
	910	905	910-905	5.63				14.73		132.6	4.00	0.54		0.0	4.00	0.00	2.15					1.50	0.000					1.500	0.000	0.000	0.35	0.097	1.632		0.000	0.000		3.781		3.781	16.99	18.469
ST. ANNE	905	525	905-525							228.9	4.00	0.93		0.0	4.00	0.00	3.71					1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.559		0.000	0.000		6.268		6.268	19.72	25.523
ST. ISIDORE (WEST)	525	520	525-520							1751.9	3.63	7.10		230.4	3.59	0.93	28.82					1.50	0.000					1.500	0.000	6.552	0.00	0.000	18.438		0.000	0.000		53.808	9.448	63.256	55.06	51.631
ST. JOSEPH (NORTH)	520	515	520-515	3.38			

Printed: 2023-12-14 at 1:40 PM

Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA - Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Cumm. Popul. (peop.)	Cumm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Cumm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION - EXISTING ICI: Areas (ha) Commerc.	Areas (ha) Industrial	Flows (l/s) Commerc.	Flows (l/s) Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha) Commerc.	Areas (ha) Industrial	Flows (l/s) Commerc.	Flows (l/s) Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{cap} %	Residual Capacity (l/s)
ST. JOSEPH (NORTH)	515	505	515-505							2052.2		3.58	8.31	244.6	3.54	0.99	32.92						1.50	0.000					1.500	0.000	26.890	0.00	0.000	30.981		0.000	0.365		91.157	31.968	123.125	90.49	12.942
CARTIER	510	505	510-505	23.64	10.67	3.44		88.55		88.5		4.00	0.36	0.0	4.00	0.00	1.43						1.50	0.000					1.500	0.000	0.000	1.79	0.502	0.502		0.000	0.000		1.937		1.937	2.15	88.319
ST. JOSEPH (NORTH)	505	500	505-500							2140.7		3.56	8.67	244.6	3.53	0.99	34.06						1.50	0.000					1.500	0.000	26.890	0.00	0.000	31.484		0.000	0.365		92.801	31.968	124.769	93.91	8.094
	500	460	500-460							2140.7		3.56	8.67	244.6	3.53	0.99	34.06						1.50	0.000					1.500	0.000	26.890	0.00	0.000	31.484		0.000	0.365		92.801	31.968	124.769	87.85	17.248
LAVAL	495	485	495-485	5.63				14.73		14.7		4.00	0.06	0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	0.53	0.149	0.149		0.000	0.000		0.388		0.388	1.42	26.890
CARTIER	490	485	490-485	4.50				11.79		11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.40	0.112	0.112		0.000	0.000		0.303		0.303	1.44	20.781
LAVAL	485	480	485-480							26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.33	20.074
	480	465	480-465							26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.15	21.276
LAVAL	475	470	475-470	7.88		2.58		24.30		24.3		4.00	0.10	0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	1.37	0.384	0.384		0.000	0.000		0.778		0.778	3.55	21.144
	470	465	470-465							24.3		4.00	0.10	0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.384		0.000	0.000		0.778		0.778	3.60	20.825
DOLLARD	465	460	465-460	15.76				41.25		92.1		4.00	0.37	0.0	4.00	0.00	1.49						1.50	0.000					1.500	0.000	0.000	1.65	0.461	1.106		0.000	0.000		2.598		2.598	3.06	82.318
ST. JOSEPH (NORTH)	460	455	460-455	16.89	8.00	5.16		67.88		2300.7		3.54	9.32	244.6	3.50	0.99	36.11						1.50	0.000					1.500	0.000	26.890	2.07	0.580	33.170		0.000	0.365		96.534	31.968	128.502	74.98	42.889
	455	305B	455-305B							2300.7		3.54	9.32	244.6	3.50	0.99	36.11						1.50	0.000					1.500	0.000	26.890	0.00	0.000	33.170		0.000	0.365		96.534	31.968	128.502	67.62	61.539
DROUIN	450	445	450-445	4.50				11.79		11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	1.45	0.407	0.407		0.000	0.000		0.598		0.598	0.69	86.382
	445	440	445-440							11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		0.598		0.598	0.71	83.377
	440	435	440-435							11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		0.598		0.598	0.91	65.311
	435	430	435-430	24.76				64.82		76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	2.84	0.795	1.202		0.000	0.000		2.444		2.444	6.53	34.983
	430	425	430-425							76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		2.444		2.444	6.17	37.192
	425	395	425-395							76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		2.444		2.444	6.07	37.805
MARQUETTE	420	415	420-415	16.89				44.20		44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	1.68	0.471	0.471		0.000	0.000		1.188		1.188	2.68	43.151
	415	410	415-410							44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	3.03	37.972
	410	400	410-400							44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	2.97	38.792
JOLIETTE	405	400	405-400	10.13				26.52		26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	1.04	0.291	0.291		0.000	0.000		0.720		0.720	1.80	39.223
JOLIETTE	400	395	400-395							70.7		4.00	0.29	0.0	4.00	0.00	1.15						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.762		0.000	0.000		1.908		1.908	4.95	36.646
DROUIN	395	PS4	395-PS4							147.3		4.00	0.60	0.0	4.00	0.00	2.39						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000		4.352		4.352	12.11	31.583
(forcemain)	PS4	390	PS4-390							147.3		4.00	0.60	0.0	4.00	0.00	2.39						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000	18.500	4.352	14.148	18.500				
LEVESQUES	390	385	390-385	7.88				20.63		168.0		4.00	0.68	0.0	4.00	0.00	2.72						1.50	0.000					1.500	0.000	0.000	1.53	0.427	2.391		0.000	0.000		5.113	14.148	19.261	34.93	35.884	91.23	60.730	61.03	60.730	60.96	60.660	Not as-built
	385	380	385-380							168.0		4.00	0.68	0.0	4.00	0.00	2.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.391		0.000	0.000		5.113	14.148	19.261	43.25	25.269	61.00	60.700	60.96	60.660	61.24	60.460	Not as-built
	380	375	380-375	25.89				67.77		235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	2.89	0.808	3.199		0.000	0.000		7.019	14.148	21.168	46.54	34.310	60.93	60.630	60.76	60.460	60.56	60.260	Not as-built
	375	370	375-370							235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		7.019	14.148	21.168	47.20	23.678	60.76	60.460	60.56	60.260	60.42	60.120	Not as-built
	370	365	370-365							235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		7.019	14.148	21.168	45.86	24.985	60.56	60.260	60.42	60.120	60.38	59.680	Not as-built
	365	335	365-335							235.7		4.00	0.95	0.0	4.00	0.00	3.82						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		7.019	14.148	21.168	45.16	25.707	60.42	60.120	60.38	59.680			Not as-built
DROUIN	360	355	360-355	23.64				61.88		61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	3.12	0.873	0.873		0.000	0.000		1.876		1.876	3.65	49.532	61.09	60.790	61.04	60.740			Not as-built
	355	350	355-350							61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	4.09	43.974	61.04	60.740	60.83	60.530			Not as-built
	350	345	350-345							61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	3.83	47.159	60.79	60.490	60.54	60.240			Length is not as-built. Portion of this run had to be scaled from DWG.
LEVESQUES	345	340	345-340	5.63				14.73		76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.71	0.199	1.072		0.000	0.000		2.314		2.314	4.88	45.137	60.50	60.200	60.32	60.020			
	340	335	340-335							76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.072		0.000	0.000		2.314		2.314	4.47	49.466	60.31	60.010	60.27	59.970			
EASEMENT	335	330	335-330							312.3		4.00	1.27	0.0	4.00	0.00	5.06						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.272		0.000	0.000		9.333	14.148	23.481	51.19	22.386	60.24	59.940	60.14	59.840			
	330	320	330-320	7.88				20.63		333.0		4.00	1.35	0.0	4.00	0.00	5.40						1.50	0.000					1.500	0.000	0.000	0.91	0.254	4.525		0.000	0.000		9.921	14.148	24.069	53.32	21.068	60.12	59.820	60.05	59.750			
LAVAL	325	320	325-320	5.63				14.73		14.7		4.00	0.06	0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	1.10	0.309	0.309		0.000	0.000		0.547		0.547	1.89	28.361	60.25	60.000	60.05	59.800			
LAVAL	320	315	320-315							347.7		4.00	1.41	0.0	4.00	0.00	5.63						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.834		0.000	0.000		10.468	14.148	24.616	50.05	24.569	60.02	59.720	59.95	59.650			
MONTCALM	315	310	315-310	5.63		8.61		26.99		374.7		4.00	1.52	0.0	4.00	0.00	6.07	1.826		0.592			1.50	0.888					1.500	0.000	0.888	1.83	0.511	5.345		0.000	0.000		12.304	14.148	26.452	52.46	23.969	59.93	59.630	59.63	59.330			Downstream Invert was taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
	310	305B	310-305B							374.7		4.00	1.52	118.75	118.8	3.98	0.48	7.95					1.50	0.000					1.500	0.000	0.888	0.00	0.000	5.345		0.000	0.000		14.182	14.148	28.331	70.39	11.919	59.56	59.260	59.58	59.280			U/S & D/S Invert were taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
MONTCALM	305A	305B	305A-305B	1.13		5.16		10.30		10.3		4.00	0.04	0.0	4.00	0.00	0.17						1.50	0.000					1.500	0.000	0.000	0.36	0.101	0.101		0.000	0.000		0.268		0.268	0.51	52.411	61.95	61.750	59.80	59.600			No as-built. Length and U/S invert has been scaled from another as-built DWG.
MONTCALM	305B	300	305B-300							2685.7		3.48	10.88	363.4	3.44	1.47	42.44						1.50	0.000					1.500	0.000	27.778	0.00	0.000	38.616		0.000	0.365		109.203	46.116	155.319	76.37	48.070	Upgraded under Existing	Upgrade	600	609.60	0.160	0.101	203.389	0.697	36.70	59.84	59.241	59.81	59.204			DWGs did not have as-built lengths or slopes. Lengths were scaled from DWGs. Inverts & lengths were taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
	300	290	300-290	4.50		6.02		20.36		2706.0		3.48	10.96	363.4	3.43	1.47	42.70	0.789		0.256			1.50	0.383					1.500	0.000	28.161	0.79	0.221	38.837		0.000	0.365		110.060	46.116	156.176	52.56	140.937	Upgraded under Existing	Upgrade	600	609.60	0.160	0.215	297.113	1.018	49.27	59.80	59.204	59.71	59.098			DWGs did not have as-built lengths or slopes. Lengths were scaled from DWGs. Inverts & lengths were taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
ST. THERESE	295	290	295-290	7.88		6.02		29.20		29.2		4.00	0.12	0.0	4.00	0.00	0.47						1.50	0.000					1.500	0.000	0.000	1.14	0.318	0.318		0.000	0.000		0.791		0.791	14.49	4.669			200	203.20	-0.029	0.025	5.460	0.168	78.54	59.83	59.630	59.85	59.650			Length and U/S invert are not as-built. Downstream Invert was taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
MONTCALM	290	255	290-255							2735.2		3.48	11.08	363.4	3.43	1.47	43.06						1.50	0.000					1.500	0.000	28.161	0.00	0.000	39.155		0.000	0.365		110.740	46.116	156.856	64.27	87.211	Upgraded under Existing	Upgrade	600	609.60	0.160	0.145	244.067	0.836	98.50	59.70	59.098	59.56	58.955			Length and U/S invert are not as-built. D/S invert taken from prelim. DWG of St. Therese.
CARTIER	285	280	285-280	2.25				5.89		5.9		4.00	0.02	0.0	4.00	0.00	0.10	0.601		0.195			1.50	0.292					1.500	0.000	0.292	0.60	0.168	0.168		0.000	0.000		0.556		0.556	2.52	21.540			200	203.20	0.413	0.417	22.096	0.681	49.16	62.91	62.710	62.71	62.505		
ST. JEAN	280	275	280-275	6.75				17.68		23.6		4.00	0.10	0.0	4.00	0.00	0.38	1.026		0.333			1.50	0.499					1.500	0.000	0.791	1.03	0.287	0.456		0.000	0.000		1.629		1.629	7.52	20.021			200	203.20	0.400	0.400	21.650	0.668	67.94	62.66	62.460	62.39	62.188		
	275	265	275-265							23.6		4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.791	0.00	0.000	0.456		0.000	0.000		1.629		1.629	7.61	19.768			200	203.20	0.400	0.391	21.397	0.660	101.26	62.37	62.173	61.98	61.777		
DOLLARD	270	265	270-265	4.50	2.67	3.44		22.13		22.1		4.00	0.09	0.0	4.00	0.00	0.36						1.50	0.000					1.500	0.000	0.000	0.55	0.155	0.155		0.000	0.000		0.514		0.514	2.46	20.380			200	203.20	0.375	0.373	20.894	0.644	84.21	63.04	62.841	62.73	62.527		
ST. JEAN	265	260	265-260	7.88	2.67	26.68		64.05		109.8		4.00	0.44	0.0	4.00	0.00	1.78	1.356		0.440			1.50	0.659					1.500	0.000	1.450	1.36	0.380	0.991		0.000	0.000		4.219		4.219	19.37	17.565			200	203.20	0.400	0.405	21.785	0.672	75.98	61.98	61.777	61.67	61.469		
	260	255	260-255							109.8		4.00	0.44	0.0	4.00	0.00	1.78						1.50	0.000					1.500	0.000	1.450	0.00	0.000	0.991		0.000	0.000		4.219		4.219	7.01	56.012			200	203.20	1.760	3.099	60.232	1.857	79.68	61.67	61.469	59.20	59.000			Downstream Invert was taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
MONTCALM	255	90	255-90							2845.0		3.46	11.52	363.4	3.42	1.47	44.42						1.50	0.000					1.500	0.000	29.612	0.00	0.000	40.145		0.000	0.365		114.538	46.116	160.654	64.53	88.291	Upgraded under Existing	Upgrade	600	609.60	0.160	0.151	248.945	0.853	105.93	59.53	58.930	59.38	58.770			DWGs did not have as-built lengths or slopes. Lengths were scaled from DWGs. Inverts & lengths were taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
ST. ISIDORE (EAST)	250	245	250-245	5.63		0.86		15.96		16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	2.53	0.708	0.708		0.000	0.000		0.967		0.967	4.45	20.777			200	203.20	0.400	0.404	21.744	0.671	66.36	64.67	64.471	64.41	64.203		
	245	240	245-240							16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	4.43	20.833			200	203.20	0.400	0.406	21.800	0.672	105.93	64.40	64.203	63.98	63.773		
	240	17.2	235	240-235						16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	4.44	20.787			200	203.20	0.400	0.404	21.754	0.671	107.12	63.97	63.773	63.54	63.340	
	235	230A	235-230A							16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	6.44	14.037			200	203.20	0.181	0.192	15.003	0.463	25.49	63.54	63.340	63.49	63.291	U/S invert might be incorrect. Length is not as-built and was scaled from DWG.
	230A	230	230A-230	7.88				20.63		36.6		4.00	0.15	0.0	4.00	0.00	0.59						1.50	0.000					1.500	0.000	0.000	1.84	0.515	1.223		0.000	0.000		1.816		1.816	7.74	21.649			200	203.20	0.480	0.470	23.465	0.724	80.38	63.49	63.292	63.12	62.914	U/S invert might be incorrect. Length is not as-built and was scaled from DWG.
	230	225	230-225							36.6		4.00	0.15	0.0	4.00	0.00	0.59						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.223		0.000	0.000		1.816		1.816	8.29	20.093			200	203.20	0.400	0.410	21.909	0.676	107.81	63.11	62.914	62.68	62.472		
	225	215	225-215	10.13				26.52		63.1		4.00	0.26	0.0	4.00	0.00	1.02	2.472		0.801			1.50	1.202					1.500	0.000	1.202	2.47	0.692	1.915		0.000	0.000		4.139		4.139	19.05	17.584			200	203.20	0.400	0.403	21.723	0.670	114.13	62.67	62.472	62.22	62.012		
BREBOEUF	220	215	220-215	9.01				23.57		23.6		4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.000	0.86	0.241	0.241		0.000	0.000		0.623		0.623	2.98	20.294			200	203.20	0.375	0.374	20.917	0.645	88.04	62.56	62.359	62.23	62.030		
ST. ISIDORE (EAST)	215	205	215-205	3.38	8.00	2.58		28.84		115.5		4.00	0.47	0.0	4.00	0.00	1.87	0.738		0.239			1.50	0.359					1.500	0.000	1.560	0.74	0.207	2.363		0.000	0.000		5.795		5.795	27.97	14.925			200	203.20	0.400	0.367	20.720	0.639	109.90	62.21	62.012	61.81	61.609		
PRINCIPALE	210	205	210-205	1.13		3.44		7.85		7.8		4.00	0.03	0.0	4.00	0.00	0.13						1.50	0.000					1.500	0.000	0.000	0.32	0.090	0.090		0.000	0.000		0.217		0.217	0.96	22.302			200	203.20	0.422	0.433	22.519	0.694	51.95	62.19	61.987	61.97	61.762		
PRINCIPALE	205	165	205-165		2.67	7.75		16.47		139.8		4.00	0.57	0.0	4.00	0.00	2.27	2.376		0.770			1.50	1.155					1.500	0.000	2.715	2.38	0.665	3.118		0.000	0.000		8.099		8.099	37.63	13.426			200	203.20	0.401	0.396	21.525	0.664	51.55	61.75	61.548	61.55	61.344		
	201	33	201-33	4.50	18.67	6.02		58.45		58.5		4.00	0.24	0.0	4.00	0.00	0.95	2.442		0.791			1.50	1.187					1.500	0.000	1.187	2.44	0.684	0.684		0.000	0.000		2.818		2.818	13.92	17.425			200	203.20	0.000	0.350	20.243	0.624	108.10	63.91	63.714	63.54	63.336	
	33	200	33-200							58.5		4.00	0.24	0.0	4.00	0.00	0.95						1.50	0.000					1.500	0.000	1.187	0.00	0.000	0.684		0.000	0.000		2.818		2.818	13.92	17.425			200	203.20	0.000	0.350	20.243	0.624	9.13	63.54	63.336	63.51	63.304	
LAURIER	200	195	200-195	11.26	2.67			34.91		93.4		4.00	0.38	0.0	4.00	0.00	1.51						1.50	0.000					1.500	0.000	1.187	0.57	0.160	0.844		0.000	0.000		3.543		3.543	15.40	19.466			200	203.20	0.447	0.452	23.009	0.710	46.44	63.50	63.304	63.30	63.094	
	195	190	195-190	12.38		3.44		37.31		130.7		4.00	0.53	0.0	4.00	0.00	2.12						1.50	0.000					1.500	0.000	1.187	1.12	0.313	1.156		0.000	0.000		4.461		4.461	20.64	17.152			200	203.20	0.400	0.399

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{ave} %	Residual Capacity (l/s)
				SANITARY CONTRIBUTION																																						
BREBOEUF	47	54	47-54							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
BREBOEUF	54	100	54-100							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
	100	95	100-95							27.5		4.00	0.11		0.0	4.00	0.00	0.44					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.161		0.000	0.000		0.605		0.605	2.90	20.299
MONTCALM	95	90	95-90	11.26	2.67				34.91	62.4		4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.500	0.000	0.000	0.70	0.196	0.357		0.000	0.000		1.367		1.367	1.24	108.719
PRINCIPALE	90	85	90-85	2.25					5.89	3418.2		3.39	13.85		370.5	3.35	1.50	51.48	1.836		0.595		1.50	0.893					1.500	0.000	40.983	1.84	0.514	49.882		0.000	0.365		142.710	46.116	188.827	85.65	31.647
	85	83	85-83							3418.2		3.39	13.85		370.5	3.35	1.50	51.48					1.50	0.000					1.500	0.000	40.983	0.00	0.000	49.882		0.000	0.365		142.710	46.116	188.827	78.55	51.578
	84	83	84-83	10.13	13.33	6.02			62.30	62.3		4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.500	0.000	0.000	0.92	0.258	0.258		0.000	0.000		1.268		1.268	3.72	32.812
	83	316	83-316							3480.5		3.39	14.10	35.63	406.1	3.34	1.65	52.66					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		144.144	46.116	190.260	75.22	62.673
316	80	80	316-80							3480.5		3.39	14.10		406.1	3.34	1.65	52.66					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		144.144	46.116	190.260	71.68	75.169
80	317	80-317								3480.5		3.39	14.10		406.1	3.34	1.65	52.66					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		144.144	46.116	190.260	99.44	1.062
317	318	317-318								3480.5		3.39	14.10		406.1	3.34	1.65	52.66					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		144.144	46.116	190.260	75.31	62.381
458	457	458-457								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	88.749
457	4550	457-4550								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	143.243
464	461	464-461								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.433
461	466	461-466								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	17.996
466	459	466-459								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.278		0.000	0.000		0.000		0.000	0.00	18.031
459	4550	459-4550								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.017
4550	456	4550-456								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	77.063
462	463	462-463								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.617
463	456	463-456								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.818
456	454	456-454								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	85.850
454	453	454-453								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	92.384
453	452	453-452								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	122.094
452	451	452-451								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	55.862
451	4500	451-4500								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	108.799
4500	449	4500-449								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	97.374
449	448	449-448								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	97.049
448	447	448-447								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	96.980
447	446	447-446								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	242.291
446	471	446-471								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	148.790
471	318	471-318								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	189.347
318	PS1	318-PS1								3480.5		3.39	14.10		406.1	3.34	1.65	52.66					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		144.144	46.116	190.260	56.18	148.385
1320	1330	1320-1330	6.75						17.68	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.54	0.433	0.433		0.000	0.000		0.719		0.719	3.65	18.959
1675	1680	1675-1680								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.138
1680	1685	1680-1685								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.755
1685	1690	1685-1690								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.023
1690	1330	1690-1330								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.299
1330	1340	1330-1340								17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.433		0.000	0.000		0.719		0.719	3.52	19.692
1340	1350	1340-1350	6.75						17.68	35.4		4.00	0.14		0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.35	0.379	0.811		0.000	0.000		1.384		1.384	6.90	18.666
1605	1610	1605-1610								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.161
1610	1615	1610-1615								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.071
1615	1620	1615-1620								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.828
1620	1625	1620-1625								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.845
1625	1630	1625-1630								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.716
1630	1635	1630-1635								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.310
1635	1640	1635-1640								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	28.133
1655	1660	1655-1660								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.011
1660	1665	1660-1665								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.617
1665	1670	1665-1670								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.429
1670	1640	1670-1640								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.420
1640	1645	1640-1645								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.186
1645	1650	1645-1650								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.300
1650	1360	1650-1360								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.292
1350	1360	1350-1360	2.25						5.89	41.3		4.00	0.17	273.13	273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.32	0.091	0.902	5.68	1.590	1.590		7.586		7.586	34.70	14.273
1360	1370	1360-1370								41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.902		0.000	1.590		7.586		7.586	43.14	9.999
1370	1380	1370-1380								41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.902		0.000	1.590		7.586		7.586	36.97	12.932
1300	1310	1300-1310								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.653
1310	1380	1310-1380								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	21.357
PRINCIPALE	1380	1390	1380-1390							41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.902		0.000	1.590		7.586		7.586	41.40	10.740
	1390	1400	1390-1400	2.25					5.89	47.1		4.00	0.19		273.1	4.00	1.11	5.19	1.299		0.421		1.50	0.632					1.500	0.000	0.632	1.30	0.364	1.266		0.000	1.590		8.677		8.677	40.93	12.524
	1700	1705	1700-1705	22.51					58.93	58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	3.49	0.978	0.978		0.000	0.000		1.933		1.933	7.14	25.135
1705	1710	1705-1710								58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	9.48	18.466
1710	1715	1710-1715								58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	9.40	18.624
1715	1400	1715-1400								58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	7.06	25.434
1400	1410	1400-1410	1.13						2.95	109.0		4.00	0.44		273.1	4.00	1.11	6.19					1.50	0.000					1.500	0.000	0.632	2.47	0.691	2.935		0.000	1.590		11.348		11.348	27.61	29.747
1410	1420	1410-1420	1.13						2.95	112.0		4.00	0.45		273.1	4.00	1.11	6.24	1.169		0.379		1.50	0.568					1.500	0.000	1.200	1.17	0.327	3.262		0.000	1.590		12.292		12.292	31.56	26.656
1720	1725	1720-1725	18.01						47.15	47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	2.78	0.780	0.780		0.000	0.000		1.544		1.544	7.33	19.528
1725	1730	1725-1730								47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.780		0.000	0.000		1.544		1.544	7.77	18.331
1730	1420	1730-1420								47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.780		0.000	0.000		1.544		1.544	5.79	25.103
1420	1430	1420-1430								159.1		4.00	0.64		273.1	4.00	1.11	7.00					1.50	0.000					1.500	0.000	1.200	0.00	0.000	4.042		0.000	1.590		13.835		13.835	32.35	28.939
1430	1440	1430-1440	4.50						11.79	170.9		4.00	0.69	90.25	363.4	3.96	1.47	8.57					1.50	0.000					1.500	0.000	1.200	3.45	0.966	5.008		0.000	1.590		16.367		16.367	38.09	26.599
1755	1750	1755-1750	5.63						14.73	14.7		4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.90	0.253	0.253		0.000	0.000		0.492		0.492	1.72	29.083
1750	1745	1750-1745								14.7		4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.253		0.000	0.000		0.492		0.492	1.92	25.091
1745	1740	1745-1740	10.13						26.52	41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	1.44	0.404	0.657		0.000	0.000		1.326		1.326	10.99	10.742
1740	1735	1740-1735								41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.657		0.000	0.000		1.326		1.326	6.50	19.078
1735	1440	1735-1440								41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.657		0.000	0.000		1.326		1.326	5.52	22.680
1440	1450	1440-1450	2.25						5.89	218.0		4.00	0.88	349.13	712.5	3.82	2.89	14.40					1.50	0.000					1.500	0.000	1.200	0.56	0.156	5.821	13.47	3.771	5.361		26.781		26.781	58.32	19.142
Area C	1450	1460	1450-1460	4.50					11.79	229.8		4.00	0.93		712.5	3.82	2.89	14.57					1.50	0.000					1.500	0.000	1.200	0.94	0.264	6.085		0.000	5.361		27.214		27.214	63.04	15.956
1755	1760	1755-1760								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	30.836
1760	1765	1760-1765								0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	22.753
1765	1770	1765-1770	6.75						17.68	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.01	0.283	0.283		0.000	0.000		0.570		0.570	2.05	27.169
1770	1775	1770-1775								17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.283		0.000	0.000		0.570		0.570	2.41	23.048
1775	1460	1775-1460	3.38						8.84	26.5		4.00	0.11		0.0	4.00	0.00	0.43					1.50	0.000					1.500	0.000	0.000	0.32	0.091	0.374		0.000	0.000		0.804		0.804	4.10	18.820
1460	1470	1460-1470	9.01						23.57	279.9		4.00	1.13		712.5	3.80	2.89	15.29					1.50	0.000					1.500	0.000	1.200	1.60	0.449	6.908		0.000	5.361		28.754		28.754	60.64	18.666
1470	1480	1470-1480	9.01						23.57	303.5		4.00	1.23		712.5	3.80	2.89	15.62					1.50	0.000					1.500	0.000	1.200	2.17	0.608	7.516		0.000	5.361		29.698		29.698	64.27	16.511
1480	1480A	1480-1480A	2.25				1.00		5.89	309.4		4.00	1.25		712.5	3.79	2.89	15.71					1.50	0.000					1.500	0.000	1.200	2.12	0.594	8.109		0.000	5.361		30.375		30.375	69.99	13.024
1480A	1490	1480A-1490	3.38						8.84	318.2		4.00	1.29	42.75	755.3	3.78	3.06	16.44					1.50	0.000					1.500	0.000	1.200	0.95	0.267	8.376		0.000	5.361		31.375		31.375	74.47	10.755
2070	2065	2070-2065	4.50						11.79	11.8		4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	3.88	1.087	1.087		0.000	0.000		1.278		1.278	4.98	24.377
2065	2060	2065-2060								11.8		4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.087		0.000	0.000		1.278		1.278	3.09	40.095
2060	2055	2060-2055	2.25						5.89	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	3.16	0.884	1.971		0.000	0.000		2.258

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA - Census Data - Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL - Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	EXISTING ICI - Areas (ha) - Commerc	Industrial	Flows (l/s) - Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI - Areas (ha) - Commerc.	Industrial	Flows (l/s) - Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRAENOUS - Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRAENOUS - Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
	1995	2000	1995-2000							0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	1.34	0.374	0.374		0.000	0.000		0.374		0.374	0.66	56.365
	2000	2005	2000-2005							0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.532
	2005	1845	2005-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.743
	2025	2020	2025-2020							0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	1.77	0.495	0.495		0.000	0.000		0.495		0.495	0.60	82.521
	2020	2015	2020-2015							0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.05	46.770
	2015	2010	2015-2010							0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.551
	2010	1845	2010-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.601
	1845	1850	1845-1850							41.3		4.00	0.17	0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.002		0.000	0.000		2.670		2.670	6.80	38.590
	1990	1985	1990-1985	13.51			14.00	35.36		35.4		4.00	0.14	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.74	0.488	0.488		0.000	0.000		1.061		1.061	2.72	37.886
	1985	1980	1985-1980		26.67		27.00	54.42		89.8		4.00	0.36	0.0	4.00	0.00	1.45					1.50	0.000					1.500	0.000	0.000	1.65	0.462	0.950		0.000	0.000		2.405		2.405	5.43	41.893
	1980	1975	1980-1975							89.8		4.00	0.36	0.0	4.00	0.00	1.45					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.84	32.778
	1975	1970	1975-1970							89.8		4.00	0.36	0.0	4.00	0.00	1.45					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.80	32.952
	1970	1850	1970-1850							89.8		4.00	0.36	0.0	4.00	0.00	1.45					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	4.00	57.664
	1900	1905	1900-1905	6.75			11.00	17.68		17.7		4.00	0.07	0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.32	0.369	0.369		0.000	0.000		0.655		0.655	0.56	116.833
	1905	1910	1905-1910							17.7		4.00	0.07	0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.11	30.467
	1910	1915	1910-1915							17.7		4.00	0.07	0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.557
	1915	1920	1915-1920							17.7		4.00	0.07	0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.535
	1920	1925	1920-1925	4.50			2.00	11.79		29.5		4.00	0.12	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000	0.000	0.65	0.182	0.551		0.000	0.000		1.028		1.028	3.40	29.225
	1925	1930	1925-1930							29.5		4.00	0.12	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.99	33.366
	1930	1935	1930-1935							29.5		4.00	0.12	0.0	4.00	0.00	0.48					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.14	47.007
	1935	1940	1935-1940	2.25				5.89		35.4		4.00	0.14	0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	0.41	0.114	0.665		0.000	0.000		1.238		1.238	4.06	29.258
	1940	1945	1940-1945	12.38			7.00	32.41		67.8		4.00	0.27	0.0	4.00	0.00	1.10					1.50	0.000					1.500	0.000	0.000	2.17	0.607	1.272		0.000	0.000		2.370		2.370	7.87	27.742
	1945	1950	1945-1950							67.8		4.00	0.27	0.0	4.00	0.00	1.10					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.87	27.754
	1950	1955	1950-1955							67.8		4.00	0.27	0.0	4.00	0.00	1.10					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.67	28.542
	1955	1960	1955-1960	11.26			12.00	29.47		97.2		4.00	0.39	0.0	4.00	0.00	1.58					1.50	0.000					1.500	0.000	0.000	2.49	0.697	1.969		0.000	0.000		3.545		3.545	11.74	26.641
	1960	1965	1960-1965							97.2		4.00	0.39	0.0	4.00	0.00	1.58					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	11.49	27.308
	1965	1850	1965-1850							97.2		4.00	0.39	0.0	4.00	0.00	1.58					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	6.46	51.294
	1850	1855	1850-1855	1.13			1.00	2.95		231.2		4.00	0.94	0.0	4.00	0.00	3.75					1.50	0.000					1.500	0.000	0.000	0.35	0.098	5.018		0.000	0.000		8.765		8.765	16.15	45.491
	1855	1860	1855-1860				8.00			231.2		4.00	0.94	0.0	4.00	0.00	3.75					1.50	0.000					1.500	0.000	0.000	1.44	0.404	5.423		0.000	0.000		9.169		9.169	18.51	40.379
	1860	1865	1860-1865							231.2		4.00	0.94	0.0	4.00	0.00	3.75					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.423		0.000	0.000		9.169		9.169	17.05	44.606
	1870	1865	1870-1865				5.00			0.0		4.00	0.00	0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.56	0.157	0.157		0.000	0.000		0.157		0.157	0.30	51.822
	1865	1875	1865-1875							231.2		4.00	0.94	1113.88	1113.9	3.71	4.51	20.23				1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580	35.16	9.845	9.845		35.658		35.658	82.44	7.594
	1875	1880	1875-1880							231.2		4.00	0.94		1113.9	3.71	4.51	20.23				1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	82.47	7.581
	1880	1885	1880-1885							231.2		4.00	0.94		1113.9	3.71	4.51	20.23				1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	89.95	3.986
	1885	1890	1885-1890							231.2		4.00	0.94		1113.9	3.71	4.51	20.23				1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	85.62	5.991
	1890	1520	1890-1520							231.2		4.00	0.94		1113.9	3.71	4.51	20.23		1.870	0.758	1.50	1.136					1.500	0.000	1.136	1.87	0.524	6.104		0.000	9.845		37.318		37.318	79.18	9.810
	1520	PS8	1520-PS8							567.1		3.95	2.30		1869.1	3.52	7.57	34.72				1.50	0.000					1.500	0.000	2.336	0.00	0.000	16.584		0.000	15.206		68.841		68.841	66.95	33.990

Reason for Upgrade	Upgrade due to Pump flow	Size Upgrade?	SEWER DATA - DIA. (mm)	Actual Dia. (mm)	DESIGN SLOPE (%)	ACTUAL SLOPE (%)	CAPAC. (l/s)	VEL. (m/s)	LENGTH (m)
			250	254.00	0.840	0.836	56.740	1.120	43.04
			250	254.00	0.600	0.596	47.906	0.945	38.57
			250	254.00	0.600	0.602	48.118	0.950	51.53
			250	254.00	0.420	1.791	83.016	1.638	33.51
			250	254.00	0.580	0.580	47.265	0.933	89.59
			250	254.00	0.600	0.600	48.046	0.948	31.68
			250	254.00	0.600	0.601	48.096	0.949	31.61
			250	254.00	0.400	0.400	39.260	0.775	87.39
			250	254.00	0.390	0.394	38.947	0.769	55.82
			250	254.00	0.510	0.510	44.297	0.874	25.50
			250	254.00	0.320	0.322	35.183	0.694	90.17
			250	254.00	0.320	0.325	35.356	0.698	52.34
			250	254.00	0.930	0.938	60.069	1.185	52.27
			250	254.00	0.250	3.586	117.488	2.319	17.57
			250	254.00	0.250	0.252	31.123	0.614	30.467
			250	254.00	0.250	0.253	31.212	0.616	43.46
			250	254.00	0.250	0.253	31.191	0.616	43.52
			250	254.00	0.240	0.238	30.253	0.597	46.26
			250	254.00	0.200	0.307	34.394	0.679	13.01
			250	254.00	0.240	0.600	48.035	0.948	16.68
			250	254.00	0.240	0.242	30.496	0.602	16.55
			250	254.00	0.240	0.236	30.112	0.594	72.16
			250	254.00	0.240	0.236	30.124	0.595	72.10
			250	254.00	0.250	0.248	30.910	0.610	36.25
			250	254.00	0.240	0.237	30.186	0.596	67.58
			250	254.00	0.250	0.247	30.853	0.609	64.69
			300	304.80	0.290	0.295	54.839	0.752	71.07
			300	304.80	0.290	0.289	54.256	0.744	24.20
			300	304.80	0.240	0.241	49.549	0.679	66.33
			300	304.80	0.280	0.284	53.775	0.737	66.87
			250	254.00	0.740	0.702	51.979	1.026	15.67
			300	304.80	0.100	0.184	43.252	0.593	48.96
			300	304.80	0.180	0.184	43.239	0.593	32.66
			300	304.80	0.180	0.154	39.644	0.543	19.43
			300	304.80	0.180	0.170	41.649	0.571	99.74
			300	304.80	0.210	0.218	47.129	0.646	96.22
			450	457.20	0.100	0.120	102.831	0.626	33.46

Upsize Diameter

Upstream Obvert (m)	Upstream Invert (m)	Downstream Obvert (m)	Downstream Invert (m)	Comments
63.01	62.760	62.65	62.400	
62.65	62.400	62.42	62.170	
62.39	62.140	62.08	61.830	
63.00	62.750	63.60	63.350	
63.57	63.320	63.05	62.800	
63.02	62.770	62.83	62.580	
62.83	62.580	62.64	62.390	
60.90	60.650	60.55	60.300	
63.97	63.720	63.75	63.500	
63.69	63.440	63.56	63.310	
63.53	63.280	63.24	62.990	
63.24	62.990	63.07	62.820	
63.07	62.820	62.58	62.330	
62.67	62.420	62.04	61.790	
63.12	62.870	63.01	62.760	
63.01	62.760	62.90	62.650	
62.90	62.650	62.79	62.540	
62.73	62.480	62.62	62.370	
62.59	62.340	62.55	62.300	
62.65	62.400	62.55	62.300	
62.49	62.240	62.45	62.200	
62.39	62.140	62.22	61.970	
62.22	61.970	62.05	61.800	
62.05	61.800	61.96	61.710	
61.96	61.710	61.80	61.550	
61.80	61.550	61.64	61.390	
61.66	61.360	61.45	61.150	
60.55	60.250	60.48	60.180	
60.45	60.150	60.29	59.990	
60.29	59.990	60.10	59.800	
60.92	60.670	60.81	60.560	
60.04	59.740	59.95	59.650	
59.89	59.590	59.83	59.530	
59.77	59.470	59.74	59.440	
59.67	59.370	59.50	59.200	
59.50	59.200	59.29	58.990	
59.29	58.840	59.26	58.800	

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J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - March 2023 (5-10 years - Future Proofed)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/capd
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/capd
Infilt. Allowance:	0.28	L/ha/s

Population Density (Future Development): 2.375

Prepared by: M.L.
Checked by: B.P.

Downstream Runs
Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	EXISTING RESIDENTIAL AREA: Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION — EXISTING ICI Areas (ha): Commerc	Industrial	Flows (l/s): Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI Areas (ha): Commerc	Industrial	Flows (l/s): Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRAENOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRAENOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
RACINE	1210	1205	1210-1205							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.980		2.423	1.50	3.634					1.500	0.000	3.634	5.98	1.674	1.674		0.000	0.000		5.308		5.308	24.67	16.207
	1205	1200	1205-1200							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	3.634	0.00	0.000	1.674		0.000	0.000		5.308		5.308	24.80	16.100
	1200	1195	1200-1195							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000		0.19		0.077	1.500	0.115	3.749	0.00	0.000	1.674	1.3	0.365	0.365		5.788		5.788	23.26	19.098
	1195	1190	1195-1190							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	3.749	0.00	0.000	1.674		0.000	0.365		5.788		5.788	17.65	27.002
	1190	1185	1190-1185							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.372		2.176	1.50	3.264					1.500	0.000	7.014	5.37	1.504	3.179		0.000	0.365		10.557		10.557	27.57	27.741
	1185	1170	1185-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	7.014	0.00	0.000	3.179		0.000	0.365		10.557		10.557	28.01	27.136
RACINE	1180	1175	1180-1175							0.0	4.00	0.00		0.0	4.00	0.00	0.00		1.450		0.587	1.50	0.881					1.500	0.000	0.881	1.45	0.406	0.406		0.000	0.000		1.287		1.287	5.76	21.044
	1175	1170	1175-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.881	0.00	0.000	0.406		0.000	0.000		1.287		1.287	5.84	20.736
INDUSTRIEL	1170	1165	1170-1165							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	7.895	0.00	0.000	3.585		0.000	0.365		11.844		11.844	41.54	16.667
	1165	1150	1165-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	7.895	0.00	0.000	3.585		0.000	0.365		11.844		11.844	41.27	16.854
INDUSTRIEL	1160	1155	1160-1155							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.344	1.809	0.436	0.733	1.50	1.753					1.500	0.000	1.753	3.15	0.883	0.883		0.000	0.000		2.636		2.636	10.43	22.625
	1155	1150	1155-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	1.753	0.00	0.000	0.883		0.000	0.000		2.636		2.636	5.77	43.011
INDUSTRIEL	1150	PS3	1150-PS3							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	9.648	0.00	0.000	4.468		0.000	0.365		14.480		14.480	45.03	17.677
INDUSTRIEL	PS3	1125	PS3-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	9.648	0.00	0.000	4.468		0.000	0.365	37.000	14.480	22.520	37.000	0.00	
INDUSTRIEL	1145	1140	1145-1140							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.561	0.986	0.182	0.399	1.50	0.872					1.500	0.000	0.872	1.55	0.433	0.433		0.000	0.000		1.305		1.305	5.37	23.024
INDUSTRIEL	1140	1135	1140-1135							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.872	0.00	0.000	0.433		0.000	0.000		1.305		1.305	5.48	22.493
INDUSTRIEL	1135	1130	1135-1130							0.0	4.00	0.00		0.0	4.00	0.00	0.00	4.125		1.337		1.50	2.005					1.500	0.000	2.877	4.12	1.155	1.588		0.000	0.000		4.465		4.465	18.77	19.327
	1130	1125	1130-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	2.877	0.00	0.000	1.588		0.000	0.000		4.465		4.465	18.45	19.734
RACINE	1125	1095	1125-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.634		0.529		1.50	0.794					1.500	0.000	13.319	1.63	0.457	6.513		0.000	0.365		20.197	22.520	42.717	63.38	24.680
RICHER	1120	1115	1120-1115							0.0	4.00	0.00		0.0	4.00	0.00	0.00	2.242		0.727		1.50	1.090					1.500	0.000	1.090	2.24	0.628	0.628		0.000	0.000		1.718		1.718	4.91	33.250
	1115	1110	1115-1110							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	1.090	0.00	0.000	0.628		0.000	0.000		1.718		1.718	5.27	30.872
LAFLECHE	1110	1105	1110-1105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.733		0.238		1.50	0.356					1.500	0.000	1.446	0.73	0.205	0.833		0.000	0.000		2.279		2.279	6.90	30.770
	1105	1100	1105-1100							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	1.446	0.00	0.000	0.833		0.000	0.000		2.279		2.279	2.56	86.903
	SOUTH417	1100	OUTH417-110							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.838		0.596		1.50	0.893					1.500	0.000	0.893	1.84	0.515	0.515		0.000	0.000		1.408		1.408	4.58	29.345
PRINCIPALE	1100	1095	1100-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	2.340	0.00	0.000	1.348		0.000	0.000		3.687		3.687	6.29	54.908
PRINCIPALE	1095	1094	1095-1094							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	15.658	0.00	0.000	7.861		0.000	0.365		23.884	22.520	46.404	68.81	21.033
	1094	1090	1094-1090							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	15.658	0.00	0.000	7.861		0.000	0.365		23.884	22.520	46.404	72.79	17.342
PRINCIPALE	244	1090	244-1090							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	90.027
	1090	1085	1090-1085	2.25					5.89	5.9	4.00	0.02		0.0	4.00	0.00	0.10	3.031		0.982		1.50	1.473					1.500	0.000	17.132	3.03	0.849	8.709		0.000	0.365		26.301	22.520	48.821	77.86	13.880
	1085	1080	1085-1080							5.9	4.00	0.02		0.0	4.00	0.00	0.10					1.50	0.000					1.500	0.000	17.132	0.00	0.000	8.709		0.000	0.365		26.301	22.520	48.821	67.66	23.338
	1080	1070	1080-1070							5.9	4.00	0.02		0.0	4.00	0.00	0.10					1.50	0.000					1.500	0.000	17.132	0.00	0.000	8.709		0.000	0.365		26.301	22.520	48.821	76.23	15.225
PRINCIPALE	1075	1070	1075-1070							0.0	4.00	0.00		0.0	4.00	0.00	0.00		3.520		1.426	1.50	2.139					1.500	0.000	2.139	3.52	0.985	0.985		0.000	0.000		3.124		3.124	22.27	10.906
JEANNE MANCE	1070	1045	1070-1045	2.25		3.44		10.79		16.7	4.00	0.07		0.0	4.00	0.00	0.27					1.50	0.000					1.500	0.000	19.270	0.45	0.125	9.820		0.000	0.365		29.725	22.520	52.245	75.74	16.731
JEANNE MANCE	1050	1045	1050-1045	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19	0.530		0.172		1.50	0.258					1.500	0.000	0.258	0.53	0.148	0.148		0.000	0.000		0.597		0.597	1.81	32.347
ST. JOSEPH (SOUTH)	1065	1060	1065-1060	15.76	16.00			73.90		73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000					1.500	0.000	0.000	1.89	0.530	0.530		0.000	0.000		1.728		1.728	7.82	20.370
	1060	1055	1060-1055							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.55	18.487
	1055	1045	1055-1045							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.11	19.580
ST. JOSEPH (SOUTH)	1045	1040	1045-1040	10.13				26.52		128.9	4.00	0.52		0.0	4.00	0.00	2.09					1.50	0.000					1.500	0.000	19.528	1.12	0.314	10.812		0.000	0.365		32.793	22.520	55.314	38.63	87.875
	1040	1015	1045-1015							128.9	4.00	0.52		0.0	4.00	0.00	2.09					1.50	0.000					1.500	0.000	19.528	0.00	0.000	10.812		0.000	0.365		32.793	22.520	55.314	39.92	83.298
DUHAMEL	1020	1015	1020-1015	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.68	0.190	0.190		0.000	0.000		0.381		0.381	1.76	21.230
PRINCIPALE	1030	1025	1030-1025	3.38		1.72		11.29		11.3	4.00	0.05		0.0	4.00	0.00	0.18					1.50	0.000					1.500	0.000	0.000	0.48	0.135	0.135		0.000	0.000		0.318		0.318	1.51	20.728
PRINCIPALE	1035	1025	1035-1025	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38	1.667		0.540		1.50	0.810					1.500	0.000	0.810	1.67	0.467	0.467		0.000	0.000		1.659		1.659	8.02	19.027
DUHAMEL	1025	1015	1025-1015	7.88		0.86		21.85		56.7	4.00	0.23		0.0	4.00	0.00	0.92					1.50	0.000					1.500	0.000	0.810	0.62	0.174	0.776		0.000	0.000		2.506		2.506	12.92	16.881
ST. JOSEPH (SOUTH)	1015	1010	1015-1010	18.01				47.15		244.5	4.00	0.99		0.0	4.00	0.00	3.96					1.50	0.000					1.500	0.000	20.338	1.18	0.332	12.110		0.000	0.365		36.776	22.520	59.296	42.71	79.544
	1010	1000	1010-1000							244.5	4.00	0.99		0.0	4.00	0.00	3.96					1.50	0.000					1.500	0.000	20.338	0.00	0.000	12.110		0.000	0.365		36.776	22.520	59.296	42.72	79.502
ST. ISIDORE (WEST)	1005	1000	1005-1000		5.33	12.05		28.04		28.0	4.00	0.11		0.0	4.00	0.00	0.45					1.50	0.000					1.500	0.000	0.000	0.54	0.150	0.150		0.000	0.000		0.604		0.604	2.49	23.630
ST. ISIDORE (WEST)	1000	520	1000-520							272.6	4.00	1.10		0.0	4.00	0.00	4.42					1.50	0.000					1.500	0.000	20.338	0.00	0.000	12.260		0.000	0.365		37.380	22.520	59.900	36.65	103.530
ST. ISIDORE (WEST)	655	650	655-650	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	1.72	0.483	0.483		0.000	0.000		1.295		1.295	5.96	20.416
	650	645	650-645							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.63	21.682
	645	635	645-635							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.70	21.409
PERCY	640	635	640-635	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.71	0.200	0.200		0.000	0.000		0.534		0.534	1.51	34.753
ST. ISIDORE (WEST)	635	630	635-630	11.26		2.58		33.14		103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000					1.500	0.000	0.000	1.52	0.426	1.108		0.000	0.000		2.791		2.791	8.49	30.098
	630	627	630-627							103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.108		0.000	0.000		2.791		2.791	8.74	29.159
	2100	2105	2100-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	26.547
	321	2105	321-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	6.357		2.060		1.50	3.090					1.500	0.000	3.090	6.36	1.780	1.780		0.000	0.000		4.870		4.870	21.29	18.003
	2105	2110	2105-2110	27.02				70.72		70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000					1.500	0.000	3.090	2.09	0.585	2.365		0.000	0.000		6.601		6.601	32.42	13.760
	2110	2115	2110-2115							70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000					1.500	0.000	3.090	0.00	0.000	2.365		0.000	0.000		6.601		6.601	29.32	15.915
	2185	2190	2185-2190	1.13				2.95		2.9	4.00	0.01		0.0	4.00	0.00	0.05					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.048		0.048	0.05	96.240
	2190	2195	2190-2195	15.76				41.25		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000					1.500	0.000	0.000	1.13	0.315	0.315		0.000	0.000		1.032		1.032	0.96	105.953
	2195	2115	2195-2115							44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.315		0.000	0.000		1.032		1.032	1.14	89.224
	2115	2150	2115-2150	4.50				11.79		126.7	4.00	0.51		0.0	4.00	0.00	2.05					1.50	0.000					1.500	0.000	3.090	0.28	0.079	2.759		0.000	0.000		7.902		7.902	6.79	108.532
	2100	2120	2100-2120	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	2.17	25.157
	2120	2125	2120-2125							20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.225		0.000	0.000		0.559		0.559	1.78	30.832
	2125	2130	2125-2130	22.51				58.93		79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000					1.500	0.000	0.000	1.79	0.502	0.727		0.000	0.000		2.016		2.016	7.26	25.771
	2130	2135	2130-2135							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.39	19.483
	2135	2140	2135-2140							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.69	18.788
	2140	2145	2140-2145							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	6.37	29.638
	2145	2150	2145-2150	3.38				8.84		88.4	4.00	0.36		0.0	4.00	0.00	1.43					1.50	0.000					1.500	0.000	0.000	0.34	0.097	0.824		0.000	0.000		2.256		2.256	10.93	18.392
	2150	2165	2150-2165	13.51				35.36		250.5	4.00	1.01		0.0	4.00	0.00	4.06					1.50	0.000					1.500	0.000	3.090	0.67	0.188	3.771		0.000	0.000		10.920		10.920	9.61	102.674
	2155	2160	2155-2160	16.89				44.20		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000					1.500	0.000	0.000	0.86	0.240	0.240		0.000	0.000		0.956		0.956	3.56	25.880
	2200	2160	2200-2160	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000					1.500	0.000	0.000	0.98	0.274	0.274		0.000	0.000		1.085		1.085	3.14	33.491
	2160	2165	2160-2165	6.75				17.68		112.0	4.00	0.45		0.0	4.00	0.00	1.81					1.50	0.000					1.500	0.000	0.000	0.39	0.108	0.622		0.000	0.000		2.436		2.436	9.75	22.560
	2165	2170	2165-2170							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	12.74	91.445
	2170	PS5	2170-PS5							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	13.69	84.173
QUARTIER DES BOISE - Area F (Partial)	PS5	2175	PS5-2175							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000	20.500	13.356	7.144	20.500	0.00	
	2175	2180	2175-2180	7.88				20.63		383.1	4.00	1.55		0.0	4.00	0.00	6.21					1.50	0.000					1.500	0.000	3.090	0.82	0.230	4.624		0.000	0.000		13.920	7.144	21.065	35.98	37.487
	2205	2180	2205-2180	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.71	0.199	0.199		0.000	0.000		0.437		0.437	1.53	28.094
	2180	627	2180-627							397.8	4.00	1.61		0.0	4.00	0.00	6.45					1.50	0.000					1.500	0.000	3.090	0.00	0.000	4.822		0.000	0.000		14.358	7.144	21.502	41.21	30.679
	627	625	627-625	7.88				20.63		522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000					1.500	0.000	3.090	1.19	0.333	6.263		0.000	0.000		17.740	7.144	24.884	79.25	6.514
	625	620	625-620							522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000					1.500	0.000	3.090	0.00	0.000	6.263		0.000	0.000		17.740	7.144	24.884	74.28	8.627
ROGER	855	850	855-850		77.33			157.81		157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	0.000	1.03	0.288	0.288		0.000	0.000		2.845		2.845	12.92	19.174
	850	845	850-845							157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	13.07	18.925
	845	840	845-840							157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.288		0.000

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA - Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	EXISTING ICI - Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI - Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{des} %	Residual Capacity (l/s)
RICHER	830	815	830-815					157.8			4.00	0.64		230.4	4.00	0.93	6.29						1.50	0.000					1.500	0.000	1.994	0.00	0.000	1.184		0.000	0.000		9.468		9.468	28.49	23.759
LAFLECHE	267	246	267-246					0.0		0.0	4.00	0.00	0.00	0.716		0.232							1.50	0.348					1.500	0.000	0.348	0.72	0.200	0.200		0.000	0.000		0.549		0.549	1.18	46.111
LAFLECHE	246	825	246-825					0.0		0.0	4.00	0.00	0.00										1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.95	57.468
LAFLECHE	825	820	825-820					0.0		0.0	4.00	0.00	0.00										1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	1.57	34.431
	820	819	820-819					0.0		0.0	4.00	0.00	0.00										1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.76	71.244
	247	248	247-248			12.05		17.15		17.2	4.00	0.07	0.00	0.28									1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.28	26.795
	249	248	249-248			12.05		17.15		17.2	4.00	0.07	0.00	0.28									1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.34	25.583
	248	819	248-819					34.3		0.0	4.00	0.14	0.00	0.56									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.140		0.000	0.000		0.696		0.696	2.35	28.872
	819	815	819-815					34.3		4.00	0.14	0.00	0.56										1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.341		0.000	0.000		1.245		1.245	4.27	27.909
ST. MARIE	900	890	900-890	9.01				23.57		23.6	4.00	0.10	0.00	0.38									1.50	0.000					1.500	0.000	0.000	0.96	0.268	0.268		0.000	0.000		0.650		0.650	3.07	20.506
ST. MARIE	895	890	895-890	1.13				2.95		2.9	4.00	0.01	0.00	0.05									1.50	0.000					1.500	0.000	0.000	0.15	0.042	0.042		0.000	0.000		0.090		0.090	0.29	31.379
EASEMENT	890	885	890-885					26.5		0.0	4.00	0.11	0.00	0.43									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	3.53	20.216
	885	875	885-875					26.5		4.00	0.11	0.00	0.43										1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	4.03	17.640
FAUCHER	880	875	880-875	13.51				35.36		35.4	4.00	0.14	0.00	0.57									1.50	0.000					1.500	0.000	0.000	1.13	0.318	0.318		0.000	0.000		0.891		0.891	2.54	34.209
FAUCHER	875	815	875-815					61.9		4.00	0.25	0.00	1.00										1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.628		0.000	0.000		1.630		1.630	8.91	16.668
ISABELLE	815	810	815-810	4.50				11.79		265.8	4.00	1.08	230.4	3.98	0.93	7.99							1.50	0.000					1.500	0.000	2.342	0.43	0.122	2.274		0.000	0.000		12.607		12.607	37.89	20.666
ISABELLE	810B	810A	810B-810A		29.33			59.86		59.9	4.00	0.24	0.00	0.97									1.50	0.000					1.500	0.000	0.000	0.26	0.072	0.072		0.000	0.000		1.042		1.042	4.42	22.536
	810A	810	810A-810							59.9	4.00	0.24	0.00	0.97									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.072		0.000	0.000		1.042		1.042	3.97	25.197
ISABELLE	810	795	810-795	4.50				11.79		337.4	4.00	1.37	230.4	3.95	0.93	9.07							1.50	0.000					1.500	0.000	2.342	0.41	0.115	2.462		0.000	0.000		13.878		13.878	30.73	31.280
BOILEAU	805	800	805-800	11.26				29.47		29.5	4.00	0.12	0.00	0.48									1.50	0.000					1.500	0.000	0.000	1.10	0.307	0.307		0.000	0.000		0.785		0.785	3.12	24.403
	800	795	800-795							29.5	4.00	0.12	0.00	0.48									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.307		0.000	0.000		0.785		0.785	3.49	21.720
ISABELLE	795	765	795-765					366.9		4.00	1.49	230.4	3.93	0.93	9.52								1.50	0.000					1.500	0.000	2.342	0.00	0.000	2.769		0.000	0.000		14.627		14.627	36.89	25.027
SAUVE	790	785	790-785	13.51				35.36		35.4	4.00	0.14	0.00	0.57									1.50	0.000					1.500	0.000	0.000	1.67	0.469	0.469		0.000	0.000		1.042		1.042	2.73	37.161
	785	780	785-780					35.4		4.00	0.14	0.00	0.57										1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	3.40	29.635
	780	775	780-775					35.4		4.00	0.14	0.00	0.57										1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	2.27	44.868
	775	770	775-770	10.13				26.52		61.9	4.00	0.25	0.00	1.00									1.50	0.000					1.500	0.000	0.000	1.01	0.283	0.752		0.000	0.000		1.755		1.755	5.48	30.252
	770	765	770-765							61.9	4.00	0.25	0.00	1.00									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.752		0.000	0.000		1.755		1.755	5.00	33.327
ISABELLE	765	760	765-760	5.63				14.73		443.5	4.00	1.80	230.4	3.90	0.93	10.66							1.50	0.000					1.500	0.000	2.342	0.55	0.155	3.676		0.000	0.000		16.675		16.675	48.65	17.603
	760	735	760-735							443.5	4.00	1.80	230.4	3.90	0.93	10.66							1.50	0.000					1.500	0.000	2.342	0.00	0.000	3.676		0.000	0.000		16.675		16.675	49.34	17.122
GAGNE	755	750	755-750	7.88				20.63		20.6	4.00	0.08	0.00	0.33									1.50	0.000					1.500	0.000	0.000	0.56	0.156	0.156		0.000	0.000		0.490		0.490	2.16	22.157
	750	745	750-745							20.6	4.00	0.08	0.00	0.33									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.156		0.000	0.000		0.490		0.490	2.35	20.394
	745	740	745-740	10.13		0.86		27.74		48.4	4.00	0.20	0.00	0.78									1.50	0.000					1.500	0.000	0.000	1.01	0.282	0.438		0.000	0.000		1.222		1.222	7.31	15.491
	740	735	740-735							48.4	4.00	0.20	0.00	0.78									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.438		0.000	0.000		1.222		1.222	5.74	20.057
ISABELLE	735	730	735-730	5.63				14.73		506.6	3.97	2.05	230.4	3.88	0.93	11.59							1.50	0.000					1.500	0.000	2.342	0.54	0.153	4.267		0.000	0.000		18.197		18.197	47.73	19.929
	730	PS2	730-PS2							506.6	3.97	2.05	230.4	3.88	0.93	11.59							1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267		0.000	0.000		18.197		18.197	41.44	25.709
	PS2	725	PS2-725							506.6	3.97	2.05	230.4	3.88	0.93	11.59							1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267	20.500	0.000	0.000		18.197	2.303	20.500	0.00	0.000
	725	715	725-715							506.6	3.97	2.05	230.4	3.88	0.93	11.59							1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267		0.000	0.000		18.197	2.303	20.500	70.46	8.593
GAGNE	720	715	720-715	11.26				29.47		29.5	4.00	0.12	0.00	0.48									1.50	0.000					1.500	0.000	0.000	0.97	0.271	0.271		0.000	0.000		0.748		0.748	3.76	19.170
ISABELLE	715	710	715-710	3.38				8.84		544.9	3.95	2.21	230.4	3.87	0.93	12.15							1.50	0.000					1.500	0.000	2.342	0.36	0.101	4.638		0.000	0.000		19.130	2.303	21.433	54.59	17.828
	710	700	710-700							544.9	3.95	2.21	230.4	3.87	0.93	12.15							1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.638		0.000	0.000		19.130	2.303	21.433	56.91	16.231
ALICE	705	700	705-700	5.63				14.73		14.7	4.00	0.06	0.00	0.24									1.50	0.000					1.500	0.000	0.000	0.52	0.147	0.147		0.000	0.000		0.385		0.385	1.80	21.016
ISABELLE	700	695	700-695	14.63				38.31		597.9	3.93	2.42	230.4	3.85	0.93	12.92							1.50	0.000					1.500	0.000	2.342	1.42	0.396	5.181		0.000	0.000		20.445	2.303	22.749	43.55	29.486
	695	675	695-675							597.9	3.93	2.42	230.4	3.85	0.93	12.92							1.50	0.000					1.500	0.000	2.342	0.00	0.000	5.181		0.000	0.000		20.445	2.303	22.749	66.58	11.418
ALICE	690	685	690-685	18.01				47.15		47.1	4.00	0.19	0.00	0.76									1.50	0.000					1.500	0.000	0.000	1.77	0.496	0.496		0.000	0.000		1.260		1.260	5.85	20.279
	685	680	685-680							47.1	4.00	0.19	0.00	0.76									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.496		0.000	0.000		1.260		1.260	6.03	19.650
	680	675	680-675	4.50				11.79		58.9	4.00	0.24	0.00	0.97									1.50	0.000					1.500	0.000	0.000	0.45	0.126	0.622		0.000	0.000		1.577		1.577	7.21	20.305
ISABELLE	675	665	675-665	4.50				11.79		668.7	3.91	2.71	230.4	3.83	0.93	13.95							1.50	0.000					1.500	0.000	2.342	0.46	0.128	5.931		0.000	0.000		22.219	2.303	24.522	72.65	9.231
ALBERT	670	665	670-665	12.38				32.41		32.4	4.00	0.13	0.00	0.53									1.50	0.000					1.500	0.000	0.000	0.95	0.265	0.265		0.000	0.000		0.790		0.790	3.64	20.883
ISABELLE	665	660	665-660	6.75				17.68		718.8	3.89	2.91	230.4	3.81	0.93	14.67							1.50	0.000					1.500	0.000	2.342	0.81	0.228	6.423		0.000	0.000		23.431	2.303	25.735	79.46	6.650
	660	620	660-620							718.8	3.89	2.91	230.4	3.81	0.93	14.67							1.50	0.000					1.500	0.000	2.342	0.00	0.000	6.423		0.000	0.000		23.431	2.303	25.735	65.81	13.371
	620	615	620-615	5.63				14.73		1255.8	3.73	5.09	230.4	3.68	0.93	22.17							1.50	0.000					1.500	0.000	5.432	0.80	0.224	12.910		0.000	0.000		40.511	9.448	49.958	63.75	28.409
	615	535	615-535							1255.8	3.73	5.09	230.4	3.68	0.93	22.17							1.50	0.000					1.500	0.000	5.432	0.00	0.000	12.910		0.000	0.000		40.511	9.448	49.958	48.03	54.062
PERCY	610	600	610-600	4.50				11.79		11.8	4.00	0.05	0.00	0.19									1.50	0.000					1.500	0.000	0.000	0.43	0.121	0.121		0.000	0.000		0.311		0.311	0.80	38.475
PERCY	605	600	605-600	3.38				8.84		8.8	4.00	0.04	0.00	0.14									1.50	0.000					1.500	0.000	0.000	0.28	0.079	0.079		0.000	0.000		0.223		0.223	0.50	44.070
DESNOYERS	600	595	600-595	16.89		0.86		45.42		66.0	4.00	0.27	0.00	1.07									1.50	0.000					1.500	0.000	0.000	1.71	0.479	0.679		0.000	0.000		1.749		1.749	7.29	22.259
	595	590	595-590							66.0	4.00	0.27	0.00	1.07									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	5.37	30.826
	590	545	590-545							66.0	4.00	0.27	0.00	1.07									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	3.83	43.883
FLEURETTE STREET	580	570	580-570	4.50				11.79		11.8	4.00	0.05	0.00	0.19									1.50	0.000					1.500	0.000	0.000	0.52	0.145	0.145		0.000	0.000		0.336		0.336	0.85	39.191
FLEURETTE CIRCLE	575	570	575-570	9.01				23.57		23.6	4.00	0.10	0.00	0.38									1.50	0.000					1.500	0.000	0.000	1.13	0.317	0.317		0.000	0.000		0.699		0.699	1.21	57.259
FLEURETTE STREET	570	565	570-565							35.4	4.00	0.14	0.00	0.57									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.462		0.000	0.000		1.035		1.035	2.41	41.919
PERCY	585	565	585-565	7.88				20.63		20.6	4.00	0.08	0.00	0.33									1.50	0.000					1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	1.71	32.044
PERCY	565	560	565-560	5.63			2.00	14.73		70.7	4.00	0.29	0.00	1.15									1.50	0.000					1.500	0.000	0.000	0.53	0.150	0.836		0.000	0.000		1.982		1.982	6.28	29.560
PERCY	560	555	560-555	12.38				32.41		32.4	4.00	0.13	0.00	0.53									1.50	0.000					1.500	0.000	0.000	1.01	0.282	0.282		0.000	0.000		0.807		0.807	2.59	30.394
	555	550	555-550							32.4	4.00	0.13	0.00	0.53									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.282		0.000	0.000		0.807		0.807	2.38	33.055
JEAN MARC	550	545	550-545							103.1	4.00	0.42	0.00	1.67									1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.118		0.000	0.000		2.789		2.789	7.48	34.518
DESNOYERS	545	540	545-540	10.13				26.52		195.7	4.00	0.79	0.00	3.17									1.50	0.000					1.500	0.000	0.000	0.94	0.262	2.060		0.000	0.000		5.231		5.231	18.70	22.740
	540	535	540-535	7.88				20.63		216.3	4.00	0.88	0.00	3.51									1.50	0.000					1.500	0.000	0.000	0.95	0.265	2.325		0.000	0.000		5.830		5.830	18.33	25.970
ST. ISIDORE (WEST)	535	530	535-530	16.89	2.67	0.86	1.00	50.87		1523.0	3.67	6.17	230.4	3.63	0.93	25.78	2.305		0.747				1.50	1.120					1.500	0.000	6.552	2.30	0.645	15.880		0.000	0.000		48.211	9.448	57.658	85.47	9.806
	530	525	530-525							1523.0	3.67	6.17	230.4	3.63	0.93	25.78							1.50	0.000					1.500	0.000	6.552	0.00	0.000	15.880		0.000	0.000		48.211	9.448	57.658	66.41	29.158
ST. ANNE	990	985	990-985	14.63				38.31		38.3	4.00	0.16	0.00	0.62									1.50	0.000					1.500	0.000	0.000	1.57	0.439	0.439		0.000	0.000		1.060		1.060	5.02	20.043
	985	980	985-980							38.3	4.00	0.16	0.00	0.62									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.439		0.000	0.000		1.060		1.060	5.08	19.806
	980	975	980-975	10.13				26.52		64.8	4.00	0.26	0.00	1.05									1.50	0.000					1.500	0.000	0.000	0.96	0.268	0.707		0.000	0.000		1.758		1.758	8.54	18.823
	975	970	975-970							64.8	4.00	0.26	0.00	1.05									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.707		0.000	0.000		1.758		1.758	8.69	18.462
	970	965	970-965	7.88	5.33			31.51		96.3	4.00	0.39	0.00	1.56									1.50	0.000					1.500	0.000	0.000	0.78	0.219	0.926		0.000	0.000		2.487		2.487	12.13	18.010
	965	905	965-905							96.3	4.00	0.39	0.00	1.56									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.926		0.000	0.000		2.487		2.487	9.33	24.168
FAUCHER	960	955	960-955	9.01				23.57		23.6	4.00	0.10	0.00	0.38									1.50	0.000					1.500	0.000	0.000	0.91	0.255	0.255		0.000	0.000		0.637		0.637	2.55	24.369
	955	945	955-945							23.6	4.00	0.10	0.00	0.38									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.255		0.000	0.000		0.637		0.637	2.95	20.979
COURT 'B'	950	945	950-945	4.50				11.79		11.8	4.00	0.05	0.00	0.19									1.50	0.000					1.500	0.000	0.000	0.95	0.267	0.267		0.000	0.000		0.458		0.458	1.71	26.391
FAUCHER	945	940	945-940							35.4	4.00	0.14	0.00	0.57									1.50	0.000					1.500	0.000	0.000	0.90	0.252	0.774		0.000	0.000		1.347		1.347	6.42	19.632
	940	930	940-930	9.01				23.57		58.9	4.00	0.24	0.00	0.95									1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.774		0.000	0.000		1.729		1.729	7.90	20.165
COURT 'A'	935	930	935-930	6.75				17.68		17.7	4.00	0.07	0.00	0.29									1.50	0.000					1.500	0.000	0.000	1.06	0.297	0.297		0.000	0.000		0.584		0.584	2.84	19.950
FAUCHER	930	925	930-925	9.01				23.57		100.2	4.00	0.41	0.00	1.62									1.50	0.000					1.500	0.000	0.000	0.92	0.258	1.329		0.000	0.000		2.953		2.953	13.66	18.671
	925	915	925-915							100.2	4.00	0.41	0.00	1.62									1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.329		0.000	0.000		2.953		2.953	13.39	19.096
ALBERT	920	915	920-915	6.75				17.68		17.7	4.00	0.07	0.00	0.29									1.50	0.000					1.500	0.000	0.000	0.73	0.206	0.206		0.000	0.000		0.492		0.492	2.29	21.032
EASEMENT	915	910	915-910							117.9	4.00	0.48	0.00	1.91									1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.535		0.000	0.000		3.445		3.445	14.93	19.624
	910	905	910-905	5.63				14.73		132.6	4.00	0.54	0.00	2.15									1.50	0.000					1.500	0.000	0.000	0.35	0.097	1.632		0.000	0.000		3.781		3.781	16.99	18.469
ST. ANNE	905	525	905-525							228.9	4.00	0.93	0.00	3.71									1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.559		0.000	0.000		6.268		6.268	19.72	25.523
ST. ISIDORE (WEST)	525	520	525-520							1751.9	3.63	7.10	230.4	3.59	0.93	28.82							1.50	0.000					1.500	0.000	6.552	0.00	0.000	18.438		0.000	0.000		53.808	9.448	63.256	55.06	51.631
ST. JOSEPH (NORTH)	520	515	520-515	3.38				8.84		2033.3	3.58	8.24	14.25	244.6	3.54	0.99	32.68						1.50	0.000					1.500	0.000	26.890	0.43	0.120	30.819		0.000	0.365		90.751	31.968	122.718	88.78	15.504
STATION	520A	515	520A-515	6.75		0.86		18.90		18.9	4.00	0.08	0.00	0.31									1.50	0.000					1.500	0.000	0.000	0.58	0.162	0.162		0.000	0.000		0.469		0.469	0.57	81.915

Reason for Upgrade	Upgrade due to Pump flow	Size Upgrade?	SEWER DATA: DIA. (mm)	Actual Dia. (mm)	DESIGN SLOPE (%)	ACTUAL SLOPE (%)	CAPAC. (l/s)	VEL. (m/s)	LENGTH (m)	Upstream Obvert (m)	Upstream Invert (m)	Downstream Obvert (m)	Downstream Invert (m)	Comments
			250	254.00	0.293	0.287	33.227	0.656	74.25	62.51	62.261	62.30	62.048	
			200	203.20	1.000	1.860	46.659	1.439	33.34	63.04	62.840	62.42	62.220	
			200	203.20	1.000	2.875	58.016

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA - Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION – EXISTING ICI: Areas (ha) Commerc.	Areas (ha) Industrial	Flows (l/s) Commerc.	Flows (l/s) Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha) Commerc.	Areas (ha) Industrial	Flows (l/s) Commerc.	Flows (l/s) Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRA/NEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRA/NEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{cap} %	Residual Capacity (l/s)
ST. JOSEPH (NORTH)	515	505	515-505							2052.2		3.58	8.31	244.6	3.54	0.99	32.92						1.50	0.000					1.500	0.000	26.890	0.00	0.000	30.981		0.000	0.365		91.157	31.968	123.125	90.49	12.942
CARTIER	510	505	510-505	23.64	10.67	3.44		88.55		88.5		4.00	0.36	0.0	4.00	0.00	1.43						1.50	0.000					1.500	0.000	0.000	1.79	0.502	0.502		0.000	0.000		1.937		1.937	2.15	88.319
ST. JOSEPH (NORTH)	505	500	505-500							2140.7		3.56	8.67	244.6	3.53	0.99	34.06						1.50	0.000					1.500	0.000	26.890	0.00	0.000	31.484		0.000	0.365		92.801	31.968	124.769	93.91	8.094
	500	460	500-460							2140.7		3.56	8.67	244.6	3.53	0.99	34.06						1.50	0.000					1.500	0.000	26.890	0.00	0.000	31.484		0.000	0.365		92.801	31.968	124.769	87.85	17.248
LAVAL	495	485	495-485	5.63				14.73		14.7		4.00	0.06	0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	0.53	0.149	0.149		0.000	0.000		0.388		0.388	1.42	26.890
CARTIER	490	485	490-485	4.50				11.79		11.8		4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.40	0.112	0.112		0.000	0.000		0.303		0.303	1.44	20.781
LAVAL	485	480	485-480							26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.33	20.074
	480	465	480-465							26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.15	21.276
LAVAL	475	470	475-470	7.88		2.58		24.30		24.3		4.00	0.10	0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	1.37	0.384	0.384		0.000	0.000		0.778		0.778	3.55	21.144
	470	465	470-465							24.3		4.00	0.10	0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.384		0.000	0.000		0.778		0.778	3.60	20.825
DOLLARD	465	460	465-460	15.76				41.25		92.1		4.00	0.37	0.0	4.00	0.00	1.49						1.50	0.000					1.500	0.000	0.000	1.65	0.461	1.106		0.000	0.000		2.598		2.598	3.06	82.318
ST. JOSEPH (NORTH)	460	455	460-455	16.89	8.00	5.16		67.88		2300.7		3.54	9.32	244.6	3.50	0.99	36.11						1.50	0.000					1.500	0.000	26.890	2.07	0.580	33.170		0.000	0.365		96.534	31.968	128.502	74.98	42.889
	455	305B	455-305B							2300.7		3.54	9.32	244.6	3.50	0.99	36.11						1.50	0.000					1.500	0.000	26.890	0.00	0.000	33.170		0.000	0.365		96.534	31.968	128.502	67.62	61.539
DROUIN	450	445	450-445	4.50				11.79		11.8		4.00	0.05	166.25	166.3	4.00	0.67	2.88					1.50	0.000					1.500	0.000	0.000	1.45	0.407	0.407		0.000	0.000		3.292		3.292	3.78	83.688
	445	440	445-440							11.8		4.00	0.05		166.3	4.00	0.67	2.88					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		3.292		3.292	3.92	80.683
	440	435	440-435							11.8		4.00	0.05		166.3	4.00	0.67	2.88					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		3.292		3.292	4.99	62.617
	435	430	435-430	24.76				64.82		76.6		4.00	0.31		166.3	4.00	0.67	3.94					1.50	0.000					1.500	0.000	0.000	2.84	0.795	1.202		0.000	0.000		5.137		5.137	13.73	32.289
	430	425	430-425							76.6		4.00	0.31		166.3	4.00	0.67	3.94					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		5.137		5.137	12.96	34.498
	425	395	425-395							76.6		4.00	0.31		166.3	4.00	0.67	3.94					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		5.137		5.137	12.76	35.111
MARQUETTE	420	415	420-415	16.89				44.20		44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	1.68	0.471	0.471		0.000	0.000		1.188		1.188	2.68	43.151
	415	410	415-410							44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	3.03	37.972
	410	400	410-400							44.2		4.00	0.18	0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	2.97	38.792
JOLIETTE	405	400	405-400	10.13				26.52		26.5		4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	1.04	0.291	0.291		0.000	0.000		0.720		0.720	1.80	39.223
JOLIETTE	400	395	400-395							70.7		4.00	0.29	0.0	4.00	0.00	1.15						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.762		0.000	0.000		1.908		1.908	4.95	36.646
DROUIN	395	PS4	395-PS4							147.3		4.00	0.60	166.3	4.00	0.67	5.08						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000		7.045		7.045	19.61	28.890
(forcemain)	PS4	390	PS4-390							147.3		4.00	0.60	166.3	4.00	0.67	5.08						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000	18.500	7.045	11.455	18.500	0.00	
LEVESQUES	390	385	390-385	7.88				20.63		168.0		4.00	0.68	166.3	4.00	0.67	5.42						1.50	0.000					1.500	0.000	0.000	1.53	0.427	2.391		0.000	0.000		7.807	11.455	19.261	34.93	35.884
	385	380	385-380							168.0		4.00	0.68	166.3	4.00	0.67	5.42						1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.391		0.000	0.000		7.807	11.455	19.261	43.25	25.269
	380	375	380-375	25.89				67.77		235.7		4.00	0.95	166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	2.89	0.808	3.199		0.000	0.000		9.713	11.455	21.168	46.54	24.310
	375	370	375-370							235.7		4.00	0.95	166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		9.713	11.455	21.168	47.20	23.678
	370	365	370-365							235.7		4.00	0.95	166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		9.713	11.455	21.168	45.86	24.985
	365	335	365-335							235.7		4.00	0.95	166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		9.713	11.455	21.168	45.16	25.707
DROUIN	360	355	360-355	23.64				61.88		61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	3.12	0.873	0.873		0.000	0.000		1.876		1.876	3.65	49.532
	355	350	355-350							61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	4.09	43.974
	350	345	350-345							61.9		4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	3.83	47.159
LEVESQUES	345	340	345-340	5.63				14.73		76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.71	0.199	1.072		0.000	0.000		2.314		2.314	4.88	45.137
	340	335	340-335							76.6		4.00	0.31	0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.072		0.000	0.000		2.314		2.314	4.47	49.466
EASEMENT	335	330	335-330							312.3		4.00	1.27	166.3	3.98	0.67	7.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.272		0.000	0.000		11.995	11.455	23.450	51.13	22.417
	330	320	330-320	7.88				20.63		333.0		4.00	1.35	166.3	3.97	0.67	8.04						1.50	0.000					1.500	0.000	0.000	0.91	0.254	4.525		0.000	0.000		12.563	11.455	24.018	53.21	21.120
LAVAL	325	320	325-320	5.63				14.73		14.7		4.00	0.06	0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	1.10	0.309	0.309		0.000	0.000		0.547		0.547	1.89	28.361
LAVAL	320	315	320-315							347.7		4.00	1.41	166.3	3.97	0.67	8.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.834		0.000	0.000		13.095	11.455	24.550	49.91	24.635
MONTCALM	315	310	315-310	5.63		8.61		26.99		374.7		4.00	1.52	166.3	3.96	0.67	8.67	1.826		0.592			1.50	0.888					1.500	0.000	0.888	1.83	0.511	5.345		0.000	0.000		14.902	11.455	26.357	52.27	24.064
	310	305B	310-305B							374.7		4.00	1.52	118.75	285.0	3.91	1.15	10.45					1.50	0.000					1.500	0.000	0.888	0.00	0.000	5.345		0.000	0.000		16.680	11.455	28.134	69.90	12.116
MONTCALM	305A	305B	305A-305B	1.13		5.16		10.30		10.3		4.00	0.04	0.0	4.00	0.00	0.17						1.50	0.000					1.500	0.000	0.000	0.36	0.101	0.101		0.000	0.000		0.268		0.268	0.51	52.411
MONTCALM	305B	300	305B-300							2685.7		3.48	10.88	529.6	3.42	2.15	44.50						1.50	0.000					1.500	0.000	27.778	0.00	0.000	38.616		0.000	0.365		111.260	43.422	154.682	76.05	48.707
	300	290	300-290	4.50		6.02		20.36		2706.0		3.48	10.96	529.6	3.41	2.15	44.75	0.789		0.256			1.50	0.383					1.500	0.000	28.161	0.79	0.221	38.837		0.000	0.365		112.115	43.422	155.537	52.35	141.575
ST. THERESE	295	290	295-290	7.88		6.02		29.20		29.2		4.00	0.12	0.0	4.00	0.00	0.47						1.50	0.000					1.500	0.000	0.000	1.14	0.318	0.318		0.000	0.000		0.791		0.791	14.49	4.669
MONTCALM	290	255	290-255							2735.2		3.48	11.08	529.6	3.41	2.15	45.11						1.50	0.000					1.500	0.000	28.161	0.00	0.000	39.155		0.000	0.365		112.793	43.422	156.215	64.00	87.852
CARTIER	285	280	285-280	2.25				5.89		5.9		4.00	0.02	0.0	4.00	0.00	0.10	0.601		0.195			1.50	0.292					1.500	0.000	0.292	0.60	0.168	0.168		0.000	0.000		0.556		0.556	2.52	21.540
ST. JEAN	280	275	280-275	6.75				17.68		23.6		4.00	0.10	0.0	4.00	0.00	0.38	1.026		0.333			1.50	0.499					1.500	0.000	0.791	1.03	0.287	0.456		0.000	0.000		1.629		1.629	7.52	20.021
	275	265	275-265							23.6		4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.791	0.00	0.000	0.456		0.000	0.000		1.629		1.629	7.61	19.768
DOLLARD	270	265	270-265	4.50	2.67	3.44		22.13		22.1		4.00	0.09	0.0	4.00	0.00	0.36						1.50	0.000					1.500	0.000	0.000	0.55	0.155	0.155		0.000	0.000		0.514		0.514	2.46	20.380
ST. JEAN	265	260	265-260	7.88	2.67	26.68		64.05		109.8		4.00	0.44	0.0	4.00	0.00	1.78	1.356		0.440			1.50	0.659					1.500	0.000	1.450	1.36	0.380	0.991		0.000	0.000		4.219		4.219	19.37	17.565
	260	255	260-255							109.8		4.00	0.44	0.0	4.00	0.00	1.78						1.50	0.000					1.500	0.000	1.450	0.00	0.000	0.991		0.000	0.000		4.219		4.219	7.01	56.012
MONTCALM	255	90	255-90							2845.0		3.46	11.52	529.6	3.40	2.15	46.46						1.50	0.000					1.500	0.000	29.612	0.00	0.000	40.145		0.000	0.365		116.580	43.422	160.002	64.27	88.943
ST. ISIDORE (EAST)	250	245	250-245	5.63		0.86		15.96		16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	2.53	0.708	0.708		0.000	0.000		0.967		0.967	4.45	20.777
	245	240	245-240							16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	4.43	20.833
	240	172	235	240-235						16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	4.44	20.787
	235	230A	235-230A							16.0		4.00	0.06	0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	6.44	14.037
	230A	230	230A-230	7.88				20.63		36.6		4.00	0.15	0.0	4.00	0.00	0.59						1.50	0.000					1.500	0.000	0.000	1.84	0.515	1.223		0.000	0.000		1.816		1.816	7.74	21.649
	230	225	230-225							36.6		4.00	0.15	0.0	4.00	0.00	0.59						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.223		0.000	0.000		1.816		1.816	8.29	20.093
	225	215	225-215	10.13				26.52		63.1		4.00	0.26	0.0	4.00	0.00	1.02	2.472		0.801			1.50	1.202					1.500	0.000	1.202	2.47	0.692	1.915		0.000	0.000		4.139		4.139	19.05	17.584
BREBOEUF	220	215	220-215	9.01				23.57		23.6		4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.000	0.86	0.241	0.241		0.000	0.000		0.623		0.623	2.98	20.294
ST. ISIDORE (EAST)	215	205	215-205	3.38	8.00	2.58		28.84		115.5		4.00	0.47	0.0	4.00	0.00	1.87	0.738		0.239			1.50	0.359					1.500	0.000	1.560	0.74	0.207	2.363		0.000	0.000		5.795		5.795	27.97	14.925
PRINCIPALE	210	205	210-205	1.13		3.44		7.85		7.8		4.00	0.03	0.0	4.00	0.00	0.13						1.50	0.000					1.500	0.000	0.000	0.32	0.090	0.090		0.000	0.000		0.217		0.217	0.96	22.302
PRINCIPALE	205	165	205-165		2.67	7.75		16.47		139.8		4.00	0.57	0.0	4.00	0.00	2.27	2.376		0.770			1.50	1.155					1.500	0.000	2.715	2.38	0.665	3.118		0.000	0.000		8.099		8.099	37.63	13.426
	201	33	201-33	4.50	18.67	6.02		58.45		58.5		4.00	0.24	0.0	4.00	0.00	0.95	2.442		0.791			1.50	1.187					1.500	0.000	1.187	2.44	0.684	0.684		0.000	0.000		2.818		2.818	13.92	17.425
	33	200	33-200							58.5		4.00	0.24	0.0	4.00	0.00	0.95						1.50	0.000					1.500	0.000	1.187	0.00	0.000	0.684		0.000	0.000		2.818		2.818	13.92	17.425
LAURIER	200	195	200-195	11.26	2.67			34.91		93.4		4.00	0.38	0.0	4.00	0.00	1.51						1.50	0.000					1.500	0.000	1.187	0.57	0.160	0.844		0.000	0.000		3.543		3.543	15.40	19.466
	195	190	195-190	12.38		3.44		37.31		130.7		4.00	0.53	0.0	4.00	0.00	2.12						1.50	0.000					1.500	0.000	1.187	1.12	0.313	1.156		0.000	0.000		4.461		4.461	20.64	17.152
	190	185	190-185	27.02	2.67			76.16		206.8		4.00	0.84	0.0	4.00	0.00	3.35						1.50	0.000					1.500	0.000	1.187	2.03	0.568	1.725		0.000	0.000		6.263		6.263	30.32	14.393
	185	175	185-175							206.8		4.00	0.84	0.0	4.00	0.00	3.35						1.50	0.000					1.500	0.000	1.187	0.00	0.000	1.725		0.000	0.000		6.263		6.263	30.11	14.541
BREBOEUF	180	175	180-175	3.38				8.84		8.8		4.00	0.04	0.0	4.00	0.00	0.14						1.50	0.000					1.500	0.000	0.000	0.42	0.118	0.118		0.000	0.000		0.262		0.262	0.95	27.208
LAURIER	175	170	175-170	1.13		1.72		5.40		221.1		4.00	0.90	0.0	4.00	0.00	3.58	0.441		0.143			1.50	0.214					1.500	0.000	1.401	0.44	0.123	1.966		0.000	0.000		6.950		6.950	32.38	14.511
	170	165	170-165							221.1		4.00	0.90	0.0	4.00	0.00	3.58						1.50	0.000					1.500	0.000	1.401	0.00	0.000	1.966		0.000	0.000		6.950		6.950	32.39	14.506
PRINCIPALE	165	160	165-160							360.9		4.00	1.46	161.50	161.5	3.96	0.65	8.39					1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	0.000		17.590		17.590	53.31	15.403
	160	155	160-155							360.9		4.00	1.46		161.5	3.96	0.65	8.39					1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	0.000		17.590		17.590	53.58	15.240
	271	155	271-155							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	36.703
	155	150	155-150							360.9		4.00	1.46	7.13	168.6	3.96	0.68	8.50					1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	0.000		17.698		17.698	54.59	14.724
	150	115	150-115							360.9		4.00	1.46		168.6	3.96	0.68	8.50	1.428		0.463		1.50	0.694					1.500	0.000	4.811	1.43	0.400	5.484		0.000	0.000		18.792		18.792	57.37	13.962
BREBOEUF	145	140	145-140	10.13		6.02		35.10		35.1		4.00	0.14	0.0	4.00	0.00	0.57	2.187		0.709			1.50	1.063					1.500	0.000	1.063	2.19	0.612	0.612		0.000	0.000		2.244		2.244	10.64	18.837
	140	125	140-125							35.1		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	1.063	0.00	0.000	0.612		0.000	0.000		2.244		2.244	10.61	18.898
ARENA	135	130	135-130							0.0		4.00	0.00	0.0	4.00	0.00	0.00	1.274		0.413			1.50	0.619					1.500	0.000	0.619	1.27	0.357	0.357		0.000	0.000		0.976		0.976	3.92	23.946
	130	125	130-125							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.619	0.00	0.000	0.357		0.000	0.000		0.976		0.976	4.54	20.515
BREBOEUF	125	120	125-120							35.1		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	1.682	0.00	0.000	0.969		0.000	0.000		3.220		3.220	15.39	17.699
	49	48	49-48							0.0		4.00	0.00	0.0	4.00	0.00	0.00	5.200		1.685			1.50	2.528					1.500	0.000	2.528	5.20	1.456	1.456		0.000	0.000		3.984		3.984	19.68	16.259
	48	46	48-46							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	2.528	0.00	0.000	1.456		0.000	0.000		3.984		3.984	19.68	16.259
	46	52	46-52	4.50				11

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{ave}	Residual Capacity (l/s)
BREBOEUF	47	54	47-54							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
BREBOEUF	54	100	54-100							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
	100	95	100-95							27.5		4.00	0.11		0.0	4.00	0.00	0.44					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.161		0.000	0.000		0.605		0.605	2.90	20.299
MONTCALM	95	90	95-90	11.26	2.67				34.91	62.4		4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.500	0.000	0.000	0.70	0.196	0.357		0.000	0.000		1.367		1.367	1.24	108.719
PRINCIPALE	90	85	90-85	2.25					5.89	3418.2		3.39	13.85	104.50	802.8	3.31	3.25	56.64	1.836		0.595		1.50	0.893					1.500	0.000	40.983	1.84	0.514	49.882		0.000	0.365		147.865	43.422	191.288	86.76	29.186
	85	83	85-83							3418.2		3.39	13.85		802.8	3.31	3.25	56.64					1.50	0.000					1.500	0.000	40.983	0.00	0.000	49.882		0.000	0.365		147.865	43.422	191.288	79.57	49.117
	84	83	84-83	10.13	13.33	6.02		62.30		62.3		4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.500	0.000	0.000	0.92	0.258	0.258		0.000	0.000		1.268		1.268	3.72	32.812
	83	316	83-316							3480.5		3.39	14.10	35.63	838.4	3.30	3.40	57.79					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		149.280	43.422	192.702	76.19	60.231
	316	80	316-80							3480.5		3.39	14.10		838.4	3.30	3.40	57.79					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		149.280	43.422	192.702	72.60	72.727
	80	317	80-317							3480.5		3.39	14.10		838.4	3.30	3.40	57.79					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		149.280	43.422	192.702	**100.72**	-1.380
	317	318	317-318							3480.5		3.39	14.10		838.4	3.30	3.40	57.79					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	0.365		149.280	43.422	192.702	76.28	59.939
	458	457	458-457							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	88.749
	457	4550	457-4550							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	143.243
	464	461	464-461							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.433
	461	466	461-466							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	17.996
	466	459	466-459							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.031
	459	4550	459-4550							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.017
	4550	456	4550-456							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	77.063
	462	463	462-463							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.617
	463	456	463-456							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.818
	456	454	456-454							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	85.850
	454	453	454-453							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	92.384
	453	452	453-452							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	122.094
	452	451	452-451							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	55.862
	451	4500	451-4500							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	108.799
	4500	449	4500-449							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	97.374
	449	448	449-448							0.0		4.00	0.00	1106.75	1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000	37.39	10.470	10.470		27.377		27.377	28.21	69.672
	448	447	448-447							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	28.23	69.603
	447	446	447-446							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	11.30	214.914
	446	471	446-471							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	18.40	121.413
	471	318	471-318							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	14.46	161.970
	318	PS1	318-PS1							3480.5		3.39	14.10		1945.1	3.21	7.88	70.59					1.50	0.000					1.500	0.000	40.983	0.00	0.000	50.140		0.000	10.834		172.551	43.422	215.973	63.78	122.672
	1320	1330	1320-1330	6.75					17.68	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.54	0.433	0.433		0.000	0.000		0.719		0.719	3.65	18.959
	1675	1680	1675-1680							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.138
	1680	1685	1680-1685							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.755
	1685	1690	1685-1690							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.023
	1690	1330	1690-1330							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.299
	1330	1340	1330-1340							17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.433		0.000	0.000		0.719		0.719	3.52	19.692
	1340	1350	1340-1350	6.75					17.68	35.4		4.00	0.14		0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.35	0.379	0.811		0.000	0.000		1.384		1.384	6.90	18.666
	1605	1610	1605-1610							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.161
	1610	1615	1610-1615							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.071
	1615	1620	1615-1620							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.828
	1620	1625	1620-1625							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.845
	1625	1630	1625-1630							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.716
	1630	1635	1630-1635							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.310
	1635	1640	1635-1640							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	29.133
	1655	1660	1655-1660							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.011
	1660	1665	1660-1665							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.617
	1665	1670	1665-1670							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.429
	1670	1640	1670-1640							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.420
	1640	1645	1640-1645							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.186
	1645	1650	1645-1650							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.300
	1650	1360	1650-1350							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.262
	1350	1360	1350-1360	2.25					5.89	41.3		4.00	0.17	273.13	273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.32	0.091	0.902	5.68	1.590	1.590		7.586		7.586	34.70	14.273
	1360	1370	1360-1370							41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.902		0.000	1.590		7.586		7.586	43.14	9.999
	1370	1380	1370-1380							41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.902		0.000	1.590		7.586		7.586	36.97	12.932
	1300	1310	1300-1310							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.653
	1310	1380	1310-1380							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	21.357
PRINCIPALE	1380	1390	1380-1390							41.3		4.00	0.17		273.1	4.00	1.11	5.09				1.01		0.329					1.500	0.493	0.493	0.00	0.000	0.902		0.000	1.590		8.079		8.079	44.08	10.247
	1390	1400	1390-1400	2.25					5.89	47.1		4.00	0.19		273.1	4.00	1.11	5.19	1.299		0.421		1.50	0.632					1.500	0.000	1.124	1.30	0.364	1.266		0.000	1.590		9.170		9.170	43.25	12.031
	1700	1705	1700-1705	22.51					58.93	58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	3.49	0.978	0.978		0.000	0.000		1.933		1.933	7.14	25.135
	1705	1710	1705-1710							58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	9.48	18.466
	1710	1715	1710-1715							58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	9.40	18.624
	1715	1400	1715-1400							58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	7.06	25.434
	1400	1410	1400-1410	1.13					2.95	109.0		4.00	0.44		273.1	4.00	1.11	6.19					1.50	0.000					1.500	0.000	1.124	2.47	0.691	2.935		0.000	1.590		11.841		11.841	28.81	29.254
	1410	1420	1410-1420	1.13					2.95	112.0		4.00	0.45		273.1	4.00	1.11	6.24	1.169		0.379		1.50	0.568					1.500	0.000	1.693	1.17	0.327	3.262		0.000	1.590		12.785		12.785	32.83	26.163
	1720	1725	1720-1725	18.01					47.15	47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	2.78	0.780	0.780		0.000	0.000		1.544		1.544	7.33	19.528
	1725	1730	1725-1730							47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.780		0.000	0.000		1.544		1.544	7.77	18.331
	1730	1420	1730-1420							47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.780		0.000	0.000		1.544		1.544	5.79	25.101
	1420	1430	1420-1430							159.1		4.00	0.64		273.1	4.00	1.11	7.00					1.50	0.000					1.500	0.000	1.693	0.00	0.000	4.042		0.000	1.590		14.328		14.328	33.50	28.446
	1430	1440	1430-1440	4.50					11.79	170.9		4.00	0.69	90.25	363.4	3.96	1.47	8.57					1.50	0.000					1.500	0.000	1.693	3.45	0.966	5.008		0.000	1.590		16.860		16.860	39.24	26.106
	1755	1750	1755-1750	5.63					14.73	14.7		4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.90	0.253	0.253		0.000	0.000		0.492		0.492	1.72	28.083
	1750	1745	1750-1745							14.7		4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.00	0.253	0.253		0.000	0.000		0.492		0.492	1.92	25.091
	1745	1740	1745-1740	10.13					26.52	41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	1.44	0.404	0.657		0.000	0.000		1.326		1.326	10.99	10.742
	1740	1735	1740-1735							41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.657		0.000	0.000		1.326		1.326	6.50	19.078
	1735	1440	1735-1440							41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.657		0.000	0.000		1.326		1.326	5.52	22.680
	1440	1450	1440-1450	2.25					5.89	218.0		4.00	0.88	349.13	712.5	3.82	2.89	14.40					1.50	0.000					1.500	0.000	1.693	0.56	0.156	5.821	13.47	3.771	5.361		27.274		27.274	59.39	18.649
Area C	1450	1460	1450-1460	4.50					11.79	229.8		4.00	0.93		712.5	3.82	2.89	14.57					1.50	0.000					1.500	0.000	1.693	0.94	0.264	6.085		0.000	5.361		27.707		27.707	64.18	15.463
	1755	1760	1755-1760							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	30.836
	1760	1765	1760-1765							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	22.753
	1765	1770	1765-1770	6.75					17.68	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.01	0.283	0.283		0.000	0.000		0.570		0.570	2.05	27.169
	1770	1775	1770-1775							17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.283		0.000	0.000		0.570		0.570	2.41	23.048
	1775	1460	1775-1460	3.38					8.84	26.5		4.00	0.11		0.0	4.00	0.00	0.43					1.50	0.000					1.500	0.000	0.000	0.32	0.091	0.374		0.000	0.000		0.804		0.804	4.10	18.820
	1460	1470	1460-1470	9.01					23.57	279.9		4.00	1.13		712.5	3.80	2.89	15.29					1.50	0.000					1.500	0.000	1.693	1.60	0.449	6.908		0.000	5.361		29.247		29.247	61.68	18.173
	1470	1480	1470-1480	9.01					23.57	303.5		4.00	1.23		712.5	3.80	2.89	15.62					1.50	0.000					1.500	0.000	1.693	2.17	0.608	7.516		0.000	5.361		30.191		30.191	65.34	16.018
	1480	1480A	1480-1480A	2.25			1.00		5.89	309.4		4.00	1.25	171.00	883.5	3.75	3.58	18.12					1.50	0.000					1.500	0.000	1.693	2.12	0.594	8.109		0.000	5.361		33.281		33.281	76.68	10.119
	1480A	1490	1480A-1490	3.38					8.84	318.2		4.00	1.29	42.75	926.3	3.74	3.75	18.84					1.50	0.000					1.500	0.000	1.693	0.95	0.267	8.376		0.000	5.361		34.268		34.268	81.34	7.851
	2070	2065	2070-2065	4.50					11.79	11.8		4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	3.88	1.087	1.087		0.000	0.000		1.278		1.278	4.98	24.377
	2065	2060	2065-2060							11.8		4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.087		0.000	0.000		1.278		1.278	3.09	40.095
	2060	2055	2060-2055	2.25					5.89	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	3.16	0.884	1.971		0.000	0.000		2.258		2.258	5.93	35.793
	2055	2050

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA: Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Cumm. Popul. (peop.)	Cumm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Cumm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION: EXISTING ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{cap} %	Residual Capacity (l/s)
	1995	2000	1995-2000							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	1.34	0.374	0.374		0.000	0.000		0.374		0.374	0.66	56.365
	2000	2005	2000-2005							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.532
	2005	1845	2005-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.743
	2025	2020	2025-2020							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	1.77	0.495	0.495		0.000	0.000		0.495		0.495	0.60	82.521
	2020	2015	2020-2015							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.05	46.770
	2015	2010	2015-2010							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.551
	2010	1845	2010-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.601
	1845	1850	1845-1850							41.3		4.00	0.17	0.0	4.00	0.00	0.67						1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.002		0.000	0.000		2.670		2.670	6.80	38.590
	1990	1985	1990-1985	13.51			14.00	35.36		35.4		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	1.74	0.488	0.488		0.000	0.000		1.061		1.061	2.72	37.886
	1985	1980	1985-1980		26.67		27.00	54.42		89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	1.65	0.462	0.950		0.000	0.000		2.405		2.405	5.43	41.893
	1980	1975	1980-1975							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.84	32.778
	1975	1970	1975-1970							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.80	32.952
	1970	1850	1970-1850							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	4.00	57.664
	1900	1905	1900-1905	6.75			11.00	17.68		17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	1.32	0.369	0.369		0.000	0.000		0.655		0.655	0.56	116.833
	1905	1910	1905-1910							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.11	30.467
	1910	1915	1910-1915							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.557
	1915	1920	1915-1920							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.535
	1920	1925	1920-1925	4.50			2.00	11.79		29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.65	0.182	0.551		0.000	0.000		1.028		1.028	3.40	29.225
	1925	1930	1925-1930							29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.99	33.366
	1930	1935	1930-1935							29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.14	47.007
	1935	1940	1935-1940	2.25				5.89		35.4		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	0.41	0.114	0.665		0.000	0.000		1.238		1.238	4.06	29.258
	1940	1945	1940-1945	12.38			7.00	32.41		67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	2.17	0.607	1.272		0.000	0.000		2.370		2.370	7.87	27.742
	1945	1950	1945-1950							67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.87	27.754
	1950	1955	1950-1955							67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.67	28.542
	1955	1960	1955-1960	11.26			12.00	29.47		97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	2.49	0.697	1.969		0.000	0.000		3.545		3.545	11.74	26.641
	1960	1965	1960-1965							97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	11.49	27.308
	1965	1850	1965-1850							97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	6.46	51.294
	1850	1855	1850-1855	1.13			1.00	2.95		231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.35	0.098	5.018		0.000	0.000		8.765		8.765	16.15	45.491
	1855	1860	1855-1860				8.00			231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	1.44	0.404	5.423		0.000	0.000		9.169		9.169	18.51	40.379
	1860	1865	1860-1865							231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.423		0.000	0.000		9.169		9.169	17.05	44.606
	1870	1865	1870-1865				5.00			0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.56	0.157	0.157		0.000	0.000		0.157		0.157	0.30	51.822
	1865	1875	1865-1875							231.2		4.00	0.94	1113.88	1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580	35.16	9.845	9.845		35.658		35.658	82.44	7.594
	1875	1880	1875-1880							231.2		4.00	0.94		1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	82.47	7.581
	1880	1885	1880-1885							231.2		4.00	0.94		1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	89.95	3.986
	1885	1890	1885-1890							231.2		4.00	0.94		1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	85.62	5.991
	1890	1520	1890-1520							231.2		4.00	0.94		1113.9	3.71	4.51	20.23		1.870		0.758	1.50	1.136		1.75		0.710	1.500	1.065	2.202	1.87	0.524	6.104		0.000	9.845		38.383		38.383	81.44	8.745
	1520	PS8	1520-PS8							567.1		3.95	2.30		2040.1	3.49	8.26	36.90					1.50	0.000					1.500	0.000	3.894	0.00	0.000	16.584		0.000	15.206		72.581		72.581	70.58	30.251

Reason for Upgrade	Upgrade due to Pump flow	Size Upgrade?	SEWER DATA: DIA. (mm)	Actual Dia. (mm)	DESIGN SLOPE (%)	ACTUAL SLOPE (%)	CAPAC. (l/s)	VEL. (m/s)	LENGTH (m)	Upstream Obvert (m)	Upstream Invert (m)	Downstream Obvert (m)	Downstream Invert (m)	Comments
			250	254.00	0.840	0.836	56.740	1.120	43.04	63.01	62.760	62.65	62.400	
			250	254.00	0.600	0.596	47.906	0.945	38.57	62.65	62.400	62.42	62.170	
			250	254.00	0.600	0.602	48.118	0.950	51.53	62.39	62.140	62.08	61.830	
			250	254.00	0.420	1.791	83.016	1.638	33.51	63.00	62.750	63.60	63.350	
			250	254.00	0.580	0.580	47.265	0.933	89.59	63.57	63.320	63.05	62.800	
			250	254.00	0.600	0.600	48.046	0.948	31.68	63.02	62.770	62.83	62.580	
			250	254.00	0.600	0.601	48.096	0.949	31.61	62.83	62.580	62.64	62.390	
			250	254.00	0.400	0.400	39.260	0.775	87.39	60.90	60.650	60.55	60.300	
			250	254.00	0.390	0.394	38.947	0.769	55.82	63.97	63.720	63.75	63.500	
			250	254.00	0.510	0.510	44.297	0.874	25.50	63.69	63.440	63.56	63.310	
			250	254.00	0.320	0.322	35.183	0.694	90.17	63.53	63.280	63.24	62.990	
			250	254.00	0.320	0.325	35.356	0.698	52.34	63.24	62.990	63.07	62.820	
			250	254.00	0.930	0.938	60.069	1.185	52.27	63.07	62.820	62.58	62.330	
			250	254.00	0.250	3.586	117.488	2.319	17.57	62.67	62.420	62.04	61.790	
			250	254.00	0.250	0.252	31.123	0.614	43.71	63.12	62.870	63.01	62.760	
			250	254.00	0.250	0.253	31.212	0.616	43.46	63.01	62.760	62.90	62.650	
			250	254.00	0.250	0.253	31.191	0.616	43.52	62.90	62.650	62.79	62.540	
			250	254.00	0.240	0.238	30.253	0.597	46.26	62.73	62.480	62.62	62.370	
			250	254.00	0.200	0.307	34.394	0.679	13.01	62.59	62.340	62.55	62.300	
			250	254.00	0.240	0.600	48.035	0.948	16.68	62.65	62.400	62.55	62.300	
			250	254.00	0.240	0.242	30.496	0.602	16.55	62.49	62.240	62.45	62.200	
			250	254.00	0.240	0.236	30.112	0.594	72.16	62.39	62.140	62.22	61.970	
			250	254.00	0.240	0.236	30.124	0.595	72.10	62.22	61.970	62.05	61.800	
			250	254.00	0.250	0.248	30.910	0.610	36.25	62.05	61.800	61.96	61.710	
			250	254.00	0.240	0.237	30.186	0.596	67.58	61.96	61.710	61.80	61.550	
			250	254.00	0.250	0.247	30.853	0.609	64.69	61.80	61.550	61.64	61.390	
			300	304.80	0.290	0.295	54.839	0.752	71.07	61.66	61.360	61.45	61.150	
			300	304.80	0.290	0.289	54.256	0.744	24.20	60.55	60.250	60.48	60.180	
			300	304.80	0.240	0.241	49.549	0.679	66.33	60.45	60.150	60.29	59.990	
			300	304.80	0.280	0.284	53.775	0.737	66.87	60.29	59.990	60.10	59.800	
			250	254.00	0.740	0.702	51.979	1.026	15.67	60.92	60.670	60.81	60.560	
			300	304.80	0.100	0.184	43.252	0.593	48.96	60.04	59.740	59.95	59.650	
			300	304.80	0.180	0.184	43.239	0.593	32.66	59.89	59.590	59.83	59.530	
			300	304.80	0.180	0.154	39.644	0.543	19.43	59.77	59.470	59.74	59.440	
			300	304.80	0.180	0.170	41.649	0.571	99.74	59.67	59.370	59.50	59.200	
			300	304.80	0.210	0.218	47.129	0.646	96.22	59.50	59.200	59.29	58.990	
			450	457.20	0.100	0.120	102.831	0.626	33.46	59.29	58.840	59.26	58.800	

Upsize Diameter

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J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

VILLAGE OF CASSELMAN: SANITARY SEWER AND WATER MASTER PLAN
JLR No. 16953-119

Future Sanitary Sewer System - March 2023 (10-25 years - Future Proofed)

SANITARY SEWER DESIGN SHEET

Design Constants/Coefficients

Manning's "n" =	0.013	
Infilt. Allowance =	0.28	L/s/ha
Residential Flow =	350	L/cap/d
Commercial/Institutional Flow Rate =	28000	L/gross ha/d
Industrial Flow Rate =	35000	L/gross ha/d

Unless otherwise indicated, Manning's 'n' is assumed to be 0.013

Population Data (Existing)

Total Number of Units:	1695
Census Existing Population:	4048
Population Calibration Factor:	0.791
Computed Population:	4048
Harmon Equation Correction Factor:	1.0
Weighted Coefficients	
Singles & Semi-Detached:	2.62
Multiple Dwellings:	2.04
Apartments:	1.42
ICI peaking factor:	1.50
PPU:	2.39

Population Data (Typical Design Parameters)

Single Family:	3.4	persons/unit
Townhouse:	2.7	persons/unit
Semi-detached:	2.70	persons/unit
Apartments:	1.80	persons/unit
Duplex:	2.30	persons/unit
Res. Flow:	350	L/cap/d
Infilt. Allowance:	0.28	L/ha/s

Population Density (Future Development): 2.375

Prepared by: M.L.
Checked by: B.P.

Downstream Runs
Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc	Industrial	Flows (l/s): Commerc	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
RACINE	1210	1205	1210-1205							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.980		2.423	1.50	3.634						1.500	0.000	3.634	5.98	1.674	1.674		0.000	0.000		5.308		5.308	24.67	16.207
	1205	1200	1205-1200							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	3.634	0.00	0.000	1.674		0.000	0.000		5.308		5.308	24.80	16.100
	1200	1195	1200-1195							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000		0.19		0.077	1.500	0.115	3.749	0.00	0.000	1.674	1.3	0.365	0.365		5.788		5.788	23.26	19.098
	1195	1190	1195-1190							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	3.749	0.00	0.000	1.674		0.000	0.365		5.788		5.788	17.65	27.002
	1190	1185	1190-1185							0.0	4.00	0.00		0.0	4.00	0.00	0.00		5.372		2.176	1.50	3.264						1.500	0.000	7.014	5.37	1.504	3.179		0.000	0.365		10.557		10.557	27.57	27.741
	1185	1170	1185-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	7.014	0.00	0.000	3.179		0.000	0.365		10.557		10.557	28.01	27.136
RACINE	1180	1175	1180-1175							0.0	4.00	0.00		0.0	4.00	0.00	0.00		1.450		0.587	1.50	0.881						1.500	0.000	0.881	1.45	0.406	0.406		0.000	0.000		1.287		1.287	5.76	21.044
	1175	1170	1175-1170							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.881	0.00	0.000	0.406		0.000	0.000		1.287		1.287	5.84	20.736
INDUSTRIEL	1170	1165	1170-1165							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	7.895	0.00	0.000	3.585		0.000	0.365		11.844		11.844	41.54	16.667
	1165	1150	1165-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	7.895	0.00	0.000	3.585		0.000	0.365		11.844		11.844	41.27	15.854
INDUSTRIEL	1160	1155	1160-1155							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.344	1.809	0.436	0.733	1.50	1.753						1.500	0.000	1.753	3.15	0.883	0.883		0.000	0.000		2.636		2.636	10.43	22.625
	1155	1150	1155-1150							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	1.753	0.00	0.000	0.883		0.000	0.000		2.636		2.636	5.77	43.011
INDUSTRIEL	1150	PS3	1150-PS3							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	9.648	0.00	0.000	4.468		0.000	0.365		14.480		14.480	45.03	17.677
INDUSTRIEL	PS3	1125	PS3-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	9.648	0.00	0.000	4.468		0.000	0.365	37.000	14.480	22.520	37.000	0.00	
INDUSTRIEL	1145	1140	1145-1140							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.561	0.986	0.182	0.399	1.50	0.872						1.500	0.000	0.872	1.55	0.433	0.433		0.000	0.000		1.305		1.305	5.37	23.024
INDUSTRIEL	1140	1135	1140-1135							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.872	0.00	0.000	0.433		0.000	0.000		1.305		1.305	5.48	22.493
INDUSTRIEL	1135	1130	1135-1130							0.0	4.00	0.00		0.0	4.00	0.00	0.00	4.125		1.337		1.50	2.005						1.500	0.000	2.877	4.12	1.155	1.588		0.000	0.000		4.465		4.465	18.77	19.327
	1130	1125	1130-1125							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	2.877	0.00	0.000	1.588		0.000	0.000		4.465		4.465	18.45	19.734
RACINE	1125	1095	1125-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.634		0.529		1.50	0.794						1.500	0.000	13.319	1.63	0.457	6.513		0.000	0.365		20.197	22.520	42.717	63.38	24.680
RICHER	1120	1115	1120-1115							0.0	4.00	0.00		0.0	4.00	0.00	0.00	2.242		0.727		1.50	1.090						1.500	0.000	1.090	2.24	0.628	0.628		0.000	0.000		1.718		1.718	4.91	33.250
	1115	1110	1115-1110							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	1.090	0.00	0.000	0.628		0.000	0.000		1.718		1.718	5.27	30.872
LAFLECHE	1110	1105	1110-1105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	0.733		0.238		1.50	0.356						1.500	0.000	1.446	0.73	0.205	0.833		0.000	0.000		2.279		2.279	6.90	30.770
	1105	1100	1105-1100							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	1.446	0.00	0.000	0.833		0.000	0.000		2.279		2.279	2.56	86.903
	SOUTH417	1100	OUTH417-110							0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.838		0.596		1.50	0.893						1.500	0.000	0.893	1.84	0.515	0.515		0.000	0.000		1.408		1.408	4.58	29.345
PRINCIPALE	1100	1095	1100-1095							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	2.340	0.00	0.000	1.348		0.000	0.000		3.687		3.687	6.29	54.908
PRINCIPALE	1095	1094	1095-1094							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	15.658	0.00	0.000	7.861		0.000	0.365		23.884	22.520	46.404	68.81	21.033
	1094	1090	1094-1090							0.0	4.00	0.00	16.63	16.6	4.00	0.07	0.27					1.50	0.000	3.26	19.07	1.055	7.726	1.500	13.171	28.830	0.00	0.000	7.861	31.89	8.829	9.293		46.253	22.520	68.773	95.20	50.823
PRINCIPALE	244	1090	244-1090							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	90.027
	1090	1085	1090-1085	2.25					5.89	5.9	4.00	0.02		16.6	4.00	0.07	0.36	3.031		0.982		1.50	1.473						1.500	0.000	30.303	3.03	0.849	8.709		0.000	9.293		48.671	22.520	71.191	58.09	51.364
	1085	1080	1085-1080							5.9	4.00	0.02		16.6	4.00	0.07	0.36					1.50	0.000						1.500	0.000	30.303	0.00	0.000	8.709		0.000	9.293		48.671	22.520	71.191	50.48	69.848
	1080	1070	1080-1070							5.9	4.00	0.02		16.6	4.00	0.07	0.36					1.50	0.000						1.500	0.000	30.303	0.00	0.000	8.709		0.000	9.293		48.671	22.520	71.191	56.87	53.993
PRINCIPALE	1075	1070	1075-1070							0.0	4.00	0.00		0.0	4.00	0.00	0.00		3.520		1.426	1.50	2.139						1.500	0.000	2.139	3.52	0.985	0.985		0.000	0.000		3.124		3.124	22.27	10.906
JEANNE MANCE	1070	1045	1070-1045	2.25		3.44		10.79		16.7	4.00	0.07		16.6	4.00	0.07	0.54					1.50	0.000						1.500	0.000	32.442	0.45	0.125	9.820		0.000	9.293		52.095	22.520	74.615	55.34	60.204
JEANNE MANCE	1050	1045	1050-1045	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19	0.530		0.172		1.50	0.258						1.500	0.000	0.258	0.53	0.148	0.148		0.000	0.000		0.597		0.597	1.81	32.347
ST. JOSEPH (SOUTH)	1065	1060	1065-1060	15.76	16.00			73.90		73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000						1.500	0.000	0.000	1.89	0.530	0.530		0.000	0.000		1.728		1.728	7.82	20.370
	1060	1055	1060-1055							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.55	18.487
	1055	1045	1055-1045							73.9	4.00	0.30		0.0	4.00	0.00	1.20					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.530		0.000	0.000		1.728		1.728	8.11	19.580
ST. JOSEPH (SOUTH)	1045	1040	1045-1040	10.13				26.52		128.9	4.00	0.52		16.6	4.00	0.07	2.36					1.50	0.000						1.500	0.000	32.699	1.12	0.314	10.812		0.000	9.293		55.163	22.520	77.683	54.25	65.505
	1040	1015	1040-1015							128.9	4.00	0.52		16.6	4.00	0.07	2.36					1.50	0.000						1.500	0.000	32.699	0.00	0.000	10.812		0.000	9.293		55.163	22.520	77.683	56.07	60.869
DUHAMEL	1020	1015	1020-1015	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000						1.500	0.000	0.000	0.68	0.190	0.190		0.000	0.000		0.381		0.381	1.76	21.230
PRINCIPALE	1030	1025	1030-1025	3.38		1.72		11.29		11.3	4.00	0.05		0.0	4.00	0.00	0.18					1.50	0.000						1.500	0.000	0.000	0.48	0.135	0.135		0.000	0.000		0.318		0.318	1.51	20.728
PRINCIPALE	1035	1025	1035-1025	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38	1.667		0.540		1.50	0.810						1.500	0.000	0.810	1.67	0.467	0.467		0.000	0.000		1.659		1.659	8.02	19.027
DUHAMEL	1025	1015	1025-1015	7.88		0.86		21.85		56.7	4.00	0.23		0.0	4.00	0.00	0.92					1.50	0.000						1.500	0.000	0.810	0.62	0.174	0.776		0.000	0.000		2.506		2.506	12.92	16.881
ST. JOSEPH (SOUTH)	1015	1010	1015-1010	18.01				47.15		244.5	4.00	0.99		16.6	4.00	0.07	4.23					1.50	0.000						1.500	0.000	33.510	1.18	0.332	12.110		0.000	9.293		59.146	22.520	81.666	58.62	57.175
	1010	1000	1010-1000							244.5	4.00	0.99		16.6	4.00	0.07	4.23					1.50	0.000						1.500	0.000	33.510	0.00	0.000	12.110		0.000	9.293		59.146	22.520	81.666	58.84	57.133
ST. ISIDORE (WEST)	1005	1000	1005-1000		5.33	12.05		28.04		28.0	4.00	0.11		0.0	4.00	0.00	0.45					1.50	0.000						1.500	0.000		0.00	0.000	0.150		0.000	0.000		0.604		0.604	2.49	23.630
ST. ISIDORE (WEST)	1000	520	1000-520							272.6	4.00	1.10		16.6	4.00	0.07	4.69					1.50	0.000						1.500	0.000	33.510	0.00	0.000	12.260		0.000	9.293		59.750	22.520	82.270	50.34	81.160
ST. ISIDORE (WEST)	655	650	655-650	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	1.72	0.483	0.483		0.000	0.000		1.295		1.295	5.96	20.416
	650	645	650-645							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.63	21.682
	645	635	645-635							50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.483		0.000	0.000		1.295		1.295	5.70	21.409
PERCY	640	635	640-635	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000						1.500	0.000	0.000	0.71	0.200	0.200		0.000	0.000		0.534		0.534	1.51	34.753
ST. ISIDORE (WEST)	635	630	635-630	11.26		2.58		33.14		103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000						1.500	0.000	0.000	1.52	0.426	1.108		0.000	0.000		2.791		2.791	8.49	30.098
	630	627	630-627							103.9	4.00	0.42		0.0	4.00	0.00	1.68					1.50	0.000						1.500	0.000	0.000	0.00	0.000	1.108		0.000	0.000		2.791		2.791	8.74	29.159
	2100	2105	2100-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	26.547
	321	2105	321-2105							0.0	4.00	0.00		0.0	4.00	0.00	0.00	6.357		2.060		1.50	3.090						1.500	0.000	3.090	6.36	1.780	1.780		0.000	0.000		4.870		4.870	21.29	18.003
	2105	2110	2105-2110	27.02				70.72		70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000						1.500	0.000	3.090	2.09	0.585	2.365		0.000	0.000		6.601		6.601	32.42	13.760
	2110	2115	2110-2115							70.7	4.00	0.29		0.0	4.00	0.00	1.15					1.50	0.000						1.500	0.000	3.090	0.00	0.000	2.365		0.000	0.000		6.601		6.601	29.32	15.915
	2185	2190	2185-2190	1.13				2.95		2.9	4.00	0.01		0.0	4.00	0.00	0.05					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.048		0.048	0.05	96.240
	2190	2195	2190-2195	15.76				41.25		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000						1.500	0.000	0.000	1.13	0.315	0.315		0.000	0.000		1.032		1.032	0.96	105.953
	2195	2115	2195-2115							44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.315		0.000	0.000		1.032		1.032	1.14	89.224
	2115	2150	2115-2150	4.50				11.79		126.7	4.00	0.51		0.0	4.00	0.00	2.05					1.50	0.000						1.500	0.000	3.090	0.28	0.079	2.759		0.000	0.000		7.902		7.902	6.79	108.532
	2100	2120	2100-2120	7.88				20.63		20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000						1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	2.17	25.157
	2120	2125	2120-2125							20.6	4.00	0.08		0.0	4.00	0.00	0.33					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.225		0.000	0.000		0.559		0.559	1.78	30.832
	2125	2130	2125-2130	22.51				58.93		79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	1.79	0.502	0.727		0.000	0.000		2.016		2.016	7.26	25.771
	2130	2135	2130-2135							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.39	19.461
	2135	2140	2135-2140							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	9.69	18.788
	2140	2145	2140-2145							79.6	4.00	0.32		0.0	4.00	0.00	1.29					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.727		0.000	0.000		2.016		2.016	6.37	29.638
	2145	2150	2145-2150	3.38				8.84		88.4	4.00	0.36		0.0	4.00	0.00	1.43					1.50	0.000						1.500	0.000	0.000	0.34	0.097	0.824		0.000	0.000		2.256		2.256	10.93	18.392
	2150	2165	2150-2165	13.51				35.36		250.5	4.00	1.01		0.0	4.00	0.00	4.06					1.50	0.000						1.500	0.000	3.090	0.67	0.188	3.771		0.000	0.000		10.920		10.920	9.61	102.674
	2155	2160	2155-2160	16.89				44.20		44.2	4.00	0.18		0.0	4.00	0.00	0.72					1.50	0.000						1.500	0.000	0.000	0.86	0.240	0.240		0.000	0.000		0.956		0.956	3.56	25.880
	2200	2160	2200-2160	19.14				50.09		50.1	4.00	0.20		0.0	4.00	0.00	0.81					1.50	0.000						1.500	0.000	0.000	0.98	0.274	0.274		0.000	0.000		1.085		1.085	3.14	33.491
	2160	2165	2160-2165	6.75				17.68		112.0	4.00	0.45		0.0	4.00	0.00	1.81					1.50	0.000						1.500	0.000	0.000	0.39	0.108	0.622		0.000	0.000		2.436		2.436	9.75	22.560
	2165	2170	2165-2170							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	12.74	91.445
	2170	PS5	2170-PS5							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000		13.356		13.356	13.69	84.173
QUARTIER DES BOISE - Area F (Partial)	PS5	2175	PS5-2175							362.4	4.00	1.47		0.0	4.00	0.00	5.87					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.393		0.000	0.000	20.500	13.356	7.144	20.500	0.00	
	2175	2180	2175-2180	7.88				20.63		383.1	4.00	1.55		0.0	4.00	0.00	6.21					1.50	0.000						1.500	0.000	3.090	0.82	0.230	4.624		0.000	0.000		13.920	7.144	21.065	35.98	37.487
	2205	2180	2205-2180	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000						1.500	0.000	0.000	0.71	0.199	0.199		0.000	0.000		0.437		0.437	1.53	28.094
	2180	627	2180-627							397.8	4.00	1.61		0.0	4.00	0.00	6.45					1.50	0.000						1.500	0.000	3.090	0.00	0.000	4.822		0.000	0.000		14.358	7.144	21.502	41.21	30.679
	627	625	627-625	7.88				20.63		522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000						1.500	0.000	3.090	1.19	0.333	6.263		0.000	0.000		17.740	7.144	24.884	79.25	6.514
	625	620	625-620							522.3	3.96	2.12		0.0	3.96	0.00	8.39					1.50	0.000						1.500	0.000	3.090	0.00	0.000	6.263		0.000	0.000		17.740	7.144	24.884	74.28	8.627
ROGER	855	850	855-850		77.33			157.81		157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000						1.500	0.000	0.000	1.03	0.288	0.288		0.000	0.000		2.845		2.845	12.92	19.174
	850	845	850-845							157.8	4.00	0.64		0.0	4.00	0.00	2.56					1.50	0.000						1.500	0.000	0.000	0.00	0.000	0.288		0.000	0.000		2.845		2.845	13.07	18.925
	845	840	845-840							157.8

Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{dwf} %	Residual Capacity (l/s)	Reason for Upgrade	Upgrade due to Pump flow	Size Upgrade?	SEWER DATA: DIA. (mm)	Actual Dia. (mm)	DESIGN SLOPE (%)	ACTUAL SLOPE (%)	CAPAC. (l/s)	VEL. (m/s)	LENGTH (m)	Upstream Obvert (m)	Upstream Invert (m)	Downstream Obvert (m)	Downstream Invert (m)	Comments
RICHER	830	815	830-815					157.8			4.00	0.64		230.4	4.00	0.93	6.29						1.50	0.000					1.500	0.000	1.994	0.00	0.000	1.184		0.000	0.000		9.468		9.468	28.49	23.759				250	254.00	0.293	0.287	33.227	0.656	74.25	62.51	62.261	62.30	62.048	
LAFLECHE	267	246	267-246					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00	0.716		0.232			1.50	0.348					1.500	0.000	0.348	0.72	0.200	0.200		0.000	0.000		0.549		0.549	1.18	46.111				200	203.20	1.000	1.860	46.659	1.439	33.34	63.04	62.840	62.42	62.220	
LAFLECHE	246	825	246-825					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.95	57.468				200	203.20	1.000	2.875	58.016	1.789	13.91	62.42	62.220	62.82	62.620	
LAFLECHE	825	820	825-820					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	1.57	34.431				250	254.00	0.320	0.318	34.979	0.690	69.20	62.46	62.210	62.24	61.990	
	820	819	820-819					0.0			4.00	0.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.200		0.000	0.000		0.549		0.549	0.76	71.244				250	254.00	0.350	1.339	71.793	1.417	7.47	62.22	61.970	62.12	61.870	
	247	248	247-248			12.05		17.15		17.2	4.00	0.07	0.0	4.00	0.00	0.28						1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.28	26.795				200	203.20	0.570	0.629	27.143	0.837	15.89	62.69	62.490	62.59	62.390	
	249	248	249-248			12.05		17.15		17.2	4.00	0.07	0.0	4.00	0.00	0.28						1.50	0.000					1.500	0.000	0.000	0.25	0.070	0.070		0.000	0.000		0.348		0.348	1.34	25.583				200	203.20	0.590	0.574	25.931	0.800	17.41	62.69	62.490	62.59	62.390	
	248	819	248-819					34.3			4.00	0.14	0.0	4.00	0.00	0.56						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.140		0.000	0.000		0.696		0.696	2.35	28.872				200	203.20	0.750	0.747	29.568	0.912	60.26	62.55	62.350	62.10	61.900	
	819	815	819-815					34.3			4.00	0.14	0.0	4.00	0.00	0.56						1.50	0.000					1.500	0.000	0.348	0.00	0.000	0.341		0.000	0.000		1.245		1.245	4.27	27.909				250	254.00	0.350	0.221	29.154	0.575	63.40	62.12	61.870	61.98	61.730	
ST. MARIE	900	890	900-890	9.01				23.57		23.6	4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.000	0.96	0.268	0.268		0.000	0.000		0.650		0.650	3.07	20.506				200	203.20	0.407	0.382	21.156	0.652	96.78	63.04	62.840	62.67	62.470	
ST. MARIE	895	890	895-890	1.13				2.95		2.9	4.00	0.01	0.0	4.00	0.00	0.05						1.50	0.000					1.500	0.000	0.000	0.15	0.042	0.042		0.000	0.000		0.090		0.090	0.29	31.379				200	203.20	0.900	0.846	31.469	0.970	10.64	63.49	63.290	63.40	63.200	
EASEMENT	890	885	890-885					26.5			4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	3.53	20.216				200	203.20	0.382	0.375	20.956	0.646	55.99	62.67	62.470	62.46	62.260	As-built says 'N-62.25 and W62.20' at MH 885. It was assumed that these values are reversed.
	885	875	885-875					26.5			4.00	0.11	0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.310		0.000	0.000		0.740		0.740	4.03	17.640				200	203.20	0.290	0.289	18.380	0.567	69.31	62.45	62.250	62.25	62.050	As-built says 'N-62.25 and W62.20' at MH 885. It was assumed that these values are reversed.
FAUCHER	880	875	880-875	13.51				35.36		35.4	4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	1.13	0.318	0.318		0.000	0.000		0.891		0.891	2.54	34.209				200	203.20	1.000	1.052	35.100	1.082	47.52	62.80	62.600	62.30	62.100	
FAUCHER	875	815	875-815					61.9			4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.628		0.000	0.000		1.630		1.630	8.91	16.668				200	203.20	0.288	0.286	18.299	0.564	94.40	62.25	62.050	61.98	61.780	
ISABELLE	815	810	815-810	4.50				11.79		265.8	4.00	1.08	230.4	3.98	0.93	7.99						1.50	0.000					1.500	0.000	2.342	0.43	0.122	2.274		0.000	0.000		12.607		12.607	37.89	20.666				250	254.00	0.296	0.288	33.273	0.657	100.82	61.99	61.740	61.70	61.450	
ISABELLE	810B	810A	810B-810A		29.33			59.86		59.9	4.00	0.24	0.0	4.00	0.00	0.97						1.50	0.000					1.500	0.000	0.000	0.26	0.072	0.072		0.000	0.000		1.042		1.042	4.42	22.536				200	203.20	0.474	0.475	23.578	0.727	67.39	62.17	61.970	61.85	61.650	
	810A	810	810A-810					59.9		59.9	4.00	0.24	0.0	4.00	0.00	0.97						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.072		0.000	0.000		1.042		1.042	3.97	25.197				200	203.20	0.611	0.588	25.239	0.809	22.41	61.80	61.600	61.68	61.480	
ISABELLE	810	795	810-795	4.50				11.79		337.4	4.00	1.37	230.4	3.95	0.93	9.07						1.50	0.000					1.500	0.000	2.342	0.41	0.115	2.462		0.000	0.000		13.878		13.878	30.73	31.280				250	254.00	0.525	0.530	45.157	0.891	31.71	61.63	61.378	61.46	61.210	Length may not be as-built / Large slope discrepancy
BOILEAU	805	800	805-800	11.26				29.47		29.5	4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	1.10	0.307	0.307		0.000	0.000		0.785		0.785	3.12	24.403				200	203.20	0.543	0.542	25.188	0.777	27.50	62.00	61.795	61.85	61.646	
	800	795	800-795							29.5	4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.307		0.000	0.000		0.785		0.785	3.49	21.720				200	203.20	0.432	0.433	22.505	0.694	84.61	61.84	61.643	61.48	61.277	
ISABELLE	795	765	795-765					366.9			4.00	1.49	230.4	3.93	0.93	9.52						1.50	0.000					1.500	0.000	2.342	0.00	0.000	2.769		0.000	0.000		14.627		14.627	36.89	25.027				250	254.00	0.409	0.409	39.654	0.783	70.25	61.46	61.210	61.18	60.923	Length may not be as-built - OMM
SAUVE	790	785	790-785	13.51				35.36		35.4	4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	1.67	0.469	0.469		0.000	0.000		1.042		1.042	2.73	37.161				250	254.00	0.365	0.379	38.203	0.754	33.76	62.51	62.261	62.39	62.133	
	785	780	785-780							35.4	4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	3.40	29.635				250	254.00	0.247	0.245	30.677	0.605	57.26	62.38	62.133	62.25	61.993	
	780	775	780-775							35.4	4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.469		0.000	0.000		1.042		1.042	2.27	44.868				250	254.00	0.522	0.548	45.910	0.906	22.83	62.20	61.954	62.08	61.829	
	775	770	775-770	10.13				26.52		61.9	4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	1.01	0.283	0.752		0.000	0.000		1.755		1.755	5.48	30.252				250	254.00	0.266	0.266	32.006	0.632	85.66	61.86	61.609	61.64	61.381	
	770	765	770-765							61.9	4.00	0.25	0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.752		0.000	0.000		1.755		1.755	5.00	33.327				250	254.00	0.322	0.320	35.081	0.692	46.91	61.32	61.073	61.18	60.923	
ISABELLE	765	760	765-760	5.63				14.73		443.5	4.00	1.80	230.4	3.90	0.93	10.66						1.50	0.000					1.500	0.000	2.342	0.55	0.155	3.676		0.000	0.000		16.675		16.675	48.65	17.603				250	254.00	0.298	0.305	34.278	0.676	32.10	61.17	60.920	61.08	60.822	Length may not be as-built - OMM
	760	735	760-735							443.5	4.00	1.80	230.4	3.90	0.93	10.66						1.50	0.000					1.500	0.000	2.342	0.00	0.000	3.676		0.000	0.000		16.675		16.675	49.34	17.122				250	254.00	0.299	0.297	33.797	0.667	42.12	61.05	60.802	60.93	60.677	Length may not be as-built - OMM
GAGNE	755	750	755-750	7.88				20.63		20.6	4.00	0.08	0.0	4.00	0.00	0.33						1.50	0.000					1.500	0.000	0.000	0.56	0.156	0.156		0.000	0.000		0.490		0.490	2.16	22.157				200	203.20	0.436	0.438	22.647	0.698	25.79	62.68	62.484	62.57	62.371	
	750	745	750-745							20.6	4.00	0.08	0.0	4.00	0.00	0.33						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.156		0.000	0.000		0.490		0.490	2.35	20.394				200	203.20	0.365	0.373	20.884	0.644	53.15	62.55	62.347	62.35	62.149	
	745	740	745-740	10.13		0.86		27.74		48.4	4.00	0.20	0.0	4.00	0.00	0.78						1.50	0.000					1.500	0.000	0.000	1.01	0.282	0.438		0.000	0.000		1.222		1.222	7.31	15.491				200	203.20	0.243	0.239	16.713	0.515	39.40	62.33	62.133	62.24	62.039	
	740	735	740-735							48.4	4.00	0.20	0.0	4.00	0.00	0.78						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.438		0.000	0.000		1.222		1.222	5.74	20.057				200	203.20	0.385	0.387	21.279	0.656	99.29	62.22	62.015	61.83	61.631	
ISABELLE	735	730	735-730	5.63				14.73		506.6	3.97	2.05	230.4	3.88	0.93	11.59						1.50	0.000					1.500	0.000	2.342	0.54	0.153	4.267		0.000	0.000		18.197		18.197	47.73	19.929				250	254.00	0.324	0.378	38.126	0.752	20.92	60.90	60.652	60.83	60.573	Length may not be as-built - OMM
	730	PS2	730-PS2							506.6	3.97	2.05	230.4	3.88	0.93	11.59						1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267		0.000	0.000		18.197		18.197	41.44	25.709				250	254.00	0.000	0.501	43.906	0.866	11.58	60.82	60.573	60.77	60.515	Updated in QGIS and manually inputed to included PS2
	PS2	725	PS2-725							506.6	3.97	2.05	230.4	3.88	0.93	11.59						1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267		0.000	0.000	20.500	18.197	2.303	20.500	0.00	5.142	14.48				200	203.20	0.000	17.638	0.000	5.142	14.48	60.77	60.515	63.32	63.069	Pointemain
	725	715	725-715							506.6	3.97	2.05	230.4	3.88	0.93	11.59						1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.267		0.000	0.000		18.197	2.303	20.500	70.46	8.593				250	254.00	0.219	0.220	29.093	0.574	45.47	63.32	63.069	63.22	62.969	
GAGNE	720	715	720-715	11.26				29.47		29.5	4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.97	0.271	0.271		0.000	0.000		0.748		0.748	3.76	19.170				200	203.20	0.335	0.339	19.919	0.614	99.74	63.53	63.328	63.19	62.990	
ISABELLE	715	710	715-710	3.38				8.84		544.9	3.95	2.21	230.4	3.87	0.93	12.15						1.50	0.000					1.500	0.000	2.342	0.36	0.101	4.638		0.000	0.000		19.130	2.303	21.433	54.59	17.828				250	254.00	0.395	0.400	39.261	0.775	42.70	63.17	62.917	63.00	62.746	
	710	700	710-700							544.9	3.95	2.21	230.4	3.87	0.93	12.15						1.50	0.000					1.500	0.000	2.342	0.00	0.000	4.638		0.000	0.000		19.130	2.303	21.433	56.91	16.231				250	254.00	0.373	0.369	37.664	0.743	33.91	63.00	62.746	62.88	62.621	
ALICE	705	700	705-700	5.63				14.73		14.7	4.00	0.06	0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	0.52	0.147	0.147		0.000	0.000		0.385		0.385	1.80	21.016				200	203.20	0.387	0.391	21.402	0.660	53.93	63.10	62.902	62.89	62.691	
ISABELLE	700	695	700-695	14.63				38.31		597.9	3.93	2.42	230.4	3.85	0.93	12.92						1.50	0.000					1.500	0.000	2.342	1.42	0.396	5.181		0.000	0.000		20.445	2.303	22.749	43.55	29.486				250	254.00	0.290	0.709	52.235	1.031	99.87	62.87	62.621	63.58	63.329	
	695	675	695-675							597.9	3.93	2.42	230.4	3.85	0.93	12.92						1.50	0.000					1.500	0.000	2.342	0.00	0.000	5.181		0.000	0.000		20.445	2.303	22.749	66.58	11.418				250	254.00	0.306	0.303	34.167	0.674	95.28	62.56	62.310	62.28	62.021	
ALICE	690	685	690-685	18.01				47.15		47.1	4.00	0.19	0.0	4.00	0.00	0.76						1.50	0.000					1.500	0.000	0.000	1.77	0.496	0.496		0.000	0.000		1.260		1.260	5.85	20.279				200	203.20	0.393	0.396	21.539	0.664	88.33	63.27	63.072	62.93	62.722	
	685	680	685-680							47.1	4.00	0.19	0.0	4.00	0.00	0.76						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.496		0.000	0.000		1.260		1.260	6.03	19.650				200	203.20	0.371	0.373	20.910	0.645	88.10	62.90	62.703	62.58	62.374	
	680	675	680-675	4.50				11.79		58.9	4.00	0.24	0.0	4.00	0.00	0.95						1.50	0.000					1.500	0.000	0.000	0.45	0.126	0.622		0.000	0.000		1.577		1.577	7.21	20.305				200	203.20	0.405	0.409	21.882	0.675	69.44	62.54	62.341	62.26	62.057	Length may not be as-built - OMM
ISABELLE	675	665	675-665	4.50				11.79		668.7	3.91	2.71	230.4	3.83	0.93	13.95						1.50	0.000					1.500	0.000	2.342	0.46	0.128	5.931		0.000	0.000		22.219	2.303	24.522	72.65	9.231				250	254.00	0.288	0.296	33.754	0.666	91.55	62.24	61.990	61.97	61.719	
ALBERT	670	665	670-665	12.38				32.41		32.4	4.00	0.13	0.0	4.00	0.00	0.53						1.50	0.000					1.500	0.000	0.000	0.95	0.265	0.265		0.000	0.000		0.790		0.790	3.64	20.883				200	203.20	0.402	0.401	21.673	0.668	107.93	62.40	62.201	61.97	61.768	
ISABELLE	665	660	665-660	6.75				17.68		718.8	3.89	2.91	230.4	3.81	0.93	14.67						1.50	0.000					1.500	0.000	2.342	0.81	0.228	6.423		0.000	0.000		23.431	2.303	25.735	79.46	6.650				250	254.00	0.272	0.272	32.385	0.639	55.05	61.95	61.704	61.81	61.554	
	660	620	660-620							718.8	3.89	2.91	230.4	3.81	0.93	14.67						1.50	0.000					1.500	0.000	2.342	0.00	0.000	6.423		0.000	0.000		23.431	2.303	25.735	65.81	13.371				250	254.00	0.400	0.397	39.105	0.772	68.96	61.80	61.554	61.53	61.280	Not sure if U/S or lengths are as-built. Downstream Invert was taken from JLR DWG 68-1130-05, Sewer Rehab.(PLAN & PROFILES)
	620	615	620-615	5.63				14.73		1255.8	3.73	5.09	230.4	3.68	0.93	22.17						1.50	0.000					1.500	0.000	5.432	0.80	0.224	12.910		0.000	0.000		40.511	9.448	49.958	63.75	28.409		Upgraded under Existing		Upgrade	375	381.00	0.183	0.184	78.367	0.687	59.92	61.64	61.260	61.53	61.150	
	615	535	615-535							1255.8	3.73	5.09	230.4	3.68	0.93	22.17						1.50	0.000					1.500	0.000	5.432	0.00	0.000	12.910		0.000	0.000		40.511	9.448	49.958	48.03	54.062		Upgraded under Existing		Upgrade	375	381.00	0.280	0.323	104.020	0.912	46.38	61.51	61.130	61.36	60.980	
PERCY	610	600	610-600	4.50				11.79		11.8	4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.43	0.121	0.121		0.000	0.000		0.311		0.311	0.80	38.475				250	254.00	0.390	0.391	38.786	0.765	60.89	62.80	62.554	62.57	62.316	
PERCY	605	600	605-600	3.38				8.84		8.8	4.00	0.04	0.0	4.00	0.00	0.14						1.50	0.000					1.500	0.000	0.000	0.28	0.079	0.079		0.000	0.000		0.223		0.223	0.50	44.070				250	254.00	0.510	0.510	44.293	0.874	19.81	62.67	62.417	62.57	62.316	
DESNOYERS	600	595	600-595	16.89		0.86		45.42		66.0	4.00	0.27	0.0	4.00	0.00	1.07						1.50	0.000					1.500	0.000	0.000	1.71	0.479	0.679		0.000	0.000		1.749		1.749	7.29	22.259				250	254.00	0.150	0.150	24.008	0.474	66.77	62.57	62.316	62.47	62.216	
	595	590	595-590							66.0	4.00	0.27	0.0	4.00	0.00	1.07						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	5.37	30.826				250	254.00	0.280	0.276	32.585	0.643	112.73	62.47	62.216	62.16	61.905	
	590	545	590-545							66.0	4.00	0.27	0.0	4.00	0.00	1.07						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.679		0.000	0.000		1.749		1.749	3.83	43.883				250	254.00	0.230	0.541	45.632	0.901	65.43	62.16	61.905	61.81	61.551	
FLEURETTE STREET	580	570	580-570	4.50				11.79		11.8	4.00	0.05	0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.52	0.145	0.145		0.000	0.000		0.336		0.336	0.85	39.191				250	254.00	0.406	0.406	39.527	0.780	34.49	62.92	62.670	62.78	62.530	
FLEURETTE CIRCLE	575	570	575-570	9.01				23.57		23.6	4.00	0.10	0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.000	1.13	0.317	0.317		0.000	0.000		0.699		0.699	1.21	57.259				300	304.80	0.440	0.330	57.958	0.794	69.68	63.15	62.850	62.92	62.620	
FLEURETTE STREET	570	565	570-565							35.4	4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.462		0.000	0.000		1.035		1.035	2.41	41.919				250	254.00	0.478	0.479	42.954	0.848	64.67	62.77	62.520	62.46	62.210	
PERCY	585	565	585-565	7.88				20.63		20.6	4.00	0.08	0.0	4.00	0.00	0.33						1.50	0.000					1.500	0.000	0.000	0.80	0.225	0.225		0.000	0.000		0.559		0.559	1.71	32.044				250	254.00	0.280	0.276	32.603	0.643	101.74	62.60	62.350	62.32	62.069	Length may not be as-built. ST and SAN MHs were switched during const.
PERCY	565	560	565-560	5.63			2.00	14.73		70.7	4.00	0.29	0.0	4.00	0.00	1.15						1.50	0.000					1.500	0.000	0.000	0.53	0.150

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STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA - Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION – EXISTING ICI: Areas (ha) Commerc.	Areas (ha) Industrial	Flows (l/s) Commerc.	Flows (l/s) Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI: Areas (ha) Commerc.	Areas (ha) Industrial	Flows (l/s) Commerc.	Flows (l/s) Industrial	Peaking Factor	ICI Flow (l/s)	Comm. Peak ICI Flow (l/s)	EXISTING EXTRA FLOWS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	FUTURE EXTRA FLOWS: Area (Ha)	Peak Extr. Flow (l/s)	Comm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{cap} %	Residual Capacity (l/s)
ST. JOSEPH (NORTH)	515	505	515-505							2052.2		3.58	8.31	261.3	3.54	1.06	33.14						1.50	0.000					1.500	0.000	40.062	0.00	0.000	30.981		0.000	9.293		113.472	31.968	145.440	70.86	59.808
CARTIER	510	505	510-505	23.64	10.67	3.44		88.55		88.5	4.00	0.36		0.0	4.00	0.00	1.43						1.50	0.000					1.500	0.000	0.000	1.79	0.502	0.502		0.000	0.000		1.937		1.937	2.15	88.319
ST. JOSEPH (NORTH)	505	500	505-500							2140.7	3.56	8.67		261.3	3.52	1.06	34.28						1.50	0.000					1.500	0.000	40.062	0.00	0.000	31.484		0.000	9.293		115.115	31.968	147.082	73.39	53.332
	500	460	500-460							2140.7	3.56	8.67		261.3	3.52	1.06	34.28						1.50	0.000					1.500	0.000	40.062	0.00	0.000	31.484		0.000	9.293		115.115	31.968	147.082	68.66	67.140
LAVAL	495	485	495-485	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	0.53	0.149	0.149		0.000	0.000		0.388		0.388	1.42	26.890
CARTIER	490	485	490-485	4.50				11.79		11.8	4.00	0.05		0.0	4.00	0.00	0.19						1.50	0.000					1.500	0.000	0.000	0.40	0.112	0.112		0.000	0.000		0.303		0.303	1.44	20.781
LAVAL	485	480	485-480							26.5	4.00	0.11		0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.33	20.074
	480	465	480-465							26.5	4.00	0.11		0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.261		0.000	0.000		0.691		0.691	3.15	21.276
LAVAL	475	470	475-470	7.88		2.58		24.30		24.3	4.00	0.10		0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	1.37	0.384	0.384		0.000	0.000		0.778		0.778	3.55	21.144
	470	465	470-465							24.3	4.00	0.10		0.0	4.00	0.00	0.39						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.384		0.000	0.000		0.778		0.778	3.60	20.825
DOLLARD	465	460	465-460	15.76				41.25		92.1	4.00	0.37		0.0	4.00	0.00	1.49						1.50	0.000					1.500	0.000	0.000	1.65	0.461	1.106		0.000	0.000		2.598		2.598	3.06	82.318
ST. JOSEPH (NORTH)	460	455	460-455	16.89	8.00	5.16		67.88		2300.7	3.54	9.32		261.3	3.50	1.06	36.32						1.50	0.000					1.500	0.000	40.062	2.07	0.580	33.170		0.000	9.293		118.846	31.968	150.814	87.99	20.577
	455	305B	455-305B							2300.7	3.54	9.32		261.3	3.50	1.06	36.32						1.50	0.000					1.500	0.000	40.062	0.00	0.000	33.170		0.000	9.293		118.846	31.968	150.814	79.36	39.227
DROUIN	450	445	450-445	4.50				11.79		11.8	4.00	0.05	166.25	166.3	4.00	0.67	2.88						1.50	0.000					1.500	0.000	0.000	1.45	0.407	0.407		0.000	0.000		3.292		3.292	3.78	83.688
	445	440	445-440							11.8	4.00	0.05		166.3	4.00	0.67	2.88						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		3.292		3.292	3.92	80.683
	440	435	440-435							11.8	4.00	0.05		166.3	4.00	0.67	2.88						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.407		0.000	0.000		3.292		3.292	4.99	62.617
	435	430	435-430	24.76				64.82		76.6	4.00	0.31		166.3	4.00	0.67	3.94						1.50	0.000					1.500	0.000	0.000	2.84	0.795	1.202		0.000	0.000		5.137		5.137	13.73	32.289
	430	425	430-425							76.6	4.00	0.31		166.3	4.00	0.67	3.94						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		5.137		5.137	12.96	34.498
	425	395	425-395							76.6	4.00	0.31		166.3	4.00	0.67	3.94						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.202		0.000	0.000		5.137		5.137	12.76	35.111
MARQUETTE	420	415	420-415	16.89				44.20		44.2	4.00	0.18		0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	1.68	0.471	0.471		0.000	0.000		1.188		1.188	2.68	43.151
	415	410	415-410							44.2	4.00	0.18		0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	3.03	37.972
	410	400	410-400							44.2	4.00	0.18		0.0	4.00	0.00	0.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.471		0.000	0.000		1.188		1.188	2.97	38.792
JOLIETTE	405	400	405-400	10.13				26.52		26.5	4.00	0.11		0.0	4.00	0.00	0.43						1.50	0.000					1.500	0.000	0.000	1.04	0.291	0.291		0.000	0.000		0.720		0.720	1.80	39.223
JOLIETTE	400	395	400-395							70.7	4.00	0.29		0.0	4.00	0.00	1.15						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.762		0.000	0.000		1.908		1.908	4.95	36.646
DROUIN	395	PS4	395-PS4					147.3		147.3	4.00	0.60		166.3	4.00	0.67	5.08						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000		7.045		7.045	19.61	28.890
(forcemain)	PS4	390	PS4-390					147.3		147.3	4.00	0.60		166.3	4.00	0.67	5.08						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.964		0.000	0.000	18.500	7.045	11.455	18.500	0.00	
LEVESQUES	390	385	390-385	7.88				20.63		168.0	4.00	0.68		166.3	4.00	0.67	5.42						1.50	0.000					1.500	0.000	0.000	1.53	0.427	2.391		0.000	0.000		7.807	11.455	19.261	34.93	35.884
	385	380	385-380							168.0	4.00	0.68		166.3	4.00	0.67	5.42						1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.391		0.000	0.000		7.807	11.455	19.261	43.25	25.269
	380	375	380-375	25.89				67.77		235.7	4.00	0.95		166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	2.89	0.808	3.199		0.000	0.000		9.713	11.455	21.168	46.54	24.310
	375	370	375-370							235.7	4.00	0.95		166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		9.713	11.455	21.168	47.20	23.678
	370	365	370-365							235.7	4.00	0.95		166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		9.713	11.455	21.168	45.86	24.985
	365	335	365-335							235.7	4.00	0.95		166.3	4.00	0.67	6.51						1.50	0.000					1.500	0.000	0.000	0.00	0.000	3.199		0.000	0.000		9.713	11.455	21.168	45.16	25.707
DROUIN	360	355	360-355	23.64				61.88		61.9	4.00	0.25		0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	3.12	0.873	0.873		0.000	0.000		1.876		1.876	3.65	49.532
	355	350	355-350							61.9	4.00	0.25		0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	4.09	43.974
	350	345	350-345							61.9	4.00	0.25		0.0	4.00	0.00	1.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.873		0.000	0.000		1.876		1.876	3.83	47.159
LEVESQUES	345	340	345-340	5.63				14.73		76.6	4.00	0.31		0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.71	0.199	1.072		0.000	0.000		2.314		2.314	4.88	45.137
	340	335	340-335							76.6	4.00	0.31		0.0	4.00	0.00	1.24						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.072		0.000	0.000		2.314		2.314	4.47	49.466
EASEMENT	335	330	335-330					312.3		312.3	4.00	1.27		166.3	3.98	0.67	7.72						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.272		0.000	0.000		11.995	11.455	23.450	51.13	22.417
	330	320	330-320	7.88				20.63		333.0	4.00	1.35		166.3	3.97	0.67	8.04						1.50	0.000					1.500	0.000	0.000	0.91	0.254	4.525		0.000	0.000		12.563	11.455	24.018	53.21	21.120
LAVAL	325	320	325-320	5.63				14.73		14.7	4.00	0.06		0.0	4.00	0.00	0.24						1.50	0.000					1.500	0.000	0.000	1.10	0.309	0.309		0.000	0.000		0.547		0.547	1.89	28.361
LAVAL	320	315	320-315					347.7		347.7	4.00	1.41		166.3	3.97	0.67	8.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	4.834		0.000	0.000		13.095	11.455	24.550	49.91	24.635
MONTCALM	315	310	315-310	5.63		8.61		26.99		374.7	4.00	1.52		166.3	3.96	0.67	8.67	1.826		0.592			1.50	0.888					1.500	0.000	0.888	1.83	0.511	5.345		0.000	0.000		14.902	11.455	26.357	52.27	24.064
	310	305B	310-305B							374.7	4.00	1.52	118.75	285.0	3.91	1.15	10.45						1.50	0.000					1.500	0.000	0.888	0.00	0.000	5.345		0.000	0.000		16.680	11.455	28.134	69.90	12.116
MONTCALM	305A	305B	305A-305B	1.13		5.16		10.30		10.3	4.00	0.04		0.0	4.00	0.00	0.17						1.50	0.000					1.500	0.000	0.000	0.36	0.101	0.101		0.000	0.000		0.268		0.268	0.51	52.411
MONTCALM	305B	300	305B-300					2685.7	3.48	10.88		546.3	3.41	2.21	44.71								1.50	0.000					1.500	0.000	40.949	0.00	0.000	38.616		0.000	9.293		133.565	43.422	176.987	87.02	26.402
	300	290	300-290	4.50		6.02		20.36		2706.0	3.48	10.96		546.3	3.41	2.21	44.96	0.789		0.256			1.50	0.383					1.500	0.000	41.333	0.79	0.221	38.837		0.000	9.293		134.420	43.422	177.842	59.86	119.271
ST. THERESE	295	290	295-290	7.88		6.02		29.20		29.2	4.00	0.12		0.0	4.00	0.00	0.47						1.50	0.000					1.500	0.000	0.000	1.14	0.318	0.318		0.000	0.000		0.791		0.791	14.49	4.669
MONTCALM	290	255	290-255					2735.2	3.48	11.08		546.3	3.41	2.21	45.32								1.50	0.000					1.500	0.000	41.333	0.00	0.000	39.155		0.000	9.293		135.097	43.422	178.520	73.14	65.548
CARTIER	285	280	285-280	2.25				5.89		5.9	4.00	0.02		0.0	4.00	0.00	0.10	0.601		0.195			1.50	0.292					1.500	0.000	0.292	0.60	0.168	0.168		0.000	0.000		0.556		0.556	2.52	21.540
ST. JEAN	280	275	280-275	6.75				17.68		23.6	4.00	0.10		0.0	4.00	0.00	0.38	1.026		0.333			1.50	0.499					1.500	0.000	0.791	1.03	0.287	0.456		0.000	0.000		1.629		1.629	7.52	20.021
	275	265	275-265							23.6	4.00	0.10		0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.791	0.00	0.000	0.456		0.000	0.000		1.629		1.629	7.61	19.768
DOLLARD	270	265	270-265	4.50	2.67	3.44		22.13		22.1	4.00	0.09		0.0	4.00	0.00	0.36						1.50	0.000					1.500	0.000	0.000	0.55	0.155	0.155		0.000	0.000		0.514		0.514	2.46	20.380
ST. JEAN	265	260	265-260	7.88	2.67	26.68		64.05		109.8	4.00	0.44		0.0	4.00	0.00	1.78	1.356		0.440			1.50	0.659					1.500	0.000	1.450	1.36	0.380	0.991		0.000	0.000		4.219		4.219	19.37	17.565
	260	255	260-255							109.8	4.00	0.44		0.0	4.00	0.00	1.78						1.50	0.000					1.500	0.000	1.450	0.00	0.000	0.991		0.000	0.000		4.219		4.219	7.01	56.012
MONTCALM	255	90	255-90					2845.0	3.46	11.52		546.3	3.40	2.21	46.66								1.50	0.000					1.500	0.000	42.783	0.00	0.000	40.145		0.000	9.293		138.884	43.422	182.306	73.23	66.639
ST. ISIDORE (EAST)	250	245	250-245	5.63		0.86		15.96		16.0	4.00	0.06		0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	2.53	0.708	0.708		0.000	0.000		0.967		0.967	4.45	20.777
	245	240	245-240							16.0	4.00	0.06		0.0	4.00	0.00	0.26						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	0.000		0.967		0.967	4.43	20.833
	240	235	240-235							16.0	4.00	0.06	356.25	356.3	4.00	1.44	6.03						1.50	0.000					1.500	0.000	0.000	20.95	5.867	5.867		0.000	0.000		12.606		12.606	57.95	9.148
	235	230A	235-230A							16.0	4.00	0.06		356.3	4.00	1.44	6.03						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.708		0.000	5.867		12.606		12.606	84.02	2.397
	230A	230	230A-230	7.88				20.63		36.6	4.00	0.15		356.3	4.00	1.44	6.37						1.50	0.000					1.500	0.000	0.000	1.84	0.515	1.223		0.000	5.867		13.455		13.455	57.34	10.010
	230	225	230-225							36.6	4.00	0.15		356.3	4.00	1.44	6.37						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.223		0.000	5.867		13.455		13.455	61.41	8.454
	225	215	225-215	10.13				26.52		63.1	4.00	0.26		356.3	4.00	1.44	6.80	2.472		0.801			1.50	1.202					1.500	0.000	1.202	2.47	0.692	1.915		0.000	5.867		15.778		15.778	72.64	5.944
BREBOEUF	220	215	220-215	9.01				23.57		23.6	4.00	0.10		0.0	4.00	0.00	0.38						1.50	0.000					1.500	0.000	0.000	0.86	0.241	0.241		0.000	0.000		0.623		0.623	2.98	20.294
ST. ISIDORE (EAST)	215	205	215-205	3.38	8.00	2.58		28.84		115.5	4.00	0.47		356.3	3.99	1.44	7.62	0.738		0.239			1.50	0.359					1.500	0.000	1.560	0.74	0.207	2.363		0.000	5.867		17.410		17.410	84.03	3.310
PRINCIPALE	210	205	210-205	1.13		3.44		7.85		7.8	4.00	0.03		0.0	4.00	0.00	0.13						1.50	0.000					1.500	0.000	0.000	0.32	0.090	0.090		0.000	0.000		0.217		0.217	0.96	22.302
PRINCIPALE	205	165	205-165		2.67	7.75		16.47		139.8	4.00	0.57		356.3	3.98	1.44	7.99	2.376		0.770			1.50	1.155					1.500	0.000	2.715	2.38	0.665	3.118		0.000	5.867		19.690		19.690	31.03	43.773
	201	33	201-33	4.50	18.67	6.02		58.45		58.5	4.00	0.24	356.25	356.3	4.00	1.44	6.72	2.442		0.791			1.50	1.187					1.500	0.000	1.187	2.44	0.684	0.684	20.95	5.867	5.867		14.457		14.457	71.42	5.786
	33	200	33-200							58.5	4.00	0.24		356.3	4.00	1.44	6.72						1.50	0.000					1.500	0.000	1.187	0.00	0.000	0.684		0.000	5.867		14.457		14.457	74.31	5.786
LAURIER	200	195	200-195	11.26	2.67			34.91		93.4	4.00	0.38		356.3	4.00	1.44	7.28						1.50	0.000					1.500	0.000	1.187	0.57	0.160	0.844		0.000	5.867		15.178		15.178	65.97	7.831
	195	190	195-190	12.38		3.44		37.31		130.7	4.00	0.53		356.3	4.00	1.44	7.85						1.50	0.000					1.500	0.000	1.187	1.12	0.313	1.156		0.000	5.867		16.061		16.061	74.31	5.552
	190	185	190-185	27.02	2.67			76.16		206.8	4.00	0.84		356.3	3.95	1.44	9.00						1.50	0.000					1.500	0.000	1.187	2.03	0.568	1.725		0.000	5.867		17.782		17.782	86.08	2.874
	185	175	185-175							206.8	4.00	0.84		356.3	3.95	1.44	9.00						1.50	0.000					1.500	0.000	1.187	0.00	0.000	1.725		0.000	5.867		17.782		17.782	85.47	3.022
BREBOEUF	180	175	180-175	3.38				8.84		8.8	4.00	0.04		0.0	4.00	0.00	0.14						1.50	0.000					1.500	0.000	0.000	0.42	0.118	0.118		0.000	0.000		0.262		0.262	0.95	27.208
LAURIER	175	170	175-170	1.13		1.72		5.40		221.1	4.00	0.90		356.3	3.94	1.44	9.22	0.441		0.143			1.50	0.214					1.500	0.000	1.401	0.44	0.123	1.966		0.000	5.867		18.452		18.452	85.98	3.009
	170	165	170-165							221.1	4.00	0.90		356.3	3.94	1.44	9.22						1.50	0.000					1.500	0.000	1.401	0.00	0.000	1.966		0.000	5.867		18.452		18.452	86.00	3.004
PRINCIPALE	165	160	165-160					360.9	4.00	1.46	161.50	874.0	3.74	3.54	18.70								1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	11.734		39.639		39.639	73.88	14.011
	160	155	160-155					360.9	4.00	1.46		874.0	3.74	3.54	18.70								1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	11.734		39.639		39.639	74.25	13.747
	271	155	271-155					0.0	4.00	0.00		0.0	4.00	0.00	0.00								1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	36.703
	155	150	155-150					360.9	4.00	1.46	7.13	881.1	3.74	3.57	18.80								1.50	0.000					1.500	0.000	4.116	0.00	0.000	5.084		0.000	11.734		39.738		39.738	75.37	12.984
	150	115	150-115					360.9	4.00	1.46		881.1	3.74	3.57	18.80	1.428		0.463		1.50	0.694								1.500	0.000	4.811	1.43	0.400	5.484		0.000	11.734		40.832		40.832	76.66	12.429
BREBOEUF	145	140	145-140	10.13		6.02		35.10		35.1	4.00	0.14		0.0	4.00	0.00	0.57	2.187		0.709			1.50	1.063					1.500	0.000	1.063	2.19	0.612	0.612		0.000	0.000		2.244		2.244	10.64	18.837
	140	125	140-125							35.1	4.00	0.14		0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	1.063	0.00	0.000	0.612		0.000	0.000		2.244		2.244	10.61	18.898
ARENA	135	130	135-130					0.0	4.00	0.00		0.0	4.00	0.00	0.00	1.274		0.413		1.50	0.619								1.500	0.000	0.619	1.27	0.357	0.357		0.000	0.000		0.976		0.976	3.92	23.946
	130	125	130-125					0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000								1.500	0.000	0.000	0.00	0.000	0.357		0.000	0.000		0.976		0.976	4.54	20.515
BREBOEUF	125	120	125-120					35.1	4.00	0.14		0.0	4.00	0.00	0.57					1.50	0.000								1.500	0.000	1.682	0.00	0.000	0.969		0.000	0.000		3.220		3.220	15.39	17.699
	49	48	49-48					0.0	4.00	0.00		0.0	4.00	0.00	0.00	5.200		1.685		1.50	2.528								1.500	0.000	2.528	5.20	1.456	1.456		0.000	0.000		3.984		3.984	19.68	16.259
	48	46	48-46					0.0	4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000								1.500	0.000	2.528	0.00	0.000	1.456		0.000	0.000		3.984		3.984	19.68	16.259
	46	52

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Upsize Diameter

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA – Census Data: Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Popul. (peop.)	Cumm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL: Popul. (peop.)	Cumm. Popul. (peop.)	Peaking Factor	Avg. Flow (l/s)	Peak Res. Flow (l/s)	EXISTING ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI – Areas (ha): Commerc.	Industrial	Flows (l/s): Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRANEOUS: Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Factor (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{ave}	%	Residual Capacity (l/s)
BREBOEUF	47	54	47-54							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
BREBOEUF	54	100	54-100							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.243
	100	95	100-95							27.5		4.00	0.11		0.0	4.00	0.00	0.44					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.161		0.000	0.000		0.605		0.605	2.90	20.299
MONTCALM	95	90	95-90	11.26	2.67				34.91	62.4		4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.500	0.000	0.000	0.70	0.196	0.357		0.000	0.000		1.367		1.367	1.24	108.719
PRINCIPALE	90	85	90-85	2.25					5.89	3418.2		3.39	13.85	104.50	1531.9	3.25	6.21	65.15	1.836		0.595		1.50	0.893					1.500	0.000	54.154	1.84	0.514	49.882		0.000	21.027		190.214	43.422	233.636	65.17	124.878
	85	83	85-83							3418.2		3.39	13.85		1531.9	3.25	6.21	65.15					1.50	0.000					1.500	0.000	54.154	0.00	0.000	49.882		0.000	21.027		190.214	43.422	233.636	68.07	109.596
	84	83	84-83	10.13	13.33	6.02			62.30	62.3		4.00	0.25		0.0	4.00	0.00	1.01					1.50	0.000					1.500	0.000	0.000	0.92	0.258	0.258		0.000	0.000		1.268		1.268	3.72	32.812
	83	316	83-316							3480.5		3.39	14.10	35.63	1567.5	3.24	6.35	66.28					1.50	0.000					1.500	0.000	54.154	0.00	0.000	50.140		0.000	21.027		191.599	43.422	235.022	65.08	126.097
	316	80	316-80							3480.5		3.39	14.10		1567.5	3.24	6.35	66.28					1.50	0.000					1.500	0.000	54.154	0.00	0.000	50.140		0.000	21.027		191.599	43.422	235.022	62.02	143.939
	80	317	80-317							3480.5		3.39	14.10		1567.5	3.24	6.35	66.28					1.50	0.000					1.500	0.000	54.154	0.00	0.000	50.140		0.000	21.027		191.599	43.422	235.022	86.04	38.134
	317	318	317-318							3480.5		3.39	14.10		1567.5	3.24	6.35	66.28					1.50	0.000					1.500	0.000	54.154	0.00	0.000	50.140		0.000	21.027		191.599	43.422	235.022	85.16	125.681
	458	457	458-457							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	88.749
	457	4550	457-4550							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	143.243
	464	461	464-461							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.433
	461	466	461-466							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	17.996
	466	459	466-459							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.031
	459	4550	459-4550							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.017
	4550	456	4550-456							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	77.063
	462	463	462-463							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	24.617
	463	456	463-456							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.818
	456	454	456-454							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	85.850
	454	453	454-453							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	92.384
	453	452	453-452							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	122.094
	452	451	452-451							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	55.862
	451	4500	451-4500							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	108.799
	4500	449	4500-449							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	97.374
	449	448	449-448							0.0		4.00	0.00	1106.75	1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000	37.39	10.470	10.470		27.377		27.377	28.21	69.673
	448	447	448-447							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	28.23	69.603
	447	446	447-446							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	11.30	214.914
	446	471	446-471							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	18.40	121.413
	471	318	471-318							0.0		4.00	0.00		1106.8	3.77	4.48	16.91					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	10.470		27.377		27.377	14.46	161.970
	318	PS1	318-PS1							3480.5		3.39	14.10		2674.3	3.16	10.83	78.79					1.50	0.000					1.500	0.000	54.154	0.00	0.000	50.140		0.000	31.497		214.582	43.422	258.004	76.19	80.641
	1320	1330	1320-1330	6.75					17.68	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.54	0.433	0.433		0.000	0.000		0.719		0.719	3.65	18.959
	1675	1680	1675-1680							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.138
	1680	1685	1680-1685							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.755
	1685	1690	1685-1690							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.023
	1690	1330	1690-1330							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.299
	1330	1340	1330-1340							17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.433		0.000	0.000		0.719		0.719	3.52	19.692
	1340	1350	1340-1350	6.75					17.68	35.4		4.00	0.14		0.0	4.00	0.00	0.57					1.50	0.000					1.500	0.000	0.000	1.35	0.379	0.811		0.000	0.000		1.384		1.384	6.90	18.666
	1605	1610	1605-1610							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.161
	1610	1615	1610-1615							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.071
	1615	1620	1615-1620							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.828
	1620	1625	1620-1625							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.845
	1625	1630	1625-1630							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.716
	1630	1635	1630-1635							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.310
	1635	1640	1635-1640							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	29.133
	1655	1660	1655-1660							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	27.011
	1660	1665	1660-1665							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	18.617
	1665	1670	1665-1670							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.429
	1670	1640	1670-1640							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.420
	1640	1645	1640-1645							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.186
	1645	1650	1645-1650							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	19.300
	1650	1360	1650-1350							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.262
	1350	1360	1350-1360	2.25					5.89	41.3		4.00	0.17	273.13	273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.32	0.091	0.902	5.68	1.590	1.590		7.586		7.586	34.70	14.273
	1360	1370	1360-1370							41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.902		0.000	1.590		7.586		7.586	43.14	9.999
	1370	1380	1370-1380							41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.902		0.000	1.590		7.586		7.586	36.97	12.932
	1300	1310	1300-1310							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	20.653
	1310	1380	1310-1380							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	21.357
PRINCIPALE	1380	1390	1380-1390							41.3		4.00	0.17		273.1	4.00	1.11	5.09					1.50	0.000	1.01		0.329		1.500	0.493	0.493	0.00	0.000	0.902		0.000	1.590		8.079		8.079	44.08	10.247
	1390	1400	1390-1400	2.25					5.89	47.1		4.00	0.19		273.1	4.00	1.11	5.19	1.299		0.421		1.50	0.632					1.500	0.000	1.124	1.30	0.364	1.266		0.000	1.590		9.170		9.170	43.25	12.031
	1700	1705	1700-1705	22.51					58.93	58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	3.49	0.978	0.978		0.000	0.000		1.933		1.933	7.14	25.135
	1705	1710	1705-1710							58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	9.48	18.466
	1710	1715	1710-1715							58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	9.40	18.624
	1715	1400	1715-1400							58.9		4.00	0.24		0.0	4.00	0.00	0.95					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.978		0.000	0.000		1.933		1.933	7.06	25.434
	1400	1410	1400-1410	1.13					2.95	109.0		4.00	0.44	71.25	344.4	4.00	1.40	7.34					1.50	0.000	1.4		0.454		1.500	0.681	1.805	2.47	0.691	2.935		0.000	1.590		13.669		13.669	33.26	27.427
	1410	1420	1410-1420	1.13					2.95	112.0		4.00	0.45		344.4	3.99	1.40	7.38	1.169		0.379		1.50	0.568					1.500	0.000	2.373	1.17	0.327	3.262		0.000	1.590		14.609		14.609	37.51	24.338
	1720	1725	1720-1725	18.01					47.15	47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	2.78	0.780	0.780		0.000	0.000		1.544		1.544	7.33	19.528
	1725	1730	1725-1730							47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.780		0.000	0.000		1.544		1.544	7.77	18.331
	1730	1420	1730-1420							47.1		4.00	0.19		0.0	4.00	0.00	0.76					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.780		0.000	0.000		1.544		1.544	5.79	25.103
	1420	1430	1420-1430							159.1		4.00	0.64		344.4	3.97	1.40	8.10					1.50	0.000					1.500	0.000	2.373	0.00	0.000	4.042		0.000	1.590		16.108		16.108	37.66	26.667
	1430	1440	1430-1440	4.50					11.79	170.9		4.00	0.69	90.25	434.6	3.93	1.76	9.64					1.50	0.000					1.500	0.000	2.373	3.45	0.966	5.008		0.000	1.590		18.611		18.611	43.32	24.354
	1755	1750	1755-1750	5.63					14.73	14.7		4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.90	0.253	0.253		0.000	0.000		0.492		0.492	1.72	28.083
	1750	1745	1750-1745							14.7		4.00	0.06		0.0	4.00	0.00	0.24					1.50	0.000					1.500	0.000	0.000	0.00	0.253	0.253		0.000	0.000		0.492		0.492	1.92	25.091
	1745	1740	1745-1740	10.13					26.52	41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	1.44	0.404	0.657		0.000	0.000		1.326		1.326	10.99	10.742
	1740	1735	1740-1735							41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.657		0.000	0.000		1.326		1.326	6.50	19.078
	1735	1440	1735-1440							41.3		4.00	0.17		0.0	4.00	0.00	0.67					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.657		0.000	0.000		1.326		1.326	5.52	22.680
	1440	1450	1440-1450	2.25					5.89	218.0		4.00	0.88	349.13	783.8	3.80	3.17	15.42					1.50	0.000					1.500	0.000	2.373	0.56	0.156	5.821	13.47	3.771	5.361		28.974		28.974	63.09	16.949
Area C	1450	1460	1450-1460	4.50					11.79	229.8		4.00	0.93		783.8	3.80	3.17	15.59					1.50	0.000					1.500	0.000	2.373	0.94	0.264	6.085		0.000	5.361		29.406		29.406	68.12	13.764
	1755	1760	1755-1760							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	30.836
	1760	1765	1760-1765							0.0		4.00	0.00		0.0	4.00	0.00	0.00					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.000		0.000	0.000		0.000		0.000	0.00	22.753
	1765	1770	1765-1770	6.75					17.68	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	1.01	0.283	0.283		0.000	0.000		0.570		0.570	2.05	27.169
	1770	1775	1770-1775							17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.283		0.000	0.000		0.570		0.570	2.41	23.048
	1775	1460	1775-1460	3.38					8.84	26.5		4.00	0.11		0.0	4.00	0.00	0.43					1.50	0.000					1.500	0.000	0.000	0.32	0.091	0.374		0.000	0.000		0.804		0.804	4.10	18.820
	1460	1470	1460-1470	9.01					23.57	279.9		4.00	1.13		783.8	3.78	3.17	16.30					1.50	0.000					1.500	0.000	2.373	1.60	0.449	6.908		0.000	5.361		30.941		30.941	65.25	16.479
	1470	1480	1470-1480	9.01					23.57	303.5		4.00	1.23		783.8	3.78	3.17	16.63					1.50	0.000					1.500	0.000	2.373	2.17	0.608	7.516		0.000	5.361		31.882		31.882	69.00	14.327
	1480	1480A	1480-1480A	2.25				1.00	5.89	309.4		4.00	1.25	171.00	954.8	3.73	3.87	19.11					1.50	0.000					1.500	0.000	2.373	2.12	0.594	8.109		0.000	5.361		34.955		34.955	80.54	8.444
	1480A	1490	1480A-1490	3.38					8.84	318.2		4.00	1.29	42.75	997.5	3.72	4.04	19.83					1.50	0.000					1.500	0.000	2.373	0.95	0.267	8.376		0.000	5.361		35.938		35.938	85.30	6.191
	2070	2065	2070-2065	4.50					11.79	11.8		4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	3.88	1.087	1.087		0.000	0.000		1.278		1.278	4.98	24.37
	2065	2060	2065-2060							11.8		4.00	0.05		0.0	4.00	0.00	0.19					1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.087		0.000	0.000		1.278		1.278	3.09	40.095
	2060	2055	2060-2055	2.25					5.89	17.7		4.00	0.07		0.0	4.00	0.00	0.29					1.50	0.000					1.500	0.000	0.000	3.16	0.884	1.971		0.000	0.000	

STREET	MANHOLE NUMBER FROM	MANHOLE NUMBER TO	FROM MH - TO MH	EXISTING RESIDENTIAL AREA - Census Data - Singles & Semis (units)	Multiple Dwellings (units)	Apart (units)	Vacant	Popul. (peop.)	Metered Residential (L/s)	Comm. Popul. (peop.)	Comm. Metered Residential (L/s)	Peaking Factor	Avg. Flow (l/s)	FUTURE RESIDENTIAL - Popul. (peop.)	Comm. Popul. (peop.)	Peaking Factor	Avg. Flow	Peak Res. Flow (l/s)	SANITARY CONTRIBUTION - EXISTING ICI - Areas (ha) - Commerc.	Industrial	Flows (l/s) - Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	FUTURE ICI - Areas (ha) - Commerc.	Industrial	Flows (l/s) - Commerc.	Industrial	Peaking Factor	ICI Flow (l/s)	Cumm. Peak ICI Flow (l/s)	EXISTING EXTRAGENOUS - Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	FUTURE EXTRAGENOUS - Area (Ha)	Peak Extr. Flow (l/s)	Cumm. Peak Extr. Flow (l/s)	Pump Flow (l/s)	Total Peak Des. Flow (l/s)	Pump Correction Facto (l/s)	Total Peak Des. Flow with pump (l/s)	Q_p/Q_{full} %	Residual Capacity (l/s)
	1995	2000	1995-2000							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	1.34	0.374	0.374		0.000	0.000		0.374		0.374	0.66	56.365
	2000	2005	2000-2005							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.532
	2005	1845	2005-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.374		0.000	0.000		0.374		0.374	0.78	47.743
	2025	2020	2025-2020							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	1.77	0.495	0.495		0.000	0.000		0.495		0.495	0.60	82.521
	2020	2015	2020-2015							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.05	46.770
	2015	2010	2015-2010							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.551
	2010	1845	2010-1845							0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.495		0.000	0.000		0.495		0.495	1.03	47.601
	1845	1850	1845-1850							41.3		4.00	0.17	0.0	4.00	0.00	0.67						1.50	0.000					1.500	0.000	0.000	0.00	0.000	2.002		0.000	0.000		2.670		2.670	6.80	38.590
	1990	1985	1990-1985	13.51			14.00	35.36		35.4		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	1.74	0.488	0.488		0.000	0.000		1.061		1.061	2.72	37.886
	1985	1980	1985-1980		26.67		27.00	54.42		89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	1.65	0.462	0.950		0.000	0.000		2.405		2.405	5.43	41.893
	1980	1975	1980-1975							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.84	32.778
	1975	1970	1975-1970							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	6.80	32.952
	1970	1850	1970-1850							89.8		4.00	0.36	0.0	4.00	0.00	1.45						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.950		0.000	0.000		2.405		2.405	4.00	57.664
	1900	1905	1900-1905	6.75			11.00	17.68		17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	1.32	0.369	0.369		0.000	0.000		0.655		0.655	0.56	116.833
	1905	1910	1905-1910							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.11	30.467
	1910	1915	1910-1915							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.557
	1915	1920	1915-1920							17.7		4.00	0.07	0.0	4.00	0.00	0.29						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.369		0.000	0.000		0.655		0.655	2.10	30.535
	1920	1925	1920-1925	4.50			2.00	11.79		29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.65	0.182	0.551		0.000	0.000		1.028		1.028	3.40	29.225
	1925	1930	1925-1930							29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.99	33.366
	1930	1935	1930-1935							29.5		4.00	0.12	0.0	4.00	0.00	0.48						1.50	0.000					1.500	0.000	0.000	0.00	0.000	0.551		0.000	0.000		1.028		1.028	2.14	47.007
	1935	1940	1935-1940	2.25				5.89		35.4		4.00	0.14	0.0	4.00	0.00	0.57						1.50	0.000					1.500	0.000	0.000	0.41	0.114	0.665		0.000	0.000		1.238		1.238	4.06	29.258
	1940	1945	1940-1945	12.38			7.00	32.41		67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	2.17	0.607	1.272		0.000	0.000		2.370		2.370	7.87	27.742
	1945	1950	1945-1950							67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.87	27.754
	1950	1955	1950-1955							67.8		4.00	0.27	0.0	4.00	0.00	1.10						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.272		0.000	0.000		2.370		2.370	7.87	28.542
	1955	1960	1955-1960	11.26			12.00	29.47		97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	2.49	0.697	1.969		0.000	0.000		3.545		3.545	11.74	26.641
	1960	1965	1960-1965							97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	11.49	27.308
	1965	1850	1965-1850							97.2		4.00	0.39	0.0	4.00	0.00	1.58						1.50	0.000					1.500	0.000	0.000	0.00	0.000	1.969		0.000	0.000		3.545		3.545	6.46	51.294
	1850	1855	1850-1855	1.13			1.00	2.95		231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.35	0.098	5.018		0.000	0.000		8.765		8.765	16.15	45.491
	1855	1860	1855-1860				8.00			231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	1.44	0.404	5.423		0.000	0.000		9.169		9.169	18.51	40.379
	1860	1865	1860-1865							231.2		4.00	0.94	0.0	4.00	0.00	3.75						1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.423		0.000	0.000		9.169		9.169	17.05	44.606
	1870	1865	1870-1865				5.00			0.0		4.00	0.00	0.0	4.00	0.00	0.00						1.50	0.000					1.500	0.000	0.000	0.56	0.157	0.157		0.000	0.000		0.157		0.157	0.30	51.822
	1865	1875	1865-1875							231.2		4.00	0.94	1113.88	1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580	35.16	9.845	9.845		35.658		35.658	82.44	7.594
	1875	1880	1875-1880							231.2		4.00	0.94		1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	82.47	7.581
	1880	1885	1880-1885							231.2		4.00	0.94		1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	89.95	3.986
	1885	1890	1885-1890							231.2		4.00	0.94		1113.9	3.71	4.51	20.23					1.50	0.000					1.500	0.000	0.000	0.00	0.000	5.580		0.000	9.845		35.658		35.658	85.62	5.991
	1890	1520	1890-1520							231.2		4.00	0.94		1113.9	3.71	4.51	20.23		1.870		0.758	1.50	1.136		1.75		0.710	1.500	1.065	2.202	1.87	0.524	6.104		0.000	9.845		38.383		38.383	81.44	8.745
	1520	PS8	1520-PS8							567.1		3.95	2.30		2111.4	3.48	8.55	37.80					1.50	0.000					1.500	0.000	4.575	0.00	0.000	16.584		0.000	15.206		74.164		74.164	72.12	28.667

Reason for Upgrade	Upgrade due to Pump flow	Size Upgrade?	SEWER DATA - DIA. (mm)	Actual Dia. (mm)	DESIGN SLOPE (%)	ACTUAL SLOPE (%)	CAPAC. (l/s)	VEL. (m/s)	LENGTH (m)	Upstream Obvert (m)	Upstream Invert (m)	Downstream Obvert (m)	Downstream Invert (m)	Comments
			250	254.00	0.840	0.836	56.740	1.120	43.04	63.01	62.760	62.65	62.400	
			250	254.00	0.600	0.596	47.906	0.945	38.57	62.65	62.400	62.42	62.170	
			250	254.00	0.600	0.602	48.118	0.950	51.53	62.39	62.140	62.08	61.830	
			250	254.00	0.420	1.791	83.016	1.638	33.51	63.00	62.750	63.60	63.350	
			250	254.00	0.580	0.580	47.265	0.933	89.59	63.57	63.320	63.05	62.800	
			250	254.00	0.600	0.600	48.046	0.948	31.68	63.02	62.770	62.83	62.580	
			250	254.00	0.600	0.601	48.096	0.949	31.61	62.83	62.580	62.64	62.390	
			250	254.00	0.400	0.400	39.260	0.775	87.39	60.90	60.650	60.55	60.300	
			250	254.00	0.390	0.394	38.947	0.769	55.82	63.97	63.720	63.75	63.500	
			250	254.00	0.510	0.510	44.297	0.874	25.50	63.69	63.440	63.56	63.310	
			250	254.00	0.320	0.322	35.183	0.694	90.17	63.53	63.280	63.24	62.990	
			250	254.00	0.320	0.325	35.356	0.698	52.34	63.24	62.990	63.07	62.820	
			250	254.00	0.930	0.938	60.069	1.185	52.27	63.07	62.820	62.58	62.330	
			250	254.00	0.250	0.586	117.488	2.319	17.57	62.67	62.420	62.04	61.790	
			250	254.00	0.250	0.252	31.123	0.614	43.71	63.12	62.870	63.01	62.760	
			250	254.00	0.250	0.253	31.212	0.616	43.46	63.01	62.760	62.90	62.650	
			250	254.00	0.250	0.253	31.191	0.616	43.52	62.90	62.650	62.79	62.540	
			250	254.00	0.240	0.238	30.253	0.597	46.26	62.73	62.480	62.62	62.370	
			250	254.00	0.200	0.307	34.394	0.679	13.01	62.59	62.340	62.55	62.300	
			250	254.00	0.240	0.600	48.035	0.948	16.68	62.65	62.400	62.55	62.300	
			250	254.00	0.240	0.242	30.496	0.602	16.55	62.49	62.240	62.45	62.200	
			250	254.00	0.240	0.236	30.112	0.594	72.16	62.39	62.140	62.22	61.970	
			250	254.00	0.240	0.236	30.124	0.595	72.10	62.22	61.970	62.05	61.800	
			250	254.00	0.250	0.248	30.910	0.610	36.25	62.05	61.800	61.96	61.710	
			250	254.00	0.240	0.237	30.186	0.596	67.58	61.96	61.710	61.80	61.550	
			250	254.00	0.250	0.247	30.853	0.609	64.69	61.80	61.550	61.64	61.390	
			300	304.80	0.290	0.295	54.839	0.752	71.07	61.66	61.360	61.45	61.150	
			300	304.80	0.290	0.289	54.256	0.744	24.20	60.55	60.250	60.48	60.180	
			300	304.80	0.240	0.241	49.549	0.679	66.33	60.45	60.150	60.29	59.990	
			300	304.80	0.280	0.284	53.775	0.737	66.87	60.29	59.990	60.10	59.800	
			250	254.00	0.740	0.702	51.979	1.026	15.67	60.92	60.670	60.81	60.560	
			300	304.80	0.100	0.184	43.252	0.593	48.96	60.04	59.740	59.95	59.650	
			300	304.80	0.180	0.184	43.239	0.593	32.66	59.89	59.590	59.83	59.530	
			300	304.80	0.180	0.154	39.644	0.543	19.43	59.77	59.470	59.74	59.440	
			300	304.80	0.180	0.170	41.649	0.571	99.74	59.67	59.370	59.50	59.200	
			300	304.80	0.210	0.218	47.129	0.646	96.22	59.50	59.200	59.29	58.990	
			450	457.20	0.100	0.120	102.831	0.626	33.46	59.29	58.840	59.26	58.800	

Upsize Diameter