



Staff Report

Finance and IT Services

Report To: Special Committee of the Whole
Meeting Date: February 1, 2021
Report Number: FAF.21.008
Subject: Wastewater Pipes Asset Management Plan
Prepared by: Sam Dinsmore, Deputy Treasurer/Manager of Accounting and Budgets

A. Recommendations

THAT Council receive Staff Report FAF.21.008 entitled “Wastewater Pipes Asset Management Plan”;

AND THAT Council approve the Wastewater Pipes Asset Management Plan as attached (Attachment #1)

B. Overview

This report is seeking Council endorsement of the Wastewater Pipes Asset Management Plan that staff have been written in accordance with the Infrastructure for Jobs and Prosperity Act, 2015 (Act) and the Asset Management Planning for Municipal Infrastructure, Ontario Regulation 588/17 (O.Reg 588/17).

C. Background

In 2017, the provincial government passed the Act which made asset management planning a legislated requirement for Ontario municipalities. The follow-up regulation, O.Reg 588/17, has a phased in requirement for municipalities to follow, however the Town has taken on a more proactive approach and will complete the requirements before regulated deadlines:

- 1) July 1, 2019 Asset Management Policy –this policy was approved by Council in early 2019;
- 2) July 1, 2021 Asset Management Plan for Core (linear) Assets – these Asset Management Plans are a component of this requirement;
- 3) July 1, 2021 Asset Management Plan for all Assets; and
- 4) July 1, 2023 Asset Management Plan for all Assets with Proposed Levels of Service – other levels of service are outlined in this asset management plan.

In 2020, the following plans were approved Fleet, Bridges, Sidewalks, Roads, Streetlights, Stormwater. Below is a schedule for 2021.

2021

1st Quarter

- Water
- Wastewater
- Parks and Trails
- Facilities and Equipment

2nd Quarter

- Final Summary Plan

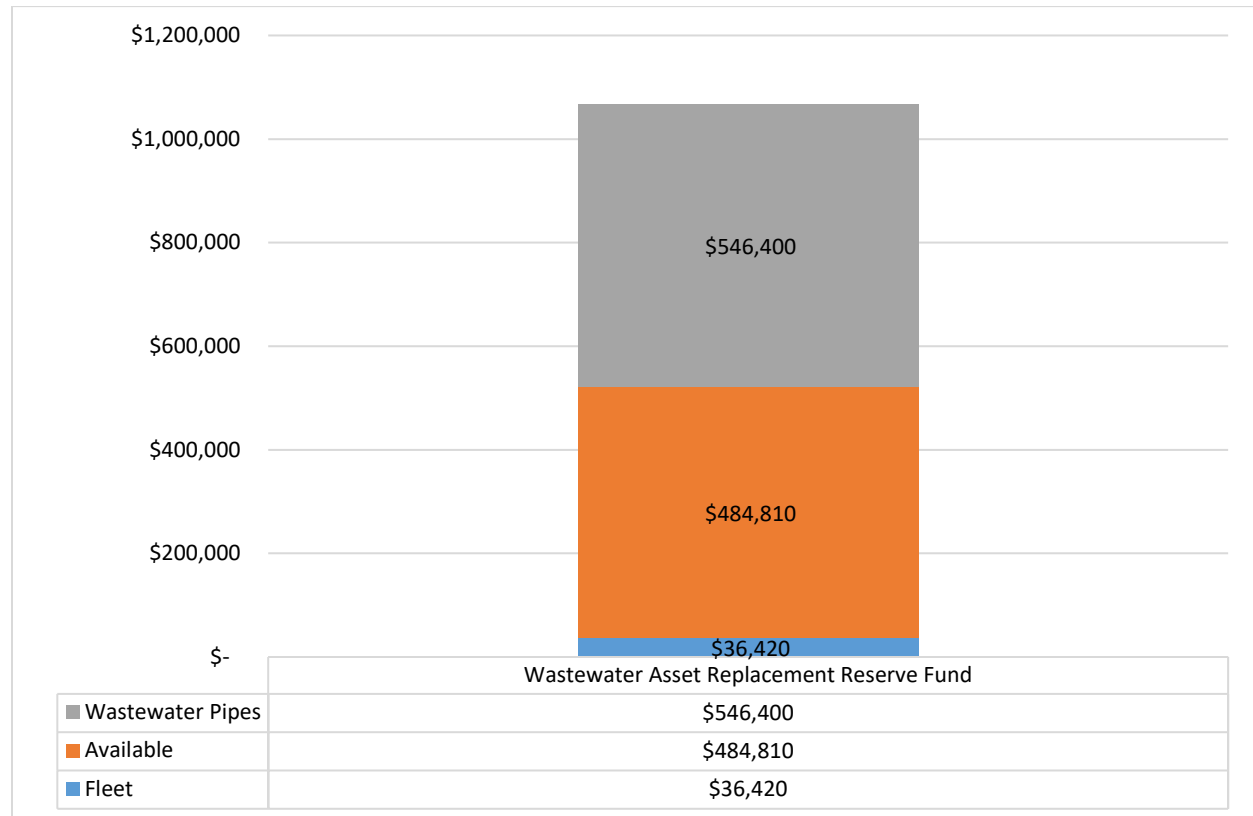
D. Analysis

Attachment #1 is the Town's proposed Wastewater Pipe Asset Management Plan; some highlights from the Plan are:

- The Town operates 99,269 meters of wastewater pipe.
- 2020 Replacement value of \$46M.
- Average age is 23 years.
- Average condition is 85 or Good

The next 10 years the Wastewater Pipes are going to cost \$11M which is split between \$5.6M in operating and \$5.5M in capital transfers. Annually it would equal to \$555,400 in regular maintenance and \$546,400 transfer in the Wastewater Asset Replacement Reserve Fund to fund capital projects.

The Wastewater Asset Replacement Reserve Fund funds multiple asset classes. The previously approved fleet asset management plans has an annual transfer of \$36,420, wastewater pipes has \$546,400 as per this plan, which leaves \$484,810 to be used to fund other water asset classes.



E. Strategic Priorities

1. Communications and Engagement

We will enhance communications and engagement between Town Staff, Town residents and stakeholders.

2. Organizational Excellence

We will continually seek out ways to improve the internal organization of Town Staff and the management of Town assets.

3. Community

We will protect and enhance the community feel and the character of the Town, while ensuring the responsible use of resources and restoration of nature.

4. Quality of Life

We will foster a high quality of life for full-time and part-time residents of all ages and stages, while welcoming visitors.

F. Environmental Impacts

During construction or maintenance, the Town will ensure all appropriate environmental mitigations are taken to reduce the impact on the environment. Specific considerations will be given around the issue of drainage.

G. Financial Impact

The financial impact is contained in this report and the attached asset management plan.

H. In consultation with

Ruth Prince, Director of Finance and IT Services
Shawn Carey, Director of Operations
Allison Kershaw, Manager of Water & Wastewater Services
Mark Service, Wastewater Supervisor
Meg Boyd, Water & Wastewater Compliance & Efficiency Coordinator
Mike Humphries, Engineering Design Technologist
Stephanie McPhie, GIS Specialist
Katherine Dabrowa, Budget Analyst
Vicky Bouwman, Financial Analyst

I. Public Engagement

The topic of this Staff Report has not been subject to a Public Meeting and/or a Public Information Centre as neither a Public Meeting nor a Public Information Centre are required. Comments regarding this report should be submitted to Sam Dinsmore, Deputy Treasurer/Manager of Accounting and Budgets at finance@thebluemountains.ca.

J. Attached

1. Wastewater Pipes Asset Management Plan

Respectfully Submitted,

Sam Dinsmore
Deputy Treasurer/Manager of Accounting and Budgets

Ruth Prince
Director of Finance and IT Services

For more information, please contact:
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Town of The Blue Mountains Wastewater Pipes Asset Management Plan

February 2021

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DRAFT

Executive Summary

Introduction

The Town owns and operates 99,269 meters of wastewater pipes with a replacement cost of \$46,215,000. The Town has different material types of wastewater pipes, which are asbestos cement, concrete pipe, ductile iron, high density poly ethylene, polyvinyl chloride and vitrified clay. The pipes are being replacement with polyvinyl chloride DR35. Staff has created a condition rate index that focuses on Close Circuit Television (CCTV) inspections scores where available, age and material type to score the pipes.

Table 1
Useful Lives by Material Type

Material Type	Meters	Useful Life (years)
Asbestos Cement	14,561	60
Concrete	5,270	80
Ductile Iron	743	90
High Density Poly Ethylene	13,925	75
Polyvinyl Chloride	64,151	100
Vitrified Clay	619	50

The factors used to rate the conditions of the water pipes was the CCTV inspections, age and material type.. This assessment provides the necessary information that allows the creation of a condition rates and a replacement schedule. At the end of 2021 the CCTV inspections should be over 80% completed of the Town's buried wastewater pipes, where there was no CCTV information the condition rate relies on age and material type. Similar to the Water Asset Management Plan, wastewater has used a weighted score shown in the table 2.

Table 2
Weighted Score

Weighted Factors	Weighted Percentage With CCTV Score	Weighted Percentage Without CCTV Score
1 – CCTV Inspection	70%	
2 – Age	20%	70%
3 – Material Type	10%	30%

Table 3
Condition Index Rating

Ratings	Metric
1 – Very Poor	0 -25
2 – Poor	26 to 50
3 – Fair	51 to 75
4 – Good	76 to 100

Plan Structure

The structure of this plan is in alignment with O.Reg 588/17. This was done so that the Town can include this piece in the final Asset Management Plan that will include all asset classes. This plan includes the following sections:

1. State of Infrastructure –Wastewater Pipes;
2. Current Levels of Service and Performance;
3. Lifecycle Model; and
4. Population and Economic Activity.

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State of the Infrastructure

The following charts and graphs outline the Wastewater Pipe segments and the associated data used to set the current level of service

- i. Road Name
- ii. Length (meters)
- iii. Material Type)
- iv. 2020 Replacement Cost
- v. Condition Rating

Table 4
State of the Infrastructure-Wastewater

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Timber Lane	82	PVC	2	\$31	99
Plum Ridge Circle	79	PVC	2	\$30	99
Between Highway 26 and Bay Street East	7	PVC	7	\$3	99
Timber Lane	78	PVC	2	\$29	99
Timber Lane	58	PVC	2	\$22	99
Peel Street North	95	PVC	2	\$44	99
Bay Street West	23	PVC	2	\$11	99
Timber Lane	108	PVC	2	\$46	99
Timber Lane	101	PVC	2	\$38	99
Timber Lane	42	PVC	2	\$19	99
Timber Lane	30	PVC	2	\$14	99
Peel Street North	44	PVC	2	\$21	99
Timber Lane	90	PVC	2	\$34	99
Timber Lane	75	PVC	2	\$32	99
Easement between Timber Lane and Peel Street North	47	PVC	2	\$22	99
Bay Street West	40	PVC	2	\$19	99
Between Highway 26 and Bay Street East	67	PVC	7	\$25	99
Timber Lane	120	PVC	2	\$45	99
Bay Street East	16	PVC	7	\$6	99
Easement between Timber Lane and Peel Street North	51	PVC	2	\$24	99
Timber Lane	44	PVC	2	\$17	99
Peel Street North	14	PVC	2	\$7	99
Walkway between Grey Road 19 and Yellow Birch Crescent	45	PVC	3	\$17	98
Elgin Street South	12	PVC	10	\$4	98
Bruce Street North	63	PVC	16	\$31	97
Highway 26	90	PVC	4	\$42	97
Arnot Crescent	28	PVC	5	\$11	97

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Between King Street West and Huron Street West	58	PVC	15	\$30	97
Grey Road 21	102	PVC	4	\$54	97
Bruce Street South	25	PVC	15	\$12	97
Victoria Street North	67	PVC	15	\$34	97
Interlaken Court	66	PVC	5	\$25	97
Courchevel Crescent	31	PVC	5	\$12	97
Grey Road 21	81	PVC	4	\$43	97
Grey Road 21	100	PVC	4	\$51	97
Courchevel Crescent	33	PVC	5	\$12	97
Grey Road 21	100	PVC	4	\$51	97
Bruce Street North	13	PVC	16	\$6	97
Grey Road 21	99	PVC	4	\$50	97
Bruce Street South	75	PVC	16	\$32	97
Courchevel Crescent	16	PVC	5	\$6	97
Grey Road 21	81	PVC	4	\$43	97
Bruce Street South	72	PVC	16	\$30	97
Bay Street East	16	PVC	14	\$18	97
Arnot Crescent	81	PVC	5	\$31	97
Nipissing Crescent	21	PVC	5	\$8	97
Grey Road 21	101	PVC	4	\$52	97
Bay Street East	40	PVC	14	\$46	97
Grey Road 21	100	PVC	4	\$51	97
Arnot Crescent	51	PVC	5	\$19	97
Arnot Crescent	27	PVC	5	\$10	97
Grey Road 21	85	PVC	4	\$43	97
Victoria Street North	61	PVC	15	\$31	97
Grey Road 21	84	PVC	4	\$43	97
Grey Road 21	99	PVC	4	\$53	97
Bruce Street South	73	PVC	16	\$34	97
Grey Road 21	99	PVC	4	\$53	97
Grindewald Court	31	PVC	5	\$12	97
Between King Street West and Huron Street West	59	PVC	15	\$30	97
Grey Road 21	89	PVC	5	\$45	97
Grey Road 21	76	PVC	4	\$39	97
Bruce Street South	55	PVC	16	\$27	97
Courchevel Crescent	92	PVC	5	\$35	97
Grey Road 21	102	PVC	4	\$55	97
Arnot Crescent	27	PVC	5	\$10	97
Grey Road 21	99	PVC	4	\$53	97
Victoria Street South	3	PVC	15	\$2	97
Arnot Crescent	98	PVC	5	\$37	97
Bruce Street North	44	PVC	16	\$22	97
Bruce Street South	94	PVC	16	\$44	97
Grey Road 21	102	PVC	4	\$52	97
Grey Road 21	75	PVC	4	\$40	97

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Grey Road 21	100	PVC	4	\$53	97
Nipissing Crescent	27	PVC	5	\$10	97
Courchevel Crescent	59	PVC	5	\$22	97
Arnot Crescent	28	PVC	5	\$10	97
Grindewald Court	52	PVC	5	\$20	97
Grey Road 21	81	PVC	4	\$43	97
Grey Road 21	8	PVC	4	\$4	97
Nipissing Crescent	90	PVC	5	\$34	97
Between King Street West and Huron Street West	3	PVC	15	\$2	97
Grey Road 21	102	PVC	4	\$52	97
Grey Road 21	93	PVC	4	\$50	97
Nipissing Crescent	43	PVC	5	\$16	97
Bruce Street South	76	PVC	16	\$32	97
Courchevel Crescent	63	PVC	5	\$24	97
Grey Road 21	82	PVC	4	\$44	97
Grey Road 21	99	PVC	4	\$53	97
Grey Road 21	103	PVC	4	\$53	97
Between Mill Street and Bay Street East	24	PVC	14	\$27	97
Arnot Crescent	40	PVC	5	\$15	97
Bay Street East	41	PVC	14	\$47	97
Grey Road 21	90	PVC	4	\$46	97
Snow Apple Crescent	41	PVC	6	\$15	96
Davos Drive	94	PVC	22	\$35	96
Blueski George Crescent	91	PVC	22	\$34	96
Snow Apple Crescent	69	PVC	6	\$26	96
Snow Apple Crescent	32	PVC	6	\$12	96
Yellow Birch Crescent	59	PVC	6	\$22	96
Between Snow Apple Crescent and Grey Road 21	36	PVC	6	\$17	96
King Street West	57	PVC	21	\$21	96
Blue Mountain Village	46	PVC	18	\$20	96
Blue Mountain Village	84	PVC	18	\$35	96
Between Snow Apple Crescent and Grey Road 21	37	PVC	6	\$14	96
Yellow Birch Crescent	97	PVC	6	\$37	96
Craigmore Crescent	81	PVC	19	\$31	96
Snow Apple Crescent	65	PVC	6	\$24	96
Between Snow Apple Crescent and Grey Road 21	39	PVC	6	\$18	96
Blueski George Crescent	90	PVC	22	\$34	96
Snow Apple Crescent	40	PVC	6	\$15	96
Yellow Birch Crescent	49	PVC	6	\$18	96
Between Snow Apple Crescent and Grey Road 21	84	PVC	6	\$39	96
Blue Mountain Village	8	PVC	18	\$4	96

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Blueski George Crescent	102	PVC	22	\$38	96
Blueski George Crescent	110	PVC	22	\$41	96
Snow Apple Crescent	42	PVC	6	\$16	96
Jozo Weider Boulevard	5	PVC	18	\$2	96
Between Snow Apple Crescent and Grey Road 21	71	PVC	6	\$33	96
Between Snow Apple Crescent and Grey Road 21	54	PVC	6	\$25	96
Blueski George Crescent	60	PVC	22	\$23	96
Davos Drive	90	PVC	22	\$34	96
Yellow Birch Crescent	36	PVC	6	\$14	96
Yellow Birch Crescent	86	PVC	6	\$32	96
Cortina Crescent	63	PVC	22	\$24	96
Blueski George Crescent	52	PVC	22	\$20	96
Blueski George Crescent	66	PVC	22	\$25	96
Between Snow Apple Crescent and Grey Road 21	46	PVC	6	\$19	96
Yellow Birch Crescent	56	PVC	6	\$21	96
King Street West	74	PVC	21	\$28	96
Between Cortina Cres and Davos Drive	76	PVC	22	\$29	96
Blue Mountain Village	39	PVC	18	\$16	96
Blueski George Crescent	40	PVC	22	\$15	96
Cortina Crescent	34	PVC	22	\$13	96
Davos Drive	88	PVC	22	\$33	96
Between Snow Apple Crescent and Grey Road 21	8	PVC	6	\$3	96
King Street West	83	PVC	21	\$31	96
Yellow Birch Crescent	54	PVC	6	\$20	96
Between Wyandot Court and Sleepy Hollow Road	10	PVC	18	\$4	96
Snow Apple Crescent	21	PVC	6	\$8	96
Blue Mountain Village	21	PVC	18	\$9	96
Between Snow Apple Crescent and Grey Road 21	57	PVC	6	\$27	96
Blue Mountain Village	28	PVC	18	\$12	96
Between Snow Apple Crescent and Grey Road 21	44	PVC	6	\$16	96
Between Snow Apple Crescent and Grey Road 21	54	PVC	6	\$20	96
Between Snow Apple Crescent and Grey Road 21	84	PVC	6	\$39	96
Yellow Birch Crescent	40	PVC	6	\$15	96
Between Cortina Cres and Davos Drive	48	PVC	22	\$18	96
Yellow Birch Crescent	9	PVC	6	\$3	96
Blue Mountain Village	27	PVC	18	\$11	96
Craigmore Crescent	8	PVC	19	\$3	96
Blueski George Crescent	90	PVC	22	\$34	96
Snow Apple Crescent	30	PVC	6	\$11	96

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Yellow Birch Crescent	54	PVC	6	\$20	96
Blue Mountain Village	49	PVC	18	\$21	96
Between Snow Apple Crescent and Grey Road 21	15	PVC	6	\$7	96
Jozo Weider Boulevard	26	PVC	18	\$11	96
Blueski George Crescent	55	PVC	22	\$21	96
King Street East	57	PVC	21	\$21	96
Blueski George Crescent	66	PVC	22	\$25	96
Yellow Birch Crescent	100	PVC	6	\$38	96
Yellow Birch Crescent	37	PVC	6	\$14	96
Between Snow Apple Crescent and Grey Road 21	40	PVC	6	\$17	96
Cortina Crescent	67	PVC	22	\$25	96
Yellow Birch Crescent	48	PVC	6	\$18	96
Between Snow Apple Crescent and Grey Road 21	51	PVC	6	\$24	96
Blue Mountain Village	52	PVC	18	\$22	96
Jozo Weider Boulevard	27	PVC	18	\$11	96
Blue Mountain Village	48	PVC	18	\$20	96
Blue Mountain Village	40	PVC	18	\$17	96
Blueski George Crescent	60	PVC	22	\$23	96
Blueski George Crescent	39	PVC	22	\$15	96
Snow Apple Crescent	54	PVC	6	\$20	96
Blueski George Crescent	46	PVC	22	\$17	96
Yellow Birch Crescent	31	PVC	6	\$12	96
Yellow Birch Crescent	22	PVC	6	\$8	96
Snow Apple Crescent	54	PVC	6	\$20	96
Yellow Birch Crescent	16	PVC	6	\$6	96
Davos Drive	91	PVC	22	\$34	96
Between Snow Apple Crescent and Grey Road 21	23	PVC	6	\$11	96
Blueski George Crescent	48	PVC	22	\$18	96
Davos Drive	63	PVC	22	\$24	96
Blueski George Crescent	89	PVC	22	\$33	96
Cortina Crescent	46	PVC	22	\$17	96
Louisa Street East	59	PVC	25	\$22	95
Wensley Drive	99	PVC	7	\$37	95
Wickens Lane	59	PVC	25	\$22	95
Russell Street West	97	PVC	25	\$37	95
Wensley Drive	70	PVC	7	\$27	95
Wensley Drive	67	PVC	7	\$25	95
Russell Court	69	PVC	25	\$26	95
Wensley Drive	7	PVC	7	\$3	95
Wensley Drive	85	PVC	7	\$32	95
Bruce Street South	27	PVC	25	\$10	95
Russell Street West	106	PVC	25	\$40	95
Wensley Drive	57	PVC	7	\$22	95

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Wickens Lane	122	PVC	25	\$46	95
Alice Street East	76	PVC	25	\$29	95
Russell Street West	105	PVC	25	\$40	95
Wensley Drive	69	PVC	7	\$26	95
Russell Street West	75	PVC	25	\$28	95
Highway 26	132	PVC	7	\$56	95
Peaks Road	79	PVC	7	\$33	95
Wensley Drive	90	PVC	7	\$34	95
Russell Street East	67	PVC	26	\$25	95
Wensley Drive	100	PVC	7	\$38	95
Wensley Drive	67	PVC	7	\$25	95
Wensley Drive	13	PVC	7	\$5	95
Wensley Drive	40	PVC	7	\$15	95
Bruce Street South	54	PVC	25	\$20	95
Wensley Drive	63	PVC	7	\$24	95
Louisa Street East	83	PVC	25	\$31	95
Highway 26	63	PVC	7	\$27	95
Wickens Lane	49	PVC	25	\$19	95
Aspen Way	108	PVC	29	\$41	94
Farm Gate Road	47	PVC	30	\$18	94
Grey Road 19	59	PVC	30	\$25	94
Farm Gate Road	47	PVC	30	\$18	94
Settlers Way	85	PVC	30	\$32	94
Arlberg Crescent	66	PVC	30	\$28	94
Settlers Way	79	PVC	30	\$30	94
Aspen Way	44	PVC	29	\$17	94
Between Fairway Ct and Grey Road 19	41	PVC	28	\$16	94
Arlberg Crescent	120	PVC	30	\$51	94
Settlers Way	59	PVC	30	\$22	94
Grey Road 19	28	PVC	30	\$12	94
Aspen Way	89	PVC	29	\$34	94
Pioneer Lane	102	PVC	30	\$38	94
Settlers Way	93	PVC	30	\$35	94
Aspen Way	48	PVC	29	\$18	94
Aspen Way	116	PVC	29	\$44	94
Pioneer Lane	112	PVC	30	\$42	94
Pioneer Lane	39	PVC	30	\$15	94
Settlers Way	66	PVC	30	\$25	94
Fairway Court	84	PVC	28	\$32	94
Between Settlers Way to Grey Road 19	60	PVC	30	\$25	94
Tyrolean Lane	106	PVC	30	\$40	94
Pioneer Lane	68	PVC	30	\$26	94
Pioneer Lane	102	PVC	30	\$39	94
Between Settlers Way and Grey Road 19	108	PVC	30	\$46	94
Fairway Court	72	PVC	28	\$27	94

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Aspen Way	39	PVC	29	\$15	94
Arlberg Crescent	75	PVC	30	\$32	94
Heritage Drive	79	PVC	30	\$30	94
Settlers Way	93	PVC	30	\$35	94
Arlberg Crescent	74	PVC	30	\$31	94
Arlberg Crescent	95	PVC	30	\$40	94
Between Fairway Ct and Grey Road 19	67	PVC	28	\$25	94
Arlberg Crescent	130	PVC	30	\$55	94
Arlberg Crescent	95	PVC	30	\$40	94
Arlberg Crescent	90	PVC	30	\$38	94
Aspen Way	50	PVC	29	\$19	94
Fairway Court	71	PVC	28	\$27	94
Craigmore Crescent	126	PVC	30	\$53	94
Farm Gate Road	46	PVC	30	\$17	94
Settlers Way	70	PVC	30	\$26	94
Arlberg Crescent	69	PVC	30	\$29	94
Farm Gate Road	97	PVC	30	\$37	94
Craigmore Crescent	115	PVC	30	\$43	94
Settlers Way	71	PVC	30	\$27	94
Aspen Way	90	PVC	29	\$34	94
Settlers Way	18	PVC	30	\$7	94
Aspen Way	61	PVC	29	\$23	94
Craigmore Crescent	85	PVC	30	\$32	94
Kandahar Lane	113	PVC	30	\$43	94
Between Fairway Ct and Grey Road 19	108	PVC	28	\$41	94
Heritage Drive	34	PVC	30	\$13	94
Tyrolean Lane	85	PVC	30	\$32	94
Lendvay Alley	90	PVC	9	\$34	94
Settlers Way	77	PVC	30	\$29	94
Block 20 towards Grey Road 19	20	PVC	9	\$8	94
Settlers Way	65	PVC	30	\$25	94
Grey Road 19	30	PVC	30	\$11	94
Between Settlers Way to Grey Road 19	101	PVC	30	\$43	94
Carmichael Crescent	57	PVC	10	\$21	93
Carmichael Crescent	79	PVC	10	\$30	93
Grey Road 19	103	PVC	35	\$43	93
Between Wintergreen Place and Grey Road 19	123	PVC	33	\$52	93
Plater St	63	PVC	10	\$24	93
Arrowhead Crescent	8	PVC	36	\$3	93
Grey Road 19	96	PVC	35	\$41	93
Wintergreen Pl	123	PVC	33	\$52	93
Grey Road 19	62	PVC	34	\$23	93
Grey Road 19	75	PVC	35	\$32	93
Block 21. Between Lendvay Alley and Grey Road 19	45	PVC	10	\$17	93

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Arrowhead Crescent	30	PVC	36	\$11	93
Campbell Crescent	31	PVC	10	\$12	93
Arrowhead Crescent	76	PVC	36	\$29	93
Carmichael Crescent	20	PVC	10	\$7	93
Huron Street West	102	PVC	34	\$38	93
Grey Road 19	72	PVC	35	\$27	93
Monterra Road	99	PVC	35	\$51	93
Campbell Crescent	66	PVC	10	\$25	93
Grey Road 19	113	PVC	35	\$48	93
Between Plater Street and Kinsey	58	PVC	10	\$22	93
Carmichael Crescent	44	PVC	10	\$17	93
Campbell Crescent	66	PVC	10	\$25	93
Carmichael Crescent	70	PVC	10	\$26	93
Carmichael Crescent	25	PVC	10	\$9	93
Kinsey Place	88	PVC	10	\$33	93
Grey Road 19	101	PVC	34	\$38	93
Carmichael Crescent	80	PVC	10	\$30	93
Campbell Crescent	36	PVC	10	\$13	93
Grey Road 19	42	PVC	35	\$18	93
Arrowhead Crescent	81	PVC	36	\$31	93
Behind Lot 9 and 10 (118 and 120 Lendvay Alley)	63	PVC	10	\$24	93
Carmichael Crescent	49	PVC	10	\$18	93
Wintergreen Pl	74	PVC	33	\$31	93
Lendvay Alley	20	PVC	10	\$7	93
Carmichael Crescent	30	PVC	10	\$11	93
Campbell Crescent	31	PVC	10	\$12	93
Arrowhead Crescent	70	PVC	36	\$26	93
Between Carmichael Crescent and Campbell Crescent	84	PVC	10	\$32	93
Highway 26	16	PVC	35	\$6	93
Between Wintergreen Place and Grey Road 19	145	PVC	33	\$61	93
Drake's Path	10	PVC	35	\$4	93
Grey Road 19	75	PVC	35	\$32	93
Campbell Crescent	41	PVC	10	\$15	93
Lendvay Alley	99	PVC	10	\$37	93
Carmichael Crescent	45	PVC	10	\$17	93
Campbell Crescent	53	PVC	10	\$20	93
Carmichael Crescent	76	PVC	10	\$29	93
Grey Road 19	131	PVC	34	\$50	93
Carmichael Crescent	55	PVC	10	\$21	93
Between Plater Street and Kinsey	51	PVC	10	\$19	93
Between Carmichael Crescent and Campbell Crescent	92	PVC	10	\$35	93
Carmichael Crescent	48	PVC	10	\$18	93
Highway 26	61	PVC	35	\$23	93

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Grey Road 19	103	PVC	35	\$44	93
Campbell Crescent	83	PVC	10	\$31	93
Plater St	55	PVC	10	\$21	93
Grey Road 19	110	PVC	35	\$46	93
Craigleith Road	101	PVC	12	\$38	92
Highway 26	116	PVC	12	\$59	92
Sunset Boulevard	78	PVC	12	\$36	92
Sunset Boulevard	55	PVC	12	\$27	92
Between Sunset Boulevard and West Ridge Drive	52	PVC	12	\$22	92
Between Sunset Boulevard and West Ridge Drive	53	PVC	12	\$23	92
Marsh Street	100	PVC	42	\$42	92
Sunset Boulevard	80	PVC	12	\$39	92
Highway 26	127	CP	33	\$48	92
Highway 26	99	PVC	12	\$51	92
West Ridge Drive	75	PVC	12	\$28	92
Highway 26	64	PVC	12	\$27	92
Highway 26	107	CP	33	\$50	92
Alfred Street West	116	PVC	42	\$44	92
11 Bay Street East	59	PVC	12	\$22	92
Highway 26	73	PVC	12	\$36	92
Sunset Boulevard	78	PVC	12	\$38	92
Highway 26 to Thornbury Wastewater Plant	1,497	PVC	12	\$718	92
West Ridge Drive	100	PVC	12	\$38	92
Sunset Boulevard	12	PVC	12	\$6	92
Victoria Street South	43	PVC	42	\$20	92
Hope St	22	CP	33	\$8	92
Lake Shore Road	14	PVC	12	\$6	92
Highway 26	128	CP	33	\$60	92
Lake Shore Road	3	PVC	12	\$1	92
Sunset Boulevard	137	PVC	12	\$67	92
Alfred Street West	117	PVC	42	\$44	92
Highway 26	97	PVC	12	\$48	92
Highway 26	93	PVC	12	\$45	92
West Ridge Drive	87	PVC	12	\$37	92
Grey Road 40	76	PVC	12	\$33	92
Craigleith Road	96	PVC	12	\$36	92
Camperdown Road	14	PVC	12	\$5	92
Highway 26	127	PVC	12	\$62	92
West Ridge Drive	20	PVC	12	\$8	92
Highway 26	116	CP	33	\$54	92
Brophy's Lane	35	CP	33	\$13	92
Highway 26	97	PVC	12	\$47	92
11 Bay Street East	43	PVC	12	\$16	92
Highway 26	82	PVC	12	\$40	92

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
West Ridge Drive	93	PVC	12	\$39	92
Blue Mountain Drive	19	CP	33	\$7	92
Alfred Street East	27	PVC	40	\$10	92
Victoria Street South	62	PVC	42	\$29	92
Highway 26	95	CP	33	\$50	92
Highway 26	69	PVC	12	\$35	92
Highway 26	113	PVC	12	\$55	92
Victoria Street South	35	PVC	42	\$17	92
Sunset Boulevard	97	PVC	12	\$47	92
Sunset Boulevard	25	PVC	12	\$12	92
Sunset Boulevard	21	PVC	12	\$10	92
Sunset Boulevard	69	PVC	12	\$32	92
Between Sunset Boulevard and West Ridge Drive	101	PVC	12	\$42	92
Highway 26	40	PVC	12	\$20	92
Sunset Boulevard	62	PVC	12	\$30	92
Highway 26	103	CP	33	\$48	92
Sunset Boulevard	115	PVC	12	\$56	92
Grey Road 40	6	PVC	12	\$2	92
Alfred Street West	89	PVC	42	\$33	92
Highway 26	121	PVC	12	\$59	92
Highway 26	80	PVC	12	\$34	92
Craigleith Road	99	PVC	12	\$37	92
Highway 26	99	CP	33	\$46	92
Bay Street West	70	PVC	42	\$33	92
West Ridge Drive	74	PVC	12	\$28	92
Between Sunset Boulevard and West Ridge Drive	92	PVC	12	\$39	92
Lake Shore Road	27	PVC	12	\$14	92
Highway 26	98	PVC	12	\$41	92
Highway 26	133	PVC	12	\$65	92
West Ridge Drive	59	PVC	12	\$25	92
Highway 26	73	PVC	12	\$35	92
Highway 26	70	PVC	12	\$34	92
Highway 26	109	PVC	12	\$56	92
Craigleith Road	19	PVC	12	\$7	92
Lake Shore Road	44	PVC	12	\$18	92
West Ridge Drive	39	PVC	12	\$15	92
Highway 26	86	CP	33	\$40	92
Craigleith Road	100	PVC	12	\$38	92
Between Sunset Boulevard and West Ridge Drive	32	PVC	12	\$13	92
Highway 26	10	PVC	12	\$5	92
Highway 26	91	PVC	12	\$38	92
Highway 26	139	PVC	12	\$68	92
Highway 26	91	PVC	12	\$45	92
West Ridge Drive	32	PVC	12	\$13	92

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Sunset Boulevard	50	PVC	12	\$23	92
Highway 26	100	PVC	12	\$49	92
Highway 26	56	CP	33	\$26	92
11 Bay Street East	10	PVC	12	\$4	92
Sunset Boulevard	54	PVC	12	\$26	92
Craigleith Road	100	PVC	12	\$38	92
Camperdown Road	49	PVC	12	\$19	92
Highway 26	79	PVC	12	\$40	92
Bay Street West	104	PVC	42	\$48	92
Highway 26	119	PVC	12	\$58	92
Sunset Boulevard	66	PVC	12	\$31	92
11 Bay Street East	19	PVC	12	\$7	92
Sunset Boulevard	12	PVC	12	\$6	92
Highway 26 to Craigleith Main Sewage Lift Station	25	CP	33	\$14	92
Sunset Boulevard	124	PVC	12	\$61	92
Sunset Boulevard	128	PVC	12	\$63	92
Highway 26	37	PVC	12	\$16	92
Highway 26	87	PVC	12	\$44	92
Highway 26	113	PVC	12	\$55	92
Between Sunset Boulevard and West Ridge Drive	100	PVC	12	\$42	92
East Ridge Drive	262	PVC	12	\$113	92
Highway 26	131	PVC	12	\$64	92
Craigleith Road	43	PVC	12	\$16	92
West Ridge Drive	24	PVC	12	\$10	92
Highway 26	138	PVC	12	\$58	92
West Ridge Drive	60	PVC	12	\$25	92
Highway 26	126	PVC	12	\$62	92
Highway 26	86	CP	33	\$40	92
Pheasant Run	174	HDPE	2	\$169	92
11 Bay Street East	15	PVC	12	\$5	92
Sunset Boulevard	49	PVC	12	\$24	92
West Ridge Drive	18	PVC	12	\$8	92
Victoria Street South	81	PVC	42	\$38	92
Victoria Street South	110	PVC	42	\$51	92
Grey Road 40	32	PVC	12	\$12	92
Highway 26	120	CP	33	\$56	92
Highway 26	94	PVC	12	\$48	92
Between Sunset Boulevard and West Ridge Drive	113	PVC	12	\$48	92
Highway 26	79	CP	33	\$37	92
Highway 26	97	CP	33	\$45	92
Highway 26	114	PVC	12	\$56	92
West Ridge Drive	47	PVC	12	\$18	92
Sunset Boulevard	103	PVC	12	\$50	92
Victoria Street South	116	PVC	42	\$54	92

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Craigleith Road	99	PVC	12	\$37	92
Highway 26	2,302	PVC	12	\$990	92
Alfred Street West	79	PVC	42	\$30	92
Victoria Street South	111	PVC	42	\$52	92
Highway 26	129	CP	33	\$49	92
Highway 26	98	PVC	12	\$50	92
Between Sunset Boulevard and West Ridge Drive	53	PVC	12	\$22	92
Highway 26	131	PVC	12	\$55	92
Sunset Boulevard	94	PVC	12	\$46	92
Highway 26	97	PVC	12	\$47	92
Highway 26	126	PVC	12	\$61	92
Highway 26	94	PVC	12	\$46	92
Highway 26	61	PVC	12	\$30	92
Highway 26	70	PVC	12	\$36	92
Sunset Boulevard	41	PVC	12	\$19	92
Highway 26	143	CP	35	\$76	91
Lakeshore Road East	112	CP	35	\$60	91
Monterra Road	80	CP	35	\$41	91
Lakeshore Road East	68	CP	35	\$36	91
Monterra Road	27	CP	35	\$14	91
Lakeshore Road East	131	CP	35	\$70	91
Monterra Road	106	CP	35	\$54	91
Between Monterra Road and Timmons Street	165	CP	35	\$149	91
Monterra Road	29	CP	35	\$15	91
Between Monterra Road and Timmons Street	108	CP	35	\$97	91
Between Monterra Road and Timmons Street	117	CP	35	\$105	91
Monterra Road	111	CP	35	\$57	91
Highway 26	128	CP	35	\$68	91
Lakeshore Road East	143	CP	35	\$76	91
Between Lakeshore Road East and Highway 26	50	CP	35	\$27	91
Highway 26	82	CP	35	\$44	91
Between Monterra Road and Timmons Street	107	CP	35	\$81	91
Lakeshore Road East	116	CP	35	\$62	91
Timmons St	33	CP	35	\$30	91
Between Monterra Road and Timmons Street	111	CP	35	\$100	91
Between Monterra Road and Timmons Street	100	CP	35	\$76	91
Timmons St	78	CP	35	\$71	91
Monterra Road	67	CP	35	\$34	91
Timmons St	12	CP	35	\$11	91

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Between Monterra Road and Timmons Street	53	CP	35	\$48	91
Monterra Road	42	CP	35	\$22	91
Lakeshore Road East	115	CP	35	\$61	91
Between Monterra Road and Timmons Street	101	CP	35	\$77	91
Monterra Road	102	CP	35	\$52	91
Between Mill Street and Bay Street East	5	PVC	44	\$6	91
Highway 26	6	CP	35	\$3	91
Lakeshore Road East	116	CP	35	\$62	91
Monterra Road	112	CP	35	\$57	91
Highway 26	119	CP	35	\$63	91
Between Alice Street West and Louisa Street West	12	PVC	15	\$5	90
Chamonic Crescent	120	PVC	14	\$45	90
Chamonic Crescent	95	PVC	14	\$36	90
Grey Road 19	71	PVC	15	\$30	90
10th Line	34	PVC	15	\$17	90
High Bluff Lane	100	PVC	15	\$51	90
East Ridge Drive	80	PVC	15	\$39	90
Peel Street North	113	PVC	15	\$58	90
Grey Road 40	120	PVC	15	\$45	90
Between John Watt Way and 10th Line	100	PVC	15	\$49	90
High Bluff Lane	47	PVC	15	\$24	90
Camperdown Road	119	PVC	15	\$45	90
East Ridge Drive	53	PVC	15	\$26	90
St. Moritz Crescent	40	PVC	15	\$15	90
St. Moritz Crescent	110	PVC	15	\$41	90
Beaver Street South	38	PVC	15	\$14	90
Long Point Road	2,168	PVC	14	\$1,041	90
Between Huron Street West and Bay Street East	15	PVC	14	\$17	90
High Bluff Lane	100	PVC	15	\$51	90
East Ridge Drive	90	PVC	15	\$44	90
Chamonic Crescent	95	PVC	14	\$36	90
Between Napier Street East & Limestone Lane	13	PVC	15	\$5	90
Grey Road 19	101	PVC	15	\$43	90
Grey Road 40	113	PVC	15	\$43	90
Limestone Lane	27	PVC	15	\$10	90
Bruce Street South	91	PVC	15	\$39	90
John Watt Way	40	PVC	15	\$19	90
East Ridge Drive	99	PVC	15	\$48	90
Grey Road 40	77	PVC	15	\$29	90
High Bluff Lane	100	PVC	15	\$51	90

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Between Napier Street East & Limestone Lane	51	PVC	15	\$19	90
John Watt Way	67	PVC	15	\$33	90
Cobblestone Lane	84	PVC	15	\$32	90
Chamonic Crescent	91	PVC	14	\$34	90
Grey Road 19	109	PVC	15	\$46	90
Grey Road 19	14	PVC	15	\$5	90
Chamonic Crescent	88	PVC	14	\$33	90
St. Moritz Crescent	62	PVC	15	\$23	90
Grey Road 19	100	PVC	15	\$42	90
Grey Road 19	86	PVC	15	\$32	90
Grey Road 40	76	PVC	15	\$29	90
High Bluff Lane	77	PVC	15	\$39	90
Arthur Street West	98	PVC	15	\$50	90
Bruce Street South	71	PVC	15	\$30	90
Arthur Street West	106	PVC	15	\$54	90
Grey Road 19	101	PVC	15	\$42	90
High Bluff Lane	100	PVC	15	\$51	90
Between John Watt Way and 10th Line	100	PVC	15	\$49	90
Between Alice Street West and Louisa Street West	96	PVC	15	\$36	90
Limestone Lane	57	PVC	15	\$22	90
East Ridge Drive	36	PVC	15	\$17	90
Grey Road 19	44	PVC	15	\$18	90
Between John Watt Way and 10th Line	96	PVC	15	\$47	90
Grey Road 40	7	PVC	15	\$2	90
Grey Road 19	90	PVC	15	\$38	90
East Ridge Drive	48	PVC	15	\$23	90
Arthur Street West	71	PVC	15	\$36	90
East Ridge Drive	39	PVC	15	\$19	90
Bruce Street South	60	PVC	15	\$25	90
St. Moritz Crescent	85	PVC	15	\$32	90
High Bluff Lane	100	PVC	15	\$51	90
Camperdown Road	112	PVC	15	\$42	90
East Ridge Drive	119	PVC	15	\$58	90
Chamonic Crescent	110	PVC	14	\$41	90
St. Moritz Crescent	50	PVC	15	\$19	90
St. Moritz Crescent	119	PVC	15	\$45	90
Chamonic Crescent	104	PVC	14	\$39	90
Camperdown Road	35	PVC	15	\$13	90
High Bluff Lane	29	PVC	15	\$15	90
Beaver Street South	94	PVC	15	\$35	90
High Bluff Lane	100	PVC	15	\$51	90
Cobblestone Lane	94	PVC	15	\$35	90
10th Line	80	PVC	15	\$39	90

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
St. Moritz Crescent	57	PVC	15	\$21	90
John Watt Way	117	PVC	15	\$57	90
Beaver Street South	59	PVC	15	\$22	90
Grey Road 19	86	PVC	15	\$32	90
Grey Road 19	97	PVC	15	\$41	90
Arthur Street West	106	PVC	15	\$54	90
St. Moritz Crescent	67	PVC	15	\$25	90
Between John Watt Way and 10th Line	85	PVC	15	\$41	90
East Ridge Drive	97	PVC	15	\$47	90
Between Napier Street East & Limestone Lane	105	PVC	15	\$40	90
Riverbank Court	70	PVC	15	\$26	90
Alice Street West	66	PVC	15	\$25	90
Arthur Street West	14	PVC	15	\$7	90
High Bluff Lane	99	PVC	15	\$51	90
Bruce Street South	90	PVC	15	\$38	90
Grey Road 40	79	PVC	15	\$30	90
East Ridge Drive	104	PVC	15	\$51	90
Camperdown Road	120	PVC	15	\$45	90
Between John Watt Way and 10th Line	100	PVC	15	\$49	90
High Bluff Lane	92	PVC	15	\$47	90
John Watt Way	82	PVC	15	\$40	90
Between Alice Street West and Louisa Street West	109	PVC	15	\$41	90
Timber Leif Ridge	109	PVC	14	\$41	90
Cobblestone Lane	84	PVC	15	\$32	90
Grey Road 19	34	PVC	15	\$14	90
Grey Road 19	75	PVC	15	\$28	90
High Bluff Lane	100	PVC	15	\$51	90
Thorncroft Court	64	PVC	16	\$24	89
Gord Canning Drive	92	PVC	16	\$39	89
Innsbruck Lane	64	PVC	16	\$24	89
Innsbruck Lane	36	PVC	16	\$13	89
Salzburg Place	38	PVC	16	\$14	89
Bruce Street South	57	PVC	16	\$24	89
Bruce Street South	61	PVC	16	\$26	89
Innsbruck Lane	58	PVC	16	\$22	89
Gord Canning Drive	85	PVC	16	\$36	89
Gord Canning Drive	7	PVC	16	\$3	89
Victoria Street South	56	PVC	16	\$21	89
Interlaken Court	275	HDPE	5	\$266	89
Jozo Weider Boulevard	74	PVC	16	\$31	89
Dolomite Court	61	PVC	16	\$23	89
Salzburg Place	108	PVC	16	\$41	89
Jozo Weider Boulevard	74	PVC	16	\$31	89

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Innsbruck Lane	62	PVC	16	\$24	89
Bruce Street South	59	PVC	16	\$25	89
Between Lemon Street & Bruce Street South	63	PVC	16	\$24	89
Victoria Street South	58	PVC	16	\$22	89
Bruce Street South	74	PVC	16	\$31	89
Pyatt Avenue	35	PVC	16	\$13	89
Gord Canning Drive	36	PVC	16	\$15	89
Pyatt Avenue	29	PVC	16	\$11	89
Jozo Weider Boulevard	72	PVC	16	\$30	89
Victoria Street South	64	PVC	16	\$30	89
Bruce Street South	114	PVC	16	\$48	89
Innsbruck Lane	52	PVC	16	\$20	89
Bruce Street South	79	PVC	16	\$33	89
Salzburg Place	22	PVC	16	\$8	89
Gord Canning Drive	68	PVC	16	\$28	89
Pyatt Court	33	PVC	16	\$13	89
Alta Road	81	PVC	17	\$30	88
Lucille Wheeler Crescent	59	PVC	17	\$22	88
Margaret Drive	92	PVC	17	\$35	88
Escarpment View Court	75	PVC	17	\$28	88
Alta Road	46	PVC	17	\$17	88
Alta Road	71	PVC	17	\$27	88
Jozo Weider Boulevard	101	PVC	17	\$38	88
Hemlock Court	64	PVC	17	\$24	88
Jozo Weider Boulevard	108	PVC	17	\$41	88
Margaret Drive	71	PVC	17	\$27	88
Between Escarpment View Ct and Alta Road	69	PVC	17	\$26	88
Hemlock Court	27	PVC	17	\$10	88
Jozo Weider Boulevard	107	PVC	17	\$40	88
Alta Road	109	PVC	17	\$41	88
Hemlock Court	99	PVC	17	\$37	88
Alta Road	18	PVC	17	\$7	88
Alta Road	44	PVC	17	\$17	88
Alta Road	77	PVC	17	\$29	88
Alta Road	36	PVC	17	\$14	88
Alta Road	71	PVC	17	\$31	88
Oak Court	90	PVC	17	\$34	88
Oak Court	30	PVC	17	\$11	88
Alta Road	36	PVC	17	\$14	88
Margaret Drive	76	PVC	17	\$29	88
Lucille Wheeler Crescent	85	PVC	17	\$32	88
Margaret Drive	114	PVC	17	\$43	88
Alta Road	31	PVC	17	\$12	88
Alta Road	70	PVC	17	\$26	88
Escarpment View Court	23	PVC	17	\$9	88

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Alta Road	74	PVC	17	\$28	88
Lucille Wheeler Crescent	65	PVC	17	\$25	88
Alta Road	96	PVC	17	\$36	88
Between Escarpment View Ct and Alta Road	97	PVC	17	\$37	88
Alta Road	504	PVC	17	\$217	88
Alta Road	47	PVC	17	\$18	88
Alta Road	58	PVC	17	\$22	88
Lucille Wheeler Crescent	71	PVC	17	\$27	88
Lucille Wheeler Lane	110	PVC	17	\$41	88
Sleepy Hollow Road	65	PVC	18	\$24	87
Alexandra Way	54	PVC	18	\$20	87
Arrowhead Road	101	PVC	18	\$38	87
Craigleith Walk	22	PVC	18	\$8	87
Kitzbuhl Crescent	38	PVC	18	\$14	87
Between Alexandra Way and Salzburg Place	82	PVC	18	\$31	87
Craigleith Road	67	PVC	18	\$25	87
Sleepy Hollow Road	75	PVC	18	\$28	87
Sleepy Hollow Road	27	PVC	18	\$10	87
Lakeshore Road West	122	PVC	18	\$46	87
Arrowhead Road	64	PVC	18	\$27	87
Craigleith Walk	41	PVC	18	\$15	87
Arrowhead Road	94	PVC	18	\$39	87
Craigleith Road	33	PVC	18	\$12	87
Alexandra Way	91	PVC	18	\$34	87
Alexandra Way	82	PVC	18	\$31	87
Kitzbuhl Crescent	84	PVC	18	\$32	87
Arrowhead Road	30	PVC	18	\$13	87
Alexandra Way	79	PVC	18	\$30	87
Sleepy Hollow Road	70	PVC	18	\$26	87
Between Alexandra Way and Salzburg Place	70	PVC	18	\$26	87
Sleepy Hollow Road	53	PVC	18	\$20	87
Sleepy Hollow Road	65	PVC	18	\$25	87
Sleepy Hollow Road	81	PVC	18	\$31	87
Arrowhead Road	111	PVC	18	\$42	87
Kitzbuhl Crescent	46	PVC	18	\$17	87
Craigleith Road	97	PVC	18	\$37	87
Arrowhead Road	1,036	PVC	18	\$445	87
Craigleith Road	101	PVC	18	\$38	87
Sleepy Hollow Road	116	PVC	18	\$44	87
Sleepy Hollow Road	60	PVC	18	\$23	87
Arrowhead Road	111	PVC	18	\$47	87
Craigleith Road	25	PVC	18	\$9	87
Craigleith Road	97	PVC	18	\$37	87
Sleepy Hollow Road	80	PVC	18	\$30	87

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Craigleith Road	10	PVC	18	\$4	87
Arrowhead Road	98	PVC	18	\$37	87
Craigleith Road	68	PVC	18	\$26	87
Sleepy Hollow Road	131	PVC	18	\$49	87
Arrowhead Road	110	PVC	18	\$47	87
Bay Street East	11	DIP	40	\$4	87
Alexandra Way	110	PVC	18	\$42	87
Kitzbuhl Crescent	74	PVC	18	\$28	87
Margaret Drive	39	PVC	18	\$15	87
Alexandra Way	101	PVC	18	\$38	87
Kitzbuhl Crescent	39	PVC	18	\$15	87
Kitzbuhl Crescent	68	PVC	18	\$26	87
Craigleith Walk	66	PVC	18	\$25	87
Arrowhead Road	52	PVC	18	\$20	87
Sleepy Hollow Road	82	PVC	18	\$31	87
Craigleith Walk	73	PVC	18	\$28	87
Alexandra Way	55	PVC	18	\$21	87
Kitzbuhl Crescent	50	PVC	18	\$19	87
Kitzbuhl Crescent	24	PVC	18	\$9	87
Sleepy Hollow Road	96	PVC	18	\$36	87
Craigleith Road	96	PVC	18	\$36	87
Sleepy Hollow Road	69	PVC	18	\$26	87
Sleepy Hollow Road	86	PVC	18	\$32	87
Blue Mountain Village	8	PVC	18	\$3	87
Alexandra Way	60	PVC	18	\$23	87
Arrowhead Road	98	PVC	18	\$37	87
Margaret Drive	6	PVC	18	\$2	87
Snowbridge Way	29	PVC	20	\$11	86
Snowbridge Way	80	PVC	20	\$30	86
Snowbridge Way	60	PVC	20	\$23	86
Crossan Court	59	PVC	20	\$22	86
Snowbridge Way	68	PVC	20	\$26	86
Grey Road 19	86	PVC	20	\$42	86
Snowbridge Way	63	PVC	20	\$24	86
Snowbridge Way	88	PVC	20	\$33	86
Grey Road 19	81	PVC	20	\$30	86
Grey Road 19	62	PVC	20	\$30	86
Snowbridge Way	16	PVC	20	\$6	86
Snowbridge Way	20	PVC	20	\$8	86
Between Snowbridge Way and Augusta Crescent	22	PVC	20	\$8	86
Grey Road 19	81	PVC	20	\$30	86
Grey Road 19	155	PVC	20	\$59	86
Grey Road 19	121	PVC	20	\$46	86
Snowbridge Way	46	PVC	20	\$18	86
Grey Road 19	53	PVC	20	\$26	86

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Between Snowbridge Way and Augusta Crescent	266	PVC	20	\$124	86
Snowbridge Way	68	PVC	20	\$26	86
Grey Road 19	23	PVC	20	\$9	86
Grey Road 19	125	PVC	20	\$47	86
Snowbridge Way	94	PVC	20	\$35	86
Grey Road 19	83	PVC	20	\$40	86
Snowbridge Way	25	PVC	20	\$10	86
Snowbridge Way	56	PVC	20	\$21	86
Grey Road 19	4	PVC	20	\$1	86
Between Snowbridge Way and Augusta Crescent	103	PVC	20	\$48	86
Snowbridge Way	88	PVC	20	\$33	86
Snowbridge Way	90	PVC	20	\$34	86
Snowbridge Way	44	PVC	20	\$17	86
Birch View Trail	51	PVC	20	\$21	86
Snowbridge Way	46	PVC	20	\$17	86
Snowbridge Way	25	PVC	20	\$9	86
Grey Road 19	22	PVC	20	\$8	86
Grey Road 19	141	PVC	20	\$53	86
Between Snowbridge Way and Augusta Crescent	103	PVC	20	\$48	86
Grey Road 19	46	PVC	20	\$22	86
Grey Road 19	126	PVC	20	\$48	86
Snowbridge Way	31	PVC	20	\$12	86
Birch View Trail	18	PVC	20	\$8	86
Snowbridge Way	14	PVC	20	\$5	86
Grey Road 19	26	PVC	20	\$10	86
Alice Street West	110	PVC	22	\$42	85
Alice Street West	109	PVC	22	\$41	85
10th Line	339	HDPE	11	\$146	84
Lake Drive	149	HDPE	11	\$144	84
Lake Drive	230	HDPE	11	\$223	84
Lake Drive	478	HDPE	11	\$205	84
Lake Drive	10	HDPE	11	\$10	84
Ellis Drive	125	HDPE	12	\$121	83
Pyatt Avenue	51	PVC	25	\$19	83
Highway 26	370	HDPE	12	\$358	83
Highway 26	107	HDPE	12	\$103	83
Sunset Boulevard	353	HDPE	12	\$169	83
Highway 26	130	HDPE	12	\$126	83
Highway 26	28	HDPE	12	\$27	83
Pyatt Avenue	50	PVC	25	\$19	83
Shirley Court	55	PVC	25	\$21	83
Highway 26	196	HDPE	12	\$84	83
Highway 26	33	HDPE	12	\$32	83
Highway 26	22	HDPE	12	\$21	83

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Pyatt Avenue	26	PVC	25	\$10	83
Pyatt Avenue	55	PVC	25	\$21	83
Highway 26	213	HDPE	12	\$206	83
Highway 26	201	HDPE	12	\$87	83
Delphi Lane	255	HDPE	12	\$246	83
Delphi Lane	45	HDPE	12	\$44	83
Highway 26	227	HDPE	12	\$220	83
Pyatt Avenue	32	PVC	25	\$12	83
Highway 26	192	HDPE	12	\$186	83
Grey Road 40	24	HDPE	12	\$23	83
Ellis Drive	135	HDPE	12	\$131	83
Napier Street West	83	AC	33	\$31	82
Highway 26	78	AC	33	\$88	82
Huron Street West	63	AC	34	\$24	82
Napier Street West	81	AC	33	\$30	82
Huron Street West	92	AC	34	\$35	82
Napier Street West	96	AC	33	\$36	82
Highway 26	80	AC	33	\$91	82
Napier Street West	100	AC	33	\$38	82
Huron Street West	46	AC	34	\$17	82
Timmons St	29	AC	33	\$11	82
Highway 26	80	AC	33	\$91	82
Between Huron Street West and Bay Street East	157	HDPE	14	\$73	81
Between Arrowhead Court and Arrowhead Crescent	110	AC	36	\$42	81
Between Huron Street West and Bay Street East	156	HDPE	14	\$76	81
Lakeshore Drive	30	AC	37	\$11	81
Arrowhead Crescent	76	AC	36	\$29	81
Thornbury Harbour	22	HDPE	14	\$21	81
Between Arrowhead Court and Arrowhead Crescent	40	AC	36	\$15	81
Thornbury Harbour	404	HDPE	14	\$391	81
Lakeshore Drive	34	AC	37	\$13	81
Arrowhead Court	40	AC	36	\$15	81
Between Arrowhead Crescent and Arrowhead Court	81	AC	36	\$31	81
Camperdown Court	57	AC	40	\$21	80
Bridge Street East	11	AC	40	\$4	80
Lakeshore Road West	121	PVC	29	\$62	80
Augusta Crescent	48	PVC	28	\$22	80
Alfred Street East	113	AC	40	\$43	80
Augusta Crescent	72	PVC	28	\$27	80
Grand Cypress Lane	67	PVC	28	\$32	80
Lakeshore Road West	122	PVC	29	\$62	80
Grand Cypress Lane	107	PVC	28	\$45	80

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
McAuley Street South	109	AC	40	\$41	80
Between Alfred Street E and Moore Crescent	54	AC	40	\$23	80
Mill Street	20	AC	40	\$8	80
Augusta Crescent	70	PVC	28	\$33	80
Grand Cypress Lane	107	PVC	28	\$45	80
Peel Street North	10	HDPE	15	\$5	80
King Street East	114	AC	40	\$43	80
Camperdown Court	87	AC	40	\$33	80
Between Alfred Street E and Moore Crescent	75	AC	40	\$32	80
Bridge Street East	97	AC	40	\$36	80
Grand Cypress Lane	79	PVC	28	\$38	80
Grand Cypress Lane	35	PVC	28	\$17	80
Augusta Crescent	38	PVC	28	\$14	80
Grand Cypress Lane	69	PVC	28	\$26	80
Grey Road 19	13	PVC	29	\$6	80
Arthur Street West	108	HDPE	15	\$45	80
Augusta Crescent	29	PVC	28	\$13	80
Lakeshore Road West	93	PVC	29	\$48	80
Camperdown Court	62	AC	40	\$23	80
Arthur Street West	80	HDPE	15	\$41	80
Grey Road 19	45	PVC	29	\$23	80
Mill Street	93	AC	40	\$35	80
King Street East	108	AC	40	\$41	80
Augusta Crescent	100	PVC	28	\$38	80
Arthur Street West	92	HDPE	15	\$47	80
Arthur Street West	96	HDPE	15	\$49	80
Grand Cypress Lane	96	PVC	28	\$36	80
Mill Street	68	AC	40	\$26	80
Grand Cypress Lane	60	PVC	28	\$22	80
Augusta Crescent	68	PVC	28	\$26	80
Arthur Street West	106	HDPE	15	\$40	80
Grand Cypress Lane	65	PVC	28	\$27	80
Lakeshore Road West	144	PVC	29	\$73	80
Alfred Street East	101	AC	40	\$38	80
Moore Crescent	5	AC	40	\$2	80
Alfred Street East	10	AC	40	\$4	80
Mill Street	53	AC	40	\$20	80
Grand Cypress Lane	57	PVC	28	\$28	80
Bay Street East	83	AC	41	\$39	79
Duncan Street West	108	AC	41	\$50	79
Lakeshore Drive	72	AC	41	\$33	79
Between Settlers Way and Grey Road 19	2	PVC	30	\$1	79
Louisa Street West	50	AC	42	\$19	79
Arlberg Crescent	39	PVC	30	\$37	79

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Lansdowne Street North	61	AC	42	\$23	79
Cottage Avenue	79	AC	42	\$30	79
Lakeshore Drive	65	AC	41	\$30	79
Louisa Street West	66	AC	42	\$25	79
Elgin Street South	5	AC	41	\$2	79
Bay Street East	19	AC	41	\$9	79
Elgin Street South	78	AC	41	\$29	79
Lakeshore Drive	85	AC	41	\$40	79
Lansdowne Street North	61	AC	42	\$23	79
Elgin Street South	121	AC	41	\$46	79
Craigmore Crescent	57	PVC	30	\$21	79
Bay Street East	86	AC	41	\$40	79
Louisa Street East	39	AC	42	\$15	79
Huron Street West	110	AC	42	\$56	79
Arthur Street West	87	AC	42	\$33	79
Alice Street East	77	AC	42	\$33	79
Moore Crescent	13	AC	41	\$6	79
Between Mill Street and Bay Street East	14	AC	42	\$6	79
Lansdowne Street North	68	AC	41	\$32	79
Duncan Street West	120	AC	41	\$56	79
Bay Street East	110	AC	41	\$51	79
Louisa Street West	58	AC	42	\$22	79
Ferguson Avenue	24	AC	42	\$10	79
Elgin Street South	71	AC	41	\$27	79
Arlberg Crescent	327	PVC	30	\$316	79
Huron Street West	110	AC	42	\$56	79
Bay Street East	106	AC	41	\$49	79
Ferguson Avenue	110	AC	42	\$46	79
Lakeshore Drive	72	AC	41	\$33	79
Bay Street East	105	AC	41	\$49	79
Moore Crescent	85	AC	41	\$36	79
Huron Street West	111	AC	42	\$57	79
Louisa Street East	78	AC	42	\$30	79
Cottage Avenue	33	AC	42	\$12	79
Cottage Avenue	108	AC	42	\$41	79
Cottage Avenue	53	AC	42	\$20	79
Bay Street East	135	AC	41	\$63	79
Duncan Street West	110	AC	41	\$51	79
Lakeshore Drive	109	AC	41	\$51	79
Georgian Trail	100	PVC	32	\$42	78
Bruce Street North	67	AC	44	\$36	78
Indian Circle	58	PVC	32	\$25	78
Orchard Drive	70	AC	44	\$26	78
Bruce Street North	22	AC	44	\$12	78
Fraser Crescent	59	PVC	31	\$22	78
Bay Street East	83	AC	44	\$35	78

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Orchard Drive	31	AC	44	\$12	78
Orchard Drive	69	AC	44	\$26	78
Fraser Crescent	10	PVC	31	\$4	78
Fraser Crescent	11	PVC	31	\$4	78
Between Wyandot Court and Sleepy Hollow Road	65	AC	44	\$25	78
Elgin Street North	121	AC	44	\$45	78
Orchard Drive	114	AC	44	\$43	78
Aberdeen Court	94	PVC	32	\$40	78
Easement between Indian Cl and Georgian Trail	21	PVC	32	\$8	78
Collens Court	38	PVC	32	\$16	78
Arthur Street East	109	AC	44	\$41	78
Wyandot Court	63	AC	44	\$24	78
Indian Circle	20	PVC	32	\$8	78
Bay Street East	6	AC	44	\$3	78
Orchard Drive	53	AC	44	\$20	78
Indian Circle	26	PVC	32	\$11	78
Tyrolean Lane	254	HDPE	17	\$246	78
Petun Drive	51	AC	44	\$19	78
Wyandot Court	82	AC	44	\$31	78
Huron Street East	104	AC	44	\$39	78
Huron Street East	122	AC	44	\$52	78
Indian Circle	48	PVC	32	\$20	78
Elgin Street South	56	AC	44	\$21	78
Fraser Crescent	59	PVC	31	\$22	78
Between Indian Cl and Grey Road 40	91	PVC	32	\$38	78
Fraser Crescent	102	PVC	31	\$39	78
Indian Circle	92	PVC	32	\$39	78
Applevale Court	37	AC	44	\$14	78
Indian Circle	52	PVC	32	\$20	78
Indian Circle	64	PVC	32	\$27	78
Indian Circle	23	PVC	32	\$10	78
Orchard Drive	29	AC	44	\$11	78
Applevale Court	70	AC	44	\$26	78
Arthur Street East	106	AC	44	\$40	78
Elgin Street South	65	AC	44	\$24	78
Scotts Court	85	PVC	32	\$36	78
Wyandot Court	91	AC	44	\$34	78
Bay Street East	21	AC	44	\$10	78
Collens Court	37	PVC	32	\$16	78
Wyandot Court	109	AC	44	\$41	78
Fraser Crescent	69	PVC	31	\$26	78
Between Wyandot Court and Sleepy Hollow Road	64	AC	44	\$24	78
Orchard Drive	83	AC	44	\$31	78
Bay Street East	100	AC	44	\$42	78

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Easement between Indian Cl and Georgian Trail	73	PVC	32	\$27	78
McAuley Street North	123	AC	44	\$46	78
Petun Drive	61	AC	44	\$23	78
Wyandot Court	51	AC	44	\$19	78
Indian Circle	106	PVC	32	\$45	78
Indian Circle	26	PVC	32	\$11	78
Arthur Street East	111	AC	44	\$42	78
Georgian Trail	47	PVC	32	\$20	78
Arthur Street East	110	AC	44	\$42	78
Bay Street East	106	AC	44	\$45	78
Orchard Drive	69	AC	44	\$26	78
Indian Circle	30	PVC	32	\$13	78
Huron Street East	114	AC	44	\$43	78
Between Wyandot Court and Sleepy Hollow Road	75	AC	44	\$28	78
Ann Heggtveit Drive	91	AC	48	\$34	77
Lisa's Lane	116	PVC	33	\$44	77
Lisa's Lane	75	PVC	33	\$28	77
Brooker Boulevard	71	PVC	33	\$33	77
Lakewood Drive	49	AC	49	\$18	77
Brooker Boulevard	57	PVC	33	\$22	77
Ann Heggtveit Drive	91	AC	48	\$34	77
Between Mill Street and Bay Street East	1	DIP	14	\$0	77
Between Mill Street and Bay Street East	8	DIP	14	\$4	77
Lakewood Drive	44	AC	49	\$17	77
Brooker Boulevard	106	PVC	33	\$52	77
Lakewood Drive	13	AC	49	\$5	77
Lakewood Drive	121	AC	49	\$46	77
Brooker Boulevard	57	PVC	33	\$28	77
Brooker Boulevard	69	PVC	33	\$26	77
Brooker Boulevard	45	PVC	33	\$19	77
Brooker Boulevard	43	PVC	33	\$16	77
Lakewood Drive	124	AC	49	\$47	77
Brooker Boulevard	83	PVC	33	\$31	77
Lisa's Lane	244	PVC	33	\$236	77
Brooker Boulevard	103	PVC	33	\$48	77
Sleepy Hollow Road	82	HDPE	18	\$79	77
Lakewood Drive	121	AC	49	\$46	77
Brooker Boulevard	110	PVC	33	\$53	77
Lisa's Lane	32	PVC	33	\$12	77
Ann Heggtveit Drive	89	AC	48	\$34	77
Brooker Boulevard	15	PVC	33	\$7	77
Kellie's Way	87	PVC	33	\$33	77
Ann Heggtveit Drive	84	AC	48	\$32	77

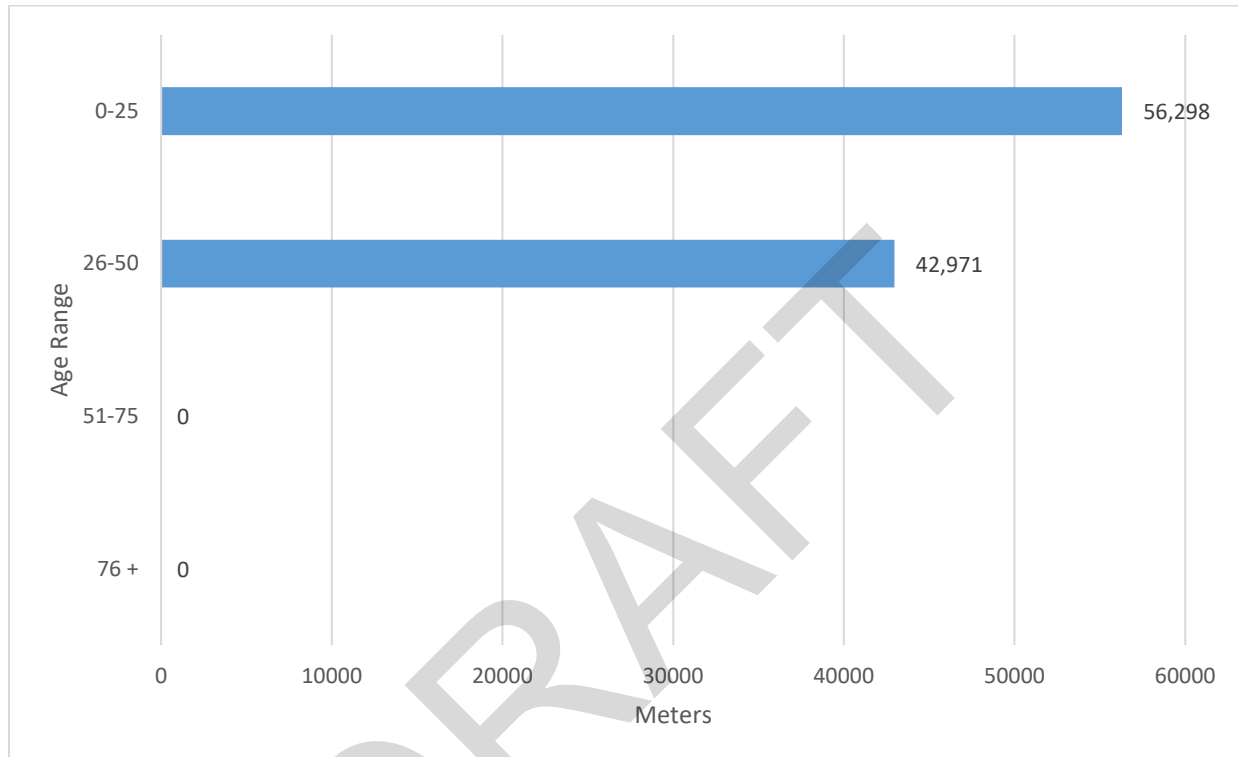
Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Brooker Boulevard	38	PVC	33	\$14	77
Kellie's Way	45	PVC	33	\$17	77
Laurie's Court	50	PVC	33	\$19	77
Between Mill Street and Bay Street East	22	DIP	14	\$11	77
Brooker Boulevard	57	PVC	33	\$24	77
Brooker Boulevard	39	PVC	33	\$18	77
Lakewood Drive	88	AC	49	\$33	77
Grey Road 19	7	PVC	34	\$3	76
Louisa Street West	57	VCP	42	\$26	75
Elma Street North	79	VCP	48	\$37	73
Alfred Street East	73	PVC	40	\$28	72
Napier Street East	60	PVC	42	\$23	71
Alfred Street West	114	PVC	42	\$43	71
Alfred Street West	45	PVC	42	\$17	71
Napier Street East	82	PVC	42	\$31	71
Highway 26	58	CP	33	\$27	71
Bay Street West	2	PVC	42	\$1	71
Bay Street West	12	PVC	42	\$5	71
Napier Street East	113	PVC	42	\$43	71
Highway 26 to Craighleith Main Sewage Lift Station	28	CP	33	\$31	71
Blue Mountain Drive	4	CP	33	\$2	71
Alfred Street West	110	PVC	42	\$42	71
Louisa Street East	19	PVC	42	\$9	71
Bay Street West	12	PVC	42	\$6	71
Between Monterra Road and Timmons Street	146	CP	35	\$132	69
Between Monterra Road and Timmons Street	100	CP	35	\$90	69
Monterra Road	61	CP	35	\$31	69
Between Monterra Road and Timmons Street	117	CP	35	\$106	69
Between Monterra Road and Timmons Street	100	CP	35	\$90	69
Between Lakewood Drive and Highway 26	47	PVC	49	\$46	66
Long Point Road	2,174	HDPE	33	\$1,044	63
Between Huron Street West and Bay Street East	19	AC	14	\$10	63
Moore Crescent	80	AC	40	\$34	62
Mill Street	86	AC	42	\$33	62
Huron Street West	110	AC	42	\$56	62
Arthur Street West	37	AC	42	\$14	62
Bruce Street South	65	AC	41	\$30	62
Between Wyandot Court and Sleepy Hollow Road	58	AC	44	\$22	61
Long Point Road	639	HDPE	36	\$341	60

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Georgian Bay	5,155	HDPE	36	\$2,747	60
Pilsen Way	62	PVC	30	\$23	59
Lakewood Drive	70	AC	49	\$27	59
Moore Crescent	11	DIP	41	\$5	56
Moore Crescent	148	DIP	41	\$64	56
Elma Street North	120	VCP	48	\$56	55
Bay Street West	542	DIP	42	\$233	55
Napier Street East	77	HDPE	42	\$75	55
King Street West	106	AC	21	\$40	51
Alice Street East	98	AC	41	\$41	44
Arthur Street West	107	AC	42	\$40	44
Bruce Street North	101	AC	44	\$54	43
Blueski George Crescent	58	PVC	22	\$22	43
Tyrolean Lane	25	PVC	30	\$11	42
Farm Gate Road	14	PVC	30	\$5	42
Ann Heggveit Drive	61	AC	48	\$23	42
Aspen Way	109	PVC	29	\$41	42
Farm Gate Road	40	PVC	30	\$15	42
Aspen Way	46	PVC	29	\$18	42
Highway 26	73	AC	33	\$28	41
Louisa Street West	70	VCP	42	\$33	40
Highway 26	87	CP	33	\$41	39
Highway 26	51	CP	33	\$19	39
Elma Street North	59	VCP	48	\$27	38
Elma Street North	72	VCP	48	\$34	38
Elma Street North	79	VCP	48	\$37	38
Elma Street North	83	VCP	48	\$39	38
Between Welling Street South and Elgin Street South	117	AC	40	\$44	32
Between Welling Street South and Elgin Street South	42	AC	40	\$16	32
Leming St	100	AC	40	\$38	32
Leming St	92	AC	40	\$35	32
Moore Crescent	21	AC	41	\$9	31
Alice Street West	100	AC	42	\$38	30
Arthur Street West	54	AC	42	\$20	30
Alice Street West	50	AC	42	\$19	30
Cottage Avenue	11	AC	42	\$4	30
Alice Street West	109	AC	42	\$41	30
Arthur Street West	10	AC	42	\$4	30
Huron Street East	104	AC	44	\$53	28
Elgin Street North	1,384	AC	44	\$665	28
Arthur Street East	110	AC	44	\$56	28
Bay Street East	103	AC	44	\$53	28
Between Huron Street West and Bay Street East	2	AC	44	\$1	28
Arthur Street East	106	AC	44	\$54	28

Road Name	Length (m)	Material	Age	Replacement Cost (\$1,000)	Condition Rating
Huron Street East	114	AC	44	\$58	28
Elgin Street North	121	AC	44	\$62	28
Bruce Street North	2	AC	44	\$1	28
Bay Street East	34	AC	44	\$15	28
Bay Street East	109	AC	44	\$56	28
Elgin Street South	56	AC	44	\$28	28
Arthur Street East	111	AC	44	\$57	28
Huron Street West	6	AC	44	\$3	28
McAuley Street North	123	AC	44	\$63	28
Arthur Street East	109	AC	44	\$56	28
Bay Street East	110	AC	44	\$56	28
Elgin Street South	65	AC	44	\$33	28
Grey Street South	39	AC	44	\$20	28
Arthur Street West	113	AC	42	\$43	27
Bruce Street North	51	AC	44	\$27	26
Lakewood Drive	37	AC	49	\$14	22
King Street West	117	AC	21	\$44	16
Alice Street East	98	AC	41	\$41	9
Lakewood Drive	122	AC	49	\$46	7

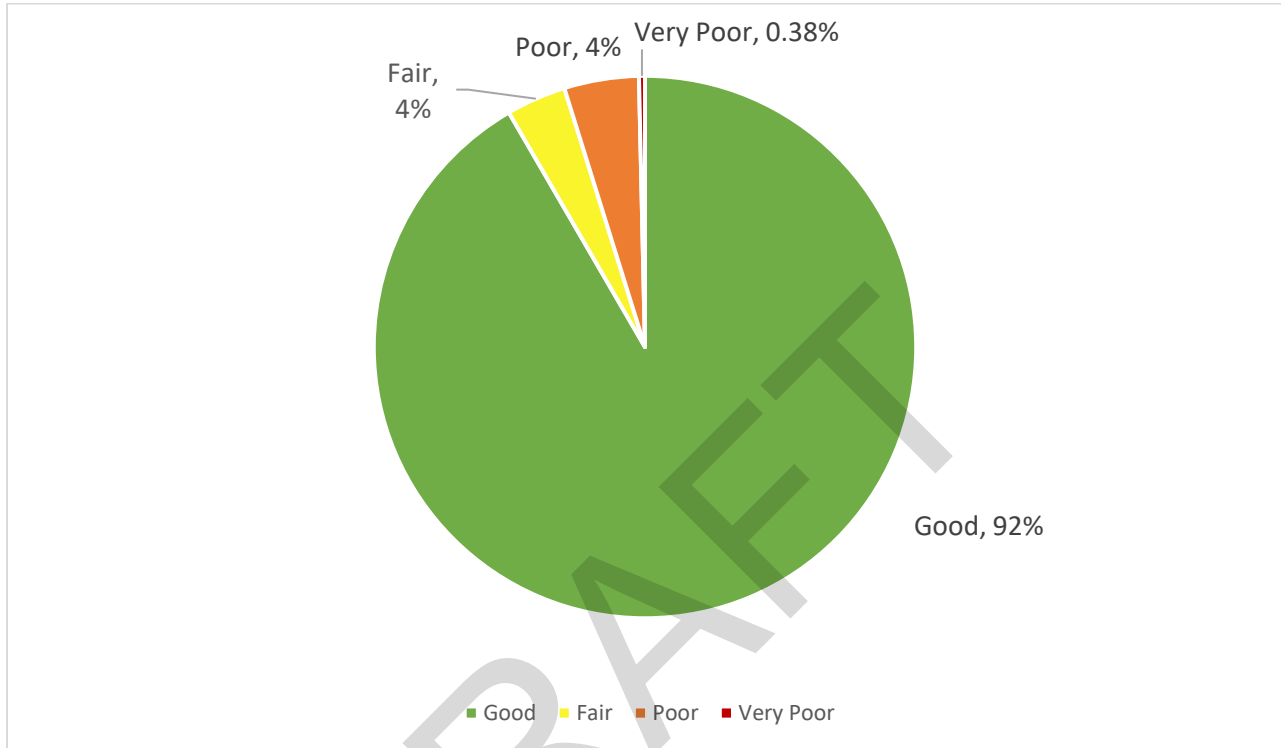
Graph 1 shows the meters of wastewater pipes by age range. The average age of the Town's pipe is 23 years which has a lower average compared to the water pipes of 28 years old. There are no wastewater pipes that are older than 49 years old. The Town does have 350 meters of abandoned wastewater pipes.

Graph 1
Meters of Wastewater Pipe by Age



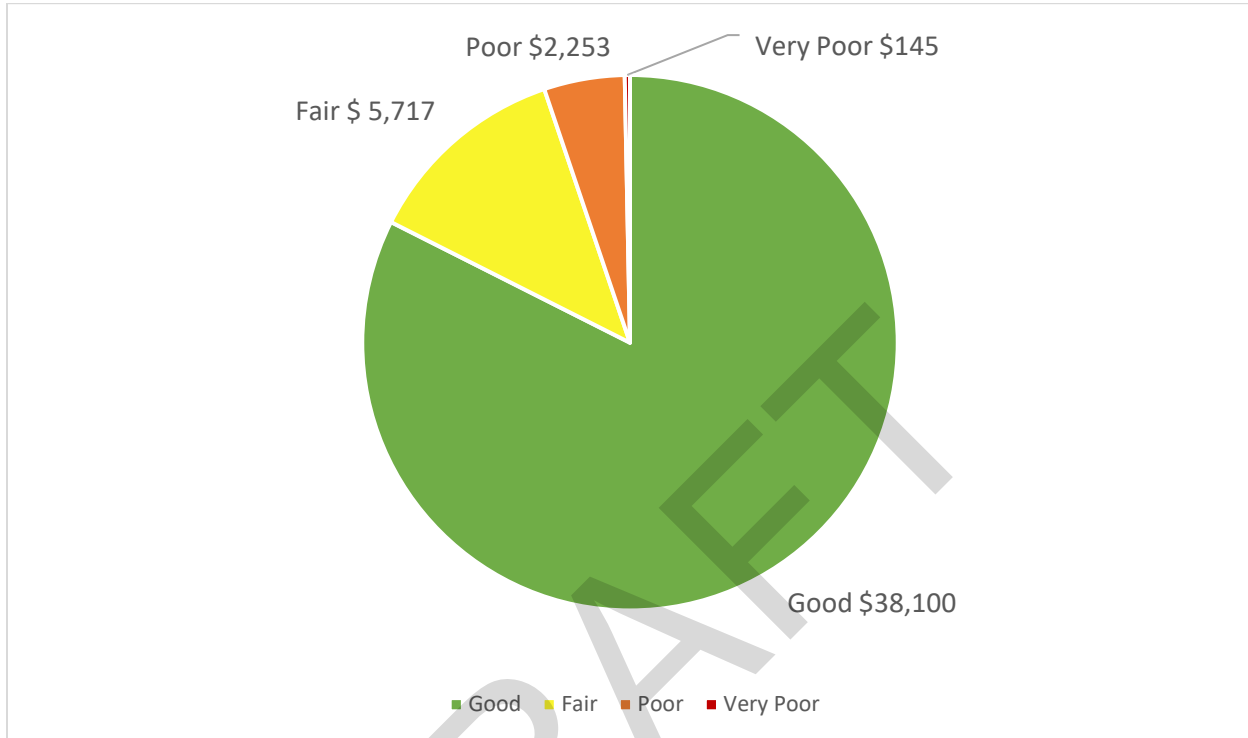
There is only .38% of Very Poor condition wastewater pipes that represents 373 meters of asbestos cement pipe. The Town is replacing all the different material types of pipe with polyvinyl chloride DR 35. The overall condition rate of the wastewater pipes is 85% or Good.

Graph 2
Wastewater Pipe by Condition Rating



Graph 3 shows that the replacement cost of the very poor is \$145,000 and compared to condition rating of Good at \$38,100,000. The total 2020 replacement cost of wastewater pipes is \$46,215,000.

Graph 3
Replacement Cost by Condition Rating (In Thousands)



Maps 1-4 of the appendix illustrates the wastewater pipe condition rating by service area.

The 10 year replacement graph and chart below shows that there is a spike in 2027. The 10 year replacement cost totals \$3,229,000.

Graph 4
10 Year Replacement Cost

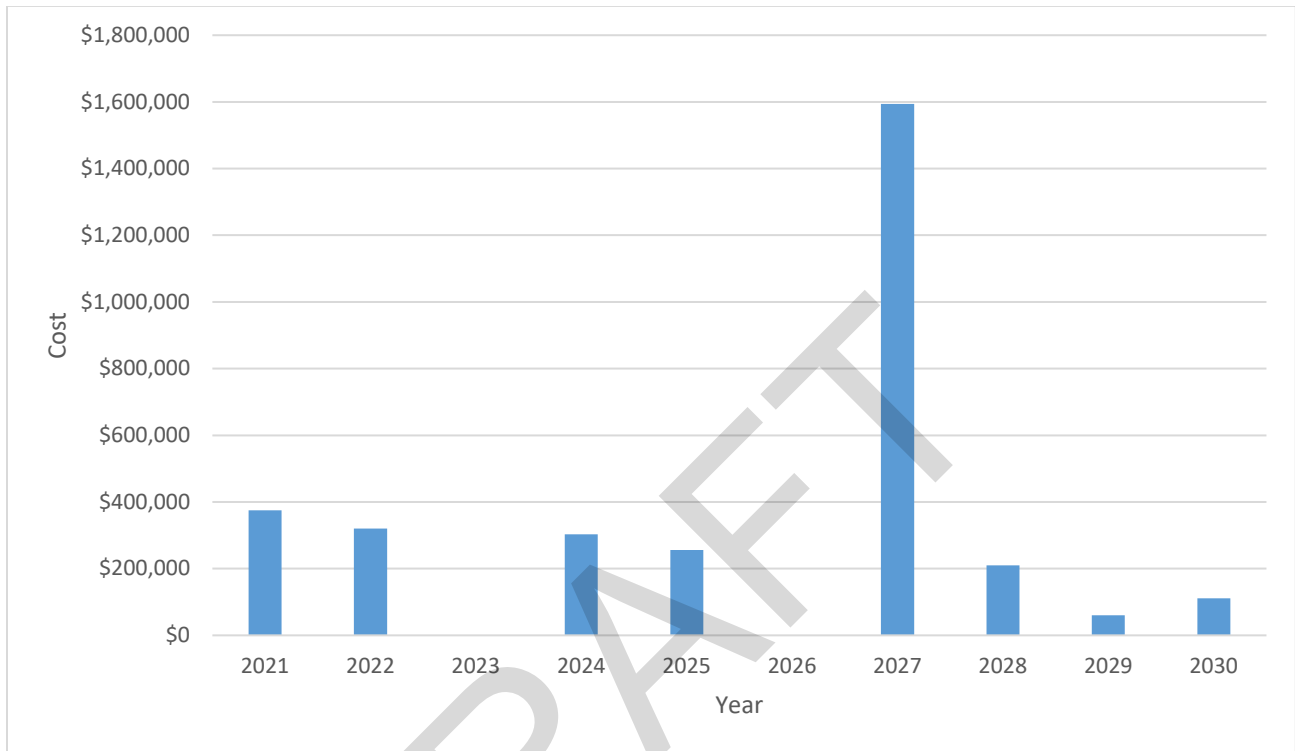


Table 5
10 Year Replacement Cost

Year	Replacement Cost
2021	\$375,000
2022	\$320,000
2023	\$0
2024	\$303,000
2025	\$256,000
2026	\$0
2027	\$1,594,000
2028	\$210,000
2029	\$60,000
2030	\$111,000
Total	\$3,229,000

Current Level of Service

As per O.Reg 588/17 this asset management plan is built using the current level of service that the Town is offering for this asset class. The regulation does speak to mandatory metrics and information that the Town must report, and staff have included some additional metrics as well.

- Description which may include maps of the users or areas of the municipality that are connected to the municipal wastewater system. (mandatory)
- Percentage of properties connected to the municipal wastewater system. (mandatory)
- Description of how combined sewer in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes. (mandatory)
- Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches. (mandatory)
- Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes.(mandatory)
- Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events describe in paragraph 3. (mandatory)
- Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system. (mandatory)
- The number of events per year where combined sewer flow in the municipal wastewater system capacity compared to the total number of properties connected to the municipal wastewater. (mandatory)
- The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.(mandatory)
- The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system. (mandatory)
- Annual operating cost per meter (optional)
- Annual capital cost per meter (optional)

Map 5-8 of the appendix illustrates the municipal wastewater system connections by Service Area.

The total properties that are connected to the Municipal wastewater system are 6,196 which represents 70% of the total properties.

Table 6
Wastewater Connections by Service Area

Connected to the Municipal Wastewater System	Not Connected to the Municipal Wastewater System	Total	Properties Connected to the Municipal Wastewater System
6,196	2,659	8,855	70%

The Town does not have any combine sewers.

Stormwater can enter municipal wastewater system though inflows or infiltration causing sewage to overflow into street or backup into homes. Infiltration can occur at poor joints, at leaky or faulty pipes.

Inflow is a direct connection to the sanitary sewer that should not be connect from homes or businesses roof drains or sump pumps.

Wastewater sewers systems are designed to reduce infiltration and inflow by having strict sewer use bylaws that prevents home owners or businesses to have illegal connections and enforced by the Building department. CCTV inspections is used to detect leaky wastewater pipes. The Town does a Sanitary Infiltration and Inflow (I&I) Study program to investigate leakage and illegal hookups. In the 2021 budget the Town has include a flow meters installation at pumping stations project to monitor the flow.

Wastewater effluent is best described as treated wastewater that has to meet strict Ministry of the Environment, Conservation and Parks (MECP) regulations. Quality of effluent leaving wastewater plant is historically better quality than receiving water.

The number of events per year where combined sewer flow in the municipal wastewater system capacity compared to the total number of properties connected to the municipal wastewater does not apply because the Town does not have any combined wastewater

Table 7 shows the number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.

Table 7
Percentage of Wastewater Backups per Total Connections

Year	Number of Days Affected By Wastewater Backup	Total Number of Properties	Percentage of Backups Per Total Number of Properties Connected
2015	0	5,503	0.00%
2016	0	5,622	0.00%
2017	0	5,682	0.00%
2018	0	5,924	0.00%
2019	4	6,196	0.06%

Table 8
Percentage of Effluent Violations per Total Number of Properties

Year	Number of Effluent Violations	Number of Properties Connect to Wastewater System	Percentage of Effluent Violations per Total Number of Properties
2015	0	5,503	0.00%
2016	2	5,622	0.04%
2017	0	5,682	0.00%
2018	9	5,924	0.15%
2019	24	6,196	0.39%

On average the Town spends \$5.59 per meter on Wastewater pipes each year.

Currently the Town transfers \$5.50 per meter to fund required capital program for the Wastewater pipes.

Lifecycle Costs

As per O.Reg 588/17 a ten-year lifecycle cost must be calculated for the asset category to maintain the current level of service that has already been established. The expenses have been split between Annual Cost and Annual Transfer. The annual operating cost include repairs and maintenance activities done on the wastewater pipes. The costs include both internal costs (staff and equipment time) and external costs. The annual transfer to the Wastewater Asset Replacement Reserve Fund. The Town uses reserve funds and annual transfers to fund capital purchases rather than trying to fund those expenses in the given year.

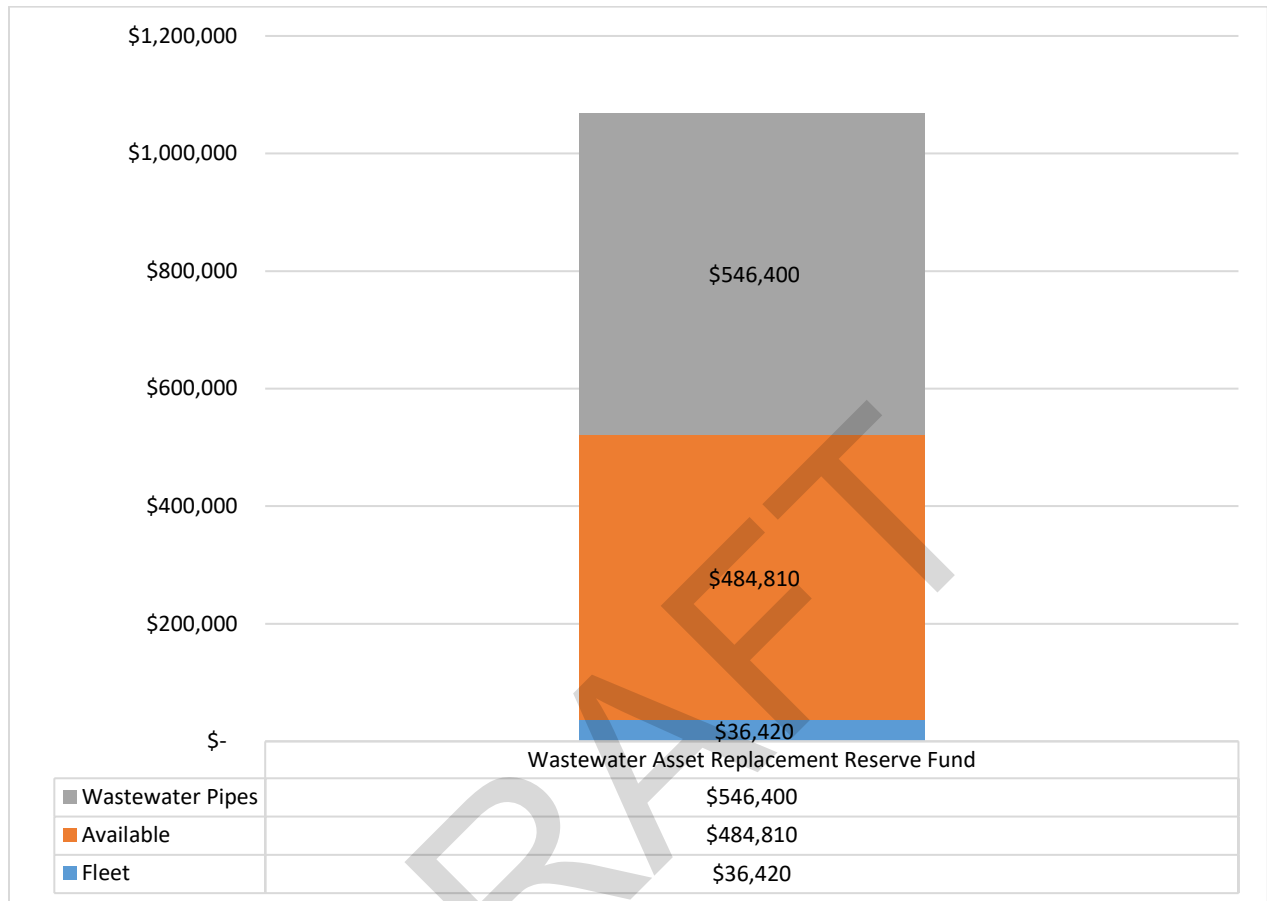
The main objective is to provide safe and reliable wastewater collection that protects the environment by complying with all the regulations. The lifecycle activities for wastewater would include preventative actions of flushing pipes and repair minor pipe breaks. The Town is actively investigating leaky pipes and illegal connections by using the CCTV system.

Table 9
Ten Year Lifecycle Costs (in thousands)

	Annual Costs	Annual Transfer	Total
Total Wastewater Costs	\$5,554	\$5,464	11,018

Additional costs that need to be factored in are for salaries and benefits for employees that are funded through the capital program. Currently the Town has three such employees, two Senior Infrastructure Capital Project Coordinators and one Capital Communication Coordinator. For the purposes of this asset management plan and the water and road plans, 25% of the cost of these employees has been added to Roads, Water, Wastewater and Development Charges. The annual transfer includes \$80,000 to fund these employees and \$143,500 to fund the minor operating capital are included in the Annual Transfer amount above.

Graph 5
Wastewater Asset Replacement Reserve Fund Annual Transfer



The 2020 transfer to Wastewater Asset Replacement Reserve Fund is \$1,067,630. The transfer funding is divided into asset classes of the Wastewater department as showed in the chart above. The previously approved fleet asset management plans has an annual \$36,420, wastewater pipes has \$546,400 as per this plan, which leaves \$484,810 to be used to fund other wastewater assets.

Population and Economic Activity

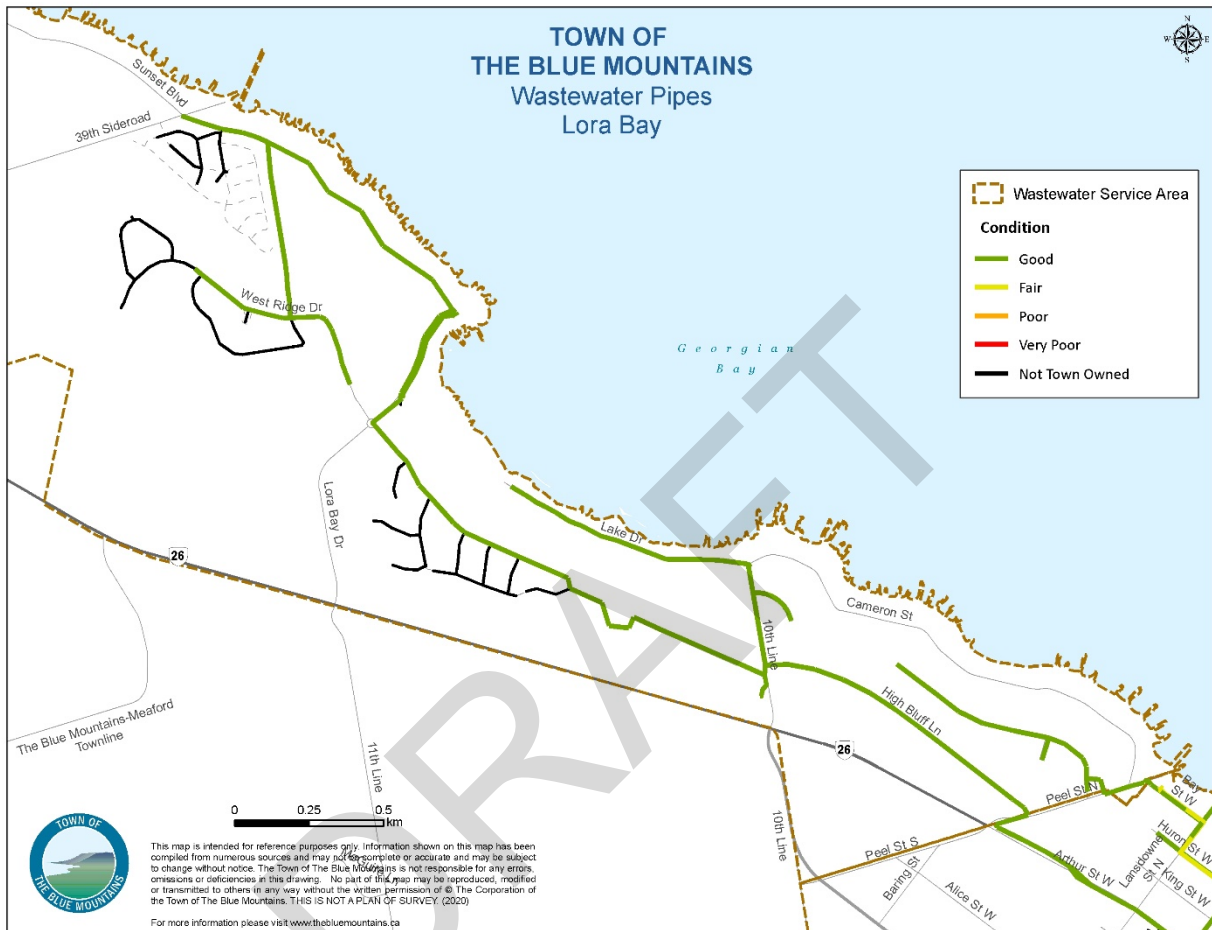
The Town adds to the wastewater pipe through growth and subdivision assumptions. The Development Charge Background Study estimates the anticipated capital requirements and related costs attributable to development over the long-term to accommodate the growth. Currently there are 8,100 meters of pipes that are non-assumed. When all build outs are completed there will be additional 33,883 meters of pipe costing \$1,387,000.

Table 10
Future Wastewater Pipe Costs

	Meters	Annual Costs	Annual Transfer	Total Cost
Growth Related	25,783	\$144,000	\$142,000	\$286,000
Assumptions	8,100	\$555,000	\$546,000	\$1,101,000
Total	33,883	\$699,000	\$688,000	\$1,387,000

Appendix

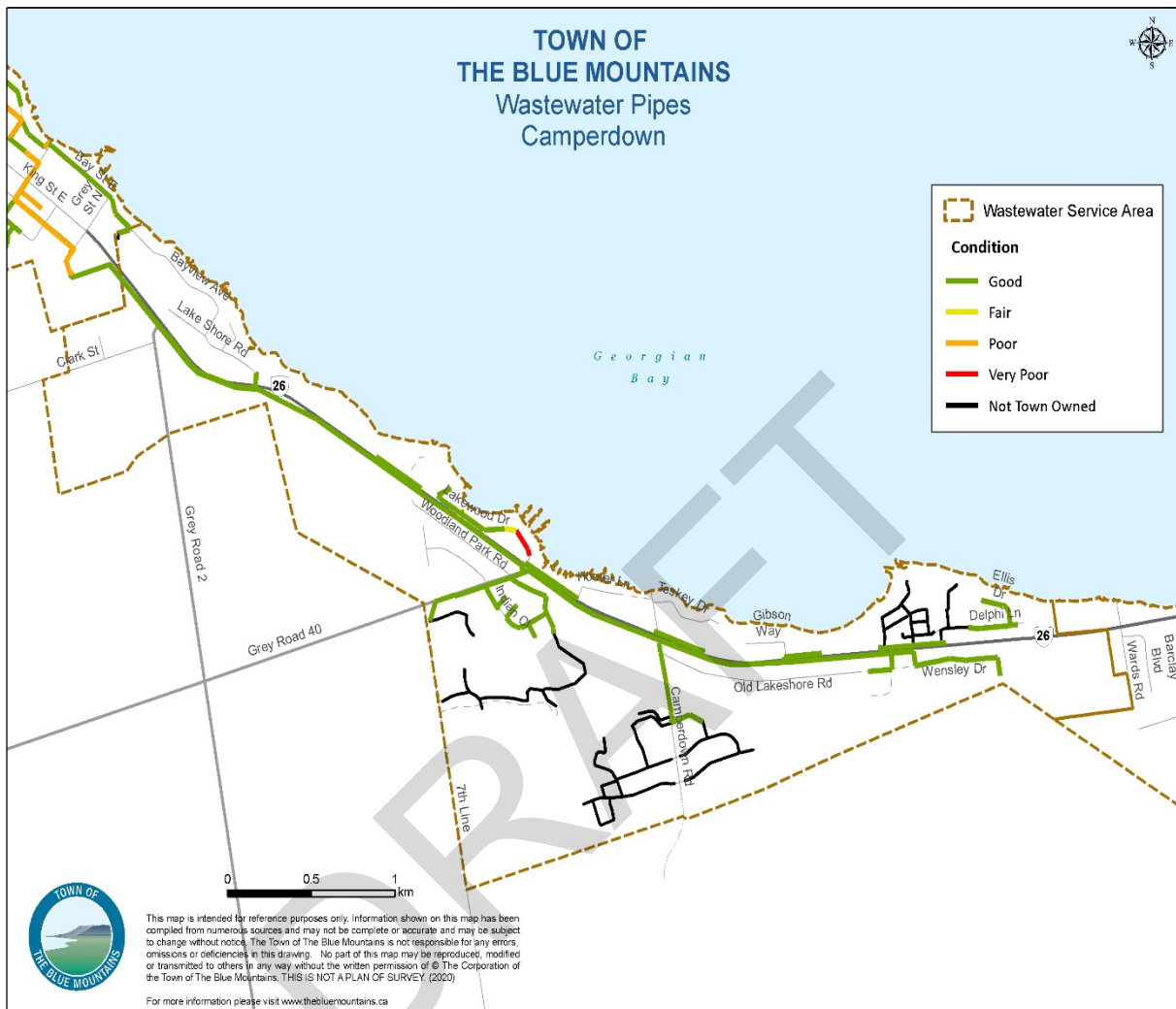
Map 1
Town of The Blue Mountains Wastewater Pipe by Condition Rating-Lora Bay



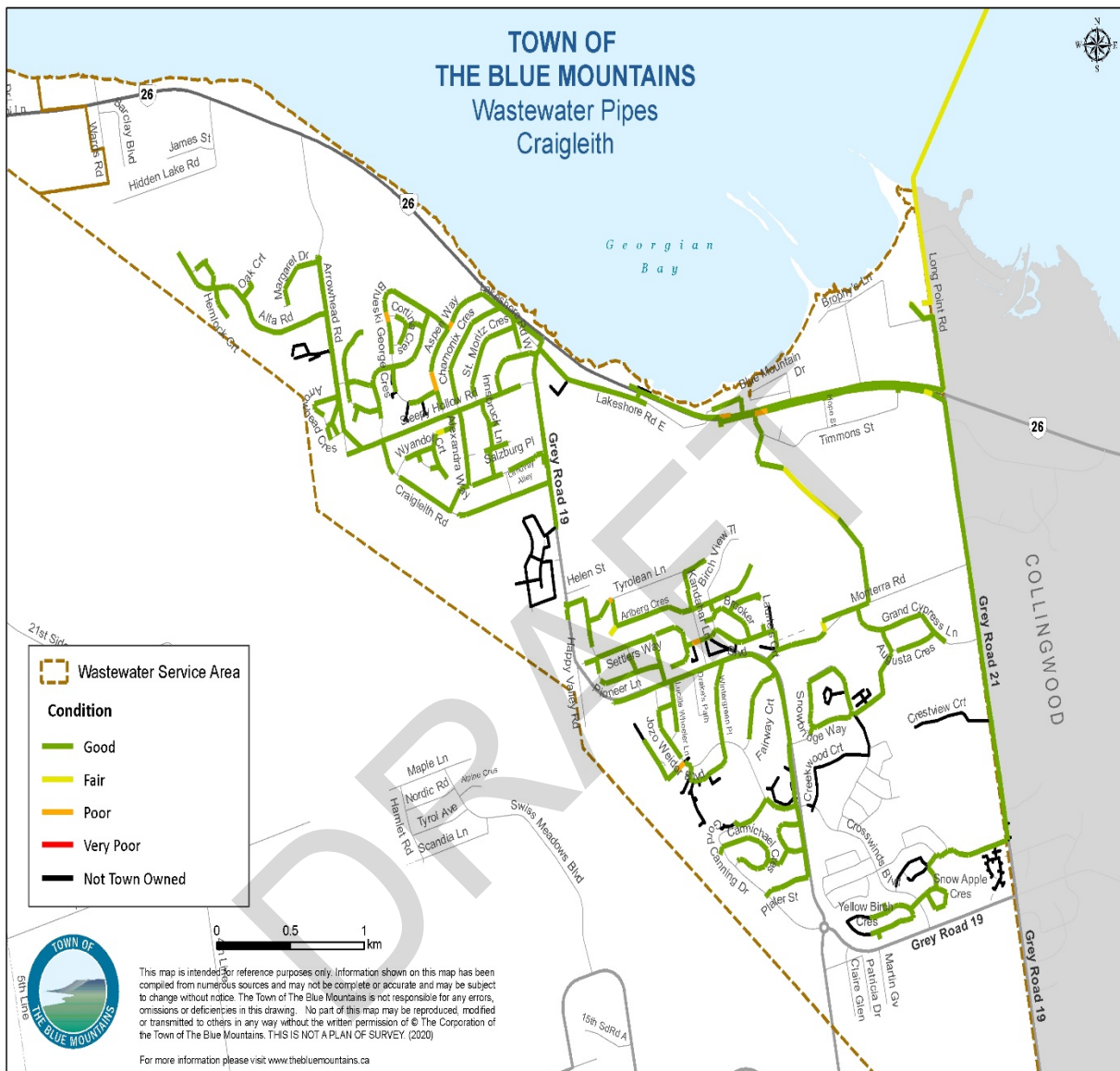
Map 2
Town of The Blue Mountains Wastewater Pipe by Condition Rating-Thornbury/Clarksburg



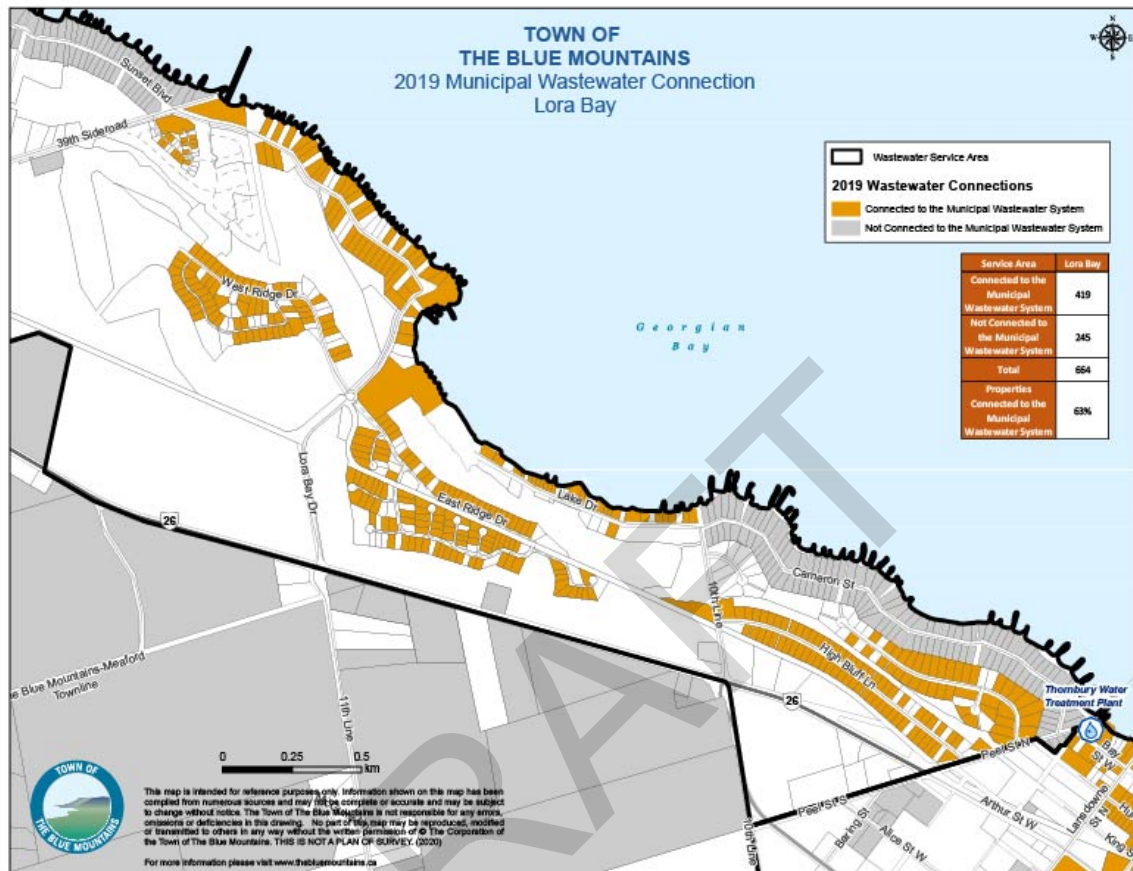
Map 3
Town of The Blue Mountains Wastewater Pipe by Condition Rating-Camperdown



Map 4
Town of The Blue Mountains Wastewater Pipe by Condition Rating-Craigleith

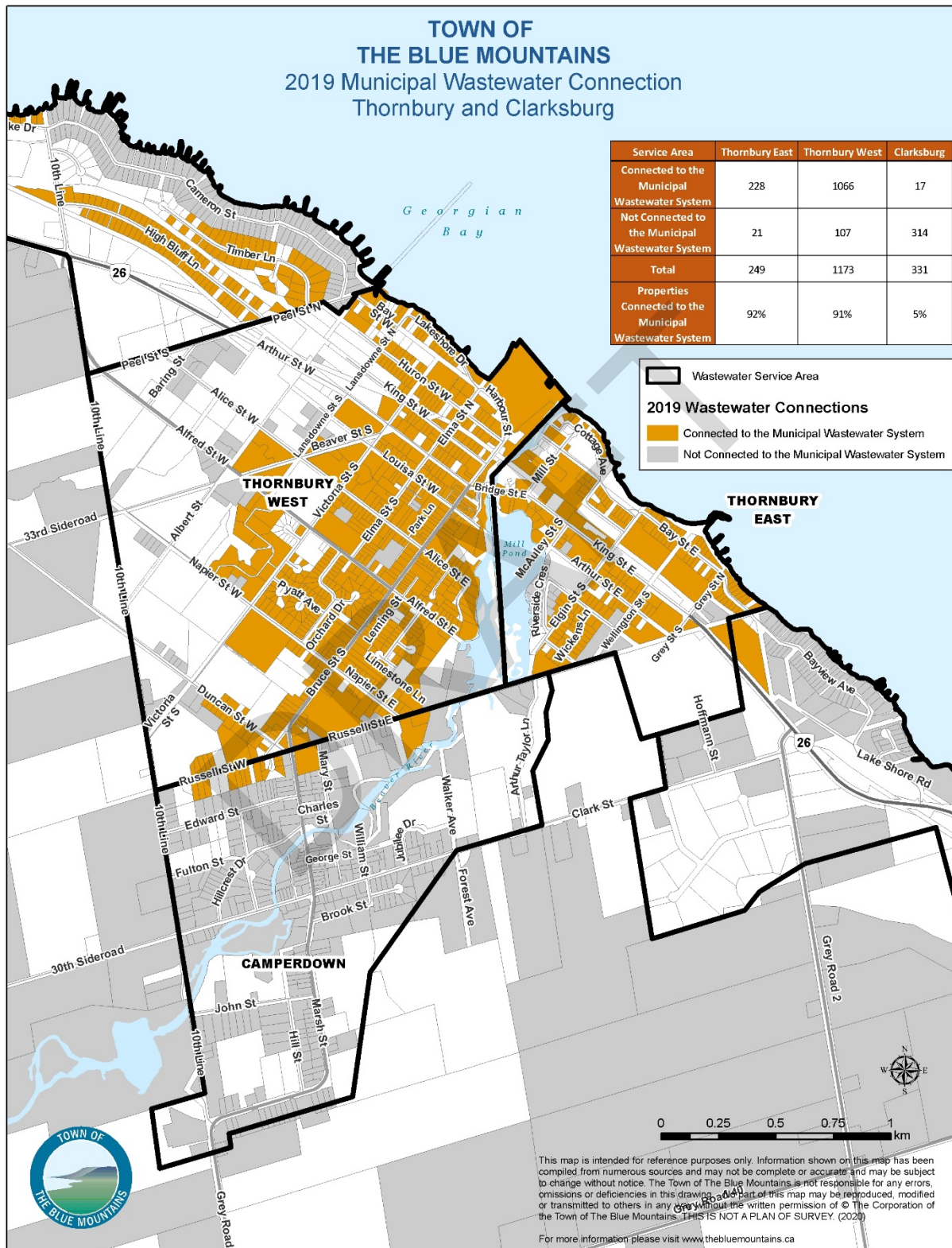


Map 5
Town of The Blue Mountains Wastewater Connections by Service Area-Lora Bay

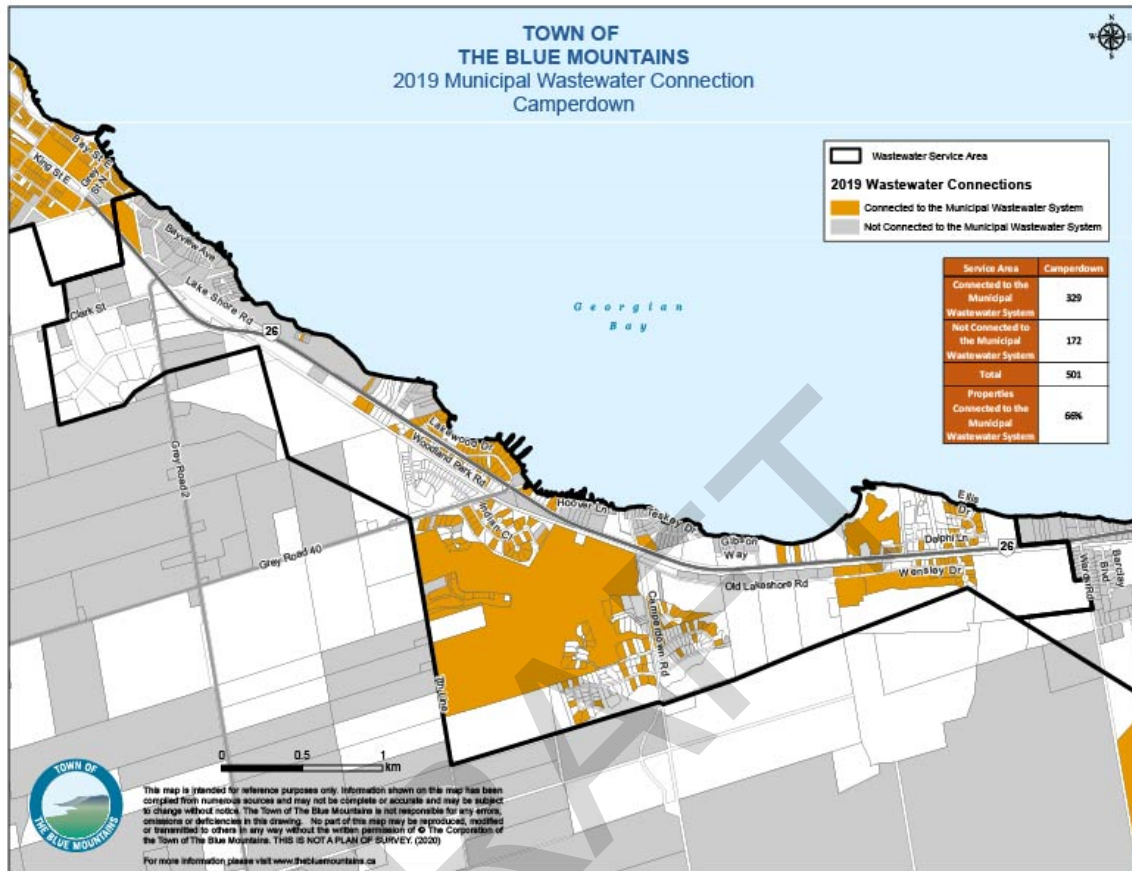


Map 6

Town of The Blue Mountains Wastewater Connections by Service Area-Thornbury/Clarksburg



Map 7
Town of The Blue Mountains Wastewater Connections by Service Area-Camperdown



Map 8
Town of The Blue Mountains Wastewater Connections by Service Area-Craigleith

