TOWNSHIP OF SOUTH FRONTENAC
COMMITTEE OF THE WHOLE MEETING
AGENDA

TIME: 7:00 PM,
DATE: Tuesday, December 13, 2016
PLACE: Council Chambers.

1.	*Call to Order*	
2.	*Presentation*	
(a)	Recognition of Service - Dan Bell	
3.	*Declaration of pecuniary interest and the general nature thereof*	
4.	*Scheduled Closed Session -n/a*	
5.	****Recess *** - n/a*	
6.	*Delegations*	
(a)	Adam Rayner, re: Gun Range on Buck Bay Rd	3 - 13
(b)	Beverly Green, re: Concerns with taxation and sanitation charge	
(c)	Curtis Tighe, Economic Development & Business Coordinator Municipal of Highlands East re: Fist Impressions Community Exchange Presentation	14 - 38
7.	*Reports Requiring Action*	
(a)	Wayne Orr, Chief Administrative Officer, re: Selection of Council members for Committee Appointments	39
(b)	Louise Fragnito, Treasurer, re: Asset Management Plan	40 - 102
8.	*Reports for Information*	
(a)	Lindsay Mills, Planner, re: Planning Department Statistics: 2016-2017	103
(b)	Lindsay Mills, Planner, re: Park Model Trailer: Process to Amend Zoning By-law to prohibit them	104 - 105
9.	*Rise & Report*	
(a)	County Council	
(b)	Arena Board	
(c)	Police Services Board	
10.	*Information Items*	
(a)	Sydenham & District Lions Club, re: Tree Lighting Ceremony on November 25	106

11. *Notice of Motions*
12. *Announcements*
13. *Question of Clarity (from the public on outcome of agenda items)*
14. *Closed Session (if requested)*
15. *Adjournment*

From: arayner@sutton.com [mailto:arayner@sutton.com]
Sent: November-29-16 1:22 PM
To: Wayne Orr <worr@southfrontenac.net>
Subject: RE: Committee of the whole December 13th

Hi Wayne,

Attached is my communication with the Chief Fire Arms Office as well as the letter I sent them as an attachment. I have also attached the lay of the land with my property and the neighbouring boundaries. I would like to appear before committee of whole on the 13th and look forward to answering any questions

Thanks,
Adam Rayner
Sales Representative
Sutton Group-Masters Realty Inc., Brokerage

Direct (613) 572-1985 or Office (613) 384-5500

* Sutton Master Platinum Award Winner 2014 & 2015 (Top 1% in Canada)

* Sutton Platinum Award Winner 2010, 2011, 2012 & 2013 (Top 5% in Canada)

* President of the Kingston and Area Real Estate Association (KAREA) 2016

* Director for the Kingston and Area Real Estate Association (KAREA) 2013, 2014, 2015

www.adamrayner.ca

-----Original Message-----
From: "Wayne Orr" <worr@southfrontenac.net>
Sent: Friday, November 25, 2016 4:05pm
To: "arayner@sutton.com" <arayner@sutton.com>
Subject: RE: Committee of the whole December 13th

Adam,

I am the right person to get in touch with about appearing before Council.

Before we schedule you as a delegation, it would be helpful to understand the nature of the problem as well as where this is happening.

Please feel free to either email some details or give me a call.

Thanks

Wayne Orr
Chief Administrative Officer
Township of South Frontenac
Box 100, Sydenham ON K0H 2T0
613-376-3027 Ext 2225
613-376-6657 (Fax)

-----Original Message-----
From: noreply@esolutionsgroup.ca [mailto:noreply@esolutionsgroup.ca] On Behalf Of arayner@sutton.com
Sent: November-25-16 2:52 PM
To: Wayne Orr <worr@southfrontenac.net>
Subject: Committee of the whole December 13th

Hi Wayne,

I was told I should contact you about talking at the next meeting on December 13th in regards to a gun range that is beside my home and about 40' from my property line. The RCMP and Chief Fire Arms Office is not taking me seriously and it was suggested by staff in the zoning/planning dept that I appear before

council can you confirm that I can do this and what time I need to arrive by

Thanks,
Adam Rayner
613-572-1985

Origin:
http://www.southfrontenac.net/en/contacts/search.aspx?s=FyPlUsu3T0gFmsK0M722E7QtweQuAleQuAl
---

This email was sent to you by Adam Rayner<arayner@sutton.com> through http://www.southfrontenac.net/.

Dec, 13th/16 Wayne OKR

delegation to present to Committee of the whole

RE: Flear's Gun Range Buck Bay Road Godfrey, Ontario
From: Niedermaier, Peter (OPP)
Sent: Wed, Nov 23, 2016 at 11:10 am
To: 'arayner@sutton.com'
Cc: Sid's Mail (devriessid@gmail.com), Carol Bayne

image001.png (35.7 KB) image002.png (35.7 KB) image003.png (35.7 KB) – **Download all**

Mr. Raynor,
The South Frontenac Shooting Club is now a CFO approved club/range. It is in compliance with the Firearms Act and Regulations and the safety requirements of the Canadian Firearms Centre – Range Design and Construction Guidelines. The Firearms Act does not provide a process by which a 3rd party can challenge a decision made under this Act. Questions respecting the Municipal approval granted to a range should be reviewed by contacting the Municipality where the range is located.
Regards
Peter

Peter Niedermaier
Sergeant
Supervisor of Shooting Clubs and Ranges
Chief Firearms Office
Office: 705 329 5538
Fax: 705 329 5623

From: arayner@sutton.com [mailto:arayner@sutton.com]
Sent: 23-Nov-16 9:37 AM
To: Niedermaier, Peter (OPP)
Cc: Sid's Mail (devriessid@gmail.com); Carol Bayne
Subject: RE: Flear's Gun Range Buck Bay Road Godfrey, Ontario

Hi,

Thanks for the email did someone come out and view the range? it is 20' from my property line and 40' to my farm animals with no rules for the club posted and limited warning you would be entering a shooting range. I would like to know the process of appealing this decision please and thanks.

Thanks,
Adam Rayner
Sales Representative
Sutton Group-Masters Realty Inc., Brokerage

Direct (613) 572-1985 or Office (613) 384-5500

* Sutton Master Platinum Award Winner 2014 & 2015 (Top 1% in Canada)

* Sutton Platinum Award Winner 2010, 2011, 2012 & 2013 (Top 5% in Canada)

* President of the Kingston and Area Real Estate Association (KAREA) 2016

* Director for the Kingston and Area Real Estate Association (KAREA) 2013, 2014, 2015

www.adamrayner.ca

-----Original Message-----
From: "Niedermaier, Peter (OPP)" <Peter.Niedermaier@opp.ca>
Sent: Monday, November 21, 2016 11:57am
To: "'arayner@sutton.com'" <arayner@sutton.com>
Cc: "Sid's Mail (devriessid@gmail.com)" <devriessid@gmail.com>, "Carol Bayne" <carol.bayne@cfp-pcaf.ca>
Subject: RE: Flear's Gun Range Buck Bay Road Godfrey, Ontario

Mr. Raynor,
Pursuant to Section 29 of the *Firearms Act and the Shooting Clubs and Ranges Regulations* the South Frontenac Shooting Club is now a CFO approved club/range. It is in compliance with the Firearms Act and Regulations and the safety requirements of the Canadian Firearms Centre – Range Design and Construction Guidelines.
Regards
Peter

Peter Niedermaier
Sergeant
Supervisor of Shooting Clubs and Ranges
Chief Firearms Office
Office: 705 329 5538
Fax: 705 329 5623

Thank you for your email enquiry regarding the South Frontenac Shooting Club which was sent to me at the Chief Firearms Office on 23August 2016.

The administration of inspection and approval of all shooting ranges in this Province is under the authority of Section 29 of the *Firearms Act.*

The standard to which shooting ranges are inspected in Ontario is the standard set out in the *Canadian Firearms Centre - Range Design and Construction Guidelines*, which were published in 1999. These guidelines provide the criteria for the safe design and operation of shooting ranges in Canada and are based on testing and input from a variety of international scientific sources and experts from the shooting community. The guidelines address indoor as well as outdoor ranges, and cover the full array of shooting disciplines and firearm specifications. Ontario's Chief Firearms Office adopted the *Canadian Firearms Centre - Range Design and Construction Guidelines* as of August 02, 2006. The objective of the Chief Firearms Officer of Ontario, in electing to employ the *Guidelines*, was to ensure public safety: by imposing rigorous standards respecting the design and use of shooting ranges, the Chief Firearms Officer is doing everything possible to ensure that no projectile would ever leave a shooting range and fall on property not owned by or under the control of the operator of that shooting range.

Public safety is the founding principle upon which the *Firearms Act* and the Canadian Firearms Program were enacted. Pursuant to Section 29 of the *Firearms Act and the Shooting Clubs and Ranges Regulations* the South Frontenac Shooting Club is in the process of becoming an approved range, the property is currently approved and operated as a private range.

A Range Inspector from the CFO will be sent to the site to ensure it is in compliance with the Firearms Act and Regulations and the safety requirements of the Canadian Firearms Centre – Range Design and Construction Guidelines.

Regards
Peter

Peter Niedermaier
Sergeant
Supervisor of Shooting Clubs and Ranges
Chief Firearms Office
Office: 705 329 5538
Fax: 705 330 4299

From: arayner@sutton.com [mailto:arayner@sutton.com]
Sent: 23-Aug-16 9:05 AM
To: Niedermaier, Peter (OPP)
Cc: arayner
Subject: Flear's Gun Range Buck Bay Road Godfrey, Ontario
Importance: High

Hi Sergeant Niedermaier,

I have attached my letter, a few diagrams of property boundaries and 4 pictures. Please note in the pictures that the longer grass between the two cut areas is the property line between my property and the range. The one picture shows a wooden post in the center that is the side marker between my property and the range. The other picture shows a chair that is approximately where they have been launching the skeet from which is directly behind my property about 4' from the line. In two of the pictures you can see the skeet shooting machine covered in a small black tarp actually. I appreciate you reviewing this before you make a decision on the future of this shooting range.

Thanks,
Adam Rayner
Sales Representative
Sutton Group-Masters Realty Inc., Brokerage

Direct (613) 572-1985 or Office (613) 384-5500

* Sutton Master Platinum Award Winner 2014 & 2015 (Top 1% in Canada)

* Sutton Platinum Award Winner 2010, 2011, 2012 & 2013 (Top 5% in Canada)

* President of the Kingston and Area Real Estate Association (KAREA) 2016

* Director for the Kingston and Area Real Estate Association (KAREA) 2013, 2014, 2015

www.adamrayner.ca

23/08/2016

RE: Flear's Gun Range Godfrey, Ontario

Sergeant Niedermaier,

Thank you for giving me the chance to express some concerns about this licensed range. I have been monitoring the range since moving into my home in October 2014 I would like to point out a few items that I feel are strong arguments for the range to no longer be allowed to continue its operation. According to the Chief Firearms office rules for a licensed range the range rules must be posted at all times in a highly visible site (they don't have any range rules posted). I have quoted the actual rules from your site:

5 The operator of an approved shooting range shall ensure that the discharge of firearms on the shooting range does not endanger the safety of persons at the shooting range or in the portion of the surrounding area described in paragraph 3(2)(a), by taking appropriate measures, including ensuring that

(a) The design and operation of the shooting range

(i) is such that projectiles discharged from firearms will not leave the shooting range if they are discharged there in accordance with the safety rules, and

(ii) promotes the safety of all persons on the shooting range, including by accommodating any adaptation that may be appropriate given the nature of the shooting activities that may take place and the type and calibre of firearms that may be used there; (Shooting skeet which they are not licensed for)

(b) the shooting range has an adequate warning system to warn persons that they are entering a shooting range and to inform them, when such is the case, that shooting activities are taking place at that time; (They only have one small sign as of 4 days ago)

(c) appropriate safety rules for the shooting range are applied that are consistent with the nature of the shooting activities that may take place and the type and calibre of firearms that may be used there; (No rules posted as of 23/08/16)

(d) the safety rules are posted in a conspicuous place on the shooting range; and

(e) if more than one person is simultaneously engaged in shooting activities on the shooting range, a person acts as the range officer.

I understood that the minimum distance between a range and a neighbouring property line was to be 200 meters? (This is what you had told me last year) The range is mere feet from my property line. I understood that this range isn't even licensed for Skeet shooting according to your office and they have been doing this a hand full of times. The skeet machine is visible from my property as of 23/08/16. I understand according to the rules that a range owner must immediately notify the Chief Firearms office of any changes to the immediate area that could affect its use? I moved in October 2014 and that immediately affected the use.

13. The operator of an approved shooting range shall report immediately to the chief firearms officer any change, other than one referred to in section 12,(a) to the shooting range or the portion of the surrounding area described in paragraph 3(2)(a) that could endanger the safety of any person.

The previous owner of my home was Mr. & Mrs. Flear's Sister in law and the family more or less shared access to the range. I know I am not able to be present but whoever comes for the inspection please make note as to how close my property line stake is to the range in the south/west corner, this is no longer a safe operation for this property and its immediate neighbours. I appreciate you taking the time to read my letter

Regards,

Adam Rayner

267 Buck Bay Road

Godfrey, Ontario

K0H-1T0

GeoWarehouse HOME Store ZOOM2IT MPAC-PROPERTY LINE NEW GeoWarehouse MY GEOWAREHOUSE LOGOUT

Welcome Adam
333 OF 1000 REPORTS VIEWED

BACK TO LAST SEARCH RESULTS

SEARCH BY: ADDRESS | ADDRESS RANGE | NAME | PIN | INSTRUMENT/PLAN | LOT&CONCESSION

FEEDBACK
HELP CENTRE

POSTAL CODE/MUNICIPALITY LRO/PROVINCE: FRONTENAC (13)
STREET #: 267
STREET NAME: BUCK BAY RD
SUITE #:
Search

Property Details | Neighbourhood Sales | Demographics | Plan List By PIN

MAP VIEW | STREET VIEW | Store Aerial Photo

N/A
N/A |
ACTIVE | PIN 362430013
Search By Block | Enhanced Report | GeoWarehouse Store

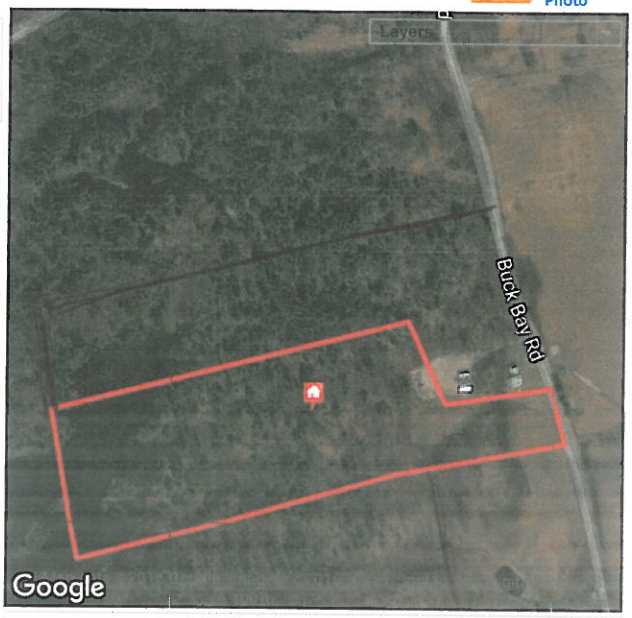
Land Registry Information - PIN: 362430013 Print Store Parcel Register

Address:	N/A				
Municipality:	N/A	LRO:	13	Area:	82,368 m2
Land Registry Status:	ACTIVE	Registration Type:	LT	Perimeter:	1,458 m
Description:	PT LT 10 CON 1 BEDFORD PT 1, 13R3998; SOUTH FRONTENAC				
Party To:	FLEAR, CATHERINE ANNE;				

Assessment Information

Assessment Roll Number	102901004005010				
2016 Tax Year, Phased In Assessment:	$5,500	Depth:	0.00 A	Frontage:	0.00 A
Assessed Value based on January 1, 2012:	$5,500	Property Type:	200 Farm property without any buildings/structures		

Store Assessment Reports



Ownership | Assessment | Municipality | Lot/Con
LRO | Search Result | Subject Property | Subject Property
Address | Plan | Subject ARN | Neighbourhood Sale

The Red outline is the gun range and black outline is my name/property

Privacy Terms Of Use Security

GeoWarehouse HOME Store ZOOM2IT CONSULT MPAC-PROPERTY LINE NEW GeoWarehouse GEOWAREHOUSE LOGOUT

Welcome Adam
332 OF 1000 REPORTS VIEWED

BACK TO LAST SEARCH RESULTS

SEARCH BY: ADDRESS | ADDRESS RANGE | NAME | PIN | INSTRUMENT/PLAN | LOT&CONCESSION

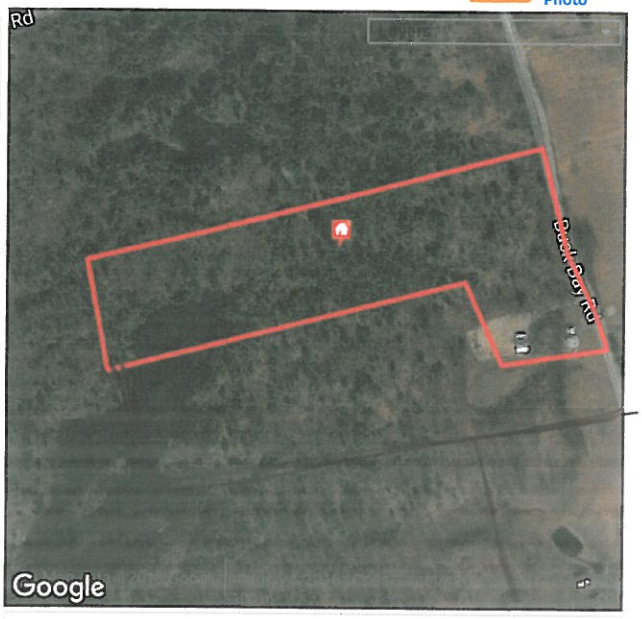
FEEDBACK
HELP CENTRE

POSTAL CODE/MUNICIPALITY	LRO/PROVINCE	STREET #	STREET NAME	SUITE #	
	FRONTENAC (13)	267	BUCK BAY RD		Search

Property Details | Neighbourhood Sales | Demographics | Plan List By PIN

MAP VIEW | STREET VIEW | Store Aerial Photo

267 BUCK BAY RD
N/A | N/A ACTIVE | PIN 362430012
Search By Block | Enhanced Report | GeoWarehouse Store



Ownership | Assessment | Municipality | Lot/Con
LRO | Search Result | Subject Property | Subject Property
Address | Plan | Subject ARN | Neighbourhood Sale

Land Registry Information - PIN: 362430012 Print Store Parcel Register

Address:	267 BUCK BAY RD				
Municipality:	N/A	LRO:	13	Area:	80,894 m2
Land Registry Status:	ACTIVE	Registration Type:	LT	Perimeter:	1,548 m
Description:	PT LT 10 CON 1 BEDFORD PT 2, 13R3998; SOUTH FRONTENAC				
Party To:	RAYNER, ADAM LOGAN;				

Assessment Information

Assessment Roll Number	102901004005020			Store	Assessment Reports
2016 Tax Year, Phased In Assessment:	$303,000	Depth:	0.00 A	Frontage:	0.00 A
Assessed Value based on January 1, 2012:	$303,000	Property Type:	301 Single-family detached (not on water)		

Red outline is my home/Property

GeoWarehouse HOME Store ZOOM2IT MPAC-PROPERTY LINE NEW GeoWarehouse LOGOUT

Welcome Adam
334 OF 1000 REPORTS VIEWED

BACK TO LAST SEARCH RESULTS

SEARCH BY: ADDRESS | ADDRESS RANGE | NAME | PIN | INSTRUMENT/PLAN | LOT&CONCESSION

FEEDBACK
HELP CENTRE

POSTAL CODE/MUNICIPALITY	LRO/PROVINCE	STREET #	STREET NAME	SUITE #	
	FRONTENAC (13)	221	BUCK BAY ROAD		Search

Property Details | Neighbourhood Sales | Demographics | Plan List By PIN

MAP VIEW STREET VIEW Store Aerial Photo

221 BUCK BAY ROAD
GODFREY | N/A ACTIVE | PIN 362430015
Search By Block | Enhanced Report | GeoWarehouse Store

Land Registry Information - PIN: 362430015 Print Store Parcel Register

Address:	221 BUCK BAY ROAD				
Municipality:	GODFREY	LRO:	13	Area:	60,586 m2
Land Registry Status:	ACTIVE	Registration Type:	LT	Perimeter:	1,009 m
Description:	PT LT 9 CON 1 BEDFORD PT 1, 13R2402; SOUTH FRONTENAC				
Party To:	ARMSTRONG, THOMAS HARVEY; WISEMAN, SUSAN MARIE;				

Assessment Information

Assessment Roll Number	102901004004800	Store	Assessment Reports
2016 Tax Year, Phased In Assessment:	$135,000	Depth: 0.00 A	Frontage: 0.00 A
Assessed Value based on January 1, 2012:	$135,000	Property Type:	211 Farm with residence - with or without secondary structures; with farm

Ownership | Assessment | Municipality | Lot/Con
LRO | Search Result | Subject Property | Subject Property
Address | Plan | Subject ARN | Neighbourhood Sale

The Red outline is the immediate neighbour to the South of the Range

South Frontenac Township

Harrowsmith, Verona, Sydenham

December 13, 2016

Full Picture First Impressions Community Exchange Report Back from
The Municipality of Highlands East

Before the Visit

- One member familiar with Township, but not Sydenham
- Harrowsmith Magazine had a big impact on expectations – Idyllic country setting, barns, apple trees, rolling hills, cows in pastures
- Websites used: South Frontenac Township site, Wikipedia, Sydenham, County of Frontenac, Google maps streetview, twitter, ruralroutes.com, YourVerona.com and SydenhamVillage.com
- South Frontenac's website was very helpful and easy to use

First Impressions

Harrowsmith – very strange intersection, no parking signs on main street, very large church, no signage from eastern entrance, homes were nice and well kept, very clean hamlet

Sydenham – Nice schools, nice new subdivision, town water, decent signage, difficult to determine business section, larger than expected, nice homes, clean area

Verona – One main road, not much parking, lots of stores, very large Ford dealership, larger town than expected, very clean

Entering the Community

Entering the community

Harrowsmith – Nice signage from south, north and west entrances, no sign on east entrance

Sydenham – Not consistent signage, no sign on south entrance

Verona – Decent signs from north and south, posters on north entrance

Overall – Decent directional signage and nice signage for each town

- Suggestions: Make signs consistent across township, update faded signage, don't allow posters etc. on entrance signs

Housing and Residential Areas

- Well kept homes, neat and tidy
- Many were located very close to the roads
- Some houses for sale, but not large numbers
- Nice retirement complex in Sydenham
- Felt housing was adequate from a first impression standpoint
- Nice sidewalks, trails, parks, and bike paths in residential areas

Local Government Services

- Township office easily located in Sydenham
- Staff very polite, and greeted us immediately
- Staff education should be a priority
- Limited or no brochures on the area, business directories, or community profiles

Education

- Very large schools in Sydenham, nice school in Harrowsmith
- Easily found, very attractive

Health, Social and Emergency Services

- Health clinic and chiropractor both available
- Police were in Sydenham on day of visit
- Several fire stations across Township
- Ambulance handled by County

Downtown Appearance

Harrowsmith – parking needs to be addressed, unusual intersection, vacant stores, no parking signs on main street

Verona – parking needs to be addressed, narrow street, lots of stores, good mix, great information kiosk

Sydenham – great parking, downtown not clear, nice mix

Downtown / Retail

Retail and Services

- Overall decent mix of businesses, friendly business operators, neat tidy

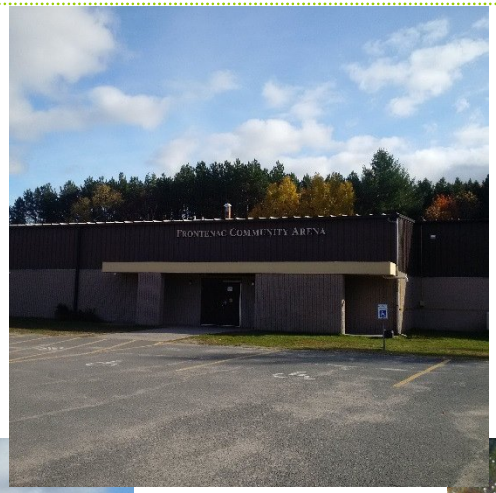
Industry

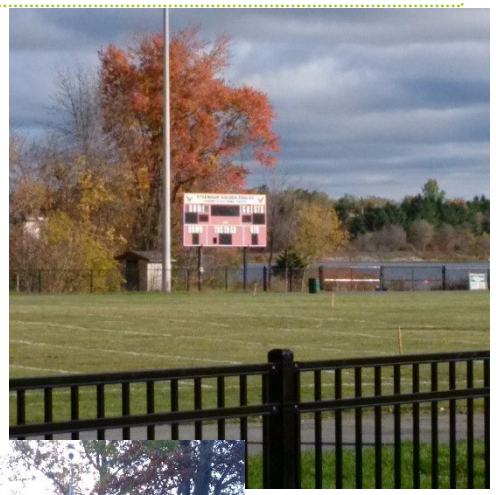
- Vacant industrial land noticed in Harrowsmith, no major industry noted

Tourism

- Major trails noticed
- Not many pamphlets or promotional materials
- Strength seems to be the history of the area
- No information centre noticed

Entertainment and Recreation





Culture and Heritage

- Historical pictures in Tousdale's general store and the Point restaurant
- Very large churches, beautiful old buildings

Environmental Sustainability

- Impressed with solar powered light on Verona sign
- Waste and recycling containers available throughout township
- Environmental sustainability mentioned in Strategic Plan

Information from Residents

- Residents very helpful, show pride in their community
- Overall very positive impression of their community
- No major concerns or negative comments

Using your Senses

- Food at the Point restaurant was excellent
- Gilmour on 38 had great butter tarts
- Smell of fresh clean air
- Everything was kept neat and tidy
- No unordinary sounds, overall quiet

Five positive features about South Frontenac

1) Neat and tidy
2) Beautiful buildings
3) Great looking schools
4) Great parks and green space
5) Great history and pride

Three potential opportunities for South Frontenac

1) Harrowsmith had a lot of potential; remove no parking signs, address odd intersection, promote new business to fill vacant storefronts
2) Increase tourism promotion through promotion of history and heritage
3) Educate staff and public to promote other towns within Township/County

Five biggest challenges facing South Frontenac

1) Proximity and dependence on Kingston
2) Lack of accommodators
3) Lack of industry
4) Unity of Township to support other towns
5) Attracting youth/young families

Thoughts

What's going to stick with us:

- The tidiness, cleanliness, pride, and beautiful buildings

What we're going to steal:

- The idea of having historic photos in businesses

What will bring us back:

- Gilmour on 38 and Tousdale's General Store

Quick Wins

- Remove no parking signs in Harrowsmith
- Improve parking opportunities in Verona
- Communicate among towns and promote each other's assets to keep people within the Township

Thank you!

Questions?

STAFF REPORT
CLERKS DEPARTMENT

PREPARED: **December 8, 2016**

AGENDA DATE: **December 13, 2016**

SUBJECT:

Selection of Council members for Committee Appointments

RECOMMENDATION:

Council is asked to confirm who is interested in what appointments so that the bylaw can come forward on December 20, 2016.

BACKGROUND:

Further to the information report to Council on December 6, where Council members were encouraged to discuss amongst themselves who wished to serve on what committees, Council is now asked to provide direction to staff so that the bylaw may be presented for the meeting of December 20, 2016.

Council policy sets out the Committee of Adjustment/Land Division Committee as being comprised of 8 members – one Councillor from each District, and one non-councillor from each District. The Planning Act requires that any non-council members of the Committee serve for the term of Council, but that Council members of the Committee be appointed annually.

Current Councillors on the Committee of Adjustment:

- Al Revill
- Mark Schjerning
- John McDougall
- Ron Sleeth

When Council appointed members to the Corporate Services and Public Services Committee there was discussion on revisiting the appointments half way through the term of Council.

Current members of Corporate Services Committee:

- Al Revill - Chair
- John McDougall
- Ross Sutherland

Current members of Public Services Committee:

- Ron Sleeth - Chair
- Mark Schjerning
- Al Revill

As presented as part of the organizational review, once the new Manager of Development Services is hired Council will have the opportunity to establish a Development Services Committee.

Submitted/approved by:
Wayne Orr, CAO

STAFF REPORT
TREASURY DEPARTMENT

Prepared for Council: **December 8th, 2016**

Agenda Date: **December 13th, 2016**

SUBJECT:

Asset Management Plan Update

RECOMMENDATION:

This report is for information and will be brought forward for adoption at the December 20th Council meeting.

BACKGROUND:

In 2013, an Asset Management Plan (AMP) was first developed. RV Anderson was contracted with the assistance of staff to develop the assessment structure as well as the final document issued December 2013. This document was presented and adopted by Council at that time.

The document was introduced to meet the provincial requirements under the *Building Together – Guide for municipal asset management plans*. The document is a requirement in order to apply for various funding including Federal Gas Tax and OCIF (both base and top-up).

Also in April 2013, Council supported the purchase of an asset management software, Cartegraph. This software met the needs of both Treasury and Public Works and allowed the Township to move away from multiple standalone systems or spreadsheets.

ANALYSIS:

Although the main driver of putting together the original AMP was meeting the requirements of the *Building Together Guide*, asset management is an integral tool used by the Township in its capital planning.

This AMP used the foundation built by RV Anderson in the first AMP and was updated by staff.

Comparison

In comparing the first AMP to the 2016 version, several changes and improvements have been made. This includes:

- an initial listing of facilities
- an updated inventory of storm sewers and manholes. The previous version only included the village of Sydenham. Further costs used in this version are based on Township historical data rather than industry estimates.
- Updated inspection data which provides essential condition data
- Updated decision matrix within Cartegraph to produce capital planning forecasts

In comparing the statistics from the first plan to this version, some improvements can be seen. They include:

- An increase of 16% of assets with a condition score of excellent
- A 6% increase in the assets in the low to medium risk distribution. This means there are less assets in the critical range of medium-high to high.
- Reduced financing needs in both the 10 year and 100 year forecasts

STAFF REPORT
TREASURY DEPARTMENT

Challenges/Differences

The creation of the asset management plan is currently not fully integrated to Cartegraph, our asset management software. The current creation of the AMP is driven from the based data in Cartegraph but does not account for the full processes used within the software. The base data is currently pulled into a spreadsheet that is then driven by a risk matrix.

The current AMP takes a like for like replacement approach and does not factor in upgrades or improvements made when an assets such as a road or bridge is assessed. It also doesn't fully consider the impact and planning for pavement preservation strategies except for the condition rating given to an asset.
In the regular capital planning, risk is factored however priorities are subcategorized and dollars are allocated within the sub-categories before projects are chosen. An example of this is that in the AMP, arterial roads have the highest consequence of failure and from strictly a risk based perspective would take priority over local and collector roads. However, in the current capital planning, dollars are sub-categorized between arterial roads, villages, local roads, local upgrades and pavement preservation which ensures that funds are allocated throughout the various priorities within the Township rather than just a risk based priority.

Having said that, the schedules under Appendix B, are strictly risk based and although there are some similarities, the listing does not reflect the measures and processes used currently.

Further, our capital planning process also incorporate smoothing out the year over year requirements to avoid large fluctuations and provides a more realistic approach to planning.

Another difference is the structure of the financing strategy. The AMP looks at a 10 year and 100 year perspective. Excluding the water component, the document considers assets that are primarily funded from tax revenue and does not include other assets where reserves are used to fund capital projects. Examples of this are rolling stock such as Public Works and Fire Vehicles, facilities which are usually primarily funded from reserves.

Comparing the financing strategy within the AMP compared to the long-term financial plan presented earlier this year, the long-term financial plan takes into account both reserve based and taxation based assets into its forecast. This is a limitation within the current AMP as it only provides a partial financial picture.

Next Steps

It is the intent that the next version of our AMP better matches the processes currently being used by fully incorporating the data and processes within Cartegraph as well as using the long-range financial plan as the driver to present financing strategy.

We anticipate providing an updated AMP every 2-3 years and in the next few years, we will be working with the software consultant to fully obtain schedules from the software that incorporates our processes and funding models.

We are also expecting that the facilities data will be fully incorporated and updated and other areas such as vehicles, streetlights will also be included.

Submitted/approved by:
Louise Fragnito, Treasurer

Prepared by:
Louise Fragnito, Treasurer
Mark Segsworth, PW Manager
David Holliday, PW Supervisor

TOWNSHIP OF SOUTH FRONTENAC

ASSET MANAGEMENT PLAN

December 2016

TOWNSHIP OF SOUTH FRONTENAC
ASSET MANAGEMENT PLAN

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

EXECUTIVE SUMMARY

Municipalities throughout Ontario own a diverse portfolio of infrastructure assets that in turn provide a varied number of services to their citizens. The infrastructure, in essence, is a conduit for the various public services the township provides, e.g., the roads supply a transportation network service; the water infrastructure supplies a clean drinking water service. A community's prosperity, economic development, competitiveness, image, and overall quality of life are inherently and explicitly tied to the performance of its infrastructure.

Since 2013, the Province requires that any municipality seeking provincial capital funding for infrastructure projects prepare an Asset Management Plan (AMP) to demonstrate the need of each project within its social, economic or environmental priorities.

This report represents the Township's updated strategic AMP based on current infrastructure information. The asset inventory currently includes roads, bridges and culverts(over 3m)* , facilities, water treatment and storage facilities, water mains, and storm sewers. The Township currently owns and operates approximately $350 million of infrastructure, and other assets will be added to the plan as more data is gathered. For example, the inventory and figure does not include rolling stock.

Like most municipalities across Ontario, a portion of assets are in poor or critical condition. These assets should be addressed on a priority basis. Over the next 100 years, the Township should spend an average of $8.3 million per year for asset rehabilitation and replacement.

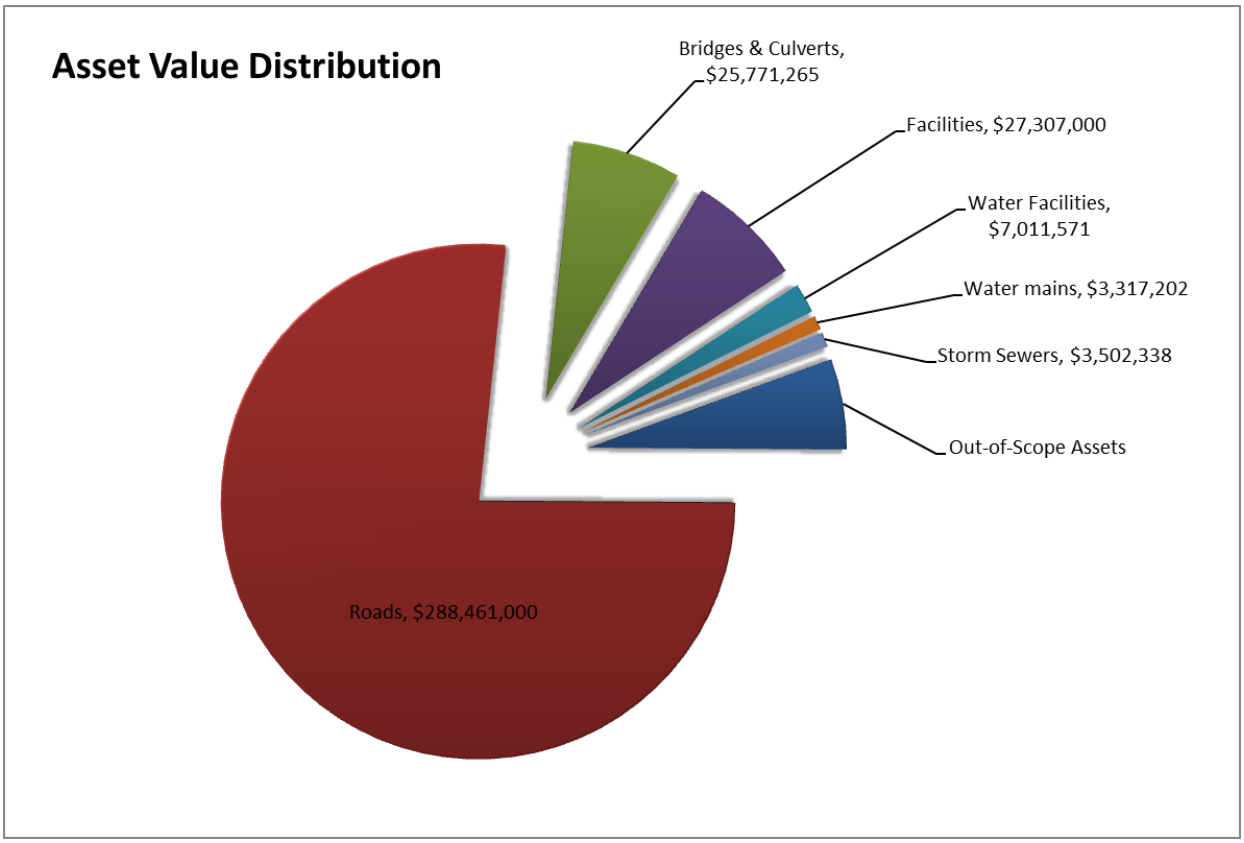
For water assets, there will be sufficient funds to cover capital expenditures through Water User Fees in the short term (10 years) and a shortfall of $290,000 over 100 years. Future financial plans will continue to monitor and ensure the sustainability of the water assets.

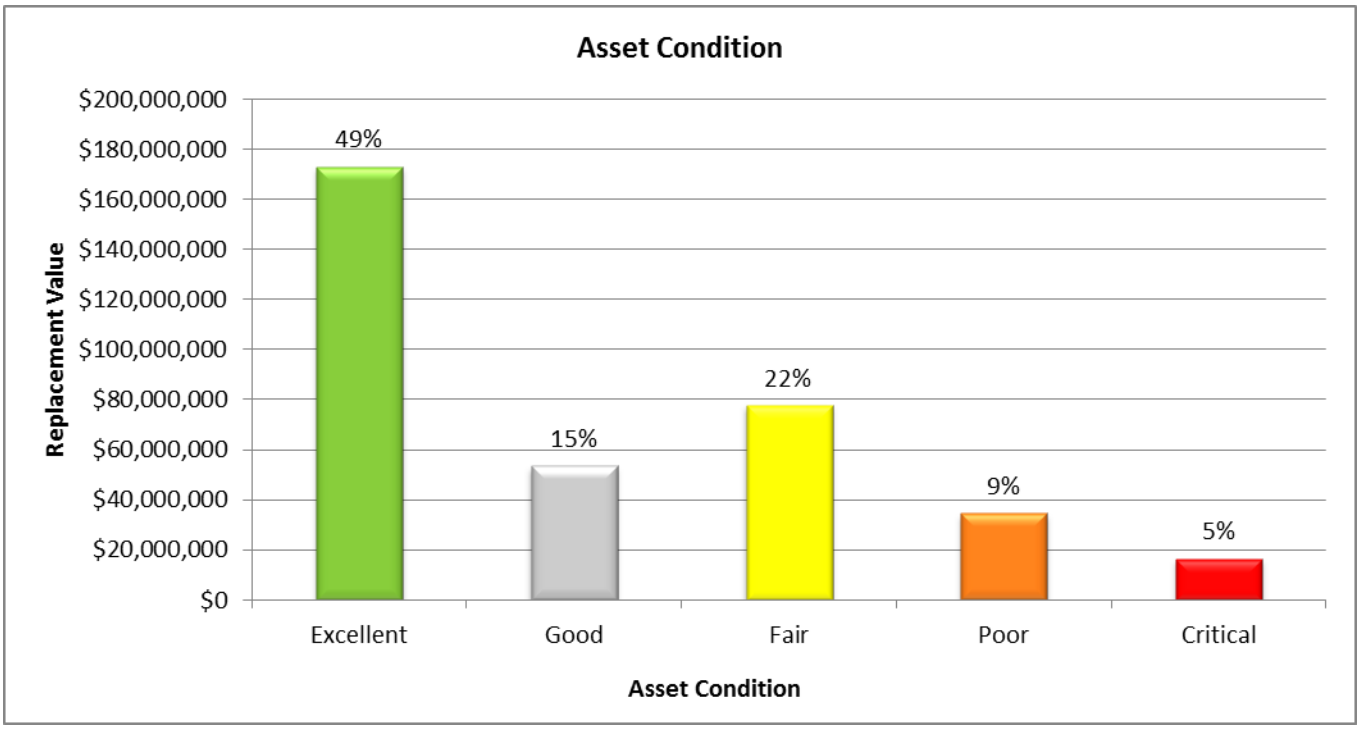
Based on a 10 year forecast and looking at assets on a like for like replacement, the current Municipal Tax Levy is insufficient to finance forecasted expenditures in the short term for tax supported assets. However, strategies such as joint tendering and preventative maintenance are not yet reflected in this plan but are factored when using Cartegraph and developing Capital plans for budgeting. By taking a longer term view, over the next 100 years, the Tax Supported Capital Levy coupled with the use of Reserves is sufficient to finance AMP expenditures.

The Township has taken a proactive approach in addressing infrastructure needs by setting aside reserve funds to minimize deficits and by investing in Cartegraph to better understand asset condition, risk and replacement needs. This strategy positions the Township on a path to sound asset management.

*future references to bridges and culverts also only refer to culverts 3m or greater

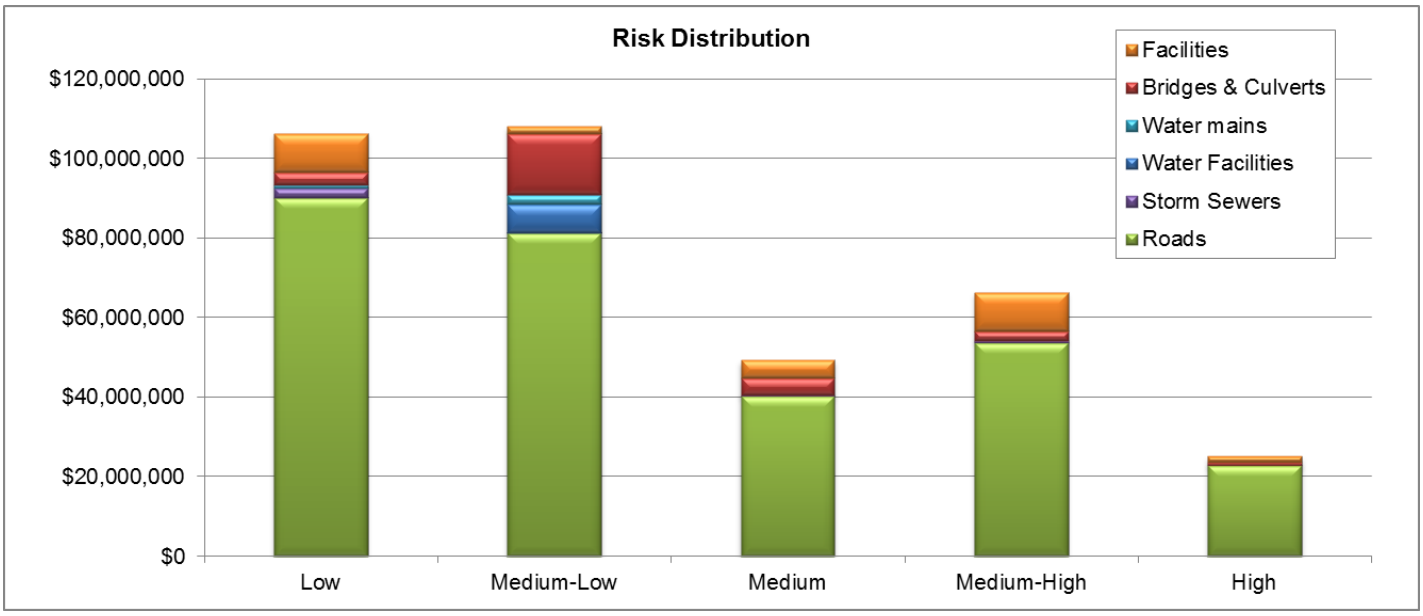
Asset Condition





Asset Risk

			Risk Distribution				
	Replacement Cost	Distribution	Low	Medium-Low	Medium	Medium-High	High
Roads	$288,461,000	81.2%	$90,163,000	$81,230,500	$40,225,000	$53,832,500	$23,010,000
Bridges & Culverts	$25,771,265	7.3%	$3,099,513	$15,207,265	$4,364,063	$2,396,225	$704,200
Facilities	$27,307,000	7.7%	$9,663,000	$1,892,000	$4,535,000	$9,717,000	$1,500,000
Water Facilities	$7,011,571	2.0%	$0	$7,011,571	$0	$0	$0
Water mains	$3,317,202	0.9%	$807,881	$2,509,321	$0	$0	$0
Storm Sewers	$3,502,338	1.0%	$2,557,666	$212,809	$259,353	$472,510	$0
Total	**$355,370,376**	**100%**	**$106,291,059**	**$108,063,466**	**$49,383,416**	**$66,418,235**	**$25,214,200**
% of Total			**29.9%**	**30.4%**	**13.9%**	**18.7%**	**7.1%**



1.0 INTRODUCTION

This report represents the Township of South Frontenac's updated Asset Management Plan (AMP), based on current data and information on the Township's transportation, facilities and water infrastructure. The Township intends to continually improve this AMP over the coming years as additional information is collected and as its knowledge of asset condition increases. It is anticipated that at a minimum, the AMP will come for Council approval every 3 years.

The Township of South Frontenac is located in Eastern Ontario in Frontenac County, bounded by the City of Kingston and the Townships of Stone Mills, Tay Valley, Central Frontenac and Rideau Lakes (Figure 1). The Township has a population of 18,100[1] and covers an area of 972 km^2. Sydenham is the only area in which water servicing is available. Refer to Appendix A for a detailed map of the Township.

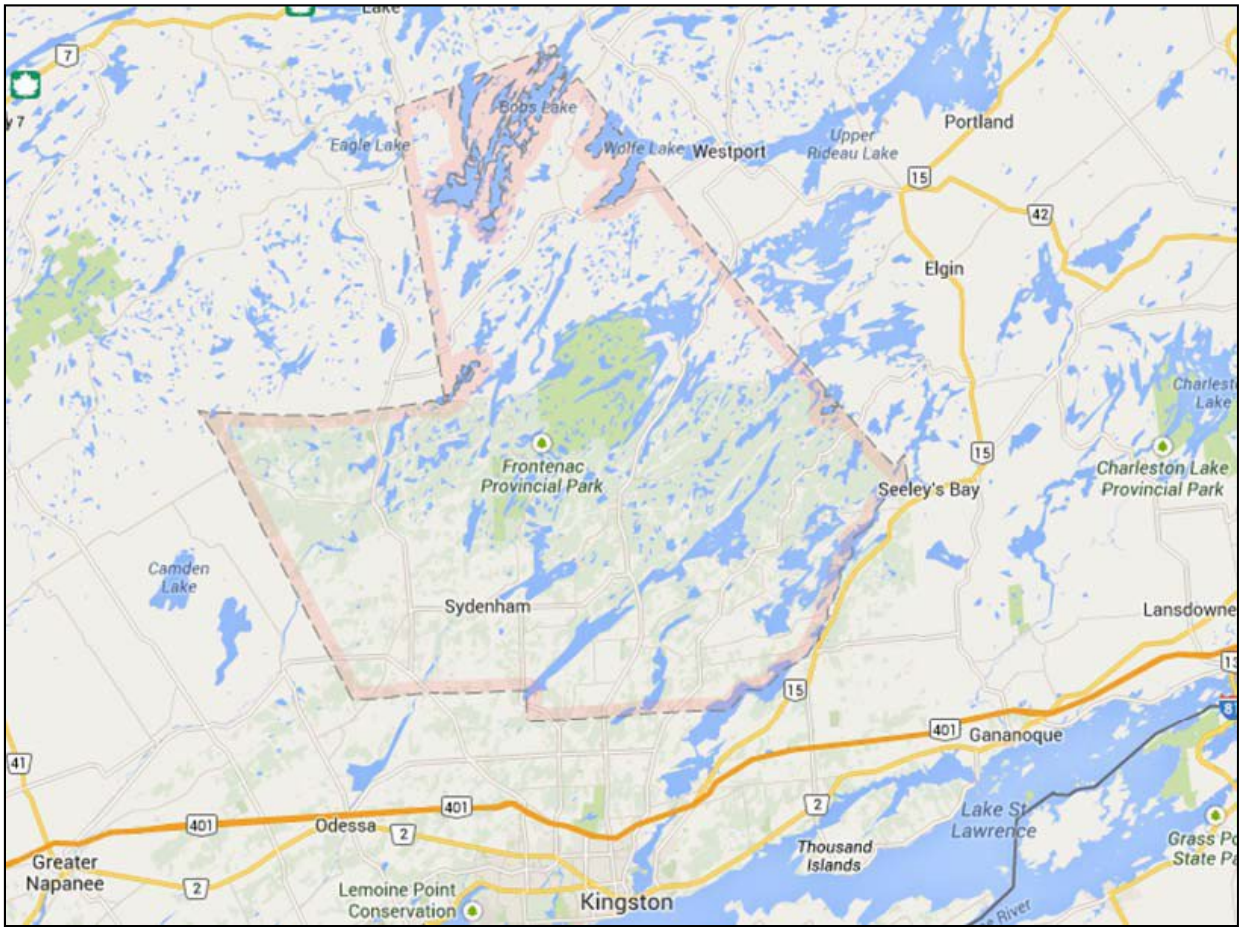


Figure 1 – Township of South Frontenac

[1] Statistics Canada. (2012). *Focus on Geography Series, 2011 Census*.

1.1 Provincial Guideline

In 2010, Ontario's Ministry of Infrastructure released a guide titled *Building Together: Guide for Municipal Asset Management Plans*. This guide forms part of a comprehensive strategy called the Municipal Infrastructure Investment Initiative (MIII) intended to develop a cooperative relationship between municipalities and the Province of Ontario to address our deteriorating infrastructure. The Province seeks to achieve standardization and consistency in the management of municipal infrastructure by requiring any municipality applying for provincial capital funding to prepare an AMP that demonstrates the particular need of the project within the social, economic or environmental priorities of the community.

Since the introduction of the *Building Together: Guide for Municipal Asset Management Plans*, many funding agencies are requiring an asset management plan which shows the Townships priorities in order to apply for funding or to use existing funding. Projects must be listed within the asset management plan and must support or reflect that the selected projects are priorities. This includes for example the Federal Gas Tax Program and Ontario Communities Infrastructure Fund, both for its base funding and application based top-up funding.

1.2 Vision for Infrastructure in the Township of South Frontenac

As part of the Township's Official Plan[2], a Vision Statement was developed to guide the growth of the Township:

> "South Frontenac is an amalgamation of communities whose common goals have brought them together for mutual co-operation. The Official Plan provides a framework for directing South Frontenac's growth in a manner which will preserve the Township's environmental integrity while enhancing both its rural character and its long-term economic viability."

Although the Plan was primarily developed to guide new development in the Township, the same principles are also relevant to the management of South Frontenac's infrastructure. The following points highlight some of the key goals and objectives presented in the Official Plan relating to asset management:

- Require adequate and efficient systems of water supply, sanitary sewage disposal, storm drainage and waste disposal to all areas of development in the Township and to co-ordinate development with the Township's ability to provide adequate physical and community services; and

- Provide an efficient and cost-effective transportation network that optimizes the movement of people and goods throughout the Township.

The Township's Strategic Plan[3] provides a clear directive to provide high quality services to residents through a series of priorities. One of the guiding principles is to take a long-term perspective to pro-actively plan for future infrastructure. The following priorities provide a vision for the management of the Township's infrastructure and have helped to guide the development of this Plan:

1. Be a catalyst to support and help build vibrant communities.
    - As a first priority, begin by supporting efforts to build vibrant hamlets that are friendly to residents of all ages, sustained by community and economic development, beautification plans, municipal services and facilities, social safety nets, housing options, and appropriate social, recreation and cultural opportunities.
2. Continually improve how the Township conducts its business.
    - Develop an infrastructure master plan to identify and guide where the Township should be going over the long term in terms of water, waste, sewage, gas, Hwy 38, service levels, budget requirements, meeting increasing needs and so on.
    - Continue to enhance practices that help ensure financial responsibility, effective capital asset management, prudent planning, decision-making, transparency and accountability.

1.3 Goals of Asset Management

Asset Management strives to continually improve the Township's infrastructure. The following are a list of goals that asset management programs and processes aim to achieve:

- Optimize life cycle costs (i.e. total operating, maintenance and capital resources) of providing services to residents;
- Reduce risk exposure by ensuring that assets are managed by recognizing the risk that their failure represents to the delivery of services;
- Informed and transparent decision making processes integrating capital expenditures, operating costs and revenue requirements (i.e. rate and tax levels); and
- Mechanisms to ensure that the infrastructure services are delivered at a sustainable and affordable level to residents.

[2] Township of South Frontenac. (2003). *Official Plan, Updated 2013*

[3] Township of South Frontenac. (2015). *Strategic Plan.*

1.4 Scope of Asset Management Plan

This AMP developed for South Frontenac covers a period of 100 years and reports on the following assets owned by the Township:

- Roads;
- Bridges and culverts;
- Facilities;
- Water treatment and storage facilities;
- Water mains and water distribution system appurtenances; and
- Storm sewers.

The Township is responsible for other assets including fleet, sidewalks, street lighting, land, sports fields among others, which will be added to the AMP as data gathered for these assets becomes more complete. The Township does not own any wastewater infrastructure or social housing assets.

1.5 Development of the Asset Management Plan

This AMP was updated by Township staff. The following documents were reviewed and incorporated throughout the development of this AMP:

- Township of South Frontenac Official Plan (2003)
- Township of South Frontenac Strategic Plan
- Municipal Budgets and other Financial Documents
- South Frontenac Township By-Law 2013-30
- O/Reg 239/02 for the Minimum Maintenance Standards for Municipal Highways

The Township's investment in Cartegraph, an asset management system has helped to guide the decisions for roads, bridges and culverts. Information on these assets, including condition, age and value, was sourced from this database. However, currently not all the components provided by Cartegraph are incorporated in this version of the asset management plan. This includes asset preservation and the sub-categorizing of road infrastructure. The current version provides for a like for like replacement and does not incorporate upgrades, improvements or growth.

Water asset information was based on historical records from the Township.

Facilities asset information is primarily based on historical records with replacement values being used from the consultant as initial presentation. On-going discussions with the consultant are taking place to finalize the data received and update the asset management plan.

Storm sewers data is based on useful life along with visual inspections as available.

1.6 Refinement of the AMP

The AMP is continually a work in progress as the Township continues to improve its data and processes in achieving the Township's goals.

Initial data has been included for facilities. However, the full data received from the consultant is still under review and as it is finalized, the data will be updated.

The Township will further improve the data within the asset management plan by better streamlining the output of the Cartegraph data into the AMP document. The intent is to fully integrate the AMP within Cartegraph so that it fully provides the data and statistics within the AMP.

It is also the intent to incorporate other assets such as vehicles, equipment, sidewalks, and streetlights for example.

The Township will develop an Implementation Strategy that will improve subsequent iterations of the AMP.

2.0 STATE OF INFRASTRUCTURE

This section summarizes the state of the Township's infrastructure, including:

- Inventory of all assets;
- Value of the assets; and
- Risk assessment, based on probability of failure and consequence of failure.

2.1 Asset Inventory

The asset inventory for South Frontenac includes transportation assets (roads, bridges and culverts), facilities, water assets (water treatment plant, storage, facility, and water mains), and storm sewers. Table 1 provides a summary of the assets included in the scope of this study. Other assets including fleet, sidewalks, street lighting, land and other equipment will be added to the asset management inventory over the coming years as additional information is collected and as knowledge of the condition of assets increases.

Table 1 – Inventory of Assets

Asset Class	Inventory
Roads	804 km
Bridges & Culverts	60
Water Mains	6.4 km
Storm Sewers	7.9 km
Facilities	40

2.2 Asset Value

Asset value was based on both historical costs and typical unit costs provided by the Township, detailed in Appendix B. Asset valuation is summarized in Table 2.

Table 2 – Value of Assets by Asset Class

Asset Class	Replacement Cost	Distribution
Roads	$288,461,000	81%
Bridges & Culverts	$25,771,265	7%
Facilities	$27,307,000	8%
Water Facilities	$7,011,571	2%
Water mains	$3,317,202	1%
Storm Sewers	$3,502,338	1%
Total	**$355,370,376**	**100%**

The Township currently owns and operates $355 million of transportation, facilities and water assets. Roads represent 81% of the total value of the Township's in-scope assets, followed by

facilities (8%) and bridges & culverts (7%). A graphical depiction of asset distribution is shown in Figure 2. Out of scope assets are estimated 6% or $21 million which includes for example, rolling stock.

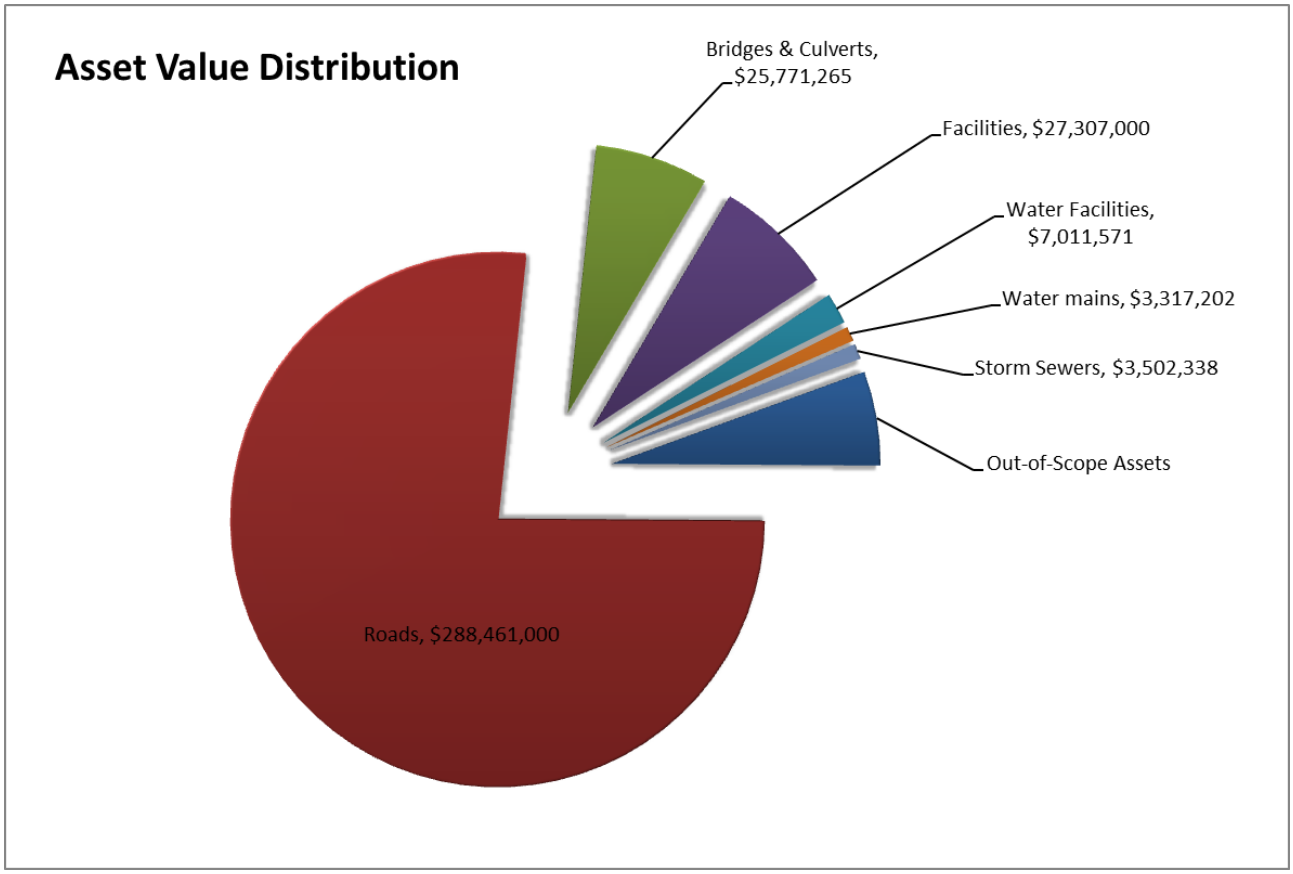


Figure 2 – Asset Replacement Value Distribution

Note that the Township is responsible for other assets that were not included in the AMP but will be incorporated in future updates to the plan as more information is gathered. Total replacement value of these assets is unknown at this time.

2.3 Asset Condition

Understanding the condition of the Township's assets is an essential component in an AMP. Ideally, condition information is based on assessment activities that provide first-hand knowledge of the infrastructure. Condition information was available for transportation assets, and storm sewers in South Frontenac. Water assets are relatively new, and more information will be collected over time as inspections are conducted. Both water assets and facilities use historical information to estimate a condition rating.

2.3.1 Transportation and Stormwater Assets

Actual condition information was available for roads, bridges and culverts, and storm sewers in South Frontenac. The Township tracks transportation assets using Cartegraph, including asset condition, historical and current value, and location. Asset condition for roads was based on the Overall Condition Index (OCI) evaluated during the road inspections conducted in 2015. Asset condition for bridges and culverts was based on the Bridge Condition Index (BCI) from the most recent Ontario Structure Inspection Manual (OSIM) reports from inspections conducted in 2015. Asset condition for storm sewers was based on structural grade evaluated during sewer inspections conducted in 2013 and 2015. Appendix B details how the condition assessment information for these asset types was converted to a condition score.

2.3.2 Water Assets

Condition information was not available for the water treatment plant, the water storage facility or water mains. Therefore, asset condition was estimated by evaluating the amount of useful life remaining. The water treatment plant, storage tower and water mains were all constructed in 2005 with plant upgrades completed in 2010. The amount of useful life remaining was based on present age and typical useful life, summarized in Table 3. All of these assets were found to have over 75% of useful life remaining; therefore, it was assumed that they are all in excellent condition.

Table 3 - Estimated Condition Based on Useful Life Remaining

Asset Description	Year Constructed	Typical Useful Life (Years)	Percent of Useful Life Remaining	Estimated Condition
Raw Water Intake	2005	100	89%	Excellent
Elevated Water Storage Tower	2005	100	89%	Excellent
Treatment Plant	2005	50	78%	Excellent
Plant Upgrades (UV & GAC contactors)	2010	25	76%	Excellent
Water Mains	2005	100	89%	Excellent

This approach provides sufficient condition information for analysis, and can be updated as knowledge of these assets increases.

2.3.3 Asset Condition Summary

Table 4 summarizes the condition of the Township's infrastructure. Approximately $16 million worth of assets are nearing the end of their useful life and are considered in critical condition.

Table 4 – Value of Assets by Condition Score

Condition Score	Replacement Cost	% of Total Assets
Excellent	$172,990,143	49%
Good	$53,421,106	15%
Fair	$77,744,634	22%
Poor	$34,657,331	10%
Critical	$16,557,162	5%
Total	**$307,385,082**	**100%**

Approximately 15% of assets are in poor or critical condition. Figure 3 shows the value distribution of assets by condition graphically. Assets in critical and poor condition include a portion of the roads, bridges and culverts, and storm sewers.

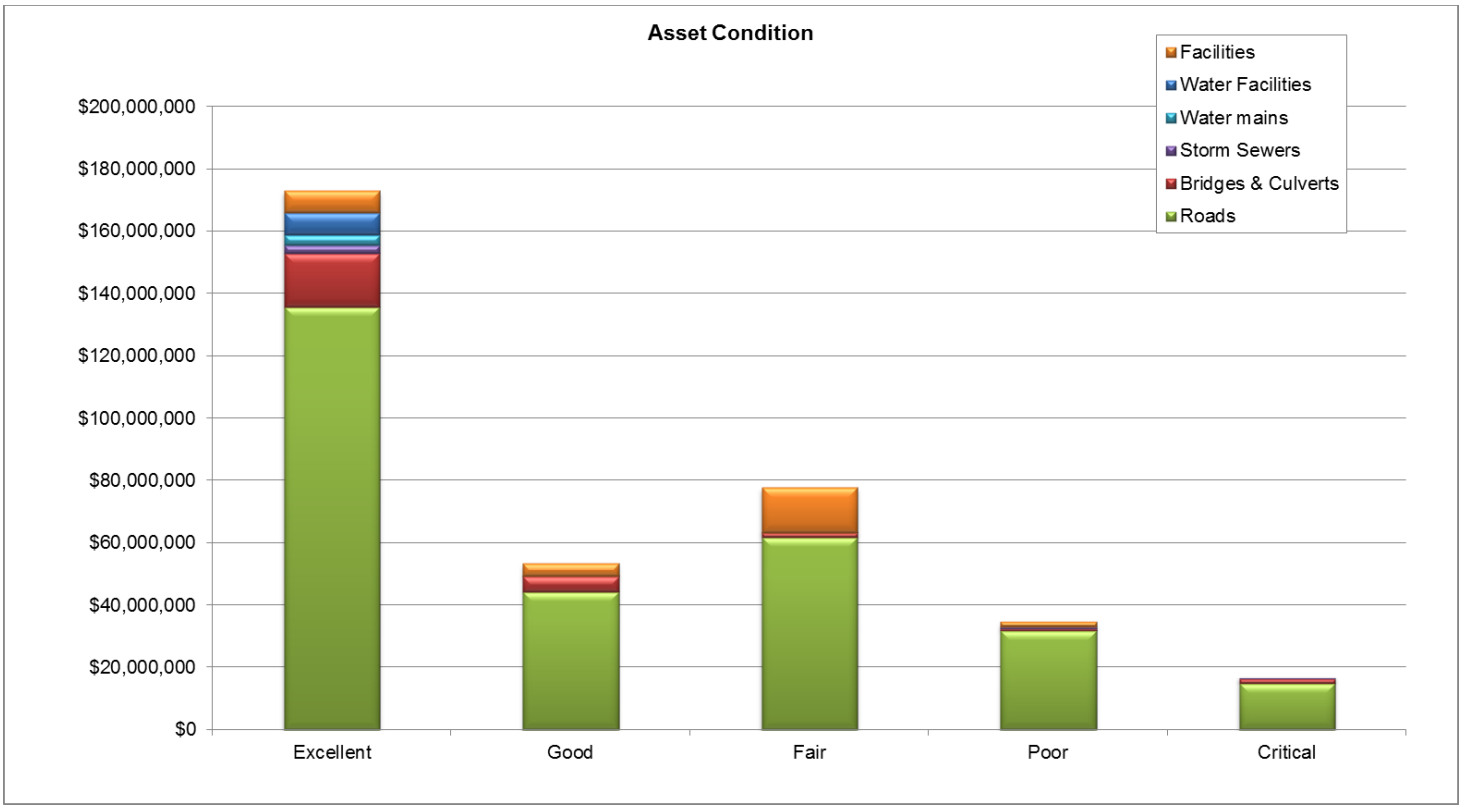


Figure 3 – Distribution of Asset Condition

2.4 Asset Risk

The state of infrastructure is not only defined by its physical condition but also by its function and the consequence of failure. To achieve a better understanding of the Township's needs, a risk score was calculated for each asset. For example, an asset with a low consequence of failure can be managed such that it remains in the listing of priorities but is ranked accordingly However, assets that have a high consequence of failure should be managed in a proactive manner. For the purposes of this AMP report, risk was defined as the product of the probability of failure and the consequence of failure, with additional consideration for Health and Safety risk.

The Township currently tracks risk of transportation assets through Cartegraph. The system incorporates parameters to evaluate the condition of assets and includes a preventative strategy to extend the life of assets, such as crack sealing, microsurfacing, seal coats and ultrathin overlay. It also considers related assets including sidewalks and storm sewers in planning replacement work. The Township will continue to optimize the strategy used in this system to extend useful life of assets and employ a preventative maintenance strategy.

The chart below provides an overview of the benefits of preventative maintenance strategies where the life of an asset is extended beyond its original useful life.

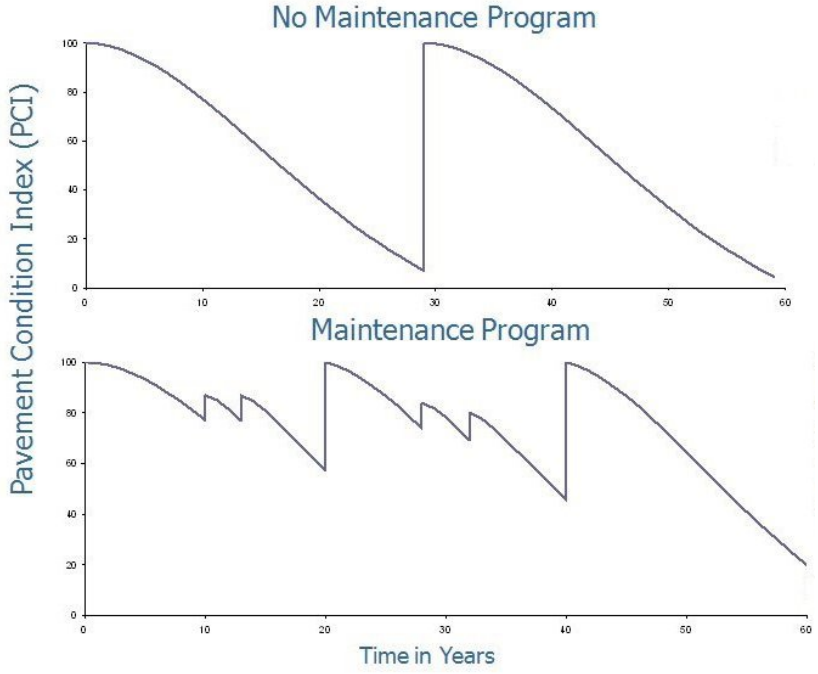


Figure 4 – Preventative Maintenance Impact

[4] http://www.canadainfrastructure.ca/en/

2.4.1 Probability of Failure

A probability of failure score was given to each asset based on the condition rating in Section 2.3

The probability of an asset failing is not necessarily indicative of its age (e.g. some newer water mains can fail more frequently than older water mains due to their production methods), and inspections where available are used to assess its condition. Where inspections aren't available, age and remaining useful life is considered. This can also be addressed in future updates of the AMP in trying to build a database that tracks failure history of assets. Table 5 summarizes the probability of failure score that was assigned to each asset based on the estimate of its physical condition and age.

Table 5 – Probability of Failure Score

Estimated Condition	Probability of Failure Description	Probability of Failure Score
Excellent	Improbable	1
Good	Unlikely	2
Fair	Possible	3
Poor	Likely	4
Critical	Highly Probable	5

2.4.2 Consequence of Failure

The consequence of failure score for each asset was based on a review of information that was provided by the Township, such as:

- Size/capacity/cost of the asset;
- Location of the asset;
- The use of the asset; and
- The importance of the asset to the operation of the system/facility.

Table 6 summarizes the approach used to establish consequence of failure scores.

Table 6 – Consequence of Failure Score Information

Consequence of Failure Description	Consequence of Failure Score
Very low measureable effect of any kind	1
Low/ seldom/marginal impact on the function, serviceability, or capacity of the asset and (or) effect on public safety and the environment	2
Moderate/ regular impact on the function, serviceability, or capacity of the asset and (or) effect on public safety and the environment	3
Major/ regular impact on the function, serviceability, or capacity of the asset and (or) effect on public safety and the environment	4
Catastrophic loss of infrastructure affecting public safety or having severe environmental consequences.	5

Roads were assigned consequence of failure scores based on the type of road. Arterial roads were given a score of 5, collector roads were given a score of 4, and local roads were given a score of 3.
Bridges and culverts located along arterial roads were given a higher score than those along local and collector roads.

The water treatment plant was assigned a score of 5 as failure at the plant would affect water quality in the distribution system and a treated water supply would not be available. Refer to Appendix B for further detail.

2.4.3 Risk Assessment

A risk score between 1 and 25 was calculated for each asset by multiplying consequence of failure scores and probability of failure scores. A third factor, *Health & Safety Risk*, was also considered. Assets with known safety risks were noted and given higher priority for replacement. This could include consideration for roads with high pedestrian traffic where no sidewalks exist, and roads with high vehicle collisions counts due to poor sightlines, among others. The Township will continue to update this rating as priority areas become known.

A risk category was established for each asset based on risk score. Figure 5 summarizes the process that was used to categorize risk score into the following categories:

- 1 - 3 represents low level risk;
- 4 - 6 represents medium-low level risk;
- 8 - 9 represents medium level risk;
- 10 - 15 represents medium-high level risk;
- 16 - 25 represents a high level of risk.

Consequence \ Probability of Failure	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Figure 5 – Risk Matrix

Table 7 summarizes the risk scores of the assets in the Township. Approximately 7% ($25 million) of assets have a high level of risk. Another 19% ($66 million) of the Township's assets have a risk score of medium-high.

Table 7 - Risk Score by Asset Value

Risk	Replacement Cost	% of Assets
Low	$106,291,059	30%
Medium-Low	$108,063,466	30%
Medium	$49,383,416	14%
Medium-High	$66,418,235	19%
High	$25,214,200	7%
Total	**$355,370,376**	**100%**

High risk assets should be addressed in the near term (5 years) to reduce the risk exposure to the Township and medium-high risk assets should be addressed in the short term (5-10 years). Some assets may require early upgrading if health and safety factors pose a risk. Similarly, the Township may be able to delay the replacement of other assets if a higher level of risk can be accepted. The Township will consider a number of factors when prioritizing asset replacement and upgrades.

Section 4 of this report describes the Asset Management Strategy suggested for addressing assets that represent elevated levels of risk. Risk distribution is summarized in Figure 6.

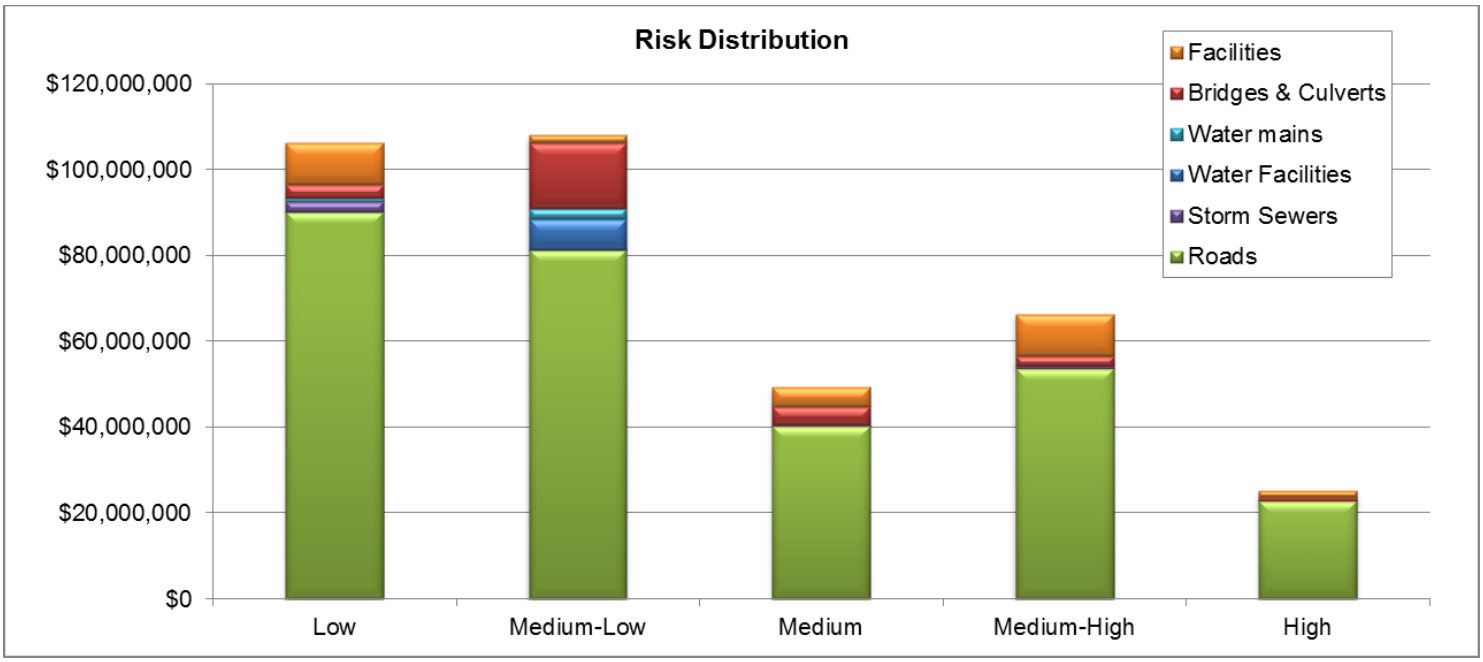


Figure 6 – Distribution of Asset Risk

2.5 Refinements by Township Staff

The condition, consequence of failure, and risk scores were reviewed with Township staff who utilized their knowledge of the Township's infrastructure to refine the scores as much as possible. The Township recognizes that the general approach and individual risk scores for each asset will continue to be refined over the coming years as more information becomes available.

3.0 LEVELS OF SERVICE

A “level of service” is a term that is used to describe *how much* of a service is being provided or *the quality* of a service that is being provided. In the context of asset management, levels of service are established as a way to guide the management of infrastructure in a manner that aims to achieve a level of service goal.

Levels of service in townships can vary widely related to finances, federal/provincial regulations, customer expectations, and/or corporate vision. In terms of Township infrastructure, the services provided are especially related to operation and maintenance cost and/or development and growth consideration. This section of the AMP gives an overview of service levels based on the Township’s existing documentation and current infrastructure management practices. The levels of service are often informal and undocumented.

3.1 Condition Levels of Service

The most basic level of service is to maintain infrastructure in an acceptable state of repair and minimize the risk exposure of the Township to an acceptable level. The capital works planning process usually addresses the infrastructure that is in the worst state of repair along with the highest risk meaning it would result in significant consequences if it were to fail, based on coordination among department managers and Council. The current capital planning process used by the Township does represent a risk-based approach to managing infrastructure and this AMP provides a high level summary of this process.

3.2 Capacity Levels of Service

Provincial policies and regulations define some minimum levels of service for water and transportation, including Ontario Regulation 239/02 (Minimum Maintenance Standards for Municipal Highways)[5] and Ontario Regulation 170/03 (Drinking Water Systems)[6]. Similar to most municipalities in Ontario, a comprehensive set of service levels to support more intensive asset management activities has not yet been prepared.

[5] http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_020239_e.htm
[6] http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_030170_e.htm

3.3 Existing Levels of Service

The primary resource to help define service levels was Ontario regulations. Majority of the levels of service documented are informal and are based on discussions with Township staff. These can be revisited and expanded upon as part of the AMP refinement process in the future.

3.3.1 Township Official Plan

The Official Plan provides some direction on the levels of services of the asset groups in the Township at a strategic level, based on the economic, social and environmental considerations for growth in the Township. Section 4.0 of the Official Plan lays out general goals and objectives related to servicing and transportation. This translates to a general level of service requiring adequate, efficient and cost effective services and transportation throughout the Township. The Official Plan does not document specific service targets or criteria.

3.3.2 Documented Service Levels

The Township strives towards to Ontario Regulation 239/02 which sets minimum standards of repair for roads and bridges under municipal jurisdiction. Through Cartegraph, the Township tracks and assesses their transportation assets and has a preventative strategy in place with an overall road overall condition index target of 70. This encompasses the Township's desired level of service for road assets through a decision making process which considers road class, surface type, and roadside environment.

At this time, the Township does not have documented levels of service for storm sewers, facilities, water mains or water treatment facilities. Table 8 provides a set of typical service levels and performance metrics that the Township can consider in future updates of its AMP . A sample for facilities will also be provided in the next version of the AMP.

Table 8 – Typical Service Levels and Performance Metrics for Small Municipalities

Department	Typical Levels of Service	Suggested Performance Metric
Water Mains & Water Facilities	1. Provide services to Settlement Areas to accommodate growth on a cost recovery basis 2. Water system designed for maximum day + fire flow or maximum hour; Normal operating pressure between 350 to 480 kPa, 280 kPa to 700 kPa is allowable 3. Services at least 19 mm; Water mains at least 150 mm in diameter 4. Meet all regulated drinking water quality targets	1. Number of development applications that are delayed due to a lack of adequate water infrastructure 2. Locations with inadequate pressure or flows confirmed through hydraulic modeling or field testing 3. Locations with inadequate infrastructure (small mains or services) 4. Number of times the regulated drinking water quality targets are not achieved 5. Number of customer complaints
Storm Sewers	1. Provide services to Settlement Areas to accommodate growth on a cost recovery basis 2. Level of protection established based on nature of area drained (risk/loss/damage of life/property): Major system - overland flooding less than 150 mm during 100 year event; Minor system – 5 year storm, 10 year storm in select high value commercial area; Culverts, major sewers designed for the 25 to 50 year depending on road classification; 50 year storm for overland flow, some flooding permitted to below depth of 100 mm. 3. Discourage the use of small isolated wet ponds with no environmental or aesthetic or recreational benefit	1. Number of development applications that are delayed due to a lack of adequate storm water infrastructure 2. Number of locations where infrastructure does not meet protection target 3. Number of resident complaints
Roads & Bridges	1. Provide services to Settlement Areas to accommodate growth on a cost recovery basis 2. Level of Service D on all roads in peak hour 3. Urban Arterial roads have bike lanes and transit **4.** Sidewalks on two sides of urban arterial and residential collector, one side on all other urban roads**.** 5. All new roads are paved 6. Concrete curb & gutter (and storm sewer) on all urban roads 7. Volume to capacity ratios should not exceed 0.85 to 1 at intersections 8. Provide maintenance standards in accordance with O/Reg 239/02	1. Number of development applications that are delayed 2. Number of roads less than level of service D during peak hour 3. Number of urban arterial roads with bike lanes and transit services 4. Number of roads that meet sidewalk level of service 5. Number of roads that are currently gravel that should be paved 6. Number of roads that do not meet curb/gutter/storm sewer level of service 7. Number of intersections that do not meet capacity level of service 8. Number of times road maintenance is not in accordance with O/Reg 239/02 9. Number of user complaints

4.0 ASSET MANAGEMENT STRATEGY

4.1 Asset Management Strategy Overview

The asset management strategy component of the AMP represents the set of planned activities to ensure that the state of the infrastructure achieves the level of service goals. The strategy is generally related to optimizing decisions with respect to:

- The replacement or rehabilitation of assets;
- The optimal level of maintenance investment required to minimize the long term costs of the assets (i.e. does more maintenance result in a longer useful life?);
- Disposing of assets that are not required to meet service levels; and
- Addressing Township policies that impact the infrastructure intervention that is used (i.e. does the asset size/design need to change to meet a certain policy).

4.2 Managing Risk

This AMP establishes the management of risk as the primary method for developing an asset management strategy. This strategy is to prioritize the renewal of infrastructure that represents a high risk to the Township. However, these priorities are also adjusted or shifted for financial efficiencies, to create capacity, optimize asset life, as well as external influences. This risk management strategy develops a renewal plan that is based on addressing the highest risk assets first according to the risk categories that were established in Section 2 of this report.

The renewal of assets in the short term should be prioritized primarily based on risk. High risk assets should be replaced in the next 5 years (between 2018 and 2021), and medium-high risk assets should be replaced in the next ten years (between 2022 and 2026). To quantify the replacement value in each individual year, a random value in the corresponding replacement year period was generated for each asset. Medium, medium-low, and low risk assets should be replaced according to their remaining expected useful life over the long term (next 100 years). This strategy is summarized in Table 9.

Table 9 – Renewal Strategy based on Risk

Risk Category	Risk Score	Replacement Term	Replacement Year
High	16 – 25	Near Term (next 5 years)	2017 – 2021
Medium-High	10 – 15	Short Term (next 5-10 years)	2022 – 2026
Medium Medium-Low Low	7 – 9 4 – 6 1 – 3	Long Term - regular planned renewal based on condition, age of asset and expected useful life or when asset reaches a higher risk level (i.e. probability or consequence of failure increases)	

The strategy to prioritize the renewal of infrastructure that represents a high risk to the Township should be continued and expanded. The Township should continue to consider other factors when prioritizing asset replacement, such as health and safety, accessibility, complimentary asset replacement (road reconstruction, storm sewer and water main replacement at the same time) as well as upgrades/improvements including intersections, public safety, growth or capacity related demands (traffic volumes and developments). The replacement strategy established through Cartegraph that the Township currently uses for roads considers complimentary asset replacement to optimize use of resources and minimize disruption to the community. Appendix C provides the sample decision tree for road segments.

Figure 6 illustrates 10 year capital investment needs for the Township's infrastructure using the risk-based asset management strategy. Over the next ten years, the Township should spend an average of $9.1 million per year to address the infrastructure needs (in constant 2016 dollars).

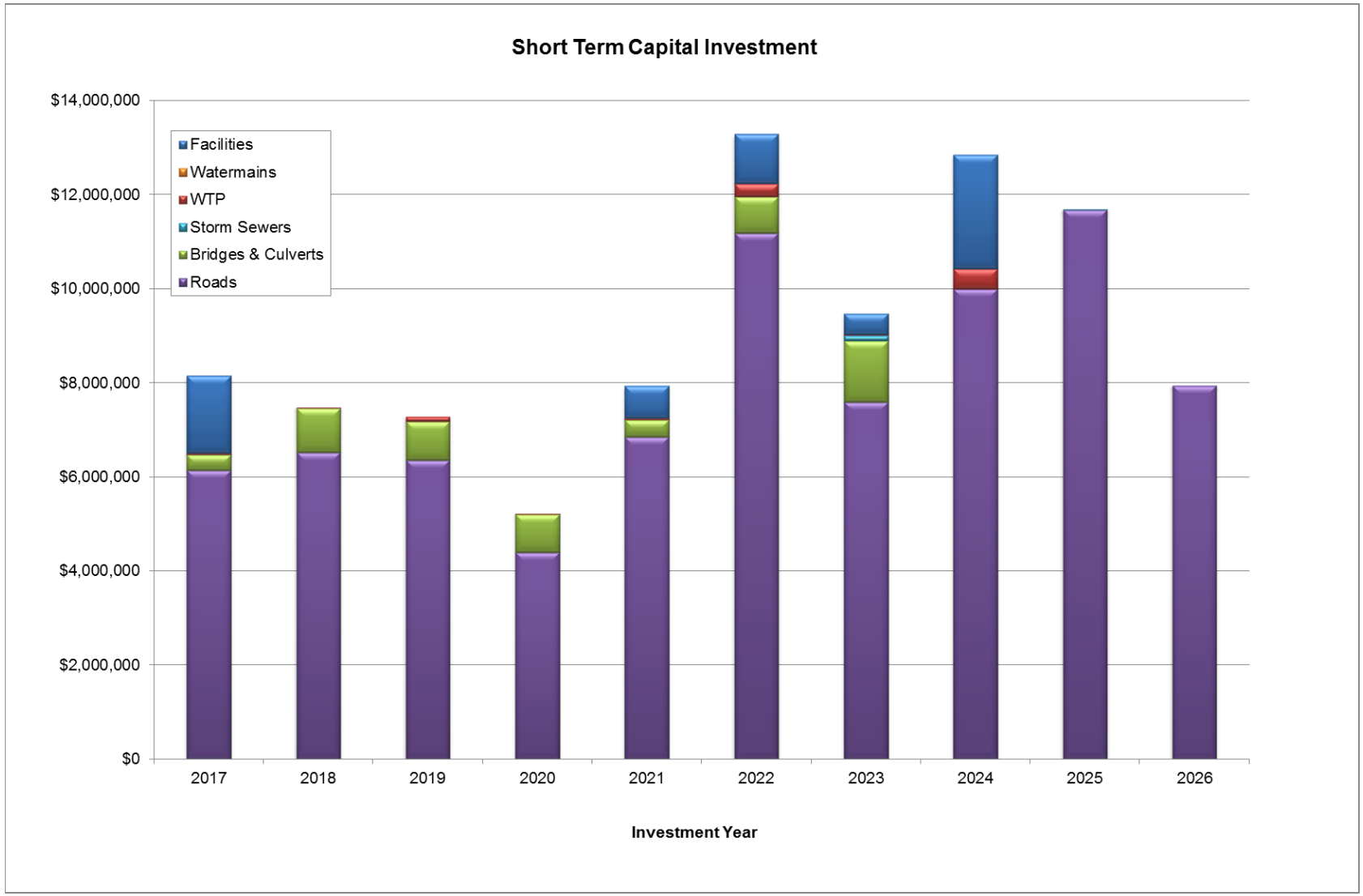


Figure 7 – 10 Year Capital Investment Needs

4.3 Long Term Infrastructure Capital Investment Needs

Long-term investment over the next 100 years must be considered to plan for replacement of assets with longer life cycles. Buried infrastructure such as storm sewers and water mains are expected to have a useful life of 80 – 100 years, and may last even longer. Similarly, newly constructed water facilities have expected useful lives of 100 years. In order to capture replacement of all assets the full life cycle period must be considered.

Long-term investment associated with replacement needs for first, second, and third replacements over the next 100 years were based on condition, age and remaining useful life.

For example, culverts are assumed to have a useful life of 50 years. A culvert that was constructed in 1995 has 58% of its useful life remaining, or 29 years (more than half its useful life). The first replacement of this bridge should be scheduled for 2045. The second replacement would occur in 2095. The third replacement would occur in 2145, beyond the study scope. Further, where condition information is available, the replacement schedule is adjusted based on current condition.

Figure 7 provides the long term capital investment needs for the renewal of the Township's existing infrastructure based on a strategic review of the replacement cost and theoretical useful life of each asset.

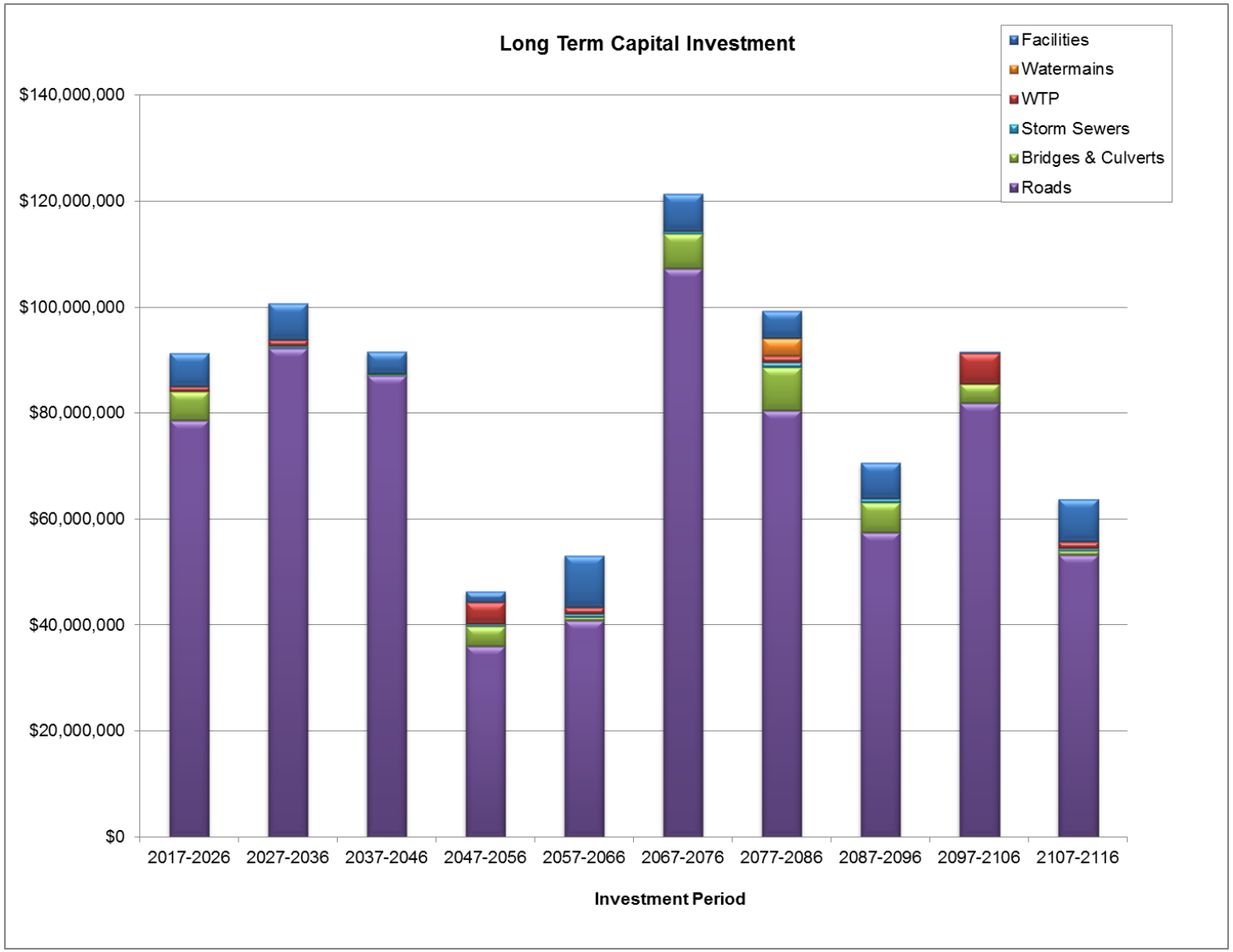


Figure 8 – 100 Year Capital Investment Needs

Based on this review, the existing in-scope infrastructure needs are approximately $8.3 million per year (in constant 2016 dollars), to be sustained using this strategic approach. This represents an overall lifecycle cost of approximately 3% on top of routine O&M costs, which usually are in the range of 3-5% for municipal infrastructure.

Over the coming years, the Township will continually review the infrastructure needs as more information becomes available and as technological improvements reduce the cost of renewing infrastructure.

4.4 Asset Management Strategies to Reduce Infrastructure Costs

The Township intends to continue advancing its asset management practices over the next several years. The infrastructure needs presented in Figure 6 and Figure 7 are based on the assumption that the Township will replace existing infrastructure with an identical asset and therefore uses replacement costs indicated. As previously mentioned, currently the AMP does not reflect other strategies currently being used such as preventative maintenance strategies and partnerships with neighboring municipalities. It is the Township's intent to update future versions with the inclusion of these strategies and their impact. Currently condition would be the primary data that would reflect the impact of the strategies.

Further, it may be feasible to replace infrastructure at a lower cost by using alternative procurement methods, new technologies, or rehabilitating the existing assets. The following is a list of strategies that the Township will continue to consider and improve upon to reduce the costs of addressing the immediate infrastructure needs:

- Review the potential cost savings of multi-year contracts to renew infrastructure (i.e. road resurfacing, water main replacement, etc.);
- Review operational practices to seek optimization of current assets.
- Including interrelated assets when assessing a construction project

5.0 FINANCING STRATEGY

The financing strategy is the final component of the AMP and provides the plan to move forward. For the purposes of this report, it was assumed that all expenditures are in 2016 dollars, levies will be maintained in future years, and assets are replaced at the end of their useful life. This strategy does not account for inflation; typical increases and adjustments to address inflation are still required.

5.1 Sources of Funding

The Township of South Frontenac provides funding for assets through two sources of revenue: Water User Fees and Municipal Tax Levy. Further, assets are also funded through existing reserves. The financing strategy supports this method of operating by addressing Water and other assets separately. Note that this financing strategy assumes zero change to the existing funding received through senior government programs, including the Federal Gas Tax.

In 2012, South Frontenac approved a 1% tax levy increase, compounded yearly, which goes into the Asset Investment Reserve. This strategy is a proactive way to deal with infrastructure deficit, and is a best practice recommended by all regulatory agencies. This will help to offset capital expenditures for tax supported assets.

5.2 Short Term Financing Strategy

5.2.1 Water Assets

The water treatment plant, water storage facility and water mains were constructed in the past 10 years; as such, these assets are not expected to require major capital replacement in the short term. Utilities Kingston operates the facility and has developed a short term capital investment forecast for the next 10 years. This forecast has been included in short term expenditures.

The Township is currently in a position of deficit from accumulated depreciation of the water treatment plant and water mains constructed in 2005. In 2014, The Township implemented a rate change which in the last 3 years has already reduced the deficit. The Revenues and Capital Expenditures for water infrastructure over the next 10 years are displayed in Table 11.

Table 10 – Short Term Capital Expenditures (Water Assets)

Year	Opening Balance	Expenditures	Capital Levy	Ending Balance
2017	451,920	26,300	165,949	591,569
2018	591,569	31,680	166,298	726,187
2019	726,187	3,500	166,626	889,314
2020	889,314	11,860	166,931	1,044,385
2021	1,044,385	110,500	167,213	1,101,098
2022	1,101,098	10,000	167,213	1,258,311
2023	1,258,311	29,830	167,213	1,395,693
2024	1,395,693	275,500	167,213	1,287,406
2025	1,287,406	23,500	167,213	1,431,119
2026	1,431,119	436,000	167,213	1,162,332
Total		**958,670**		

This table illustrates that over the course of the next 10 years, the current proposed Water Capital Levy is sufficient to finance the Asset Management Plan expenditures. The surplus at the end of 2025 will be used to finance future year's expenditures.

5.2.2 Tax Supported Assets

Tax supported infrastructure includes roads, bridges, culverts and storm sewers. The Revenues and Capital Expenditures for tax supported infrastructure over the next 10 years are displayed in Table 12.

Table 11 – Short Term Capital Expenditures (Tax Supported Assets)

Year	Opening Balance	Expenditures	Tax Levy	Reserves & Funding	Ending Balance
2017	739,314	6,477,000	4,205,339	1,294,661	-237,686
2018	-237,686	7,463,500	4,415,606	1,359,394	-1,926,186
2019	-1,926,186	7,177,025	4,636,386	1,427,364	-3,039,461
2020	-3,039,461	5,199,175	4,868,205	1,498,732	-1,871,699
2021	-1,871,699	7,219,600	5,111,615	1,573,669	-2,406,015
2022	-2,406,015	11,963,500	5,367,196	1,652,352	-7,349,967
2023	-7,349,967	9,009,366	5,635,556	1,734,970	-8,988,807
2024	-8,988,807	9,997,500	5,917,334	1,821,719	-11,247,254
2025	-11,247,254	11,674,408	6,213,201	1,912,805	-14,795,656
2026	-14,795,656	7,935,000	6,523,861	2,008,445	-14,198,350
TOTAL		**84,116,074**			

Over the course of the next 10 years the current Tax Supported Capital Levy is insufficient to finance the Asset Management Plan expenditures. At the end of 2026 there is a deficit of $14.1 million. However, the AMP presents yearly capital expenditures based on their priorities from condition and risk and further does not reflect the savings from strategies already being used such as pavement preservation and joint tendering.

5.2.3 Addressing the Short-Term Financial Requirements

The following list of alternatives should be considered to reduce the financing requirements over the next ten years:

1. The Township will develop an Implementation Strategy to improve this Plan over the next few years. This would include optimizing the current service levels and continuing to update condition, risk, and health and safety information. Further incorporating strategies already being used rather a like for like replacement calculation will be beneficial in future presentations to better reflect the Township's position.
2. Continue to raise reserve funds through taxation to offset accumulating depreciation costs.
3. Some municipalities rely on debt to decrease to reduce tax rate increases. This may be viewed as a feasible option, but it must be recognized that debt offers short term relief but long term pain. Money borrowed today must be paid back in the future with interest.
4. Continue to pursue Provincial and Federal grants whenever possible. Apart from Federal Gas Tax and OCIF, the Plan assumes no grant funding from the Provincial and Federal Governments. This is a conservative approach that is recommended in the Provincial government's asset management guide. Both senior levels of government have acknowledged that they should share in addressing the infrastructure deficit. It is reasonable to assume that funds will become available in the future from both senior levels of government.

Over the past few years, the Township has undertaken a proactive approach to addressing their financial position, and should continue to do so. Setting aside reserves to address future expenditures puts the Township in a good position financially. The Township should continue to employ proactive financing strategies to minimize deficit and keep this infrastructure in good condition well into the future.

5.3 Long Term Financing Strategy

5.3.1 Water Assets

The Capital Expenditures over the 100 years indicate that the asset replacements for water assets are grouped in large amounts. Water assets were all constructed around the same time, and as such, are expected to need replacement in the same year, according to expected useful life. The Revenues and Capital Expenditures on water infrastructure over the next 100 years are displayed in Table 13.

Table 12 – Long Term Capital Expenditures (Water Assets)

Investment Period	Opening Balance	Expenditures	Capital Levy	Ending Balance
2017-2026	451,920	958,670	1,669,082	1,162,332
2027-2036	1,162,332	1,205,851	1,702,463	1,658,944
2037-2046	1,658,944	0	1,736,513	3,395,457
2047-2056	3,395,457	4,112,802	1,771,243	1,053,897
2057-2066	1,053,897	1,205,851	1,806,668	1,654,714
2067-2076	1,654,714	0	1,842,801	3,497,515
2077-2086	3,497,515	4,523,052	1,879,657	854,120
2087-2096	854,120	0	1,917,250	2,771,370
2097-2106	2,771,370	5,805,720	1,955,595	-1,078,756
2107-2116	-1,078,756	1,205,851	1,994,707	-289,899
Total		**19,017,797**		

Over the course of the next 100 years the current Water Capital Levy is insufficient to finance the Asset Management Plan expenditures. By the end of the 100 years, additional financing of $290,000 will need to be applied to the Water User Fees Supported capital program. The existing rates and long term plan will continue to be reviewed from a long term perspective to ensure the long term sustainability of the water assets.

5.3.2 Tax Supported Assets

The Revenues and Capital Expenditures for tax supported infrastructure over the next 100 years, separated into decades, are displayed in Table 15.

Table 13 – Long Term Capital Expenditures (Tax Supported Assets)

Year	Opening Balance	Expenditures	Tax Levy	Reserves & Funding	Ending Balance
2017-2026	739,314	84,116,074	52,894,299	16,284,111	-14,198,350
2027-2036	-14,198,350	92,634,162	54,216,656	16,691,214	-35,924,642
2037-2046	-35,924,642	87,411,314	55,572,072	17,108,494	-50,655,390
2047-2056	-50,655,390	40,160,599	56,961,374	17,536,206	-16,318,410
2057-2066	-16,318,410	42,060,706	58,385,408	17,974,611	17,980,904
2067-2076	17,980,904	114,377,867	59,845,043	18,423,976	-18,127,944
2077-2086	-18,127,944	89,572,917	61,341,169	18,884,575	-27,475,117
2087-2096	-27,475,117	63,850,214	62,874,698	19,356,689	-9,093,944
2097-2106	-9,093,944	85,507,750	64,446,565	19,840,606	-10,314,523
2107-2116	-10,314,523	54,534,401	66,057,729	20,336,621	21,545,426
TOTAL		**754,226,004**			

The Township has approved a 1% tax levy increase, compounded yearly. This is a good step in addressing the necessary financing. Over the course of the next 100 years the current Tax Supported Capital Levy, coupled with the 1% Asset Investment Reserve is sufficient to finance the Asset Management Plan expenditures. The surplus at the end of the last two decades will be needed to offset the effects of inflation. It is important to note the financing shortfall in most decades. If additional financing becomes available then it should be applied to the early years of this financing scenario.

5.3.3 Addressing the Long-Term Financial Requirements

The best strategy to address the long-term financing is to continue to develop improved asset management tools and processes. These strategies include the following:

- Continue to establish appropriate levels of service and associated performance metrics to track how well the infrastructure is meeting the service levels. This may result in some higher-risk assets being renewed at a later time and/or some lower-risk assets becoming a priority for renewal at an earlier time than expected. For example, a road asset that is identified as low risk may need to be replaced because it poses a health and safety risk.

- Maintain an up-to-date database of asset condition based on regular inspections.
- Collect and review additional condition/performance information for the Township's infrastructure to better assess the probability of failure. For example, tracking and reviewing water main break records is a much better indicator for the future probability of failure of the asset. This analysis can then be used to adjust the infrastructure needs.
- Consider non-infrastructure solutions to achieve service levels. For example, promoting a cycling-friendly community could be accomplished by improved signage, reducing speed limits or undertaking educational campaigns, without additional infrastructure.
- Consider consolidating or eliminating redundant infrastructure. For example, removing bridges that are under-utilized or have alternate bridges that can be used will reduce the long term infrastructure needs while maintaining service levels.

The Township has already taken a good first step by investing in the Cartegraph asset management system to prioritize asset repair, rehabilitation and replacement. An extensive database has been developed to manage road assets and the Township is dedicated to updating and maintaining this as new or more up-to-date information becomes available. The Township should continue to assess and prioritize asset replacement needs by incorporating appropriate levels of service, risk tolerance, and updated condition assessment as new technologies and methods for assessing assets become available.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The Township's Asset Management Plan identifies a long-term need of $8.3 million/year to renew the Township's infrastructure for assets in the scope of this study. Asset renewal in the short term should be prioritized to minimize risk and address health and safety concerns.

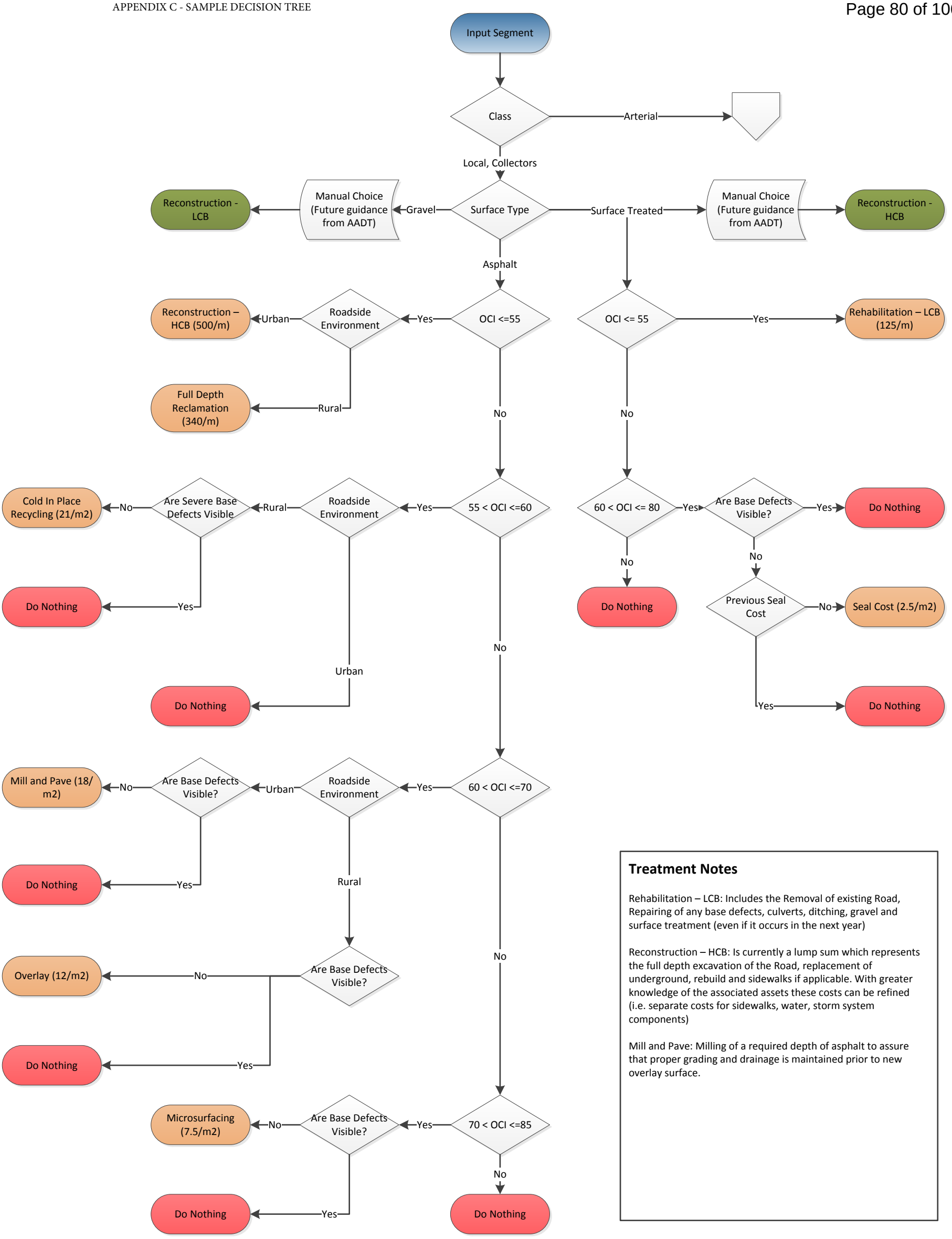
The Township has taken a proactive approach in addressing infrastructure needs by setting aside reserve funds to minimize deficits, approving levy increases to cover future deficits and investing in Cartegraph to better understand transportation asset condition, risk and replacement needs. The Township is committed to maintaining an up-to-date asset management database including levels of service, risk tolerance, and condition to improve the process for assessing and prioritizing asset repair, rehabilitation and replacement. Further it is committed to using strategies such as pavement preservation and joint tendering as well as investigating future opportunities or strategies. The Township is in a better position financially than many municipalities in Ontario and should continue to engage in forward thinking financial planning.

The Township provides funding for assets through two sources of revenue: Water User Fees and Municipal Tax Levy. Reserves are also used as a source of funding. Both in the short term and in the long term, the financing strategies being used including the use of a long range financial plan puts the Township in a position to meet future requirements

Over the coming years, the Township will continually review the infrastructure needs as more information is gathered. The Township will continue to set aside funds for asset replacement, build appropriate depreciation costs into future water rate adjustments, and continue to pursue Provincial and Federal infrastructure grants. This strategy positions the Township on a path to ultimately reach a point where the infrastructure needs equal the available revenues.

Asset Group	Probability of Failure Score (1 = low, 5 = high)	Consequence of Failure Score (1 = low, 5 = high)	Useful Life	Unit Costs (preliminary estimates for planning purposes only)
Roads	Based on 2015 Inspections – Overall Condition Index (OCI): OCI 0 – 40 = 5 OCI 40 – 55 = 4 OCI 55 – 70 = 3 OCI 70 – 85 = 2 OCI 85 – 100 = 1	Based on Road Class: Arterial = 5 Collector = 4 Local = 3	Surface Treated 30 years Gravel 75 years Asphalt/Village 50 years	Based on Surface Type: Village = $1500 / m Asphalt = $450 / m Surface treated = $200 / m Gravel = $250 / m
Bridges & Culverts	Based on OSIM reports – Bridge Condition Index (BCI): BCI 0 – 35 = 5 BCI 35 – 45 = 4 BCI 45 – 60 = 3 BCI 60 – 75 = 2 BCI 75 – 100 = 1 If BCI unavailable, based on % of useful life remaining (age)	Bridge (Arterial)= 5 Bridge (Collector/Local)= 4 Culvert (Arterial)=4 Culvert (Collector/Local) = 3	Bridges = 75 yrs Culverts= 50 yrs	Based on average historical replacement cost (in 2015 dollars): $5,000 / m^2 Approximate cost, based on average bridge and culvert replacement values in Township
Facilities	Facility Condition Index (FCI): FCI 0 – .25 = 1 FCI .26 –.50 = 2 FCI .51 – .75 = 3 FCI .76 – 1.0 = 4 FCI 1.0 + = 5 If FCI unavailable, based on % of useful life remaining (age)	Beach/Park/Museum=1 Township Rentals=2 PW Dome/Recreation Hall/Library=3 PW Garage & Admin/Town Hall/ Secondary Firehall = 4 Primary Firehall/Police=5	30 to 50 years	Based on replacement costs from condition assessment report from consultant

Water Facilities	Based on remaining useful life (age): 80 – 100 % = 1 60 – 79 % = 2 30 – 59 % = 3 1 – 29 % = 4 0 % = 5	Raw Water Intake = 5 Elevated Water Storage Tower = 4 Treatment Plant = 5 UV& GAC contactors = 5	Raw Water Intake = 100 yrs Elevated Water Storage Tower = 100 yrs Treatment Plant = 50 yrs UV& GAC contactors = 25 yrs	Based on historical costs + inflation rate of 3%
Water Mains	Based on remaining useful life (age): 80 – 100 % = 1 60 – 80 % = 2 40 – 60 % = 3 20 – 40 % = 4 0 – 20 % = 5	Based on pipe diameter: 250 mm = 5 200 mm = 4 150 mm = 3 100 mm = 2 < 100 mm = 1	100 yrs	Based on Diameter: 250 mm = $450 / m 200 mm = $400 / m 150 mm = $300 / m 100 mm = $400 / m (based on City of Ottawa 2012 Spec Code Listing, includes all appurtenances) Water course crossings cost & fire hydrants based on historical costs + 3% inflation
Storm Sewers	Based on Structural Grade (SG) SG 1 = 1 SG 2 = 2 SG 3 = 3 SG 4 = 4 SG 5 = 5	Based on sewer diameter: 1050mm+ = 5 675mm - 900mm = 4 450mm - 600mm = 3 250mm - 375mm = 2 < 250 mm = 1	80 yrs	Unit Cost based on 2012-2016 actual project costs



Treatment Notes

Rehabilitation – LCB: Includes the Removal of existing Road, Repairing of any base defects, culverts, ditching, gravel and surface treatment (even if it occurs in the next year)

Reconstruction – HCB: Is currently a lump sum which represents the full depth excavation of the Road, replacement of underground, rebuild and sidewalks if applicable. With greater knowledge of the associated assets these costs can be refined (i.e. separate costs for sidewalks, water, storm system components)

Mill and Pave: Milling of a required depth of asphalt to assure that proper grading and drainage is maintained prior to new overlay surface.


Surface Type
Surface Treated
Manual Choice (Future guidance from AADT)
Reconstruction - HCB
Asphalt
OCI <= 60
Yes
Roadside Environment
Urban
Reconstruction – HCB (500/m)
Rural
Full Depth Reclamation (340/m)
No
OCI <= 60
Yes
Rehabilitation – LCB (125/m)
No
60 < OCI <=65
Yes
Roadside Environment
Rural
Are Severe Base Defects Visible
No
Cold In Place Recycling (21/m2)
Yes
Do Nothing
Urban
Do Nothing
No
65 < OCI <=75
Yes
Roadside Environment
Urban
Are Base Defects Visible?
No
Mill and Pave (18/m2)
Yes
Do Nothing
Rural
Are Base Defects Visible?
No
Overlay (12/m2)
Yes
Do Nothing
No
70 < OCI <= 90
Yes
Are Base Defects Visible?
Yes
Do Nothing
No
Do Nothing
No
Previous Seal Cost
No
Seal Cost (2.5/m2)
Yes
Do Nothing
No
80 < OCI <=90
Yes
Are Base Defects Visible?
No
Microsurfacing (7.5/m2)
Yes
Do Nothing
No
Do Nothing

Roads

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
50125	Battersea Road	Moreland Dixon Road	Sunbury Road	Arterial	Urban	Asphalt	Class 3	500	7.3	3650	09/09/2015	34.22	1500	$ 750,000.00	5	5	1990	50	25	2017	2017
51115	Bedford Road	Alton Road	Freeman Road	Arterial	Rural	Surface treated	Class 3	3850	6.2	23870	10/22/2015	18.33	300	$ 1,155,000.00	5	5	1992	30	25	2017	2017
53185	Desert Lake Road			Arterial	Rural	Surface treated	Class 3	200	6.2	1240	12/04/2015	30.33	300	$ 60,000.00	5	5	1992	30	25	2017	2017
57785	Westport Road	Buck Bay Road	New Road	Arterial	Rural	Surface treated	Class 4	7700	6.6	50820	11/25/2015	30.22	300	$ 2,310,000.00	5	5	2000	30	25	2017	2017
57900	Westport Road	New Road	Burridge Road	Arterial	Rural	Surface treated	Class 4	3400	6.6	22440	11/25/2015	39.78	300	$ 1,020,000.00	5	5	2000	30	25	2017	2017
50750	Battersea Road	Burnt Hills Road	Burnt Hills Road	Arterial	Rural	Surface treated	Class 4	2200	6.7	14740	09/10/2015	25.11	300	$ 660,000.00	5	5	2003	30	25	2017	2017
50675	Battersea Road	Burnt Hills Road	Burnt Hills Road	Arterial	Urban	Surface treated	Class 4	600	6.4	3840	09/10/2015	38.89	300	$ 180,000.00	5	5	2007	30	25	2017	2017
51000	Bedford Road	Portland Avenue	Alton Road	Arterial	Urban	Asphalt	Class 4	1000	7.7	7700	10/22/2015	51.78	1500	$ 1,500,000.00	4	5	1992	50	20	2018 to 2021	2018
53415	Harrowsmith Road	Road 38	Loughborough Portland	Arterial	Rural	Asphalt	Class 3	3600	6.7	24120	09/01/2015	47	450	$ 1,620,000.00	4	5	1998	50	20	2018 to 2021	2018
58245	Westport Road	Wolfe Lake Road	Bresee Road	Arterial	Rural	Surface treated	Class 4	1200	6.6	7920	11/25/2015	53.56	300	$ 360,000.00	4	5	2000	30	20	2018 to 2021	2018
58475	Westport Road	Concession 12		Arterial	Rural	Surface treated	Class 4	1350	6.6	8910	11/25/2015	42	300	$ 405,000.00	4	5	2000	30	20	2018 to 2021	2018
56520	Rutledge Road	Sydenham Road	Perth Road 10	Arterial	Rural	Asphalt	Class 4	5850	6.7	39195	10/22/2015	49.89	450	$ 2,632,500.00	4	5	2001	50	20	2018 to 2021	2018
56635	Sunbury Road	Battersea Road	Battersea Road	Arterial	Rural	Asphalt	Class 3	3400	7	23800	09/10/2015	43.78	450	$ 1,530,000.00	4	5	1967	50	20	2018 to 2021	2019
52150	Bellrock Road	Cross Road	Road 38	Arterial	Rural	Asphalt	Class 3	1300	6.8	8840	09/01/2015	44.67	450	$ 585,000.00	4	5	1983	50	20	2018 to 2021	2019
50000	Battersea Road		Moreland Dixon Road	Arterial	Rural	Asphalt	Class 3	4300	7.2	30960	09/09/2015	53	450	$ 1,935,000.00	4	5	1994	50	20	2018 to 2021	2019
56980	Sunbury Road	Brewer Lake Road		Arterial	Rural	Surface treated	Class 3	1300	7	9100	09/10/2015	49	300	$ 390,000.00	4	5	2003	30	20	2018 to 2021	2019
52495	Desert Lake Road	Road 38	High Falls Road	Arterial	Rural	Surface treated	Class 4	2950	6.2	18290	09/01/2015	44.22	300	$ 885,000.00	4	5	2004	30	20	2018 to 2021	2019
50500	Battersea Road	Sarah Street	Burnt Hills Road	Arterial	Rural	Asphalt	Class 3	2300	6.4	14720	09/10/2015	54.11	450	$ 1,035,000.00	4	5	2007	50	20	2018 to 2021	2019
54910	Road 38		Kingston Road	Arterial	Rural	Asphalt	Class 2	5350	7.5	40125	09/02/2015	50.56	450	$ 2,407,500.00	4	5	1993	50	20	2018 to 2021	2020
50625	Battersea Road	Burnt Hills Road	Burnt Hills Road	Arterial	Rural	Surface treated	Class 4	1700	6.4	10880	09/10/2015	54.11	300	$ 510,000.00	4	5	2007	30	20	2018 to 2021	2020
51690	Bedford Road	Salmon Lake Road	Desert Lake Road	Arterial	Rural	Surface treated	Class 4	3600	6.4	23040	10/22/2015	43.78	300	$ 1,080,000.00	4	5	2007	30	20	2018 to 2021	2020
53760	Perth Road 10			Arterial	Urban	Asphalt	Class 2	700	7.9	5530	09/10/2015	66.67	1500	$ 1,050,000.00	3	5	1989	50	15	2022 to 2026	2021
55140	Road 38	Kingston Road		Arterial	Urban	Asphalt	Class 2	800	12.5	10000	09/02/2015	58	1500	$ 1,200,000.00	3	5	1993	50	15	2022 to 2026	2021
53645	Perth Road 10	Spooner Road		Arterial	Rural	Asphalt	Class 2	5400	8.7	46980	09/09/2015	69.11	450	$ 2,430,000.00	3	5	2003	50	15	2022 to 2026	2021
53875	Perth Road 10			Arterial	Rural	Asphalt	Class 2	3100	6.7	20770	09/10/2015	61.22	450	$ 1,395,000.00	3	5	2003	50	15	2022 to 2026	2021
46225	Tobin Road		Devil Lake Road	Local	Rural	Gravel	Class 6	1000	4	4000	04/26/2016	29.11	250	$ 250,000.00	5	3	2003	75	15	2022 to 2026	2021
42520	Goodrich Street	Percy Street	Main Street	Local	Urban	Asphalt	Class 6	100	3.7	370	09/01/2015	9	1500	$ 150,000.00	5	3	2016	50	15	2022 to 2026	2021
44980	Percy Street	Bellrock Road	Bellrock Mill Street	Local	Urban	Asphalt	Class 4	250	3.2	800	09/01/2015	14	1500	$ 375,000.00	5	3	2016	50	15	2022 to 2026	2021
44275	McGarvey Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 6	150	5.8	870	12/18/2015	30.56	300	$ 45,000.00	5	3	1990	30	15	2022 to 2026	2022
45415	Rideau Road	Burnt Hills Road	Burnt Hills Road	Local	Rural	Surface treated	Class 4	950	4.9	4655	09/10/2015	35.89	300	$ 285,000.00	5	3	1993	30	15	2022 to 2026	2022
44470	Mount Chesney Road	Battersea Road	Frontenac Road	Local	Rural	Surface treated	Class 4	400	5.8	2320	09/09/2015	33.33	300	$ 120,000.00	5	3	1995	30	15	2022 to 2026	2022
44070	Mallen Road	Craig Road	Craig Road	Local	Rural	Surface treated	Class 6	100	4	400	09/01/2015	37	300	$ 30,000.00	5	3	1995	30	15	2022 to 2026	2022
44185	Masonville Road		Craig Road	Local	Rural	Surface treated	Class 6	250	3.5	875	09/01/2015	29.44	300	$ 75,000.00	5	3	1996	30	15	2022 to 2026	2022
42910	Hinchinbrooke Road	Moore Farm Lane	Desert Lake Road	Local	Rural	Surface treated	Class 4	4400	6.2	27280	09/01/2015	38.67	300	$ 1,320,000.00	5	3	1997	30	15	2022 to 2026	2022
45340	Randy Clark Road		Battersea Road	Local	Rural	Surface treated	Class 4	2200	6.1	13420	09/11/2015	25.67	300	$ 660,000.00	5	3	1997	30	15	2022 to 2026	2022
46780	York Road		Bellrock Road	Local	Rural	Surface treated	Class 6	1300	6.1	7930	09/01/2015	33.33	300	$ 390,000.00	5	3	2000	30	15	2022 to 2026	2022
43735	Latimer Road	Davidson Road	Perth Road 10	Local	Rural	Surface treated	Class 4	2900	6.3	18270	09/09/2015	19.11	300	$ 870,000.00	5	3	2001	30	15	2022 to 2026	2022
44485	Mount Chesney Road	Frontenac Road	Beach Nut Road	Local	Rural	Surface treated	Class 4	1600	6.1	9760	09/09/2015	31.22	300	$ 480,000.00	5	3	2001	30	15	2022 to 2026	2022
58360	Westport Road	Bresee Road	Concession 12	Arterial	Rural	Surface treated	Class 4	1400	6.6	9240	11/25/2015	57.11	300	$ 420,000.00	3	5	2002	30	15	2022 to 2026	2022
43435	Kerr Road	Petworth Road		Local	Rural	Surface treated	Class 4	600	4.3	2580	09/01/2015	18.22	300	$ 180,000.00	5	3	2003	30	15	2022 to 2026	2022
45055	Petworth Road	Kerr Road	Road 38	Local	Urban	Surface treated	Class 4	3550	6.3	22365	09/01/2015	18.78	300	$ 1,065,000.00	5	3	2003	30	15	2022 to 2026	2022
43585	Lakefield Drive		Holmes Road	Local	Rural	Surface treated	Class 6	600	6.2	3720	09/09/2015	35.44	300	$ 180,000.00	5	3	2012	30	15	2022 to 2026	2022
55255	Road 38			Arterial	Rural	Asphalt	Class 2	4750	7.5	35625	09/02/2015	55.89	450	$ 2,137,500.00	3	5	1994	50	15	2022 to 2026	2023
55485	Road 38	Lions Club Road	Pine Ridge Road	Arterial	Urban	Asphalt	Class 2	1200	7.6	9120	09/02/2015	65	1500	$ 1,800,000.00	3	5	1994	50	15	2022 to 2026	2023
40075	Amey Road		Murvale Road	Local	Rural	Surface treated	Class 4	950	4.2	3990	10/22/2015	33.56	300	$ 285,000.00	5	3	1995	30	15	2022 to 2026	2023
56865	Sunbury Road	Battersea Road	Battersea Road	Arterial	Rural	Surface treated	Class 3	700	7	4900	09/10/2015	63.22	300	$ 210,000.00	3	5	2003	30	15	2022 to 2026	2023
56750	Sunbury Road	Battersea Road	Battersea Road	Arterial	Rural	Surface treated	Class 3	3200	7	22400	09/10/2015	67.11	300	$ 960,000.00	3	5	2011	30	15	2022 to 2026	2023
57095	Sunbury Road	Battersea Road	Brewer Lake Road	Arterial	Rural	Surface treated	Class 3	1400	7	9800	09/10/2015	61.44	300	$ 420,000.00	3	5	2012	30	15	2022 to 2026	2023
40630	Bradshaw Road	Bob's Lake Road	Steele Road	Local	Rural	Asphalt	Class 4	1250	6.7	8375	11/25/2015	32.33	450	$ 562,500.00	5	3	1991	50	15	2022 to 2026	2024
55370	Road 38		Lions Club Road	Arterial	Rural	Asphalt	Class 2	3900	7.5	29250	09/02/2015	56.78	450	$ 1,755,000.00	3	5	1995	50	15	2022 to 2026	2024
50250	Battersea Road	Sunbury Road	Larry York Road	Arterial	Rural	Asphalt	Class 3	5200	6.7	34840	09/10/2015	69.11	450	$ 2,340,000.00	3	5	2000	50	15	2022 to 2026	2024
50375	Battersea Road	Larry York Road	Sarah Street	Arterial	Urban	Asphalt	Class 3	2050	7.3	14965	09/10/2015	68.56	1500	$ 3,075,000.00	3	5	2004	50	15	2022 to 2026	2024
40435	Bellrock Mill Street	Bellrock Road	First Lake Road	Local	Urban	Asphalt	Class 4	250	5	1250	09/01/2015	24	1500	$ 375,000.00	5	3	2016	50	15	2022 to 2026	2024
40465	Bellrock Pepper Street	Bellrock Road	First Lake Road	Local	Urban	Asphalt	Class 4	100	3.2	320	09/01/2015	14	1500	$ 150,000.00	5	3	2016	50	15	2022 to 2026	2024
55715	Road 38	Desert Lake Road	Piccadilly Road	Arterial	Rural	Asphalt	Class 2	3100	7.8	24180	09/02/2015	67.67	450	$ 1,395,000.00	3	5	1996	50	15	2022 to 2026	2025
56060	Rutledge Road	Loughborough Portland Road		Arterial	Rural	Asphalt	Class 3	1400	6.7	9380	10/22/2015	62.67	450	$ 630,000.00	3	5	2000	50	15	2022 to 2026	2025
41695	Davidson Road	Latimer Road	Holmes Road	Local	Rural	Surface treated	Class 4	1000	6.4	6400	09/09/2015	26.78	300	$ 300,000.00	5	3	2003	30	15	2022 to 2026	2025
40180	Arena Boundary Road		Piccadilly Road	Local	Rural	Asphalt	Class 4	450	6	2700	09/01/2015	39.67	450	$ 202,500.00	5	3	1975	50	15	2022 to 2026	2026
40720	Buck Bay Road	Westport Road	White Lake Road	Local	Rural	Surface treated	Class 4	1700	5.7	9690	11/25/2015	17.11	300	$ 510,000.00	5	3	2007	30	15	2022 to 2026	2026
58015	Westport Road	Burridge Road		Arterial	Rural	Surface treated	Class 4	2500	6.8	17000	11/25/2015	59.78	300	$ 750,000.00	3	5	2008	30	15	2022 to 2026	2026
42655	Greenfield Road		Perth Road 10	Local	Rural	Surface treated	Class 4	150	6	900	09/10/2015	46.67	300	$ 45,000.00	4	3	2000	30	12	2022 to 2026	2022
44455	Mount Chesney Road		Battersea Road	Local	Rural	Surface treated	Class 4	1000	5.4	5400	09/09/2015	44.89	300	$ 300,000.00	4	3	2002	30	12	2022 to 2026	2022

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
41155	Carrying Place Road		Burnt Hills Road	Local	Rural	Gravel	Class 4	4800	6	28800	04/18/2016	50.89	250	$ 1,200,000.00	4	3	2003	75	12	2022 to 2026	2022
42370	Frontenac Road	Mount Chesney Road	Battersea Road	Local	Rural	Gravel	Class 6	500	5.5	2750	04/18/2016	48.89	250	$ 125,000.00	4	3	2003	75	12	2022 to 2026	2022
43240	Ida Hill Road	Washburn Road	Sunbury Road	Local	Urban	Gravel	Class 4	1300	5.5	7150	04/18/2016	47.67	250	$ 325,000.00	4	3	2003	75	12	2022 to 2026	2022
43885	Leveque Road	Bellrock Pero Road		Local	Rural	Gravel	Class 4	3550	4.6	16330	04/15/2016	51	250	$ 887,500.00	4	3	2003	75	12	2022 to 2026	2022
43900	Little Long Lake Road	Bedford Road	Charlie Green Road	Local	Rural	Gravel	Class 6	1800	3	5400	04/22/2016	43	250	$ 450,000.00	4	3	2003	75	12	2022 to 2026	2022
42505	German Road	Petworth Road	Long Swamp Road	Local	Rural	Surface treated	Class 4	1500	5.5	8250	10/01/2010	53.44	300	$ 450,000.00	4	3	2003	30	12	2022 to 2026	2022
44290	McGarvey Road	Battersea Road	Princess Road	Local	Rural	Gravel	Class 4	1800	5.5	9900	04/18/2016	49.89	250	$ 450,000.00	4	3	2003	75	12	2022 to 2026	2023
44425	Miller Road		Road 38	Local	Urban	Gravel	Class 4	1200	4.2	5040	04/15/2016	49.78	250	$ 300,000.00	4	3	2003	75	12	2022 to 2026	2023
43975	Loughborough Portland Rd	Harrowsmith Road	Alton Road	Collector	Rural	Surface treated	Class 3	1400	6.4	8960	09/01/2015	58.22	300	$ 420,000.00	3	4	2004	30	12	2022 to 2026	2023
43990	Loughborough Portland Rd	Alton Road	Jamieson Road	Collector	Rural	Surface treated	Class 3	1350	6.5	8775	09/01/2015	58.78	300	$ 405,000.00	3	4	2004	30	12	2022 to 2026	2023
44005	Loughborough Portland Rd	Jamieson Road	Vanluven Road	Collector	Rural	Surface treated	Class 3	700	6.5	4550	09/01/2015	64.78	300	$ 210,000.00	3	4	2004	30	12	2022 to 2026	2023
44560	Murvale Road	Scanlan Road	Amey Road	Local	Urban	Surface treated	Class 4	1400	6.5	9100	10/22/2015	50.78	300	$ 420,000.00	4	3	2003	30	12	2022 to 2026	2024
44500	Mulville Road	Devil Lake Road		Local	Rural	Gravel	Class 6	2400	4.3	10320	04/26/2016	53.22	250	$ 600,000.00	4	3	2003	75	12	2022 to 2026	2025
45355	Redmond Road		Redmond Road	Local	Rural	Gravel	Class 6	1000	4.6	4600	04/15/2016	40	250	$ 250,000.00	4	3	2003	75	12	2022 to 2026	2025
41575	Craig Road	Road 38		Local	Rural	Surface treated	Class 4	3750	5	18750	09/01/2015	51.33	300	$ 1,125,000.00	4	3	2004	30	12	2022 to 2026	2025
45580	Round Lake Road	Latimer Road	Latimer Road	Local	Rural	Surface treated	Class 4	600	6.3	3780	12/18/2015	52.11	300	$ 180,000.00	4	3	2006	30	12	2022 to 2026	2025
45775	Scanlan Road	Murvale Road	Murvale Road	Local	Rural	Surface treated	Class 4	500	6	3000	10/22/2015	51.78	300	$ 150,000.00	4	3	2006	30	12	2022 to 2026	2025
45595	Round Lake Road	Latimer Road	Battersea Road	Local	Rural	Surface treated	Class 4	2200	6.1	13420	09/10/2015	53.89	300	$ 660,000.00	4	3	2007	30	12	2022 to 2026	2025
45640	Salmon Lake Road	Bedford Road		Local	Rural	Surface treated	Class 6	2100	6.5	13650	10/22/2015	48.56	300	$ 630,000.00	4	3	2007	30	12	2022 to 2026	2025
45760	Scanlan Road		Murvale Road	Local	Rural	Surface treated	Class 4	950	6.5	6175	10/22/2015	45.33	300	$ 285,000.00	4	3	2007	30	12	2022 to 2026	2025
46000	Stage Coach Road	Campbell Road	Rutledge Road	Collector	Urban	Asphalt	Class 4	650	6.7	4355	10/22/2015	63.22	1500	$ 975,000.00	3	4	1986	50	12	2022 to 2026	2026
43750	Latimer Road	Perth Road 10	Perth Road 10	Local	Urban	Asphalt	Class 4	1700	6.2	10540	09/09/2015	51.44	1500	$ 2,550,000.00	4	3	1996	50	12	2022 to 2026	2026
45010	Peters Road	Harrowsmith Road		Local	Rural	Surface treated	Class 4	300	3.6	1080	09/01/2015	54	300	$ 90,000.00	4	3	1999	30	12	2022 to 2026	2026
41785	Deer Creek Drive	Spooner Road		Local	Rural	Surface treated	Class 4	400	6	2400	09/09/2015	50.78	300	$ 120,000.00	4	3	2007	30	12	2022 to 2026	2026
44665	North Shore Road	Hewlett Packard Road	Convery Lane	Local	Rural	Surface treated	Class 4	4000	5.7	22800	09/10/2015	49.44	300	$ 1,200,000.00	4	3	2007	30	12	2022 to 2026	2026
43465	Kingsford Lake Road		Devil Lake Road	Local	Rural	Gravel	Class 6	300	3.5	1050	04/26/2016	40.67	250	$ 75,000.00	4	3	2012	75	12	2022 to 2026	2026
42205	Fishing Lake Road	North Shore Road		Local	Rural	Gravel	Class 6	8000	4	32000	04/18/2016	51.56	250	$ 2,000,000.00	4	3	2003	75	12	2022 to 2026	2037
58935	Yarker Road 4	Wilton Road 18	Road 38	Arterial	Rural	Asphalt	Class 3	2050	6.7	13735	09/02/2015	70.33	450	$ 922,500.00	2	5	1993	50	10	2022 to 2026	2022
55600	Road 38	Pine Ridge Road	Desert Lake Road	Arterial	Urban	Asphalt	Class 2	500	7.8	3900	09/02/2015	73.33	1500	$ 750,000.00	2	5	1995	50	10	2022 to 2026	2024
53530	Moreland Dixon Road	Perth Road 10	Battersea Road	Arterial	Rural	Asphalt	Class 3	4150	6.7	27805	09/09/2015	82.44	450	$ 1,867,500.00	2	5	1997	50	10	2022 to 2026	2025
58705	Wilton Road 18	Yarker Road 4	Road 38	Arterial	Rural	Asphalt	Class 3	3300	6.7	22110	09/02/2015	80.67	450	$ 1,485,000.00	2	5	1997	50	10	2022 to 2026	2025
58130	Westport Road	Canoe Lake Road	Canoe Lake Road	Arterial	Rural	Asphalt	Class 4	1300	9.1	11830	11/25/2015	81.56	450	$ 585,000.00	2	5	2007	50	10	2022 to 2026	2025
54335	Perth Road 10			Arterial	Rural	Asphalt	Class 3	200	6.7	1340	12/18/2015	79.56	450	$ 90,000.00	2	5	2009	50	10	2022 to 2026	2025
55830	Road 38	Piccadilly Road		Arterial	Rural	Asphalt	Class 2	750	7.4	5550	09/02/2015	70.33	450	$ 337,500.00	2	5	2000	50	10	2022 to 2026	2026
52610	Desert Lake Road	High Falls Road	High Falls Road	Arterial	Urban	Surface treated	Class 3	300	6.7	2010	12/04/2015	84	300	$ 90,000.00	2	5	2004	30	10	2022 to 2026	2028
40615	Bradshaw Road	Road 38	Bob's Lake Road	Local	Rural	Asphalt	Class 4	900	6.7	6030	11/25/2015	59.22	450	$ 405,000.00	3	3	1991	50	9	2027 to 2033	2027
42025	Easy Street		Road 38	Local	Urban	Asphalt	Class 6	100	5.1	510	09/01/2015	67.78	1500	$ 150,000.00	3	3	1995	50	9	2027 to 2033	2027
42115	Fellows Road		Murvale Road	Local	Rural	Surface treated	Class 4	800	3.8	3040	10/22/2015	57.44	300	$ 240,000.00	3	3	1995	30	9	2027 to 2033	2027
41965	Division Street	Perth Road 10	Latimer Road	Local	Urban	Asphalt	Class 4	300	6.2	1860	09/09/2015	62.44	1500	$ 450,000.00	3	3	1997	50	9	2027 to 2033	2027
42100	Fairgrounds Road	Perth Road 10	Latimer Road	Local	Urban	Asphalt	Class 4	300	6.4	1920	09/10/2015	64.78	1500	$ 450,000.00	3	3	1997	50	9	2027 to 2033	2027
42895	Hinchinbrooke Road	Road 38	Moore Farm Lane	Local	Rural	Surface treated	Class 4	1400	6.4	8960	09/01/2015	68.89	300	$ 420,000.00	3	3	1997	30	9	2027 to 2033	2027
41215	Centennial Park Road	Notre Dame Street	Road 38	Local	Urban	Asphalt	Class 5	150	6.7	1005	09/01/2015	67.11	1500	$ 225,000.00	3	3	1998	50	9	2027 to 2033	2027
43030	Holleford Road	New Morin Road	Johnny Martin Road	Local	Rural	Surface treated	Class 4	2900	6.6	19140	09/01/2015	56.89	300	$ 870,000.00	3	3	2000	30	9	2027 to 2033	2027
42175	First Lake Road	First Lake Road	Snider Road	Local	Rural	Gravel	Class 4	3700	4.3	15910	04/15/2016	56.44	250	$ 925,000.00	3	3	2003	75	9	2027 to 2033	2027
42310	Freeman Road	Loughborough Portland R	Gould Lake Road	Local	Rural	Gravel	Class 4	550	4	2200	10/01/2010	60.33	250	$ 137,500.00	3	3	2003	75	9	2027 to 2033	2027
43405	Keir Road		Duff Road	Local	Rural	Gravel	Class 4	700	2.4	1680	04/18/2016	67.11	250	$ 175,000.00	3	3	2003	75	9	2027 to 2033	2027
43915	Long Swamp Road	Bellrock Road	Bellrock Road	Local	Rural	Gravel	Class 4	2100	4.5	9450	04/15/2016	67	250	$ 525,000.00	3	3	2003	75	9	2027 to 2033	2027
41605	Crow Lake Road	Badour Road	Badour Road	Local	Rural	Surface treated	Class 4	550	6.4	3520	11/25/2015	58.56	300	$ 165,000.00	3	3	2004	30	9	2027 to 2033	2027
43420	Keller Road		Larry York Road	Local	Rural	Gravel	Class 6	150	5.3	795	04/18/2016	68.89	250	$ 37,500.00	3	3	2006	75	9	2027 to 2033	2027
45565	Round Lake Road	Latimer Road	Latimer Road	Local	Urban	Surface treated	Class 4	1300	6.1	7930	12/18/2015	61	300	$ 390,000.00	3	3	1992	30	9	2027 to 2033	2028
45535	Round Lake Road	Latimer Road	Latimer Road	Local	Rural	Surface treated	Class 4	1200	6.2	7440	09/10/2015	58.44	300	$ 360,000.00	3	3	1995	30	9	2027 to 2033	2028
44515	Murton Road	Road 38	Road 38	Local	Rural	Surface treated	Class 4	1850	5.9	10915	09/02/2015	68.33	300	$ 555,000.00	3	3	1996	30	9	2027 to 2033	2028
44530	Murton Road	Road 38	Murvale Road	Local	Rural	Surface treated	Class 4	900	6.5	5850	09/02/2015	68.33	300	$ 270,000.00	3	3	1996	30	9	2027 to 2033	2028
44590	New Morin Road	Vanluven Road	Holleford Road	Local	Urban	Surface treated	Class 4	1700	5.7	9690	09/01/2015	65.44	300	$ 510,000.00	3	3	1996	30	9	2027 to 2033	2028
43660	Lambert Road	Stage Coach Road		Local	Rural	Gravel	Class 6	800	5.5	4400	10/01/2010	66.44	250	$ 200,000.00	3	3	2003	75	9	2027 to 2033	2028
45310	Ramparts Road		Battersea Road	Local	Rural	Gravel	Class 4	800	4.9	3920	10/01/2010	67.44	250	$ 200,000.00	3	3	2003	75	9	2027 to 2033	2028
45325	Ramparts Road	Battersea Road	Battersea Road	Local	Rural	Gravel	Class 4	1100	4.9	5390	04/18/2016	65.89	250	$ 275,000.00	3	3	2003	75	9	2027 to 2033	2028
45400	Rickards Road	Rutledge Road		Local	Rural	Gravel	Class 6	300	3.7	1110	10/01/2010	63.78	250	$ 75,000.00	3	3	2003	75	9	2027 to 2033	2028
40030	Alton Road	Road 38	Loughborough Portland	Local	Rural	Surface treated	Class 4	2700	5.6	15120	09/01/2015	56.22	300	$ 810,000.00	3	3	2003	30	9	2027 to 2033	2028
44545	Murvale Road	Murton Road	Scanlan Road	Local	Rural	Surface treated	Class 4	1550	6.5	10075	10/22/2015	63.89	300	$ 465,000.00	3	3	2003	30	9	2027 to 2033	2028
45175	Quarry Road	Boyce Road		Local	Rural	Surface treated	Class 6	900	5.5	4950	09/01/2015	61.56	300	$ 270,000.00	3	3	2003	30	9	2027 to 2033	2028
45160	Quarry Road	Boyce Road	Boyce Road	Local	Rural	Surface treated	Class 4	400	5	2000	09/01/2015	67.78	300	$ 120,000.00	3	3	2004	30	9	2027 to 2033	2028
45610	Roushorn Road	Perth Road 10	Perth Road 10	Local	Rural	Gravel	Class 6	500	4.5	2250	04/22/2016	69.22	250	$ 125,000.00	3	3	2006	75	9	2027 to 2033	2028

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
45550	Round Lake Road	Latimer Road	Latimer Road	Local	Rural	Surface treated	Class 6	1000	6.3	6300	12/18/2015	59.56	300	$ 300,000.00	3	3	2007	30	9	2027 to 2033	2028
45655	Verona Sand Road		Cross Road	Local	Rural	Surface treated	Class 5	2200	5	11000	09/01/2015	63.56	300	$ 660,000.00	3	3	2007	30	9	2027 to 2033	2028
43555	Lake Road		Lower Round Lake Road	Local	Rural	Gravel	Class 6	150	3	450	10/01/2010	64	250	$ 37,500.00	3	3	2014	75	9	2027 to 2033	2028
44575	Mustard Road		Craig Road	Local	Urban	Surface treated	Class 6	250	3.5	875	09/01/2015	66.56	300	$ 75,000.00	3	3	2014	30	9	2027 to 2033	2028
45685	Verona Sand Road	Cross Road	McMahon Drive	Local	Rural	Asphalt	Class 5	1250	7	8750	09/01/2015	66.56	450	$ 562,500.00	3	3	1997	50	9	2027 to 2033	2029
45790	Shales Road		Perth Road 10	Local	Rural	Gravel	Class 4	3100	4.5	13950	04/22/2016	59.67	250	$ 775,000.00	3	3	2003	75	9	2027 to 2033	2029
45850	Simpson Road	Battersea Road		Local	Rural	Gravel	Class 6	2200	4.5	9900	04/18/2016	59.44	250	$ 550,000.00	3	3	2003	75	9	2027 to 2033	2029
40330	Battersea Mill Street	Battersea Road		Local	Urban	Surface treated	Class 4	150	2.8	420	09/10/2015	57.22	300	$ 45,000.00	3	3	1990	30	9	2027 to 2033	2030
42190	Fish Creek Road		Bob's Lake Road	Local	Rural	Gravel	Class 6	2500	4.5	11250	04/26/2016	59	250	$ 625,000.00	3	3	2003	75	9	2027 to 2033	2030
42715	Hanna Road	Westport Road		Local	Rural	Gravel	Class 6	1400	4.5	6300	04/26/2016	68.22	250	$ 350,000.00	3	3	2003	75	9	2027 to 2033	2030
43225	Iawah Road	Lee Road		Local	Rural	Gravel	Class 6	1500	4.9	7350	04/26/2016	67.11	250	$ 375,000.00	3	3	2003	75	9	2027 to 2033	2030
43510	Knowlton Lake Road	Loughborough Portland Road		Local	Rural	Gravel	Class 4	800	5	4000	04/15/2016	69.44	250	$ 200,000.00	3	3	2003	75	9	2027 to 2033	2030
43525	Koen Road		North Shore Road	Local	Rural	Gravel	Class 6	500	3.7	1850	10/01/2010	62.44	250	$ 125,000.00	3	3	2003	75	9	2027 to 2033	2030
44125	Maple Leaf Road	Opinicon Road	Billy Green Road	Local	Rural	Gravel	Class 4	1800	4.9	8820	10/01/2010	63.67	250	$ 450,000.00	3	3	2003	75	9	2027 to 2033	2030
43675	Larry York Road	Battersea Road		Local	Rural	Gravel	Class 6	400	4.9	1960	04/18/2016	68.89	250	$ 100,000.00	3	3	2003	75	9	2027 to 2033	2031
43780	Lee Road	Westport Road		Local	Rural	Gravel	Class 6	5400	4.3	23220	04/26/2016	57.33	250	$ 1,350,000.00	3	3	2003	75	9	2027 to 2033	2031
43540	Lagoon Road		Harrowsmith Road	Local	Rural	Gravel	Class 6	200	4	800	04/15/2016	68	250	$ 50,000.00	3	3	2003	75	9	2027 to 2033	2032
42625	Green Bay Road	White Lake Road	Burns Road	Local	Rural	Gravel	Class 6	5200	6.4	33280	04/26/2016	59.89	250	$ 1,300,000.00	3	3	2006	75	9	2027 to 2033	2032
42760	Henderson Road	Wilton Road 18	Yarker Road 4	Local	Rural	Surface treated	Class 4	1600	5.9	9440	09/02/2015	58.11	300	$ 480,000.00	3	3	2007	30	9	2027 to 2033	2032
42210	Fitzgerald Road	Westport Road	Westport Road	Local	Rural	Gravel	Class 6	500	3	1500	04/26/2016	60.11	250	$ 125,000.00	3	3	2003	75	9	2027 to 2033	2033
42400	Garrett Road	Westport Road	Green Bay Road	Local	Rural	Gravel	Class 4	2200	4.5	9900	04/26/2016	65.89	250	$ 550,000.00	3	3	2003	75	9	2027 to 2033	2033
42745	Haughton Road	Westport Road	Westport Road	Local	Rural	Gravel	Class 6	500	4	2000	04/26/2016	67.67	250	$ 125,000.00	3	3	2003	75	9	2027 to 2033	2033
42835	Hidden Valley Road	Perth Road 10		Local	Rural	Gravel	Class 6	500	4.5	2250	04/22/2016	67.11	250	$ 125,000.00	3	3	2003	75	9	2027 to 2033	2033
42925	Hinchinbrooke Road	Desert Lake Road		Local	Rural	Gravel	Class 4	3200	4	12800	04/15/2016	56.22	250	$ 800,000.00	3	3	2003	75	9	2027 to 2033	2033
43270	James Wilson Road	Bunker Hill Road	Canoe Lake Road	Local	Rural	Gravel	Class 6	5900	4	23600	04/26/2016	64.44	250	$ 1,475,000.00	3	3	2003	75	9	2027 to 2033	2033
44050	MacGillivary Road	Billy Green Road		Local	Rural	Gravel	Class 6	1500	4	6000	10/01/2010	68.56	250	$ 375,000.00	3	3	2003	75	9	2027 to 2033	2033
44200	Massassauga Road	Perth Road 10	Perth Road 10	Local	Rural	Gravel	Class 4	1400	4.5	6300	04/22/2016	68.56	250	$ 350,000.00	3	3	2003	75	9	2027 to 2033	2033
44205	Massassauga Road	Perth Road 10		Local	Rural	Gravel	Class 4	5700	4.5	25650	10/01/2010	68.56	250	$ 1,425,000.00	3	3	2003	75	9	2027 to 2033	2033
44215	McAndrews Road			Local	Rural	Gravel	Class 6	4200	4	16800	10/01/2010	64.44	250	$ 1,050,000.00	3	3	2003	75	9	2027 to 2033	2033
44335	McNiel Road	Burridge Road	Lee Road	Local	Rural	Gravel	Class 6	3100	4	12400	04/26/2016	57.33	250	$ 775,000.00	3	3	2003	75	9	2027 to 2033	2033
44605	New Road	Westport Road	Green Bay Road	Local	Rural	Gravel	Class 6	500	4.9	2450	04/26/2016	57.89	250	$ 125,000.00	3	3	2003	75	9	2027 to 2033	2033
44620	Nolan Road	Clair Road		Local	Rural	Gravel	Class 6	350	4	1400	04/15/2016	65.78	250	$ 87,500.00	3	3	2003	75	9	2027 to 2033	2033
44785	Old Thirteen Island Road		Westport Road	Local	Rural	Gravel	Class 4	1600	4.6	7360	04/26/2016	61.89	250	$ 400,000.00	3	3	2003	75	9	2027 to 2033	2033
44875	O'Riley Road	Holleford Road		Local	Urban	Gravel	Class 6	600	4.2	2520	04/15/2016	67.11	250	$ 150,000.00	3	3	2003	75	9	2027 to 2033	2033
45895	Sonneveld Road	Washburn Road	Sunbury Road	Local	Rural	Gravel	Class 4	1600	5	8000	04/18/2016	57.22	250	$ 400,000.00	3	3	2003	75	9	2027 to 2033	2033
45910	Split Rail Road		Opinicon Road	Local	Rural	Gravel	Class 6	500	4	2000	10/01/2010	68.89	250	$ 125,000.00	3	3	2003	75	9	2027 to 2033	2033
46090	Sweetman Road		Dewitt Road	Local	Rural	Gravel	Class 6	600	3.5	2100	04/26/2016	68.89	250	$ 150,000.00	3	3	2003	75	9	2027 to 2033	2033
46195	Tett Crescent	Perth Road 10	Perth Road 10	Local	Rural	Gravel	Class 6	900	5.2	4680	04/22/2016	60.11	250	$ 225,000.00	3	3	2003	75	9	2027 to 2033	2033
46390	Walsh Road	Perth Road 10	Perth Road 10	Local	Rural	Gravel	Class 6	650	4.5	2925	10/01/2010	58.22	250	$ 162,500.00	3	3	2003	75	9	2027 to 2033	2033
46600	White Road	Westport Road	Westport Road	Local	Urban	Gravel	Class 6	600	4.2	2520	04/26/2016	63.56	250	$ 150,000.00	3	3	2003	75	9	2027 to 2033	2033
43105	Holmes Road	Silverwood Drive	Davidson Road	Local	Rural	Surface treated	Class 4	900	6.4	5760	09/09/2015	62.44	300	$ 270,000.00	3	3	2003	30	9	2027 to 2033	2033
46030	Steele Road		Bradshaw Road	Local	Rural	Surface treated	Class 4	2200	5	11000	10/01/2010	68	300	$ 660,000.00	3	3	2003	30	9	2027 to 2033	2033
46360	Walker Street	Verona Street	Road 38	Local	Urban	Asphalt	Class 5	50	8.8	440	09/01/2015	58.67	1500	$ 75,000.00	3	3	2004	50	9	2027 to 2033	2033
46240	Tom Watson Road		Watson Road	Local	Rural	Surface treated	Class 6	400	4.5	1800	09/01/2015	55	300	$ 120,000.00	3	3	2004	30	9	2027 to 2033	2033
46315	Vanluven Road	Holleford Road	Loughborough Portland	Local	Rural	Surface treated	Class 4	2400	6.1	14640	09/01/2015	55.89	300	$ 720,000.00	3	3	2004	30	9	2027 to 2033	2033
46015	Station Street	Walker Street	Bank Street	Local	Urban	Surface treated	Class 4	100	5	500	09/01/2015	55.44	300	$ 30,000.00	3	3	2005	30	9	2027 to 2033	2033
46270	Trousdale Road	Hinchinbrooke Road	Holleford Road	Local	Urban	Surface treated	Class 4	1700	6.2	10540	09/01/2015	61	300	$ 510,000.00	3	3	2005	30	9	2027 to 2033	2033
42610	Green Bay Road	Buck Bay Road	White Lake Road	Local	Rural	Gravel	Class 6	5400	4.9	26460	04/26/2016	61.78	250	$ 1,350,000.00	3	3	2006	75	9	2027 to 2033	2033
43285	James Wilson Road	Canoe Lake Road	Canoe Lake Road	Local	Rural	Gravel	Class 4	1000	3.5	3500	04/26/2016	66.67	250	$ 250,000.00	3	3	2006	75	9	2027 to 2033	2033
42235	Florida Road	Henderson Road	Henderson Road	Local	Rural	Surface treated	Class 4	1300	6.3	8190	09/02/2015	58.33	300	$ 390,000.00	3	3	2007	30	9	2027 to 2033	2033
42340	Freeman Road	Gould Lake Road	Bedford Road	Local	Rural	Surface treated	Class 4	1950	6.2	12090	10/22/2015	68.89	300	$ 585,000.00	3	3	2007	30	9	2027 to 2033	2033
44020	Lower Round Lake Road	Round Lake Road	Ernie Road	Local	Rural	Surface treated	Class 6	2100	6.6	13860	09/10/2015	57.44	300	$ 630,000.00	3	3	2007	30	9	2027 to 2033	2033
44035	Lower Round Lake Road	Ernie Road		Local	Urban	Surface treated	Class 4	1450	6.2	8990	09/10/2015	64	300	$ 435,000.00	3	3	2007	30	9	2027 to 2033	2033
44650	North Shore Road	North Shore Crescent	Hewlett Packard Road	Local	Rural	Surface treated	Class 4	5800	6.3	36540	09/10/2015	62.11	300	$ 1,740,000.00	3	3	2007	30	9	2027 to 2033	2033
40540	Bracken Road	Yarker Road 4	Mclean Road	Local	Rural	Surface treated	Class 4	1550	5.9	9145	09/02/2015	65.11	300	$ 465,000.00	3	3	2011	30	9	2027 to 2033	2033
46660	Wilmer Road	Rutledge Road	McFadden Road	Local	Rural	Surface treated	Class 4	4750	6.7	31825	10/22/2015	69.22	300	$ 1,425,000.00	3	3	2011	30	9	2027 to 2033	2033
44065	Main Street	Bellrock Road	Bellrock Mill Street	Local	Urban	Asphalt	Class 5	450	4.2	1890	09/01/2015	63	1500	$ 675,000.00	3	3	2016	50	9	2027 to 2033	2033
45985	Stage Coach Road	Railton Road	Campbell Road	Collector	Rural	Surface treated	Class 4	2200	6.5	14300	10/22/2015	83.33	300	$ 660,000.00	2	4	1995	30	8	2027 to 2033	2027
41455	Colebrook Road	Cemetery Road	Road 38	Collector	Urban	Asphalt	Class 3	1250	7.3	9125	09/02/2015	80.67	1500	$ 1,875,000.00	2	4	2008	50	8	2027 to 2033	2027
46105	Switzer Lane	Portland Avenue		Local	Urban	Gravel	Class 5	200	3	600	10/01/2010	76.56	250	$ 50,000.00	2	3	2003	75	6	2034 to 2040	2033
46255	Trotter Road	Shales Road		Local	Rural	Gravel	Class 6	500	4.3	2150	04/22/2016	74.11	250	$ 125,000.00	2	3	2003	75	6	2034 to 2040	2033
42415	Garrison Court		Petworth Road	Local	Rural	Surface treated	Class 6	450	5.5	2475	09/01/2015	73.11	300	$ 135,000.00	2	3	1995	30	6	2034 to 2040	2034
43450	Kildeer Drive	Pine Ridge Road		Local	Rural	Asphalt	Class 6	200	5.1	1020	09/01/2015	81.33	450	$ 90,000.00	2	3	1996	50	6	2034 to 2040	2034

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
43495	Kingston Road	Road 38	Harrowsmith Road	Local	Urban	Asphalt	Class 4	300	6.6	1980	09/01/2015	81	1500	$ 450,000.00	2	3	1996	50	6	2034 to 2040	2034
42220	Florida Road		Henderson Road	Local	Rural	Surface treated	Class 4	1200	6.3	7560	11/12/2013	73.11	300	$ 360,000.00	2	3	2000	30	6	2034 to 2040	2034
42385	Frye Road		Roushorn Road	Local	Rural	Gravel	Class 6	1000	3.8	3800	04/22/2016	71.56	250	$ 250,000.00	2	3	2003	75	6	2034 to 2040	2034
42730	Harris Road	Battersea Road		Local	Rural	Gravel	Class 6	1900	3.5	6650	04/18/2016	73.56	250	$ 475,000.00	2	3	2003	75	6	2034 to 2040	2034
42805	Hewlett Packard Road	North Shore Road		Local	Rural	Gravel	Class 6	800	4	3200	10/01/2010	78.89	250	$ 200,000.00	2	3	2003	75	6	2034 to 2040	2034
43960	Loughborough View Road		Battersea Road	Local	Rural	Gravel	Class 5	700	4.9	3430	04/18/2016	73.22	250	$ 175,000.00	2	3	2003	75	6	2034 to 2040	2034
46585	White Lake Road	Buck Bay Road	Green Bay Road	Local	Rural	Gravel	Class 4	3000	5.3	15900	04/26/2016	72.25	250	$ 750,000.00	2	3	2003	75	6	2034 to 2040	2034
46615	Whitty Road North	Bradford Road		Local	Rural	Gravel	Class 6	300	5	1500	04/15/2016	74.44	250	$ 75,000.00	2	3	2003	75	6	2034 to 2040	2034
46630	Whitty Road South		Bradford Road	Local	Rural	Gravel	Class 6	150	4	600	04/15/2016	81.22	250	$ 37,500.00	2	3	2003	75	6	2034 to 2040	2034
46720	Wilson Road	Harrowsmith Road		Local	Rural	Gravel	Class 6	800	5.9	4720	04/15/2016	74.67	250	$ 200,000.00	2	3	2003	75	6	2034 to 2040	2034
43015	Holleford Road	Trousdale Road	New Morin Road	Local	Rural	Surface treated	Class 4	1800	6.1	10980	09/01/2015	71	300	$ 540,000.00	2	3	2003	30	6	2034 to 2040	2034
41470	Colebrook Road East	Road 38	Kingston Road	Local	Urban	Asphalt	Class 6	100	6	600	08/31/2015	81.89	1500	$ 150,000.00	2	3	2003	50	6	2034 to 2040	2034
41050	Canoe Lake Road		Holsgrove Lane	Local	Rural	Surface treated	Class 4	2000	6.7	13400	11/25/2015	81	300	$ 600,000.00	2	3	2009	30	6	2034 to 2040	2034
43825	Leland Road	Perth Road 10	Perth Road 10	Local	Rural	Surface treated	Class 6	1600	6.3	10080	12/18/2015	81.33	300	$ 480,000.00	2	3	2011	30	6	2034 to 2040	2034
41125	Canoe Lake Road		Westport Road	Local	Rural	Surface treated	Class 4	3000	6	18000	11/25/2015	72.44	300	$ 900,000.00	2	3	2016	30	6	2034 to 2040	2034
42550	Gould Lake Road	Freeman Road	Gould Lake Road	Local	Rural	Surface treated	Class 4	900	6.1	5490	10/22/2015	77.78	300	$ 270,000.00	2	3	2000	30	6	2034 to 2040	2035
43795	Leisure Point Road	Massassauga Road		Local	Rural	Gravel	Class 6	2400	4	9600	04/22/2016	72.44	250	$ 600,000.00	2	3	2003	75	6	2034 to 2040	2035
42985	Holleford Road	Road 38	Vanluven Road	Local	Rural	Surface treated	Class 4	1600	6.5	10400	09/01/2015	80.11	300	$ 480,000.00	2	3	2003	30	6	2034 to 2040	2035
45970	Stage Coach Road	Orser Road	Railton Road	Local	Urban	Surface treated	Class 3	2900	5.6	16240	10/22/2015	75	300	$ 870,000.00	2	3	1995	30	6	2034 to 2040	2036
42775	Henry Road		Westport Road	Local	Urban	Gravel	Class 6	1000	4.3	4300	04/26/2016	77.11	250	$ 250,000.00	2	3	2003	75	6	2034 to 2040	2036
46210	Timmerman Road		James Wilson Road	Local	Rural	Gravel	Class 6	1000	3	3000	04/26/2016	72.44	250	$ 250,000.00	2	3	2003	75	6	2034 to 2040	2036
43330	Johnny Martin Road	Holleford Road		Local	Rural	Gravel	Class 6	900	4	3600	04/15/2016	76.22	250	$ 225,000.00	2	3	2006	75	6	2034 to 2040	2036
45295	Railway Street	Wilton Road 18	Road 38	Local	Urban	Gravel	Class 6	250	4.5	1125	04/15/2016	73	250	$ 62,500.00	2	3	2006	75	6	2034 to 2040	2036
46045	Steve Babcock Road	James Wilson Road		Local	Rural	Gravel	Class 6	350	3.5	1225	04/26/2016	72.11	250	$ 87,500.00	2	3	2006	75	6	2034 to 2040	2036
40255	Babcock Road		Rutledge Road	Local	Rural	Surface treated	Class 6	200	3.7	740	12/18/2015	71.33	300	$ 60,000.00	2	3	2006	30	6	2034 to 2040	2036
44755	Oak Bluffs Road		Alf Patterson Road	Local	Rural	Asphalt	Class 4	3050	6.2	18910	11/25/2015	78.56	450	$ 1,372,500.00	2	3	2006	50	6	2034 to 2040	2036
44815	Opinicon Road	Perth Road 10		Local	Rural	Surface treated	Class 4	3300	6.5	21450	09/10/2015	82.44	300	$ 990,000.00	2	3	2006	30	6	2034 to 2040	2036
40525	Boyce Road	Road 38	Road 38	Local	Urban	Asphalt	Class 4	680	5.5	3740	09/01/2015	80.67	1500	$ 1,020,000.00	2	3	2008	50	6	2034 to 2040	2036
43810	Leland Road	Perth Road 10	Perth Road 10	Local	Rural	Surface treated	Class 4	300	6.2	1860	12/18/2015	81.33	300	$ 90,000.00	2	3	2011	30	6	2034 to 2040	2036
40855	Burnt Hills Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 4	1000	5.8	5800	09/10/2015	80.11	300	$ 300,000.00	2	3	2016	30	6	2034 to 2040	2036
42325	Freeman Road	Gould Lake Road	Gould Lake Road	Local	Rural	Surface treated	Class 5	1150	6.2	7130	10/22/2015	84.89	300	$ 345,000.00	2	3	2016	30	6	2034 to 2040	2036
44110	Maple Hill Way		Hitchcock Drive	Local	Rural	Surface treated	Class 6	300	6.5	1950	09/11/2015	81.56	300	$ 90,000.00	2	3	2016	30	6	2034 to 2040	2036
46555	White Lake Road		Buck Bay Road	Local	Rural	Surface treated	Class 6	1100	6.7	7370	11/25/2015	81.33	300	$ 330,000.00	2	3	2016	30	6	2034 to 2040	2036
42535	Gorr Road	Road 38		Local	Rural	Surface treated	Class 4	900	4.8	4320	09/02/2015	70.89	300	$ 270,000.00	2	3	1997	30	6	2034 to 2040	2037
42565	Gould Lake Road	Gould Lake Road		Local	Rural	Gravel	Class 4	1450	4.5	6525	10/01/2010	72.67	250	$ 362,500.00	2	3	2003	75	6	2034 to 2040	2037
45925	Spooner Road	Latimer Road		Local	Rural	Gravel	Class 4	800	4.5	3600	10/01/2010	81.56	250	$ 200,000.00	2	3	2003	75	6	2034 to 2040	2037
42265	Forest Road	Murvale Road	Stage Coach Road	Local	Rural	Surface treated	Class 4	1900	6.1	11590	10/22/2015	73.11	300	$ 570,000.00	2	3	2007	30	6	2034 to 2040	2037
42010	Duff Road	Round Lake Road		Local	Rural	Surface treated	Class 4	2250	6.1	13725	09/10/2015	71.89	300	$ 675,000.00	2	3	2007	30	6	2034 to 2040	2037
45205	Quinn Road West	Wilton Road 18	Road 38	Local	Rural	Surface treated	Class 4	1550	3.9	6045	09/02/2015	78.11	300	$ 465,000.00	2	3	2009	30	6	2034 to 2040	2037
40780	Burnett Road		Road 38	Local	Rural	Surface treated	Class 6	300	5.9	1770	09/01/2015	84.89	300	$ 90,000.00	2	3	2013	30	6	2034 to 2040	2037
46330	Verona Street	Lions Club Road		Local	Urban	Asphalt	Class 5	900	6.4	5760	09/01/2015	84	1500	$ 1,350,000.00	2	3	1993	50	6	2034 to 2040	2038
45445	Ritchie Road		Wilmer Road	Local	Rural	Surface treated	Class 6	200	5	1000	10/01/2010	78.67	300	$ 60,000.00	2	3	1995	30	6	2034 to 2040	2038
44740	Notre Dame Street	Centennial Park Road	Centennial Park Road	Local	Urban	Asphalt	Class 5	350	7	2450	09/01/2015	83.11	1500	$ 525,000.00	2	3	1996	50	6	2034 to 2040	2038
45115	Portland Avenue	Sydenham Church Street	George Street	Local	Urban	Asphalt	Class 5	900	7	6300	10/22/2015	81	1500	$ 1,350,000.00	2	3	1998	50	6	2034 to 2040	2038
45040	Petworth Road	River Road	Kerr Road	Local	Rural	Surface treated	Class 4	3250	6.7	21775	09/01/2015	80.22	300	$ 975,000.00	2	3	1998	30	6	2034 to 2040	2038
42295	Fox Ridge Trail			Local	Urban	Asphalt	Class 4	600	6.2	3720	10/22/2015	79.22	1500	$ 900,000.00	2	3	2000	50	6	2034 to 2040	2038
42130	Firehall Road	Garrett Road	Burridge Road	Local	Rural	Gravel	Class 6	1500	4.5	6750	04/26/2016	73.56	250	$ 375,000.00	2	3	2003	75	6	2034 to 2040	2038
43840	Leland Road	Perth Road 10	North Shore Road	Local	Rural	Gravel	Class 4	4200	4.9	20580	10/01/2010	74.44	250	$ 1,050,000.00	2	3	2003	75	6	2034 to 2040	2038
45390	Reynolds Road	Snider Road	Snider Road	Local	Urban	Gravel	Class 6	350	4	1400	04/15/2016	72.44	250	$ 87,500.00	2	3	2003	75	6	2034 to 2040	2038
45430	Rideau Road	Burnt Hills Road		Local	Urban	Gravel	Class 6	100	4.5	450	04/18/2016	77.11	250	$ 25,000.00	2	3	2003	75	6	2034 to 2040	2038
46710	Wilmer Road	Perth Road 10	Perth Road 10	Local	Urban	Asphalt	Class 4	50	6.5	325	10/23/2013	81.56	1500	$ 75,000.00	2	3	2013	50	6	2034 to 2040	2038
42940	Hitchcock Drive		Sunbury Road	Local	Rural	Surface treated	Class 4	850	6.1	5185	09/11/2015	82.44	300	$ 255,000.00	2	3	2016	30	6	2034 to 2040	2038
40245	Cedarwoods Drive	Road 38	Valleyview Drive	Local	Urban	Surface treated	Class 5	360	6.9	2484	09/01/2015	70.44	300	$ 108,000.00	2	3	2005	30	6	2034 to 2040	2039
41590	Cross Road	Bellrock Road	Verona Sand Road	Local	Rural	Surface treated	Class 4	550	4.5	2475	09/01/2015	73.44	300	$ 165,000.00	2	3	2009	30	6	2034 to 2040	2039
45670	Verona Sand Road	Cross Road	Cross Road	Local	Rural	Surface treated	Class 6	700	5.4	3780	09/01/2015	84	300	$ 210,000.00	2	3	2009	30	6	2034 to 2040	2039
46750	Wolfe Swamp Road	Colebrook Road	Petworth Road	Local	Rural	Surface treated	Class 4	2900	6.3	18270	09/01/2015	71.67	300	$ 870,000.00	2	3	2009	30	6	2034 to 2040	2039
40810	Burnt Hills Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 4	1200	5.8	6960	09/10/2015	80.11	300	$ 360,000.00	2	3	2016	30	6	2034 to 2040	2039
40915	Burridge Road	Westport Road	Green Bay Road	Local	Rural	Asphalt	Class 4	1700	6.3	10710	11/25/2015	84.44	450	$ 765,000.00	2	3	1984	50	6	2034 to 2040	2040
44905	Orser Road		Stage Coach Road	Local	Rural	Surface treated	Class 4	1200	6	7200	10/22/2015	76	300	$ 360,000.00	2	3	1998	30	6	2034 to 2040	2040
43720	Latimer Road	Holmes Road	Davidson Road	Local	Rural	Surface treated	Class 4	1400	6	8400	09/09/2015	71.89	300	$ 420,000.00	2	3	2001	30	6	2034 to 2040	2040
42820	Hickey Road	Buck Bay Road		Local	Rural	Gravel	Class 6	1200	4.3	5160	05/02/2016	74.22	250	$ 300,000.00	2	3	2003	75	6	2034 to 2040	2040
43095	Holmes Road	Heska Crescent	Silverwood Drive	Local	Rural	Surface treated	Class 4	600	6.4	3840	09/09/2015	76	300	$ 180,000.00	2	3	2010	30	6	2034 to 2040	2040
42580	Graham Road		Road 38	Local	Rural	Surface treated	Class 4	500	4.7	2350	09/01/2015	74.22	300	$ 150,000.00	2	3	2011	30	6	2034 to 2040	2040

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
43045	Holleford Road	Johnny Martin Road	Deer Park Lane	Local	Rural	Surface treated	Class 4	1600	6.6	10560	09/01/2015	77.56	300	$ 480,000.00	2	3	2011	30	6	2034 to 2040	2040
43060	Holleford Road	Deer Park Lane	Desert Lake Road	Local	Rural	Surface treated	Class 4	2700	6.6	17820	09/01/2015	77.78	300	$ 810,000.00	2	3	2011	30	6	2034 to 2040	2040
43120	Holmes Road	Davidson Road	Latimer Road	Local	Rural	Surface treated	Class 4	1400	6.7	9380	09/09/2015	75.67	300	$ 420,000.00	2	3	2011	30	6	2034 to 2040	2040
44305	Mclean Road	Wallace Road	Colebrook Road	Local	Rural	Surface treated	Class 4	1350	5.9	7965	09/02/2015	76.33	300	$ 405,000.00	2	3	2011	30	6	2034 to 2040	2040
46375	Wallace Road	Camden Portland Bounda	Mclean Road	Local	Rural	Surface treated	Class 4	3300	5.6	18480	09/02/2015	70.78	300	$ 990,000.00	2	3	2011	30	6	2034 to 2040	2040
43135	Holmes Road	Latimer Road	Old Boy Road	Local	Rural	Surface treated	Class 4	400	6.4	2560	09/09/2015	84.22	300	$ 120,000.00	2	3	2012	30	6	2034 to 2040	2040
44245	McConnell Road	Clark Road	Yarker Road 4	Local	Urban	Surface treated	Class 4	1450	5.5	7975	09/02/2015	82.22	300	$ 435,000.00	2	3	2012	30	6	2034 to 2040	2040
40201	Burnt Hills Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 4	3250	5.8	18850	09/10/2015	83.67	300	$ 975,000.00	2	3	2013	30	6	2034 to 2040	2040
44395	Milburn Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 6	2000	6.5	13000	09/10/2015	84.78	300	$ 600,000.00	2	3	2013	30	6	2034 to 2040	2040
44890	Ormsbee Road	Milburn Road		Local	Rural	Surface treated	Class 6	2650	6.2	16430	09/10/2015	80.78	300	$ 795,000.00	2	3	2014	30	6	2034 to 2040	2040
45955	Spooner Road	Perth Road 10		Local	Rural	Surface treated	Class 4	550	6	3300	09/09/2015	84	300	$ 165,000.00	2	3	2014	30	6	2034 to 2040	2040
46300	Valleyview Drive		Cedarwoods Drive	Local	Urban	Surface treated	Class 4	500	6.3	3150	09/01/2015	76.56	300	$ 150,000.00	2	3	2014	30	6	2034 to 2040	2040
43255	Ida Hill Road	Sunbury Road	Milburn Road	Local	Rural	Surface treated	Class 4	1900	6.8	12920	09/10/2015	72.11	300	$ 570,000.00	2	3	2015	30	6	2034 to 2040	2040
40825	Burnt Hills Road	Battersea Road	Battersea Road	Local	Rural	Asphalt	Class 4	200	6.5	1300	09/10/2015	80.78	450	$ 90,000.00	2	3	2016	50	6	2034 to 2040	2040
40735	Buck Bay Road	White Lake Road	White Lake Road	Local	Rural	Surface treated	Class 4	2650	6.7	17755	11/25/2015	81.11	300	$ 795,000.00	2	3	2016	30	6	2034 to 2040	2040
40840	Burnt Hills Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 4	400	6.2	2480	09/10/2015	84.56	300	$ 120,000.00	2	3	2016	30	6	2034 to 2040	2040
46060	Stone Point Road		Hitchcock Drive	Local	Rural	Surface treated	Class 4	1150	6.7	7705	09/11/2015	80.11	300	$ 345,000.00	2	3	2016	30	6	2034 to 2040	2040
57440	Sydenham Road	Orser Road	Rutledge Road	Arterial	Rural	Asphalt	Class 2	5250	9.2	48300	12/07/2015	96.89	450	$ 2,362,500.00	1	5	1993	50	5	2034 to 2040	2034
57555	Sydenham Road	Rutledge Road	Rutledge Road	Arterial	Rural	Asphalt	Class 2	350	9.2	3220	12/17/2015	100	450	$ 157,500.00	1	5	1993	50	5	2034 to 2040	2034
54565	Perth Road 10	Roushorn Road	Roushorn Road	Arterial	Rural	Asphalt	Class 3	500	6.9	3450	10/22/2015	93.67	450	$ 225,000.00	1	5	2004	50	5	2034 to 2040	2034
42445	George Street	Sydenham Mill Street	Wheatley Street	Arterial	Urban	Asphalt	Class 4	150	7.8	1170	10/22/2015	94	1500	$ 225,000.00	1	5	2005	50	5	2034 to 2040	2035
55945	Road 38	Bradshaw Road		Arterial	Rural	Asphalt	Class 2	3300	6.3	20790	11/25/2015	90	450	$ 1,485,000.00	1	5	2005	50	5	2034 to 2040	2035
57210	Sydenham Mill Street	Rutledge Road	George Street	Arterial	Urban	Asphalt	Class 3	400	8.9	3560	12/18/2015	92.22	1500	$ 600,000.00	1	5	2005	50	5	2034 to 2040	2035
58590	Wilton Road 18		Yarker Road 4	Arterial	Rural	Asphalt	Class 3	3600	6.7	24120	09/02/2015	92.56	450	$ 1,620,000.00	1	5	2005	50	5	2034 to 2040	2035
58820	Yarker Road 4	Camden Portland Bounda	Wilton Road 18	Arterial	Rural	Asphalt	Class 3	3750	10	37500	09/02/2015	100	450	$ 1,687,500.00	1	5	2015	50	5	2034 to 2040	2035
54220	Perth Road 10	Perth Road 10		Arterial	Rural	Asphalt	Class 3	2500	6.7	16750	10/22/2015	98.89	450	$ 1,125,000.00	1	5	1993	50	5	2034 to 2040	2036
54450	Perth Road 10		Roushorn Road	Arterial	Rural	Asphalt	Class 3	6700	6.9	46230	10/22/2015	85.11	450	$ 3,015,000.00	1	5	1996	50	5	2034 to 2040	2036
54460	Perth Road 10		Roushorn Road	Arterial	Rural	Asphalt	Class 3	1000	6.9	6900	08/27/2015	100	450	$ 450,000.00	1	5	1996	50	5	2034 to 2040	2036
53990	Perth Road 10		Perth Road Crescent	Arterial	Rural	Asphalt	Class 3	5300	6.7	35510	10/22/2015	93.11	450	$ 2,385,000.00	1	5	2002	50	5	2034 to 2040	2036
51805	Bellrock Road		Bellrock Mill Street	Arterial	Urban	Asphalt	Class 4	3350	6.8	22780	09/01/2015	91.89	1500	$ 5,025,000.00	1	5	2006	50	5	2034 to 2040	2036
56175	Rutledge Road		Wheatley Street	Arterial	Urban	Asphalt	Class 3	550	10.4	5720	10/22/2015	99.44	1500	$ 825,000.00	1	5	2016	50	5	2034 to 2040	2036
56290	Rutledge Road	Wheatley Street	Storm Haven Lane	Arterial	Urban	Asphalt	Class 3	1100	10.4	11440	10/22/2015	98.56	1500	$ 1,650,000.00	1	5	2016	50	5	2034 to 2040	2036
50875	Battersea Road	Burnt Hills Road		Arterial	Rural	Surface treated	Class 3	6100	6.7	40870	09/10/2015	87	300	$ 1,830,000.00	1	5	2016	30	5	2034 to 2040	2036
51460	Bedford Road	Busch Lane	Salmon Lake Road	Arterial	Rural	Surface treated	Class 4	2400	6.7	16080	10/22/2015	87	300	$ 720,000.00	1	5	2016	30	5	2034 to 2040	2036
51575	Bedford Road	Salmon Lake Road	Salmon Lake Road	Arterial	Rural	Surface treated	Class 4	1000	6.4	6400	10/22/2015	87	300	$ 300,000.00	1	5	2016	30	5	2034 to 2040	2036
56405	Rutledge Road	Storm Haven Lane	Sydenham Road	Arterial	Rural	Asphalt	Class 3	2750	9.1	25025	10/22/2015	99.44	450	$ 1,237,500.00	1	5	1993	50	5	2034 to 2040	2037
42460	George Street	Wheatley Street	Portland Avenue	Arterial	Urban	Asphalt	Class 4	200	8.9	1780	10/22/2015	88.11	1500	$ 300,000.00	1	5	1996	50	5	2034 to 2040	2037
51230	Bedford Road	Freeman Road		Arterial	Rural	Asphalt	Class 4	300	7.7	2310	10/22/2015	95.11	450	$ 135,000.00	1	5	2007	50	5	2034 to 2040	2037
57325	Sydenham Road	Horning Road		Arterial	Rural	Asphalt	Class 2	2000	8.7	17400	10/22/2015	92.11	450	$ 900,000.00	1	5	2007	50	5	2034 to 2040	2037
52955	Desert Lake Road	Deyos Road	Holleford Road	Arterial	Urban	Surface treated	Class 4	2800	6.7	18760	09/01/2015	97.11	300	$ 840,000.00	1	5	2015	30	5	2034 to 2040	2038
53070	Desert Lake Road	Holleford Road		Arterial	Urban	Surface treated	Class 3	650	6.7	4355	09/01/2015	88	300	$ 195,000.00	1	5	2015	30	5	2034 to 2040	2038
53300	Desert Lake Road		Bedford Road	Arterial	Rural	Surface treated	Class 3	1700	6.7	11390	09/01/2015	97.11	300	$ 510,000.00	1	5	2015	30	5	2034 to 2040	2038
54790	Perth Road 10	McComish Lane	McComish Lane	Arterial	Rural	Asphalt	Class 3	850	6.8	5780	10/22/2015	100	450	$ 382,500.00	1	5	1999	50	5	2034 to 2040	2039
54795	Perth Road 10	McComish Lane		Arterial	Rural	Asphalt	Class 3	5150	6.8	35020	10/22/2015	91.89	450	$ 2,317,500.00	1	5	1999	50	5	2034 to 2040	2039
55025	Road 38	Kingston Road	Kingston Road	Arterial	Urban	Asphalt	Class 2	500	10	5000	12/04/2015	87.56	1500	$ 750,000.00	1	5	2009	50	5	2034 to 2040	2039
52840	Desert Lake Road	Bauder Drive	Deyos Road	Arterial	Urban	Surface treated	Class 4	2200	6.7	14740	09/01/2015	93.67	300	$ 660,000.00	1	5	2016	30	5	2034 to 2040	2039
52725	Desert Lake Road	High Falls Road	Bauder Drive	Arterial	Rural	Surface treated	Class 3	1550	6.7	10385	11/18/2016	100	300	$ 465,000.00	1	5	2016	30	5	2034 to 2040	2039
54680	Perth Road 10	Roushorn Road	McComish Lane	Arterial	Rural	Asphalt	Class 3	2100	10	21000	10/22/2015	93.67	450	$ 945,000.00	1	5	2010	50	5	2034 to 2040	2040
51920	Bellrock Road	Bellrock Mill Street	Long Swamp Road	Arterial	Rural	Asphalt	Class 3	2100	10	21000	09/01/2015	95.67	450	$ 945,000.00	1	5	2011	50	5	2034 to 2040	2040
52035	Bellrock Road	Long Swamp Road	Cross Road	Arterial	Rural	Asphalt	Class 3	3200	7	22400	09/01/2015	98	450	$ 1,440,000.00	1	5	2012	50	5	2034 to 2040	2040
54105	Perth Road 10	Perth Road Crescent	Perth Road Crescent	Arterial	Rural	Asphalt	Class 3	1400	10	14000	10/22/2015	95.67	450	$ 630,000.00	1	5	2013	50	5	2034 to 2040	2040
51345	Bedford Road		Busch Lane	Arterial	Rural	Surface treated	Class 4	4050	6.2	25110	10/22/2015	87.11	300	$ 1,215,000.00	1	5	2014	30	5	2034 to 2040	2040
57670	Westport Road		Buck Bay Road	Arterial	Rural	Surface treated	Class 4	2700	6.4	17280	11/25/2015	92	300	$ 810,000.00	1	5	2014	30	5	2034 to 2040	2040
40045	Alton Road	Loughborough Portland R	Bedford Road	Collector	Rural	Surface treated	Class 3	3700	6	22200	10/22/2015	93.11	300	$ 1,110,000.00	1	4	2003	30	4	2034 to 2040	2035
45265	Railton Road	Sydenham Road	Sydenham Road	Collector	Rural	Asphalt	Class 6	50	6.3	315	12/18/2015	100	450	$ 22,500.00	1	4	2005	50	4	2034 to 2040	2035
46180	Sydenham William Street	Rutledge Road	Sydenham Mill Street	Collector	Urban	Asphalt	Class 4	500	7.8	3900	10/22/2015	92.78	1500	$ 750,000.00	1	4	2005	50	4	2034 to 2040	2035
40585	Bradford Road	Camden Portland Bounda	Wolfe Swamp Road	Collector	Rural	Surface treated	Class 4	2500	5.7	14250	09/01/2015	94.89	300	$ 750,000.00	1	4	1993	30	4	2034 to 2040	2036
45220	Railton Road	Murvale Road	Stage Coach Road	Collector	Rural	Surface treated	Class 4	1800	6.7	12060	10/22/2015	88	300	$ 540,000.00	1	4	2011	30	4	2034 to 2040	2039
45235	Railton Road	Stage Coach Road	Stage Coach Road	Collector	Rural	Surface treated	Class 4	550	6.4	3520	11/25/2015	96.56	300	$ 165,000.00	1	4	2015	30	4	2034 to 2040	2039
43705	Latimer Road	Davidson Road	Holmes Road	Collector	Rural	Surface treated	Class 4	2300	6	13800	09/09/2015	86.33	300	$ 690,000.00	1	4	1992	30	4	2034 to 2040	2040
43360	Keeley Road	Sydenham Road	Sydenham Road	Collector	Rural	Asphalt	Class 4	300	7.5	2250	12/18/2015	89.56	450	$ 135,000.00	1	4	2010	50	4	2034 to 2040	2040
43690	Latimer Road	Dover Road	Davidson Road	Collector	Rural	Surface treated	Class 5	950	6.4	6080	09/09/2015	89.89	300	$ 285,000.00	1	4	2010	30	4	2034 to 2040	2040
45280	Railton Road	Sydenham Road	Cliffside Lane	Collector	Rural	Surface treated	Class 6	2900	6.4	18560	10/22/2015	98.89	300	$ 870,000.00	1	4	2015	30	4	2034 to 2040	2040

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
43615	Lakefield Drive	Holmes Road	Holmes Road	Local	Rural	Surface treated	Class 4	1300	5.4	7020	09/09/2015	97.11	300	$ 390,000.00	1	3	1990	30	3	2041 to 2046	2020
41515	Copper Kettle Drive	Lakefield Drive		Local	Urban	Surface treated	Class 6	400	5.8	2320	09/09/2015	99.44	300	$ 120,000.00	1	3	1992	30	3	2041 to 2046	2022
44080	Maple Crest Road	Lakefield Drive		Local	Rural	Surface treated	Class 4	800	5.8	4640	09/09/2015	99.44	300	$ 240,000.00	1	3	1992	30	3	2041 to 2046	2022
43630	Lakeside Road		Duff Road	Local	Rural	Surface treated	Class 4	300	4.8	1440	09/10/2015	95.44	300	$ 90,000.00	1	3	1994	30	3	2041 to 2046	2024
46420	Washburn Road	Ida Hill Road	Factory Road	Local	Rural	Surface treated	Class 4	1600	6.6	10560	09/09/2015	98	300	$ 480,000.00	1	3	1994	30	3	2041 to 2046	2024
41740	Davidson Road	Latimer Road	Perth Road 10	Local	Rural	Surface treated	Class 4	2600	6.4	16640	09/09/2015	97.11	300	$ 780,000.00	1	3	1995	30	3	2041 to 2046	2025
41710	Davidson Road	Holmes Road	Mowoods Lane	Local	Rural	Surface treated	Class 4	1500	6.4	9600	09/09/2015	99.44	300	$ 450,000.00	1	3	1995	30	3	2041 to 2046	2025
45940	Spooner Road		Perth Road 10	Local	Urban	Surface treated	Class 4	700	6	4200	09/09/2015	100	300	$ 210,000.00	1	3	1995	30	3	2041 to 2046	2025
40945	Camden Portland Boundar	Colebrook Road	Petworth Road	Local	Rural	Surface treated	Class 4	2100	5.5	11550	09/02/2015	100	300	$ 630,000.00	1	3	1996	30	3	2041 to 2046	2026
42490	German Road	Petworth Road	Petworth Road	Local	Rural	Surface treated	Class 4	1650	6.1	10065	09/01/2015	86.33	300	$ 495,000.00	1	3	1996	30	3	2041 to 2046	2026
42475	German Road	Long Swamp Road	Long Swamp Road	Local	Rural	Surface treated	Class 4	200	5.3	1060	12/18/2015	90	300	$ 60,000.00	1	3	1997	30	3	2041 to 2046	2027
45025	Petworth Road	Garrison Court	River Road	Local	Rural	Surface treated	Class 4	1250	6.7	8375	09/01/2015	86.33	300	$ 375,000.00	1	3	1998	30	3	2041 to 2046	2028
45475	River Road		Petworth Road	Local	Rural	Surface treated	Class 4	250	4	1000	09/01/2015	96	300	$ 75,000.00	1	3	1998	30	3	2041 to 2046	2028
43075	Holmes Road	Heska Crescent	Heska Crescent	Local	Rural	Surface treated	Class 4	1350	6.7	9045	09/09/2015	92.22	300	$ 405,000.00	1	3	2000	30	3	2041 to 2046	2030
46480	Watson Road	Petworth Road	Boyce Road	Local	Rural	Surface treated	Class 4	1400	6.4	8960	09/01/2015	93.44	300	$ 420,000.00	1	3	2000	30	3	2041 to 2046	2030
40960	Campbell Road	Stage Coach Road	Stage Coach Road	Local	Rural	Surface treated	Class 4	2000	6.4	12800	10/22/2015	95.67	300	$ 600,000.00	1	3	2000	30	3	2041 to 2046	2030
42670	Greenfield Road	Perth Road 10	Perth Road 10	Local	Rural	Surface treated	Class 4	700	6.7	4690	09/10/2015	93.33	300	$ 210,000.00	1	3	2000	30	3	2041 to 2046	2030
44860	Opinicon Road	Perth Road 10		Local	Rural	Surface treated	Class 4	2950	6.5	19175	09/10/2015	90.44	300	$ 885,000.00	1	3	2001	30	3	2041 to 2046	2031
45490	Rockwood Place		Moreland Dixon Road	Local	Rural	Surface treated	Class 6	200	7.2	1440	09/10/2015	94	300	$ 60,000.00	1	3	2001	30	3	2041 to 2046	2031
40135	Arena Boundary Road	Second Lake Road	Snider Road	Local	Rural	Surface treated	Class 6	800	5.4	4320	09/01/2015	98	300	$ 240,000.00	1	3	2001	30	3	2041 to 2046	2031
43210	Horning Road		Sydenham Road	Local	Rural	Surface treated	Class 4	1550	5.6	8680	10/22/2015	88.67	300	$ 465,000.00	1	3	2001	30	3	2041 to 2046	2031
44830	Opinicon Road		Post Office Gate Lane	Local	Rural	Surface treated	Class 4	3950	6.5	25675	09/10/2015	93.67	300	$ 1,185,000.00	1	3	2001	30	3	2041 to 2046	2031
44845	Opinicon Road	Post Office Gate Lane	Perth Road 10	Local	Rural	Surface treated	Class 4	1700	6.5	11050	09/10/2015	93.67	300	$ 510,000.00	1	3	2001	30	3	2041 to 2046	2031
41725	Davidson Road	Mowoods Lane	Latimer Road	Local	Rural	Surface treated	Class 4	1300	6.4	8320	09/09/2015	98	300	$ 390,000.00	1	3	2002	30	3	2041 to 2046	2032
40930	Camden Portland Boundar	Yarker Road 4	Colebrook Road	Local	Rural	Surface treated	Class 4	2850	5.6	15960	09/02/2015	100	300	$ 855,000.00	1	3	2003	30	3	2041 to 2046	2033
41335	Clark Road	McConnell Road		Local	Rural	Surface treated	Class 5	900	3.8	3420	09/02/2015	94.56	300	$ 270,000.00	1	3	2003	30	3	2041 to 2046	2033
40600	Bradford Road	Wolfe Swamp Road	Ellerbeck Road	Local	Urban	Surface treated	Class 4	650	5.5	3575	09/01/2015	86.44	300	$ 195,000.00	1	3	2003	30	3	2041 to 2046	2033
41275	Church Road (Bellrock)	Bellrock Road	Mary Moore Road	Local	Rural	Surface treated	Class 4	1500	5.3	7950	12/18/2015	91.67	300	$ 450,000.00	1	3	2003	30	3	2041 to 2046	2033
46675	Wilmer Road	McFadden Road	Ritchie Road	Local	Rural	Surface treated	Class 4	800	5.3	4240	10/22/2015	91.33	300	$ 240,000.00	1	3	2003	30	3	2041 to 2046	2033
43600	Lakefield Drive	Holmes Road	Holmes Road	Local	Rural	Surface treated	Class 4	700	6.2	4340	09/09/2015	92.22	300	$ 210,000.00	1	3	2004	30	3	2041 to 2046	2034
43000	Holleford Road	Vanluven Road	Trousdale Road	Local	Rural	Surface treated	Class 4	1350	6.2	8370	09/01/2015	93	300	$ 405,000.00	1	3	2005	30	3	2041 to 2046	2035
44800	Opinicon Road	Perth Road 10	Perth Road 10	Local	Rural	Surface treated	Class 4	4400	6.5	28600	09/10/2015	92.78	300	$ 1,320,000.00	1	3	2006	30	3	2041 to 2046	2036
43375	Keeley Road	Sydenham Road	Park Valley Road	Local	Rural	Surface treated	Class 4	2200	6.5	14300	10/22/2015	97.78	300	$ 660,000.00	1	3	2007	30	3	2041 to 2046	2037
45505	Rosedale Road	Alton Road	Freeman Road	Local	Rural	Surface treated	Class 5	1350	6.3	8505	10/22/2015	93.67	300	$ 405,000.00	1	3	2007	30	3	2041 to 2046	2037
42105	Fawn Brook Drive	Spooner Road		Local	Rural	Surface treated	Class 4	400	6	2400	09/09/2015	86.89	300	$ 120,000.00	1	3	2007	30	3	2041 to 2046	2037
44695	Norway Road	McFadden Road	Wilmer Road	Local	Rural	Surface treated	Class 4	1900	5.2	9880	10/22/2015	85.56	300	$ 570,000.00	1	3	2008	30	3	2041 to 2046	2038
43870	Leveque Road	Bellrock Mill Street	Bellrock Pero Road	Local	Rural	Surface treated	Class 4	1000	6	6000	09/01/2015	86.33	300	$ 300,000.00	1	3	2009	30	3	2041 to 2046	2039
42595	Graham Road	Road 38	Road 38	Local	Rural	Surface treated	Class 4	200	4.7	940	09/01/2015	87.22	300	$ 60,000.00	1	3	2009	30	3	2041 to 2046	2039
43930	Long Swamp Road	German Road	Bellrock Road	Local	Rural	Surface treated	Class 6	2100	6.1	12810	09/01/2015	85.78	300	$ 630,000.00	1	3	2009	30	3	2041 to 2046	2039
45370	Redmond Road	Redmond Road	Holleford Road	Local	Rural	Surface treated	Class 6	250	6.4	1600	09/01/2015	85	300	$ 75,000.00	1	3	2009	30	3	2041 to 2046	2039
46135	Sydenham Cross Street	Sydenham Mill Street	Wheatley Street	Local	Urban	Asphalt	Class 4	150	6.1	915	10/22/2015	95.44	1500	$ 225,000.00	1	3	2005	50	3	2041 to 2046	2040
40165	Arena Boundary Road	Davey Road		Local	Rural	Surface treated	Class 4	2150	6	12900	11/25/2015	99.44	300	$ 645,000.00	1	3	2010	30	3	2041 to 2046	2040
42790	Heska Crescent	Holmes Road	Holmes Road	Local	Rural	Surface treated	Class 6	1250	6.7	8375	09/09/2015	95.11	300	$ 375,000.00	1	3	2010	30	3	2041 to 2046	2040
43345	Johns Way Road	Heska Crescent	Heska Crescent	Local	Rural	Surface treated	Class 6	300	6.5	1950	09/09/2015	95.67	300	$ 90,000.00	1	3	2010	30	3	2041 to 2046	2040
40000	Abernathy Road	Ida Hill Road	Ida Hill Road	Local	Rural	Surface treated	Class 6	800	5.9	4720	09/10/2015	89.89	300	$ 240,000.00	1	3	2010	30	3	2041 to 2046	2040
45835	Silverwood Drive	Holmes Road		Local	Rural	Surface treated	Class 6	950	5.9	5605	09/09/2015	93.67	300	$ 285,000.00	1	3	2010	30	3	2041 to 2046	2040
46712	Wilmer Road	Perth Road 10	Perth Road Crescent	Local	Urban	Asphalt	Class 4	50	7	350	12/18/2015	100	1500	$ 75,000.00	1	3	1990	50	3	2041 to 2046	2040
42955	Hogan Road		Wilmer Road	Local	Rural	Surface treated	Class 4	1900	4.9	9310	10/22/2015	96.56	300	$ 570,000.00	1	3	2011	30	3	2041 to 2046	2041
45130	Princess Road		Battersea Road	Local	Urban	Surface treated	Class 4	1650	6.1	10065	09/09/2015	91.33	300	$ 495,000.00	1	3	2011	30	3	2041 to 2046	2041
45745	Scanlan Court	Scanlan Road		Local	Rural	Surface treated	Class 6	200	6.1	1220	12/07/2015	92	300	$ 60,000.00	1	3	2011	30	3	2041 to 2046	2041
46690	Wilmer Road	Ritchie Road	Norway Road	Local	Rural	Surface treated	Class 4	1750	5.3	9275	10/22/2015	91.33	300	$ 525,000.00	1	3	2011	30	3	2041 to 2046	2041
46705	Wilmer Road	Norway Road	Perth Road 10	Local	Rural	Surface treated	Class 5	700	5.4	3780	10/22/2015	92.78	300	$ 210,000.00	1	3	2011	30	3	2041 to 2046	2041
41170	Carrying Place Road	Burnt Hills Road	Burnt Hills Road	Local	Rural	Surface treated	Class 4	1050	6	6300	09/10/2015	87.78	300	$ 315,000.00	1	3	2011	30	3	2041 to 2046	2041
43765	Latimer Road	Perth Road 10	Round Lake Road	Local	Urban	Asphalt	Class 4	450	6.1	2745	09/10/2015	91	1500	$ 675,000.00	1	3	1991	50	3	2041 to 2046	2041
40300	Bank Street	Revell Road	Revell Road	Local	Urban	Surface treated	Class 5	500	6	3000	09/01/2015	90.56	300	$ 150,000.00	1	3	2012	30	3	2041 to 2046	2042
40240	Autumn Ridge Drive			Local	Rural	Surface treated	Class 6	300	7.2	2160	09/10/2015	96.89	300	$ 90,000.00	1	3	2012	30	3	2041 to 2046	2042
41485	Collins Drive			Local	Rural	Surface treated	Class 6	150	7	1050	09/10/2015	96.56	300	$ 45,000.00	1	3	2012	30	3	2041 to 2046	2042
41550	Country Woods Drive	Campbell Road	Campbell Road	Local	Rural	Surface treated	Class 4	700	6	4200	10/22/2015	89.78	300	$ 210,000.00	1	3	2012	30	3	2041 to 2046	2042
42700	Greenfield Road	Perth Road 10	Duff Road	Local	Rural	Surface treated	Class 4	830	6.1	5063	09/10/2015	86	300	$ 249,000.00	1	3	2012	30	3	2041 to 2046	2042
44230	McConnell Road		Clark Road	Local	Rural	Surface treated	Class 4	1600	4.5	7200	09/02/2015	92.78	300	$ 480,000.00	1	3	2012	30	3	2041 to 2046	2042
44635	North Shore Crescent	Perth Road 10	Perth Road 10	Local	Rural	Surface treated	Class 4	1100	6.5	7150	09/10/2015	94.89	300	$ 330,000.00	1	3	2012	30	3	2041 to 2046	2042
44770	Old Boy Road	Perth Road 10	Holmes Road	Local	Rural	Surface treated	Class 4	1600	6.4	10240	09/09/2015	91.56	300	$ 480,000.00	1	3	2012	30	3	2041 to 2046	2042
46150	Sydenham Walker Road	Loughborough Portland R	Rock Quarry Lane	Local	Rural	Surface treated	Class 4	1000	6.4	6400	10/22/2015	94	300	$ 300,000.00	1	3	2012	30	3	2041 to 2046	2042

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
46570	White Lake Road	Buck Bay Road	Buck Bay Road	Local	Rural	Surface treated	Class 4	1700	6.1	10370	11/25/2015	92.56	300	$ 510,000.00	1	3	2012	30	3	2041 to 2046	2042
44380	Middle Woodlands Drive	Autumn Ridge Drive		Local	Rural	Surface treated	Class 6	500	7	3500	09/10/2015	94.22	300	$ 150,000.00	1	3	2012	30	3	2041 to 2046	2042
45385	Revell Road	Bank Street		Local	Urban	Surface treated	Class 5	900	6.1	5490	09/01/2015	92.22	300	$ 270,000.00	1	3	2012	30	3	2041 to 2046	2042
45460	Ritchie Road	Wilmer Road	Perth Road 10	Local	Urban	Surface treated	Class 6	1900	6.6	12540	10/22/2015	96	300	$ 570,000.00	1	3	2012	30	3	2041 to 2046	2042
40270	Badour Road		Crow Lake Road	Local	Rural	Surface treated	Class 4	2200	5.2	11440	11/25/2015	95.11	300	$ 660,000.00	1	3	2013	30	3	2041 to 2046	2043
42055	Ellerbeck Road	Bradford Road	Petworth Road	Local	Rural	Surface treated	Class 4	1500	4.5	6750	09/01/2015	89.67	300	$ 450,000.00	1	3	2013	30	3	2041 to 2046	2043
43180	Holmes Road	Lakefield Drive	Davidson Road	Local	Rural	Surface treated	Class 4	1500	6.5	9750	09/09/2015	85.11	300	$ 450,000.00	1	3	2013	30	3	2041 to 2046	2043
44680	Norway Road	Draper Lake Road	Charlie Green Road	Local	Rural	Surface treated	Class 4	100	5.2	520	12/18/2015	95.44	300	$ 30,000.00	1	3	2013	30	3	2041 to 2046	2043
45715	Sands Road	Battersea Road		Local	Rural	Surface treated	Class 4	2600	6.7	17420	09/10/2015	86.89	300	$ 780,000.00	1	3	2013	30	3	2041 to 2046	2043
46735	Wolfe Lake Road	Westport Road		Local	Rural	Surface treated	Class 6	2200	6	13200	04/10/2014	93.9	300	$ 660,000.00	1	3	2013	30	3	2041 to 2046	2043
40975	Campbell Road	Murvale Road	Stage Coach Road	Local	Rural	Surface treated	Class 4	2000	6.4	12800	10/22/2015	96.56	300	$ 600,000.00	1	3	2013	30	3	2041 to 2046	2043
41065	Canoe Lake Road	Holsgrove Lane	James Wilson Road	Local	Urban	Surface treated	Class 4	2300	6	13800	11/25/2015	94.89	300	$ 690,000.00	1	3	2013	30	3	2041 to 2046	2043
43665	Landfill Road	Draper Lake Road	Norway Road	Local	Rural	Surface treated	Class 6	150	5.8	870	12/18/2015	97.67	300	$ 45,000.00	1	3	2013	30	3	2041 to 2046	2043
40510	Boyce Road	Watson Road	Road 38	Local	Rural	Surface treated	Class 4	1780	5.5	9790	09/01/2015	89.89	300	$ 534,000.00	1	3	2013	30	3	2041 to 2046	2043
42250	Forest Hill Point	Valleyview Drive		Local	Urban	Surface treated	Class 6	400	6.7	2680	09/01/2015	95.44	300	$ 120,000.00	1	3	2013	30	3	2041 to 2046	2043
44365	Mica Point Road		Badour Road	Local	Rural	Surface treated	Class 6	450	4.5	2025	11/25/2015	95.44	300	$ 135,000.00	1	3	2013	30	3	2041 to 2046	2043
40150	Arena Boundary Road	Snider Road	Davey Road	Local	Rural	Surface treated	Class 4	2150	4.7	10105	09/01/2015	94	300	$ 645,000.00	1	3	2013	30	3	2041 to 2046	2043
40210	Ashwood Drive	Rutledge Road		Local	Urban	Surface treated	Class 6	800	5.6	4480	10/22/2015	97.44	300	$ 240,000.00	1	3	2014	30	3	2041 to 2046	2044
41185	Cedarwoods Drive	Valleyview Drive		Local	Urban	Surface treated	Class 5	310	6.9	2139	09/01/2015	98.56	300	$ 93,000.00	1	3	2014	30	3	2041 to 2046	2044
41380	Cliffside Lane	Railton Road		Local	Rural	Surface treated	Class 5	800	6.4	5120	10/22/2015	98	300	$ 240,000.00	1	3	2014	30	3	2041 to 2046	2044
43195	Holmes Road	Davidson Road	Moreland Dixon Road	Local	Rural	Surface treated	Class 6	600	6.1	3660	09/09/2015	96.89	300	$ 180,000.00	1	3	2014	30	3	2041 to 2046	2044
43315	Jamieson Road	Road 38	Loughborough Portland	Local	Urban	Surface treated	Class 4	2300	5.6	12880	09/01/2015	92.22	300	$ 690,000.00	1	3	2014	30	3	2041 to 2046	2044
43570	Lake Road	Lower Round Lake Road	Lower Round Lake Road	Local	Rural	Surface treated	Class 4	600	5	3000	09/10/2015	93.89	300	$ 180,000.00	1	3	2014	30	3	2041 to 2046	2044
43945	Loughborough Drive Road		Sydenham Road	Local	Rural	Surface treated	Class 5	500	4.3	2150	10/22/2015	96	300	$ 150,000.00	1	3	2014	30	3	2041 to 2046	2044
44410	Milburn Road	Battersea Road	Wellington Street	Local	Rural	Surface treated	Class 4	1800	6.5	11700	09/10/2015	98	300	$ 540,000.00	1	3	2014	30	3	2041 to 2046	2044
44920	Orser Road	Stage Coach Road	Stage Coach Road	Local	Rural	Surface treated	Class 4	1200	6.5	7800	10/22/2015	94.78	300	$ 360,000.00	1	3	2014	30	3	2041 to 2046	2044
44950	Park Street	Centennial Park Road	Graham Road	Local	Urban	Surface treated	Class 4	200	7.1	1420	09/01/2015	97.44	300	$ 60,000.00	1	3	2014	30	3	2041 to 2046	2044
44965	Park Valley Road		Keeley Road	Local	Rural	Surface treated	Class 4	450	7.3	3285	10/22/2015	98	300	$ 135,000.00	1	3	2014	30	3	2041 to 2046	2044
46510	Wellington Street	United Street	Milburn Road	Local	Rural	Surface treated	Class 5	550	6.5	3575	09/10/2015	96.56	300	$ 165,000.00	1	3	2014	30	3	2041 to 2046	2044
40495	Botting Road	Bedford Road	Sills Bay Road	Local	Rural	Surface treated	Class 4	750	6.2	4650	10/22/2015	98.89	300	$ 225,000.00	1	3	2014	30	3	2041 to 2046	2044
40750	Buck Bay Road	White Lake Road	Bob's Lake Road	Local	Rural	Surface treated	Class 4	3800	5.5	20900	11/25/2015	96	300	$ 1,140,000.00	1	3	2014	30	3	2041 to 2046	2044
40966	Milburn Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 6	850	6.5	5525	09/10/2015	86.56	300	$ 255,000.00	1	3	2014	30	3	2041 to 2046	2044
41005	Canoe Lake Road	Desert Lake Road	Desert Lake Road	Local	Rural	Surface treated	Class 4	850	6	5100	11/25/2015	98.89	300	$ 255,000.00	1	3	2014	30	3	2041 to 2046	2044
45520	Round Lake Road	Moreland Dixon Road	Latimer Road	Local	Rural	Surface treated	Class 4	800	6	4800	09/10/2015	93.67	300	$ 240,000.00	1	3	2014	30	3	2041 to 2046	2044
40967	Milburn Road	Battersea Road	Battersea Road	Local	Rural	Surface treated	Class 6	1450	6.5	9425	09/10/2015	95.67	300	$ 435,000.00	1	3	2014	30	3	2041 to 2046	2044
44350	Meadow Ridge Road	Park Valley Road		Local	Rural	Surface treated	Class 6	130	7.3	949	10/22/2015	98.89	300	$ 39,000.00	1	3	2014	30	3	2041 to 2046	2044
40375	Bear Creek Road	Battersea Road		Local	Rural	Surface treated	Class 4	2700	5.8	15660	09/09/2015	98.33	300	$ 810,000.00	1	3	2015	30	3	2041 to 2046	2045
40489	Bob's Lake Road	Green Bay Road	Bradshaw Road	Local	Rural	Surface treated	Class 4	4200	5	21000	11/25/2015	100	300	$ 1,260,000.00	1	3	2015	30	3	2041 to 2046	2045
41260	Charlie Green Road		Norway Road	Local	Rural	Surface treated	Class 4	2200	6	13200	10/22/2015	98.89	300	$ 660,000.00	1	3	2015	30	3	2041 to 2046	2045
41365	Clearwater Road	Bedford Road	Botting Road	Local	Rural	Surface treated	Class 4	500	5.1	2550	10/22/2015	99.44	300	$ 150,000.00	1	3	2015	30	3	2041 to 2046	2045
41395	Colebrook Road		Road 38	Local	Rural	Surface treated	Class 5	1700	6.5	11050	09/02/2015	98.56	300	$ 510,000.00	1	3	2015	30	3	2041 to 2046	2045
41410	Colebrook Road	Road 38	Road 38	Local	Rural	Surface treated	Class 5	1000	6.5	6500	09/02/2015	97.67	300	$ 300,000.00	1	3	2015	30	3	2041 to 2046	2045
41425	Colebrook Road	Road 38	Road 38	Local	Rural	Surface treated	Class 4	1100	6.5	7150	09/02/2015	95.89	300	$ 330,000.00	1	3	2015	30	3	2041 to 2046	2045
41440	Colebrook Road	Road 38	Cemetery Road	Local	Rural	Surface treated	Class 4	1500	6.5	9750	09/02/2015	95.89	300	$ 450,000.00	1	3	2015	30	3	2041 to 2046	2045
41635	Daley Road	Railton Road	Railton Road	Local	Rural	Surface treated	Class 4	600	6	3600	10/22/2015	98.89	300	$ 180,000.00	1	3	2015	30	3	2041 to 2046	2045
41650	Daley Road	Railton Road		Local	Rural	Surface treated	Class 4	500	6	3000	10/22/2015	98.89	300	$ 150,000.00	1	3	2015	30	3	2041 to 2046	2045
41755	Davidson Road	Perth Road 10	Holmes Road	Local	Rural	Surface treated	Class 4	500	6	3000	09/09/2015	98	300	$ 150,000.00	1	3	2015	30	3	2041 to 2046	2045
42070	Ernie Road		Lower Round Lake Road	Local	Rural	Surface treated	Class 4	400	5.5	2200	09/10/2015	98	300	$ 120,000.00	1	3	2015	30	3	2041 to 2046	2045
42355	Freeman Road	Bedford Road	Sills Bay Road	Local	Rural	Surface treated	Class 4	800	6.2	4960	10/22/2015	98.89	300	$ 240,000.00	1	3	2015	30	3	2041 to 2046	2045
42640	Green Bay Road	Burns Road	Burridge Road	Local	Urban	Surface treated	Class 6	2900	6	17400	11/25/2015	99.44	300	$ 870,000.00	1	3	2015	30	3	2041 to 2046	2045
42685	Greenfield Road	Perth Road 10	Perth Road 10	Local	Rural	Surface treated	Class 4	770	6.5	5005	09/10/2015	86.22	300	$ 231,000.00	1	3	2015	30	3	2041 to 2046	2045
42865	Hinchinbrooke Road	Road 38	Road 38	Local	Urban	Surface treated	Class 4	1000	6.4	6400	09/01/2015	96.56	300	$ 300,000.00	1	3	2015	30	3	2041 to 2046	2045
42880	Hinchinbrooke Road	Road 38	Road 38	Local	Rural	Surface treated	Class 4	700	6.7	4690	09/01/2015	96.56	300	$ 210,000.00	1	3	2015	30	3	2041 to 2046	2045
43150	Holmes Road	Old Boy Road	Perth Road 10	Local	Rural	Surface treated	Class 4	1200	6.4	7680	09/09/2015	94.44	300	$ 360,000.00	1	3	2015	30	3	2041 to 2046	2045
43165	Holmes Road	Perth Road 10	Lakefield Drive	Local	Rural	Surface treated	Class 4	1400	6.3	8820	09/09/2015	98.89	300	$ 420,000.00	1	3	2015	30	3	2041 to 2046	2045
43390	Keeley Road	Park Valley Road	Rutledge Road	Local	Rural	Surface treated	Class 6	2200	6.4	14080	10/22/2015	99.44	300	$ 660,000.00	1	3	2015	30	3	2041 to 2046	2045
43480	Kingsmere Lane	Railton Road		Local	Rural	Surface treated	Class 5	700	6.1	4270	10/22/2015	98.89	300	$ 210,000.00	1	3	2015	30	3	2041 to 2046	2045
44155	Mary Moore Road	Church Road (Bellrock)	Church Road (Bellrock)	Local	Rural	Surface treated	Class 4	1100	5.5	6050	09/01/2015	98	300	$ 330,000.00	1	3	2015	30	3	2041 to 2046	2045
44170	Mary Moore Road	Church Road (Bellrock)		Local	Rural	Surface treated	Class 4	2200	5.5	12100	09/01/2015	97	300	$ 660,000.00	1	3	2015	30	3	2041 to 2046	2045
44260	McFadden Road	Wilmer Road	Norway Road	Local	Rural	Surface treated	Class 4	1850	6.7	12395	10/22/2015	98.89	300	$ 555,000.00	1	3	2015	30	3	2041 to 2046	2045
44440	Morrison Road		Wilmer Road	Local	Rural	Surface treated	Class 5	1200	5.5	6600	10/22/2015	98.89	300	$ 360,000.00	1	3	2015	30	3	2041 to 2046	2045
44685	Norway Road	Charlie Green Road	McFadden Road	Local	Rural	Surface treated	Class 4	350	5.2	1820	10/22/2015	99.44	300	$ 105,000.00	1	3	2015	30	3	2041 to 2046	2045
45190	Quinn Road East	Road 38		Local	Rural	Surface treated	Class 4	1600	5.2	8320	09/02/2015	98	300	$ 480,000.00	1	3	2015	30	3	2041 to 2046	2045

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
45820	Sills Bay Road	Botting Road		Local	Rural	Surface treated	Class 6	1700	6.2	10540	10/22/2015	98.56	300	$ 510,000.00	1	3	2015	30	3	2041 to 2046	2045
45865	Snider Road		Reynolds Road	Local	Rural	Surface treated	Class 4	2000	6.2	12400	09/01/2015	98.56	300	$ 600,000.00	1	3	2015	30	3	2041 to 2046	2045
45880	Snider Road	Reynolds Road	Road 38	Local	Rural	Surface treated	Class 4	3000	6.2	18600	09/01/2015	98.56	300	$ 900,000.00	1	3	2015	30	3	2041 to 2046	2045
46075	Sumac Road	Sydenham Road		Local	Rural	Surface treated	Class 4	1150	6.9	7935	10/22/2015	99.44	300	$ 345,000.00	1	3	2015	30	3	2041 to 2046	2045
46345	Vienna Crescent	Sumac Road		Local	Rural	Surface treated	Class 4	350	6.4	2240	10/22/2015	99.44	300	$ 105,000.00	1	3	2015	30	3	2041 to 2046	2045
46405	Washburn Road	Battersea Road	Ida Hill Road	Local	Urban	Surface treated	Class 4	2000	6.2	12400	09/09/2015	96.89	300	$ 600,000.00	1	3	2015	30	3	2041 to 2046	2045
46435	Washburn Road	Factory Road	Factory Road	Local	Rural	Surface treated	Class 4	1000	6.3	6300	09/09/2015	94.78	300	$ 300,000.00	1	3	2015	30	3	2041 to 2046	2045
46450	Washburn Road	Bel-Air Drive		Local	Urban	Surface treated	Class 4	3150	6.3	19845	09/09/2015	86.33	300	$ 945,000.00	1	3	2015	30	3	2041 to 2046	2045
46525	Wellington Street	Milburn Road		Local	Rural	Surface treated	Class 5	1700	6.5	11050	09/10/2015	99.44	300	$ 510,000.00	1	3	2015	30	3	2041 to 2046	2045
46765	Wurtz Court Road	Vienna Crescent	Vienna Crescent	Local	Rural	Surface treated	Class 4	50	7.3	365	12/18/2015	100	300	$ 15,000.00	1	3	2015	30	3	2041 to 2046	2045
42160	First Lake Road	First Lake Road	First Lake Road	Local	Rural	Surface treated	Class 4	1000	6	6000	11/25/2015	99.44	300	$ 300,000.00	1	3	2015	30	3	2041 to 2046	2045
45250	Railton Road	Stage Coach Road	Sydenham Road	Local	Rural	Surface treated	Class 4	1200	6.7	8040	10/22/2015	97.11	300	$ 360,000.00	1	3	2015	30	3	2041 to 2046	2045
41035	Canoe Lake Road			Local	Rural	Surface treated	Class 4	1500	6.7	10050	11/25/2015	99.44	300	$ 450,000.00	1	3	2015	30	3	2041 to 2046	2045
41290	Church Street (Harrowsmit	Notre Dame Street	Road 38	Local	Urban	Asphalt	Class 5	100	10	1000	09/01/2015	94.89	1500	$ 150,000.00	1	3	1996	50	3	2041 to 2046	2046
41140	Carlton Drive	Road 38	Cemetery Road	Local	Urban	Asphalt	Class 5	450	6.1	2745	09/01/2015	88.44	1500	$ 675,000.00	1	3	1996	50	3	2041 to 2046	2046
41305	Church Street (Harrowsmit	Road 38	Road 38	Local	Urban	Asphalt	Class 5	200	7.4	1480	09/01/2015	93.11	1500	$ 300,000.00	1	3	1996	50	3	2041 to 2046	2046
42850	Hinchinbrooke Road	Road 38	Road 38	Local	Rural	Asphalt	Class 4	600	7	4200	12/07/2015	89	450	$ 270,000.00	1	3	1996	50	3	2041 to 2046	2046
40870	Burnt Hills Road	Battersea Road		Local	Rural	Surface treated	Class 4	1700	5.3	9010	09/10/2015	85.22	300	$ 510,000.00	1	3	2016	30	3	2041 to 2046	2046
41245	Centreville Road	Devil Lake Road		Local	Rural	Surface treated	Class 6	400	6	2400	11/25/2015	87.78	300	$ 120,000.00	1	3	2016	30	3	2041 to 2046	2046
44320	McMahon Drive	Lions Club Road	Bank Street	Local	Urban	Asphalt	Class 4	250	6.2	1550	09/01/2015	92	1500	$ 375,000.00	1	3	1996	50	3	2041 to 2046	2046
44935	Ottawa Street	Railway Street	Wilton Road 18	Local	Urban	Asphalt	Class 4	100	6.5	650	09/01/2015	91.67	1500	$ 150,000.00	1	3	1996	50	3	2041 to 2046	2046
45145	Princess Road	Battersea Road	Battersea Road	Local	Urban	Asphalt	Class 4	150	6.7	1005	09/09/2015	96.56	1500	$ 225,000.00	1	3	1996	50	3	2041 to 2046	2046
45625	Salmon Drive	Lakeview Drive		Local	Rural	Asphalt	Class 6	100	5.1	510	09/01/2015	86.11	450	$ 45,000.00	1	3	1996	50	3	2041 to 2046	2046
46120	Sydenham Church Street	William Street	Portland Avenue	Local	Urban	Asphalt	Class 5	400	6.5	2600	10/22/2015	94.56	1500	$ 600,000.00	1	3	1996	50	3	2041 to 2046	2046
46645	William Street	Rutledge Road	Church Street (Sydenhan	Local	Urban	Asphalt	Class 4	200	7	1400	09/01/2015	93.11	1500	$ 300,000.00	1	3	1996	50	3	2041 to 2046	2046
43645	Lakeview Drive	Salmon Drive	Pine Ridge Road	Local	Rural	Asphalt	Class 5	150	6.5	975	09/01/2015	85.78	450	$ 67,500.00	1	3	1996	50	3	2041 to 2046	2046
44140	Maria Street	Notre Dame Street	Road 38	Local	Urban	Asphalt	Class 4	100	7.8	780	09/01/2015	94	1500	$ 150,000.00	1	3	1996	50	3	2041 to 2046	2046
44710	Notre Dame Street	Colebrook Road	Church Street (Harrowsn	Local	Urban	Asphalt	Class 5	350	6.6	2310	09/01/2015	90.78	1500	$ 525,000.00	1	3	1996	50	3	2041 to 2046	2046
42145	First Lake Road	Main Street	First Lake Road	Local	Rural	Surface treated	Class 4	700	5.2	3640	09/01/2015	96.22	300	$ 210,000.00	1	3	2016	30	3	2041 to 2046	2046
40360	Bauder Road	Desert Lake Road		Local	Rural	Surface treated	Class 4	1200	4.2	5040	09/01/2015	92.22	300	$ 360,000.00	1	3	2016	30	3	2041 to 2046	2046
41230	Centreville Road	Devil Lake Road	Devil Lake Road	Local	Rural	Surface treated	Class 6	400	6	2400	11/25/2015	87.78	300	$ 120,000.00	1	3	2016	30	3	2041 to 2046	2046
41905	Devil Lake Road	Centreville Road	Westport Road	Local	Rural	Surface treated	Class 6	1650	6.7	11055	11/25/2015	86.33	300	$ 495,000.00	1	3	2016	30	3	2041 to 2046	2046
43300	Jamieson Road	Road 38	Road 38	Local	Rural	Surface treated	Class 4	1300	5.6	7280	09/01/2015	85	300	$ 390,000.00	1	3	2016	30	3	2041 to 2046	2046
41200	Cemetery Road	Water Street		Local	Rural	Asphalt	Class 6	50	4.9	245	09/01/2015	93.44	450	$ 22,500.00	1	3	1997	50	3	2041 to 2046	2047
45700	Verona Sand Road	McMahon Drive	Road 38	Local	Urban	Asphalt	Class 5	250	6.7	1675	09/01/2015	93.11	1500	$ 375,000.00	1	3	1997	50	3	2041 to 2046	2047
41680	Davey Drive		Maple Drive	Local	Rural	Asphalt	Class 4	450	6.7	3015	09/01/2015	95.67	450	$ 202,500.00	1	3	1997	50	3	2041 to 2046	2047
46465	Water Street	Road 38		Local	Urban	Asphalt	Class 6	150	6.8	1020	09/01/2015	89.89	1500	$ 225,000.00	1	3	1997	50	3	2041 to 2046	2047
40285	Bank Street	Road 38	Revell Road	Local	Urban	Asphalt	Class 5	400	6.4	2560	09/01/2015	86.33	1500	$ 600,000.00	1	3	1997	50	3	2041 to 2046	2047
42430	Genge Street	Road 38		Local	Rural	Asphalt	Class 6	100	7.2	720	09/01/2015	92	450	$ 45,000.00	1	3	1997	50	3	2041 to 2046	2047
45085	Pine Ridge Road	Road 38		Local	Urban	Asphalt	Class 5	450	5.1	2295	09/01/2015	86.33	1500	$ 675,000.00	1	3	1997	50	3	2041 to 2046	2047
45805	Short Street	Bank Street		Local	Urban	Asphalt	Class 5	50	4.7	235	09/01/2015	97	1500	$ 75,000.00	1	3	1997	50	3	2041 to 2046	2047
40690	Brewery Street	William Street	Sydenham Mill Street	Local	Urban	Asphalt	Class 4	200	7	1400	10/22/2015	94.89	1500	$ 300,000.00	1	3	1998	50	3	2041 to 2046	2048
44925	Orser Road	Stage Coach Road	Sydenham Road	Local	Rural	Asphalt	Class 4	100	6.5	650	12/18/2015	87.22	450	$ 45,000.00	1	3	1998	50	3	2041 to 2046	2048
44095	Maple Drive	Road 38		Local	Urban	Asphalt	Class 4	550	6.2	3410	09/01/2015	90.22	1500	$ 825,000.00	1	3	1999	50	3	2041 to 2046	2049
42280	Four Seasons Drive	Holmes Road		Local	Rural	Asphalt	Class 6	1350	6.2	8370	09/09/2015	86.89	450	$ 607,500.00	1	3	2000	50	3	2041 to 2046	2050
41800	Deer Run Way		Bedford Road	Local	Urban	Asphalt	Class 4	450	6.2	2790	10/22/2015	85.11	1500	$ 675,000.00	1	3	2000	50	3	2041 to 2046	2050
44725	Notre Dame Street	Church Street (Harrowsm	Centennial Park Road	Local	Urban	Asphalt	Class 5	350	7.6	2660	09/01/2015	91.67	1500	$ 525,000.00	1	3	2000	50	3	2041 to 2046	2050
45100	Point Road	Wheatley Street		Local	Urban	Asphalt	Class 5	250	10.4	2600	10/22/2015	93.11	1500	$ 375,000.00	1	3	2001	50	3	2041 to 2046	2051
46540	Wheatley Street	Rutledge Road	George Street	Local	Urban	Asphalt	Class 4	550	7.8	4290	10/22/2015	91.33	1500	$ 825,000.00	1	3	2005	50	3	2041 to 2046	2055
40060	Amelia Street	Brewery Street	William Street	Local	Urban	Asphalt	Class 5	200	8.4	1680	10/22/2015	94	1500	$ 300,000.00	1	3	2005	50	3	2041 to 2046	2055
42710	Grey Owl Road	Oak Bluffs Road	Oak Bluffs Road	Local	Rural	Asphalt	Class 4	350	6.4	2240	11/25/2015	90.67	450	$ 157,500.00	1	3	2006	50	3	2041 to 2046	2056
41110	Canoe Lake Road			Local	Rural	Asphalt	Class 4	350	6.5	2275	11/25/2015	93.67	450	$ 157,500.00	1	3	2007	50	3	2041 to 2046	2057
41020	Canoe Lake Road	Desert Lake Road		Local	Rural	Asphalt	Class 4	500	6	3000	11/25/2015	99.44	450	$ 225,000.00	1	3	2008	50	3	2041 to 2046	2058
40705	Buck Bay Road	Westport Road	Westport Road	Local	Rural	Asphalt	Class 4	200	5.5	1100	11/25/2015	95.44	450	$ 90,000.00	1	3	2009	50	3	2041 to 2046	2059
46165	Sydenham Walker Road	Rock Quarry Lane	Sydenham Church Street	Local	Urban	Asphalt	Class 4	400	6	2400	10/22/2015	95.44	1500	$ 600,000.00	1	3	2009	50	3	2041 to 2046	2059
42970	Holleford Road	Road 38	Road 38	Local	Urban	Asphalt	Class 4	150	7.7	1155	12/07/2015	94.89	1500	$ 225,000.00	1	3	2010	50	3	2041 to 2046	2060
45070	Piccadilly Road	Road 38	Arena Boundary Road	Local	Rural	Asphalt	Class 4	150	6.3	945	09/01/2015	95.78	450	$ 67,500.00	1	3	2010	50	3	2041 to 2046	2060
45730	Sarah Street	Water Street	Battersea Road	Local	Urban	Asphalt	Class 5	200	7	1400	09/10/2015	93.56	1500	$ 300,000.00	1	3	2012	50	3	2041 to 2046	2062
40345	Battersea Water Street		Battersea Road	Local	Urban	Asphalt	Class 4	100	7	700	09/10/2015	96.22	1500	$ 150,000.00	1	3	2013	50	3	2041 to 2046	2063
46495	Wellington Street	Battersea Road	United Street	Local	Urban	Asphalt	Class 4	250	7	1750	09/10/2015	100	1500	$ 375,000.00	1	3	2013	50	3	2041 to 2046	2063
44995	Perth Road Crescent	Perth Road 10	Perth Road 10	Local	Urban	Asphalt	Class 5	600	7	4200	10/22/2015	98.89	1500	$ 900,000.00	1	3	2013	50	3	2041 to 2046	2063
40315	Battersea Cross Street	Wellington Street	Battersea Road	Local	Urban	Asphalt	Class 4	100	6.4	640	09/10/2015	98.56	1500	$ 150,000.00	1	3	2014	50	3	2041 to 2046	2064
41788	Deer Creek Drive	Spooner Road	Whitetail Court	Local	Rural	Asphalt	Class 4	560	6	3360	01/01/2014	100	450	$ 252,000.00	1	3	2014	50	3	2041 to 2046	2064

ID	Street	From	To	Classification	Roadside Environment	Surface Type	Maintenace Class	Length (m)	Width (m)	Pavement Area (m2)	Last Inspection Date	Inspection OCI	Cost $/m assumed	Replacement Value Estimate	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Install / Last Reconstruct Date	Useful Life	Risk	Timing of First Replacement (based on Risk)	Timing of First Replacement (based on Risk)
46545	Whitetail Court	Fawn Brook Drive		Local	Rural	Asphalt	Class 4	240	6	1440	01/01/2014	100	450	$ 108,000.00	1	3	2014	50	3	2041 to 2046	2064
42108	Fawn Brook Drive		Whitetail Court	Local	Rural	Asphalt	Class 4	260	6	1560	01/01/2014	100	450	$ 117,000.00	1	3	2014	50	3	2041 to 2046	2064
43855	Leveque Road	Bellrock Mill Street	Bellrock Mill Street	Local	Rural	Asphalt	Class 4	100	4	400	09/01/2015	87.78	450	$ 45,000.00	1	3	2016	50	3	2041 to 2046	2066
40120	Anderson Road	Bertrim Lane		Local	Rural	Gravel	Class 6	1400	4.9	6860	10/01/2010	95.56	250	$ 350,000.00	1	3	2003	75	3	2041 to 2046	2078
40195	Arthur Road	Latimer Road		Local	Rural	Gravel	Class 6	600	6	3600	04/18/2016	92.44	250	$ 150,000.00	1	3	2003	75	3	2041 to 2046	2078
40405	Beech Nut Road	Mount Chesney Road	Bear Creek Road	Local	Rural	Gravel	Class 4	1500	5.5	8250	04/18/2016	96.33	250	$ 375,000.00	1	3	2003	75	3	2041 to 2046	2078
40484	Billy Green Road	Maple Leaf Road		Local	Rural	Gravel	Class 4	6000	4	24000	10/01/2010	95.22	250	$ 1,500,000.00	1	3	2003	75	3	2041 to 2046	2078
40645	Bradshaw Road	Steele Road		Local	Rural	Gravel	Class 4	1900	4.6	8740	10/01/2010	96.11	250	$ 475,000.00	1	3	2003	75	3	2041 to 2046	2078
40765	Bunker Hill Road	Westport Road	James Wilson Road	Local	Rural	Gravel	Class 5	2600	5	13000	04/26/2016	95.56	250	$ 650,000.00	1	3	2003	75	3	2041 to 2046	2078
41320	Clair Road		Leveque Road	Local	Rural	Gravel	Class 4	3600	4.2	15120	04/15/2016	95	250	$ 900,000.00	1	3	2003	75	3	2041 to 2046	2078
41350	Clear Lake Road		Perth Road 10	Local	Rural	Gravel	Class 6	700	4	2800	04/22/2016	92.22	250	$ 175,000.00	1	3	2003	75	3	2041 to 2046	2078
41500	Concession 12	Mulville Road	Westport Road	Local	Urban	Gravel	Class 6	1100	4	4400	04/26/2016	95.56	250	$ 275,000.00	1	3	2003	75	3	2041 to 2046	2078
41560	Coupland Road		Rutledge Road	Local	Rural	Gravel	Class 6	150	4.5	675	10/01/2010	96.44	250	$ 37,500.00	1	3	2003	75	3	2041 to 2046	2078
41620	Cummins Road	Wilton Road 18		Local	Rural	Gravel	Class 4	1400	6	8400	10/01/2010	96.67	250	$ 350,000.00	1	3	2003	75	3	2041 to 2046	2078
41665	Darling Road	Opinicon Road		Local	Rural	Gravel	Class 6	500	3.5	1750	10/01/2010	94.89	250	$ 125,000.00	1	3	2003	75	3	2041 to 2046	2078
41770	Dean Smith Road	Leland Road		Local	Rural	Gravel	Class 6	2000	4.5	9000	10/01/2010	96.67	250	$ 500,000.00	1	3	2003	75	3	2041 to 2046	2078
41830	Depot Street	Bellrock Road		Local	Rural	Gravel	Class 6	100	4.6	460	04/15/2016	96.11	250	$ 25,000.00	1	3	2003	75	3	2041 to 2046	2078
42040	Eel Bay Road		Charlie Green Road	Local	Rural	Gravel	Class 4	800	4.5	3600	04/22/2016	96.67	250	$ 200,000.00	1	3	2003	75	3	2041 to 2046	2078
40225	Asselstine Road	Ritchie Road		Local	Urban	Gravel	Class 6	200	3	600	11/16/2016	94.44	250	$ 50,000.00	1	3	2003	75	3	2041 to 2046	2078
40090	Anderson Road	Bradshaw Road		Local	Urban	Gravel	Class 6	2550	4.9	12495	04/26/2016	95.56	250	$ 637,500.00	1	3	2003	75	3	2041 to 2046	2078
40390	Bedford Mills Road	Perth Road 10	Perth Road 10	Local	Rural	Gravel	Class 6	700	4.6	3220	04/22/2016	95.56	250	$ 175,000.00	1	3	2003	75	3	2041 to 2046	2078
40480	Bellrock Pero Road		Leveque Road	Local	Rural	Gravel	Class 6	300	4	1200	04/15/2016	94.44	250	$ 75,000.00	1	3	2003	75	3	2041 to 2046	2078
40885	Burridge Lake Road	Burridge Road		Local	Rural	Gravel	Class 6	1800	4.8	8640	04/26/2016	95.78	250	$ 450,000.00	1	3	2003	75	3	2041 to 2046	2078
41545	Cottage Road		Gould Lake Road	Local	Rural	Gravel	Class 6	400	3.7	1480	10/01/2010	96	250	$ 100,000.00	1	3	2003	75	3	2041 to 2046	2078
41845	Devil Lake Road	Canoe Lake Road	Kingsford Lake Road	Local	Rural	Gravel	Class 5	1600	5	8000	04/26/2016	96.22	250	$ 400,000.00	1	3	2003	75	3	2041 to 2046	2078
41860	Devil Lake Road	Kingsford Lake Road		Local	Rural	Gravel	Class 6	4200	5	21000	04/26/2016	96.67	250	$ 1,050,000.00	1	3	2003	75	3	2041 to 2046	2078
41875	Devil Lake Road		Tobin Road	Local	Rural	Gravel	Class 6	4500	5	22500	04/26/2016	95.56	250	$ 1,125,000.00	1	3	2003	75	3	2041 to 2046	2078
40105	Anderson Road		Bertrim Lane	Local	Rural	Gravel	Class 6	2100	4.9	10290	10/01/2010	95.67	250	$ 525,000.00	1	3	2003	75	3	2041 to 2046	2078
40990	Canal Road	Sunbury Road		Local	Rural	Gravel	Class 6	500	4.9	2450	04/18/2016	96.33	250	$ 125,000.00	1	3	2003	75	3	2041 to 2046	2078
41890	Devil Lake Road	Tobin Road	Centreville Road	Local	Rural	Gravel	Class 6	1950	5.7	11115	04/26/2016	95.67	250	$ 487,500.00	1	3	2003	75	3	2041 to 2046	2078
42085	Factory Road	Washburn Road	Sunbury Road	Local	Rural	Gravel	Class 4	1400	5.5	7700	04/18/2016	93.33	250	$ 350,000.00	1	3	2003	75	3	2041 to 2046	2078
40420	Bell Road	Holleford Road		Local	Rural	Gravel	Class 4	400	4.5	1800	04/15/2016	97.78	250	$ 100,000.00	1	3	2003	75	3	2041 to 2046	2078
40555	Bradden Road		Battersea Road	Local	Rural	Gravel	Class 6	500	4.2	2100	04/18/2016	95.78	250	$ 125,000.00	1	3	2003	75	3	2041 to 2046	2078
40660	Bresee Road		Westport Road	Local	Rural	Gravel	Class 6	400	4.5	1800	04/26/2016	96.67	250	$ 100,000.00	1	3	2003	75	3	2041 to 2046	2078
41920	Dewitt Road		Burridge Road	Local	Rural	Gravel	Class 6	2600	4.2	10920	04/26/2016	96.67	250	$ 650,000.00	1	3	2003	75	3	2041 to 2046	2078
41935	Deyos Road	Morey Lane	James Wilson Road	Local	Rural	Gravel	Class 4	2500	4.5	11250	04/26/2016	96.67	250	$ 625,000.00	1	3	2003	75	3	2041 to 2046	2078
46395	Walsh Road	Perth Road 10	Perth Road 10	Local	Rural	Gravel	Class 6	650	4.5	2925	04/22/2016	92.31	250	$ 162,500.00	1	3	2003	75	3	2041 to 2046	2078
40795	Burns Road	Green Bay Road		Local	Rural	Gravel	Class 5	3300	4.2	13860	04/26/2016	96.67	250	$ 825,000.00	1	3	2003	75	3	2041 to 2046	2078
40900	Burridge Road	Green Bay Road		Local	Rural	Gravel	Class 4	8200	4.5	36900	04/26/2016	96.67	250	$ 2,050,000.00	1	3	2003	75	3	2041 to 2046	2078
41815	Deerhurst Lane		Bellrock Road	Local	Rural	Gravel	Class 6	800	4.5	3600	04/15/2016	95.56	250	$ 200,000.00	1	3	2003	75	3	2041 to 2046	2078
41950	Deyos Road	Desert Lake Road	Morey Lane	Local	Rural	Gravel	Class 4	1100	4	4400	04/26/2016	96.11	250	$ 275,000.00	1	3	2003	75	3	2041 to 2046	2078
41980	Dixon Road	Latimer Road		Local	Rural	Gravel	Class 6	1150	4.3	4945	04/18/2016	95.56	250	$ 287,500.00	1	3	2003	75	3	2041 to 2046	2078
41995	Draper Lake Road	Norway Road		Local	Rural	Gravel	Class 4	2900	3.7	10730	10/01/2010	95.11	250	$ 725,000.00	1	3	2003	75	3	2041 to 2046	2078
44355	Meeks Road	Leveque Road	Leveque Road	Local	Rural	Gravel	Class 6	300	2.7	810	11/17/2016	100	250	$ 75,000.00	1	3	2003	75	3	2041 to 2046	2078
46285	Twighlight Lane	Maple Leaf Road		Local	Rural	Gravel	Class 6	350	3.5	1225	11/17/2016	100	250	$ 87,500.00	1	3	2005	75	3	2041 to 2046	2080
40675	Brewer Lake Road	Sunbury Road	Sunbury Road	Local	Rural	Gravel	Class 6	800	4	3200	04/18/2016	93.33	250	$ 200,000.00	1	3	2006	75	3	2041 to 2046	2081
41530	Corkey Road	Latimer Road		Local	Urban	Gravel	Class 6	450	3.5	1575	04/18/2016	95.56	250	$ 112,500.00	1	3	2006	75	3	2041 to 2046	2081
41080	Canoe Lake Road	James Wilson Road	Devil Lake Road	Local	Rural	Gravel	Class 4	2100	6	12600	04/26/2016	95.56	250	$ 525,000.00	1	3	2007	75	3	2041 to 2046	2082
41095	Canoe Lake Road	Devil Lake Road		Local	Rural	Gravel	Class 4	3400	6	20400	04/26/2016	96.11	250	$ 850,000.00	1	3	2007	75	3	2041 to 2046	2082
40015	Abernathy Road	Ida Hill Road		Local	Rural	Gravel	Class 6	700	4	2800	04/18/2016	97.56	250	$ 175,000.00	1	3	2009	75	3	2041 to 2046	2084
40570	Bradford Road	Camden Portland Bounda	Camden Portland Bound	Local	Rural	Gravel	Class 4	500	5.7	2850	09/01/2015	95	250	$ 125,000.00	1	3	2012	75	3	2041 to 2046	2087
40450	Bellrock Mill Street	First Lake Road		Local	Urban	Gravel	Class 6	100	5	500	10/01/2010	95.56	250	$ 25,000.00	1	3	2016	75	3	2041 to 2046	2091
														$ 288,461,000.00							

Bridges & Culverts

Site No.	Name	Bridge/ Culvert	Type	Road Class	Posted Speed	Year Constructed/ Rehabilitated	# of Spans	Total Length (m)	Width (m)	Existing Surface Area (m2)	Historical Cost ($)	Replacement Cost ($000)	BCI	Health & Safety Risk	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement (based on life cycle)	Timing of First Replacement (based on risk)	Timing of Second Replacement (life cycle)
63350	Long Swamp Road Bridge	Bridge	I-beam or Girders	Local	80	1940	1	11.9	4.6	55	16655	273.7	10.9		0%	5	4	1940	75	20	2015 to 2018	2015	2020	2095
63560	Petworth Road Culvert	Bridge	Rigid Frame, Vertical Legs	Local	80	1965	1	3.8	7.3	28	24037	138.7	26.5		32%	5	4	1965	75	20	2015 to 2018	2040	2023	2098
63250	Buck Bay Road Bridge	Bridge	Rigid Frame, Vertical Legs	Local	80	2008	1	4.2	5.6	24	38840	117.6	34.1		89%	5	4	2008	75	20	2015 to 2018	2083	2083	
63280	Fish Creek Bridge	Bridge	T-Beam	Local	80	1927	1	6.7	5.2	35	7357	174.2	37.2		0%	4	4	1927	75	16	2015 to 2018	2002	2018	2093
63290	Eagle Creek Culvert	Culvert	Rigid Frame, Vertical Legs	Local	80	1945	1	3.9	5.4	21	11080	105.3	29.8		0%	5	3	1945	50	15	2019 to 2023	1995	2018	2068
63360	Shales Road Culvert	Culvert	Frame, Inclined Legs	Local	80	1955	1	3.0	5.5	17	7563	82.5	33.8		0%	5	3	1955	50	15	2019 to 2023	2005	2030	2080
64005	Culvert #5	Culvert	Hybrid	Local	60	1960	1	1.2	16.6	20		99.6	17.6		0%	5	3	1960	50	15	2019 to 2023	2010	2022	2072
63420	Boss Marsh Culvert	Culvert	Round Culvert	Local	80	1981	1	31.6	3.1	98	233361	489.8	28.5		30%	5	3	1981	50	15	2019 to 2023	2031	2018	2068
63230	Bunker Hill Road North culvert	Culvert	Rectangle Culvert	Local	80	1960	1	6.1	6.1	37	22160	186.1	16.0		25%	5	3	1960	75	15	2019 to 2023	2035	2019	2094
64009	Culvert #9 (North Shore)	Culvert	Hybrid	Local	60	1960	1	0.9	8.2	8		37.9	35.1		0%	4	3	1960	50	12	2019 to 2023	2010	2020	2070
63040	Buck Lake Culvert	Culvert	Round Culvert	Arterial	80	1970	1	3.1	17.2	52	43572	262.3	59.1		8%	3	4	1970	50	12	2019 to 2023	2020	2020	2070
64008	Hinchenbrooke Road Culvert	Culvert	Rectangle Culvert	Local	80	1970	1	2.8	13.1	37	13542	183.4	41.2		8%	4	3	1970	50	12	2019 to 2023	2020	2023	2073
64006	Culvert #6	Culvert	Rectangle Culvert	Arterial	80	1982	1	1.5	1.3	19	18662	93.8	49.1		32%	3	4	1982	50	12	2019 to 2023	2032	2020	2070
63510	Clair Road Culvert	Bridge	Rigid Frame, Vertical Legs	Local	80	1965	1	3.7	4.8	18	11195	88.8	45.0		32%	3	4	1965	75	12	2019 to 2023	2040	2022	2097
63060	Burago Lane Culvert	Culvert	Round Culvert		80	1993	2	9.3	3.8	35	69678	176.7	36.0		54%	4	3	1993	50	12	2019 to 2023	2043	2018	2068
63170	Road 38 Bridge #19	Bridge	Rigid Frame, Vertical Legs	Arterial	80	1996	1	28.1	4.2	118	60609	590.1	68.9		73%	2	5	1996	75	10	2019 to 2023	2071	2022	2097
63210	Bedford Mills Road Culvert	Culvert	Rigid Frame, Vertical Legs	Local	80	1940	1	3.6	8.0	29	16857	144.0	56.6		0%	3	3	1940	50	9	based on life cycle	1990	2020	2070
63180	Devil Lake Culvert	Culvert	Round Culvert	Collector	60	1965	1	3.6	24.8	89	63754	446.4	51.1		0%	3	3	1965	50	9	based on life cycle	2015	2023	2073
64011	Colebrooke Rd. East Culvert	Culvert	Rigid Frame, Vertical Legs	Local	50	1965	1	7.5	1.7	13		63.8	50.3		0%	3	3	1965	50	9	based on life cycle	2015	2019	2069
63430	Stafford Lane Culvert	Culvert	Arch Culvert	Local	80	1967	1	3.1	6.9	21	19542	105.2	53.9		2%	3	3	1967	50	9	based on life cycle	2017	2019	2069
63090	Little Long Lake Culvert	Culvert	Rigid Frame, Vertical Legs	Local	60	1992	1	4.8	15.4	74	44904	369.6	51.7		52%	3	3	1992	50	9	based on life cycle	2042	2021	2071
63130	Culvert Under Road 38	Culvert	Rectangular Culvert	Arterial	80	1965	1	22.2	4.8	107	71606	532.8	70.6		0%	2	4	1965	50	8	based on life cycle	2015	2023	2073
63120	Bracken Culvert	Culvert	Arch Culvert	Arterial	80	1966	1	21.0	4.4	92	81215	462.0	69.8		33%	2	4	1966	75	8	based on life cycle	2041	2019	2094
64002	Morland-Dixon Culvert	Culvert	Round Culvert	Arterial	80	1970	1	33.0	1.2	40	14621	198.0	65.0		8%	2	4	1970	50	8	based on life cycle	2048	2045	2095
63330	First Lake Road Bridge	Bridge	Rigid Frame, Vertical Legs	Local	80	1995	1	8.3	10.0	83	279066	415.0	75.0		72%	2	4	1995	75	8	based on life cycle	2070	2070	
63370	Railton Road Bridge	Bridge	Rigid Frame, Vertical Legs	Local	50	1928	1	4.9	6.1	30	7370	149.5	72.0		0%	2	4	1928	75	8	based on life cycle	2070	2067	
63270	Buck Bay Bridge	Bridge	Rigid Frame, Vertical Legs	Local	80	1965	1	6.7	9.1	61	21164	304.9	73.0		32%	2	4	1965	75	8	based on life cycle	2071	2068	
63460	Buck Bay Road Bridge	Bridge	Rigid Frame, Vertical Legs	Local	80	1960	1	3.8	5.1	19	10103	96.9	73.8		25%	2	4	1960	75	8	based on life cycle	2071	2068	
63080	Sydenham Lake Bridge and Dam	Bridge	Rectangle Culvert	Collector	50	1978	2	6.4	12.2	78	157069	390.4	74.5		49%	2	4	1978	75	8	based on life cycle	2072	2053	
63070	Rutledge Road Bridge	Bridge	Rigid Frame, Vertical Legs	Collector	50	2008	1	6.3	14.2	89	251377	444.7	73.7		89%	2	4	2008	75	8	based on life cycle	2083	2083	
63380	Church Street Culve	Bridge	Rigid Frame, Vertical Legs	Local	50	2013	1	6.1	7.9	48	11130	241.0	66.0		96%	2	4	2013	75	8	based on life cycle	2088	2088	
64003	Culvert #3	Culvert	Rigid Frame, Vertical Legs	Local	80	1962	1	3.0	6.0	18	11661	90.0	64.9		0%	2	3	1962	50	6	based on life cycle	2048	2062	2112
63140	Depot Creek Culvert	Culvert		Collector	80	1980	1	27.5	6.7	184	295812	921.3	74.7		28%	2	3	1980	50	6	based on life cycle	2053	2055	2105
63320	Watson Road Culvert	Culvert		Local	80	1981	1	11.2	3.6	40	99885	201.6	74.2		30%	2	3	1981	50	6	based on life cycle	2053	2056	2106
63010	Battersea Bridge	Bridge	Rigid Frame, Vertical Legs	Arterial	50	1979	1	8.2	11.2	92	148430	459.2	75.0		51%	1	5	1979	75	5	based on life cycle	2054	2054	
63190	Bedford Mills Bridge	Bridge	T-Beam	Arterial	80	1997	1	19.1	9.9	189	117766	945.5	76.0		75%	1	5	1997	75	5	based on life cycle	2072	2072	
63200	Sunbury Road Canal Overpass	Bridge	I-beam or Girders	Arterial	80	2005	3	73.5	11.7	859	1132096	4297.4	75.0		85%	1	5	2005	75	5	based on life cycle	2080	2080	
63020	Loughborough Lake Bridge	Bridge	I-beam or Girders	Arterial	80	2010	3	43.6	12.5	545	1500000	2725.0	75.0		92%	1	5	2010	75	5	based on life cycle	2085	2085	
63540	Hardwood Creek (Verona Bridge)	Bridge	I-beam or Girders	Arterial	60	2013	1	12.3	15.5	191	103487	953.3	96.0		96%	1	5	2013	75	5	based on life cycle	2088	2088	
63561	Petworth Bridge	Bridge	Through Truss	Arterial	80	2013	1	23.3	4.2	98	21482	489.3	96.0		96%	1	5	2013	75	5	based on life cycle	2088	2088	
63110	Murvale Creek Culvert	Culvert	Arch Culvert	Arterial	80	1993	1	29.6	3.7	108	139100	541.7	75.0		54%	1	4	1993	50	4	based on life cycle	2043	2068	
63030	Bear Creek Culvert	Culvert	Rectangular Culvert	Arterial	80	2009	1	2.8	37.4	105	609168	523.6	86.0		86%	1	4	2009	50	4	based on life cycle	2059	2059	2109
63440	Opinicon Lake Bridge	Bridge	I-beam or Girders	Local	80	2001	1	12.0	5.7	68	8578	342.0	80.0		80%	1	4	2001	75	4	based on life cycle	2076	2076	
63400	Mitchell Creek Bridge	Bridge	Earth Filled Arch	Local	10	2007	1	9.8	7.5	74	526798	367.5	85.7		88%	1	4	2007	75	4	based on life cycle	2082	2082	
63300	12th Concession Bridge	Bridge	Rigid Frame, Vertical Legs	Local	80	2009	1	4.0	6.4	26	115000	128.6	89.8		91%	1	4	2009	75	4	based on life cycle	2084	2084	
63550	Maynard Structure	Bridge	I-beam or Girders	Local	80	2012	1	27.0	9.3	251	354213	1255.5	75.0		95%	1	4	2012	75	4	based on life cycle	2087	2087	
63260	Green Bay Road Culvert	Bridge	Rigid Frame, Vertical Legs	Local	80	2013	1	4.6	5.5	25	23683	125.7	85.0		96%	1	4	2013	75	4	based on life cycle	2088	2088	
63160	High Falls Bridge (Rock Lake Bridge)	Bridge	Rectangular Culvert	Collector	80	2014	2	11.0	7.9	87	876000	434.5	92.0		97%	1	4	2014	75	4	based on life cycle	2089	2089	
64001	Perth Road Culvert	Culvert	Arch Culvert	Arterial	80	2014	1	23.0	1.7	38	14011	189.8	97.0		97%	1	4	2014	75	4	based on life cycle	2089	2089	
64007	Culvert #7	Culvert	Rectangle Culvert	Arterial	60	2016	1	2.4	18.0	43	290000	216.0	100.0		100%	1	4	2016	100	4	based on life cycle	2116	2116	
63340	Craig Creek Culvert	Culvert	Arch Culvert	Local	80	1998	1	22.0	3.1	68	191194	337.7	75.0		64%	1	3	1998	50	3	based on life cycle	2048	2073	
63050	Sydenham Road Culvert Bridge	Culvert	Rigid Frame, Vertical Legs	Local	80	1980	1	22.3	4.9	109	192631	546.4	75.0		34%	1	3	1980	50	3	based on life cycle	2054	2055	2105
63150	Bellrock Rd. Culvert	Culvert	Rectangular Culvert	Collector	80	1980	1	20.3	3.0	61	107360	304.5	75.0		28%	1	3	1980	50	3	based on life cycle	2054	2055	2105
63310	Colebrook Road Culvert	Culvert	Arch Culvert	Local	50	1980	1	11.6	3.7	43	94579	214.6	75.0		28%	1	3	1980	50	3	based on life cycle	2054	2055	2105
63410	Milburn Creek Culvert	Culvert		Local	80	1980	1	19.5	5.5	107	236337	536.3	75.0		28%	1	3	1980	50	3	based on life cycle	2054	2055	2105
64004	Latimer Road Culvert	Culvert	Rectangle Culvert	Local	80	1960	1	9.6	3.0	28	16870	141.6	81.6		0%	1	3	1960	50	3	based on life cycle	2057	2054	2104
63240	Bunker Hill Road	Culvert	CSP	Local	80	2012	1	2.1	2.1	4	26366	21.0	95.0		92%	1	3	2012	50	3	based on life cycle	2062	2087	
64010	Culvert #10 (James Wilson)	Culvert	Rigid Frame, Vertical Legs	Local	80	2013	1	3.0	4.1	12	233000	61.5	90.0		94%	1	3	2013	50	3	based on life cycle	2063	2088	
63220	Massasauga Road Culvert	Culvert	Rigid Frame, Vertical Legs	Local	80	2015	1	12.0	2.4	29	239000	144.0	99.0		98%	1	3	2015	50	3	based on life cycle	2065	2090	
63100	Otter Lake Culvert	Culvert	Arch Culvert	Collector	80	2016	1	2.9	24.0	68	170965	342.0	100.0		100%	1	3	2016	50	3	based on life cycle	2066	2017	2067
63390	Salmon Lake Road Culvert / Otter Lake	Culvert	Round Culvert	Collector	80	2016	1	25.0	3.6	90	350000	450.0	100.0		100%	1	3	2016	50	3	based on life cycle	2066	2091	
												$ 25,771,265												

APPENDIX D-3

Water Treatment and Storage Facilities

Type	Asset Description	Construction Year	Useful Life	Historical Construction Cost	2013 Replacement Cost*	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life (yrs)	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement (based on life cycle)	Timing of First Replacement	Timing of Second Replacement (Life Cycle)	Timing of Third Replacement (Life Cycle)	Tming of Fourth Replacement (Life Cycle)
WTP	Raw Water Intake	2005	100	$227,000.00	$ 314,221.09	92%	1	5	2005	100	5	based on life cycle	2105	2105			
Storage	Elevated Water Storage Tower	2005	100	$996,000.00	$ 1,378,696.94	92%	1	4	2005	100	4	based on life cycle	2105	2105			
WTP	Treatment Plant	2005	50	$2,971,176.00	$ 4,112,802.46	84%	1	5	2005	50	5	based on life cycle	2055	2055	2105		
WTP	Plant Upgrades (UV & GAC contactors)	2010	25	$1,009,881.00	$ 1,205,850.73	88%	1	5	2010	25	5	based on life cycle	2035	2035	2060	2085	2110
TOTAL				$5,204,057.00	$7,011,571.21												

APPENDIX D-4

Watermains

DESCRIPTION	DIAMETER (mm)	LENGTH (m)	QUANTITY	UNIT PRICE ($)	CONST YEAR	USEFUL LIFE (YRS)	HISTORIC COST	2013 Replacement Cost (inflation accounted)	*Replacement Cost ($/unit)	2013 Replacement Cost	REMAINING LIFE (YRS)	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement-Based on life cycle	Timing of First Replacement
Water Main	250	1197		200	2005	100	$ 239,400.00	$ 303,264.76	450	$ 538,650.00	92	92%	1	5	2005	80	5	based on life cycle	2085	2085
Water Main	200	4800		190	2005	100	$ 912,000.00	$ 1,155,294.31	400	$ 1,920,000.00	92	92%	1	4	2005	80	4	based on life cycle	2085	2085
Water Main	150	366		180	2005	100	$ 65,880.00	$ 83,454.81	300	$ 109,800.00	92	92%	1	3	2005	80	3	based on life cycle	2085	2085
Water Main	100	5		170	2005	100	$ 850.00	$ 1,076.75	400	$ 2,000.00	92	92%	1	2	2005	80	2	based on life cycle	2085	2085
Water Servicing Piping	19	1992		150	2005	100	$ 298,800.00	$ 378,510.90	250	$ 498,000.00	92	92%	1	1	2005	80	1	based on life cycle	2085	2085
Water Servicing Piping	25	20		200	2005	100	$ 4,000.00	$ 5,067.08	275	$ 5,500.00	92	92%	1	1	2005	80	1	based on life cycle	2085	2085
Water Servicing Piping	50	58		300	2005	100	$ 17,400.00	$ 22,041.80	350	$ 20,300.00	92	92%	1	1	2005	80	1	based on life cycle	2085	2085
Water Course Crossing - George St			1	20000	2005	100	$ 20,000.00	$ 25,335.40		$ 25,335.40	92	92%	1	5	2005	80	5	based on life cycle	2085	2085
Water Course Crossing - Church St			1	10000	2005	100	$ 10,000.00	$ 12,667.70		$ 12,667.70	92	92%	1	5	2005	80	5	based on life cycle	2085	2085
Water Course Crossing - Rutledge Rd			1	10000	2005	100	$ 10,000.00	$ 12,667.70		$ 12,667.70	92	92%	1	5	2005	80	5	based on life cycle	2085	2085
Fire Hydrant Set			34	4000	2005	100	$ 136,000.00	$ 172,280.73		$ 172,280.73	92	92%	1	1	2005	80	1	based on life cycle	2085	2085
		6368								$ 3,317,201.53										

PIPE/STRUCTURE ID	SEGMENT ID	LOCATION	VILLAGE	MATERIAL	DIAMETER (mm)	LENGTH (m)	Construction Year	Structural Grade	Operational Grade	Unit Cost (Replacement)*	Replacement Value Estimate	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement Based on Risk, then lifecycle	Timing of Second Replacement
STRUCTURES (manholes)																				
90000		Main St	Bellrock	Stormceptor	1800		2015	1		30000	$ 30,000.00	99%	1	1	2015	100	1	based on life cycle	2115	
90001	44065	Main St	Bellrock	DCB	1200 x 600		2015	1		3800	$ 3,800.00	99%	1	1	2015	100	1	based on life cycle	2115	
90002	44065	Main St	Bellrock	DCB	1200 x 600		2015	1		3800	$ 3,800.00	99%	1	1	2015	100	1	based on life cycle	2115	
90003	44065	Main St	Bellrock	CBMH	1200		2015	1		4000	$ 4,000.00	99%	1	1	2015	100	1	based on life cycle	2115	
90004	44065	Main St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90005	44065	Main St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90006	44065	Main St	Bellrock	CBMH	1200		2015	1		4000	$ 4,000.00	99%	1	1	2015	100	1	based on life cycle	2115	
90007		Main St	Bellrock	Stormceptor	1500		2015	1		30000	$ 30,000.00	99%	1	1	2015	100	1	based on life cycle	2115	
90008	44065	Main St	Bellrock	DCB	1200 x 600		2015	1		3800	$ 3,800.00	99%	1	1	2015	100	1	based on life cycle	2115	
90009	44065	Main St	Bellrock	DCBMH	1800		2015	1		7500	$ 7,500.00	99%	1	1	2015	100	1	based on life cycle	2115	
90010		Main St	Bellrock	DI	600 x 600		2015	1		3500	$ 3,500.00	99%	1	1	2015	100	1	based on life cycle	2115	
90011	44065	Main St	Bellrock	MH	1200		2015	1		4000	$ 4,000.00	99%	1	1	2015	100	1	based on life cycle	2115	
90012	40435	Mill St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90013	40435	Mill St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90014	40450	Mill St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90015	40450	Mill St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90016	43855	Leveque Rd	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90017	40435	Mill St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90018	40435	Mill St	Bellrock	CB	600 x 600		2015	1		2200	$ 2,200.00	99%	1	1	2015	100	1	based on life cycle	2115	
90200	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90201	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90202	45700	Verona Sands Rd	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	1	1975	100	1	based on life cycle	2075	
90203	45700	Verona Sands Rd	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	1	1975	100	1	based on life cycle	2075	
90204	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90205	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90206	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90207	55485	Road 38	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	3	1975	100	3	based on life cycle	2075	
90208	46360	Walker St	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	1	1975	100	1	based on life cycle	2075	
90209	46360	Walker St	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	1	1975	100	1	based on life cycle	2075	
90210	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90211	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90212	46465	Water St	Verona	MH	1200		1975			4000	$ 4,000.00	59%	1	1	1975	100	1	based on life cycle	2075	
90213	46465	Water St	Verona	MH	1200		1975			4000	$ 4,000.00	59%	1	1	1975	100	1	based on life cycle	2075	
90214	46465	Water St	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	1	1975	100	1	based on life cycle	2075	
90215	55485	Road 38	Verona	MH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90216	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90217	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90218	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90219	42430	Genge St	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	1	1975	100	1	based on life cycle	2075	
90220	42430	Genge St	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	1	1975	100	1	based on life cycle	2075	
90221	40285	Bank St	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	1	1975	100	1	based on life cycle	2075	
90222	40285	Bank St	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	1	1975	100	1	based on life cycle	2075	
90223	55485	Water St	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	1	1975	100	1	based on life cycle	2075	
90224	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90225	55485	Road 38	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	3	1975	100	3	based on life cycle	2075	
90226	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90227	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90228	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90229	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90230	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90231		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90232	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90233	55485	Road 38	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	3	1975	100	3	based on life cycle	2075	
90234	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90235		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	

PIPE/STRUCTURE ID	SEGMENT ID	LOCATION	VILLAGE	MATERIAL	DIAMETER (mm)	LENGTH (m)	Construction Year	Structural Grade	Operational Grade	Unit Cost (Replacement)*	Replacement Value Estimate	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement Based on Risk, then lifecycle	Timing of Second Replacement
90236		Road 38	Verona	MH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90237	55485	Road 38	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	3	1975	100	3	based on life cycle	2075	
90238	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90239	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90240		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90241	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90242	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90243	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90244		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90245	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90246		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90247	55485	Road 38	Verona	DCB	1200 x 600		1975			3800	$ 3,800.00	59%	1	3	1975	100	3	based on life cycle	2075	
90248		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90249		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90250	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90251	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90252		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90253		Carleton St	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	1	1975	100	1	based on life cycle	2075	
90254	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90255	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90256		Carleton St	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	1	1975	100	1	based on life cycle	2075	
90257	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90258	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90259		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90260	55485	Road 38	Verona	CBMH	1200		1975			4000	$ 4,000.00	59%	1	3	1975	100	3	based on life cycle	2075	
90261		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90262	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90263		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90264	55485	Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90265		Road 38	Verona	CB	600 x 600		1975			2200	$ 2,200.00	59%	1	3	1975	100	3	based on life cycle	2075	
90500	40525	Boyce Rd	Hartington	DI	600 x 600		1973			3500	$ 3,500.00	57%	1	1	1973	100	1	based on life cycle	2073	
90501	40525	Boyce Rd	Hartington	DI	600 x 600		1973			3500	$ 3,500.00	57%	1	1	1973	100	1	based on life cycle	2073	
90502	55255	Road 38	Hartington	MH	1200		1973			4000	$ 4,000.00	57%	1	3	1973	100	3	based on life cycle	2073	
90503	55255	Road 38	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	3	1973	100	3	based on life cycle	2073	
90504	55255	Road 38	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	3	1973	100	3	based on life cycle	2073	
90505	55255	Road 38	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	3	1973	100	3	based on life cycle	2073	
90506	55255	Road 38	Hartington	MH	1200		1973			4000	$ 4,000.00	57%	1	3	1973	100	3	based on life cycle	2073	
90507	55255	Road 38	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	3	1973	100	3	based on life cycle	2073	
90508	55255	Road 38	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	3	1973	100	3	based on life cycle	2073	
90509	55255	Road 38	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	3	1973	100	3	based on life cycle	2073	
90510	55255	Road 38	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	3	1973	100	3	based on life cycle	2073	
90511	55255	Road 38	Hartington	DI	600 x 600		1973			3500	$ 3,500.00	57%	1	3	1973	100	3	based on life cycle	2073	
90512	42970	Holleford Rd	Hartington	DI	600 x 600		1973			3500	$ 3,500.00	57%	1	1	1973	100	1	based on life cycle	2073	
90513	42970	Holleford Rd	Hartington	DI	600 x 600		1973			3500	$ 3,500.00	57%	1	1	1973	100	1	based on life cycle	2073	
90514	42970	Holleford Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90515	42970	Holleford Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90516	42970	Holleford Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90517	40525	Boyce Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90518	40525	Boyce Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90519	40525	Boyce Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90520	40525	Boyce Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90521	40525	Boyce Rd	Hartington	CB	600 x 600		1973			2200	$ 2,200.00	57%	1	1	1973	100	1	based on life cycle	2073	
90700		Kingston Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90701		Kingston Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90702	43495	Kingston Rd	Harrowsmith	MH	1200		1985			4000	$ 4,000.00	69%	1	1	1985	100	1	based on life cycle	2085	
90703	43495	Kingston Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	

PIPE/STRUCTURE ID	SEGMENT ID	LOCATION	VILLAGE	MATERIAL	DIAMETER (mm)	LENGTH (m)	Construction Year	Structural Grade	Operational Grade	Unit Cost (Replacement)*	Replacement Value Estimate	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement Based on Risk, then lifecycle	Timing of Second Replacement
90704	58705	Wilton Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90705		Ottawa St	Harrowsmith	CBMH	1200		1985			4000	$ 4,000.00	69%	1	1	1985	100	1	based on life cycle	2085	
90706	55140	Road 38	Harrowsmith	CBMH	1200		1985			4000	$ 4,000.00	69%	1	3	1985	100	3	based on life cycle	2085	
90707	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90708	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90709	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90710	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90711	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90712	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90713	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90714	55140	Road 38	Harrowsmith	MH	1200		1985			4000	$ 4,000.00	69%	1	3	1985	100	3	based on life cycle	2085	
90715	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90716	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90717	55140	Road 38	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90718	55140	Road 38	Harrowsmith	DI	600 x 600		1985			3500	$ 3,500.00	69%	1	3	1985	100	3	based on life cycle	2085	
90719	55140	Road 38	Harrowsmith	DI	600 x 600		1985			3500	$ 3,500.00	69%	1	3	1985	100	3	based on life cycle	2085	
90720	41455	Colebrook Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90721	41455	Colebrook Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90722	41455	Colebrook Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90723	41455	Colebrook Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90724	44710	Notre Dame St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90725	44710	Notre Dame St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90726	44710	Notre Dame St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90727	44710	Notre Dame St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90728	44140	Maria St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90729	44140	Maria St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90730	53415	Harrowsmith Rd	Harrowsmith	MH	1200		1985			4000	$ 4,000.00	69%	1	3	1985	100	3	based on life cycle	2085	
90731	53415	Harrowsmith Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90732	53415	Harrowsmith Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90733	53415	Harrowsmith Rd	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	3	1985	100	3	based on life cycle	2085	
90734	44710	Notre Dame St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90735	46645	William St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90736	46645	William St	Harrowsmith	CB	600 x 600		1985			2200	$ 2,200.00	69%	1	1	1985	100	1	based on life cycle	2085	
90900	56175	Rutledge Rd	Sydenham	MH	1200		2014			4000	$ 4,000.00	98%	1	3	2014	100	3	based on life cycle	2114	
90901	56175	Rutledge Rd	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	3	1986	100	3	based on life cycle	2086	
90902	56175	Rutledge Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90903	56175	Rutledge Rd	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	3	1986	100	3	based on life cycle	2086	
90904	56175	Rutledge Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90905	56175	Rutledge Rd	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	3	1986	100	3	based on life cycle	2086	
90906	56175	Rutledge Rd	Sydenham	DI	600 x 600		1986			3500	$ 3,500.00	70%	1	3	1986	100	3	based on life cycle	2086	
90907	56175	Rutledge Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90908	56175	Rutledge Rd	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	3	1986	100	3	based on life cycle	2086	
90909	56175	Rutledge Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90910	56175	Rutledge Rd	Sydenham	MH	1200		2014			4000	$ 4,000.00	98%	1	3	2014	100	3	based on life cycle	2114	
90911	56175	Rutledge Rd	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	3	1986	100	3	based on life cycle	2086	
90912	56175	Rutledge Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90913	56175	Rutledge Rd	Sydenham	DCB	1200 x 600		2014			3800	$ 3,800.00	98%	1	3	2014	100	3	based on life cycle	2114	
90914	56175	Rutledge Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90915	45970	Stage Coach Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90916	45970	Stage Coach Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90917	45970	Stage Coach Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90918	45970	Stage Coach Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90919	56290	Rutledge Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90920	46120	Sydenham Church St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90921	46180	William St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90922	46180	William St	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	1	1986	100	1	based on life cycle	2086	

PIPE/STRUCTURE ID	SEGMENT ID	LOCATION	VILLAGE	MATERIAL	DIAMETER (mm)	LENGTH (m)	Construction Year	Structural Grade	Operational Grade	Unit Cost (Replacement)*	Replacement Value Estimate	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement Based on Risk, then lifecycle	Timing of Second Replacement
90923	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90924	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90925	46180	William St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90926	46180	William St	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	1	1986	100	1	based on life cycle	2086	
90927	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90928	40690	Brewery St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90929	40690	Brewery St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90930	40690	Brewery St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90931	40690	Brewery St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90932	40690	Brewery St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90933	40690	Brewery St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90934	40690	Brewery St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90935	Private- Retirement	William St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90936	Private- Retirement	William St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90937	Private- Retirement	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90938	Private- Retirement	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90939	Private- Retirement	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90940	Private- Retirement	William St	Sydenham	DI	600 x 600		1986			3500	$ 3,500.00	70%	1	1	1986	100	1	based on life cycle	2086	
90941	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90942	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90943	40060	Amelia St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90944	40060	Amelia St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90945	40060	Amelia St	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	1	1986	100	1	based on life cycle	2086	
90946	40060	Amelia St	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	1	1986	100	1	based on life cycle	2086	
90947	42445	George St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90948	42445	George St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90949	42445	George St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90950	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90951	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90952	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90953	46180	William St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90954	57210	Sydenham Mill St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90955	57210	Sydenham Mill St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90956	57210	Sydenham Mill St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90957	57210	Sydenham Mill St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90958	57210	Sydenham Mill St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90959	57210	Sydenham Mill St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90960	57210	Sydenham Mill St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90961	57210	Sydenham Mill St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90962	57210	Sydenham Mill St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90963	57210	Sydenham Mill St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90964	57210	Sydenham Mill St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90965	57210	Sydenham Mill St	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	1	1986	100	1	based on life cycle	2086	
90966	57210	Sydenham Mill St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90967	57210	Sydenham Mill St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90968	46540	Wheatley St	Sydenham	MH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90969	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90970	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90971	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90972	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90973	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90974	46135	Cross St	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	1	1986	100	1	based on life cycle	2086	
90975	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90976	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90977	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90978	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	

PIPE/STRUCTURE ID	SEGMENT ID	LOCATION	VILLAGE	MATERIAL	DIAMETER (mm)	LENGTH (m)	Construction Year	Structural Grade	Operational Grade	Unit Cost (Replacement)*	Replacement Value Estimate	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement Based on Risk, then lifecycle	Timing of Second Replacement
90979	46540	Wheatley St	Sydenham	CBMH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90980	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90981	46540	Wheatley St	Sydenham	MH	1200		1986			4000	$ 4,000.00	70%	1	1	1986	100	1	based on life cycle	2086	
90982	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90983	46540	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90984	Private- High school	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90985	Private- High school	Wheatley St	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90986	56290	Rutledge Rd	Sydenham	CBMH	1500		2014			5600	$ 5,600.00	70%	1	3	1986	100	3	based on life cycle	2086	
90987	56290	Rutledge Rd	Sydenham	CB	600 x 600		2014			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90988	Private	Rutledge Rd	Sydenham	CBMH	1200		2014			4000	$ 4,000.00	70%	1	3	1986	100	3	based on life cycle	2086	
90989	Private- High school	Rutledge Rd	Sydenham	CB	600 x 600		2014			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90990	56290	Rutledge Rd	Sydenham	CB	600 x 600		2014			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90991	56290	Rutledge Rd	Sydenham	CB	600 x 600		2014			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90992	56290	Rutledge Rd	Sydenham	CB	600 x 600		2014			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
90993	45100	Point Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90994		Point Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90995	45100	Point Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
90996		Point Rd	Sydenham	DI	600 x 600		1986			3500	$ 3,500.00	70%	1	1	1986	100	1	based on life cycle	2086	
90997	42460	George St	Sydenham	DCBMH	1500		1986			6500	$ 6,500.00	70%	1	1	1986	100	1	based on life cycle	2086	
90998	42460	George St	Sydenham	DCB	1200 x 600		1986			3800	$ 3,800.00	70%	1	1	1986	100	1	based on life cycle	2086	
90999	45115	Portland Ave	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91000	45115	Portland Ave	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91001	45115	Portland Ave	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91002	45115	Portland Ave	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91003	45115	Portland Ave	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91004	45115	Portland Ave	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91005	45115	Portland Ave	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91006	51000	Bedford Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	1	1986	100	1	based on life cycle	2086	
91007	51000	Bedford Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
91008	51000	Bedford Rd	Sydenham	CB	600 x 600		1986			2200	$ 2,200.00	70%	1	3	1986	100	3	based on life cycle	2086	
91200	44995	Perth Rd Cres	Perth Rd	CB	600 x 600		2012	1		2200	$ 2,200.00	96%	1	1	2012	100	1	based on life cycle	2112	
91201	44995	Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91202		Perth Rd Cres	Perth Rd	DI	600 x 600		2012	1		3500	$ 3,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91203	44995	Perth Rd Cres	Perth Rd	CB	600 x 600		2012	1		2200	$ 2,200.00	96%	1	1	2012	100	1	based on life cycle	2112	
91204		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91205		Perth Rd Cres	Perth Rd	MH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91206	44995	Perth Rd Cres	Perth Rd	DCBMH	1500		2012	1		6500	$ 6,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91207	44995	Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91208		Perth Rd Cres	Perth Rd	DI	600 x 600		2012	1		3500	$ 3,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91209	44995	Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91210		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91211		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91212		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91213	44995	Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91214		Perth Rd Cres	Perth Rd	DI	600 x 600		2012	1		3500	$ 3,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91215		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91216		Perth Rd Cres	Perth Rd	MH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91217		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91218		Perth Rd Cres	Perth Rd	DCBMH	1500		2012	1		6500	$ 6,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91219	44995	Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91220	44995	Perth Rd Cres	Perth Rd	DI	600 x 600		2012	1		3500	$ 3,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91221	44995	Perth Rd Cres	Perth Rd	DI	600 x 600		2012	1		3500	$ 3,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91222		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91223		Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91224	44995	Perth Rd Cres	Perth Rd	CBMH	1200		2012	1		4000	$ 4,000.00	96%	1	1	2012	100	1	based on life cycle	2112	
91225	44995	Perth Rd Cres	Perth Rd	DI	600 x 600		2012	1		3500	$ 3,500.00	96%	1	1	2012	100	1	based on life cycle	2112	

PIPE/STRUCTURE ID	SEGMENT ID	LOCATION	VILLAGE	MATERIAL	DIAMETER (mm)	LENGTH (m)	Construction Year	Structural Grade	Operational Grade	Unit Cost (Replacement)*	Replacement Value Estimate	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement Based on Risk, then lifecycle	Timing of Second Replacement
91226		Perth Rd Cres	Perth Rd	DI	600 x 600		2012	1		3500	$ 3,500.00	96%	1	1	2012	100	1	based on life cycle	2112	
91227	54220	Perth Rd	Shales/Opp	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	3	1993	100	3	based on life cycle	2093	
91228	45790	Shales Rd	Shales/Opp	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	1	1993	100	1	based on life cycle	2093	
91229		Shales Rd	Shales/Opp	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	1	1993	100	1	based on life cycle	2093	
91230	45790	Shales Rd	Shales/Opp	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	1	1993	100	1	based on life cycle	2093	
91231	44800	Opinicon Rd	Shales/Opp	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	1	1993	100	1	based on life cycle	2093	
91232	44800	Opinicon Rd	Shales/Opp	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	1	1993	100	1	based on life cycle	2093	
91400	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91401	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91402	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91403	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91404	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91405	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91406	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91407	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91408	53760	Perth Rd	Inverary	DI	600 x 600		1993			3500	$ 3,500.00	77%	1	3	1993	100	3	based on life cycle	2093	
91409	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91410	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91411	53760	Perth Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	3	1993	100	3	based on life cycle	2093	
91412		Latimer Rd	Inverary	CBMH	1200		1993			4000	$ 4,000.00	77%	1	1	1993	100	1	based on life cycle	2093	
91413	43765	Latimer Rd	Inverary	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	1	1993	100	1	based on life cycle	2093	
91414	43765	Latimer Rd	Inverary	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	1	1993	100	1	based on life cycle	2093	
91600	50125	Battersea Rd	Sunbury	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	3	1993	100	3	based on life cycle	2093	
91601	50125	Battersea Rd	Sunbury	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	3	1993	100	3	based on life cycle	2093	
91602	50125	Battersea Rd	Sunbury	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	3	1993	100	3	based on life cycle	2093	
91603	50000	Battersea Rd	Sunbury	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	3	1993	100	3	based on life cycle	2093	
91604	50000	Battersea Rd	Sunbury	CB	600 x 600		1993			2200	$ 2,200.00	77%	1	3	1993	100	3	based on life cycle	2093	
91800	50375	Battersea Rd	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	3	2013	100	3	based on life cycle	2113	
91801	50375	Battersea Rd	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	3	2013	100	3	based on life cycle	2113	
91802	50375	Battersea Rd	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	3	2013	100	3	based on life cycle	2113	
91803	50375	Battersea Rd	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	3	2013	100	3	based on life cycle	2113	
91804	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91805	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91806	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91807	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91808	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91809	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91810	50375	Battersea Rd	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	3	2013	100	3	based on life cycle	2113	
91811	50375	Battersea Rd	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	3	2013	100	3	based on life cycle	2113	
91812	50375	Battersea Rd	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	3	2013	100	3	based on life cycle	2113	
91813			Battersea	DI	600 x 600		2013	1		3500	$ 3,500.00	97%	1	3	2013	100	3	based on life cycle	2113	
91814	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91815	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91816	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91817	50375	Battersea Rd	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	3	2013	100	3	based on life cycle	2113	
91818	50375	Battersea Rd	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	3	2013	100	3	based on life cycle	2113	
91819	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91820	50375	Battersea Rd	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	3	2013	100	3	based on life cycle	2113	
91821	50375	Battersea Rd	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	3	2013	100	3	based on life cycle	2113	
91822	50375	Battersea Rd	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	3	2013	100	3	based on life cycle	2113	
91823	40345	Battersea Water St	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	1	2013	100	1	based on life cycle	2113	
91824	40345	Battersea Water St	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	1	2013	100	1	based on life cycle	2113	
91825	40345	Battersea Water St	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	1	2013	100	1	based on life cycle	2113	
91826	40345	Battersea Water St	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	1	2013	100	1	based on life cycle	2113	
91827			Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	1	2013	100	1	based on life cycle	2113	
91828	46495	Wellington St	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	1	2013	100	1	based on life cycle	2113	

PIPE/STRUCTURE ID	SEGMENT ID	LOCATION	VILLAGE	MATERIAL	DIAMETER (mm)	LENGTH (m)	Construction Year	Structural Grade	Operational Grade	Unit Cost (Replacement)*	Replacement Value Estimate	% Useful Life Remaining (based on age)	Condition/Probability of Failure (1 = good/not likely, 5 = poor/likely)	Consequence of Failure (1 = low, 5 = high)	Inst Year	Useful Life	Risk	Timing of First Replacement-Based on Risk	Timing of First Replacement Based on Risk, then lifecycle	Timing of Second Replacement
91829	46495	Wellington St	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	1	2013	100	1	based on life cycle	2113	
91830			Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	1	2013	100	1	based on life cycle	2113	
91831			Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	1	2013	100	1	based on life cycle	2113	
91832	46495	Wellington St	Battersea	CBMH	1200		2013	1		4000	$ 4,000.00	97%	1	1	2013	100	1	based on life cycle	2113	
91833	40315	Battersea Cross St	Battersea	DI	600 x 600		2013	1		3500	$ 3,500.00	97%	1	1	2013	100	1	based on life cycle	2113	
91834	46495	Wellington St	Battersea	DCB	1200 x 600		2013	1		3800	$ 3,800.00	97%	1	1	2013	100	1	based on life cycle	2113	
91835	46495	Wellington St	Battersea	CB	600 x 600		2013	1		2200	$ 2,200.00	97%	1	1	2013	100	1	based on life cycle	2113	
91836			Battersea	DI	600 x 600		2013	1		3500	$ 3,500.00	97%	1	1	2013	100	1	based on life cycle	2113	
STRUCTURES TOTAL											$ 1,084,800									
PIPES AND STRUCTURES TOTAL											$ 3,502,338									

APPENDIX D6

Township of South Frontenac
Facilities

Building Name & Address	Replacement Cost	Probability of Failure	Consequence of Failure	Risk	Remaining life	useful life	1st capital investment	2nd capital investment
Verona Medical Clinic - 6582 Road 38, Verona, Ontario	$605,000	3	2	6	0.91	50	2062	2112
Hartington Fire Hall - 4808 Holleford Road, Harrowsmith, Ontario	$1,052,000	3	5	15	0.11	50	2022	2072
Bradshaw Fire Hall - 7 Steele Road, South Frontenac, Ontario	$260,000	3	5	15	0.29	50	2031	2081
Latimer Fire Hall, 3516 Latimer Road, Inverary, Ontario	$515,000	3	4	12	0.49	50	2041	2091
Burridge Fire Hall - 237 Burridge Road, Tichborne, Ontario	$683,000	3	4	12	0.09	50	2021	2071
Sydenham Fire Hall, 4233 Stage Coach Road, Sydenham, Ontario	$444,000	3	5	15	0.13	50	2023	2073
Verona Substation - 6930 Hwy 38, South Frontenac, Ontario	$336,000	2	4	8	0.65	50	2049	2099
Burnt Hills Fire Hall - 5038 Carrying Place Road, South Frontenac, Ontario	$133,000	3	4	12	0.35	50	2034	2084
Perth Road Firehall	$1,500,000	4	4	16	0.01	50	2017	2067
Sydenham Library - 4418 Wheatley St, Sydenham,	$1,979,000	1	3	3	0.97	50	2065	2115
Main Portland Garage, 5286 Hinchinbrooke Road, Verona, Ontario	$582,000	1	4	4	0.87	50	2060	2110
Portland OPP - 5282 Hinchinbrooke Road, Verona, Ontario	$1,659,000	3	5	15	0.26	50	2029	2079
Keeley Office - 2490 Keeley Road, South Frontenac, Ontario	$311,000	2	4	8	0.45	50	2039	2089
Hinchinbrooke Sand & Salt Storage Butler, 5286 Hinchinbrooke Road, Verona, Ontario	$1,050,000	1	3	3	0.88	50	2061	2111
Storrington Garage/dome	$1,050,000	1	3	3	1.00	50	2066	2116
Keeley Dome	$1,050,000	1	3	3	0.84	50	2059	2109
Keeley Garage - 2490 Keeley Rd, Sydenham, Ontario	$1,968,000	3	4	12	0.15	50	2024	2074
Main Portland Garage, 5286 Hinchinbrooke Road, Verona, Ontario	$338,000	3	4	12	0.57	50	2045	2095
Picadilly Yard	$0	5	1	5	-	50	2016	2066
Hartington Sand Dome, 5286 Hinchinbrooke Road, Verona, Ontario	$351,000	1	3	3	0.87	40	2051	2091
Bedford Sand Dome, 1389 Westport Road, Godfrey, Ontario	$391,000	1	3	3	0.96	40	2055	2095
Keeley Sand Dome, 2490 Keeley Road, Sydenham, Ontario	$429,000	1	3	3	0.84	40	2050	2090

Township of South Frontenac
Facilities

Building Name & Address	Replacement Cost	Probability of Failure	Consequence of Failure	Risk	Remaining life	useful life	1st capital investment	2nd capital investment
Main Portland Garage, 5286 Hinchinbrooke Road, Verona, Ontario	$646,000	3	4	12	0.42	50	2037	2087
Loughborough Garage - 4264 Stage Coach Rd	$500,000	3	2	6	0.51	50	2042	2092
McMullen Beach Building, 6089 Carleton Drive, Verona, Ontario	$90,000	2	1	2	0.85	50	2059	2109
Princess Anne - 5597 Hwy 38, Harrowsmith, Ontario	$934,000	3	3	9	0.83	50	2058	2108
Storrington Centre - 3910 Battersea Rd, Iverary, Ontario	$2,019,000	3	5	15	0.30	50	2031	2081
Bradshaw School House - 7 Steele Road, South Frontenac, Ontario	$143,000	3	3	9	-	50	2016	2066
Fermoy Community Centre, 3874 Westport Road, Tichborne, Ontario	$193,000	3	3	9	0.87	50	2060	2110
Glendower Hall - 1381 Westport Road, South Frontenac, Ontario	$870,000	3	3	9	0.57	50	2045	2095
Old Schoolhouse - 5595 Road 38, Harrowsmith, ON K0H 1V0	$587,000	2	1	2	1.00	40	2056	2096
Harris Park - 5612 Perth Road Crescent, South Frontenac, Ontario	$334,000	3	1	3	0.29	50	2031	2081
Point Municipal Park - 4410 Point Road, Sydenham, Ontario	$688,000	3	1	3	0.37	50	2035	2085
Battersea Ball Park - 5167 Battersea Road, battersea, Ontario	$451,000	3	1	3	0.15	50	2024	2074
Centennial Park - 4500 Cennial Park Drive, South Frontenac, Ontario	$926,000	2	1	2	0.98	30	2046	2076
Inverary Ball Park - 4772 Latimer Road	$205,000	4	1	4	0.85	50	2059	2109
Gerald Ball Park - 3365 Moreland-Dixon Road, Iverary, Ontario	$67,000	2	1	2	0.37	50	2035	2085
HHW Building	$150,000	1	1	1	0.89	50	2061	2111
Portland Scalehouse	$70,000	1	3	3	0.96	50	2065	2115
Town Hall - 4432 George St, Sydenham, ON K0H 2T0	$1,748,000	2	4	8	0.62	30	2035	2065
Portfolio Total in 2017 dollars	$27,307,000							

PLANNING REPORT

Township of South Frontenac **Planning Department**
Prepared for Committee of the Whole

Agenda Date: December 13, 2016
Date of Report: December 8, 2016

Subject: Planning Department Application Statistics: 2016 and 2017

Summary of the Recommendation:

The recommendation is that the Committee receive the Planning Report dated December 8, 2016 for information.

Purpose of the Report:

The purpose of this report is to bring to the Committee a review and comparison of the number of applications processed by the Planning Department in the years 2016 and 2017.

Year	2015	2016 (as of Dec. 7th, 2016)
Consents	75	69
Minor Variances	31	44
Zoning Amendments	8	16
Official Plan Amendments	0	0
Road Closings	4	7

Recommendation:

The recommendation is that the Committee receive the report for information.

ApplicationNumbers

PLANNING REPORT

Township of South Frontenac **Planning Department**
Prepared for Committee of the Whole

Agenda Date: December 13, 2016
Date of Report: December 6, 2016

Subject: Park Model Trailers: Process to Amend the Zoning By-law to Prohibit Them in Recreational Resorts and Implications Thereof

---

Summary of the Recommendation:

The recommendation is that the Committee receive the Planning Report dated December 6, 2016 for information.

Purpose of the Report:

The purpose of this report is to bring to the Committee a review of the process to prohibit the use of Park Model Trailers in commercial recreational resorts in the Township.

Background:

On November 1, 2016, Council resolved that the Planning Department should prepare a report that confirms what amendments would be required to the zoning by-law to prohibit park model units from being permitted in the RRC lands as an option. Accordingly, the following is a review of the process required to prohibit their use and the implications of undertaking the change.

What a Park Model Trailer Is:
A park model trailer, a.k.a. park model recreational vehicle, is a somewhat unique trailer-type recreational vehicle that is designed to provide temporary accommodation to the travelling public for recreation, camping or seasonal use. They are built on a single chassis with a detachable hitch, mounted on wheels and are designed to be attached to a motor vehicle for the purpose of being drawn or propelled by the motor vehicle.

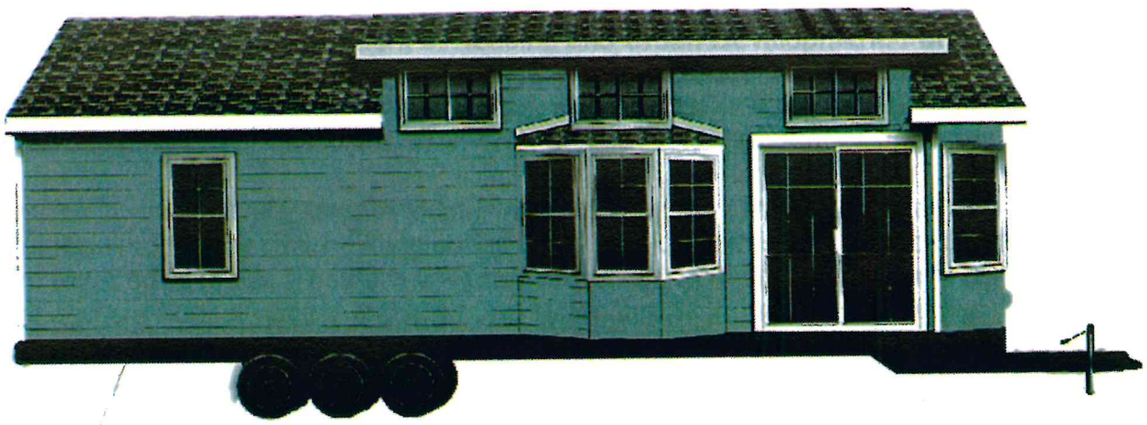
Park models are most often used in recreational vehicle campgrounds and they are not intended by their manufacturers to be used as permanent residences. It should also be note that they are unique in the fact that they can be up to fifteen feet in width or thirty six feet long with a peaked and shingled or metal roof as opposed to smaller more standard-built travel trailers. Some offer gabled windows and are often designed with built-in porches and/or storage areas – many have the look of a summer cottage.

What a Park Model Trailer Is Not:

Park models are regulated under section 9.38 of the Ontario Building Code and, thus, there are minimum building standard that must be met by all manufacturers producing park models – specifying that these units are designed for the 'recreational use' category where one may occupy the unit in each season of the year but not consistently as a primary residence.

It should be emphasized that park models do not constitute housing and there is no practical difference in the use of park models from travel trailers or fifth-wheel trailers. Park models should be regarded as simply one choice among many options in the RV camping world.

The depiction below is an example of a park model trailer:



Analysis:

Presently, park model trailers are permitted in the Recreational Resort Commercial zones because they meet the definition of a "Travel Trailer" which is a permitted use in this zone.

A travel trailer is defined in the Comprehensive Zoning By-law as follows:

"TRAVEL TRAILER" *shall mean any vehicle so constructed that is suitable for being attached to a motor vehicle for the purpose of being drawn or propelled by the motor vehicle, notwithstanding that such vehicle is jacked-up or that its running gear is removed, but not including any vehicle unless it is used or intended for the temporary living, sleeping or eating accommodation of persons therein, and shall be deemed to include a tent trailer and a motorhome."*

Thus, if Council wishes to prohibit park model trailers in the RRC zones it would simply be a matter of adding a sentence to the definition to state that "A Travel Trailer does not include a Park Model Trailer". It may also be prudent to define park model trailers in the by-law.

Other Considerations:

If it was decided that park models should be prohibited then the following items must be taken into consideration in bringing forward the zoning amendment:

1. An inventory of all existing park model units in all resorts in the Township would need to be prepared. This would require site checks to all 64 resorts in the Township. The inventory would relegate existing units to the status of 'legal non-conforming' and more such units could not be added;

2. The zoning amendment would be Township-initiated and would require that each resort owner be contacted concerning the proposed change. Also, notice would need to be given Township-wide in local newspapers.

Council may wish to also consider that, if park models are to remain as a permitted use in resorts, perhaps the minimum required site area for each park model unit could be expanded. The present minimum requirement is 100 metres^2 (1,076 ft.^{2}) for each trailer site. If there is a concern that park models constitute a larger footprint than normal travel trailers and would therefore promote overcrowding of the resort, then expanding the minimum size for each park model site to possibly 150 metres^2 (1,615 ft.^{2}) would address the concern. Of course, any existing park models would be permitted to stay on existing-sized sites since the new regulations cannot be applied retroactively.

Recommendation:

This report is for the Committee's consideration to provide direction to staff.

Sydenham & District Lions Club

Box 199 Sydenham, Ontario, Canada, K0H 2T0

November 28th 2016

Mr. Ron Vandewal, Mayor
Township of South Frontenac
Box 100,
Sydenham, ON
K0H 2T0

Dear Mayor Vandewal,

The Sydenham & District Lions Club and the Sydenham Women's Institute would like to express their thanks for your participation in the tree-lighting ceremony last Friday. Through you we also wish to express our thanks to Councillors Ross Sutherland and Mark Schjerning for joining us in the celebration.

We hope that this will become a tradition in Sydenham over the next few years and we will do our best to see that it happens.

With little preliminary fanfare it was heartening to see so many turn out at this initial event, especially the young ones. We look forward to working toward a bigger and better tree-lighting next year.

Best wishes for a Merry Christmas and a healthy and happy 2017 to you and all members of council.

Sincerely

Lion Jim Kelly
President
Sydenham & District Lions Club
613-376-3515
kellyj@queensu.ca

Connie Selle
President
Sydenham Women's Institute