



Town of Petawawa  
Infrastructure Study Update  
2013

Appendix



**Jp2g Consultants Inc.**

ENGINEERS • PLANNERS • PROJECT MANAGERS  
PEMBROKE • OTTAWA

**APPENDIX A**

**EXCERPTS FROM SECTION 15  
REGARDING TRANSPORTATION  
AND SECTION 16  
REGARDING SEWAGE AND WATER SYSTEMS  
OF  
THE TOWN OF PETAWAWA'S  
OFFICIAL PLAN**

## SECTION 15.0 – TRANSPORTATION

### 15.1 GENERAL INTENT

The road network is extremely important for the safety and convenience of residents of the Municipality. Provincial highways and County and Town roads form the network of public roads. Private roads are another class of vehicle access, the use and maintenance of which are the responsibility of the abutting landowners.

The Transportation policies are intended to promote the creation and maintenance of a safe and efficient road system within the financial capability of the Municipality, and to ensure cooperation with the Ontario Ministry of Transportation.

### 15.2 OBJECTIVES

- (1) To maintain the safety and efficiency of the road system.
- (2) To prevent undue increases in the proportion of expenditures on roads.
- (3) To ensure that all new development has suitable and legal access.
- (4) To protect corridors and rights-of-way for significant transportation and infrastructure facilities.
- (5) To prevent incompatible development from locating adjacent to transportation corridor or facility.

### 15.3 POLICIES

- (1) The location of roads or intersections of roads is only approximate. As areas are developed it may be necessary to alter the alignment or location of the proposed roads or intersection of roads. Such alterations shall not require an amendment to this Plan provided that:
  - (a) existing built-up areas in the path of such proposals are not unfavourably affected;
  - (b) where access to a road under the jurisdiction of another authority is affected, the appropriate Municipal, County or Provincial authority is notified and is in agreement with the proposed alteration; and
  - (c) the area and location of the adjacent land use designations are not affected in any major way.
- (2) Truck traffic will be regulated by a by-law pursuant to the Municipal Act.

- (3) Reference should be made to the applicable General Policies for Development found in Section 18 of this Plan.

## 15.4 CLASSIFICATIONS

- (1) Roads are divided into the following main classifications:

- Provincial Highway
- County
- Municipal
- Seasonal Municipal
- Private

The road classification, which is shown on the Schedule 'A', is based on the Town's road naming by-law which was passed by Council as part of the civic addressing component of the implementation of the 911 emergency system. The road classification is general and is considered as accurate as possible. However, the final determination of the status of individual roads rests with the appropriate road authority.

- (2) Provincial Highway

Provincial Highways generally carry large volumes of traffic between major generators of traffic at high speeds and under free flowing conditions with access restricted to grade-separated intersections. The Ministry of Transportation has jurisdiction over Highway No. 17 (a Class I Freeway/Expressway) in this area. No direct property accesses will be granted.

- (3) County Roads

The County of Renfrew Roads Department is responsible for County Roads as identified on Schedule 'A'. The County of Renfrew categorizes its roads into the following classifications:

- (a) Major Arterial - County Road 51 - Petawawa Boulevard.
- (b) Minor Arterial - County Road 26 - Doran Road from Petawawa Boulevard to Provincial Highway 17.  
County Road 37 - Murphy Road from Petawawa Boulevard to Provincial Highway 17.  
County Road 55 - Paquette Road.
- (c) Collector - County Road 25 - Laurentian Drive  
County Road 16 - Victoria Street  
County Road 28 - Barron Canyon Road

This classification may change from time to time. Such changes will not require an amendment to this Plan.

Any development that proposes access to, or frontage on, County Roads shall satisfy the requirements of the County of Renfrew Roads Department.

(4) Municipal Roads

The Town is responsible for municipal roads as identified on the Schedule A to this Plan.

Where a road is required to be upgraded, a professional engineer shall design and supervise the upgrading of the road at the expense of the developer. Council may assume or bring the road up to standard under local improvement provided all property owners abutting the road sign the petition for local improvement purposes.

The creation of a new road or a minor extension of an existing public road may be undertaken, subject to the approval of Council. A professional engineer shall design and supervise the construction of the road at the expense of the developer. Once the construction is completed, the road (except for a Private Road) shall be dedicated by the developer and assumed by the Municipality.

(5) Private Roads

A private road is one which provides access by means of a registered right-of-way to private property, the use and maintenance of which is the responsibility of the abutting owners. The Municipality will not assume any road until it is constructed to Municipal standards and unless it abuts an existing public road which is maintained year round. Until a road is assumed by by-law, the Municipality shall not be responsible for any road maintenance, snow plowing, garbage collection or other road dependent services. No new lots will be permitted on a private road.

## 15.5 INTERSECTION AND CROSSING IMPROVEMENTS

No development or redevelopment of lands shall be approved in close proximity to an intersection of railway crossing which is scheduled for improvement until this improvement has been sufficiently designed to determine the land required for such improvement.

It is intended that, wherever possible, as traffic conditions warrant, improvements in the form of jog elimination, sight triangles, regulation of turning movement, proper signing, installation of traffic signals, marking of traffic lanes and channelization instruction will be undertaken.

## 15.6 ACCESS TO DEVELOPMENTS

Unless specified otherwise in this Plan, development shall only be permitted if access to a public road of adequate width and standard acceptable to the Municipality is available or established as a condition of approval.

The location of an access driveway should not create a traffic hazard because of its concealment by a curve, grade or other visual obstruction. Access driveways should be limited in number and designed as to minimize the dangers to vehicular and pedestrian traffic in the vicinity.

## 15.7 LAND ACQUISITION FOR ROADS PURPOSES

Where land is required for road widening, road extensions, road rights-of-way, intersections or railway crossing improvements, such land shall be obtained by the appropriate agency in the course of approving plans of subdivision, development applications and consents for land severances. Any proposals to widen, extend, or improve roads in the Municipality should take into account the scenic factors and natural attributes of the adjacent lands, particularly trees which may be on or near the road allowance.

## 15.8 NOISE ATTENUATION

A noise feasibility study, based on Ministry of Environment guidelines, will be required as part of an application which proposes residential or institutional development within 100 metres of a freeway right-of-way (i.e., Highway 17).

A noise feasibility study, based on Ministry of Environment guidelines, will be required as part of an application which proposes residential or institutional development within 100 metres of a principal main railway line right-of-way (i.e., the CPR line).

A noise feasibility study may not be required in the instances described above if there are existing, intervening buildings between the proposed development and the highway or rail line which buildings may serve to act as a noise attenuation barrier. A noise feasibility study may also not be required if the proposed development represents infilling.

A noise feasibility study may be requested by council when development is proposed near a transportation facility (e.g., major truck stop, stations, etc.) or if these facilities are being proposed.

Reference should also be made to the noise attenuation policies of the General Policies for Development section of this Plan.

## SECTION 16.0 - SEWAGE AND WATER SYSTEMS

### 16.1 GENERAL GOAL AND INTENT

#### \*(County Of Renfrew's Modification No. 22)\*

It is the intent of this Plan that the majority of new residential growth in the Town take place on full municipal water and sewage services in order to make efficient use of the existing public infrastructure and to limit growth pressures in the rural area. The lands designated in the Plan to accommodate this growth on full services is the Residential designation. This area is serviced by the Town's water treatment plant and sewage treatment plant. Both plants were formerly owned by the Department of National Defence. \*\*

\*Some residential development in the Town is on partial services service i.e., municipal water and private septic system.\* The area designated for development on one service is the Suburban designation. This designation corresponds to the area of the Town serviced by a municipal waterworks system that was installed in the former Township to serve the primarily residential development along the Petawawa Boulevard corridor. \*\* The water supply for this system was originally the City of Pembroke's water treatment plant.

\*However, the Town has connected the former Township's water distribution system to the former Village's system to create one unified system serviced by the Town of Petawawa's Water Treatment Plant. (The system can still draw water from the City of Pembroke's Water Treatment Plant. In fact, a portion of the Suburban designation - mainly in the McGuire subdivision - continues to be serviced by water pumped from the City of Pembroke.)\*

\*Both the water and sewage systems have reserve capacity for future growth.\*

Finally, additional, limited development on private wells and septic systems will be permitted in the Rural Residential designation and the Rural designation. The amount of new development in these last two designations will be controlled through the policies on consents and plans of subdivision.

\*In fully serviced areas, lot creations should be only permitted if sufficient reserve water and sewer plant capacity are available to accommodate it. Communal services are the preferred means of servicing multiple lots/units in areas where full municipal services are not or cannot be provided. Private services may be used for lot/unit creation where the use of communal systems is not feasible and where site conditions are suitable over the long term. Partial services are discouraged except where necessary to address failed services or because of physical constraints.\*

### 16.2 OBJECTIVES

- (1) To maintain sufficient capacity in both public water and sewage systems and facilities to provide for anticipated growth.

**\*(County Of Renfrew's Modification No. 23)\***

- (2) To direct the majority of new growth in the Town to lands serviced by public water and sewage systems, \*and except for minor infilling, discourage development on partial services.\*
- (3) To discourage incompatible development in areas surrounding water and sewage systems and facilities.

**16.3 POLICIES**

- (1) A feasibility study which assesses the potential adverse effects of odour, aerosols, noise, etc. will be required when development is proposed within 400 metres of an existing sewage treatment facility. New or expanded facilities will be subject to the regulations of the Ministry of the Environment.
- (2) All application for development within fully serviced areas will ensure that sufficient uncommitted reserves exist to service the development.
- (3) All development proposals consisting of six (6) or more lots on the basis of communal or individual services will require a servicing options statement and hydrogeological study.
- (4) All development proposed on private sewage systems will require approval under the Ontario Building Code. Development proposed on large subsurface systems (effluent greater than 10,000 litres per day) requires approval under the Ontario Water Resources Act and requires a hydrogeological study to satisfy the requirements of the Ministry of the Environment's "Reasonable Use Guideline".
- (5) Reference should be made to the applicable General Policies for Development found in Section 18 of this Plan.

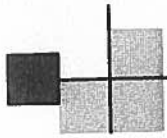
**\*(County of Renfrew's Modification No. 24)\***

- \*(6) Consents on partial services outside of the Suburban designation are permitted, subject to the relevant policies of this Plan.\*



**APPENDIX B**

**JP2G'S FEBRUARY 15, 2011  
SEWAGE TREATMENT PLANT  
CAPACITY ANALYSIS**



February 15, 2011

Town of Petawawa  
1111 Victoria Street  
Petawawa, Ontario  
K8H 2E6

Attention: Mitch Stillman, CAO/Clerk

by e-mail

**RE: Sewage Treatment Plant Capacity Analysis  
Town of Petawawa  
Our File No. 2106590A**

Dear Sir:

As requested, we have reviewed the Petawawa sewage plant flow records in order to estimate the hydraulic reserve capacity of the sewage plant and the equivalent number of household units that can be serviced to utilize the available reserve capacity as of December 31, 2010.

Based on OCWA records, the sewage plant flow data for the years 2005 to 2010 inclusive are summarized as follows:

Year	Total Annual Flow (m <sup>3</sup> )	Average Day Flow (m <sup>3</sup> /day)	Max. Day Flow (m <sup>3</sup> /day)	Peaking Factor
2005	1,863,924	5,107	8,341	1.6
2006	1,853,440	5,078	9,860	1.9
2007	1,909,043	5,230	9,881	1.9
2008	1,974,308	5,394	11,759	2.2
2009	2,091,652	5,731	7,410	1.3
2010	2,004,988	5,493	7,176	1.3

For the purposes of our analysis, we have used the following data:

1. Current average daily sewage flows as recorded at the sewage treatment plant: In accordance with MOE guidelines for estimating hydraulic reserve capacity, the normal procedure is to average the sewage plant flows for the past 3 years (2008, 2009, 2010) in order to establish the representative current average daily sewage flow.

The average for 2008, 2009 and 2010 is 5,539 m<sup>3</sup>/day.

2. The per capita average daily sewage flow: We have used 0.48 m<sup>3</sup>/cap/day (which is taken from the 2007 report on the sewage plant capacity analysis) on the assumption that the future development growth in the Town of Petawawa will result in a per capita average sewage flow of approximately 0.48 m<sup>3</sup>/cap/day.
3. The average number of persons per household unit: On the basis of historical data, we have assumed 2.4 persons per household.

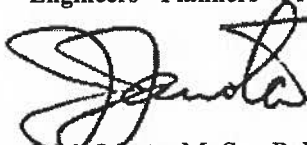
4. The rated capacity of the sewage treatment plant: Per the MOE Certificate of Approval, the rated capacity of the plant is 8,730 m<sup>3</sup>/day.

On the basis of the above data, we have estimated the number of household units that can be developed as follows:

Rated capacity of STP:	8,730 m <sup>3</sup> /day
Current average daily sewage flow:	5,539 m <sup>3</sup> /day (63%)
Reserve hydraulic capacity:	3,191 m <sup>3</sup> /day
Per capita average daily sewage flow:	0.48 m <sup>3</sup> /day
Estimated increase in population that can be serviced:	6,648 persons
Average number of persons per household unit:	2.4
Estimated number of household units to utilize reserve capacity: (new CFHA units or units within the Town of Petawawa sanitary services area)	2,770

As can be seen, our analysis indicates that, based on the assumptions outlined above, the number of household units that can be developed to utilize the available reserve capacity at the Town's sewage treatment plant is 2,770. It is important to note, however, that troop deployment out of CFB Petawawa can have a significant impact on average daily sewage flow in any given year which, in turn, would affect the calculated reserve hydraulic capacity for the sewage plant. This is likely the reason the 2010 flows were lower than those in 2009.

Yours very truly,  
**Jp2g Consultants Inc.**  
Engineers · Planners · Project Managers



J. M. Janota, M. Sc., P. Eng.  
President

JMJ/lr

**APPENDIX C**

**MEMO FROM DAN PATRICK JAN 12, 2010  
RE PETAWAWA/DND SANITARY  
AND STORM AGREEMENT**



TOWN OF PETAWAWA  
1111 Victoria Street  
Petawawa, ON K8H 2E6  
(613) 687-5536  
(613) 687-5973  
[www.petawawa.ca](http://www.petawawa.ca)

MEMO TO: Mitch Stillman, CAO  
FROM: Dan Patrick, Project Coordinator  
DATE: January 12, 2010  
RE: Petawawa/DND Sanitary and Storm Sewer Agreement

#### Reference Documents

1. Agreement between DND and Town of Petawawa dated 1998 ( no day noted)

#### Key Document Items

- DND owned Sanitary Treatment Plant (STP) associated collecting system and storm sewer system referred to as “the Works”.
- “The Works” are shown on an attached Schedule A and B. “The Works” are also shown in more detail on Plans LP90-8410-101, 101A and 101B attached to the 1993 Petawawa/DND Water agreement.
- DND to transfer ownership, administration and control of “the Works” to the Town.
- The Town agreed to operate, supervise, control, maintain, repair, administer and ensure “the Works” operate for benefit of DND and the Town.
- The Town to provide for treatment of up to 1.2 million gallons per day from the Base.
- DND to pay for sewer services at an industrial user rate. Usage to be based on sewage meter readings.
- DND to provide 12 months notice of any new connection to the sanitary or storm system and advise of any substantial change in usage.

- The Parties agreed “the Works” are to be maintained on a payment formula reflecting the percentage of use of the storm or sanitary sewer system.
- Upgrade costs for the STP and sewer mains were defined.
- Future capital expansion consented to by the Parties is to be assessable to both parties on a percentage of usage.

### Comments

1. The Town owns and is responsible for the maintenance of the STP and associated property.
2. The Town owns and maintains the sanitary sewer system from the Base property limit on Wolfe Avenue, along Wolfe and Victoria Street to the STP. Also a portion of the North Townsite sanitary sewer from the south side of Petawawa River to Victoria Street in the vicinity of Alfred Street.
3. The Town owns and maintains the storm sewer system from the Base property limit on Wolfe Avenue along Wolfe, through DND property to Violet Street along Violet to outfall at the Petawawa River below the Town of Petawawa Municipal Office.



Dan Patrick  
Project Coordinator

**APPENDIX D**

**SANITARY SEWER MODEL  
EXISTING CONDITIONS APRIL 2011**

TOWN OF PETAWAWA SANITARY SEWERS  
 CALCULATIONS FOR THE EXISTING SYSTEM  
 PROJECT NO: 2115331A  
 Date: Nov. 2011  
 FILE:P:\Docs\211\2115331A\Sanitary Background Information\Petawawa Sanitary System - 2011 Update

Where:  $q$  = Average daily per capita flow (L/capita/d)  
 $I$  = Unit of peak extraneous flow (L/ha/s)  
 $M$  = Peaking factor  
 $Q(p)$  = Peak population flow (L/s)  
 $Q(i)$  = Peak extraneous flow (L/s)

Formulas:  $Q(d) = Q(p) + \text{peak ext. cum. flow (L/s)}$   
 $Q(i) = I \times \text{pipe size (pipe length/1000)} \text{ (L/s)}$   
 $Q(p) = \text{cum. pop}/n \times q \text{ (M/86400) (L/s)}$   
 $Q(d) = Q(p) + \text{peak ext. cum. flow (L/s)}$   
 $M = 1 + 14/\text{SQRT(cum. pop}/n \times 1000) + 4$

### Existing Conditions - Spring 2011

INCLUDES - LIMESTONE 3 & 4  
 HIGHLAND PHASE 3  
 BRIARWOOD PHASE 3  
 THE FOREST - PHASE 3 & 4  
 VEREKYEN

$Q(d)$  = Peak design flow  
  
 Values:  $q$  = 340 L/c/d  
 Persons/unit = 2.4  
 $I$  = 0.12 L/ha  
 ICI Peaking Factor = 3  
 ICI Flow Rate = 10000 L/ha/day  
 = 0.1157407 L/s/ha

APPROX. LOCATION, STREET NAME, etc.	From MH No.	To MH No.	Res. units by section	POPULATION Pop. Cumulative population	PEAKING FACTOR (M)	POPULATION FLOW Q(p) (L/s)	Individual ICI Lands (ha.)	Cummulative ICI Lands (ha.)	ICI Flows (L/s)	Res. Area (ha.)	EXTRANEOUS Individual Q(i) (L/s)	Cummulative Flows (L/s)	PEAK DESIGN FLOW Q(d) (L/s)	Length of Pipe (m)	PIPE SPECIFICATIONS Size of Pipe (mm)	Type of Pipe	Slope (%)	Capacity n = 0.013 (L/s)	Full Flow Velocity (m/s)	% OF UTILIZATION	REMARKS
<b>Victoria Street Trunk</b>																					
Victoria Street	2607	2606	0	0	4.50	0.00	0.22	0.22	0.08	0.00	0.00	0.00	0.08	81	200	SCL 2400	0.4	20.75	0.66	0.37	Start
Victoria Street	2605	2605	4	9.6	4.42	0.00	0.59	0.81	0.28	0.45	0.05	0.05	0.59	77	200	SCL 2400	0.4	20.75	0.66	2.42	
Victoria Street	2605	2604	0	0	4.8	0.00	0.00	1.07	0.37	0.00	0.00	0.20	1.39	37	200	SCL 2400	0.4	20.75	0.66	6.68	Branch Collector Willard Street
Victoria Street	2604	2601	2	4.8	52.8	0.00	0.00	1.07	0.37	0.13	0.02	0.21	1.48	221	200	SCL 2400	0.4	20.75	0.66	7.14	
Victoria Street	2601	1032	0	0	86.4	0.00	0.00	1.07	0.37	0.00	0.00	0.35	2.17	141	200	SCL 3300	0.4	20.75	0.66	10.47	Branch Collector Ebel Street
<b>Victoria Street Trunk</b>																					
Victoria Street	1032	1031	3	7.2	2752.8	3.47	1.00	23.75	8.25	0.60	0.07	10.69	56.57	53	400	SCL 4000	0.16	83.32	0.66	67.89	Branch Collector Violet Street
Victoria Street	1031	1030	0	0	2752.8	3.47	0.36	24.11	8.37	0.00	0.00	10.69	56.69	107	400	SCL 5000	0.16	83.32	0.66	68.04	
Victoria Street	1030	1029	0	0	2752.8	3.47	0.39	24.50	8.51	0.00	0.00	10.69	56.83	79	400	SCL 5000	0.16	83.32	0.66	68.20	
Victoria Street	1029	1028	0	0	2752.8	3.47	0.39	24.50	8.51	0.00	0.00	10.69	56.83	37	400	SCL 5000	0.16	83.32	0.66	68.20	
Victoria Street	1028	1027	0	0	5565.6	3.20	0.00	33.95	11.79	0.00	0.00	18.88	100.79	94	300	AC Sewer	1.11	101.90	1.44	98.90	Branch Collector Wolfe Avenue
Victoria Street	1027	1026	0	0	5565.6	3.20	0.00	33.95	11.79	0.00	0.00	18.88	100.79	48	300	AC Sewer	3.83	189.29	2.68	53.25	
Victoria Street	1026	1025	0	0	5565.6	3.20	0.00	33.95	11.79	0.00	0.00	18.88	100.79	61	300	AC Sewer	4.01	193.69	2.74	52.04	
Victoria Street	1025	1024	0	0	5565.6	3.20	0.00	33.95	11.79	0.00	0.00	18.88	100.79	51	450	AC Sewer	2.45	446.37	2.81	22.58	Branch Collector Vermont Meadows
Victoria Street	1024	1023	68	163.2	5728.8	3.19	0.00	33.95	11.79	2.50	0.30	19.18	102.88	19	450	AC Sewer	2.45	446.37	2.81	23.05	Branch Collector Armstrong Road
Victoria Street	1023	1022	2	4.8	5750.4	3.19	0.00	33.95	11.79	0.64	0.08	19.44	103.38	16	450	AC Sewer	2.43	444.54	2.80	23.25	
Victoria Street	1022	1021	0	0	5750.4	3.19	0.00	33.95	11.79	0.00	0.00	19.44	103.38	54	300	AC Sewer	3.9	191.01	2.70	54.12	
Victoria Street	1021	1020	6	14.4	5764.8	3.19	0.00	33.95	11.79	1.24	0.15	19.59	103.68	63	300	AC Sewer	4.03	194.17	2.75	53.40	
Victoria Street	1020	1019	8	19.2	5846.4	3.18	0.00	33.95	11.79	1.25	0.15	20.42	105.40	114	300	AC Sewer	1.17	104.62	1.48	100.74	
Victoria Street	1019	1018	3	7.2	5853.6	3.18	0.00	33.95	11.79	0.34	0.04	20.46	105.52	66	450	AC Sewer	0.125	100.82	0.63	106.66	Branch Collector Armstrong Road
Victoria Street	1018	1017	4	9.6	5863.2	3.18	0.00	33.95	11.79	0.47	0.06	20.52	105.68	89	450	AC Sewer	0.125	100.82	0.63	106.82	
Victoria Street	1017	1016	6	14.4	5877.6	3.18	0.00	33.95	11.79	0.57	0.07	20.58	105.91	57	450	AC Sewer	0.22	133.76	0.84	79.18	
Victoria Street	1016	1015	9	21.6	5899.2	3.18	0.00	33.95	11.79	0.68	0.08	20.67	106.22	119	525	PVC DR35	0.125	152.09	0.70	69.84	
Victoria Street	1015	1014	7	16.8	5916	3.18	0.00	33.95	11.79	0.85	0.10	20.77	106.51	50	450	AC Sewer	0.125	100.82	0.63	106.64	
Victoria Street	1014	1013	1	2.4	5954.4	3.17	0.00	33.95	11.79	0.42	0.05	21.38	107.54	68	450	AC Sewer	0.125	100.82	0.63	106.66	Branch Collector Armstrong Road
Victoria Street	1013	1012	4	9.6	5964	3.17	0.00	33.95	11.79	0.42	0.05	21.43	107.69	84	450	AC Sewer	0.125	100.82	0.63	106.81	
Victoria Street	1012	1011	3	7.2	5971.2	3.17	0.00	33.95	11.79	0.80	0.10	21.53	107.87	101	525	PVC DR35	0.125	152.09	0.70	70.92	
Victoria Street	1011	1010	0	0	10106.4	2.95	0.00	183.95	63.87	0.00	0.00	36.69	217.89	106	675	RCPipe(C76)	0.125	297.27	0.83	73.30	Branch Collector North Townsite
Victoria Street	1010	1009	0	0	10106.4	2.95	0.00	183.95	63.87	0.00	0.00	36.69	217.89	12	675	RCPipe(C76)	0.125	297.27	0.83	73.30	
Victoria Street	1009	1008	6	14.4	10956	2.92	0.00	190.66	66.20	1.03	0.12	39.67	231.55	109	675	RCPipe(C76)	0.09	252.24	0.70	91.80	Branch Collector Laurentian Drive
Victoria Street	1008	1007	1	2.4	10958.4	2.92	0.00	190.66	66.20	0.23	0.03	39.69	231.60	123	675	RCPipe(C76)	0.09	252.24	0.70	91.82	
Victoria Street	1007	1006	1	2.4	11217.6	2.90	0.00	190.66	66.20	0.13	0.02	41.14	235.57	91	675	RCPipe(C76)	0.09	252.24	0.70	93.39	Branch Collector East Street
Victoria Street	1006	1005	0	0	11217.6	2.90	0.00	190.66	66.20	0.00	0.00	41.14	235.57	49	675	RCPipe(C76)	0.09	252.24	0.70	93.39	
Victoria Street	1005	1004	0	0	11217.6	2.90	0.00	190.66	66.20	0.00	0.00	41.14	235.57	84	675	RCPipe(C76)	0.09	252.24	0.70	93.39	
Victoria Street	1004	1003	0	0	11431.2	2.90	0.00	190.66	66.20	0.00	0.00	42.24	238.75	52	675	RCPipe(C76)	0.09	252.24	0.70	94.65	Branch Collector Jan Drive
Victoria Street	1003	1002	0	0	11431.2	2.90	0.00	190.66	66.20	0.00	0.00	42.24	238.75	69	675	RCPipe(C76)	0.09	252.24	0.70	94.65	
Victoria Street	1002	1001	0	0	11431.2	2.90	0.00	190.66	66.20	0.00	0.00	42.24	238.75	34	675	RCPipe(C76)	0.09	252.24	0.70	94.65	
Victoria Street	1001	1000	0	0	11431.2	2.90	0.00	190.66	66.20	0.00	0.00	42.24	238.75	83	675	RCPipe(C76)	0.09	252.24	0.70	94.65	Sewage Plant (start)
<b>Laurentian Drive Collector</b>																					
Renfrew St. PS	2205	2204	0	0	835.2	3.85	0.00	6.71	2.33	0.00	0.00	2.85	17.83								
Laurentian Drive	2204	2203	0	0	835.2	3.85	0.00	6.71	2.33	0.00	0.00	2.85	17.83	1718	200	PVC Class 150	0.09	60.00	1.91	29.71	Forcemain
Laurentian Drive	2203	2202	0	0	835.2	3.85	0.00	6.71	2.33	0.00	0.00	2.85	17.83	110	200	PVC DR35	6.32	82.47	2.63	21.62	
Laurentian Drive	2202	2201	0	0	835.2	3.85	0.00	6.71	2.33	0.00	0.00	2.85	17.83	110	200	PVC DR35	8	92.79	2.95	19.21	
Laurentian Drive	2201	2200	0	0	835.2	3.85	0.00	6.71	2.33	0.00	0.00	2.85	17.83	113	200	PVC DR35	7.5	89.84	2.86	19.84	
Laurentian Drive	2200	1009	0	0	835.2	3.85	0.00	6.71	2.33	0.00	0.00	2.85	17.83	55	200	PVC DR35	3.25	59.14	1.88	30.15	



APPROX. LOCATION, STREET NAME, etc.	From MH No.	To MH No.	Res. units by section	POPULATION Pop. per section	Cumulative population	PEAKING FACTOR (M)	POPULATION FLOW Q(p) (L/s)	Individual ICI Lands (ha.)	Cummulative ICI Lands (ha.)	ICI Flows (L/s)	Res. Area (ha.)	EXTRANEOUS FLOWS Individual Q(i) (L/s)	Cumulative (L/s)	PEAK DESIGN FLOW Q(d) (L/s)	Length of Pipe (m)	PIPE SPECIFICATIONS Size of Pipe (mm)	Type of Pipe	Slope (%)	Capacity n = 0.013 (L/S)	Full Flow Velocity (m/s)	PERCENTAGE OF UTILIZATION	REMARKS	
<b>Jan Drive System</b>																							
Jan Drive	2105	2104	8	19.2	19.2	4.38	0.33	0.00	0.00	0.00	0.60	0.07	0.07	0.40	77	200	San.	0.5	23.20	0.74	1.74	to Edward Street Collector	
Jan Drive	2104	2102	14	33.6	52.8	4.31	0.90	0.00	0.00	0.00	0.79	0.09	0.17	1.06	170	200	San.	0.5	23.20	0.74	4.58	Start	
<b>Edward Street Collector</b>																							
Edward Street	2160	2102	7	16.8	16.8	4.39	0.29	0.00	0.00	0.00	0.51	0.06	0.06	0.35	50	200	San.	0.98	32.48	1.03	1.08	to Victoria Street Trunk	
Edward Street	2102	2101	0	0	69.6	4.28	1.17	0.00	0.00	0.00	0.00	0.00	0.228	1.40	80	200	San.	1.9	45.22	1.44	3.10	Branch Collector Jan Drive	
Edward Street	2101	2391	0	0	165.6	4.18	2.72	0.00	0.00	0.00	0.00	0.00	0.81	3.53	13	200	San.	0.46	22.25	0.71	15.86	Branch Collector Earl Street	
Edward Street	2391	2100	20	48	213.6	4.14	3.48	0.00	0.00	0.00	2.49	0.30	1.11	4.58	13	200	San.	0.46	22.25	0.71	20.60	Branch Collector Baysshore	
<b>Earl Street System</b>																							
Earl Street	2172	2171	14	33.6	33.6	4.35	0.57	0.00	0.00	0.00	1.87	0.22	0.22	0.80	118	200	San.	0.4	20.75	0.66	3.85	Start	
Earl Street	2171	2101	11	26.4	60	4.30	1.01	0.00	0.00	0.00	1.46	0.18	0.40	1.41	141	200	San.	0.4	20.75	0.66	6.82	Start	
Earl Street	2152	2101	15	36	36	4.34	0.62	0.00	0.00	0.00	1.50	0.18	0.18	0.80	150	200	San.	1.35	38.12	1.21	2.09	to Victoria Street Trunk	
<b>Edward Street Collector</b>																							
Edward Street	2100	1004	0	0	213.6	4.14	3.48	0.00	0.00	0.00	0.00	0.00	1.11	4.58	347	100	160 PVC	0	6.00	0.76	76.40	Forcemain	
<b>Albert Street Branch</b>																							
Albert Street	2309	2307	17	40.8	40.8	4.33	0.70	0.00	0.00	0.00	2.13	0.26	0.26	0.95	198	200	SCL 2400	0.4	20.75	0.66	4.58	Start	
Albert Street	2307	2306	6	14.4	55.2	4.31	0.94	0.00	0.00	0.00	0.40	0.05	0.30	1.24	122	200	SCL 2400	0.4	20.75	0.66	5.97	Start	
Albert Street	2306	2305	3	7.2	62.4	4.29	1.05	0.00	0.00	0.00	0.32	0.04	0.34	1.40	106	200	SCL 2400	0.4	20.75	0.66	6.73	Start	
Albert Street	2380	2305	3	7.2	7.2	4.43	0.13	0.00	0.00	0.00	0.59	0.07	0.07	0.20	61	200	SCL 2400	0.4	20.75	0.66	0.95	Start	
<b>Alice Street Collector</b>																							
Alice Street	2305	2304	5	12	81.6	4.27	1.37	0.00	0.00	0.00	0.41	0.05	0.46	1.83	108	200	SCL 3300	0.4	20.75	0.66	8.83	Branch Collector Albert Street	
Alice Street	2304	2303	11	26.4	108	4.23	1.80	0.00	0.00	0.00	1.26	0.15	0.61	2.41	101	200	SCL 3300	0.4	20.75	0.66	11.63	Start	
<b>Point Crescent System</b>																							
Point Crescent	2371	2370	12	28.8	28.8	4.36	0.49	0.00	0.00	0.00	0.82	0.10	0.10	0.59	96	200	ACCL 2400	0.4	20.75	0.66	2.85	to East Street Collector	
Point Crescent	2370	2351	9	21.6	50.4	4.31	0.86	0.00	0.00	0.00	0.74	0.09	0.19	1.04	125	200	ACCL 2400	0.4	20.75	0.66	5.03	Start	
<b>Edward Street System</b>																							
Edward Street	2360	2353	9	21.6	21.6	4.38	0.37	0.00	0.00	0.00	1.56	0.19	0.19	0.56	70	200	ACCL 2400	1	32.81	1.04	1.70	to East Street Collector	
<b>East Street Collector</b>																							
East Street	2390	2353	8	19.2	19.2	4.38	0.33	0.00	0.00	0.00	1.09	0.13	0.13	0.46	85	200	SCL 2400	0.4	20.75	0.66	2.23	to Victoria Street Trunk	
East Street	2353	2351	7	16.8	57.6	4.30	0.98	0.00	0.00	0.00	0.86	0.10	0.42	1.40	122	200	SCL 2400	0.4	20.75	0.66	6.73	Branch Collector Edward Street	
East Street	2351	2303	5	12	120	4.22	1.99	0.00	0.00	0.00	0.68	0.08	0.69	2.68	112	200	SCL 2400	0.4	20.75	0.66	12.93	Start	
East Street	2303	2302	2	4.8	232.8	4.12	3.78	0.00	0.00	0.00	0.15	0.02	1.32	5.10	21	200	SCL 3300	0.4	20.75	0.66	24.57	Branch Collector Alice Street	
East Street	2302	2301	0	0	232.8	4.12	3.78	0.00	0.00	0.00	0.00	0.00	1.32	5.10	19	200	SCL 3300	0.4	20.75	0.66	24.57	Start	
East Street	2301	2300	0	0	232.8	4.12	3.78	0.00	0.00	0.00	0.00	0.00	1.32	5.10	381	100	CL 380	0.16	5.68	0.72	89.80	Forcemain	
East Street	2300	1007	10	24	256.8	4.11	4.15	0.00	0.00	0.00	0.90	0.11	1.43	5.58	119	200	SCL 2400	0.4	20.75	0.66	26.89	Start	
<b>North Townsite</b>																							
Northern Interceptor	Pet.River	9000	1723	4135.2	4135.2	3.32	54.03	150.00	150.00	52.08	126.40	15.17	15.17	121.28	47	610	AC Class II	0.1	202.97	0.69	59.75	to Victoria Street Trunk	
Northern Interceptor	9000	1011	0	0	4135.2	3.32	54.03	0.00	150.00	52.08	0.00	0.00	15.17	121.28	84	610	AC Class II	0.1	202.97	0.69	59.75	(Start) North CFB	
<b>Armstrong Road Collector</b>																							
Armstrong Road	2406	2402	11	26.4	26.4	4.36	0.45	0.00	0.00	0.00	3.60	0.43	0.43	0.89	171	200	SCL 2400	0.43	21.51	0.68	4.12	to Victoria Street Trunk	
Armstrong Road	2402	1014	4	9.6	36	4.34	0.62	0.00	0.00	0.00	1.08	0.13	0.56	1.18	109	200	SCL 2400	7.23	88.21	2.18	1.33	Start	
Armstrong Road	2462	2461	7	16.8	16.8	4.39	0.29	0.00	0.00	0.00	1.99	0.24	0.24	0.53	33	200	SCL 2400	0.32	18.56	0.59	2.85	Start	
Armstrong Road	2461	2452	10	24	40.8	4.33	0.70	0.00	0.00	0.00	2.13	0.26	0.49	1.19	189	200	SCL 2400	0.28	17.36	0.55	6.85	Start	
Armstrong Road	2455	2452	9	21.6	21.6	4.38	0.37	0.00	0.00	0.00	1.51	0.18	0.18	0.55	144	200	SCL 2400	0.25	16.40	0.52	3.37	Start	
Armstrong Road	2452	1019	0	0	62.4	4.29	1.05	0.00	0.00	0.00	0.00	0.00	0.68	1.73	152	200	SCL 2400	7.2	88.03	2.80	1.97	Branch Collector Easement	
Armstrong Road	2470	1023	7	16.8	16.8	4.39	0.29	0.00	0.00	0.00	1.57	0.19	0.19	0.48	94	200	SCL 2400	0.39	20.49	0.65	2.34	Start	
<b>Wolfe Avenue Collector</b>																							
South Townsite	to	8001	757	1816.8	1816.8	3.62	25.87	0.00	0.00	0.00	35.00	4.20	4.20	30.07									to Victoria Street Trunk
Wolfe Avenue	8001	8000	0	0	1816.8	3.62	25.87	0.00	0.00	0.00	1.80	0.22	4.42	30.28	104	300	AC Sewer	0.5	68.39	0.97	44.28	Population based on MPAC data	
Wolfe Avenue	8000	1028	0	0	1816.8	3.62	25.87	2.80	2.80	0.97	0.00	0.00	4.42	31.25	113	300	AC Sewer	0.25	48.36	0.68	64.63	Branch Collector apartment buildings	
<b>Violet Street Trunk</b>																							
Violet Street	1036	1035	6	14.4	2560.8	3.50	35.27	0.00	18.57	6.45	0.42	0.05	9.81	51.52	94	400	SCL 5000	0.16	83.32	0.66	61.83	to Victoria Street Trunk	
Violet Street	1035	1032	11	26.4	2659.2	3.49	36.48	0.00	21.68	7.53	1.13	0.14	10.26	54.27	203	400	SCL 5000	0.16	83.32	0.66	65.14	Branch Collector Mohms Avenue	

APPROX. LOCATION, STREET NAME, etc.	From MH No.	To MH No.	POPULATION		Cumulative population	PEAKING FACTOR (M)	POPULATION FLOW Q(p) (L/s)	Individual ICI Lands (ha.)	Cumulative ICI Lands (ha.)	ICI Flows (L/s)	Area (ha.)	EXTRANEOUS FLOWS		PEAK DESIGN FLOW Q(d) (L/s)	PIPE SPECIFICATIONS				PIPE DESIGN		PERCENTAGE OF UTILIZATION	REMARKS	
			Res. units by section	Pop. per section								Individual Q(i) (L/s)	Cumulative (L/s)		Length of Pipe (m)	Size of Pipe (mm)	Type of Pipe	Slope (%)	Capacity n = 0.013 (L/S)	Full Flow Velocity (m/s)			
<b>Vereyken Crescent Collector</b>																							
Vereyken Crescent	3527	3526	8	19.2	19.2	4.38	0.33	0.00	0.00	0.00	0.58	0.07	0.07	0.40	65	200	PVC DR 35	0.4	20.75	0.66	1.93	to Wilbert Street Collector	
Vereyken Crescent	3526	3525	32	76.8	96	4.25	1.60	0.00	0.00	0.00	0.58	0.07	0.14	1.74	38	200	PVC DR 35	0.4	20.75	0.66	8.41	Start	
Vereyken Crescent	3525	3522	38	91.2	187.2	4.16	3.06	1.66	1.66	0.58	0.86	0.10	0.24	3.88	187	200	PVC DR 35	0.4	20.75	0.66	18.71		
Vereyken Crescent	3522	3521	23	55.2	242.4	4.12	3.93	0.00	1.66	0.58	0.57	0.07	0.31	4.81	31	300	SCL 3300	0.06	23.69	0.34	20.32		
Vereyken Crescent	3521	3507	8	19.2	328.8	4.06	5.25	0.00	1.66	0.58	0.52	0.06	0.60	6.43	99	300	SCL 3300	0.25	48.36	0.68	13.30		
Vereyken Crescent	3527	3531	6	14.4	14.4	4.40	0.25	0.00	0.00	0.00	0.50	0.06	0.06	0.31	126	200	PVC DR 35	0.4	20.75	0.66	1.49	Start	
Vereyken Crescent	3533	3531	13	31.2	31.2	4.35	0.53	0.00	0.00	0.00	0.76	0.09	0.09	0.63	94	200	PVC DR 35	0.4	20.75	0.66	3.01	Start	
Vereyken Crescent	3531	3530	9	21.6	67.2	4.29	1.13	0.00	0.00	0.00	0.64	0.08	0.23	1.36	90	200	PVC DR 35	0.4	20.75	0.66	6.56	Branch Collector Vereyken Crescent	
Vereyken Crescent	3530	3521	0	0	67.2	4.29	1.13	0.00	0.00	0.00	0.00	0.00	0.23	1.36	40	200	PVC DR 35	0.4	20.75	0.66	6.56		
<b>Wilbert Street Collector</b>																							
Wilbert Street	3507	3505	9	21.6	840	3.85	12.72	0.00	4.77	1.66	0.84	0.10	2.48	16.86	100	300	SCL 3300	0.25	48.36	0.68	34.86	to Violet Street Trunk	
Wilbert Street	3505	3503	9	21.6	861.6	3.84	13.02	0.00	4.77	1.66	0.95	0.11	2.60	17.28	139	300	SCL 4000	0.25	48.36	0.68	35.72	Branch Collector Dundonald Drive	
Wilbert to Violet St	3503	1037	0	0	861.6	3.84	13.02	0.00	4.77	1.66	0.00	0.00	2.60	17.28	309	300	SCL 4000	0.25	48.36	0.68	35.72		
Wilbert to Violet St	1037	1036	0	0	2546.4	3.50	35.09	0.00	18.57	6.45	0.00	0.00	9.75	51.29	69	400	SCL 5000	0.16	83.32	0.66	61.56	Branch Collector Maple Avenue	
<b>Dundonald Drive Collector</b>																							
Herman to Cord 51	3510	3509	0	0	489.6	3.98	7.67	0.00	0.00	0.00	0.00	0.00	1.78	9.45	47	200	ACCL 3300	0.82	29.71	0.95	31.80	to Wilbert Street Collector	
Cord 51 Cord 51	3509	3508	0	0	489.6	3.98	7.67	0.00	0.00	0.00	0.00	0.00	1.78	9.45	23	200	PVC SDR 35	2	46.39	1.48	20.36	Branch Collector Herman Street	
Dundonald to Wilbert	3508	3507	0	0	489.6	3.98	7.67	0.00	3.11	1.08	0.00	0.00	1.78	10.53	95.2	250	PVC SDR 35	0.28	31.47	0.64	33.45	to Dundonald Drive Collector	
<b>Herman Street System</b>																							
Laurentian Highlands -Phase Murphy Road	IA & B ext.	4000	95	228	228	4.13	3.70	0.00	0.00	0.00	5.54	0.66	0.66	4.37		200	PVC SDR 35	2	46.39	1.48	0.00		
Herman Street	4000	3542	4	9.6	237.6	4.12	3.85	0.00	0.00	0.00	0.48	0.06	0.72	4.57		200	ACCL 2400	0.4	20.75	0.66	22.05		
Herman Street	3542	3541	5	12	302.4	4.08	4.85	0.00	0.00	0.00	0.48	0.06	1.00	5.85	104	200	ACCL 2400	0.4	20.75	0.66	28.20		
Herman Street	3541	3510	25	60	362.4	4.04	5.76	0.00	0.00	0.00	1.94	0.23	1.23	7.00	101	200	ACCL 2400	0.4	20.75	0.66	33.72	Branch Collector Laroche Crescent	
Herman Street	3561	3511	14	33.6	33.6	4.35	0.57	0.00	0.00	0.00	1.13	0.14	0.14	0.71	141	200	ACCL 2400	0.6	25.41	0.81	2.80	Start	
Herman Street	3511	3510	0	0	127.2	4.21	2.11	0.00	0.00	0.00	0.00	0.00	0.55	2.66	24	200	ACCL 2400	0.4	20.75	0.66	12.81	Branch Collector Laroche Crescent	
<b>Laroche Crescent System</b>																							
Laroche Crescent	3545	3542	22	52.8	52.8	4.31	0.90	0.00	0.00	0.00	1.83	0.22	0.22	1.12	242	200	ACCL 2400	0.4	20.75	0.66	5.37	to Herman Street Collector	
<b>Laroche Crescent Collector</b>																							
Laroche Crescent	3516	3514	15	36	36	4.34	0.62	0.00	0.00	0.00	1.43	0.17	0.17	0.79	122	200	ACCL 2400	2	46.39	1.48	1.70		
Laroche Crescent	3514	3512	7	16.8	52.8	4.31	0.90	0.00	0.00	0.00	0.68	0.08	0.25	1.15	98	200	ACCL 2400	3.4	60.49	1.93	1.90		
Laroche Crescent	3512	3511	0	0	93.6	4.25	1.57	0.00	0.00	0.00	0.00	0.00	0.41	1.98	88	200	ACCL 2400	0.9	31.12	0.99	6.36		
<b>James Street System</b>																							
James Street	3551	3512	17	40.8	40.8	4.33	0.70	0.00	0.00	0.00	1.33	0.16	0.16	0.86	198	200	ACCL 2400	0.4	20.75	0.66	4.12		
<b>County Road 51 System</b>																							
Cord 51	3573	3508	0	0	0	4.50	0.00	1.84	1.84	0.64	0.00	0.00	0.00	0.64		200	SCL 2400	0.4	20.75	0.66	3.08		
Cord 51	3583	3508	0	0	0	4.50	0.00	1.27	1.27	0.44	0.00	0.00	0.00	0.44	293	200	SCL 2400	0.39	20.49	0.65	2.15		
<b>Mohns Avenue Collector</b>																							
Mohns Avenue	2753	1035	8	19.2	19.2	4.38	0.33	0.65	0.65	0.23	1.17	0.14	0.14	0.70	338	200	SCL 2400	0.4	20.75	0.66	3.36		
RCRCS to Mohns Ave.	2770	2703	0	0	52.8	4.31	0.90	1.59	1.59	0.55	0.00	0.00	0.18	1.63	86	200	SCL 2400	0.4	20.75	0.66	7.86		
Mohns Avenue	2704	2703	0	0	0	4.50	0.00	0.87	0.87	0.30	0.00	0.00	0.00	0.30	22	200	SCL 2400	0.4	20.75	0.66	1.46		
Mohns Avenue	2703	2701	7	16.8	16.8	4.39	0.29	0.00	2.46	0.85	0.50	0.06	0.06	1.20	181	200	SCL 2400	0.4	20.75	0.66	5.80		
Mohns Avenue	2701	2700	0	0	16.8	4.39	0.29	0.00	2.46	0.85	0.00	0.00	0.06	1.20	22	200	SCL 2400	0.4	20.75	0.66	5.80		
Mohns Avenue	2700	1035	4	9.6	52.8	4.31	0.90	0.00	2.46	0.85	0.31	0.04	0.18	1.93	94	200	SCL 2400	0.4	20.75	0.66	9.31		
<b>Ethel Street System</b>																							
Ethel Street	2760	2700	11	26.4	26.4	4.36	0.45	0.00	0.00	0.00	0.71	0.09	0.09	0.54	74	200	SCL 2400	1.04	33.45	1.06	1.61		

APPROX. LOCATION, STREET NAME, etc.	From MH No.	To MH No.	POPULATION		Cumulative population	PEAKING FACTOR (M)	POPULATION FLOW Q(p) (L/s)	Individual ICI Lands (ha.)	Cumulative ICI Lands (ha.)	ICI Flows (L/s)	Area (ha.)	EXTRANEUS FLOWS		PEAK DESIGN FLOW Q(d) (L/s)	PIPE SPECIFICATIONS			PIPE DESIGN		PERCENTAGE OF UTILIZATION	REMARKS	
			Res. units by section	Pop. per section								Individual Q(i) (L/s)	Cumulative (L/s)		Length of Pipe (m)	Size of Pipe (mm)	Type of Pipe	Slope (%)	Capacity n = 0.013 (L/S)			Full Flow Velocity (m/s)
<b>Ethel Street System</b>																						
Ethel Street	2651	2601	14	33.6	33.6	4.35	0.57	0.00	0.00	0.00	1.14	0.14	0.14	0.71	179	200	SCL 2400	0.4	20.75	0.66	3.43	
<b>Willard Street System</b>																						
Willard Street	2671	2605	16	38.4	38.4	4.34	0.66	0.26	0.26	0.09	1.21	0.15	0.15	0.89	185	200	SCL 2400	0.4	20.75	0.66	4.29	
<b>County Road 51 System</b>																						
Cord 51	3032	3003	0	0	0	4.50	0.00	1.17	1.17	0.41	0.00	0.00	0.00	0.41	159	200	SCL 2400	0.39	20.49	0.65	1.98	
<b>County Road 51 Collector</b>																						
Cord 51	3003	3002	0	0	9.6	4.42	0.17	0.00	5.06	1.76	0.00	0.00	0.04	1.97	34	300	SCL 2400	0.1	30.59	0.43	6.43	
Cord 51	3002	3001	0	0	9.6	4.42	0.17	0.00	5.06	1.76	0.00	0.00	0.04	1.97	86	300	SCL 2400	0.3	52.98	0.75	3.71	
Cord 51	3001	3000	0	0	9.6	4.42	0.17	0.00	5.06	1.76	0.00	0.00	0.04	1.97	101	300	SCL 3300	0.22	45.37	0.64	4.34	
Cord 51	3000	1043	0	0	9.6	4.42	0.17	1.40	6.46	2.24	0.00	0.00	0.04	2.45	81	300	SCL 3300	0.27	50.26	0.71	4.88	
<b>Maple Avenue Collector</b>																						
Maple Avenue	1043	1042	0	0	1608	3.66	23.14	0.00	11.85	4.11	0.00	0.00	6.67	33.93	54	400	SCL 4000	0.16	83.32	0.66	40.72	
Maple Avenue	1042	1040	11	26.4	1634.4	3.65	23.49	0.00	11.85	4.11	1.10	0.13	6.81	34.41	96	400	SCL 5000	0.16	83.32	0.66	41.30	
Maple Avenue	1040	1039	8	19.2	1653.6	3.65	23.74	0.00	11.85	4.11	0.60	0.07	6.88	34.73	72	400	SCL 5000	0.16	83.32	0.66	41.69	
Maple Avenue	1039	1038	0	0	1682.4	3.64	24.12	0.00	11.85	4.11	0.00	0.00	7.14	35.37	81	400	SCL 5000	0.16	83.32	0.66	42.45	
Maple to Violet St.	1038	1037	1	2.4	1684.8	3.64	24.15	1.95	13.80	4.79	0.16	0.02	7.16	36.10	106	400	SCL 5000	0.16	83.32	0.66	43.33	
<b>Pine Pine System</b>																						
Pine Place	1060	1039	12	28.8	28.8	4.36	0.49	0.00	0.00	0.00	2.18	0.26	0.26	0.76	109	200	ACCL 2400	0.58	24.98	0.80	3.02	
<b>Mohs Avenue System</b>																						
Mohs Avenue	3021	3020	4	9.6	9.6	4.42	0.17	0.00	0.00	0.00	0.36	0.04	0.04	0.21	75	200	SCL 2400	0.4	20.75	0.66	1.01	
Mohs Avenue	3020	3003	0	0	9.6	4.42	0.17	0.69	0.69	0.24	0.00	0.00	0.04	0.45	85	200	SCL 2400	1.6	41.50	1.32	1.08	
<b>Violet Street Trunk</b>																						
Cord 51	3602	3601	0	0	0	4.50	0.00	0.54	0.54	0.19	0.00	0.00	0.00	0.19	129	200	SCL 2400	0.45	22.01	0.70	0.85	
Cord 51	3601	3600	0	0	0	4.50	0.00	0.76	1.30	0.45	0.00	0.00	0.00	0.45	91	200	SCL 2400	0.37	19.95	0.64	2.26	
Cord 51	3600	1043	0	0	0	4.50	0.00	0.00	1.30	0.45	0.00	0.00	0.00	0.45	101	200	SCL 2400	0.43	21.51	0.68	2.10	
<b>Harry Street System</b>																						
Harry Street	2907	2906	5	12	12	4.41	0.21	0.00	0.00	0.00	0.48	0.06	0.06	0.27	70	200	PVC	0.91	31.29	1.00	0.85	
<b>Algonquin Street Collector</b>																						
Algonquin Street	2906	2904	12	28.8	40.8	4.33	0.70	0.00	0.00	0.00	0.93	0.11	0.17	0.86	165	200	PVC	1.19	35.79	1.14	2.42	
Algonquin Street	2904	2902	6	14.4	55.2	4.31	0.94	0.00	0.00	0.00	0.50	0.06	0.23	1.16	33	200	PVC	5.45	76.58	2.44	1.52	
Algonquin Street	2902	2901	6	14.4	144	4.20	2.38	0.00	0.00	0.00	0.57	0.07	0.69	3.06	73	200	PVC	0.4	20.75	0.66	14.77	
Algonquin to Harry	2901	2900	0	0	144	4.20	2.38	0.00	0.00	0.00	0.00	0.00	0.69	3.06	106	200	PVC	0.4	20.75	0.66	14.77	
<b>Park Drive System</b>																						
Park Drive	2917	2914	18	43.2	43.2	4.33	0.74	0.00	0.00	0.00	1.98	0.24	0.24	0.97	78	200	PVC	2.22	48.88	1.56	1.99	
Park Drive	2914	2902	13	31.2	74.4	4.28	1.25	0.00	0.00	0.00	1.26	0.15	0.39	1.64		200	PVC	0.4	20.75	0.66	7.91	
<b>Harry Street Collector</b>																						
Harry Street	2925	2922	15	36	36	4.34	0.62	0.00	0.00	0.00	1.25	0.15	0.15	0.77	162	200	SCL 2400	0.4	20.75	0.66	3.69	
Harry Street	2922	2921	6	14.4	50.4	4.31	0.86	0.00	0.00	0.00	0.60	0.07	0.22	1.08	71	200	SCL 2400	0.4	20.75	0.66	5.19	
Harry Street	2921	2920	2	4.8	55.2	4.31	0.94	0.00	0.00	0.00	0.33	0.04	0.26	1.20	62	200	SCL 2400	9.5	101.11	3.22	1.18	
Harry Street	2920	2900	2	4.8	60	4.30	1.01	0.00	0.00	0.00	0.00	0.00	0.26	1.28	45	200	SCL 2400	0.4	20.75	0.66	6.15	
Harry Street	2900	2801	0	0	204	4.14	3.33	0.00	0.00	0.00	0.00	0.00	0.95	4.28	13	200	SCL 2400	0.4	20.75	0.66	20.61	
Harry Street	2801	P/S	0	0	996	3.80	14.90	0.00	6.65	2.31	0.00	0.00	3.78	20.98	3	250	CL 2400	0.4	37.62	0.77	55.78	
Harry to Wolfe Ave.	P/S	1028	0	0	996	3.80	14.90	0.00	6.65	2.31	0.00	0.00	3.78	20.98	602	150	PVC	0	27.76	1.57	75.60	
<b>County Road 51 Collector</b>																						
Cord 51	3006	3005	0	0	0	4.50	0.00	0.78	0.78	0.27	0.00	0.00	0.00	0.27	88	300	SCL 2400	1.65	124.24	1.76	0.22	
Cord 51	3005	3004	0	0	0	4.50	0.00	1.21	1.99	0.69	0.00	0.00	0.00	0.69	88	300	SCL 2400	0.31	53.85	0.76	1.28	
Cord 51	3004	3003	0	0	0	4.50	0.00	1.21	3.20	1.11	0.00	0.00	0.00	1.11	25	300	SCL 2400	0.52	69.75	0.99	1.59	
<b>County Road 51 System</b>																						
Cord 51	2842	2808	0	0	0	4.50	0.00	1.21	1.21	0.42	0.00	0.00	0.00	0.42	69	200	SCL 2400	2	46.39	0.58	0.91	

APPROX. LOCATION, STREET NAME, etc.	From MH No.	To MH No.	POPULATION		Cumulative population	PEAKING FACTOR (M)	POPULATION FLOW Q(p) (L/s)	Individual ICI Lands (ha.)	Cumulative ICI Lands (ha.)	ICI Flows (L/s)	Area (ha.)	EXTRANEUS FLOWS		PEAK DESIGN FLOW Q(d) (L/s)	PIPE SPECIFICATIONS				PIPE DESIGN		PERCENTAGE OF UTILIZATION	REMARKS	
			Res. units by section	Pop. per section								Individual Q(i) (L/s)	Cumulative (L/s)		Length of Pipe (m)	Size of Pipe (mm)	Type of Pipe	Slope (%)	Capacity n = 0.013 (L/s)	Full Flow Velocity (m/s)			
<b><u>County Road 51 Collector</u></b>																							
Cord 51	2808	2807	0	0	792	3.86	12.04	1.52	3.60	1.25	0.00	0.00	2.83	16.12	102	200	SCL 2400	1.15	35.18	1.12	45.82		
Cord 51	2807	2806	0	0	792	3.86	12.04	0.58	4.18	1.45	0.00	0.00	2.83	16.32	59	200	SCL 2400	0.26	16.73	0.53	97.56		
Cord 51	2806	2805	0	0	792	3.86	12.04	0.00	4.18	1.45	0.00	0.00	2.83	16.32	72	200	SCL 2400	1.65	42.14	1.34	38.73		
Cord 51	2805	2804	0	0	792	3.86	12.04	0.00	4.18	1.45	0.00	0.00	2.83	16.32	16	200	SCL 2400	2	46.39	1.48	35.18		
Cord 51	2804	2803	0	0	792	3.86	12.04	0.00	6.65	2.31	0.00	0.00	2.83	17.18	8	200	SCL 3300	8	92.79	2.95	18.51		
Cord 51	2803	2802	0	0	792	3.86	12.04	0.00	6.65	2.31	0.00	0.00	2.83	17.18	22	200	SCL 3300	8	92.79	2.95	18.51		
Cord 51	2802	2801	0	0	792	3.86	12.04	0.00	6.65	2.31	0.00	0.00	2.83	17.18	74	250	SCL 2400	0.7	49.76	1.01	34.52		
<b><u>County Road 51 System</u></b>																							
Cord 51	2835	2833	0	0	0	4.50	0.00	1.57	1.57	0.55	0.00	0.00	0.00	0.55	200	SCL 2400	1.15	35.18	1.12	1.55			
Cord 51	2833	2804	0	0	0	4.50	0.00	0.90	2.47	0.86	0.00	0.00	0.00	0.86	200	SCL 2400	1.13	34.87	1.11	2.46			
<b><u>Portage Road Branch</u></b>																							
Portage Road	2851	2850	0	0	0	4.50	0.00	0.35	0.35	0.12	0.00	0.00	0.00	0.12	87	200	SCL 2400	0.96	32.14	1.02	0.38		
Portage Road	2850	2814	0	0	0	4.50	0.00	0.52	0.87	0.30	0.00	0.00	0.00	0.30	43	200	SCL 2400	3.4	60.49	1.93	0.50		
<b><u>Portage Road Collector</u></b>																							
Portage Road	2827	2825	7	16.8	16.8	4.39	0.29	0.00	0.00	0.00	0.58	0.07	0.07	0.36	98	200	PVC DR 35	0.4	20.75	0.66	1.73		
Portage Road	2825	2823	11	26.4	43.2	4.33	0.74	0.00	0.00	0.00	0.84	0.10	0.17	0.91	191	200	PVC DR 35	0.4	20.75	0.66	4.37		
Portage Road	2823	2822	0	0	189.6	4.16	3.10	0.00	0.00	0.00	0.00	0.00	0.86	3.96	14	200	SCL 2400	0.4	20.75	0.66	19.09		
Portage Road	2822	2821	5	12	201.6	4.15	3.29	0.00	0.00	0.00	0.47	0.06	0.92	4.21	55	200	SCL 2400	0.4	20.75	0.66	20.27		
Portage Road	2821	2820	7	16.8	249.6	4.11	4.04	0.00	0.00	0.00	0.60	0.07	1.10	5.14	88	200	SCL 2400	0.4	20.75	0.66	24.78		
Portage Road	2820	2819	0	0	424.8	4.01	6.70	0.00	0.00	0.00	0.00	0.00	1.82	8.52	11	200	SCL 2400	0.4	20.75	0.66	41.06		
Portage Road	2819	2817	5	12	523.2	3.96	8.16	0.00	0.00	0.00	0.33	0.04	2.09	10.25	120	200	SCL 2400	0.4	20.75	0.66	49.42		
Portage Road	2817	2816	0	0	523.2	3.96	8.16	0.00	0.00	0.00	0.00	0.00	2.09	10.25	26	200	SCL 2400	0.4	20.75	0.66	49.42		
Portage Road	2816	2815	0	0	523.2	3.96	8.16	0.00	0.00	0.00	0.00	0.00	2.09	10.25	17	200	SCL 2400	0.77	28.79	0.92	35.62		
Portage Road	2815	2814	0	0	523.2	3.96	8.16	0.00	0.00	0.00	0.00	0.00	2.09	10.25	13	200	SCL 2400	0.4	20.75	0.66	49.42		
Portage to Cord 51	2814	2813	0	0	523.2	3.96	8.16	0.00	0.87	0.30	0.00	0.00	2.09	10.56	67	200	SCL 2400	0.4	20.75	0.66	50.87		
Portage to Cord 51	2813	2812	5	12	535.2	3.96	8.34	0.00	0.87	0.30	0.00	0.00	2.09	10.73	65	200	SCL 2400	0.4	20.75	0.66	51.72		
Portage to Cord 51	2812	2811	6	14.4	549.6	3.95	8.55	0.00	0.87	0.30	0.00	0.00	2.09	10.94	42	200	SCL 2400	0.4	20.75	0.66	52.74		
Portage to Cord 51	2811	2810	101	242.4	792	3.86	12.04	0.00	0.87	0.30	6.14	0.74	2.83	15.17	94	200	SCL 2400	0.63	26.04	0.83	58.26		
Portage to Cord 51	2810	2809	0	0	792	3.86	12.04	0.00	0.87	0.30	0.00	0.00	2.83	15.17	35	200	SCL 2400	0.4	20.75	0.66	73.12		
Portage to Cord 51	2809	2808	0	0	792	3.86	12.04	0.00	0.87	0.30	0.00	0.00	2.83	15.17	90	200	SCL 2400	0.4	20.75	0.66	73.12		
<b><u>Daniel Drive System</u></b>																							
Daniel Drive	2874	2873	7	16.8	16.8	4.39	0.29	0.00	0.00	0.00	0.43	0.05	0.05	0.34	70	200	PVC DR 35	0.4	20.75	0.66	1.65	Start	
Daniel Drive	2873	2871	12	28.8	45.6	4.32	0.78	0.00	0.00	0.00	0.61	0.07	0.12	0.90	151	200	PVC DR 35	0.4	20.75	0.66	4.34		
Wilson Drive	2878	2871	15	36	36	4.34	0.62	0.00	0.00	0.00	0.77	0.09	0.09	0.71	200	PVC DR 35	0.4	20.75	0.66	3.41			
Wilson Drive	2871	2819	2	4.8	86.4	4.26	1.45	0.00	0.00	0.00	0.16	0.02	0.24	1.68	250	PVC DR 35	0.4	37.62	0.77	4.48			
<b><u>Lisa Crescent System</u></b>																							
Lisa Crescent	2886	2885	11	26.4	26.4	4.36	0.45	0.00	0.00	0.00	1.21	0.15	0.15	0.60	76	200	AC 2400	0.4	20.75	0.66	2.88		
<b><u>Hilda Street System</u></b>																							
Hilda Street	2885	2882	17	40.8	67.2	4.29	1.13	0.00	0.00	0.00	1.83	0.22	0.36	1.50	246	200	AC 2400	0.4	20.75	0.66	7.22		
<b><u>Scott Avenue Collector</u></b>																							
Scott Avenue	2882	2881	4	9.6	76.8	4.27	1.29	0.00	0.00	0.00	0.31	0.04	0.40	1.69	95	200	AC 2400	0.4	20.75	0.66	8.16		
Scott Avenue	2881	2823	4	9.6	146.4	4.19	2.42	0.00	0.00	0.00	0.31	0.04	0.69	3.11	86	200	AC 2400	0.4	20.75	0.66	14.97		
<b><u>Lisa Crescent System</u></b>																							
Lisa Crescent	2893	2891	11	26.4	26.4	4.36	0.45	0.00	0.00	0.00	1.02	0.12	0.12	0.58	152	200	AC 2400	0.4	20.75	0.66	2.77		
Lisa Crescent	2890	2881	14	33.6	60	4.30	1.01	0.00	0.00	0.00	1.07	0.13	0.25	1.27	164	200	AC 2400	0.4	20.75	0.66	6.10		
<b><u>Audrey Street System</u></b>																							
Audrey Street	2861	2860	13	31.2	31.2	4.35	0.53	0.00	0.00	0.00	0.96	0.12	0.12	0.65	82	200	SCL 2400	0.4	20.75	0.66	3.13		
Audrey Street	2860	2821	0	0	31.2	4.35	0.53	0.00	0.00	0.00	0.00	0.00	0.12	0.65	85	200	SCL 2400	0.4	20.75	0.66	3.13		
<b><u>Russell Street System</u></b>																							
Sammy Drive	3132	3131	5	12	12	4.41	0.21	0.00	0.00	0.00	0.33	0.04	0.04	0.25	70	200	AC Sewer	0.4	20.75	0.66	1.19		
Russell Street	3131	3130	10	24	36	4.34	0.62	0.00	0.00	0.00	0.64	0.08	0.12	0.73	90	200	AC Sewer	0.4	20.75	0.66	3.53		
Russell Street	3130	3103	0	0	36	4.34	0.62	0.00	0.00	0.00	0.00	0.00	0.12	0.73	30	200	AC Sewer	0.4	20.75	0.66	3.53		
<b><u>Audrey Street System</u></b>																							
Audrey Street	3103	3102	4	9.6	76.8	4.27	1.29	0.00	0.00	0.00	0.33	0.04	0.30	1.59	90	200	SCL 2400	0.5	23.20	0.74	6.87		
<b><u>Audrey Street Collector</u></b>																							
Hilda Street	3102	3101	7	16.8	93.6	4.25	1.57	0.00	0.00	0.00	0.63	0.08	0.38	1.94	74	200	SCL 2400	0.4	20.75	0.66	9.37		

APPROX. LOCATION, STREET NAME, etc.	From MH No.	To MH No.	POPULATION		PEAKING FACTOR (M)	POPULATION FLOW Q(p) (L/s)	Individual ICI Lands (ha.)	Cumulative ICI Lands (ha.)	ICI Flows (L/s)	Area (ha.)	EXTRANEUS FLOWS		PEAK DESIGN FLOW Q(d) (L/s)	Length of Pipe (m)	PIPE SPECIFICATIONS			Slope (%)	PIPE DESIGN		PERCENTAGE OF UTILIZATION	REMARKS
			Res. units by section	Pop. per section						Individual Q(i) (L/s)	Cumulative (L/s)			Size of Pipe (mm)	Type of Pipe		Capacity n = 0.013 (L/S)	Full Flow Velocity (m/s)				
<b>Florence Street Collector</b>																						
Florence Street	3101	3100	0	0	132	4.21	2.19	0.00	0.00	0.00	0.00	2.72	117	200	SCL 2400	0.4	20.75	0.66	13.13			
Florence Street	3100	2820	4	9.6	175.2	4.17	2.87	0.00	0.00	0.00	0.32	3.59	86	200	SCL 2400	0.4	20.75	0.66	17.28			
<b>Russell Street System</b>																						
Russell Street	3105	3103	13	31.2	31.2	4.35	0.53	0.00	0.00	0.00	1.22	0.68	60	200	SCL 2400	0.4	20.75	0.66	3.28			
<b>Hilda Street System</b>																						
Hilda Street	3121	3101	16	38.4	38.4	4.34	0.66	0.00	0.00	0.00	1.34	0.82	174	200	SCL 2400	0.4	20.75	0.66	3.93			
<b>Craig Place System</b>																						
Craig Place	3111	3100	14	33.6	33.6	4.35	0.57	0.00	0.00	0.00	1.12	0.71	138	200	AC 2400	0.4	20.75	0.66	3.42			
<b>Edith Street Collector</b>																						
Edith Street	1048	1047	0	0	909.6	3.83	13.70	0.00	0.00	0.00	0.00	17.08	88	300	SCL 2400	0.3	52.98	0.75	32.23			
Edith Street	1047	1046	0	0	940.8	3.82	14.13	0.00	0.93	0.32	0.00	17.97	13	300	SCL 2400	0.3	52.98	0.75	33.92			
Edith Street	1046	1045	0	0	1154.4	3.76	17.08	0.00	1.53	0.53	0.00	22.11	91	300	SCL 2400	0.3	52.98	0.75	41.74			
Edith Street	1045	1044	0	0	1598.4	3.66	23.02	0.00	4.09	1.42	0.00	31.07	57	300	SCL 2400	0.3	52.98	0.75	58.64			
Edith to Cord 51	1044	1043	0	0	1598.4	3.66	23.02	0.00	4.09	1.42	0.00	31.07	79	300	SCL 2400	0.33	55.56	0.79	55.92			
<b>Selkirk Street Collector</b>																						
Selkirk Street	3323	3320	33	79.2	79.2	4.27	1.33	0.00	0.00	0.00	2.43	1.62	289	200	SCL 2400	0.36	19.68	0.63	8.24			
Selkirk Street	3320	3305	0	0	79.2	4.27	1.33	0.00	0.00	0.00	0.00	1.62	76	200	SCL 2400	0.04	98.63	3.14	1.64			
Selkirk Street	3305	3304	0	0	427.2	4.01	6.74	0.00	0.00	0.00	0.00	8.34	11	200	SCL 2400	2.03	46.74	1.49	17.83			
Selkirk Street	3304	1048	37	88.8	516	3.97	8.06	0.00	0.00	0.00	3.18	10.03	179	200	SCL 2400	0.6	25.41	0.81	39.49			
<b>Tangelwood Drive</b>																						
Tangelwood Drive	1054	1058	38	91.2	91.2	4.25	1.53	0.00	0.00	0.00	2.43	1.82		200	PVC	0.5	23.20	0.74	7.84			
<b>Edith Street Collector</b>																						
Edith Street	1058	1049	50	120	211.2	4.14	3.44	0.00	0.00	0.00	4.38	0.53	0.82	4.26	57	250	PVC	0.3	32.58	0.66	13.07	includes Briarwood Phase 3 lands
<b>Briarwood Drive Collector</b>																						
Briarwood Drive	1053	1051	27	64.8	64.8	4.29	1.09	0.00	0.00	0.00	1.51	1.28	191	200	PVC ULTRA RIB	0.4	20.75	0.66	6.15	Start		
Briarwood Drive	1051	1049	26	62.4	127.2	4.21	2.11	0.00	0.00	0.00	1.19	2.43	184	200	PVC ULTRA RIB	1.3	37.40	1.19	6.50			
<b>Edith Street Collector</b>																						
Edith Street	1049	1048	3	7.2	345.6	4.05	5.51	0.00	0.00	0.00	0.38	0.05	1.19	6.70	103	250	PVC ULTRA RIB	0.3	32.58	0.66	20.56	
<b>Russel Street /System</b>																						
Russel Street	3105	3140	17	40.8	40.8	4.33	0.70	0.00	0.00	0.00	1.59	0.19	0.19	0.89	192	200	SCL 2400	0.52	23.66	0.75	3.75	
Selkirk Street	3140	1048	3	7.2	48	4.32	0.82	0.00	0.00	0.00	0.20	0.02	0.21	1.03	101	200	SCL 2400	0.4	20.75	0.66	4.97	
<b>Hemlock Street Collector</b>																						
Hemlock Street	3333	3330	32	76.8	151.2	4.19	2.49	0.00	0.00	0.00	2.42	0.29	0.60	3.09	275	200	CL 2400	0.57	24.77	0.79	12.49	from Woodlands Crescent Collector
Hemlock Street	3330	3306	0	0	151.2	4.19	2.49	0.00	0.00	0.00	0.00	0.00	0.60	3.09	89	200	CL 2400	3.63	62.50	1.99	4.95	
<b>Woodland Crescent System</b>																						
Woodland Crescent	3306	3305	0	0	348	4.05	5.55	0.00	0.00	0.00	0.00	0.00	1.31	6.85	91	200	CL 2400	2.05	46.97	1.50	14.59	Branch Collector Hemlock Street
<b>Spruce Street Collector</b>																						
Spruce Street	3350	3334	22	52.8	52.8	4.31	0.90	0.00	0.00	0.00	1.62	0.19	0.19	1.09	237	200	CL 2400	0.59	25.20	0.80	4.33	
<b>Woodland Crescent System</b>																						
Woodland Crescent	3334	3333	9	21.6	74.4	4.28	1.25	0.00	0.00	0.00	0.97	0.12	0.31	1.56	90	200	CL 2400	1.03	33.29	1.06	4.69	Branch Collector from Spruce St.
Woodland Crescent	3307	3306	7	16.8	196.8	4.15	3.21	0.00	0.00	0.00	0.22	0.03	0.70	3.92	90	200	CL 2400	3.72	63.27	2.01	6.19	Branch Collector from Spruce St.
<b>Spruce Street System</b>																						
Spruce Street	3350	3307	8	19.2	19.2	4.38	0.33	0.00	0.00	0.00	0.54	0.06	0.06	0.40	92	200	CL 2400	2.67	53.60	1.71	0.74	

APPROX. LOCATION, STREET NAME, etc.	From MH No.	To MH No.	POPULATION		Cumulative population	PEAKING FACTOR (M)	POPULATION FLOW Q(p) (L/s)	Individual ICI Lands (ha.)	Cumulative ICI Lands (ha.)	ICI Flows (L/s)	Area (ha.)	EXTRANEUS FLOWS		PEAK DESIGN FLOW Q(d) (L/s)	PIPE SPECIFICATIONS			PIPE DESIGN		PERCENTAGE OF UTILIZATION	REMARKS	
			Res. units by section	Pop. per section								Individual Q(i) (L/s)	Cumulative (L/s)		Length of Pipe (m)	Size of Pipe (mm)	Type of Pipe	Slope (%)	Capacity n = 0.013 (L/S)			Full Flow Velocity (m/s)
<b>Woodlands Crescent Collector</b>																						
Woodlands Crescent	3308	3307	2	4.8	160.8	4.18	2.65	0.00	0.00	0.00	0.22	0.03	0.61	3.26	90	200	CL 2400	0.4	20.75	0.66	15.71	Branch Collector from Oak St.
<b>Oak Street System</b>																						
Oak Avenue	3372	3308	28	67.2	67.2	4.29	1.13	0.00	0.00	0.00	2.02	0.24	0.24	1.38	329	200	PVC SDR 35	0.5	23.20	0.74	5.93	
<b>Woodlands Crescent Collector</b>																						
Woodlands Crescent	3313	3309	36	86.4	86.4	4.26	1.45	0.00	0.00	0.00	2.77	0.33	0.33	1.78	337	200	PVC SDR 35	0.4	20.75	0.66	8.58	
Woodland Crescent	3309	3308	1	2.4	88.8	4.26	1.49	0.00	0.00	0.00	0.10	0.01	0.34	1.83	84	200	PVC SDR 35	0.4	20.75	0.66	8.83	
<b>Murphy Road System</b>																						
Murphy Road	3411	3409	12	28.8	28.8	4.36	0.49	0.00	0.00	0.00	1.90	0.23	0.23	0.72	88	200	SCL 2400	0.4	20.75	0.66	3.48	
<b>Doran Road Collector</b>																						
Doran Road	3161	1046	2	4.8	4.8	4.44	0.08	0.60	0.60	0.21	0.15	0.02	0.02	0.31	86	200	SCL 2400	0.4	20.75	0.66	1.50	
Doran Road	3409	3406	36	86.4	115.2	4.23	1.92	0.00	0.00	0.00	2.93	0.35	0.58	2.50	264	200	SCL 2400	0.4	20.75	0.66	12.03	
Doran Road	3406	3405	0	0	115.2	4.23	1.92	0.00	0.00	0.00	0.00	0.00	0.58	2.50	124	200	SCL 2400	6.28	82.21	2.62	3.04	
Doran Road	3405	3404	0	0	115.2	4.23	1.92	0.00	0.00	0.00	0.00	0.00	0.58	2.50	14	200	SCL 2400	0.4	20.75	0.66	12.03	
Doran Road	3404	3401	23	55.2	170.4	4.17	2.80	0.00	0.00	0.00	2.08	0.25	0.83	3.63	269	200	SCL 2400	1.96	45.93	1.46	7.90	
Doran Road	3401	3400	3	7.2	177.6	4.17	2.91	0.00	0.00	0.00	0.20	0.02	0.85	3.77	76	200	SCL 2400	0.89	30.95	0.99	12.17	
Doran Road	3400	1046	13	31.2	208.8	4.14	3.40	0.00	0.00	0.00	0.98	0.12	0.97	4.37	111	200	SCL 2400	0.64	26.24	0.84	16.66	
<b>Hilda Street System</b>																						
Hilda Street	3153	3151	11	26.4	26.4	4.36	0.45	0.00	0.00	0.00	0.98	0.12	0.12	0.57	61	200	SCL 2400	0.4	20.75	0.66	2.75	
<b>Doran Road Collector</b>																						
Doran Road	3151	1047	2	4.8	31.2	4.35	0.53	0.93	0.93	0.32	0.15	0.02	0.14	0.99	82	200	SCL 2400	0.37	19.95	0.64	4.98	
<b>Mary Street Collector</b>																						
Mary Street	3227	3226	7	16.8	16.8	4.39	0.29	0.00	0.00	0.00	0.78	0.09	0.09	0.38	84	200	SCL 2400	0.4	20.75	0.66	1.85	to Edith Street Collector
Mary Street	3226	3223	22	52.8	69.6	4.28	1.17	0.00	0.00	0.00	1.77	0.21	0.31	1.48	86	200	SCL 2400	2.04	46.86	1.49	3.16	Start
Mary Street	3223	3221	19	45.6	115.2	4.23	1.92	0.00	0.00	0.00	1.57	0.19	0.49	2.41	85	200	SCL 2400	0.96	32.14	1.02	7.50	
Mary Street	3221	3200	10	24	139.2	4.20	2.30	0.00	0.00	0.00	0.75	0.09	0.58	2.89	82	200	SCL 2400	0.95	31.97	1.02	9.03	
Mary Street	3200	1045	10	24	436.8	4.00	6.88	0.00	2.56	0.89	0.75	0.09	2.09	9.86	131	200	SCL 2400	0.6	25.41	0.81	38.81	Branch Collector Laura Street
Mary Street	3260	1045	3	7.2	7.2	4.43	0.13	0.00	0.00	0.00	0.28	0.03	0.03	0.16	50	200	SCL 2400	0.4	20.75	0.66	0.77	Start
<b>Laura Street Collector</b>																						
Laura Street	3201	3200	0	0	273.6	4.10	4.41	0.00	2.56	0.89	1.28	0.15	1.42	6.72	78	200	SCL 2400	0.4	20.75	0.66	32.37	Murry Street Collector Branch Collector John Street
<b>John Street Collector</b>																						
John Street	3203	3201	12	28.8	259.2	4.10	4.19	0.00	2.56	0.89	0.77	0.09	1.18	6.25	68	200	SCL 2400	0.48	22.73	0.72	27.51	to Laura Street Collector
<b>Norman Street System</b>																						
Norman Street	3270	3204	12	28.8	28.8	4.36	0.49	0.00	0.00	0.00	0.47	0.06	0.06	0.55	105	200	SCL 2400	0.4	20.75	0.66	2.65	to John Street Collector
Norman Street	3204	3203	0	0	230.4	4.13	3.74	0.00	2.56	0.89	0.00	0.00	1.08	5.71	28	200	SCL 2400	0.4	20.75	0.66	27.54	Start Branch Collector John Street
<b>John Street Collector</b>																						
John Street	3252	3209	18	43.2	43.2	4.33	0.74	0.00	0.00	0.00	2.12	0.25	0.25	0.99	68	200	SCL 2400	1.08	34.09	1.09	2.90	to Laura Street Collector
John Street	3209	3206	17	40.8	136.8	4.20	2.26	0.00	0.00	0.00	1.69	0.20	0.75	3.01	93	200	SCL 2400	1.1	34.41	1.10	8.76	
John Street	3206	3204	17	40.8	201.6	4.15	3.29	0.00	2.56	0.89	1.56	0.19	1.03	5.21	83	200	SCL 2400	0.4	20.75	0.66	25.10	
John Street	3230	3201	6	14.4	14.4	4.40	0.25	0.00	0.00	0.00	0.72	0.09	0.09	0.34	80	200	SCL 2400	0.4	20.75	0.66	1.62	Start
<b>Herman Street System</b>																						
Herman Street	3241	3240	9	21.6	21.6	4.38	0.37	2.56	2.56	0.89	0.70	0.08	0.08	1.34	65	200	SCL 2400	0.4	20.75	0.66	6.48	to John Street Collector
Herman Street	3240	3206	1	2.4	24	4.37	0.41	0.00	2.56	0.89	0.06	0.01	0.09	1.39	88	200	SCL 2400	0.4	20.75	0.66	6.71	Start
<b>Roy Street System</b>																						
Roy Street	3212	3211	13	31.2	31.2	4.35	0.53	0.00	0.00	0.00	1.28	0.15	0.15	0.69	111	200	ACCL 2400	2.9	55.87	1.78	1.23	to John Street Collector
Roy Street	3211	3210	6	14.4	45.6	4.32	0.78	0.00	0.00	0.00	0.76	0.09	0.24	1.02	84	200	ACCL 2400	0.4	20.75	0.66	4.92	Start
Roy Street	3210	3209	3	7.2	52.8	4.31	0.90	0.00	0.00	0.00	0.40	0.05	0.29	1.19	82	200	ACCL 2400	0.4	20.75	0.66	5.73	



**APPENDIX E**

**TOWN OF PETAWAWA  
PETAWAWA EAST SANITARY SEWER  
CAPACITY ANALYSIS**