



UEM Project: 18-400

PREPARED FOR:  
**The Township of Puslinch**

Wayne Wood P. Eng.  
Urban and Environmental  
Management  
120 Colborne St, Brantford, ON  
N3T 2G6

Mary Hasan, Director of  
Finance/Treasurer  
7404 Wellington Road 34  
Puslinch, Ontario  
N0B 2J0



UEM



## Table of Contents

The Township of Puslinch Asset Management Plan .....	1
1.0 Executive Summary.....	1
1.1 Regulation 588/17 .....	1
1.2 The Asset Registry .....	1
1.3 Levels of Service .....	2
1.4 Factors Affecting Levels of Service .....	2
1.5 The Process of Developing a Level of Service Analysis .....	3
1.6 Developing Levels of Service .....	3
1.7 10 Year Capital Plan.....	4
1.8 Financial Plan.....	4
1.9 Public Engagement.....	5
2.0 Introduction .....	7
2.1 Township of Puslinch Overview .....	7
2.2 Township of Puslinch: General Information .....	7
2.3 The Goal of Asset Management and Key Elements .....	8
2.4 The Need for Asset Management .....	8
2.5 Defining Sustainability.....	8
2.6 Provincial Requirements for Asset Management Plans.....	9
2.7 Asset Management Policies .....	9
2.8 Asset Management Plans.....	9
2.9 Information Technology Systems Strategy .....	10
2.10 Project Deliverables .....	10
2.11 Data and Information Provided .....	10
2.12 Project Methodology .....	12
2.13 Reference Documents for Asset Management.....	13
2.14 Objectives.....	13
2.15 Strategic Plan.....	14
2.16 Upper Tier Influences.....	15
3.0 Climate Change .....	15

---

4.0	Level of Service Policies .....	18
4.1	Identifying Services .....	19
4.2	Service Reviews .....	19
4.3	Factors Affecting Levels of Service .....	20
4.4	Current vs Expected Levels of Service.....	20
4.5	The Process of Developing a Levels of Service Analysis.....	21
4.6	Defining Customer Expectations.....	21
4.7	Developing Levels of Service .....	22
4.8	Consultation, Communication, and Approval.....	22
4.9	Ongoing Review, Updates and, Improvements .....	22
4.10	Comparing Current Levels of Service to Expected Levels of Service .....	22
5.0	Levels of Service Policies.....	23
5.1	Bridges and Culverts .....	24
5.2	Gravel Roads.....	25
5.3	Hard Surface Roads .....	26
5.4	Storm Water Management Ponds .....	27
5.5	Storm Water Management Systems.....	28
5.6	Street Trees .....	29
5.7	Buildings and Facilities .....	30
5.8	Fire Equipment .....	31
5.9	Fire Reservoirs.....	32
5.10	Fleet – Works, Parks, Building and Fire Department Vehicles & Equipment .....	33
5.11	Parks and Recreation.....	34
5.12	Regulatory Signs/Warning Signs .....	35
5.13	Sidewalks.....	36
5.14	Street lights and Poles.....	37
5.15	Sewage Assets .....	38
5.16	Water Assets .....	39
5.17	Parklands.....	40
6.0	The Asset Registry.....	41

---

6.1	Types of Asset Attributes .....	42
6.2	Asset Attributes: Asset Identifiers, Location, and Descriptors .....	43
6.3	Detailed Technical Data .....	43
6.4	Condition Data .....	43
6.5	Assets with No Condition Data.....	44
6.6	Condition Data: Standardization .....	44
6.7	Valuation Data: Remediation Costs .....	45
6.8	Valuation Data: Replacement Costs.....	45
6.9	Data Confidence .....	45
6.10	Data Confidence Trend.....	46
6.11	Asset Registry Data Quality Score .....	51
7.0	State of The Infrastructure .....	52
7.1	Total Asset Replacement Cost.....	52
7.2	Lifecycle Management Methodology .....	52
7.3	Total Asset Replacement Cost by Asset Class .....	53
7.4	Sum-Total: Puslinch Assets Classes Asset Rating Categories .....	54
7.5	Asset Condition Rating: Puslinch Asset Classes .....	55
7.6	Bridges.....	56
7.7	Culverts.....	57
7.8	Roads – 1 Lift, 2 Lift, Surface Treated and Gravel Roads .....	59
7.9	Buildings and Facilities .....	62
7.10	Parks & Recreation .....	63
7.11	Sidewalks.....	64
7.12	Fire Reservoirs.....	68
7.13	Fire Vehicle Assets - Fire Licensed Vehicles & Tires.....	70
7.14	Storm Water Management Ponds .....	71
7.15	Parks and Building Department – Licensed & Unlicensed Vehicles.....	73
7.16	Works Department – Licensed & Unlicensed Vehicles .....	74
7.17	Storm Sewers .....	75
7.18	Street Lights.....	79

---



7.19	Regulatory/Warnings Signs .....	83
7.20	Fire Equipment .....	85
7.21	Street Trees .....	86
8.0	10 Year Capital Plan .....	87
8.1	Capital Plan: Summary .....	87
8.2	Capital Plan: Lifecycle Management Methodology .....	87
8.3	Static and Dynamic Inputs.....	88
8.4	Static and Dynamic Inputs: Hard Surface Roads .....	88
8.5	Input Mapping: 10 Year Capital Plan.....	89
9.0	All Existing Infrastructure Included in 10 Year Capital Plan.....	90
9.1	Existing Infrastructure not included in the 10 Year Capital Plan .....	93
9.2	Bridges.....	94
9.3	Culverts.....	95
9.4	Hard Surface Roads – 1 Lift, 2 Lift, and Surface Treated.....	96
9.5	Gravel Roads.....	103
9.6	Buildings and Facilities .....	105
9.7	Fire Equipment .....	108
9.8	Parks and Recreation.....	113
9.9	Storm Water Management Ponds .....	115
9.10	Fire Vehicles – Licensed Vehicles & Tires.....	116
9.11	Parks and Recreation and Building Department Vehicles .....	119
9.12	Works Department – Licensed and Unlicensed Vehicles & Equipment .....	120
9.13	Sidewalks .....	122
10.0	Risk .....	123
10.1	Probability of Failure .....	124
10.2	Consequence of Failure.....	124
10.3	Calculating Probability of Failure Based on Remaining Service Life .....	125
10.4	Calculating Probability of Failure Based on Condition .....	125
10.5	Consequence of Failure Factors .....	126
10.6	Consequence of Failure: Establishing Baseline Risk.....	126

---

10.7	Consequence of Failure: Quantifying the Qualitative Methodology.....	127
10.8	Consequence of Failure Classifications: Puslinch Asset Classes .....	130
10.9	Technical Walkthrough: Calculating Risk & Risk Profiling.....	131
10.10	Risk: Summary of Methods.....	131
10.11	10 Year Capital Plan Risk Matrix .....	133
11.0	Asset Class Risk Summaries .....	133
11.1	Bridges.....	134
11.2	Culverts.....	135
11.3	1 Lift, 2 Lift, Gravel and Surface Treated Roads.....	136
11.4	Buildings and Facilities .....	137
11.5	Parks and Recreation.....	138
11.6	Works Department – Licensed & Unlicensed Vehicles and Equipment .....	139
11.7	Parks and Recreation Unlicensed vehicles.....	140
11.8	Building Department Licensed Vehicles.....	141
11.9	Fire Licensed Vehicles (Vehicles and Tires).....	142
11.10	Fire Equipment .....	143
11.11	Storm Water Management Ponds.....	144
11.12	Street lights and Poles (No Data).....	145
11.13	Sidewalks .....	146
11.14	Fire Reservoirs (No Data).....	147
11.15	Regulatory/Warnings Signs (No Data).....	148
11.16	Storm Sewers (No Data) .....	149
11.17	Street Trees (No Data) .....	150
12.0	Financial Plan .....	151
12.1	Legislative Requirement.....	151
12.2	Financial Strategy Assumptions .....	151
12.3	Capital Financing Assumptions .....	151
12.4	Capital Asset Replacement Discretionary Reserve Assumptions .....	152
12.5	Asset Management Lifecycle Activities Assumptions.....	153
12.6	Annual Asset Management Plan Capital Levy Assumptions .....	153

---

12.7	Debt Management Assumptions .....	153
13.0	Financial Policy Considerations.....	154
13.1	Recommended Asset Management Lifecycle Activity Target Funding Levels.....	154
13.2	Recommended Capital Asset Replacement Discretionary Reserve Target Balances ..	154
13.3	Recommended Long-Term Debt Capacity Restrictions .....	155
14.0	Financial Strategy Options .....	155
14.1	Asset Management Plan Capital Levy .....	155
14.2	Asset Management Plan Funding .....	157
14.3	Capital Asset Replacement Discretionary Reserve .....	159
14.4	Long-Term Debt.....	159
14.5	Assessment of Financial Strategy Options .....	160
15.0	Resources.....	163
15.1	Information Technology Strategy .....	163
15.2	Possible Database/Software Solutions .....	163
15.3	Technology-Related Requirements.....	163
15.4	Asset Management Tools.....	164
16.0	Council Approval and Public Engagement .....	164
16.1	Council Approval .....	164
16.2	Public Engagement.....	165
17.0	Conclusions .....	167
17.1	Ongoing Maintenance of the Asset Management Program .....	167
17.2	Capital Program.....	168
17.3	Service Level Policy: Hard Surface Roads.....	169
18.0	Recommendations .....	169
18.1	Proposed Level of Service Policies .....	169
18.2	Staff .....	169
18.3	Financial Strategy .....	170
18.4	Fleet.....	170
18.5	Boundary Roads – Road Structures & Bridges and Culverts.....	170
18.6	Technical Levels of Service .....	171

---

18.7	Technology Related Requirements .....	171
18.8	Climate Change .....	171
19.0	Asset Registry Recommendations .....	172
19.1	Bridges and Culverts:.....	172
19.2	Hard Surface Roads: .....	172
19.3	Gravel Roads: .....	172
19.4	Traffic Volume Study .....	173
19.5	Buildings and Facilities: .....	173
19.6	Storm Water Management Ponds .....	174
19.7	Fire Reservoirs .....	174
19.8	Fire Equipment .....	174
19.9	Fleet: Works, Building, Parks and Fire Department Vehicles.....	174
19.10	Parks and Recreation, Sidewalks .....	175
19.11	Street Lights and Poles .....	175
19.12	Street Trees.....	175
19.13	Storm Sewers.....	175
19.14	Inspection & Lifecycle Tables .....	176
19.15	Budget Implications .....	177
20.0	Appendices.....	178
20.1	Financial Strategy Option 1 (1 Percent Impact) .....	179
20.2	Financial Strategy Option 2 (2 Percent Impact) .....	182
20.3	Financial Strategy Option 3 (3 Percent Impact) .....	185
20.4	The Township of Puslinch Asset Management Policy.....	188
20.5	Puslinch Asset Registry (No Regulatory/Warning Signs) - Reduced Fields .....	192
20.6	Comments from the Public .....	294

---

## 1.0 Executive Summary

### 1.1 Regulation 588/17

The Municipal Finance Officers' Association of Ontario (MFOA) best summarized the reasons for implementing asset management including the regulatory basis for asset management in Ontario in the MFOA Strategic Management Policy Toolkit.

'The regulation is a progression of the Municipal Infrastructure Strategy launched in 2012 and the Infrastructure for Jobs and Prosperity Act of 2015. The regulation builds upon the Municipal Infrastructure Strategy and "Building Together" guide for Municipal Asset Management Plans launched in 2012 and the Infrastructure for Jobs and Prosperity Act of 2015., to strengthen the role of municipal asset management within municipal planning and budgeting. For example, asset management plans must now be considered in the development of annual budgets. The vehicle for this new form of municipal governance is a policy. In the regulatory content of Ontario, it is considered a strategic asset management policy, as it requires municipalities to describe processes as well as accountabilities.'

Ontario adopted Ontario Regulation 588/17 made under the Jobs and Prosperity Act, 2015 that set out the parameters for Asset Management Policies and Asset Management Plans.

The Asset Management Policy is to be approved by Council by July 1, 2019. A copy of the Asset Management Policy is included in Appendix 20.4 of this report.

### 1.2 The Asset Registry

The asset registry includes description, location, size, material type, and condition of assets. The asset registry also includes financial components such as unit cost, remediation cost and a total replacement cost for all asset components. The asset classes included are identified in the following chart on the next page.

Regulation 588/17 Asset Group	Asset Registry Asset Group
Core Municipal Infrastructure	Bridges
	Culverts
	Asphalt Roads 1 Lift
	Asphalt Roads 2 Lift
	Asphalt Roads Surface Treated
	Gravel Roads
	Storm Water Management Ponds
	Storm Sewers
Municipal Infrastructure	Buildings and Facilities
	Fire Equipment
	Fire Reservoirs
	Parks and Recreation
	Sidewalks
	Regulatory/Warning Signs
	Street Lights
	Fire Licensed Vehicles
	Fire Vehicle Tires
	Works Unlicensed vehicles
	Works licensed vehicles
	Parks & Building Department Licensed/Unlicensed Vehicles
Green Infrastructure	Street Trees

ES - 1 Puslinch Asset Classes

### 1.3 Levels of Service

Puslinch provides all of the legally mandated services, as well as other services desired by residents. The development of a “service-centric” asset management process entails understanding and answering the following questions for all services:

- What are the services that Puslinch is providing?
- What are the services that customers expect?
- What assets is Puslinch providing for each service?

### 1.4 Factors Affecting Levels of Service

Several factors affect the levels of service delivery for particular asset types. The following are some of the factors:

- **Community Expectations:** This factor represents one of the major drivers in setting levels of service. Information is needed about the community’s expected level of service

and willingness to pay for this service. A balance then needs to be determined between that expected level of service and its associated costs.

- **Legislative requirements:** Legislative standards and regulations affect the way assets are managed. These requirements stipulate the minimum levels of service. Therefore, relevant requirements must be taken into consideration in setting levels of service.
- **Policies and objectives:** Existing policies and objectives should be considered when developing levels of service, with care taken to remain aligned with an organization's strategic planning documents.
- **Resource availability and financial constraints:** These constraints play a large role in an organization's ability to provide sustainable levels of service. Therefore, resource constraints play a significant part in determining affordable levels of service.

### 1.5 The Process of Developing a Level of Service Analysis

The process for developing and adopting levels of service measures may be defined as follows:

**Levels of Service:** Compliance with all legislated requirements, protect and uphold public safety, community wellbeing and the environment; and, reliably meets the informed expectations of stakeholders and the public.

**Level of Service Analysis can involve:**

1. Developing Levels of Service
  - Customer vs. Technical Levels of Service
  - Current vs. Expected Levels of Service
  - Use of performance measures
2. Consultation, Communication, and Approval
  - Receiving input on the proposed Levels of Service analysis
  - Communicating the Levels of Service analysis to stakeholders
  - Seeking Council approval of Levels of Service analysis
3. Ongoing Review, Updates, and Improvements
  - Updating the Levels of Service analysis, as needed

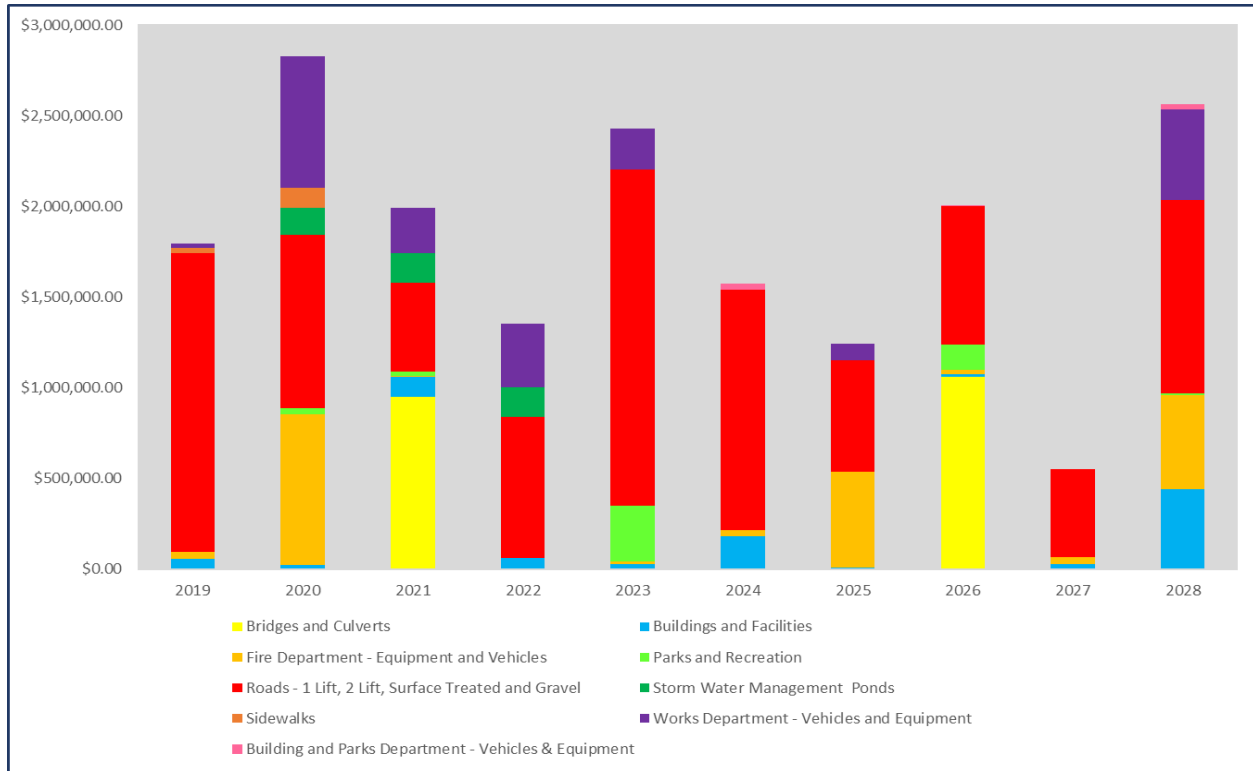
### 1.6 Developing Levels of Service

To be effective in developing levels of service, input should be gathered from and communicated to all interested parties. The services being provided, and the community expectations must be documented.

Based upon discussions with Staff and input from Council a series of Level of Service policies were developed and may be found in Section 5 of the Asset Management Plan.

## 1.7 10 Year Capital Plan

Based upon the asset registry which includes all physical assets, associated condition, age, and rehabilitation costs as well as Levels of Service, a 10-year capital plan was developed to model both Static (linear deterioration curve) and dynamic inputs (staff intervention). The following bar chart illustrates the 10-year capital plan.



ES - 2 10 Year Capital Plan

## 1.8 Financial Plan

Several financial strategy options were developed that identified annual projected funding over the 2019-2028 forecast period. Each option was examined with a recommendation towards a financial strategy that would see an annual increase in the Township's capital levy that impacts the taxes of a typical single-family dwelling by 3% until a sustainable level of funding is achieved.

The use of long-term debt is also necessary to undertake the capital plan in years where available capital financing, including funds within capital asset related reserves, are insufficient to finance the capital plan. Financial policies that govern the level of debt, the capital related reserves, and asset replacement funding are also discussed with policies recommended for the implementation of the financial strategy in Section 12 and 13 and 18.3.



## 1.9 Public Engagement

O. Reg 588/17 outlines the following requirements with respect to Asset Management Public Engagement:

- An Asset Management Policy must be developed and adopted by July 1, 2019 and reviewed and updated at least every 5 years. The Asset Management Policy outlines a requirement to include a commitment to provide opportunities for municipal residents and other interested parties to provide input into the Asset Management Plan (AMP).
- Municipalities are required to post their Asset Management Policy and Asset Management Plan on the Township's website and make copies of these documents available to the public, if requested.

In reference to Puslinch, the public was invited to provide input during the development stages of asset management planning. In this manner, the public had the opportunity to shape the direction of asset management processes by having the opportunity to comment on the Asset Management Policy and on Levels of Service Policies as well as impacts on the Capital Budget.

The public was encouraged to provide comments on asset management topics in general. A presentation in regard to the Asset Management Plan was posted online on the Township's website. A public meeting was held on February 5, 2019 in the Council Chambers of Puslinch. The Sign-in-sheet indicated that 7 individuals attended. As of February 8<sup>th</sup>, two emails were received by the Township.

Verbal comments of concern were as follows:

1. There is a need to establish a process that would allow the surface treatment of gravel roads or the paving of roads on which there are homes.
2. There was concern in regard to Old Morriston Park and the need for improvements that are not in the Township capital budget.

Verbal areas of clarification were as follows:

3. The methodologies used in order to quantify the condition of building components.
4. The methodologies used in determining the need for upgrading gravel roads.
5. The methodologies used to define level of service policies and their technical levels of service.

Areas of concern in the emails were as follows:

6. Service Level Policy for Gravel Roads.
7. Lack of Data in regard to condition of Gravel Roads.
8. Change in condition of roads to poor.
9. Opinion not to borrow money.
10. Staff levels for Fire Department and Township as whole.

The preparation of this project was carried out with assistance from the Government of Canada and the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the authors, and the Federation of Canadian Municipalities and the Government of Canada accept no responsibility for them.”

## 2.0 Introduction

### 2.1 Township of Puslinch Overview

Puslinch is a Township in south-central Ontario, in Wellington County, surrounding the south end of Guelph. The main industries of the Township are agriculture, transportation, manufacturing and aggregate extraction.

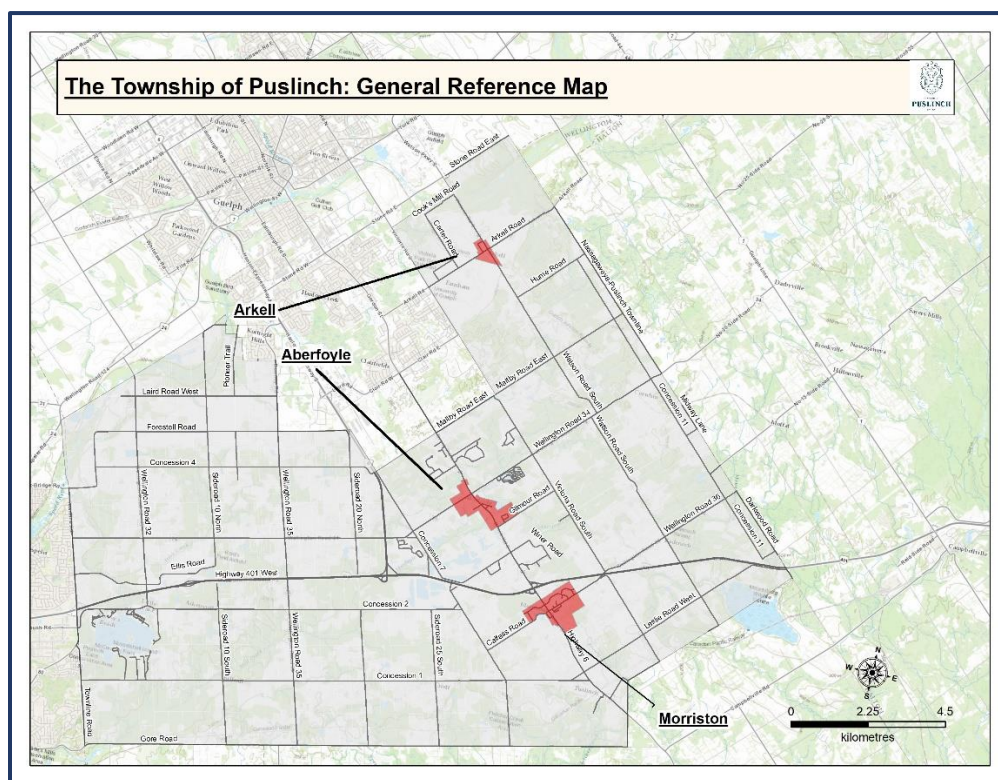
The Township has its own Strategic Plan, with the current version dated 2015 to 2020. Its mission statement is as follows: "Progressing together to provide reliable and sustainable services to our residents, businesses and visitors. We will protect our resources while respectfully building upon our heritage as a safe, fun and prosperous rural community."

The Township of Puslinch's main hamlets include Aberfoyle, Arkell, Badenoch, Little Lake and Morriston.

### 2.2 Township of Puslinch: General Information

The following figure shows a map of the Township of Puslinch showing main roads and Township Centres.

Table 8 of the County of Wellington Official Plan indicates that the Township of Puslinch had a population of 7,815 in 2016 and is expected to grow to 9,565 in 2036. Employment in 2016 was 4,020 with projected employment to rise to 5,160 by 2036.



2.0 - 1 Township Map

## 2.3 The Goal of Asset Management and Key Elements

The International Infrastructure Management Manual, Version 4, 2011, defines the goal of asset management as “meeting a required level of service, in the most cost-effective manner, through the management of assets for present and future customers”. The key elements of asset management are:

- Providing a defined level of service and monitoring performance;
- Managing the impact of growth through demand management and infrastructure investment;
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet defined levels of service;
- Identifying, assessing and appropriately controlling risks; and
- Having a long-term financial plan that identifies required expenditures and how the plan will be funded.

These elements of asset management are enabled through the use of capable staff, effective tools and systems, and a commitment to continuous improvement. A formal approach to the management of infrastructure assets is essential in order to provide services in the most cost-effective manner and to demonstrate this to Council, citizens, and other stakeholders.

## 2.4 The Need for Asset Management

Without appropriate information, it is difficult for municipal staff and elected officials to make decisions regarding asset replacement and rehabilitation. Being properly informed is the first step in ensuring that public money is spent in the most efficient and effective manner possible. An asset management plan is the medium for providing this information. The first step in creating an asset management plan is compiling an asset registry. Such a registry is a comprehensive list of all the organization’s assets including their age, replacement value, and condition. Key benefits of compiling such a registry is as follows:

- Prolonging asset life and aiding in making informed decisions regarding rehabilitation, repair, and replacement;
- Meeting community demand with a focus on system sustainability;
- Setting rates based on sound operational and financial planning;
- Budgeting focused on activities critical to sustained performance;
- Meeting service expectations and regulatory requirements;
- Improving response to emergencies; and
- Improving the security and safety of assets

## 2.5 Defining Sustainability

The Brundtland Commission of the United Nations on March 20, 1987, stated: “sustainable development is development that meets the needs of the present without compromising the

ability of future generations to meet their own needs". The objective of asset management is to meet a required level of service, in the most cost-effective manner, through the management of assets for the present and future population of the Township. Lifecycle asset management encompasses all practices associated with considering management strategies as part of the asset lifecycle. The objective of sustainable asset management is to look at the lowest long-term cost when making decisions.

## **2.6 Provincial Requirements for Asset Management Plans**

The Province of Ontario, through the Ministry of Infrastructure, released in June 2011 a long-term infrastructure plan called 'Ontario Building Together'. The plan sets out a strategic framework that guides future investments in ways that support economic growth and respond to changing needs. A key element of this framework is ensuring good stewardship through proper asset management. Subsequent to the release of 'Ontario Building Together', The Province of Ontario issued Ontario Regulation 588/17 in late 2017.

## **2.7 Asset Management Policies**

Ontario Regulation 588/17 requires that every Municipality develop an asset management policy that includes municipal goals and policies supported by the Municipalities' asset management plan. Such policies influence long-term financial plans that provide for continuous improvement and adoption of appropriate practices that provide for the sustainable management of assets.

Policies must provide for infrastructure planning that recognizes issues such as:

1. Vulnerability due to climate change
2. Management of vulnerabilities
3. Anticipated costs due to vulnerabilities
4. Mitigating approaches to climate change
5. Disaster Planning
6. Contingency funding

In addition, policies must recognize and provide for processes that ensure asset management policies align with Ontario's land use planning framework as well as the Official Plan of the County of Wellington and such policies must provide for Financial Plans that recognize capitalization thresholds, proximity owned municipal assets and financial policies impacting the replacement of assets.

## **2.8 Asset Management Plans**

Ontario Regulation 588/17 requires that every Municipality prepare an asset management plan that provides current levels of service for each asset category. Energy usage and operating efficiency must be estimated for core municipal infrastructure assets such as:

- i. Storm Water Management
- ii. Roads
- iii. Bridges and/or Culverts

Asset Management Plans include Asset Hierarchies, an overview of the State of Infrastructure for the Township of Puslinch and a detailed 10-year capital needs forecast, which identifies and prioritizes specific assets for inclusion in the Capital Budget.

## 2.9 Information Technology Systems Strategy

The Information Technology Systems Strategy is designed to align information systems with the Township's asset management decision-making requirements. The Information Systems Strategy provides a summary of existing software systems related to asset management and identifies opportunities for consolidation or replacement of existing systems to meet the goals of the Asset Management Strategy.

## 2.10 Project Deliverables

The project scope involved developing the following deliverables:

1. Asset Management Policies
2. Asset Management Plans
3. Information Technology Plans

## 2.11 Data and Information Provided

The following information was provided by the Township of Puslinch and used in the completion of this project:

<u>Delivered Items</u>	
<b><u>Condition Assessments, Inspections, Policy and Insurance</u></b>	
2013 Asset Management Plan	2017 Bridge and Culvert Inspection
2016 Pavement Condition Index Report	2017 Storm Water Management Pond Inspection Report
2008 Road and Bridge Inventory Report	2008 Asset Valuation Report
2014 Building Inspection Report	Playground Equipment Inspection
Development Charges By-Laws	Insurance Schedules
Equipment Replacement Schedule	2019 Capital Budget and Forecast

<u>Delivered Items</u>	
<u>Master Plans</u>	
Community-Based Strategic Plan 2015	Community Improvement Plan 2016
Puslinch Master Fire Plan	Puslinch Space Needs Analysis
Recreation and Parks Master Plan	Parks Master Plan – Puslinch Community Centre
<u>Financial Policies</u>	
Investment Policy	Asset Maintenance Trust Fund Program – Council Resolution No. 2014-271
2017 Fleet Management Policy	Procurement Policy
Commodity Price Hedging Policy	Financial Policies regarding Establishment and Contribution to Reserves
Financial Administration and Budget Management	Sale and Other Disposition of Land Policy
Lease Financing Agreement Policy	Tangible Capital Asset Policy
<u>Reserve Balances Documents</u>	
Balances in Discretionary and Restricted Reserves	
<u>Debt Documents</u>	
Amortization Schedule	
<u>Tax Levy</u>	
2017 Final Tax Levy By-Law	2018 Final Tax Levy By-Law
<u>Tangible Capital Listing</u>	
Asset Acquisition List - 2013	Asset Acquisition List - 2014
Asset Acquisition List - 2015	Asset Acquisition List - 2016
Asset Acquisition List - 2017	Fixed Asset List 2017
<u>Service Level</u>	
2010 Fire Establishing By-law	Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways

<u>Delivered Items</u>	
<u>Resource Documents</u>	
Asset Management Training Workshop Documents	Municipal Finance Officers' Association
Policy and Strategy Templates	
<u>GIS Files</u>	
Roads	Bridges
Land Parcels	Address Points
Urban Centre	Traffic Lights
<u>Traffic Count Data</u>	
Roszell Road	Hume Road
Watson Road	4982 Concession 4
Laird Road	Summary Document
<u>Asset Delivery</u>	
Sidewalk Listing	Sidewalk Inspections
Puslinch Computer Listing	Fire Equipment Listing
Street Name Sign Listing	
<u>Tender Documents/ Unit Costs</u>	
Optimist Recreation Centre First Built	Gravel Unit Costs
Streetlight Poles Rented/Own Document	Tender Documents for various assets

2.0 - 2 Delivered Documents

## 2.12 Project Methodology

UEM has worked closely with Township staff on this project. Workshops were held to expand on the benefits and potential components within an asset management strategy. The UEM Team's objective was to define an initial high-level asset management strategy and more detailed vision for asset management and asset reporting in Puslinch. The workshops aimed at providing information to staff on the best practices in asset management and to develop a common understanding of what the Township is aiming to achieve. The workshop environment



also allowed the UEM Team to discuss current business practices to determine the current definition of Asset Management and develop an asset hierarchy.

Once the Asset Management Framework and Strategy were developed, UEM staff executed the strategy using Puslinch's asset data, developing initial outputs.

As part of the project, a review of current information technology systems was undertaken. An evaluation of potential improvements that would facilitate the evolution of asset management in Puslinch with recommendations are presented in Sections 18 and 19 of this report.

### **2.13 Reference Documents for Asset Management**

The following documents were utilized in preparing both the Asset Management Policy and Asset Management Plan for the Township of Puslinch.

1. International Asset Management Manual
2. How to develop an Asset Management policy, strategy and Governance framework; FCM; Federation of Canadian Municipalities
3. Strategic Asset Management Policy Toolkit - Municipal Finance Officers' Association of Ontario (MFOA)
4. Asset Management Framework; MFOA
5. Development Charges Act (DCA)
6. County of Wellington Official Plan, *last updated June 1, 2018*

These documents recognize that Municipalities deliver many of the services that are critical to Ontarians and these services rely on well-planned, well-maintained infrastructure. The Province views asset management as a prerequisite for productive discussions about funding for municipal infrastructure.

### **2.14 Objectives**

The administration of the Township is segmented into the following Departments: Public Works, Building and Planning, Parks and Recreation, Fire and Rescue, CAO/Clerk and Finance.

The Asset Management Policy and Plan were developed in consultation with all departments at the Township with the following objectives:

- Guide the Township in the creation of an Asset Management Policy and Plan conforming to Provincial guidelines and Ontario Regulation 588/17 as well as Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways.
- Document a vision for asset management and define the actions and resources that will enable improved asset management by the Township;
- Understand the long-term cost to sustain the assets owned by the Township to deliver the current and forecasted future needs to replace and maintain these assets;

- Review the Township's existing information systems required to support the Township's Asset Management Plan and define the actions and resources that will enable improved use of technology by the Township.
- facilitate involvement with staff, Council and most importantly the Public in approval levels of service and the impact of service level changes to the Township's budget.

## 2.15 Strategic Plan

As previously indicated the Township undertook the development of a Community Based Strategic Plan 2015-2020.

Township Strategic Goals and associated objectives were developed that were to be integrated into an Implementation Plan. Relevant to the Asset Management Plan (AMP) were Goals and Objectives identified in the following chart:

Strategic Plan			
Strategic Goal	Objective	Sub Objectives	Action
Strategic Goal IV	Maintain Financial Strengths and Define Service Levels	Long-Term Financial Planning	Incorporate service level decisions into 10-year Capital Plan
			<ul style="list-style-type: none"> <li>(i) Develop a long-term funding strategy for capital program</li> <li>(ii) Update Pavement Condition Index for Township Roads</li> <li>(iii) Update Asset Management Plan through identification and inspection of the Township's Storm Water Management Facilities</li> <li>(iv) Review and update the Township's Reserve and Reserve Fund Policy which considers the establishment of a Tax Stabilization Reserve</li> <li>(v) Develop a Debt Policy</li> <li>(vi) Complete a comprehensive update to the Township's Asset Management Plan</li> <li>(vii) Review and update the Development Charges By-law</li> </ul>

		Fire Master Plan Service Levels and Recommendations	Incorporate and implement the outcomes of the decisions made on the Fire Master Plan recommendations into the Township's service delivery standards and budget, 2016–2024.
		Recreation and Parks Master Plan Service Levels and Recommendations	Incorporate and implement the outcomes of the decisions made on the Recreation and Parks Master Plan and the ORCP Ad-hoc Committee into the Township's service delivery standards and budget, 2016–2024.
		Service Delivery review – Other Departments	i.) Identify other areas for review i.e. Public Works, Governance. ii.) Report to Council with an action plan to define and outline the departmental service delivery items. iii.) Report to Council with a proposed schedule for review of other departments. iv.) Incorporate and implement the outcomes of the decisions made into the Township's service delivery standards, 2018-2024.

2.0 - 3 Strategic Plan

## 2.16 Upper Tier Influences

The following documents were reviewed to determine influences of the County of Wellington upon Puslinch.

1. Wellington County Economic Development Strategic Plan
2. County of Wellington Official Plan
3. Places to Grow – Growth Plan 2017

## 3.0 Climate Change

Physical assets (such as buildings and transportation systems) operate in a dynamic environment where they are exposed to variability in environmental conditions. An important input to asset management is an adequate understanding of this variability. This typically includes the estimation of environmental conditions that can be expected over the life of an asset or a system of assets (e.g. a road system). In order to offset the negative aspects of such viability, environmental criteria should be used as inputs into the following;

- the design and construction of an asset
- the planning of operations to gain an understanding of maintenance requirements for the life of the asset.

Environmental criteria provides a statistical view of the changing conditions within which the asset must operate such as changes in air temperature as an input in the design of a road. An analysis of the most extreme environmental conditions that an asset is designed to withstand is a critical design input.

However, for determining extremes, the extent of information available on environmental conditions is almost always significantly less than the design period of an asset. Essentially, knowledge of past conditions is no longer valid for making projections about the future. Since changes in climate are not traditionally incorporated into asset management decision-making, new techniques must be established to offset the effects of climate change.

The risks associated with the uncertainty of the environment have generally been accommodated through appropriate safety margins. The incorporation of climate change into asset design has so far been limited. However, a risk assessment approach can be used which considers four major conceptual factors in assessing climate change impact and adaptation. These are exposure to climate stressors, vulnerability, resilience, and adaptation.

**Climate Change Exposure** refers to the degree to which a system is exposed to extreme climate variations and the nature of those variations.

**Vulnerability** refers to the potential for loss due to exposure to a climate stressor, such as the degree to which a system is susceptible, and unable to cope and considers the structural strength, integrity and function of assets or asset systems in terms of the potential for damage or functional disruption as a result of climate stressors. It's important to recognize that asset risk is a function of exposure and vulnerability.

**Resilience** is used to refer to the capacity of a system to absorb disturbance without losing essential function, such as the ability of a system to continue to operate as a result of built-in redundancy. For example, the adequate operation of a road system despite the loss of a single road or bridge or the relative ease that a single asset can be repaired or replaced.

**Adaptation** or 'adaptive capacity' is the ability of the asset to adjust to climate change, including climate variability and extremes. This works to moderate potential damages or to cope with consequences of changing climates including taking advantage of respective opportunities to extend the asset lifecycle.

Adaptive strategies fall into three categories:

1. protect
2. accommodate
3. retreat

An example of a protection strategy is wetland restoration. An accommodation strategy is preparing for an event such as periodic flooding by having operational plans in place to minimize disruptions. Retreat involves no attempt to protect the asset, e.g. a facility or structure may be abandoned under certain conditions.

An important concept in the risk assessment approach is that of thresholds. In the context of asset management, such thresholds are points within a decision-making process at which specific actions are taken. Thresholds are indicators when the condition of an infrastructure component falls below a certain standard or may be economic when replacement costs are less than repair costs.

Such an indicator as risk combines an assessment of present-day vulnerabilities pertaining to specific climate factors including projections as to how they might change under climate change scenarios. However, risk also takes into account the severity of a given impact, the amount of infrastructure affected and the ability to adapt to climate change.

Certain authorities have developed a methodology for determining thresholds by using a two-stage process. The first stage includes examining the necessity for taking action. No action is deemed necessary if it is determined that a given impact is unlikely to occur within the design life of the asset or if current standards would adequately address climate impact. The second stage applies when action is required immediately or in the near future compared to the cost of doing nothing, retrofitting the infrastructure or designing new infrastructure.

Along with the concept of adaptive strategies is the concept of interventions. Interventions are triggered when a certain threshold is reached and consists of a 'set of responses', which are a particular measure, an example being the application of a hard surface on a gravel road. Adaptation previously took into account future changes including climate change, physical changes to an asset, and deterioration of an existing asset. While such adaptations are designed for making assumptions about future change, the magnitude of future change is unknown.

An approach to adaptation takes into account the uncertainty of future change and enables decisions to be made that are based on actual rates of change. The primary future changes that will affect the implementation of and preparation of an adaptation plan are:

- Climate change. This presents the greatest challenge in terms of future uncertainty.
- Socio-economic change.
- Deterioration of the existing assets.
- The physical environment in which assets are located.
- Public attitudes toward modifying service levels.

The types of adaptation envisaged within the Puslinch asset management plan to cope with the uncertainty of future change includes the following:

- Changes to the timing of new interventions.
- Ability to change between options.
- Adaptation of engineering responses.
- Land use planning that provides flexibility in the selection of options.
- Adaptation to new infrastructure, for example, the construction of a new road.

The timing of a decision to implement an intervention is based on:

- The rate of change of the indicator (which is unlikely to be linear).
- The threshold value when an intervention is required.
- An estimate of how the indicator will continue to change, in order to estimate the date when it reaches the threshold value.
- The lead time for planning and constructing the intervention.

The procedure outlined above will take place over a number of years.

In regard to Puslinch, it is accepted that climate change is having an impact on assets. However, the rate of change is such that climate change will not have a significant financial impact on the assets of Puslinch over the next ten-year period. The deterioration rate of the physical condition of assets is not significant at the present time. Reference should be made to recommendations which highlight the need to include climate change as a consideration in undertaking future updates of asset condition such as a Roads Needs Study.

## 4.0 Level of Service Policies

Determining municipal level of service policies requires first developing a baseline for acceptable and affordable levels of service. This is done by first examining present-day service levels, community needs, regulatory or legal obligations and the cost of service delivery. Once present-day service levels have been examined, this baseline can be compared against level of service expectations.

Initially, current levels of service were documented as well as the annual cost to each service delivery. Any higher-level service, even at a cost of delivery, in all likelihood will require an

increase in budget. However, such an increase in budget may be justified if a service level change is required to achieve compliance with regulation codes or standards.

Levels of Service Analysis is a component of asset management planning that is significant and has a great deal of impact. The core purpose of a Municipality is to provide services to residents and other stakeholders. Assets help to provide those services and most of the resources devoted to asset management planning are spent on infrastructure. Physical assets are simply a portion of what is required to deliver the various levels of service as determined by the Township. The Township needs to ensure that the infrastructure performs to meet the level of service goals at an affordable and sustainable cost. An objective of Levels of Service analysis is to find a balance between the expected levels of service and the cost of providing that level of service.

A Levels of Service analysis includes:

- Service identification with the identification of assets involved in providing the services and the stakeholder's impact;
- Determination of levels of service, based on community expectations;
- Comparison of existing levels of service to expected technical levels of service;
- Use of performance measures to assist in comparing existing service levels to expected levels; and
- An assessment of the lifecycle cost implications of moving from existing levels of service to expected (desired) levels of service over a forecast period.

In addition, the following should be identified in the Levels of Service Policies.

- The options for the proposed levels of service and the risks associated with those options to the long-term sustainability of the Township.
- How the proposed levels of service differ from the current levels of service.
- Whether the proposed levels of service are achievable.
- The Township's ability to afford the proposed levels of service.

#### **4.1 Identifying Services**

Identifying and determining services are beneficial for several reasons. For asset management planning, identifying services is an important step in developing the Levels of Service analysis. Once the Township has identified the services it is providing and what services it wishes to provide, then the levels of service to be provided can be determined. Service reviews can be undertaken by both formal and informal means and involve a number of stakeholders including staff and Council.

#### **4.2 Service Reviews**

Given that the asset management planning process is in place to determine how assets will provide services to residents and other stakeholders, the identification of services is a critical

“first step” to initiate the Levels of Service analysis. Municipalities provide all of the legally mandated services, as well as other services desired by the residents. The development of a “service-centric” asset management process entails understanding and answering the following questions for all services:

- What are the services that Puslinch is providing?
- What are the services that customers expect?
- What are the assets provided for each service?

### 4.3 Factors Affecting Levels of Service

Several factors affect the levels of service delivery for particular asset types. The Township’s policy objectives, community expectations, legislative requirements, and resource constraints are some of the factors that generally influence the levels of services. Some factors are as follows:

- **Community expectations:** This factor represents one of the major drivers in setting levels of service. Information is needed about the community’s expected levels of service and willingness to pay for this service. A balance then needs to be determined between expected levels of service and associated costs.
- **Legislative requirements:** Legislative standards and regulations affect the way assets are managed. These requirements stipulate the minimum levels of service. Therefore, relevant requirements must be taken into consideration in setting levels of service.
- **Policies and objectives:** Existing policies and objectives should be considered when developing levels of service, with care taken to remain aligned with the Township’s planning documents.
- **Resource availability and financial constraints:** These constraints play a large role in the Township’s ability to provide sustainable levels of service. Therefore, resource constraints play a significant part in determining affordable levels of service.

### 4.4 Current vs Expected Levels of Service

The concept of comparing current vs. expected Levels of Service is very important to the overall Levels of Service analysis process. Current levels of service are essentially the service levels that are being provided by Puslinch at the present time. They can be defined through qualitative descriptions, lifecycle cost related projects, and/or performance measurements. The current year’s budget reflects the cost of providing current levels of service. However, the current years’ budget may or may not include adequate funding to maintain current levels of service over time. Information on current levels of service enables an understanding of the difference between the service levels currently being provided and the service levels expected.



Levels of service are differentiated between:

- **Community Expectations:** Based on what the customer and community expect to receive;
- **Customer Levels of Service:** Measuring community expectations against attributes such as reliability, quality, safety, efficiency, and capacity. Outlines what the customer will receive from a levels of service standpoint; and
- **Technical Levels of Service:** How Puslinch will provide the levels of service, often using operational or technical measures.

#### 4.5 The Process of Developing a Levels of Service Analysis

The process for developing and adopting levels of service measures may be defined as follows:

**Levels of Service analysis can involve:**

1. Developing Levels of Service
  - Customer vs. Technical Levels of Service
  - Current vs. Expected Levels of Service
  - Use of performance measures
2. Consultation, Communication, and Approval
  - Receiving input on the proposed Levels of Service analysis
  - Communicating the Levels of Service analysis to stakeholders
  - Seeking Council approval of Levels of Service analysis
3. Ongoing Review, Updates, and Improvements
  - Updating the Levels of Service Analysis, as needed

#### 4.6 Defining Customer Expectations

The process of defining customer expectations involve any or all the following:

- Staff input;
- Use of industry/local knowledge;
- Existing reports that refer to customer expectations;
- Council input; and/or
- Seeking public input.

Involving Council and/or public in the process of defining customer expectations provides a direct connection between the community and their expectations that may not be identified through other sources. Other sources can involve assumptions and estimations of customer

expectations. Such direct public impact can be determined by way of public meetings and submission of comments from the public.

#### **4.7 Developing Levels of Service**

To be effective in developing levels of service, input should be gathered from and communicated to all interested parties. The services being provided, and the community expectations should be documented based upon input from applicable departments and their staff. Levels of service policies must be created and approved by Council.

#### **4.8 Consultation, Communication, and Approval**

The Levels of Service analysis was completed in 'draft form'. Consultation and Communication was a process that needed to occur to finalize approval of levels of service. From a consultation and communication point of view a public meeting was scheduled to review the draft Levels of Service analysis and to provide feedback. Stakeholders included other staff members, Council, and the public.

The levels of service are approved through the adoption of the Asset Management Plan.

#### **4.9 Ongoing Review, Updates and, Improvements**

The establishment of a Levels of Service analysis is not a one-time occurrence. Rather, it is a constant and evolving process with ongoing consideration to customer expectations, legislative or technological requirements/changes, corporate mission and objectives, and financial opportunities/constraints. The frequency of these reviews should be established and followed by staff as part of the Asset Management Policy.

It is important to note that although seeking public input is important, this input must be compared with financial implications.

Establishing Levels of Service targets is often an iterative process. The process starts with public (community) expectations of service levels and then measuring these expectations against constraints such as financial considerations, resources, and affordability. Only after these constraints have been considered will it be determined whether public expectations can in fact be approved as expected Levels of Service for the Township's asset management process.

#### **4.10 Comparing Current Levels of Service to Expected Levels of Service**

- An identification of existing Levels of Service;
- A determination of expected (or desired) Levels of Service; and
- An assessment of the implication of moving from existing Levels of Service to expected (desired) Levels of Service over a forecast period.

If current Levels of Service equates to what service level is currently provided, expected Levels of Service outlines the overall objective or target Levels of Service to be reached at some point in time. The amount of time it will take to reach expected Levels of Service depends on the assumptions Puslinch makes within the asset management planning process. For example, a municipality could decide to meet expected Levels of Service in a particular area in 10 years. When that scenario is assessed with the Lifecycle Management Strategy and the Financing Strategy and concluded to be too expensive too quickly, the Levels of Service analysis can be updated to include another scenario to reach expected Levels of Service in 15 or 20 years. Alternate scenarios can also represent different levels of service.

## 5.0 Levels of Service Policies

Based on the discussion in Section 4, Levels of Service Policies were developed for all asset classes in the Township of Puslinch.

## 5.1 Bridges and Culverts

Regulation 588/17 Asset Group: **Core Municipal Assets**

Major Asset Class: **Bridges and Culverts**

### **Township Current Level of Service Policy:**

Township Bridges and Culverts are inspected by a Professional Engineer every two years.

### **Lifecycle/Deterioration Rate:**

Expected Life of 50 Years for all Bridge and Culvert Structures.

### **Consequence of Failure items impacted by failure to achieve service level:**

Health and Safety  
Financial  
Legal/Regulatory Compliance  
Environmental

### **UEM Proposed Level of Service Policy:**

To inspect according to the Ontario structure inspection manual and Ontario Regulation 104/97. This inspection shall occur every two years and shall adjust the BCI based on the recommendations of the qualified engineer. The inspection report shall include all repairs that exceed the capital threshold in the capital budget to the schedule recommended by the qualified engineer.

The asset registry must be updated at least once per year to reflect whether the asset was inspected or not. For those not inspected, the BCI will be maintained based upon the requirements of the Ontario Regulation 104/97.

### **Budget Implications**

Bridge and Culvert Inspection Reports, \$15,000 every 2 years.

### **Source Documents**

Ontario Structure Inspection Manual.

O. Reg. 104/97: Standards for Bridges.

## 5.2 Gravel Roads

Regulation 588/17 Asset Group: **Core Municipal Assets**

Major Asset Class: **Gravel Roads**

### Township Current Level of Service Policy:

All Township owned gravel roads are regularly maintained in the form of grading and gravel addition. The Township does not have a policy for when a gravel road should be surface treated including asphalt and or reconstruction.

The Township completes dust control annually. Further applications of dust control are completed as required.

### UEM Proposed Level of Service Policy:

The Service level for gravel roads is the Minimum Maintenance Standard for gravel roads. Repairs will include grading and if required an application of additional granular material. Other alternatives should be considered such as surface treatment including asphalt and/or reconstruction if all of the following criteria are met:

- Full regrading is completed more than 6 times during each of two consecutive non-winter periods. The non-winter period is from May 1st to November 1st; and
- an inspection of the gravel base has been completed by a qualified engineer and confirms that the road base can support a hard-top surface, without additional construction required; and
- the average daily traffic volume exceeds 400 vehicles; and
- the Township has approved funding for the project. For all gravel roads that have been fully graded following the half load season, the PCI will be assumed to be 90.

Note: Regrading is triggered by the following:

- Frost leaving the gravel road.
- Pot holes in the gravel road.
- Rainfall resulting in a significant number of washouts.
- Rutting due to truck traffic.

### Lifecycle/ Deterioration Rate

5 PCI points adjustment per grading.

### Consequence of Failure items impacted by failure to achieve service level:

Health and Safety  
Financial

### Budget Implications

Inspection of Gravel Base \$6,000 per average from intersection to intersection as required.

Gravel Road Surface Treatment Cost \$52,000/km based upon tender document 18-136 provided by the City of Guelph. Pricing excludes costs associated with reconstruction of base and drainage works.

Gravel Road Study: \$25,000

### Source Documents

O. Reg. 239/02: Minimum Maintenance Standards for Municipal Highways

Gravel Road Management, Wyoming Technology Transfer Center Sept 2010

Economics of Upgrading an Aggregate Road, Minnesota Department of Transportation Sept 2005. *Note:* Ontario Service Document not available.

### 5.3 Hard Surface Roads

Regulation 588/17 Asset Group: **Core Municipal Assets**

Major Asset Class: **Hard Surface Roads – 1 Lift, 2 Lift & Surface Treated Roads**

<p><b>Township Current Level of Service Policy:</b></p> <p>The 2013 Asset Management Plan and 2016 Pavement Condition Index (PCI) Report indicated that the Township will strive to maintain all hardtop and non-paved roads in a good to fair condition. For hard surface roads, this will approximately correspond to a PCI value of 65 or greater. The 2013 Asset Management Plan recommended completing a full PCI update every 5 years.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>1 Lift and 2 Lift Roads:</p> <p>Based upon a deterioration rate of 2 PCI points per year the condition decreases from 100 to 60 over 20 years.</p> <p>Surface Treated Roads:</p> <p>Based upon a fixed deterioration rate; Surface Treated Roads should be remediated every 7 years</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>Class 3 roads be rehabilitated or reconstructed at a PCI of 65</p> <p>Class 4 roads be rehabilitated or reconstructed at a PCI of 60</p> <p>Class 5 roads be rehabilitated or reconstructed at a PCI of 60</p> <p>Surface treated roads be rehabilitated every 7 years</p> <p>The pavement condition index should be renewed in 2021 and should be renewed every 5 years thereafter. A traffic volume study should be undertaken every 5 years beginning in 2020.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the condition be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Health and Safety Financial</p> <p><b>Budget Implications</b></p> <p>Traffic Volume Study, \$25,000 every 5 years.</p> <p>Pavement Condition Index Report, including the need to evaluate the condition of existing gravel and surface treated roads, \$24,500 every 5 years</p> <p><b>Source Documents</b></p> <p>2016 Pavement Condition Index Study.</p> <p>2011-2017 Traffic Volume Data.</p>

## 5.4 Storm Water Management Ponds

Regulation 588/17 Asset Group: **Core Municipal Assets**

Major Asset Class: **Storm Water Management Ponds**

<p><b>Township Current Level of Service Policy:</b></p> <p>The Township completes visual, non-documented inspections of storm water management ponds as part of routine road inspections.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>50 years for pond components and 20 years for Hicken bottom.</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>Inspection of storm water management ponds should occur on average four times per year during the first two years of operation, and then at least annually.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the asset be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Environmental Legal/Regulatory Compliance</p>
	<p><b>Budget Implications</b></p> <p>The estimated annual cost of storm water management pond inspections is \$5000.</p>
	<p><b>Source Documents</b></p> <p>Section: 6:3:1 Storm Water Management Planning and Design Manual – Ontario.</p>

## 5.5 Storm Water Management Systems

Regulation 588/17 Asset Group: **Core Municipal Assets**

Major Asset Class: **Storm Water Management Systems**

<p><b>Township Current Level of Service Policy:</b></p> <p>The Township does not annually inspect the storm water management systems or clean the storm water management systems as required to minimize the movement of silts through the outlets. The Township externally contracts the cleaning out of catch basins every two years as required.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>50 year expected life.</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>In reference to catch basin cleaning, as a general rule it should be done annually but the frequency should be adjusted based upon the volume of material removed. Inspection of storm water management systems should occur on average four times per year during the first two years of operation and then at least annually.</p> <p>The asset registry must be updated at least once per year to reflect the current condition, whether the asset be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Environmental Legal/Regulatory Compliance</p>
	<p><b>Budget Implications</b></p> <p>The estimated annual cost of storm water management systems inspections is \$5,000.</p> <p>Catch basin cleaning \$1,200 per km.</p>
	<p><b>Source Documents</b></p> <p>Section 4:2:3 Storm Water Management Planning and Design Manual – Ontario)</p> <p>Section 6:2:3 Storm Water Management and Planning Design Manual – Ontario</p>



## 5.6 Street Trees

Regulation 588/17 Asset Group: **Green Infrastructure**

Major Asset Class: **Street Trees**

### Township Current Level of Service Policy:

The Township completes required maintenance of trees but there is no schedule for inspection.

### Lifecycle/ Deterioration Rate

50 Years Expected Life.

### UEM Proposed Level of Service Policy:

This service level policy includes all trees that have been assumed by the Township through a development agreement. Subsequent to planting a tree the agency or company planting trees shall be responsible with all maintenance including pruning and replacement if necessary. After acceptance by the Township, the tree shall be inspected after 10 years and shall be inspected every 5 years thereafter to determine any required maintenance.

The Township will hire an arborist or potentially the services of the University of Guelph to visually inspect only the trees planted in the subdivisions within the Township.

It is recognized that there are numerous trees on public lands and road rights of way that may impact the safety of the public and maintenance activities. The Township overtime should document the location of such trees, their condition and required maintenance. However, staff shall develop a tree program taking into consideration the above and present such a program to Council.

The asset registry must be updated at least once per year to reflect the current condition whether the condition be inspected or not (those not inspected will be updated based on lifecycle standards).

### Consequence of Failure items impacted by failure to achieve service level:

Environmental

### Budget Implications

Tree Inspections  
\$6,000 on the year of inspection.

### Source Documents

UEM Professional Recommendation.

## 5.7 Buildings and Facilities

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Buildings and Facilities**

<p><b>Township Current Level of Service Policy:</b></p> <p>The Township's last Building Condition Assessment (BCA) report was completed in 2014. The BCA report recommended completion of an Arc Flash Study for all electrical equipment in the Township's facilities. The Township has not completed an Arc Flash Study at this time. The BCA report recommended that as part of a regular operations and maintenance program that all equipment and wire terminations be investigated via infrared scanning every 3 to 5 years. The Township has not completed infrared scanning of all equipment and wire terminations at this time.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>50 Years Expected Life.</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>Buildings and Facilities owned by the Township of Puslinch should be inspected by a qualified structural engineer on a routine basis, however not more than 5 years apart, to determine necessary improvements, repairs or replacements. In addition to the qualified structural engineer an additional qualified engineer shall be retained to address electrical, HVAC and mechanical components. The cost of any needed improvements shall be integrated into the capital plan by way of updates to the asset registry.</p> <p>In addition to the inspections by such qualified engineers' a qualified company or individual shall undertake an Arc-Flash study every 5 years and infrared scanning of all electrical equipment to determine the adequacy of such equipment.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the asset be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Financial</p> <p><b>Budget Implications</b></p> <p>Building Condition Assessment \$25,000.</p> <p>Infra-Red Scanning \$3,000.</p> <p>Arc Flash Study \$7,500.</p> <p><b>Source Documents</b></p> <p>2014 Building Condition Report.</p> <p>Ontario Electrical Safety Code (OESC).</p>

## 5.8 Fire Equipment

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Fire Equipment**

<p><b>Township Current Level of Service Policy:</b></p> <p>The Township completes annual documented inspections of fire equipment in accordance with the related NFPA standards.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>Varies depending on type of equipment.</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>The service level policy for Fire Equipment shall be in accordance with the related NFPA standards: 1911, 1962, 1932, 1855, 1858, 1852, 1851 and 1971.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the condition be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Health and Safety Internal Demand/Operational Financial</p>
	<p><b>Budget Implications</b></p> <p>No significant budget implications.</p>
	<p><b>Source Documents</b></p> <p>National Fire Protection Association Standards.</p>

## 5.9 Fire Reservoirs

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Fire Reservoirs**

<p><b>Township Current Level of Service Policy:</b></p> <p>The Township completes annual documented inspections of fire reservoirs in accordance with Ontario Fire Code 213/07 and NFPA Standard 25 for the inspection and maintenance of all municipally owned fire reservoirs.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>50 Years Expected Life.</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>The Fire Department shall on an annual basis inspect all fire reservoirs owned by the Township in accordance with the Ontario Fire Code 213/07 and NFPA Standard 25 to ensure that such fire reservoirs can be easily accessible and that any components above the roof of the reservoir are in good condition. Such reservoirs shall not be obstructed by vegetation of any form such as plants, bushes and trees.</p> <p>The Fire Department shall inspect the reservoirs every 5 years to ensure the integrity of the reservoir.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the asset be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Internal Demand/Operational Financial</p>
	<p><b>Budget Implications</b></p> <p>No significant budget implications.</p>
	<p><b>Source Documents</b></p> <p>UEM Professional Recommendation.</p>

## 5.10 Fleet – Works, Parks, Building and Fire Department Vehicles & Equipment

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Fleet – Various Departments**

Township Current Level of Service Policy:	Lifecycle/ Deterioration Rate
<p>All Commercial Motor Vehicles owned by the Township require an Annual Inspection Certificate as required by the Ministry of Transportation (MTO).</p> <p><b>Fire and Rescue Services Fleet:</b></p> <ul style="list-style-type: none"> <li>Visual non-documented 360-degree inspection prior to the fleet leaving the Fire Station.</li> <li>Weekly documented MTO Schedule 1 Inspection completed for commercial motor vehicles.</li> <li>Fire and Rescue Services fleet require annual testing of pumps and aerial devices (i.e. ladders) in accordance with NFPA Standard 1911.</li> <li>Non-destructive testing of aerial devices (i.e. ladders) is required every 5 years in accordance with NFPA Standard 1911.</li> </ul> <p><b>Public Works Fleet:</b></p> <ul style="list-style-type: none"> <li>Daily documented MTO Schedule 1 Inspection completed for commercial motor vehicles.</li> </ul> <p><b>Non-commercial motor vehicles (i.e. Pick-up trucks):</b></p> <ul style="list-style-type: none"> <li>Daily documented inspection logbook completed for all non-commercial motor vehicles.</li> </ul>	<p>Varies from 7-25 years by vehicle type.</p>
	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Internal Demand/Operational Financial</p>
	<p><b>Budget Implications</b></p> <p>No significant budget implications.</p>
	<p><b>Source Documents</b></p> <p>Fleet Management Policy: Puslinch</p>
UEM Proposed Level of Service Policy:	
<p>Fleet shall be maintained in conformance with licensing practices of the Province of Ontario including the Ministry of Transportation and shall include a daily visual inspection of any licensed vehicle before the vehicle leaves the fleet storage facility of the Township. Fleet of the Township shall be determined for replacement based on the criteria noted in the Fleet Management Policy. Inspection of fire and rescue services vehicles shall also be based on relevant NFPA standards.</p> <p>Further to the proposed service level policy described above. It is recommended by UEM that the Township retain their current service level policy.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the asset be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	

## 5.11 Parks and Recreation

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Parks and Recreation**

### Township Current Level of Service Policy:

The Township completes visual, non-documented weekly inspections of parks while performing maintenance activities.

The Township completes monthly documented playground inspections.

### UEM Proposed Level of Service Policy:

All Parks and Recreation facilities including but not restricted to baseball diamonds, baseball diamond lights, soccer fields, tennis courts and trails available for public use shall be inspected as frost leaves the ground in late winter or early spring to ensure the safety of such Parks and Recreation assets. Included are both internal and external fencing, hard surfaces, bleachers and any other ancillary assets located within Parks and Recreation areas. Upon identification of any surface deficiencies that may endanger the public repairs shall be undertaken prior to such infrastructure being deemed available for public use.

Subsequent inspections should occur monthly until Parks and Recreation assets are closed prior to the winter season.

For assets, an example being “Trails” that may be open for public use throughout the winter inspections shall occur following winter storms to ensure the safety of the public.

The asset registry must be updated at least once per year to reflect the current condition whether the asset is inspected or not (those not inspected will be updated based on lifecycle standards).

### Lifecycle/ Deterioration Rate

Varies from 15-40 years depending on asset type.

### Consequence of Failure items impacted by failure to achieve service level:

Financial

### Budget Implications

No significant budget implications.

### Source Documents

UEM Professional Recommendation.

## 5.12 Regulatory Signs/Warning Signs

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Regulatory Signs/Warning Signs**

### Township Current Level of Service Policy:

The Township externally contracts the completion of retro reflectivity inspections of regulatory/warning signs annually.

### Lifecycle/ Deterioration Rate

15 years expected life for sign and post.

### UEM Proposed Level of Service Policy:

The Township shall retain a qualified company/individual that shall test the retro reflectivity of each sign once per calendar year with each inspection taking place no more than 16 months from the previous inspection. In conformance with the retro reflectivity specified in the Ontario Traffic Manual and when not meeting such requirements the Township shall replace the sign. Further, the Township shall conform with the requirement for class 3,4 and 5 highways as per the Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways.

The standard for the frequency of inspecting regulatory signs or warning signs to verify that they meet the retro-reflectivity requirements of the Ontario Traffic Manual is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 8; O. Reg. 47/13, s. 12 (1); O. Reg. 366/18, s. 13.

Class of Highway	Time
1	7 days
2	14 days
3	21 days
4	30 days
5	30 days

If a regulatory sign or warning sign is illegible, improperly oriented, obscured or missing, the standard is to repair or replace the sign within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 23/10, s. 8; O. Reg. 366/18, s. 13.

### Consequence of Failure items impacted by failure to achieve service level:

Health and Safety  
Internal  
Demand/Operational  
Financial  
Legal/Regulatory  
Compliance

### Budget Implications

No significant budget implications.

### Source Documents

Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways

### 5.13 Sidewalks

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Sidewalks**

<p><b>Township Current Level of Service Policy:</b></p> <p>The Township completes annual documented sidewalk inspections.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>20 year expected life.</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>In accordance with Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways, the standard for the frequency of inspecting sidewalks is once per year with each inspection occurring no more than 16 months from the previous inspection. Any discontinuity that exceeds 2cm shall be treated or repaired within 14 days of the inspection.</p> <p>Under winter conditions sidewalks must be inspected within 48 hours of the end of snow accumulation to ensure that there is less than 8cm of snow accumulated on the sidewalk and to reduce to the level of 8cm within the same 48-hour period. The same time period of 48 hours shall apply when ice forms on a sidewalk and shall require either removal or a treatment such as sand, salt or a combination of both to the sidewalk within the same 48-hour period.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the asset be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Financial</p>
	<p><b>Budget Implications</b></p> <p>Sidewalk Winter Maintenance \$20,000 annually using staff or contracted clearing.</p>
	<p><b>Source Documents</b></p> <p>Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways.</p>



## 5.14 Street lights and Poles

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Street Lights and Poles**

<p><b>Township Current Level of Service Policy:</b></p> <p>The Township completes visual, non-documented yearly inspections to note any light deficiencies.</p>	<p><b>Lifecycle/ Deterioration Rate</b></p> <p>30 year expected life for poles and 20 years for fixtures.</p>
<p><b>UEM Proposed Level of Service Policy:</b></p> <p>All luminaires shall be inspected once per calendar year with each inspection taking place not more than 16 months from the last inspection. The standard of repair should be as outlined in Section 10 of Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways. The same standard of inspection shall apply to luminaire arms and poles and supporting luminaires that are owned by the Township.</p> <p>The technology with streetlighting is evolutionary at the present time in Puslinch. The Township is in the process of modifying their streetlighting to LED fixtures while maintaining existing fixtures and poles. After the completion of the conversion to LED fixtures, the policy should be to replace fixtures in a cyclical manner every 20 years. Poles should be inspected by a qualified company/individual every 5 years to determine the need to replace based on a pole life of 30 years.</p> <p>The asset registry must be updated at least once per year to reflect the current condition whether the asset be inspected or not (those not inspected will be updated based on lifecycle standards).</p>	<p><b>Consequence of Failure items impacted by failure to achieve service level:</b></p> <p>Health and Safety</p> <p><b>Budget Implications</b></p> <p>\$20,000 for testing every 5 years.</p> <p><b>Source Documents</b></p> <p>Section 10, Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways.</p>

### 5.15 Sewage Assets

Regulation 588/17 Asset Group: **Municipal Assets** Major Asset Class: **Sewage Collection Systems, Sewage Pumping Stations, Sewage Treatment Plants**

<b>Township Current Level of Service Policy:</b>	<b>Lifecycle/ Deterioration Rate</b>
<b>UEM Proposed Level of Service Policy:</b>	<b>Consequence of Failure items impacted by failure to achieve service level:</b>
	<b>Budget Implications</b>
	<b>Source Documents</b>

## 5.16 Water Assets

Regulation 588/17 Asset Group: **Municipal Assets**

Major Asset Class: **Water Treatment Plants, Water Pumping Stations, Water Storage Facilities, Raw Water Supply, Water Distribution Mains**

<b>Township Current Level of Service Policy:</b>	<b>Lifecycle/ Deterioration Rate</b>
<b>UEM Proposed Level of Service Policy:</b>	<b>Consequence of Failure items impacted by failure to achieve service level:</b>
	<b>Budget Implications</b>
	<b>Source Documents</b>

## 5.17 Parklands

Regulation 588/17 Asset Group: **Green Infrastructure**

Major Asset Class: **Parklands**

<b>Township Current Level of Service Policy:</b>	<b>Lifecycle/ Deterioration Rate</b>
<b>UEM Proposed Level of Service Policy:</b>	<b>Consequence of Failure items impacted by failure to achieve service level:</b>
	<b>Budget Implications</b>
	<b>Source Documents</b>

## 6.0 The Asset Registry

Through multiple meetings with staff of Puslinch, UEM developed an Asset Registry. The Township was able to provide knowledge of the physical components of many assets in the asset registry by providing reports and documentation. The asset registry includes description, location, size, material type, and conditions of all known assets. As the project evolved, UEM completed the financial components of the asset registry. The asset registry financial components consist of unit cost, remediation cost and a total replacement cost for all asset components.

Regulation 588/17 Asset Group	Asset Registry Asset Group
Core Municipal Infrastructure	Bridges
	Culverts
	Asphalt Roads 1 Lift
	Asphalt Roads 2 Lift
	Asphalt Roads Surface Treated
	Storm Water Management Ponds
	Storm Sewers
	Gravel Roads
Municipal Infrastructure Assets	Buildings and Facilities
	Fire Equipment
	Fire Reservoirs
	Parks and Recreation
	Sidewalks
	Regulatory/Warning Signs
	Street Lights
	Fire Licensed Vehicles
	Fire Vehicle Tires
	Works Unlicensed Vehicles
	Works Licensed Vehicles
	Parks and Recreation Unlicensed vehicles
	Building Department licensed vehicles
Green Infrastructure	Street Trees

6.0 - 1 Asset Class Hierarchy

This asset registry was developed through the incorporation of all departments input data. Because of the all-inclusive design of the asset registry the Township of Puslinch may assume that the data in this report is the most current. Further, updating is highly recommended to

begin first from this asset registry and amendments should occur through a qualified QA/QC process of the existing assets. The copy of the asset registry may be found in Appendix 20.5.

## 6.1 Types of Asset Attributes

This asset registry has been developed with certain asset attributes that allow for clear identification, quantification, description, and evaluation of each asset in the registry. UEM has collected attribute types that will allow the Township to do certain levels of reporting. These attribute types are at a higher level and can be best understood through a review of the table that follows. The “Yes” and “No” columns indicate if the Asset Registry has the Parameter included in its architecture.

Parameter	Yes	No	Description of use
Asset Identifiers, Location, and Descriptors	✓		To identify, describe and locate the asset. Will also define asset in terms of position in an asset hierarchy.
Detailed Technical Data	✓		To individualize and quantify each asset from similar assets.
Valuation Data	✓		Data that allows the organization to assess costs of the assets (both historical and current) and record/track amortization.
Maintenance Data		✓	Data that identifies the work to be completed and work completed against an asset.
Condition Data	✓		Data used to assess asset risk and determine the actual remaining useful lives of assets.
Predictive Data		✓	Data used to allow future behaviour of assets to be predicted. These would include deterioration curves and treatment effect details.
Performance Data		✓	Data recording demand and capacity performance. Unplanned maintenance activity is recorded against asset including cause and costs. Planned maintenance procedures adopted for critical assets.
Risk Data	✓		Data used to analyze the risk of an asset’s failure and determine the risk if the asset were to fail.
Lifecycle data	✓		Data used to plan future costs associated with operations, maintenance, creation, renewal, disposal of assets. The cost of any strategy should also be determined.
Optimized Lifecycle Data		✓	Data used to optimize analysis of works considering the following factors: risk, maintenance, operations, life extension, age and condition of the asset, asset decay, treatment options, and cost.

6.0 - 2 Types of Asset Attributes

## 6.2 Asset Attributes: Asset Identifiers, Location, and Descriptors

UEM has prepared the asset registry with the ability for each asset to be located through a strict asset hierarchy. This hierarchy ensures that there is no duplication of any asset and or carryover of such asset into different locations. This hierarchy was devised first through qualifying each asset class in its appropriate regulation group. Secondly, each asset was loaded into asset classes. This was done by grouping assets with like characteristics or management structures.

## 6.3 Detailed Technical Data

The level of detail for each asset class has been individually assessed through meetings with department heads of Puslinch.

## 6.4 Condition Data

UEM through consultation with staff has generated condition data for the majority of assets in the asset registry. For the majority of the asset classes in Puslinch condition data classification was established through reports/data prepared by consultants.

In addition to these reports, staff consultation was utilized to amend condition data. This is inclusive to all assets for which a report/dataset was not provided and or concern was raised from staff or UEM regarding the quality of data provided. The methodology for establishing condition data is summarized in the following table:

Asset Class	Condition Rating Methodology
Bridges and Culverts	Staff provided report
Hard Surface Roads	Staff provided report
Gravel Roads	Consultation with staff
Storm Water Management Ponds	Staff provided report
Storm Sewers	Consultation with staff
Buildings and Facilities	Staff provided report
Fire Reservoirs	Staff provided data
Parks and Recreation	UEM visual condition assessment
Fire Vehicles	Consultation with staff
Fire Equipment	Staff provided data
Street Trees	Consultation with staff
Sidewalks	UEM visual condition assessment
Works, Building Department and Parks and Recreation Vehicles	Consultation with staff
Regulatory/Warning Signs	Consultation with staff
Street Lights	UEM visual condition assessment

6.0 - 3 Asset Condition Data Rating Methodology

## 6.5 Assets with No Condition Data

For some assets no condition data was available to be entered into the asset registry. Thus, for this asset management plan each asset without a condition rating would be assumed to deteriorate at a linear rate from its point of acquisition. For these assets only, the data attributes, acquisition date and life expectancy were used to classify their condition. In other words, these condition ratings would be a function of their remaining serviceable life.

## 6.6 Condition Data: Standardization

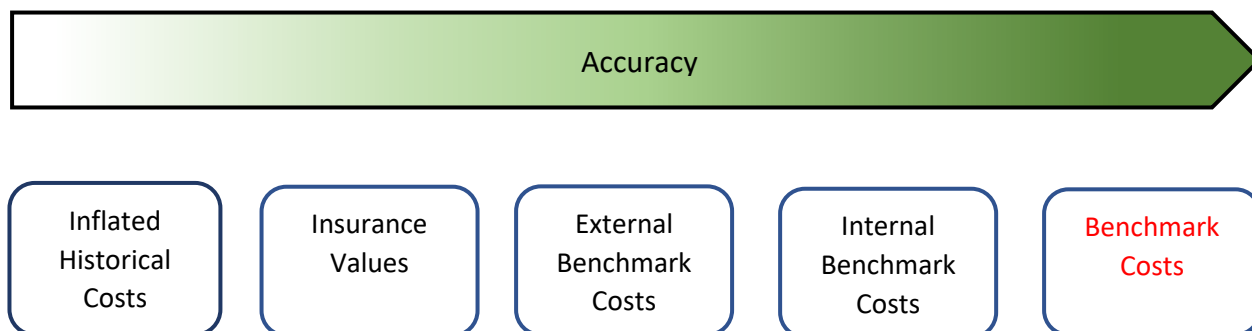
To standardize all condition data UEM employed a 1-5 rating scale. This scale ensured that assets could be incorporated into the same data model and analyzed without assets being over or under-prioritized. A sample of this standardization process has been showcased in the following table:

Asset Class	Condition Rating Type	Condition Rating	Condition Index	Condition Index Methodology
Bridges & Culverts	BCI	70	3	Good: BCI Range 70 -100 Fair: BCI Range 60 -70 Poor: BCI Less than 60
Roads	PCI	99	5	UEM standardized condition for Roads where a PCI of 100 converts to 5 for "Excellent", 90 converts to a 4 for "Good", 80 converts to a 3 for "Fair", 70 converts to a 2 for "Poor", and 60 or fewer converts to a 1 for "Critical"
Regulatory /Warning Signs	Condition Rating	5	5	Provided datasets from the Township were already standardized - no intervention required.
Fleet	Fleet Kilometres	55,000	3	UEM adhered to the Township's Current Fleet Management Policy when standardizing each vehicle in the fleet. Each vehicle type has their own metric for determining condition. Further clarification of methods, procedures can be identified more clearly in the Asset Registry.
Fire Equipment	Condition Rating	5	5	Provided datasets from the Township were already standardized - no intervention required.
Park and Recreation	Visual Condition Rating	2	2	UEM through a visual inspection of park and recreation assets devised a condition rating based on the total assessment of each part of the park and recreation asset. In some cases, low condition ratings were given to asset due to the lack of adherence to regulations or codes.



## 6.7 Valuation Data: Remediation Costs

UEM has employed Benchmark Costs to asset class remediation valuation where possible. This valuation methodology is consistent for all assets in the asset registry and may be considered for future use so long as costs are inflated at an appropriate rate.



6.0 - 5 Valuation Methodology

## 6.8 Valuation Data: Replacement Costs

UEM has employed Benchmark Costs to asset class replacement valuation where possible. The source of this valuation data is external or Reproduction Costs. This valuation methodology is consistent for:

- Hard Surface Roads
- Gravel Roads
- Surface Treated Roads
- Parks and Recreation
- Sidewalks
- Regulatory/Warning Signs
- Bridges and Culverts
- All Fleet Assets
- Trees
- Fire Equipment
- Fire Reservoirs
- Regulatory/Warning Signs

Benchmark Costs were not applied to Storm Sewers, Storm Water Management Ponds, and Buildings and Facilities. UEM relied upon historical costs, external research and internal consultation with staff of Puslinch to value these assets.

A summary of the specific methodology for remediation cost and/or replacement costs has been summarized in greater detail in the summary page for each asset class in Section 7.0.

## 6.9 Data Confidence

To summarize the Asset Registry and its ability to effectively manage and deploy core financing reports such as PSAB 3150, FIR Reporting, GIS Mapping, and Capital Plans, UEM developed a scorecard for the data quality of each asset class. The score summarizes in bullet form the strengths of each asset class as well the weaknesses. The methodologies used to create a data confidence score are summarized in Figure 6.

The Data Confidence Score devised from Figure 7 Table will help the Township identify which assets need more attention.

### 6.10 Data Confidence Trend




UEM devised a Data Confidence Trend for each asset class in the asset registry. The methodology for formulating Data Confidence is the balance between the positive and negative attributes of each asset class data structure.


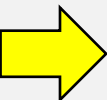

To clarify, the Data Confidence Trend is a balance between multiple factors which in the summary indicates the current trend of data quality that has been collected by the Township over time. Using multiple sources of confidence (as showcased in the below stated table 6.0 - 6) a rating methodology of data confidence was devised. Where a 100% confidence means the data can be taken essentially as fact whereas 0% confidence means that the data should be verified in the future.





The (%) for valuation is the confidence of the financial data that has been loaded into the asset registry. The reliability of the summarized trends in data confidence is exclusively related to UEMs understanding of the Township's current policies and practices, data sources and or verification from staff.





Example Factors	High Confidence	Moderate Confidence	Low Confidence
When was the date of data collection?	Data is up to date	There needs to be changes to the data since it's been collected	There are many changes required since it's been collected
What is the relative completeness of the Dataset?	The Data is fully complete and present for the data set	The Data is partially complete and present for the data set	The Data is not complete and present for the data set
What is the source of the data source?	Qualified Consultant/Firm	Unconfirmed Sources	Personal Accounts, Undocumented Sources
Is there Staff confirmation of the reliability of the data?	Full Confirmation across departments	Partial Confirmation to some Departments	No Confirmation from Departments

6.0 - 6 Condition Rating Standardization

Program Area	Inventory and Condition	Valuation	Data Confidence Trend	Comments
<b>Bridges</b>	<b>100%</b>	<b>75%</b>		<ul style="list-style-type: none"> <li>The Inventory data is extensive as it relates to bridge and culvert structures.</li> <li>In 2017 a Bridge and Culvert Inspection was completed which gave a detailed summary of the recommended capital expenditure of the Bridge and Culvert structures over 10 years.</li> <li>The Value of each crossing has been compiled from the Bridge and Culvert Inspection report.</li> </ul>
<b>Culverts</b>				
<b>Hard Surface Roads</b>	<b>75%</b>	<b>85%</b>		<ul style="list-style-type: none"> <li>The Inventory data is extensive and has been compiled from the 2016 Road Condition Assessment with further adjustments being completed through consultation with Staff.</li> <li>The Township does not currently follow lifecycle event schedule set out by the condition data.</li> <li>The Valuation of each road segment has been formulated from consultation with staff.</li> </ul>
<b>Gravel Roads</b>	<b>25%</b>	<b>85%</b>		<ul style="list-style-type: none"> <li>The Inventory data has been completed through consultation with staff.</li> <li>The Township currently does not have a formal policy for documenting gravel road condition.</li> <li>The Valuation of each road segment has been formulated from consultation with staff.</li> </ul>

Program Area	Inventory and Condition	Valuation	Data Confidence Trend	Comments
<b>Regulatory/ Warning Signs</b>	<b>100%</b>	<b>100%</b>		<ul style="list-style-type: none"> <li>The inventory data has been delivered by staff in multiple data formats with extensive detail on the condition and location of each sign.</li> <li>The valuation of each sign has been formulated with consultation from staff.</li> </ul>
<b>Sidewalks</b>	<b>100%</b>	<b>75%</b>		<ul style="list-style-type: none"> <li>Inspection data was not adequate in creating condition profiles for each sidewalk.</li> <li>The inventory and condition data for sidewalks has been compiled through a visual assessment in summer of 2018 by UEM staff. Discontinuity in the sidewalk surface was not verified by UEM staff.</li> <li>Further, the valuation of each sidewalk has been formulated through professional recommendations from UEM staff.</li> </ul>
<b>Street Lights</b>	<b>25%</b>	<b>75%</b>		<ul style="list-style-type: none"> <li>The inventory data for street light fixtures is evolutionary as the Township upgrades to LEDs. The pole locations have been compiled from delivered datasets from the Township.</li> <li>Pole condition has been developed through random sample assessment by UEM staff.</li> <li>The valuation of each street light pole has been developed through recommendations by UEM staff.</li> </ul>

Program Area	Inventory and Condition	Valuation	Data Confidence Trend	Comments
<b>Storm Sewers</b>	<b>25%</b>	<b>50%</b>		<ul style="list-style-type: none"> <li>The inventory and condition data for Storm Sewers have been acquired through consultation with Puslinch Staff.</li> <li>There is no condition for any storm sewer asset in the Township of Puslinch.</li> <li>The valuation of each Storm Sewer segment has been developed through recommendations by UEM staff.</li> </ul>
<b>Buildings and Facilities</b>	<b>100%</b>	<b>85%</b>		<ul style="list-style-type: none"> <li>The inventory data has been compiled from the 2014 Building Inspection report.</li> <li>The valuation of each building component was sourced by UEM staff whereas repair/remediation activities have been sourced from the 2014 Buildings Inspection report.</li> </ul>
<b>Fire Equipment</b>	<b>100%</b>	<b>100%</b>		<ul style="list-style-type: none"> <li>The inventory data is extensive and was delivered by Puslinch staff.</li> <li>The valuation of each asset was delivered by Puslinch staff.</li> </ul>
<b>Fire Reservoirs</b>	<b>85%</b>	<b>100%</b>		<ul style="list-style-type: none"> <li>The inventory data is extensive and was delivered by Puslinch staff. The condition for each Fire Reservoir has been sourced from consultation with Puslinch staff.</li> <li>The valuation of each Fire Reservoir was developed through recommendations by UEM staff.</li> </ul>

Program Area	Inventory and Condition	Valuation	Data Confidence Trend	Comments
<b>Storm Water Management Ponds</b>	95%	75%		<ul style="list-style-type: none"> <li>The inventory data has been compiled from the 2017 Storm Water Management Pond Inspection Report.</li> <li>The valuation of each asset was delivered by Puslinch staff. The valuation of each Storm Water Management Pond has been developed through recommendations by UEM staff.</li> </ul>
<b>Parks and Recreation</b>	95%	75%		<ul style="list-style-type: none"> <li>The inventory and condition data for Parks and Recreation was compiled through a visual assessment in summer of 2018 by UEM staff.</li> <li>The valuation of each Park and Recreation asset was delivered by Puslinch staff and through UEM's recommendations.</li> </ul>
<b>All Fleet Assets</b>	100%	100%		<ul style="list-style-type: none"> <li>The inventory data was compiled by Puslinch staff and from the fleet management analysis report.</li> <li>The condition for each vehicle was compiled from the fleet management analysis report with help by Puslinch staff.</li> <li>The valuation of each vehicle was compiled from the fleet management analysis report.</li> </ul>
<b>Street Trees</b>	50%	100%		<ul style="list-style-type: none"> <li>The inventory data was delivered by Puslinch staff. This inventory does not reflect all the known Street Tree assets in the Township of Puslinch.</li> <li>The condition of each asset is unknown.</li> <li>The valuation of each tree asset has been delivered by Puslinch staff.</li> </ul>

6.0 - 7 Data Trend Summary Table: Puslinch Asset Classes

## 6.11 Asset Registry Data Quality Score



### Data Quality Score Summary:

The Asset Registry has a very good data foundation but, in some areas, requires improvement. For that reason, the data quality score for the asset registry is a B. To improve the quality data score UEM recommends taking certain actions in the Areas of Improvement as follows.

### Areas of Improvement:

**Gravel Roads:** As per the proposed service level policy all gravel roads have been assumed to have a PCI of 90. This assumption is based strictly on staff understanding of the gravel surface from a maintenance perspective. Moving forward, grading activities should be stored in a tabular format and used as a basis of condition tracking. This recommendation is consistent with the recommendations section of this report.

**Sidewalks:** Sidewalk inspections should be more adequate, with more technical details to create a condition score that is akin to the proposed service level policy. Such technical details should include a report of any discontinuity in the sidewalk surface and a condition rating that ranges from 1-5.

**Street lights:** A full condition assessment of each pole should be conducted in order to adequately assess the possible capital needs in the future.

**Street Trees:** An identification of each Street Tree and input into the Asset Registry with species type, location and lifecycle attributes should be undertaken as a future activity.

**Storm Sewers:** Verification of location and full condition assessment of each storm sewer catch basin and outlets.

## 7.0 State of The Infrastructure

This section of the Asset Management Plan documents the current condition of assets using the best available information regarding physical condition, age, and financial data. Replacement values were assigned to each asset based on current unit pricing generated from research for each specific asset class. Information sources, assumptions and asset-specific information are discussed in subsequent sections, with an overview provided in the section below.

### 7.1 Total Asset Replacement Cost

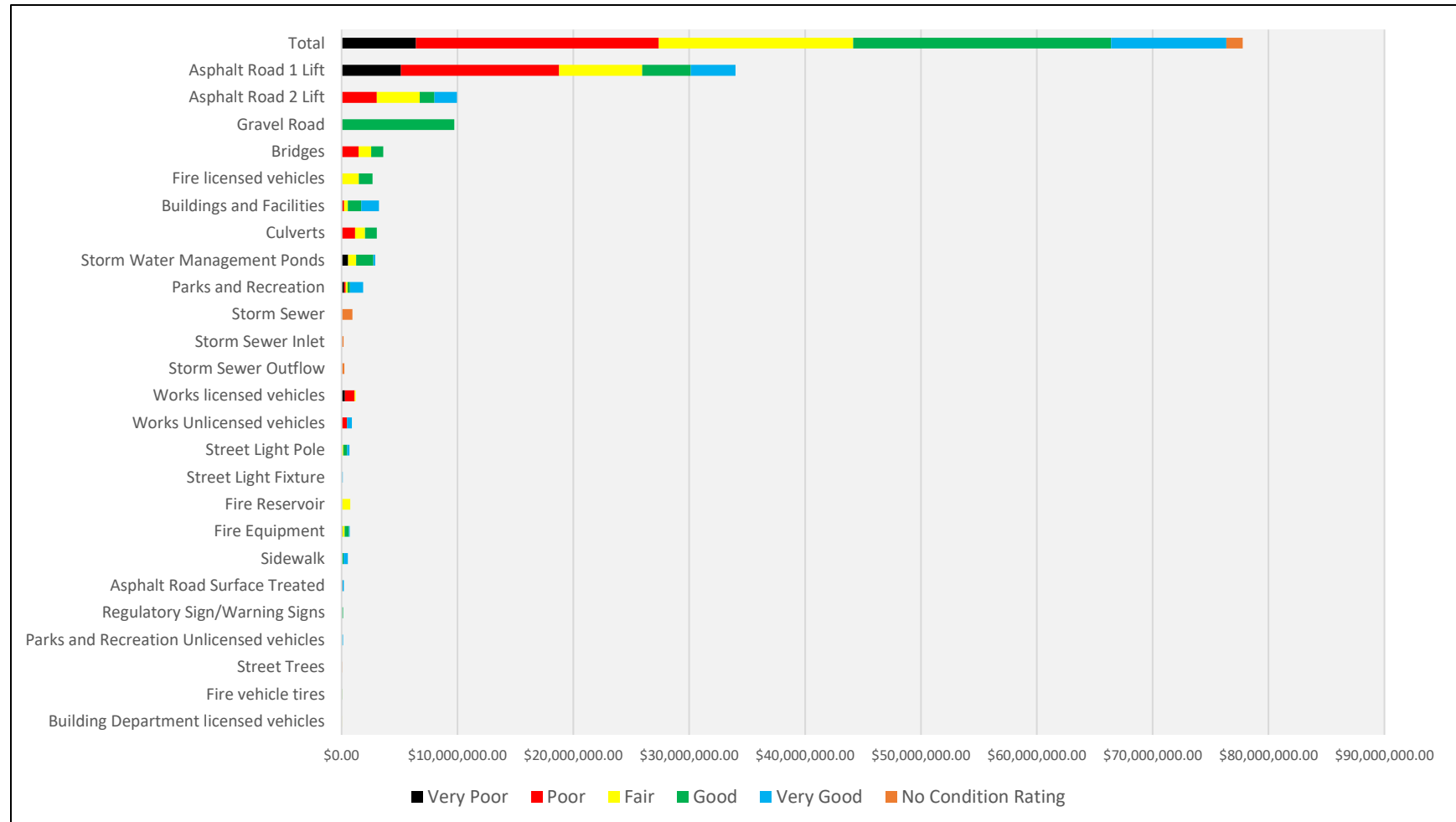
UEM through data provided by the Township has estimated that the total asset replacement cost for all assets owned by the Township is \$77.6 million dollars as of 2018.

### 7.2 Lifecycle Management Methodology

To plan and project for future expenditures, an asset can either be scheduled to be replaced based on a condition assessment or assumed to reach a critical state of repair at a certain point in time. This point in time is calculated based on its construction year and expected life. The asset registry has incorporated both types of lifecycle management, which when analyzed with no recognition of the asset classes results in skewed results. For this reason, each asset class was analyzed independently to give a realistic picture of the lifecycle management strategy, potential capital expenditures, and risk.



### 7.3 Total Asset Replacement Cost by Asset Class



As stated in section 6 of this report, the replacement cost calculation for each asset has been determined using the best-known information available. Once each asset's replacement cost were calculated each asset was summarized to it's appropriate asset class grouping to acquire the total replacement cost for the asset class. The result of this analytics is the above figure.

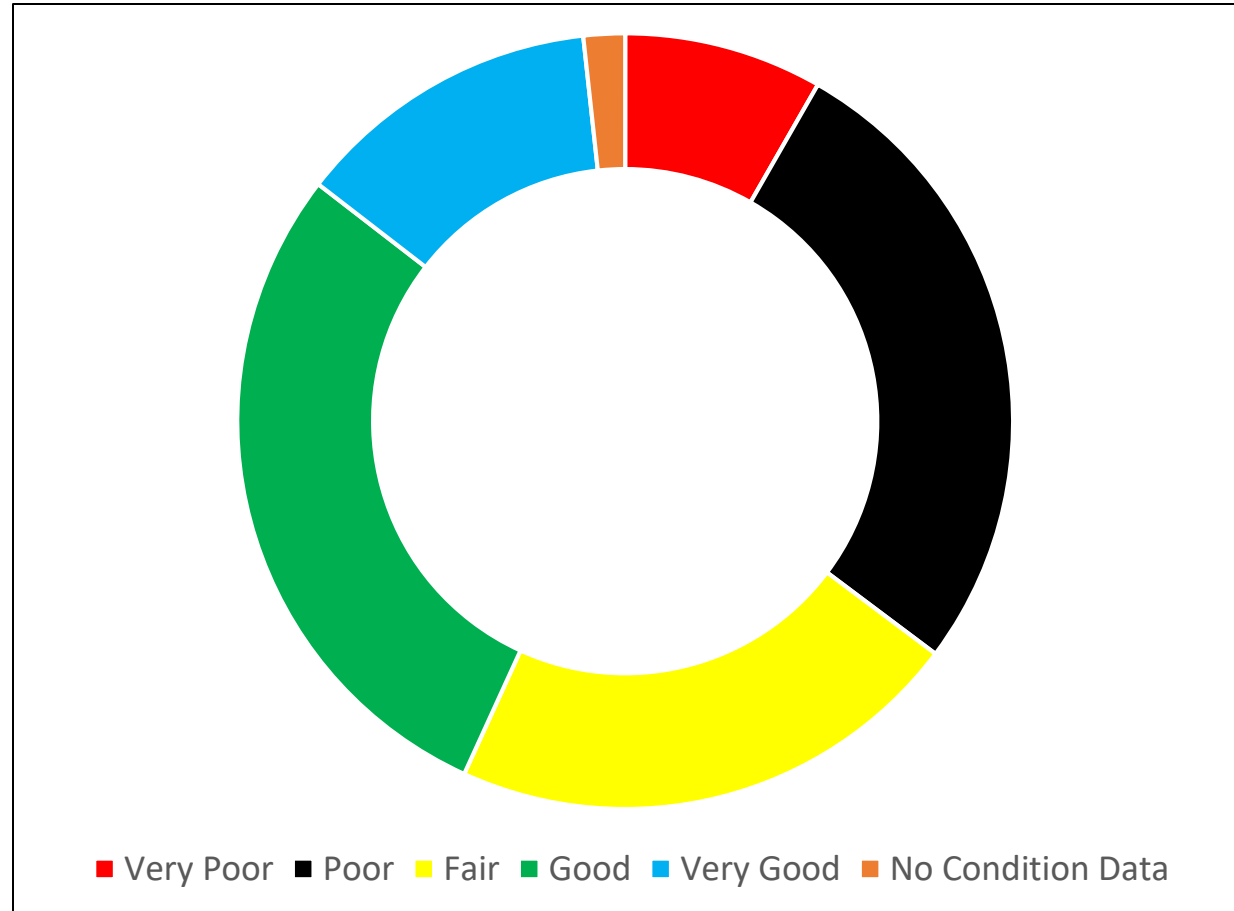
7.0 - 1 Total Asset Replacement Cost by Asset Class

#### 7.4 Sum-Total: Puslinch Assets Classes Asset Rating Categories

The total asset replacement cost is illustrated in Figure 2. This pie graph showcases the financial impacts that each rating category may have on capital planning and budgeting.

UEM recognizes that assets are only scheduled for replacement/remediation when they reach a critical state based on lifecycle or on a condition assessment. A key component of this asset management plan is incorporating the lifecycle and expected replacements into the 10-year capital plan.

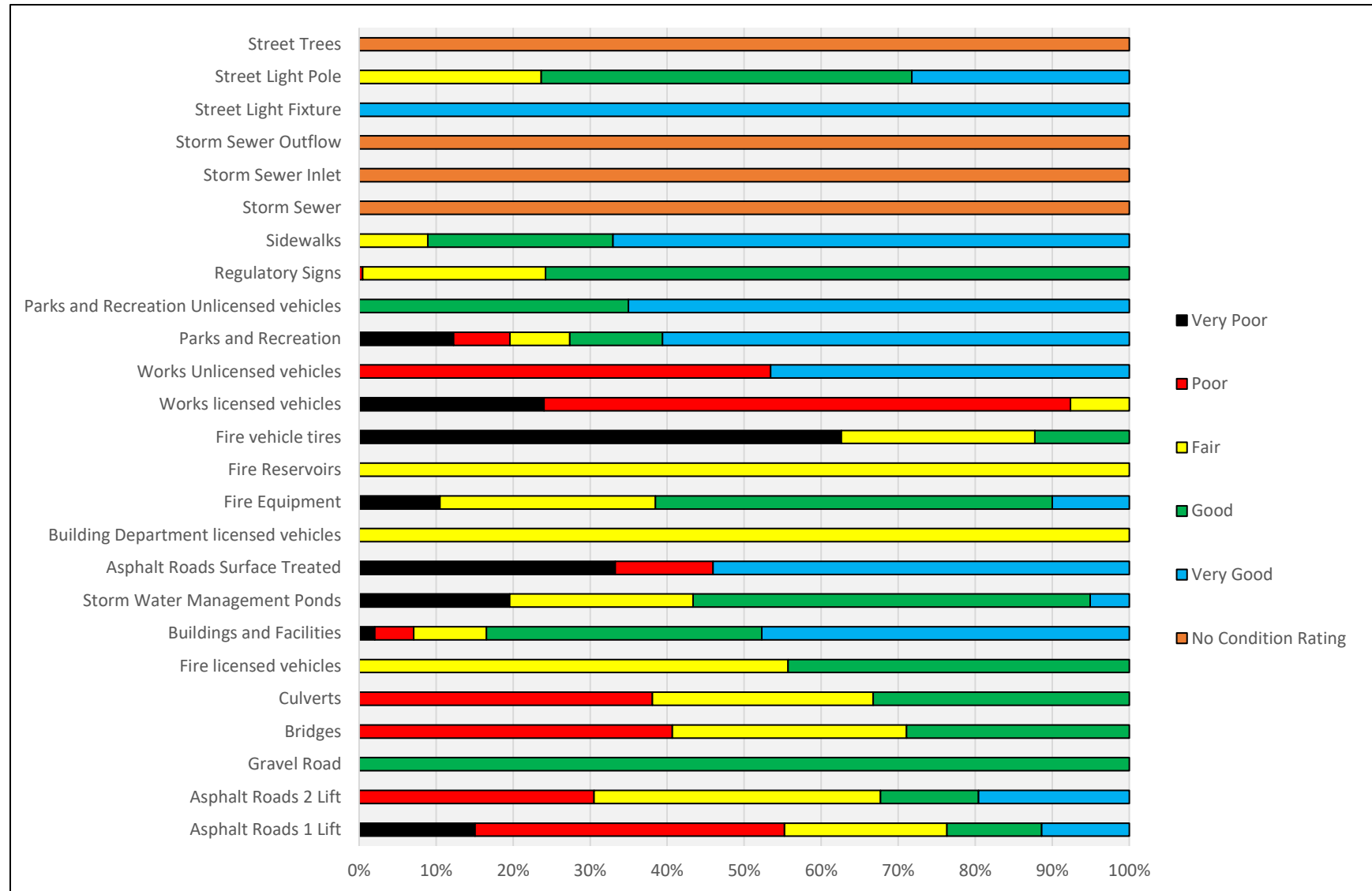
Figure 2 is intended to illustrate, at the highest level, the state of the infrastructure as it relates to the condition ratings of all asset classes.



7.0 - 2 Total Asset Replacement Cost by Rating Category

No Condition Rating	Very Poor	Poor	Fair	Good	Very Good	Total
\$1.3 Million	\$6.4 Million	\$20.9 Million	\$16.7 Million	\$22.2 Million	\$9.9 Million	\$77.6 Million

## 7.5 Asset Condition Rating: Puslinch Asset Classes



7.0 - 3 Asset Rating Distribution All Asset Classes

## 7.6 Bridges

### Lifecycle Management Methodology:

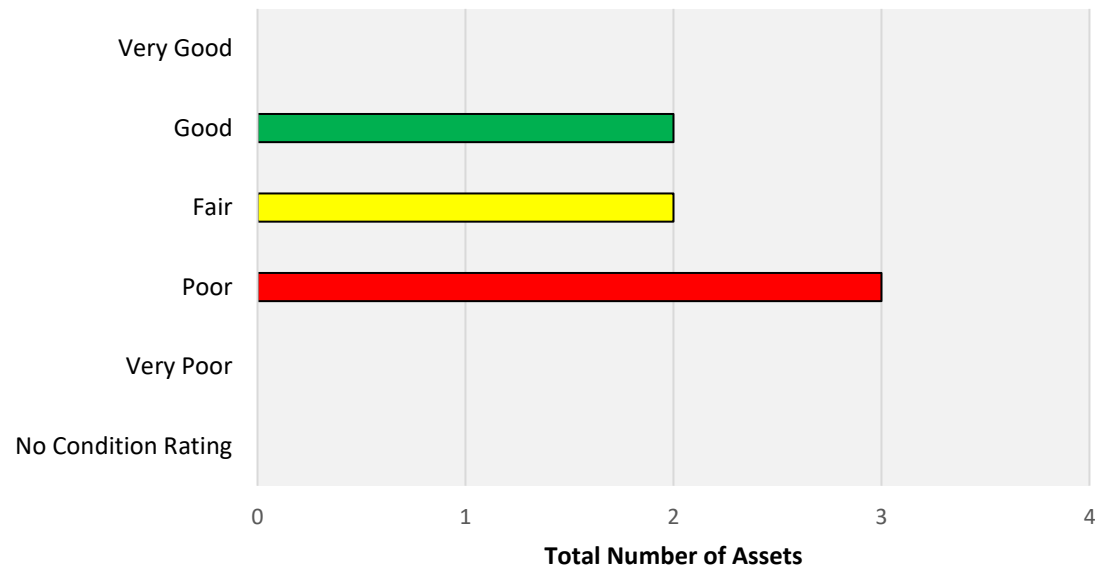
Bridge structures in Puslinch were inspected in 2017 by qualified engineers in order to describe their condition. Bridges based on their BCI on average are in “fair” condition. Though the condition of some bridges is “Poor” the lifecycle management methodology (extracted from the Bridge and Culvert Inspection report) resulted in repairs for a few identified bridge structures. Thus, the BCI was not the leading factor when determining lifecycle activities for Bridges. However, the BCI does infer upon probable future expenditures should further deterioration occur on the structure.

### Replacement Cost Calculation:

Bridge Replacement cost has been sourced from the 2017 bridge and culvert inspection report. For all assets in this asset registry \$6,500 per square metre was used as a baseline replacement cost.

### Source Documentation:

2017 Bridge and Culvert Inspection Summary Report. *August 2017*



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$1,460,680.00	\$1,092,650.00	\$1,039,090.00	\$-	\$3,592,420.00

## 7.7 Culverts

### Lifecycle Management Methodology:

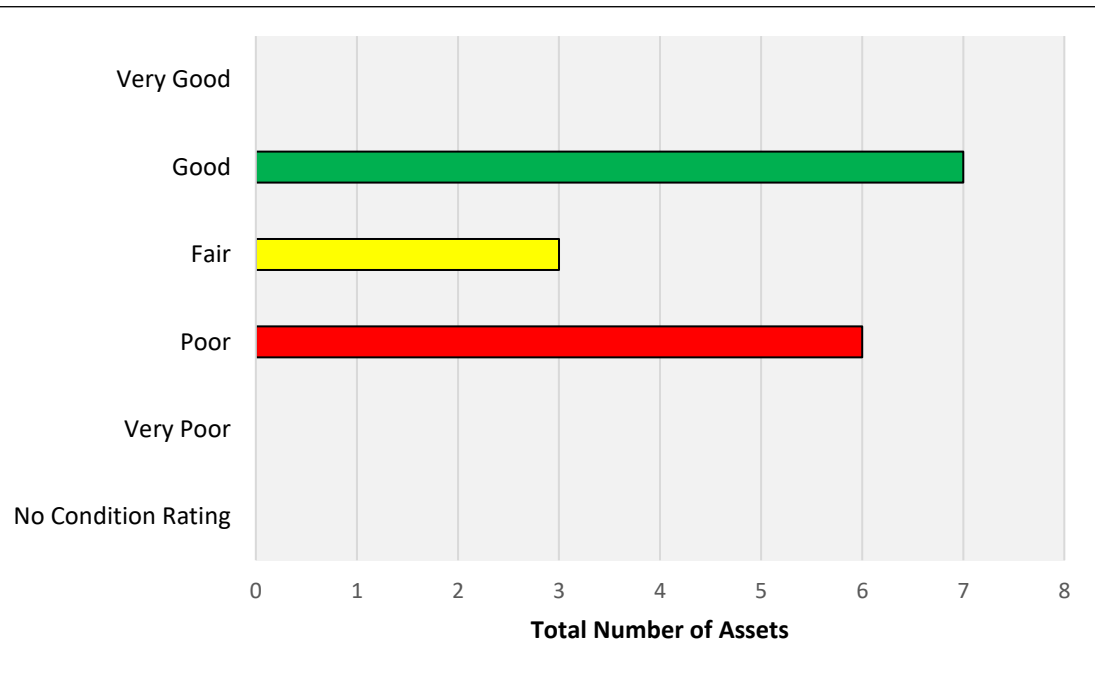
Culvert structures in Puslinch were inspected in 2017 by qualified engineers in order to describe their condition. Culverts based on their BCI are on average in “fair” condition. Though the condition of some Culverts is “Poor” the lifecycle management methodology (extracted from the Bridge and Culvert Inspection report) resulted in repairs for a few identified culvert structures. The BCI was not the leading factor when determining lifecycle activities for Culverts. However, the BCI does infer upon future expenditures should further deterioration occur on the structure.

### Replacement Cost Calculation:

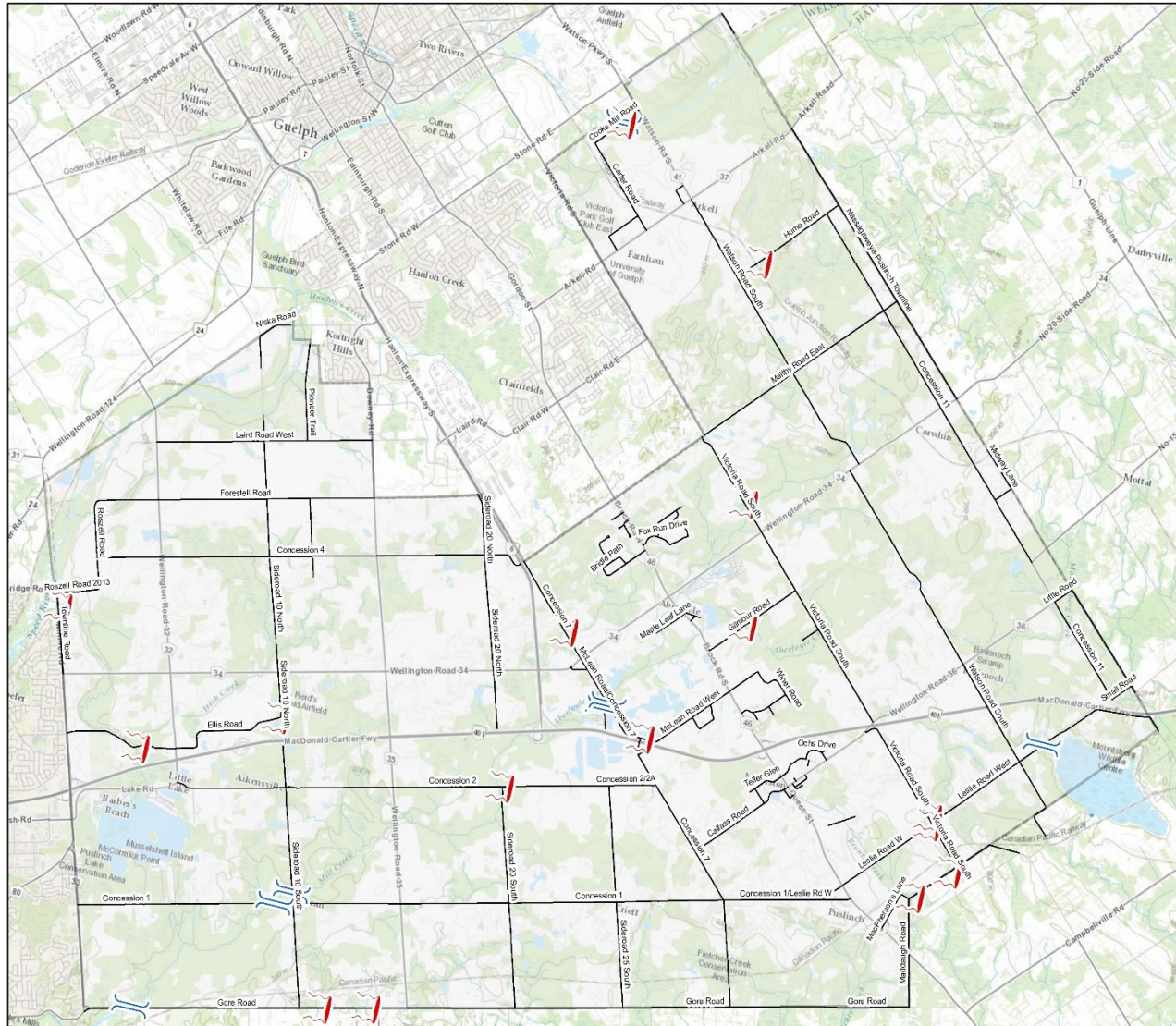
Culvert replacement costs have been sourced from the 2017 bridge and culvert inspection report. For all culvert assets in this asset registry \$4,500 per square metre was used as a baseline replacement cost.



### Source Documentation:

2017 Bridge and Culvert Inspection Summary Report. *August 2017*



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$1,155,780.00	\$869,535.00	\$1,008,328.50	\$-	\$3,033,643.50





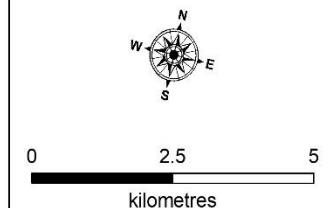



## The Township of Puslinch

### Bridge and Culvert Locations

This document has been created through consultation with Puslinch Staff for the 2019 Asset Management Plan.

  
**Bridge**  
  
**Culvert**



7.0 - 4 Bridge and Culvert Locations

## 7.8 Roads – 1 Lift, 2 Lift, Surface Treated and Gravel Roads

### Lifecycle Management Methodology:

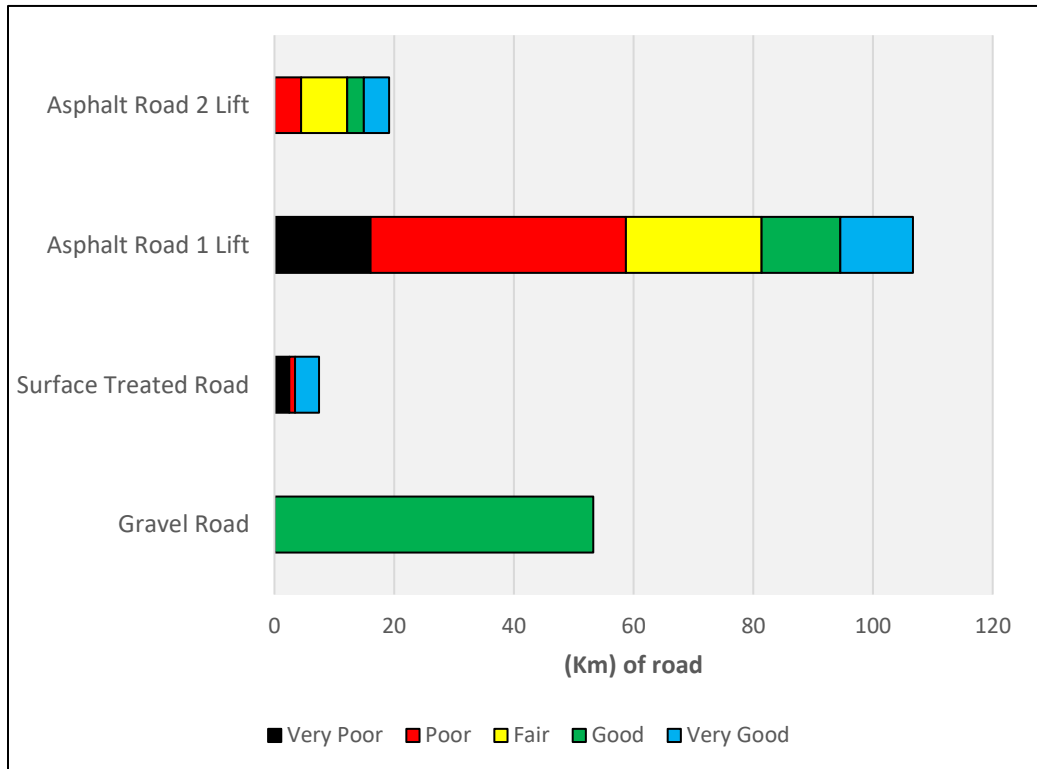
Road structures in Puslinch were inspected in 2016 by qualified engineers to describe their condition. The road network condition based on each road segment's PCI, is on average in "fair" Condition. The lifecycle management methodology for lifecycle activities is based on a threshold PCI index of 65 for class 3 roads, 60 for class 4 roads and 60 for class 5 roads.

### Replacement Cost Calculation:

Two Lift Hard Surface roads have been calculated to be replaced at a cost of \$461 per metre, One Lift at \$318 per metre, Surface Treated at \$56 per metre and gravel roads at \$177.5 per metre.

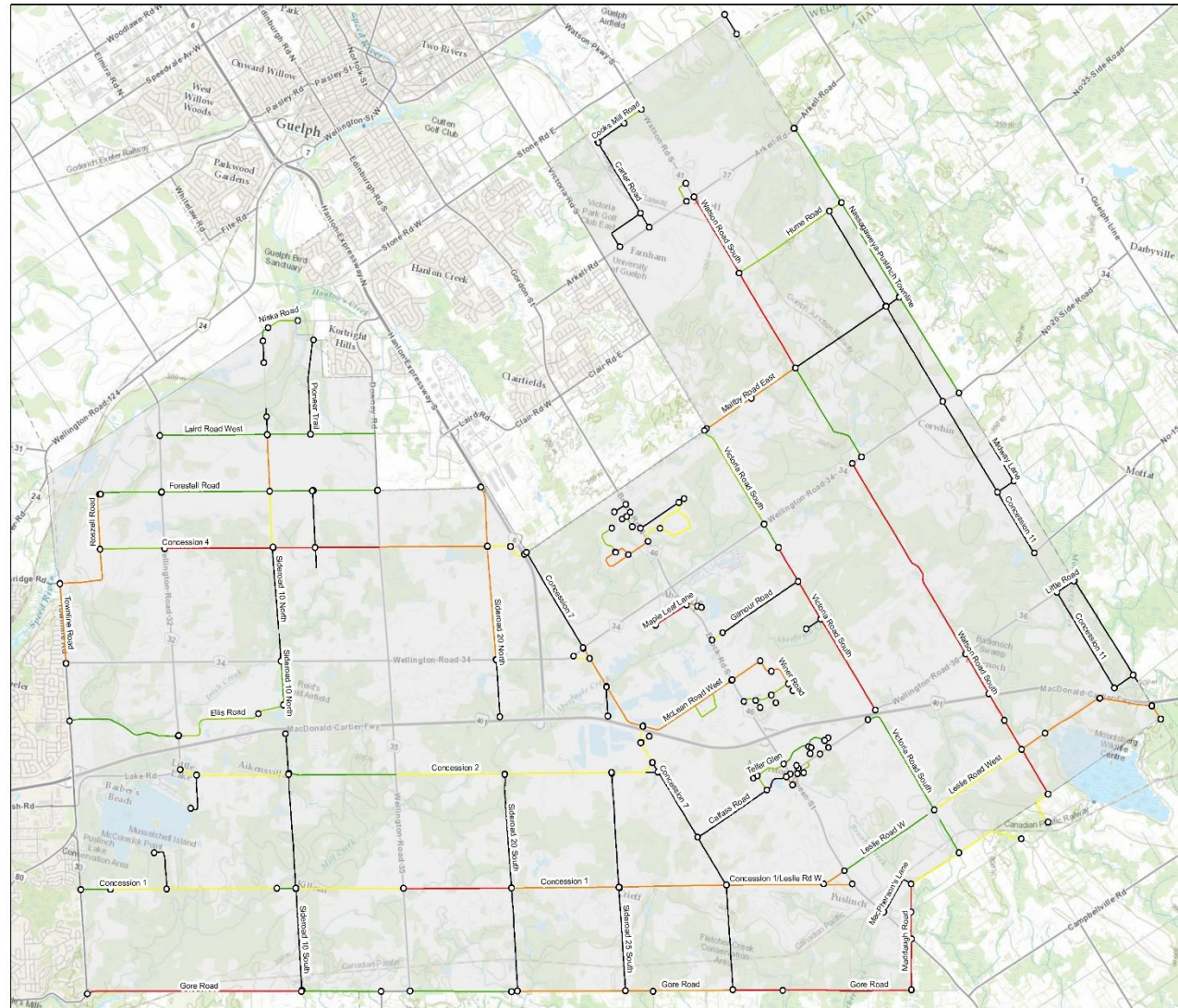
### Source Documentation

2016 Road Condition Assessment  
Tender Advertisement 2018 Road Rehabilitation and Culvert Upgrades Township of Puslinch Contract No. PW18-100.



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$5,182,937.41	\$16,726,891.38	\$10,848,807.22	\$15,188,380.90	\$5,917,478.54	\$53,864,495.44





## The Township of Puslinch

### Pavement Condition Index (2018)

This document has been created through consultation with Puslinch Staff for the 2019 Asset Management Plan.

The Pavement Condition Index is a condition rating methodology for tracking the degradation of a hard surfaced road overtime. A road segments PCI can range from 1-100 (100 being excellent condition 1 being failed surface).

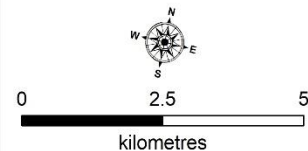
It has been assumed for this Asset Management Plan that 1 Lift and 2 Lift Hard Surface Roads degrade at the same rate of 2 points per year.

Further, the remediation PCI for Class 3 Roads is 65 and Class 4/5 Roads 60.

Gravel Roads for this Asset Management Plan have been assumed to have a PCI of 90.

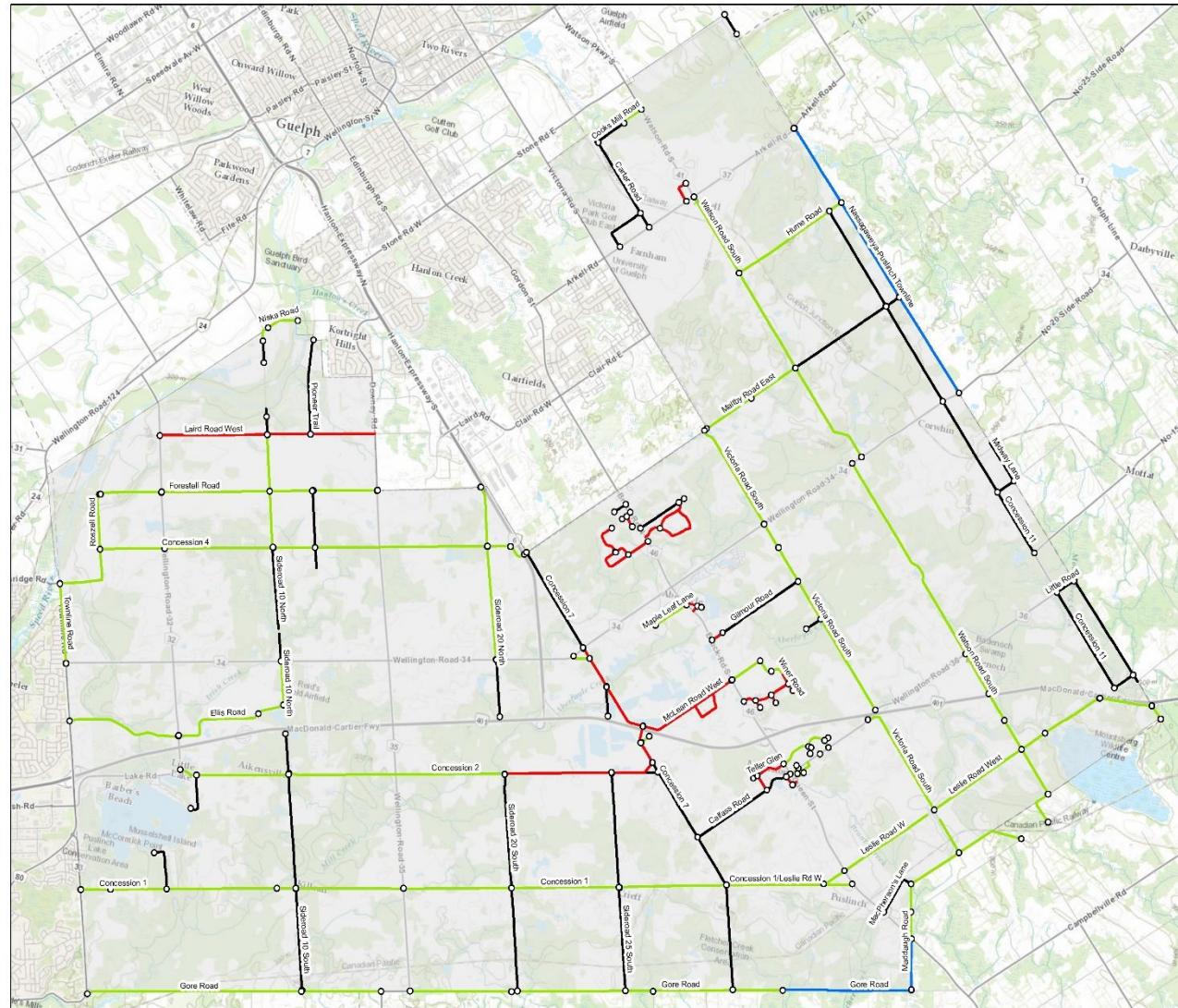
- Gravel Roads
- 62 - 67
- 68 - 73
- 74 - 79
- 80 - 87
- 88 - 99

○ Road Segment Start - End



7.0 - 4 Pavement Condition Index





## The Township of Puslinch

### Road Surface Types

This document has been created through consultation with Puslinch Staff for the 2019 Asset Management Plan.

The road surface types in the Township of Puslinch are as follows:

- Asphalt Road 1 Lift
- Asphalt Road 2 Lift
- Surface Treated
- Gravel

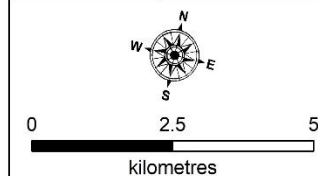
Asphalt Road 1 Lift

Asphalt Road 2 Lift

Asphalt Road  
Surface Treated

Gravel Road

○  
Road Segment  
Start - End



7.0 - 5 Road Surface Type Map

## 7.9 Buildings and Facilities

### Lifecycle Management Methodology:

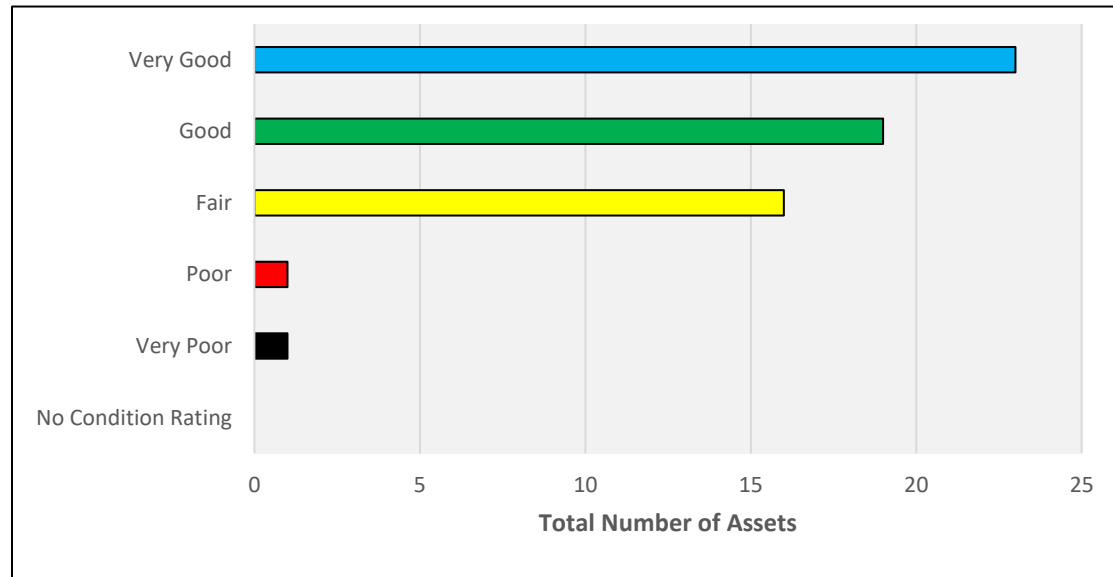
Building and Facilities were broken down into distinct components to create appropriate Lifecycle and Financial attributes. The components are as follows: Structure, Roof, Walls & Windows, Interior Finishes, Mechanical, Electrical, Fire, Life-Safety, and Septic Tank. UEM identified these components and updated their condition according to available data provided from the 2014 Building Inspection Report. In the asset registry each component can be managed using a linear deterioration rate but the Township's current practice of following a remediation schedule is more appropriate and should continue.

### Replacement Cost Calculation

The replacement cost for each Building and Facilities component has been individually assessed based on the component type. The costing methodology has been extracted exclusively from RS Means Square Foot Cost Data.

### Source Documentation

Square Foot Costs with RS Means Data



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$66,042.05	\$162,750.00	\$306,413.60	\$1,156,772.66	\$1,543,417.20	\$3,235,395.50

## 7.10 Parks & Recreation

### Lifecycle Management Methodology:

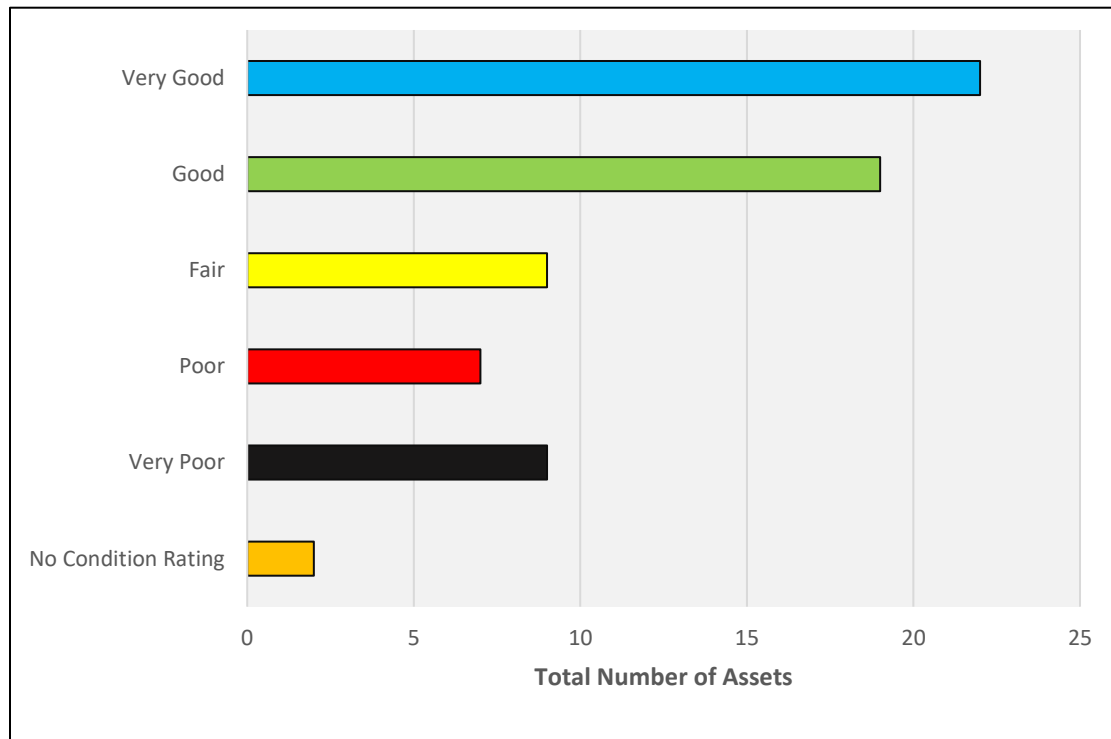
Parks & Recreation assets were individually assessed by UEM in the summer of 2018 through visual inspections. The assets were given a condition rating on a scale of 1-5 and as well an expected life based on the asset type. For all Parks & Recreation assets a linear deterioration rate was assumed. Lifecycle (replacement and remediation) events are triggered by an asset reaching its end of expected life.

### Replacement Cost Calculation

The replacement cost for each Park & Recreation asset has been individually assessed based on the asset type. Through documents provided by the Township and internal/external research each asset was provided a replacement cost. Further detail in regard to the specific cost calculations for each asset can be referenced in the asset registry.

### Source Documentation

Aberfoyle Ball Diamond Lighting Upgrades Contract.  
Various Tender Documents provided by Township.



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$228,053.00	\$136,273.00	\$144,475.00	\$223,506.50	\$1,126,711.00	\$1,859,018.50

## 7.11 Sidewalks

### Lifecycle Management Methodology:

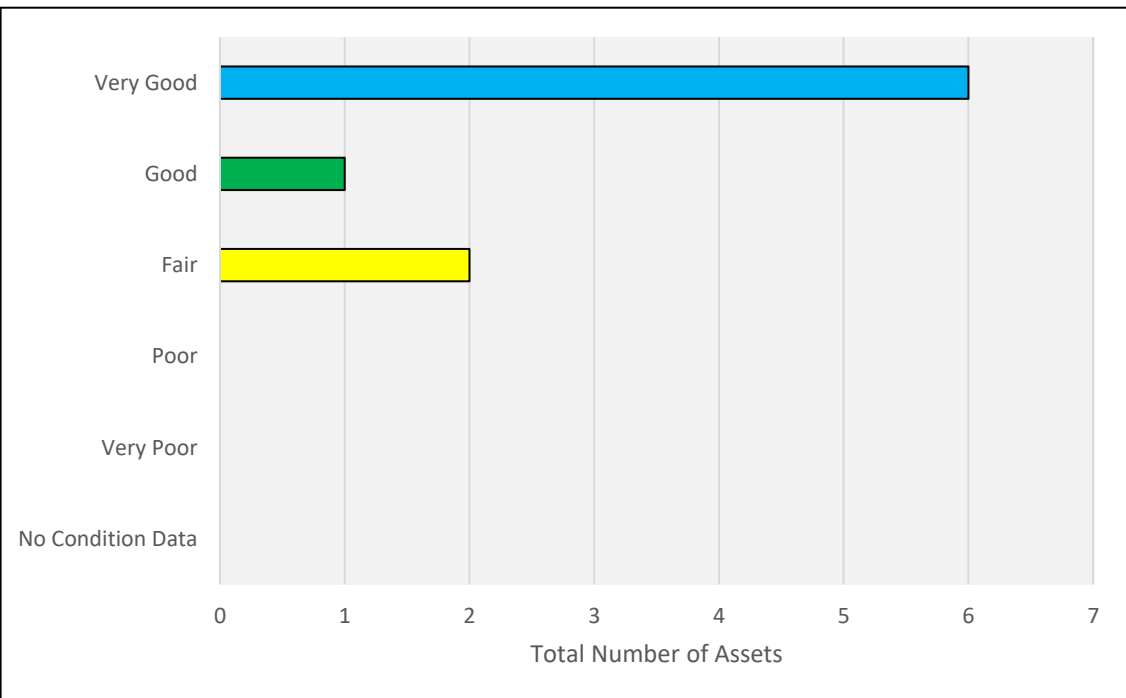
Sidewalk assets were individually assessed by UEM in the summer of 2018 through visual inspections. The assets were given a condition rating on a scale of 1-5 and as well an expected life based on the asset type. For all sidewalks a linear deterioration rate was assumed. Lifecycle (replacement and remediation) events are triggered by an asset reaching it's expected life or failure to adhere to O. Reg. 239/02: Minimum Maintenance Standard for Municipal Highways.

### Replacement Cost Calculation:

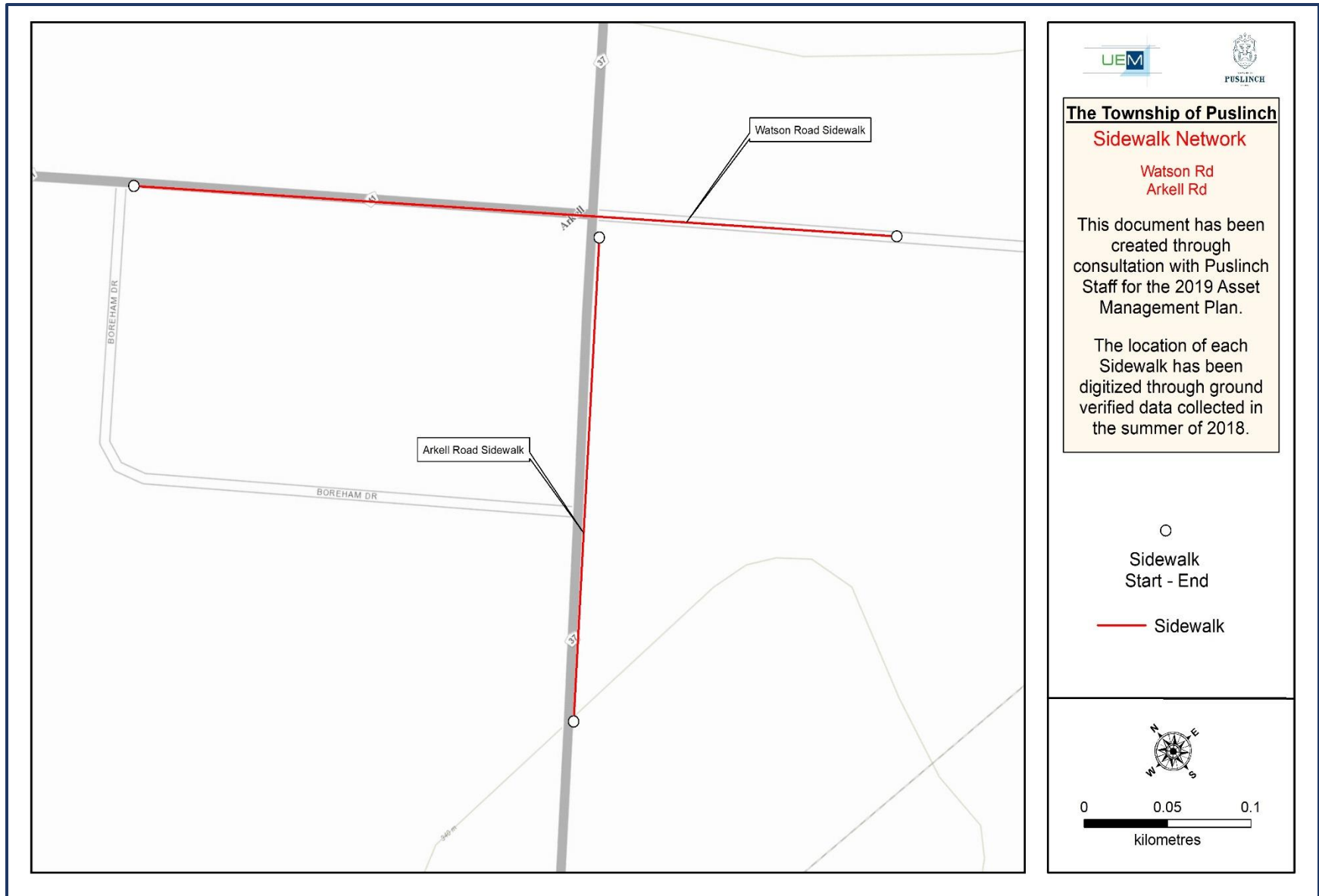
The replacement cost for sidewalks has been estimated at 143\$ per linear metre.

### Source Documentation

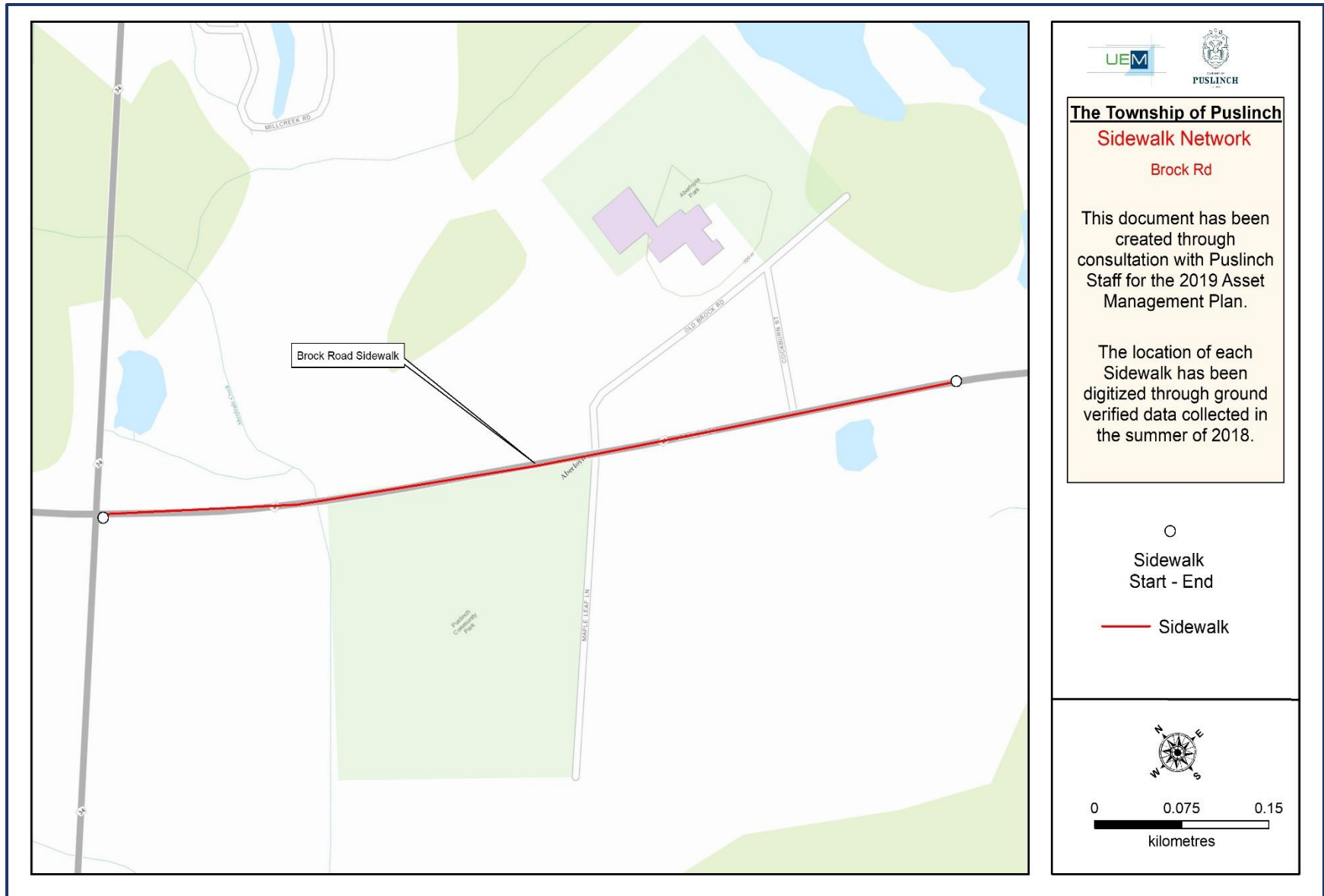
Professional Consultation with industry experts.



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$-	\$48,620.00	\$131,131.00	\$300,586.00	\$480,337.00

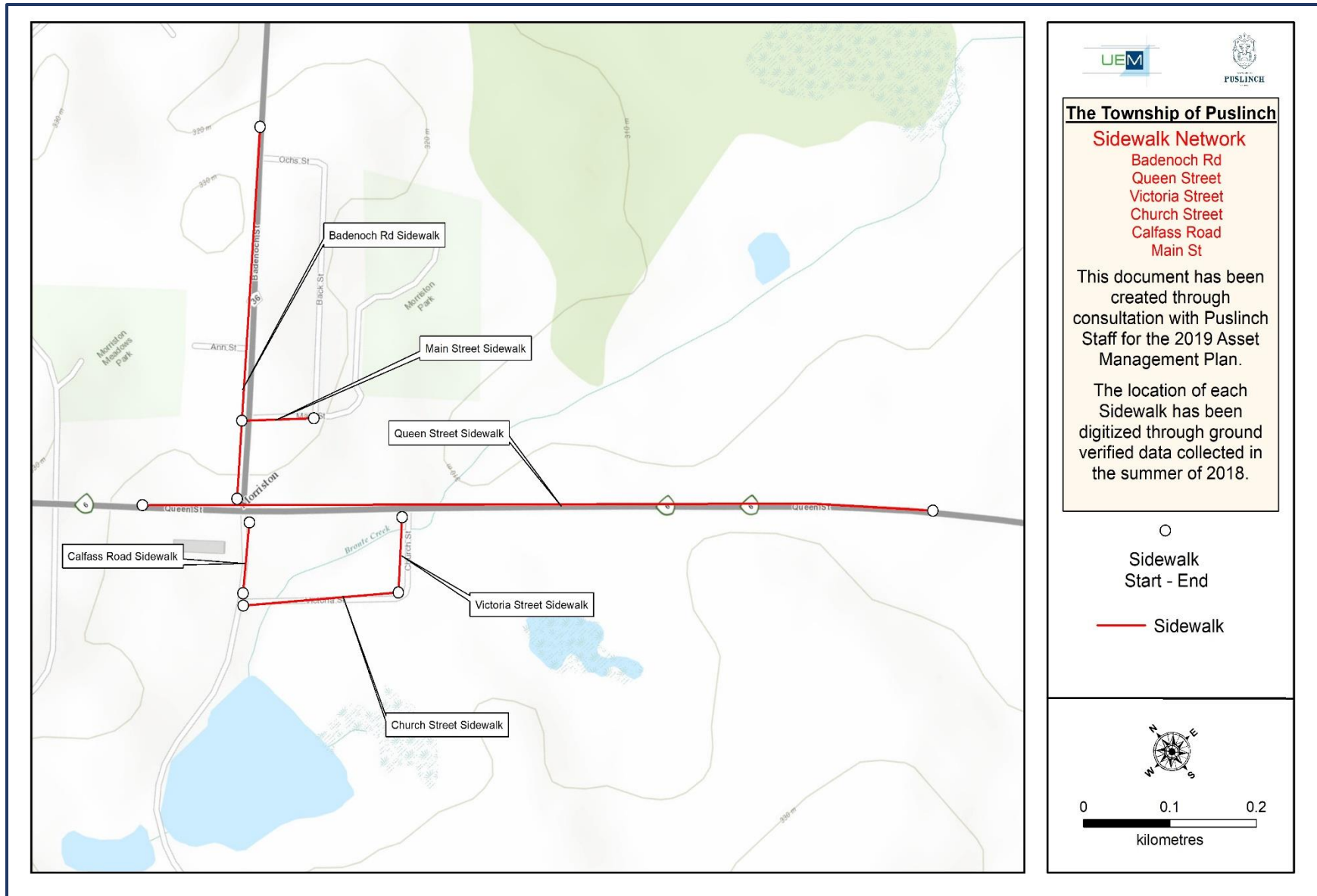


7.0 - 6 Watson Road, Arkell Road



7.0 - 7 Brock Road





7.0 - 8 Badenoch Road, Queen Street, Victoria Street, Church Street, Calfass Road, Main Street

## 7.12 Fire Reservoirs

### Lifecycle Management Methodology:

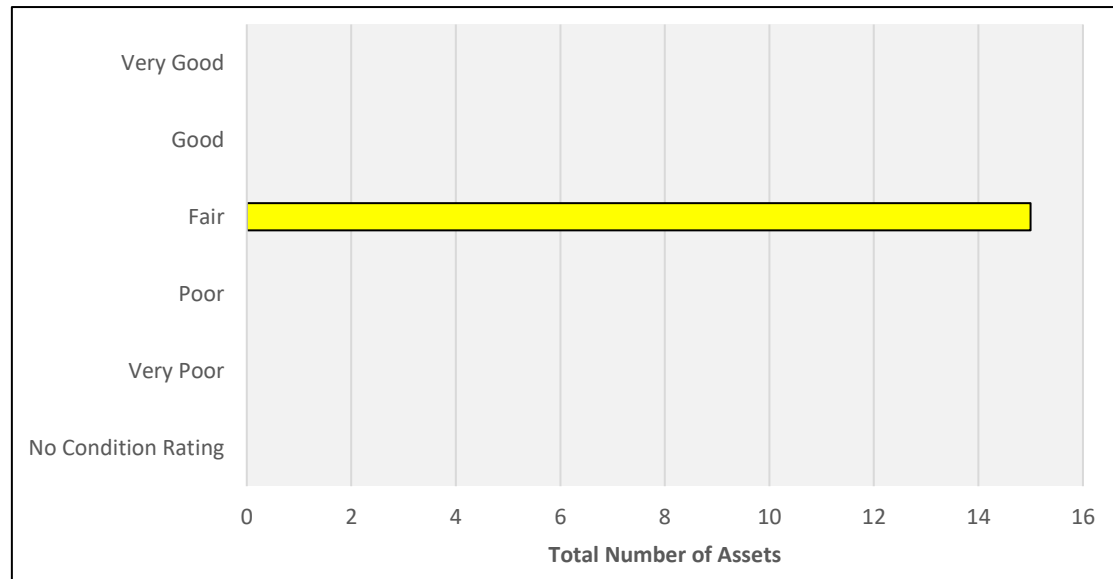
Fire Reservoir assets were identified in the asset registry using the defined lifecycle attributes provided by UEM. Each Fire Reservoir was given a condition rating based on the proximity to its defined end of service life. The physical condition of the reservoir was not considered for condition assessment only the percentage of life remaining. The end of service life for Fire Reservoirs are assessed based on the condition data provided by individual inspections of each fire reservoir.

### Replacement Cost Calculation:

Each Fire Reservoir asset has been loaded into the Asset Registry with a replacement cost of \$50,000. This figure has been derived through UEM internal consultation.

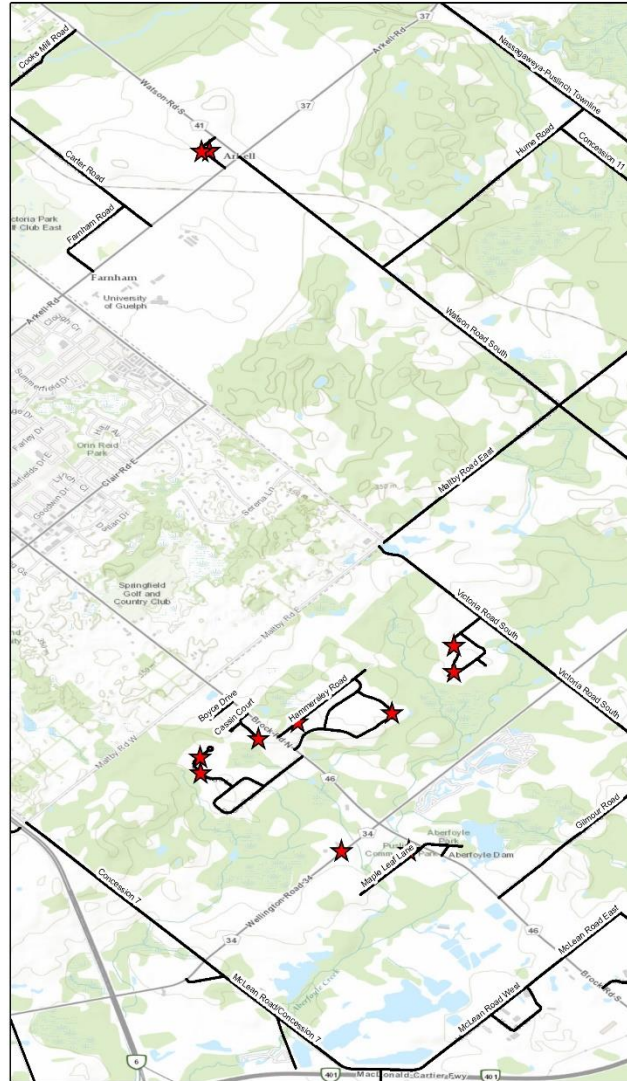
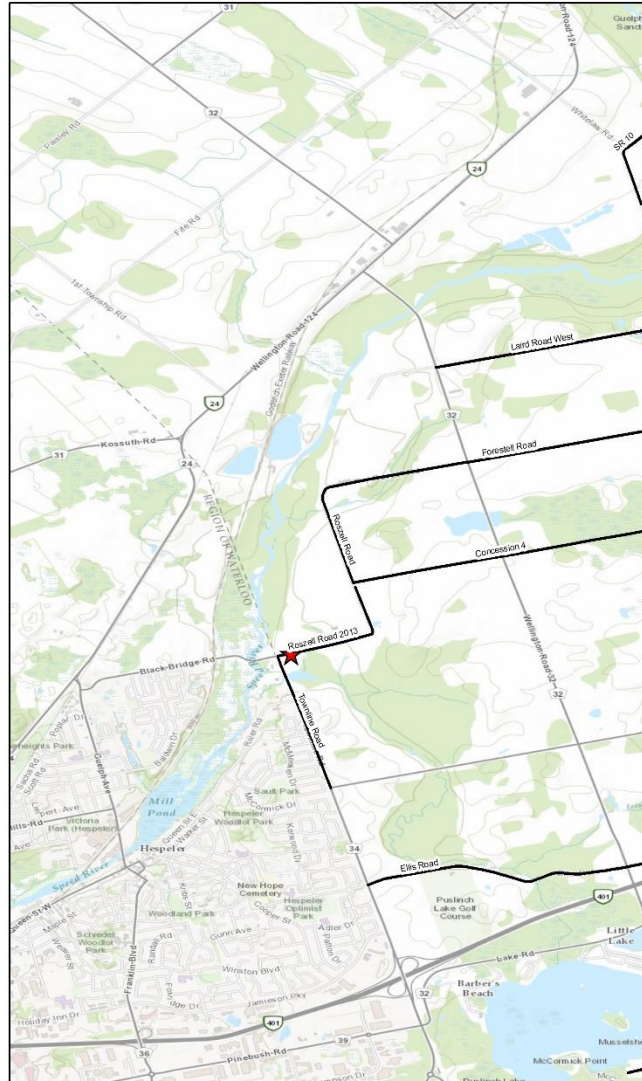
### Source Documentation

UEM Professional Recommendation



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$-	\$ 750,000.00	\$-	\$-	\$ 750,000.00



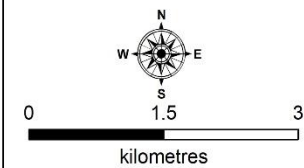


### The Township of Puslinch Fire Reservoir Locations

This document has been created through consultation with Puslinch Staff for the 2019 Asset Management Plan.



Puslinch Fire Reservoirs



7.0 - 9 Puslinch Fire Reservoir Locations

### 7.13 Fire Vehicle Assets - Fire Licensed Vehicles & Tires

#### Lifecycle Management Methodology:

Fire Vehicle assets were identified in the asset registry using the defined lifecycle attributes provided in the 2017 Fleet Management Report. Each Fire Vehicle asset was given a condition rating based on the proximity to its defined end of service life. The physical condition of the vehicle was considered for condition classification when available, however, the majority of Fire Vehicle assets condition ratings were defined based on its proximity to its expected end of service life which were formed by the Township's accepted Fleet Management Policy.

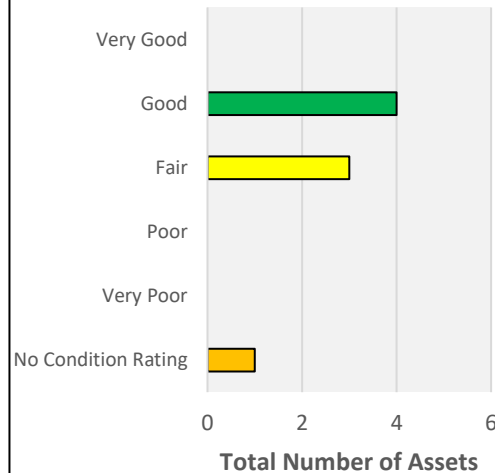
#### Replacement Cost Calculation:

Each Fire Vehicle asset has been individually valued based on the recommendations of the 2017 Fleet Management Report and staff. For all Fire Vehicle assets in the asset registry the replacement cost should be loaded as a new vehicle replacement cost.

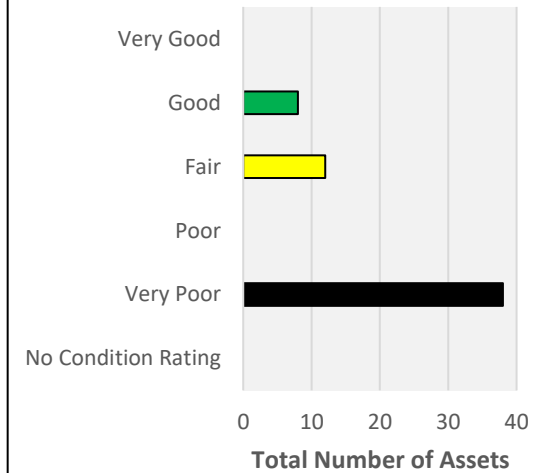
#### Source Documentation

Provided datasets by Township staff

#### Fire Licensed Vehicles



#### Fire Vehicle Tires



#### Total Replacement Cost

Very Poor	Poor	Fair	Good	Very Good	Total
\$22,604.00	\$-	\$1,497,066.00	\$1,187,426.00	\$-	\$2,707,096.00

## 7.14 Storm Water Management Ponds

### Lifecycle Management Methodology:

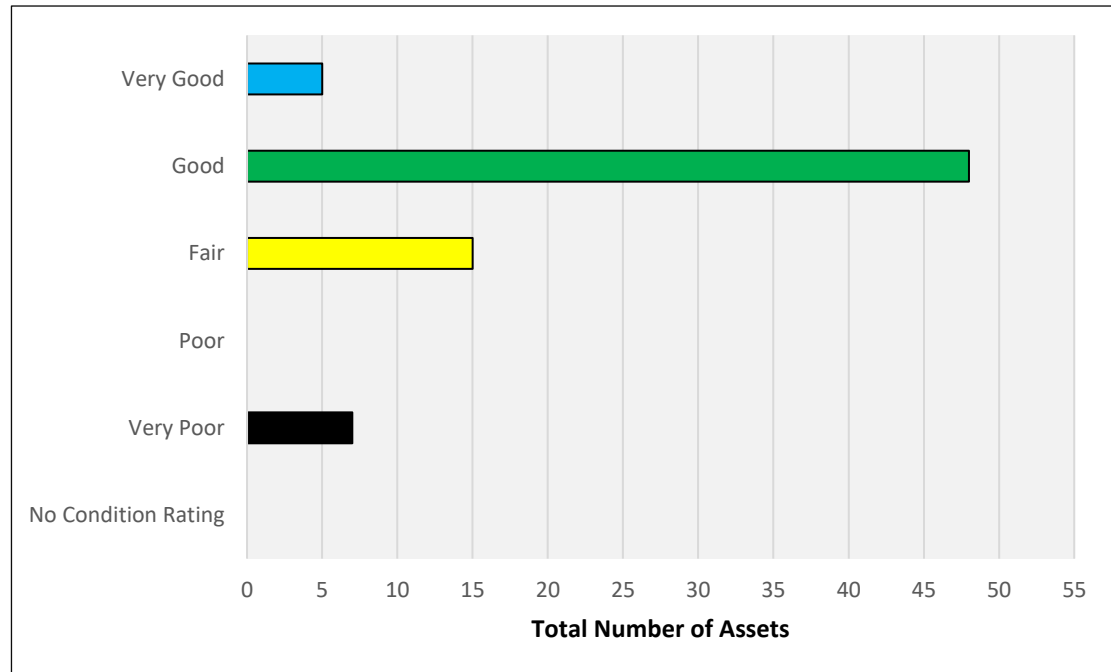
Storm Water Management Ponds were identified in the asset registry with a linear deterioration rate. However, in 2017 the Township acquired the services of a consultant to assess the state of repair of all Storm Water Management Ponds. This assessment provided a remediation schedule and comment on the general state of repair of each Storm Water Management Pond.

### Replacement Cost Calculation:

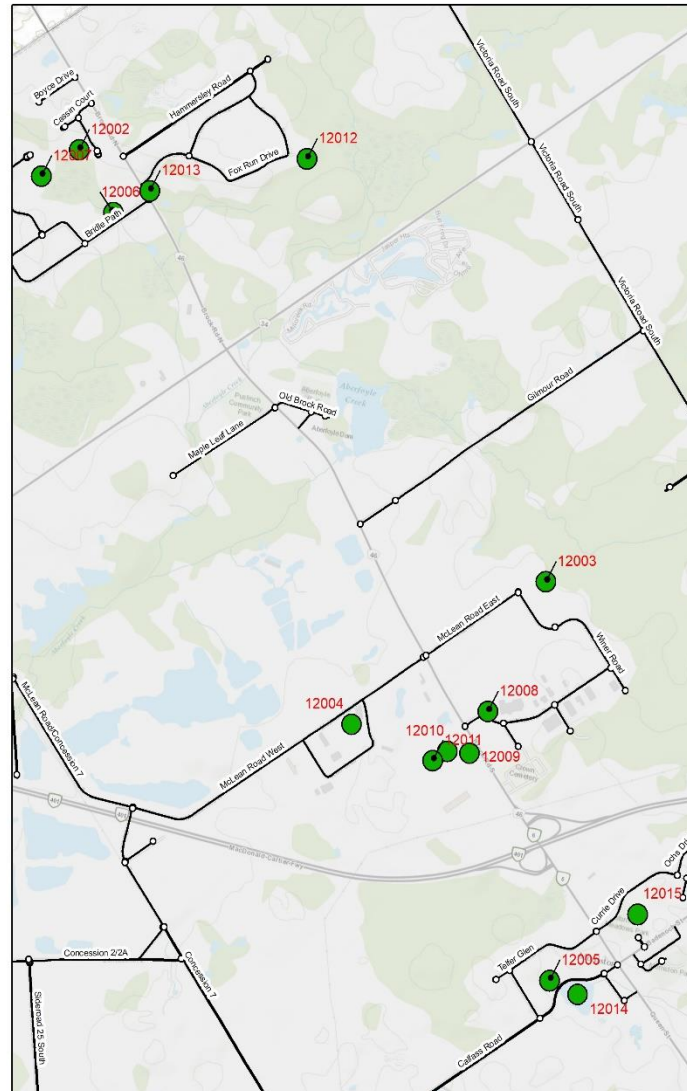
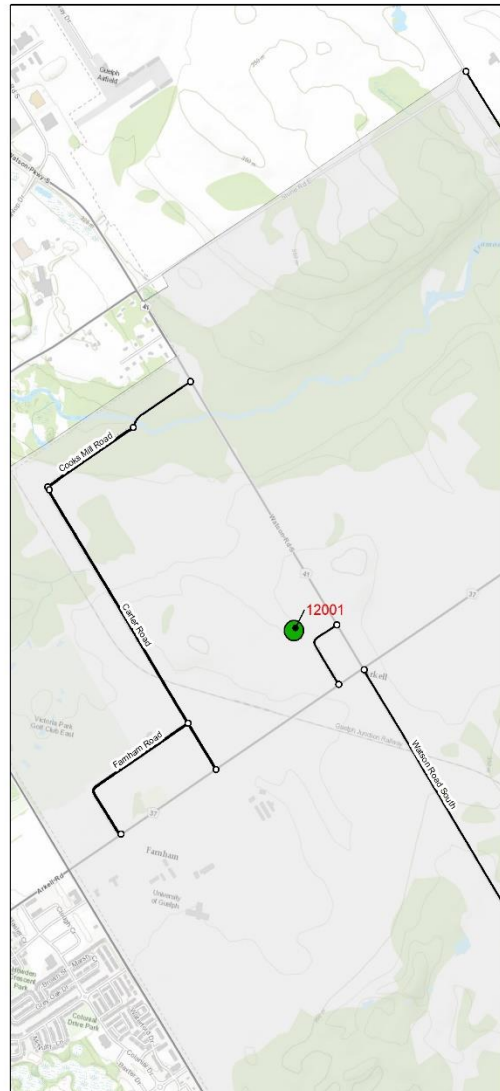
The replacement cost of each Storm Water Management Pond component has been individually calculated. The tailwall has been calculated at \$2000, Headwall \$2000, Outlet Device \$2000, and the pond enclosure is the acquisition cost minus the tailwall, headwall and outlet device. The acquisition cost of each storm water management pond has been sourced from the 2013 Asset Management Plan.



### Source Documentation

Provided datasets by Township staff.



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$565,487.68	\$-	\$687,860.60	\$1,490,273.45	\$146,453.92	\$2,890,075.65







### The Township of Puslinch


#### Storm Water Management Pond Locations

This document has been created through the consultation with Puslinch Staff for the 2019 Asset Management Plan.

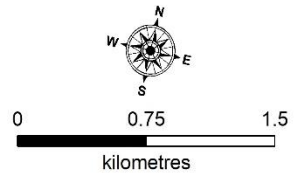
Each Storm Water Management Pond location has been digitized using reference locations provided by the 2017 Storm Water Management Pond Inspection Report and through consultation with Puslinch



Storm Water Management Ponds



Road Segment Start - End



0 0.75 1.5  
kilometres

7.0 - 10 Storm Water Management Pond Locations



## 7.15 Parks and Building Department – Licensed & Unlicensed Vehicles

### Lifecycle Management Methodology:

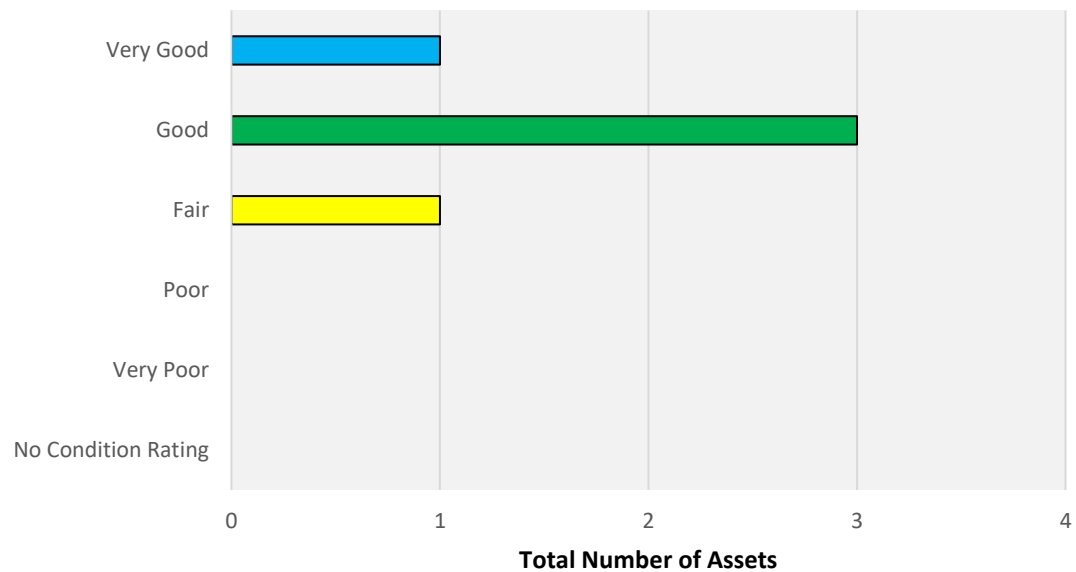
Parks and Building Department vehicle assets were identified in the asset registry using the defined lifecycle attributes provided in the 2017 Fleet Management Report. The physical condition of the vehicle was considered for condition assessment if it was available in the form of vehicle kilometers or the proximity to its end of expected life based on Township Fleet Management Policies. The same lifecycle management methodology is consistent for all identified Parks and Building Department vehicular equipment.

### Replacement Cost Calculation:

Each Parks and Building Department Vehicle asset has been individually valued based on the recommendations in the 2017 fleet management report and staff. For all vehicle assets in the asset registry the replacement cost were loaded as a new vehicle replacement cost.

### Source Documentation

Provided datasets by Township staff



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$-	\$33,000.00	\$43,000.00	\$80,000.00	\$156,000.00

## 7.16 Works Department – Licensed & Unlicensed Vehicles

### Lifecycle Management Methodology:

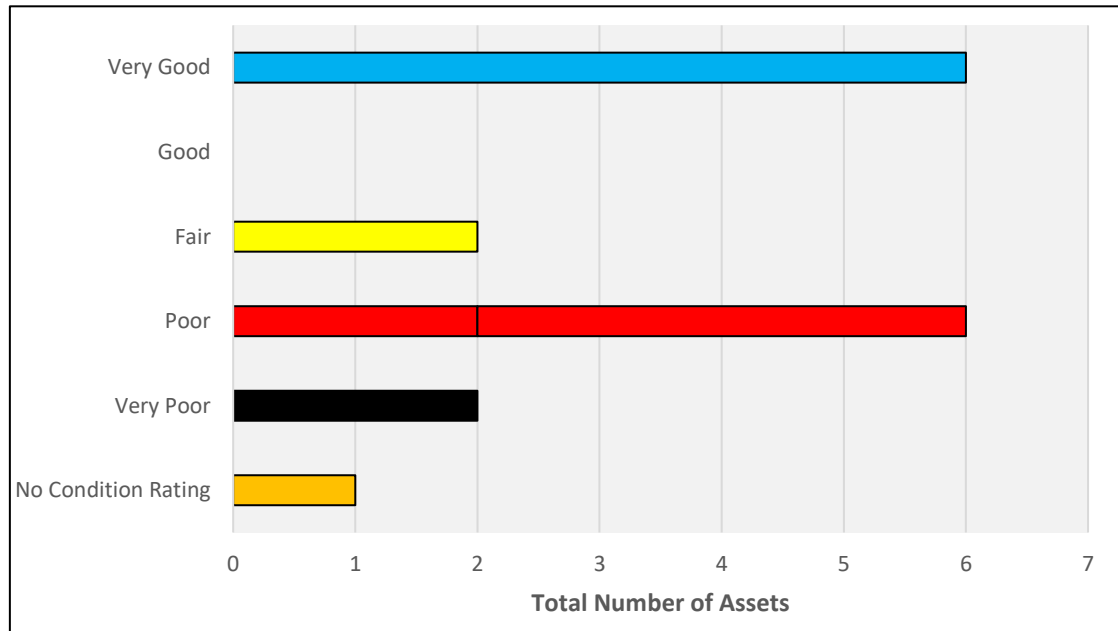
Works Vehicle assets were identified in the asset registry using the defined lifecycle attributes provided in the 2017 Fleet Management Report. The physical condition of the vehicle was considered for condition assessment if it was available in the form of vehicle kilometers or the proximity to its end of expected life based on Township Fleet Management Policies. The same lifecycle management methodology is consistent for all identified Works vehicle equipment.

### Replacement Cost Calculation:

Each Works Vehicle asset has been individually valued based on the recommendations in the 2017 fleet management report and staff. For all vehicle assets in the asset registry the replacement cost were loaded as a new vehicle replacement cost.

### Source Documentation

Provided datasets by Township staff



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$290,000.00	\$1,300,000.00	\$92,000.00	\$-	\$414,000.00	\$2,096,000.00

## 7.17 Storm Sewers

### Lifecycle Management Methodology:

Storm Sewer assets were identified in the asset registry using a linear deterioration rate for each individual asset component. There is no available condition data for storm sewers. For that reason, no condition data was entered into the asset registry

### Geographic Information System

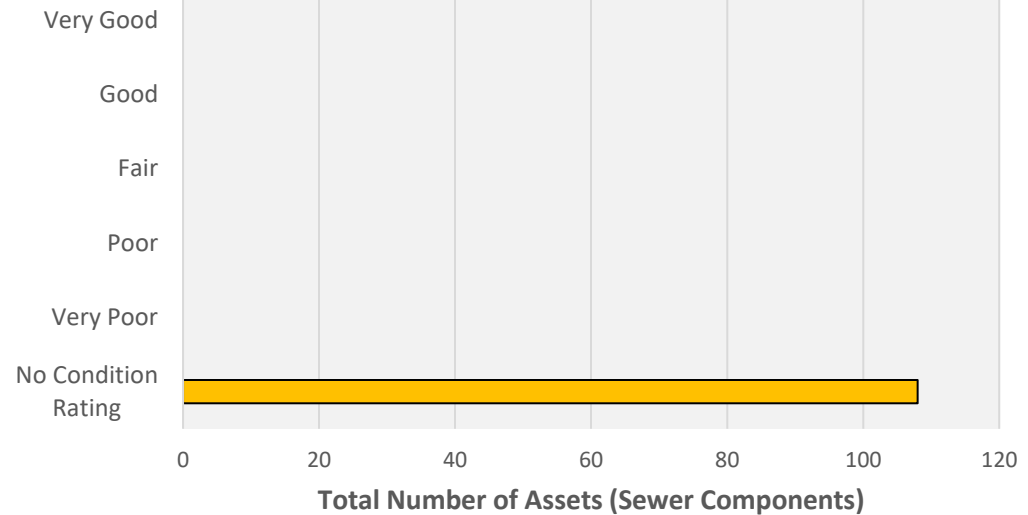
Each Storm Sewer Inlet, and Storm Sewer line has been generated through staff consultation. Field inspections of the spatial referencing has not been completed.

### Replacement Cost Calculation:

Replacement cost for the whole storm sewer system has been calculated based on unit costs of the Outlets at \$5,000 and catch basins at \$ 3,724. The whole storm sewer replacement cost is a function of the outlet, catch basins and linear storm mains at a replacement cost of 63\$ per m. More detail can be sourced in the asset registry.

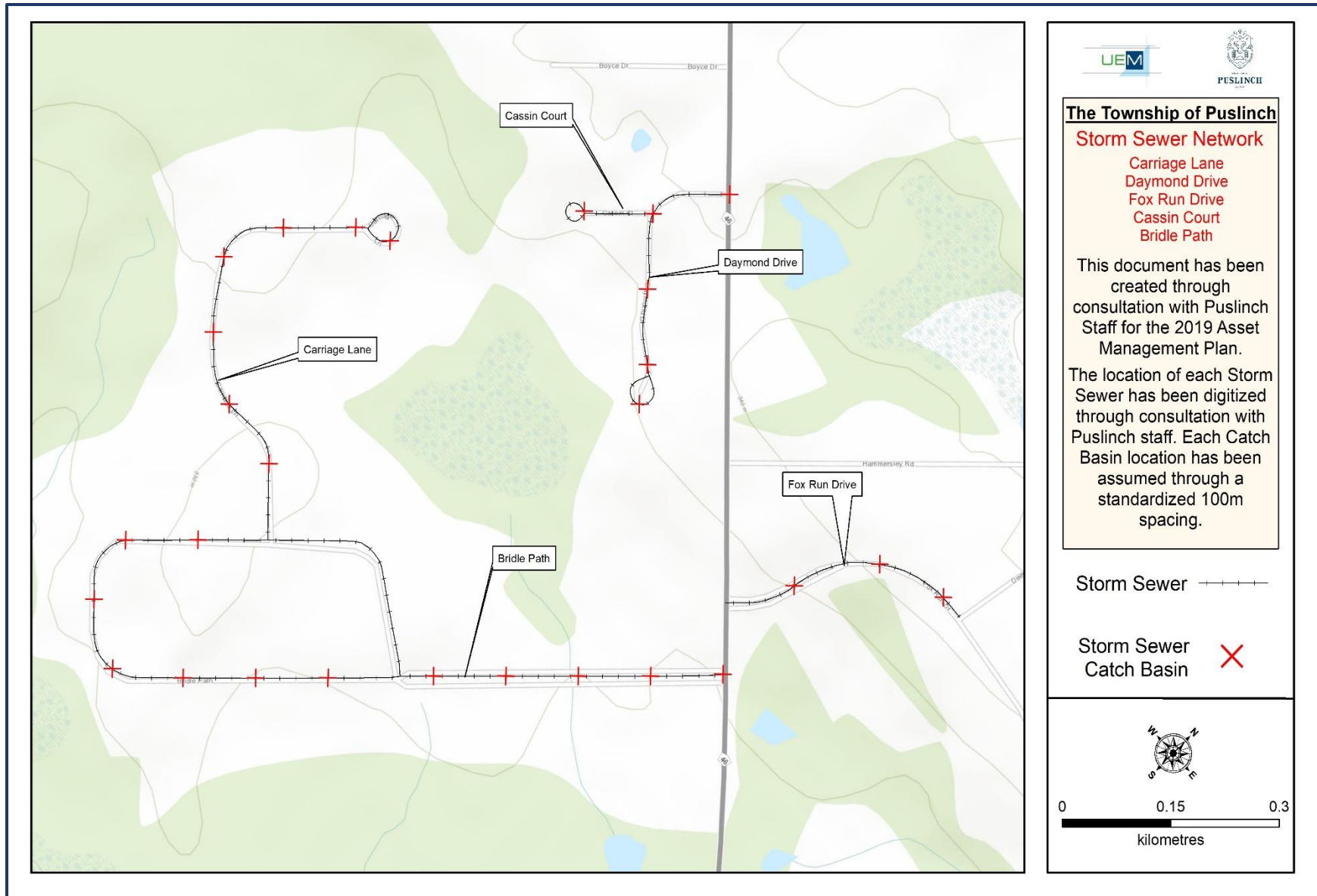
### Source Documentation

Town of Friday Harbor, Storm Water Management Plan 2005



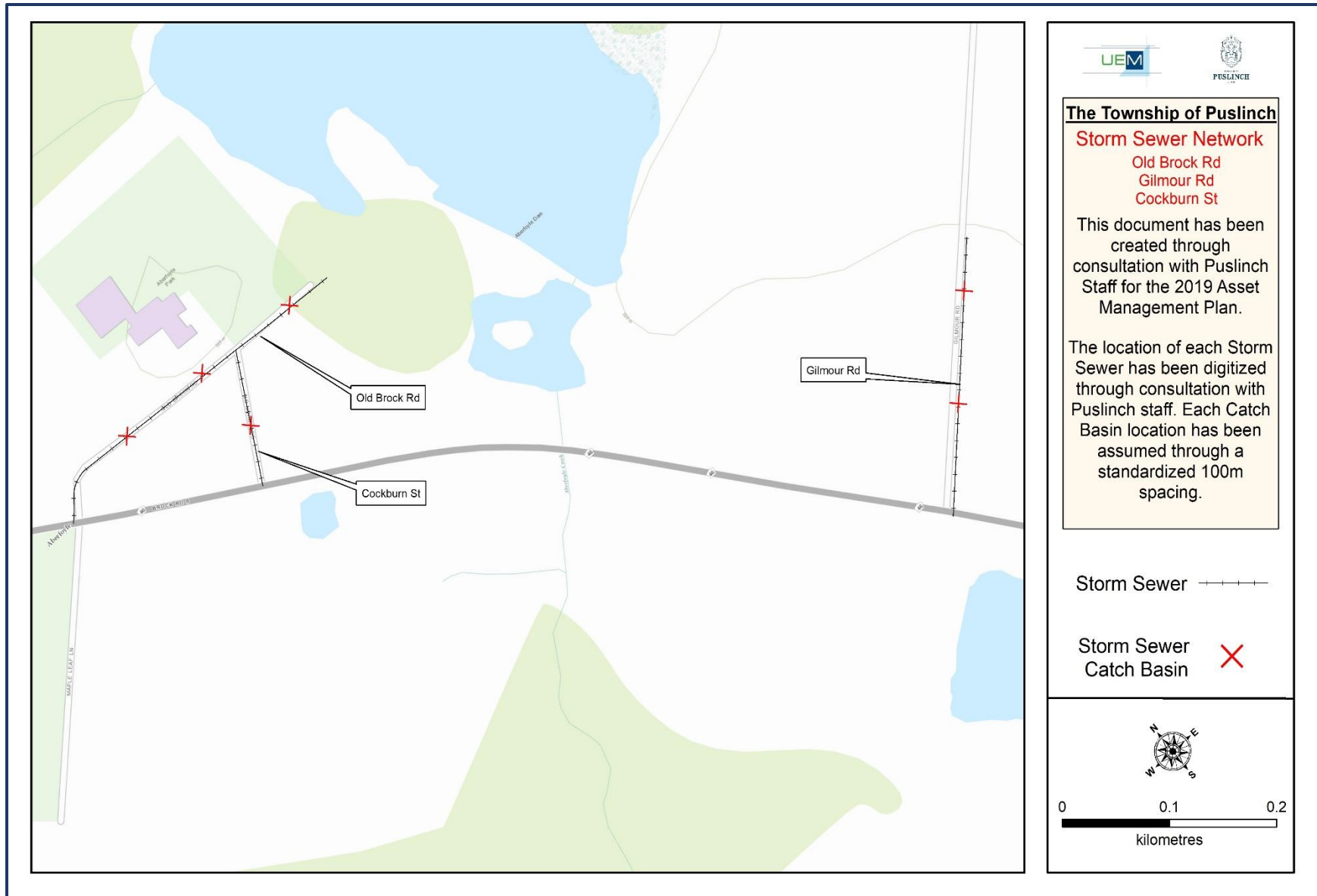
### Total Replacement Cost

\$1,282,195.11

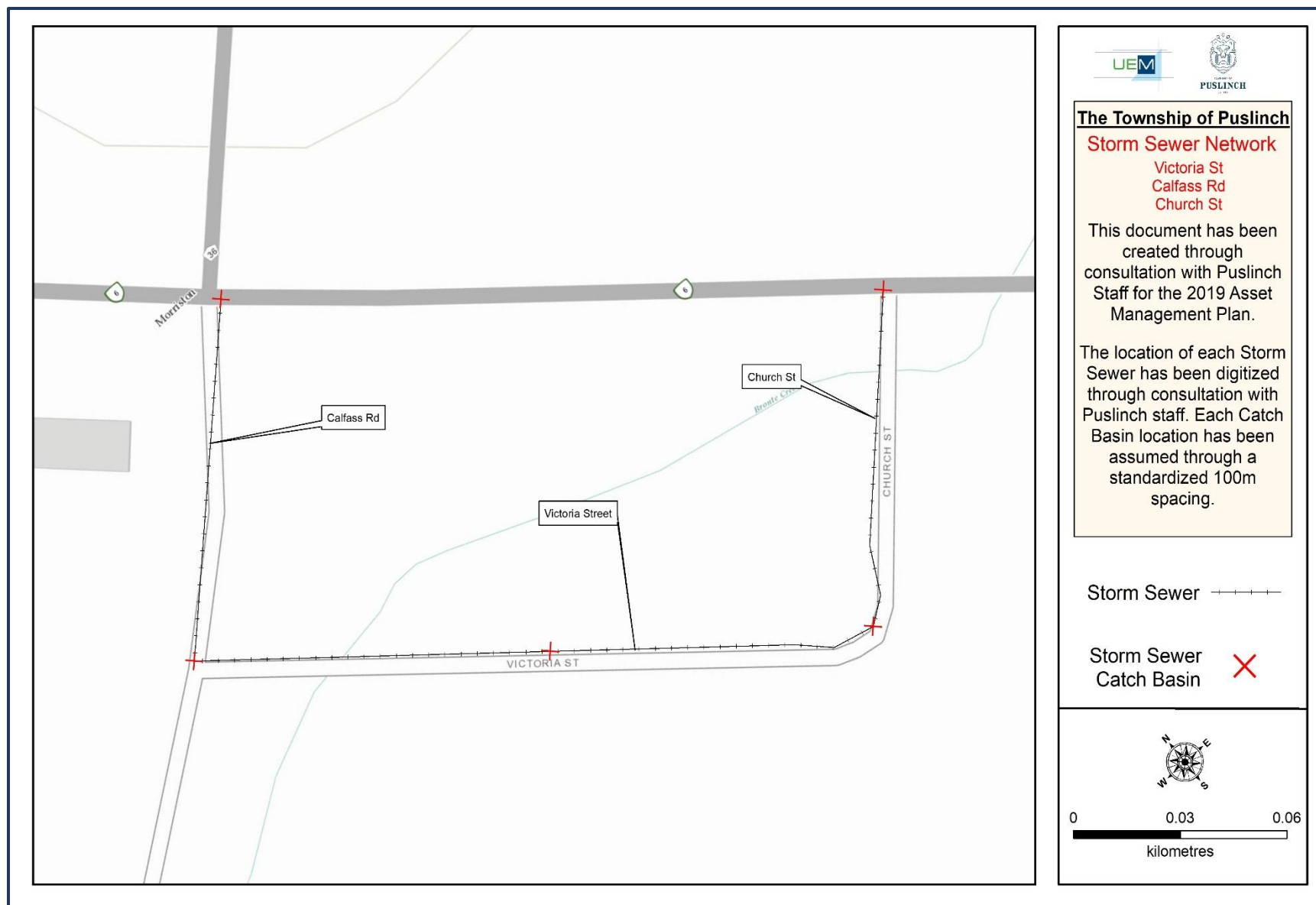


7.0 - 10 Storm Sewer Network: Carriage Lane, Daymond Drive, Fox Run Drive, Cassin Court, Bridle Path





7.0 - 11 Storm Sewer Network: Old Brock Rd, Gilmour Rd



### 7.0 - 12 Storm Sewer Network: Victoria St, Calfass Rd, Church St

## 7.18 Street Lights

### Lifecycle Management Methodology:

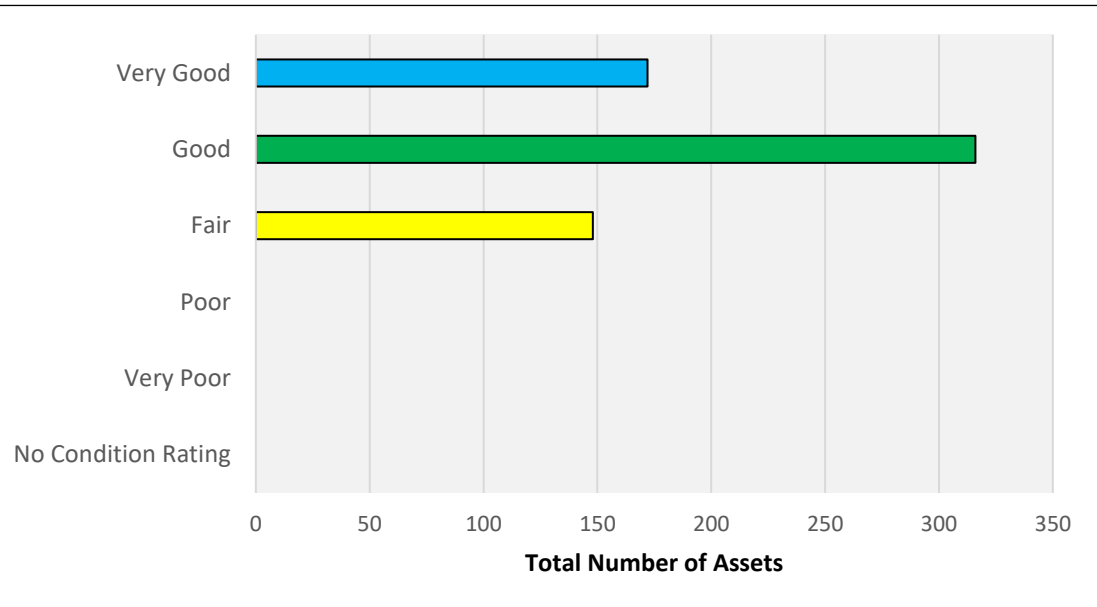
Street Light assets were identified in the asset registry using a linear deterioration rate for each individual asset component. Condition ratings were provided for each pole based on a random sample assessment done by UEM during the summer of 2018.

### Replacement Cost Calculation:

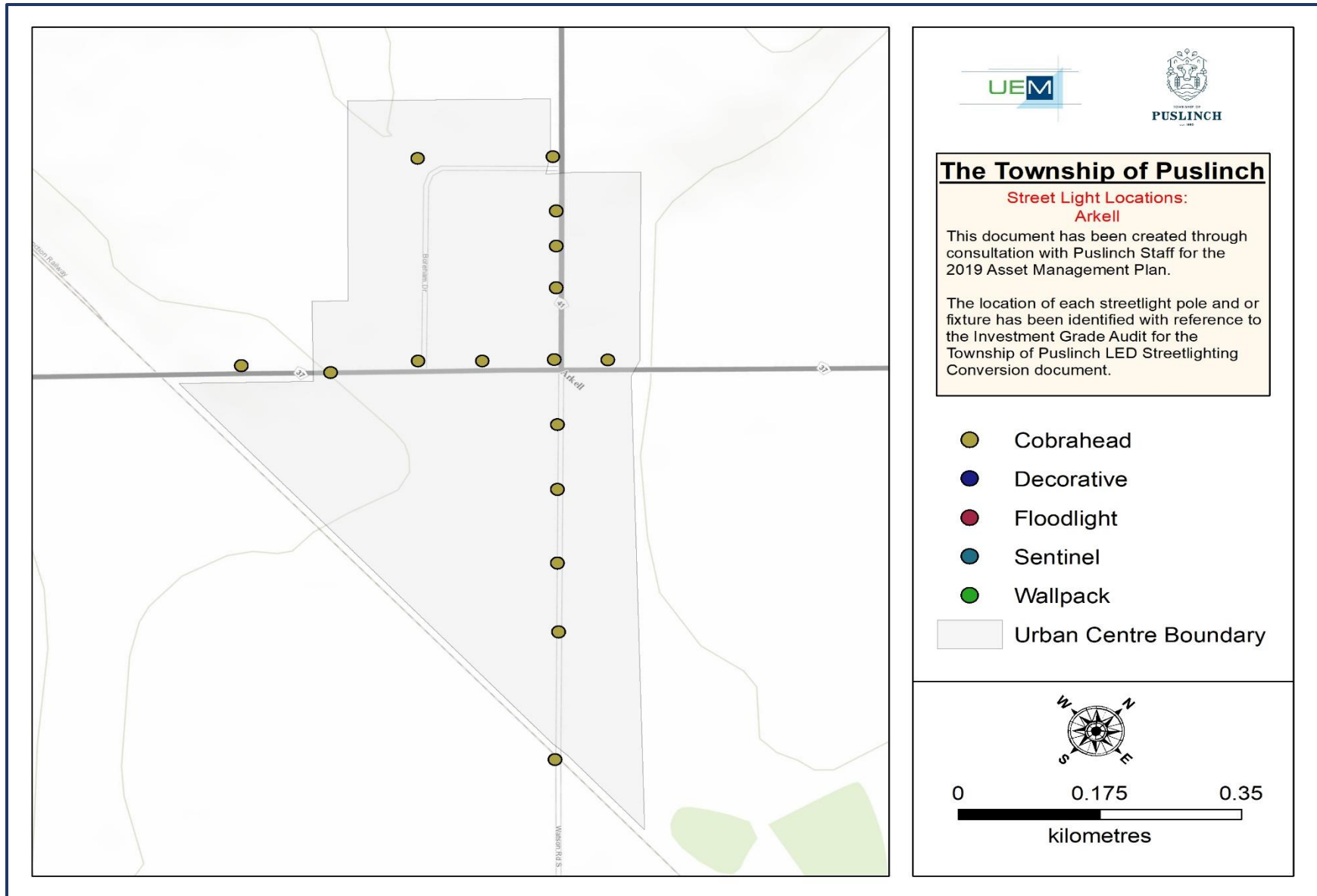
Each Street Light has been broken down into two parts: Fixture and Pole. The cost for each fixture is consistent across all pole types at \$300; the pole cost varies from \$1,300 to \$4000 depending on the type.

### Source Documentation

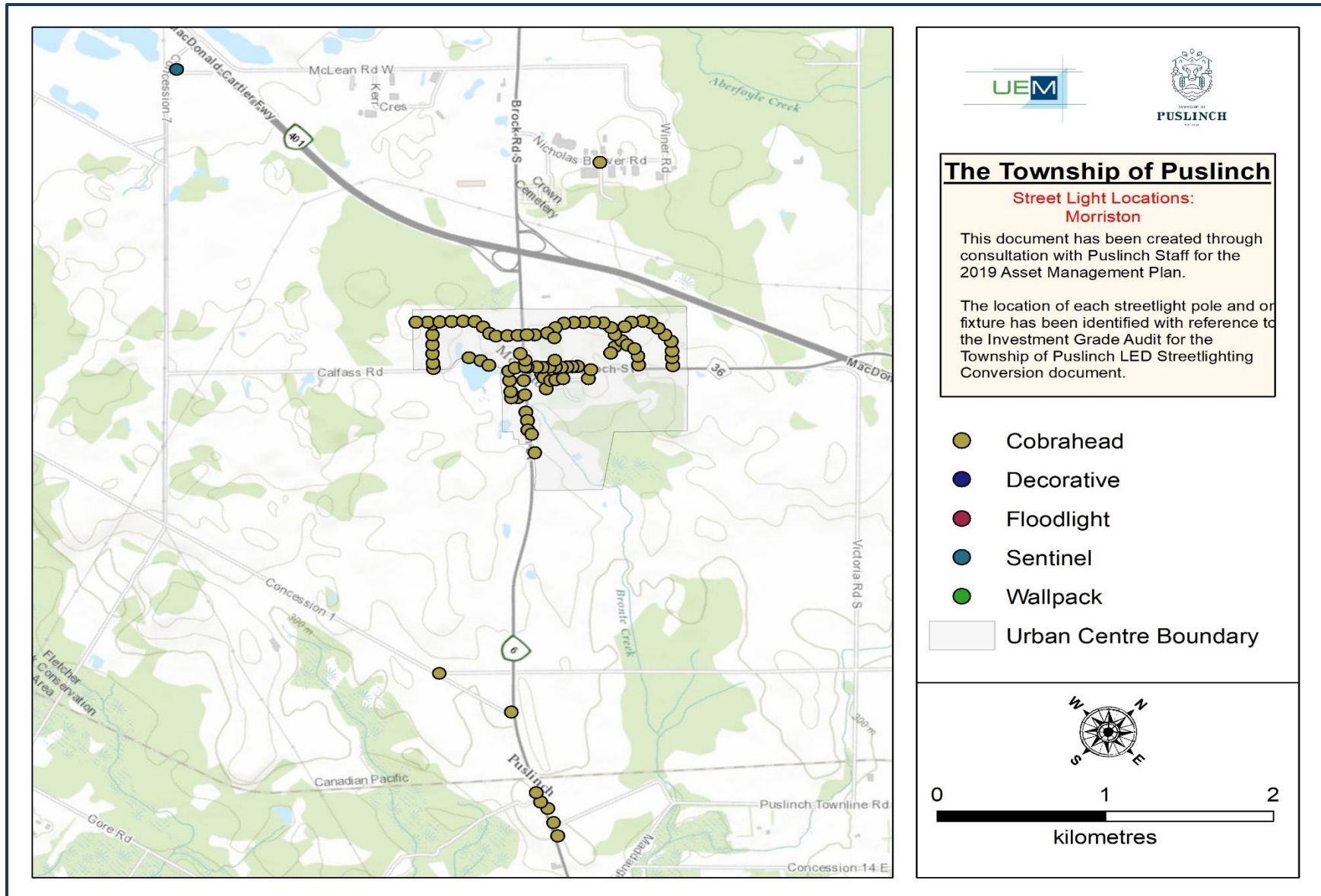
UEM professional recommendation



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$-	\$181,325.39	\$368,581.67	\$215,306.63	\$765,213.69

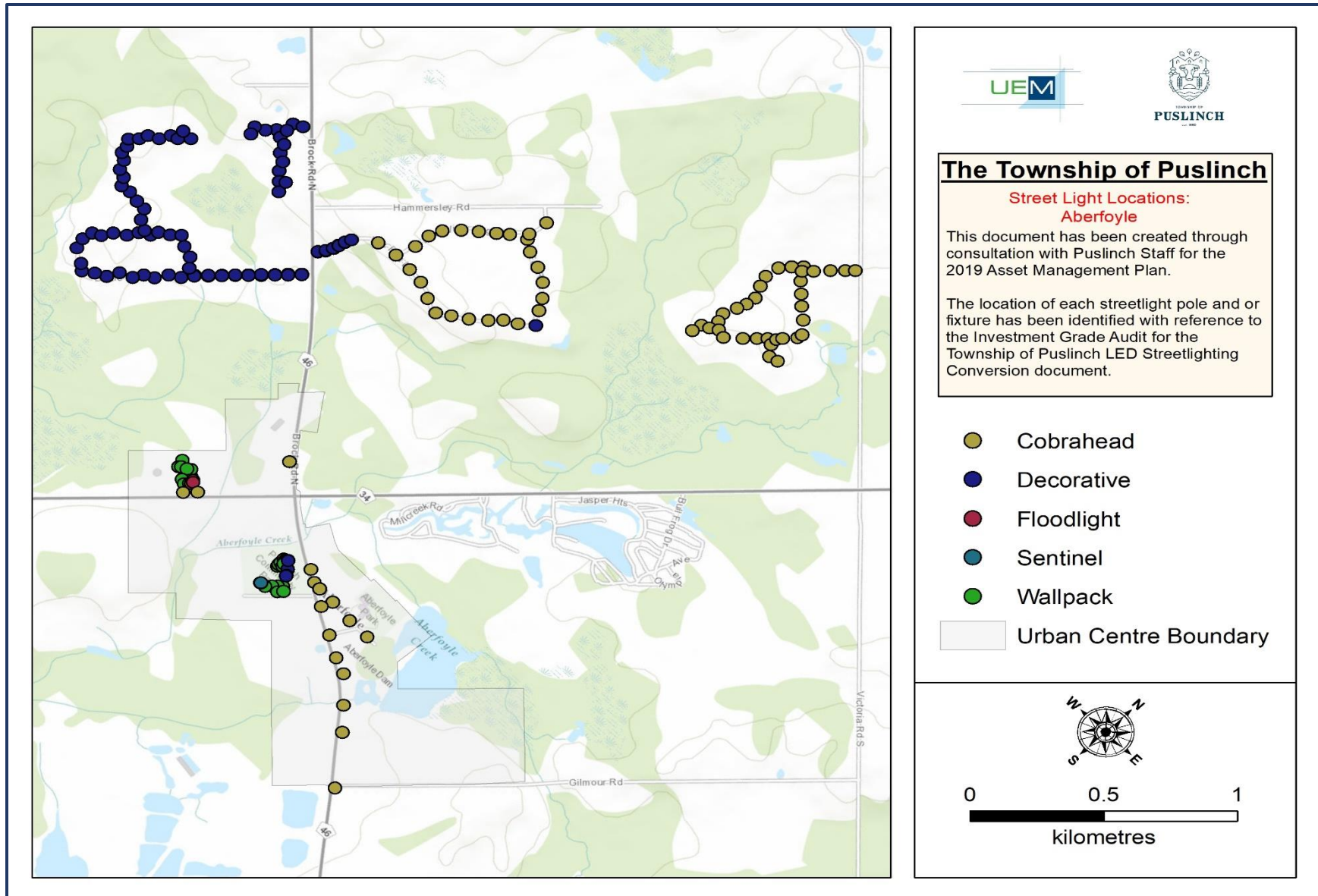


7.0 - 13 Street light locations: Arkell



7.0 - 14 Street light Locations: Morriston





7.0 - 15 Streetlight Locations: Aberfoyle

## 7.19 Regulatory/Warnings Signs

### Lifecycle Management Methodology:

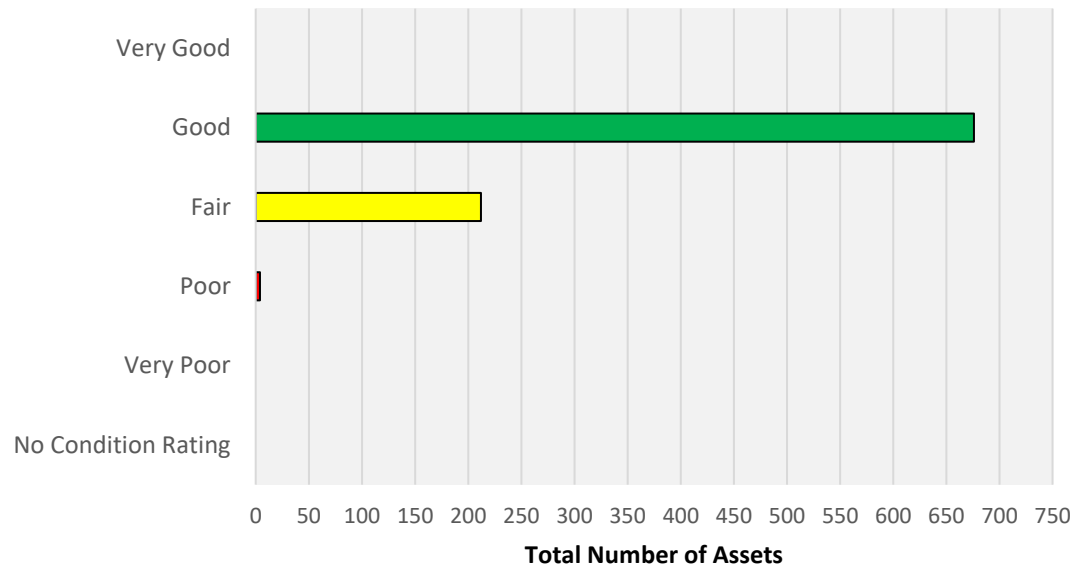
Regulatory & Warnings Sign assets were identified in the asset registry using a linear deterioration rate for each individual asset component. Condition ratings have been provided for each sign based on the last condition assessment of each sign.

### Replacement Cost Calculation:

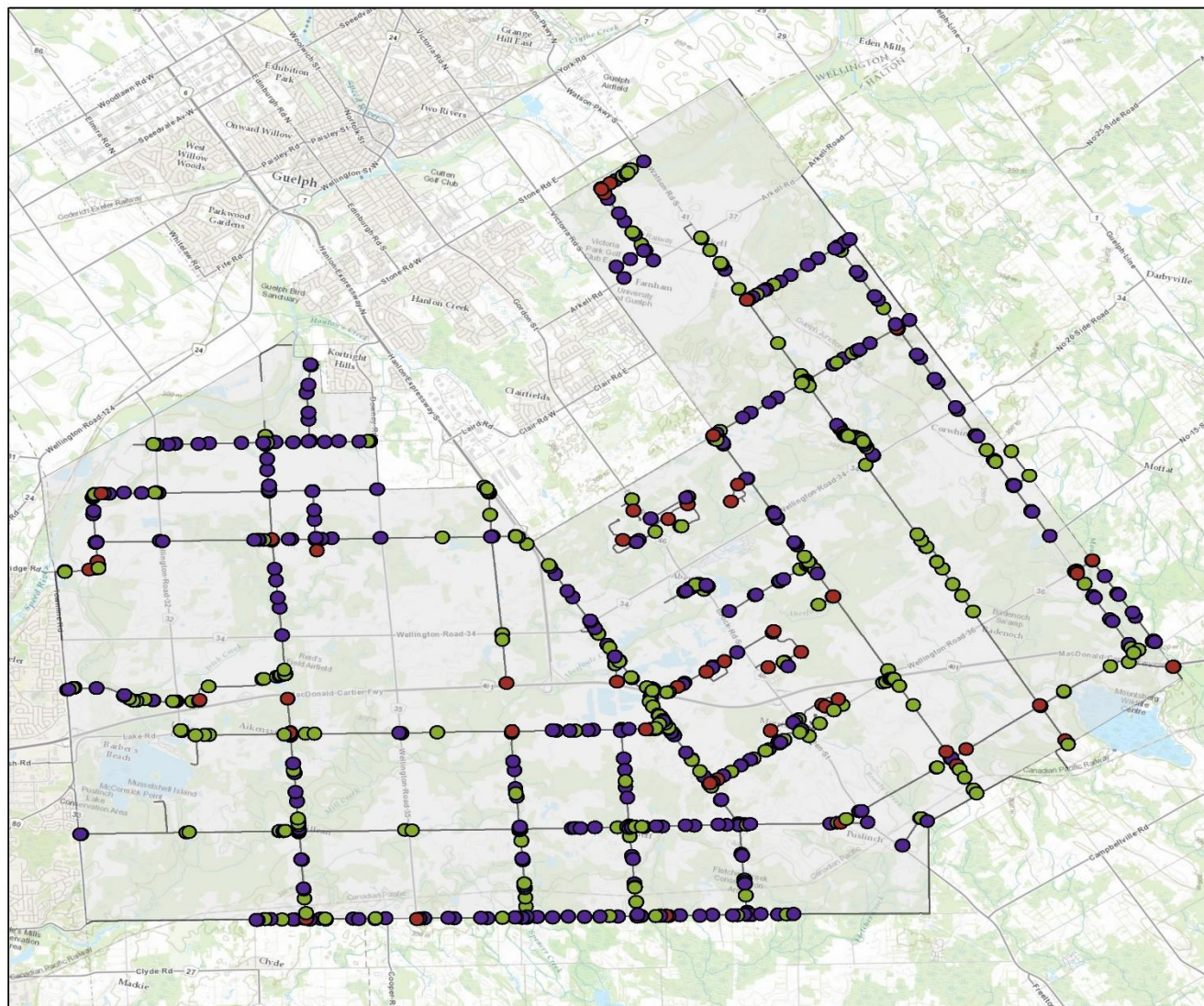
Each Regulatory or Warning Sign has been valued at 150\$ per sign based on the recommendations of staff.

### Source Documentation

Provided datasets by Township staff



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$600.00	\$31,800.00	\$101,400.00	\$-	\$133,800.00



**The Township of**  
**Puslinch**

Regulatory/Warning  
Sign  
Locations

This document has been created through consultation with Puslinch Staff for the 2019 Asset Management Plan.

## Sign Classification

- Priority
- Regulatory
- Warning



A horizontal scale bar with a black segment from 0 to 1.75 and a white segment from 1.75 to 3.5. The word "kilometres" is centered below the bar.

### 7.0 - 16 Regulatory/Warnings Sign Locations



## 7.20 Fire Equipment

### Lifecycle Management Methodology:

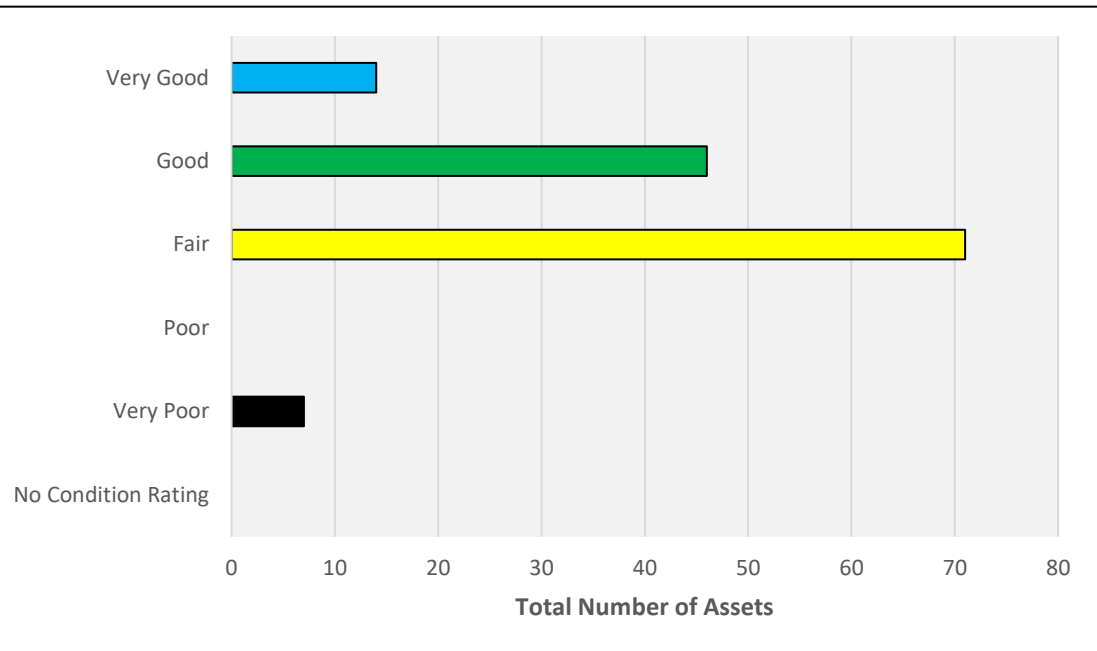
Fire Equipment assets were identified in the asset registry using the defined lifecycle attributes provided by Puslinch Township staff. Each Fire Equipment asset was given a condition rating based on the proximity to its defined end of service level or a pre-defined condition rating provided by the Township.

### Replacement Cost Calculation:

Replacement cost calculations for fire equipment assets have been sourced from Puslinch Township staff. Each asset has been individually assessed through tender documents in order to ensure reliable cost information.

### Source Documentation

Provided Datasets from Township.



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$73,500.00	\$-	\$196,100.00	\$361,350.00	\$69,990.00	\$700,940.00

## 7.21 Street Trees

### Lifecycle Management Methodology:

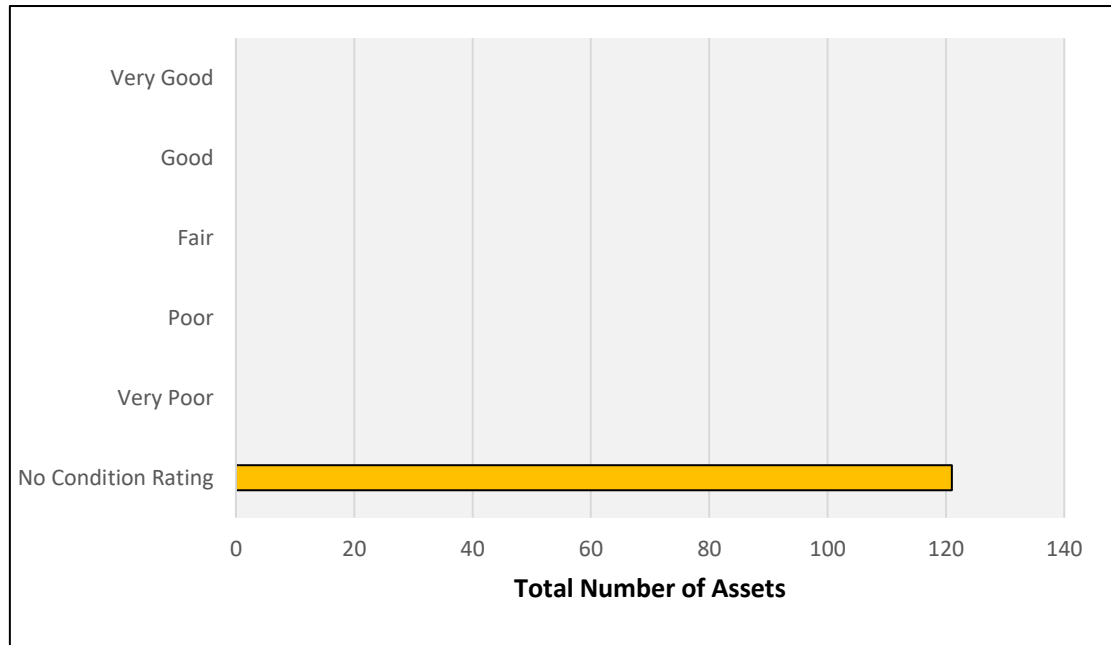
Street Tree assets were identified in the asset registry using a linear deterioration rate for each individual asset component. However, through this asset management plan it has been recognized that the data available for Street Trees is not sufficient for current or future use. For that reason, no condition data was recorded.

### Replacement Cost Calculation:

Replacement cost calculations for Street Tree assets have been sourced from Puslinch Township staff. Each asset has been individually assessed through tender documents in order to ensure reliable cost information. The price to replace each tree has been sourced from tender documentation from \$300 to \$700 depending on the species type.

### Source Documentation

Provided datasets by Township staff



Total Replacement Cost					
Very Poor	Poor	Fair	Good	Very Good	Total
\$-	\$-	\$-	\$-	\$-	\$61,429.00

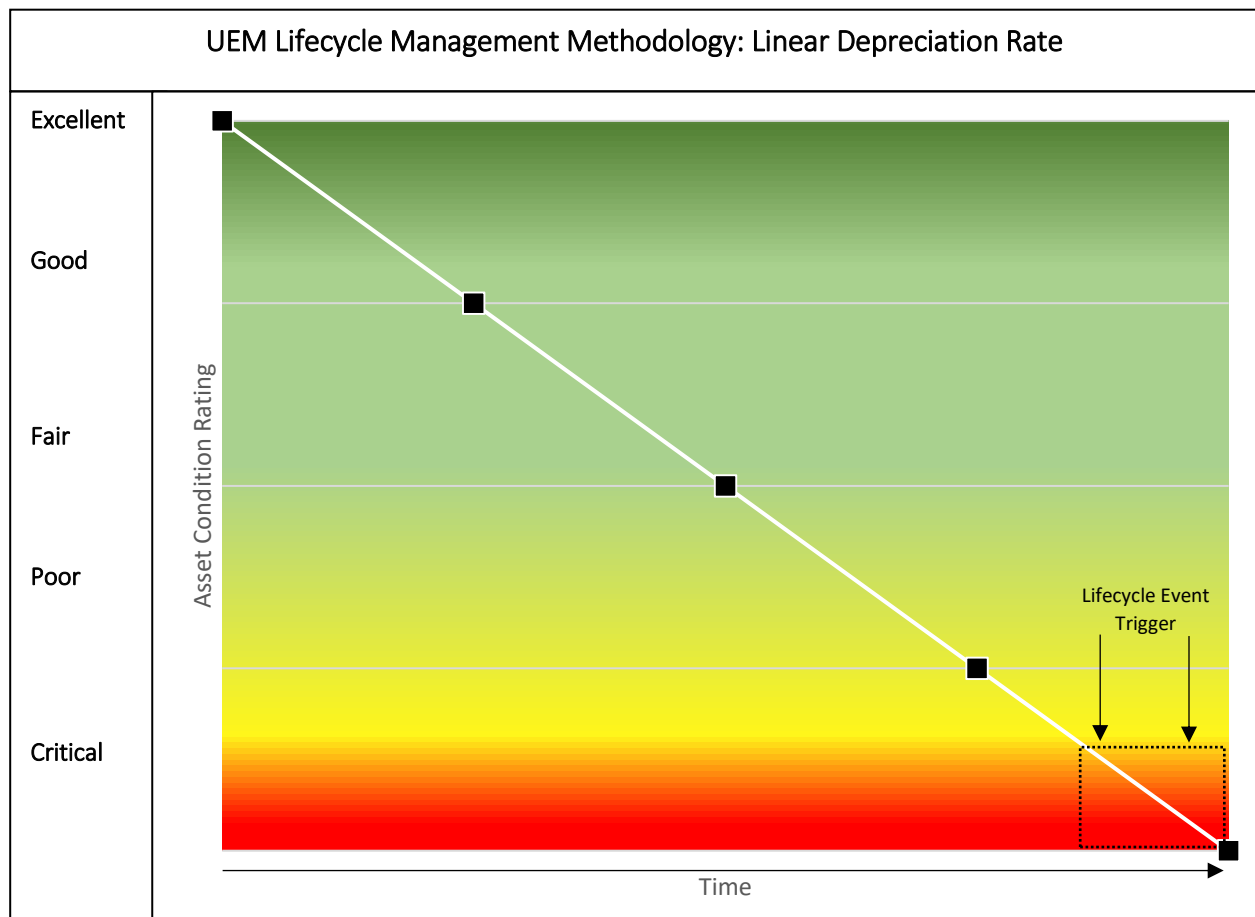
## 8.0 10 Year Capital Plan

### 8.1 Capital Plan: Summary

This 10 Year Capital Plan has been developed using the Asset Registry and through referencing documents provided by the Township described in Section 2.

### 8.2 Capital Plan: Lifecycle Management Methodology

As stated in the State of The Infrastructure section of this report, some asset classes were identified in the Asset Registry with a linear deterioration rate lifecycle management methodology. However, for other assets significant staff input was utilized to determine year of replacement. UEM defines manual asset lifecycle parameterization (staff intervention) as dynamic inputs. For this reason, this 10 Year Capital Plan had been developed to model both static (Linear Depreciation Rate) and dynamic inputs (Staff Intervention) to project capital expenditures for existing infrastructure for the Township of Puslinch.



8.0 - 2 Lifecycle Management Methodology

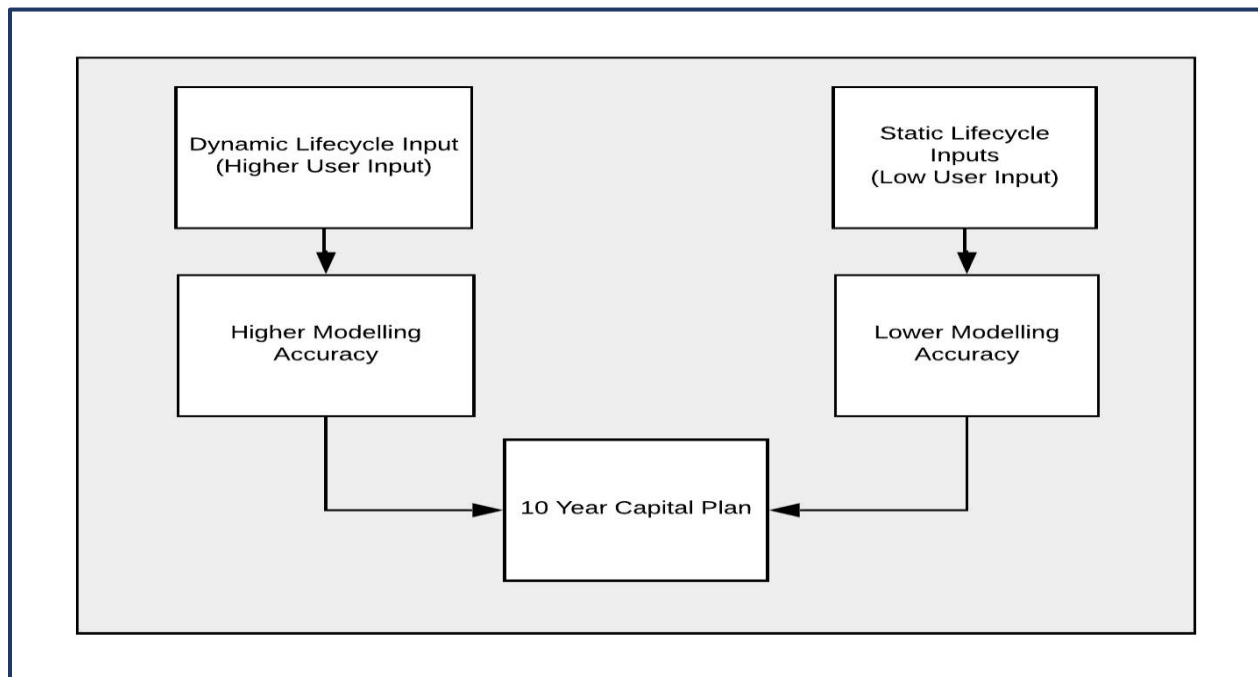
### 8.3 Static and Dynamic Inputs

Static inputs for this Asset Management Plan are defined as data attributes that have high levels of transferability to models. Furthermore, these inputs are user-defined at one point in time. For some assets, UEM employed a linear deterioration rate that incorporates condition, expected life, remediation costs/replacement costs, and installation date. These variables allow for seamless transferability to different modelling methods and softwares. These variables when loaded into a model create static results and are affixed to one point in time. The output is thus affixed to the inputs point of acquisition and have reduced reliability.

Dynamic inputs allow for the user to manually or systematically alter the attributes of the model's datasets. It can allow for highly accurate modelling outcomes but with high amounts of user intervention into the datasets. However, dynamically modelling may result in conflicting capital planning to the defined lifecycle attributes in the asset registry. Thus, a review of such asset classes that incorporate dynamic inputs have been summarized in the next page.

### 8.4 Static and Dynamic Inputs: Hard Surface Roads

Hard Surface Roads lifecycle activities follow a static methodology. Based on the proposed service level policy a lifecycle activity is only triggered based on class 4 and 5 roads reaching a PCI level of 60 (static input) and Class 3 roads reaching a PCI level of 65 (static inputs). Recognizing that Puslinch's informal road management policy is a combination of staff input and the known PCI rating; roads would have a combination of both staff input and the PCI rating (dynamic inputs). However, for this asset management plan only the proposed service level policy (Static) was considered for capital planning.



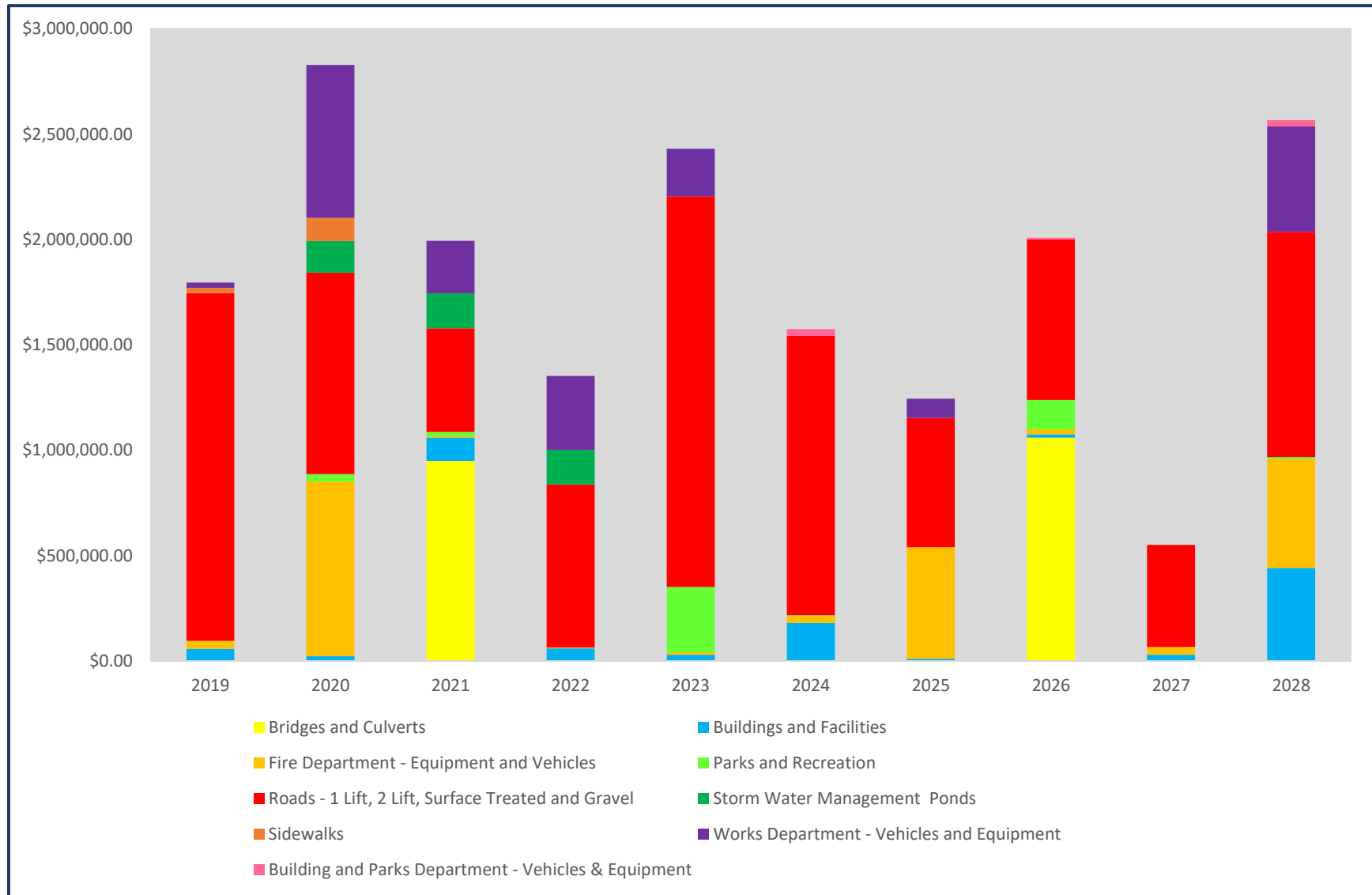
## 8.5 Input Mapping: 10 Year Capital Plan

The below chart summarizes the methodology (Static or Dynamic) for capital planning and forecasting of lifecycle events for all asset classes in the Township of Puslinch. Generally speaking, the majority of the assets incorporate static inputs and have reliable modelling outputs. However, there are some assets that do not have static inputs such as Fire Equipment, Storm Water Management Ponds and Fleet Assets. These asset classes either have lifecycle activities planned with no lifecycle attributes or through reference to a remediation schedule.

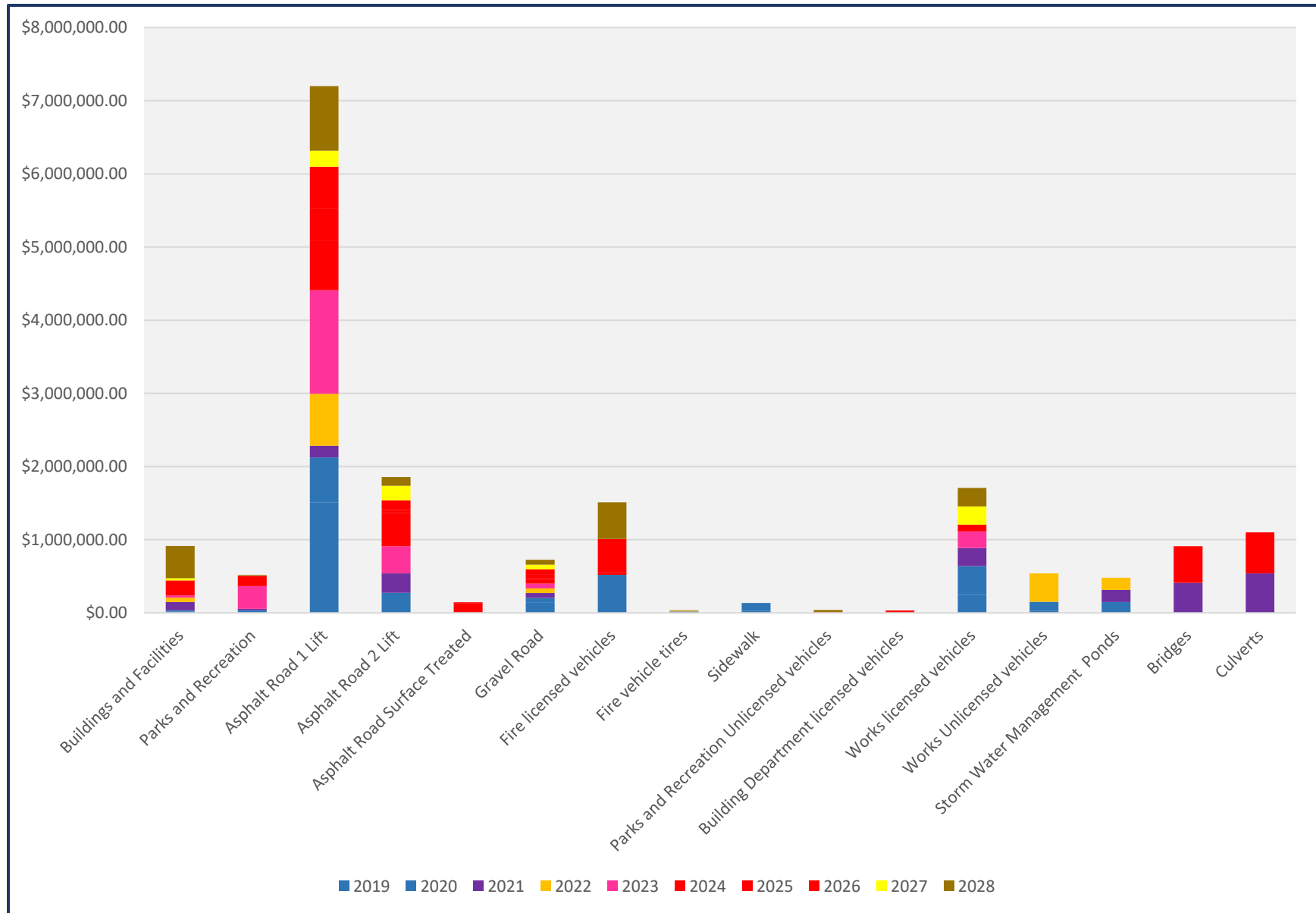
Asset Class	Static	Dynamic	Combination of Both
Bridges		✓	
Culverts		✓	
Buildings and Facilities		✓	
Fire Equipment			✓
Parks and Recreation		✓	
Asphalt Roads 1 Lift	✓		
Asphalt Roads 2 Lift	✓		
Asphalt Roads Surface Treated	✓		
Gravel Roads	✓		
Storm Water Management Ponds		✓	
Fire Licensed Vehicles			✓
Fire Vehicle Tires			✓
Works Licensed Vehicles			✓
Works Unlicensed Vehicles			✓
Parks and Recreation Unlicensed Vehicles & Building Department Licensed Vehicles			✓
Storm Sewers	✓		
Regulatory/ Warning Signs	✓		
Trees	✓		
Fire Reservoirs	✓		
Sidewalks			✓
Streetlight and Poles			✓

8.0 - 4 Capital Plan Modelling Logic: Puslinch Asset Classes

## 9.0 All Existing Infrastructure Included in 10 Year Capital Plan



9.0 - 1 All Existing Infrastructure Included in 10 Year Capital Plan Year Over Year



9.0 - 2 All Existing Infrastructure Included in 10 Year Capital Plan Asset Class Year over Year

# THE TOWNSHIP OF PUSLINCH ASSET MANAGEMENT PLAN

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Bridges			\$410,000.00					\$500,000.00			\$910,000.00
Culverts			\$540,000.00					\$560,000.00			\$1,100,000.00
Buildings and Facilities	\$57,750.00	\$22,000.00	\$110,000.00	\$60,000.00	\$30,000.00	\$181,250.00	\$10,000.00	\$15,000.00	\$30,000.00	\$442,087.00	\$958,087.00
Fire Equipment	\$21,000.00	\$308,650.00	\$6,000.00		\$12,000.00	\$9,000.00	\$61,500.00	\$24,000.00	\$37,000.00	\$12,000.00	\$491,150.00
Parks and Recreation		\$34,668.00	\$22,000.00		\$310,000.00	\$1,800.00		\$139,828.00		\$7,740.00	\$516,036.00
Asphalt Road 1 Lift	\$1,509,345.84	\$614,689.29	\$161,136.66	\$708,589.46	\$1,417,522.40	\$679,928.37	\$437,028.21	\$569,296.01	\$219,975.00	\$882,983.79	\$7,200,495.03
Asphalt Road 2 Lift		\$276,397.81	\$264,844.32		\$371,396.70	\$450,397.48	\$46,560.00	\$127,550.47	\$199,107.66	\$121,118.06	\$1,857,372.49
Asphalt Road Surface Treated						\$130,291.97	\$64,964.98				\$195,256.95
Gravel Road	\$140,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$725,000.00
Storm Water Management Ponds		\$150,000.00	\$165,000.00	\$165,000.00							\$480,000.00
Fire Licensed vehicles		\$520,000.00				\$23,000.00	\$468,000.00			\$500,000.00	\$1,511,000.00
Fire Vehicle Tires	\$17,146.00	\$1,650.00		\$4,116.00		\$1,650.00				\$5,538.00	\$30,100.00
Sidewalks	\$25,000.00	\$110,000.00									\$135,000.00
Works licensed vehicles		\$600,000.00	\$290,000.00		\$225,000.00		\$92,000.00			\$500,000.00	1,707,000.00
Works Unlicensed vehicles	\$26,000.00	\$125,000.00		\$350,000.00							\$501,000.00
Building Department Licensed Vehicles						\$33,000.00					\$33,000.00
Parks and Recreation Unlicensed Vehicles								\$8,000.00		\$30,000.00	\$38,000.00
Regulatory/Warning Signs											\$0
Street Lights											\$0
Street Trees											\$0
Storm Sewers											\$0
Fire Reservoirs											\$0
Total	\$1,796,241.84	\$2,828,055.09	\$2,033,980.98	\$1,352,705.46	\$2,430,919.10	\$1,575,317.82	\$1,245,053.20	\$2,008,674.48	\$551,082.66	\$2,566,466.85	\$18,388,497.48

## 9.0 - 3 Capital Plan Detailed Breakdown by Asset Classes



### 9.1 Existing Infrastructure not included in the 10 Year Capital Plan

As stated previously in Section 8 of this report - all asset classes that were included into the 10-year capital plan fell into one of three input categories for capital planning: Static, Dynamic or a Combination of Static and Dynamic Inputs. The Assets that are not included in the 10-year capital plan, though defined with either one of the three categories, did not meet the thresholds loaded in their lifecycle OR inspected condition is “Good” and therefore over-steps the defined lifecycle loaded into the asset registry.

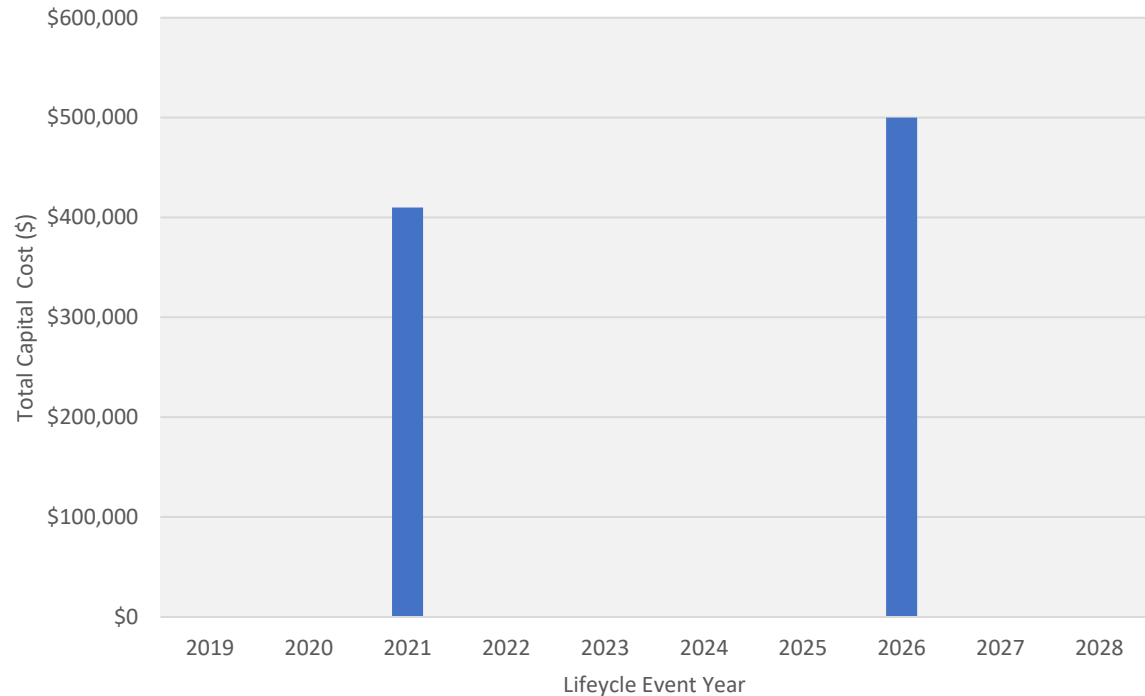
For example, all Fire Reservoir assets have been loaded with an expected life of 50 Years. Based on their construction date all of the Fire Reservoirs have a remaining life in excess of 10 years. Therefore, Fire Reservoirs are not included in the 10-year capital plan. If the asset management plan covered a period of 30 years, the majority of the Fire Reservoirs would be included in capital plan. This is because the majority of Fire Reservoirs would be reaching the end of their service life. This logic is consistent for all assets that have been not included into the 10-year capital plan.

**Note: In the following tables, the Life Expectancy column (L.E) has been described as L.E in order to reduce the size of the column.**

## 9.2 Bridges

### Capital Plan Summary

As Stated in the State of The Infrastructure section of this report, Bridges do not follow a linear deterioration rate for lifecycle events. Instead, they follow the schedule of the qualified engineer upon inspection of the Bridge. As of 2017, The Township of Puslinch employed an engineering consulting firm to do such inspections. The graph and table reflect the recommendations set out by the firm.



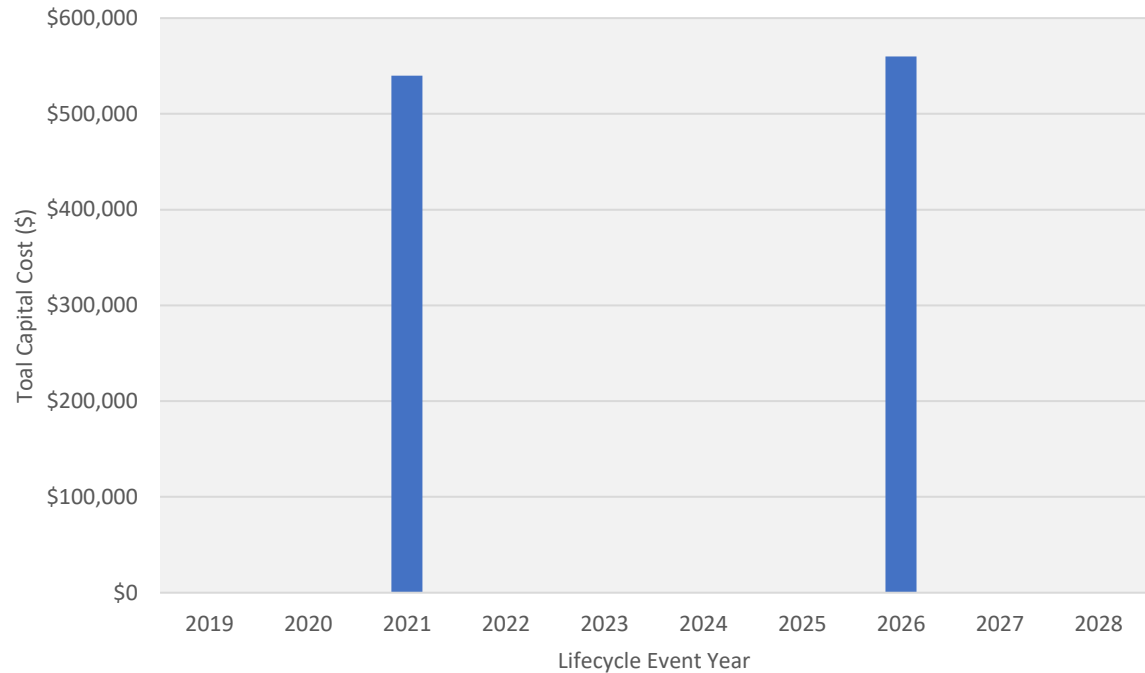
Total Capital Expenditure: \$910,000.00

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition (BCI)	Risk
1003	Bridge	Little's Bridge	50	2021	\$240,000.00	22	Very High
1008	Bridge	Galt Creek Bridge Gore Road Lot 2	50	2021	\$170,000.00	60	Very High
1004	Bridge	Moyer's Bridge	50	2026	\$500,000.00	63	Very High

### 9.3 Culverts

#### Capital Plan Summary

As Stated in the State of The Infrastructure section of this report, Culverts do not follow a linear deterioration rate for lifecycle events. Instead, they follow the schedule of the qualified engineer upon inspection of the Culvert. As of 2017, The Township of Puslinch employed an engineering consulting firm to do such inspections. The graph and table reflect the recommendations set out by the firm.



Total Capital Expenditure: \$1,100,000.00

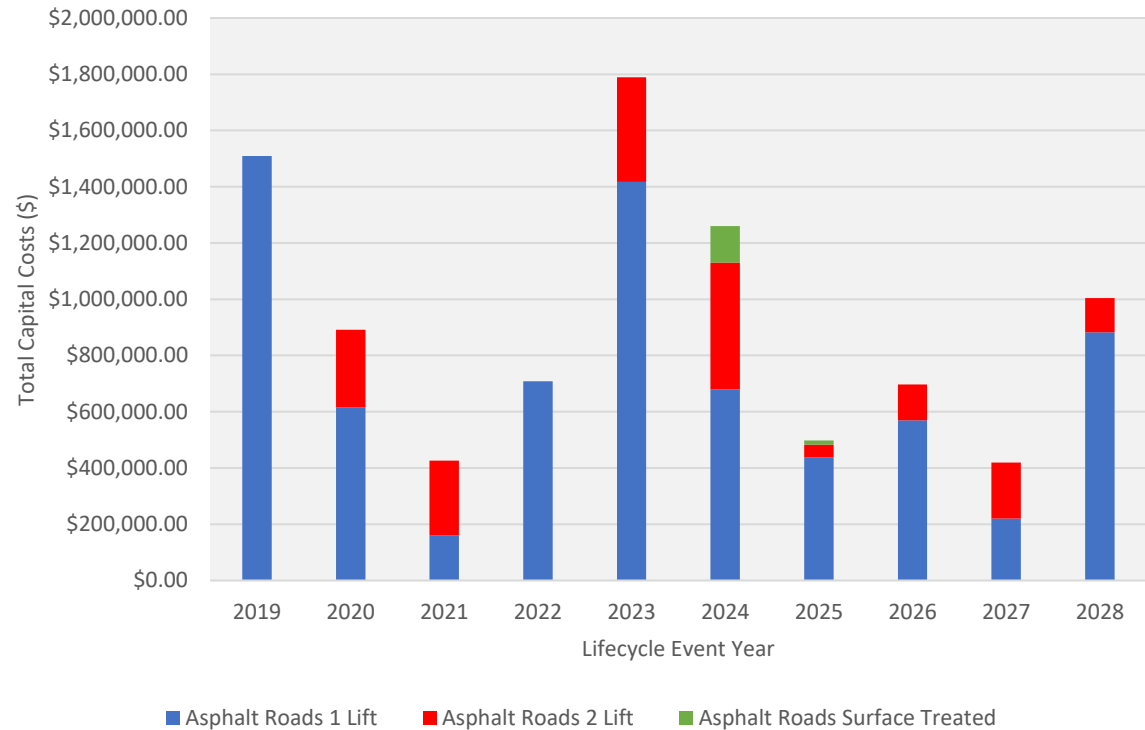
Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition (BCI)	Risk
2009	Culvert	Gilmour Rd Culvert Over Aberfoyle Creek	50	2021	\$540,000.00	50	Very High
2006	Culvert	Victoria Road Culvert Over Galt Creek	50	2026	\$65,000.00	72	Very High
2007	Culvert	Irish Creek Culvert on Townline Road	50	2026	\$180,000.00	57	Very High
2010	Culvert	Ellis Road Culvert Over Puslinch Lake Irish Creek	50	2026	\$250,000.00	43	Very High
2013	Culvert	Victoria Road Culvert North of Leslie	50	2026	\$65,000.00	70	Very High

## 9.4 Hard Surface Roads – 1 Lift, 2 Lift, and Surface Treated

### Capital Plan Summary

As illustrated in the state of Infrastructure section of this report, Hard Surface Roads follow a linear deterioration rate for lifecycle events. The rate of deterioration is 2 PCI points per year where 100 is “Excellent” and “Critical” is 60. For this capital plan, class 3 roads remediation PCI are 65, class 4 and 5 roads are 60.

Surface Treated roadways were as well modelled to deteriorate 6 points per year. This works out to lifecycle events being triggered every 7 years.



Total Capital Expenditure: \$9,253,123.63

### Capital Plan Summary Static and Dynamic Inputs

The Township has recognized that a linear deterioration rate for road assets is not the best lifecycle management methodology due to variable road conditions, traffic volumes, and weather. Further, a static input such as a PCI gives lower quality data confidence when modelling for longer term trends. Thus, the Township through its own management practices has optimized its decisions making methodology through the implementation of the dynamic inputs through regular visual inspections to verify the condition of the paved surface and plan for capital expenditures accordingly.

Note: The condition Data (PCI) described in the following table is as of the year 2018.

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Road Class	Condition Index (2018)	Risk
137	Asphalt Road 1 Lift	Watson Road South Resurfacing	25	2019	\$435,057	3	64	Very High
133	Asphalt Road 1 Lift	Watson Road South Resurfacing	25	2019	\$103,795	3	65	Very High
139	Asphalt Road 1 Lift	Watson Road South Resurfacing	25	2019	\$214,310	3	66	Very High
124	Asphalt Road 1 Lift	Victoria Road South Resurfacing	25	2019	\$304,917	3	62	Very High
125A	Asphalt Road 1 Lift	Victoria Road South Resurfacing	25	2019	\$63,753	3	62	Very High
134	Asphalt Road 1 Lift	Watson Road South Resurfacing	25	2019	\$64,906	3	66	Very High
135	Asphalt Road 1 Lift	Watson Road South Resurfacing	25	2019	\$60,251	3	66	Very High
136	Asphalt Road 1 Lift	Watson Road South Resurfacing	25	2019	\$89,556	3	66	Very High
140	Asphalt Road 1 Lift	Watson Road South Resurfacing	25	2019	\$172,801	3	66	Very High
58	Asphalt Road 1 Lift	Concession 4 Resurfacing	25	2020	\$129,704	4	64	Very High
56	Asphalt Road 1 Lift	Concession 4 Resurfacing	25	2020	\$217,480	4	64	Very High
6	Asphalt Road 1 Lift	Gore Road Resurfacing	25	2020	\$50,337	4	64	Very High
40_SURFACE	Asphalt Road 2 Lift	McLean Road West Resurfacing	25	2020	\$276,398	3	68	Very High
1	Asphalt Road 1 Lift	Gore Road Resurfacing	25	2020	\$217,168	4	64	Very High

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Road Class	Condition Index (2018)	Risk
52	Asphalt Road 1 Lift	Maple Leaf Lane Resurfacing	25	2021	\$74,719	5	65	Very High
57	Asphalt Road 1 Lift	Concession 4 Resurfacing	25	2021	\$86,417	4	65	Very High
165_SURFACE	Asphalt Road 2 Lift	McLean Road/Concession 7 Resurfacing	25	2021	\$115,798	3	72	Very High
164_SURFACE	Asphalt Road 2 Lift	McLean Road/Concession 7 Resurfacing	25	2021	\$149,046	3	72	Very High
15	Asphalt Road 1 Lift	Concession 1 Resurfacing	25	2022	\$217,671	4	67	Very High
121B	Asphalt Road 1 Lift	Maddaugh Road Resurfacing	25	2022	\$26,658	4	67	Very High
121A	Asphalt Road 1 Lift	Maddaugh Road Resurfacing	25	2022	\$25,594	4	67	Very High
59	Asphalt Road 1 Lift	Concession 4 Resurfacing	25	2022	\$217,097	4	67	Very High
88	Asphalt Road 1 Lift	Townline Road Resurfacing	25	2022	\$153,119	4	68	Very High
158	Asphalt Road 1 Lift	McLean Road East Resurfacing	25	2022	\$68,451	4	67	Very High
148	Asphalt Road 1 Lift	Puslinch-Flamborough Townline Resurfacing	25	2023	\$31,635	5	69	Very High
90	Asphalt Road 1 Lift	Roszell Road Resurfacing	25	2023	\$104,314	4	68	Very High
63B	Asphalt Road 1 Lift	Maltby Road East Resurfacing	25	2023	\$106,047	4	70	Very High

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Road Class	Condition Index (2018)	Risk
54A	Asphalt Road 1 Lift	Roszell Road 2013 Resurfacing	25	2023	\$138,648	4	68	Very High
25	Asphalt Road 1 Lift	Leslie Road West Resurfacing	25	2023	\$106,699	4	69	Very High
23	Asphalt Road 1 Lift	Leslie Road West Resurfacing	25	2023	\$128,411	4	69	Very High
22	Asphalt Road 1 Lift	Leslie Road West Resurfacing	25	2023	\$56,595	4	69	Very High
115	Asphalt Road 2 Lift	Concession 7 Resurfacing	25	2023	\$59,774	3	76	High
116	Asphalt Road 2 Lift	Concession 7 Resurfacing	25	2023	\$43,396	3	76	High
97	Asphalt Road 1 Lift	Sideroad 10 North Resurfacing	25	2023	\$108,921	4	69	Very High
17	Asphalt Road 1 Lift	Concession 1 Resurfacing	25	2023	\$216,762	4	69	Very High
204_SURFACE	Asphalt Road 2 Lift	Bridle Path Resurfacing	25	2023	\$155,794	5	70	Very High
63A	Asphalt Road 1 Lift	Maltby Road East Resurfacing	25	2023	\$106,960	4	70	Very High
185_SURFACE	Asphalt Road 2 Lift	Bridle Path Resurfacing	25	2023	\$62,266	5	70	Very High
212B_SURFACE	Asphalt Road 2 Lift	Winer Road Resurfacing	25	2023	\$50,167	4	70	Very High
212A	Asphalt Road 1 Lift	Winer Road Resurfacing	25	2023	\$62,387	4	70	Very High
108	Asphalt Road 1 Lift	Sideroad 20 North Resurfacing	25	2023	\$214,744	4	69	Very High

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Road Class	Condition Index (2018)	Risk
132	Asphalt Road 1 Lift	McRae Station Road Resurfacing	25	2023	\$35,397	3	74	Very High
71	Asphalt Road 1 Lift	Laird Road West Resurfacing	25	2024	\$42,000	4	70	Very High
18	Asphalt Road 1 Lift	Concession 1/Leslie Rd W Resurfacing	25	2024	\$255,663	4	72	Very High
19	Asphalt Road 1 Lift	Concession 1 Resurfacing	25	2024	\$48,441	4	72	Very High
4	Asphalt Road 1 Lift	Gore Road Resurfacing	25	2024	\$136,801	4	71	Very High
28_SURFACE	Asphalt Road 2 Lift	Victoria Street and Church Street Resurfacing	25	2024	\$39,461	5	71	Very High
5	Asphalt Road 1 Lift	Gore Road Resurfacing	25	2024	\$80,119	4	70	Very High
153	Asphalt Road Surface Treated	Nassagaweya-Puslinch Townline Resurfacing	7	2024	\$54,921	4	98	Medium
154	Asphalt Road Surface Treated	Nassagaweya-Puslinch Townline Resurfacing	7	2024	\$28,974	4	98	Medium
120	Asphalt Road Surface Treated	Maddaugh Road Resurfacing	7	2024	\$24,785	4	67	Very High
36	Asphalt Road 2 Lift	Concession 2/2A Resurfacing	25	2024	\$124,716	3	77	High
35	Asphalt Road 2 Lift	Concession 2 Resurfacing	25	2024	\$286,221	3	77	High
166	Asphalt Road 1 Lift	Sideroad 20 North Resurfacing	25	2024	\$116,905	4	72	Very High



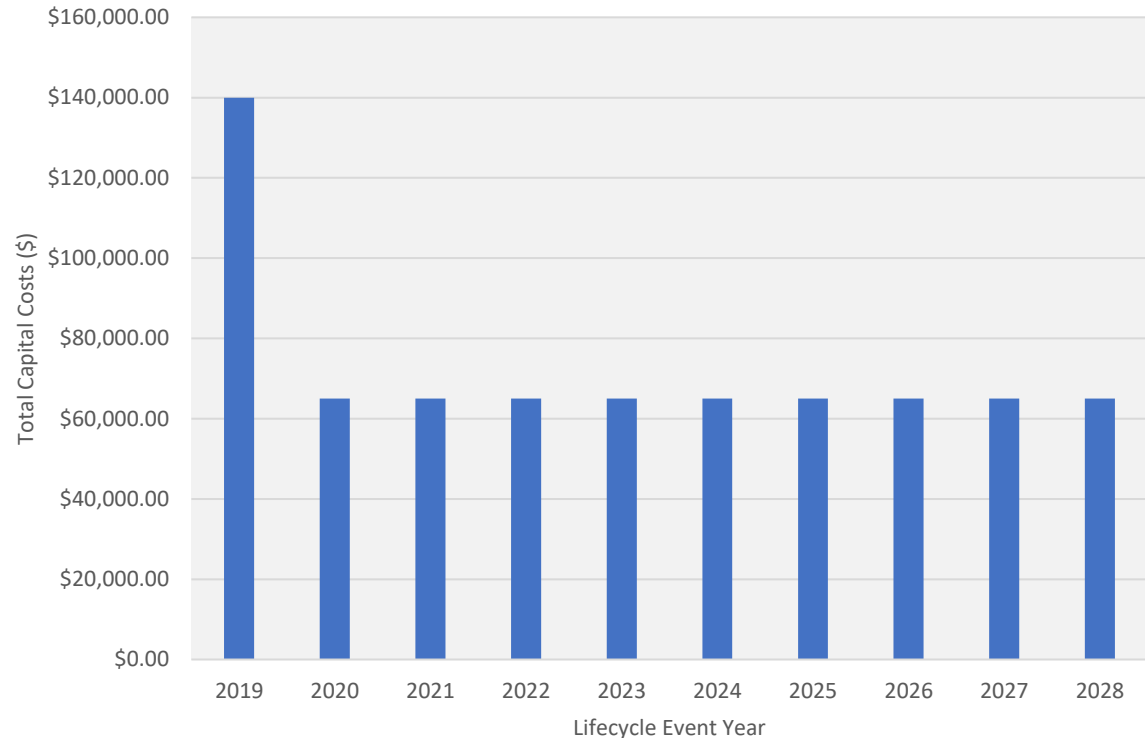
Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Road Class	Condition Index (2018)	Risk
155	Asphalt Road Surface Treated	Nassagaweya-Puslinch Townline Resurfacing	7	2024	\$21,613	4	98	Medium
16	Asphalt Road 1 Lift	Concession 1 Resurfacing	25	2025	\$216,474	4	73	Very High
51_SURFACE	Asphalt Road 2 Lift	Old Brock Road Resurfacing	25	2025	\$46,560	5	73	Very High
7	Asphalt Road Surface Treated	Gore Road Resurfacing	7	2025	\$64,964	4	64	Very High
32	Asphalt Road 1 Lift	Concession 2 Resurfacing	25	2025	\$220,555	4	74	Very High
195	Asphalt Road 2 Lift	Deer View Ridge Resurfacing	25	2026	\$92,917	5	76	High
48	Asphalt Road 1 Lift	Smith Road Resurfacing	25	2026	\$34,843	5	76	High
21	Asphalt Road 1 Lift	Leslie Road West Resurfacing	25	2026	\$211,570	4	76	High
14	Asphalt Road 1 Lift	Concession 1 Resurfacing	25	2026	\$217,139	4	75	High
46_SURFACE	Asphalt Road 2 Lift	Gilmour Road Resurfacing	25	2026	\$34,634	4	75	Very High
160	Asphalt Road 1 Lift	Concession 4 Resurfacing	25	2026	\$46,904	4	75	Very High
161	Asphalt Road 1 Lift	Concession 4 Resurfacing	25	2026	\$35,472	4	75	Very High
38	Asphalt Road 1 Lift	Mason Road Resurfacing	25	2026	\$23,369	5	74	Very High
205	Asphalt Road 2 Lift	Fox Run Drive Resurfacing	25	2027	\$32,823	5	77	High

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Road Class	Condition Index (2018)	Risk
196	Asphalt Road 2 Lift	Fox Run Drive Resurfacing	25	2027	\$57,549	5	77	High
206	Asphalt Road 2 Lift	Fox Run Drive Resurfacing	25	2027	\$17,412	5	77	High
34	Asphalt Road 1 Lift	Concession 2 Resurfacing	25	2027	\$219,975	4	77	High
207	Asphalt Road 2 Lift	Fox Run Drive Resurfacing	25	2027	\$91,324	5	77	High
30	Asphalt Road 1 Lift	Main St And Back Resurfacing	25	2028	\$36,264	5	80	High
190	Asphalt Road 2 Lift	Telfer Glen Resurfacing	25	2028	\$97,421	5	80	High
9	Asphalt Road 1 Lift	Puslinch-Flamborough Townline Resurfacing	25	2028	\$56,748	4	79	High
10	Asphalt Road 1 Lift	Puslinch-Flamborough Townline Resurfacing	25	2028	\$69,805	4	79	High
214	Asphalt Road 2 Lift	Beiber Road Resurfacing	25	2028	\$23,697	5	79	High
13A	Asphalt Road 1 Lift	Concession 1 Resurfacing	25	2028	\$333,716	4	79	High
96	Asphalt Road 1 Lift	Sideroad 10 North Resurfacing	25	2028	\$105,000	4	78	High
78	Asphalt Road 1 Lift	Niska Road Resurfacing	25	2028	\$63,744	3	85	High
126	Asphalt Road 1 Lift	Victoria Road South Resurfacing	25	2028	\$217,705	3	85	High

## 9.5 Gravel Roads

### Capital Plan Summary

Gravel Road surfaces have been assumed to require \$65,000 of maintenance expenditures annually. This cost is consistent despite weather or traffic volumes. The graph illustrates this linear expenditure over the next 10-year period amounting to \$650,000. Additionally, in 2019, the Township has approved a gravel road conversion project and a gravel road study which amounts to 75,000\$.



**Total Capital Expenditure: \$725,000**

### Capital Plan Summary Static and Dynamic Inputs

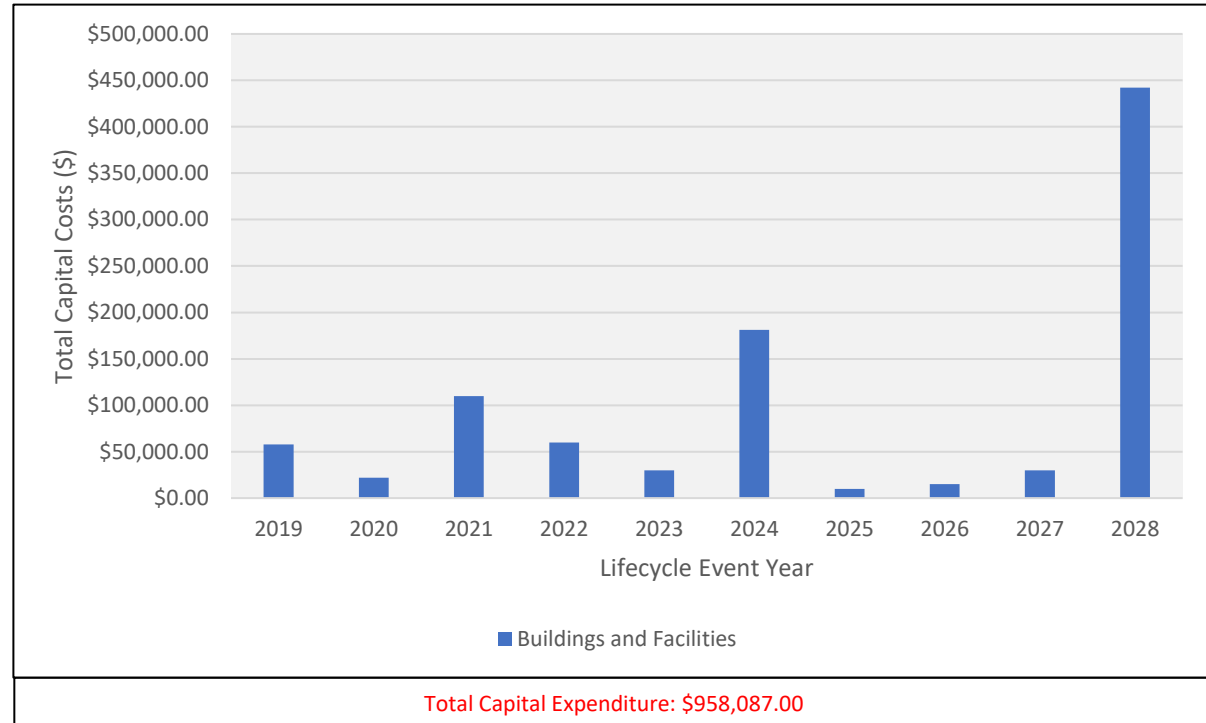
The capital expenditures for gravel roads are static inputs as they do not incorporate expected costs from increased or decreased volumes, or volatile weather conditions. UEM has assumed that the Township manages each gravel road equally and repairs each road according to staff understood deterioration triggers such as grading events and dust control events. As stated in the service level policy for gravel roads each road segment should be monitored more closely to acquire a greater detail of rate of decay of each segment and as well attempt to quantify the maintenance expenditures associated with each segments' lifecycle management.

Asset #	Asset Class	Lifecycle Event Description	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
<b>GRM</b>	Gravel Road	Gravel Road Study	2019	\$25,000		Medium
<b>144</b>	Gravel Road	Drainage and Repave of Road Surface (Conversion Project)	2019	\$50,000	90	High
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2019	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2020	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2021	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2022	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2023	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2024	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2025	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2026	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2027	\$65,000		Medium
<b>GRM</b>	Gravel Road	Gravel Road Maintenance - no asset # to reference	2028	\$65,000		Medium

## 9.6 Buildings and Facilities

### Capital Plan Summary

As Stated in the State of The Infrastructure section of this report, Buildings and Facilities do not follow a linear deterioration rate for lifecycle events. Instead, Buildings and Facilities follow the schedule of the qualified engineer upon inspection of the Building or Facility. As of 2014, The Township employed an engineering consulting firm to do such inspections, the graph and table reflects the recommended remediation schedule set out by the firm.



Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
4002	Buildings and Facilities	Computer Replacement	5	2019	\$10,000.00	5	Low
4001	Buildings and Facilities	Server Replacement	5	2019	\$42,000.00	5	Low
26PCC	Buildings and Facilities	Replacement of Exterior Lighting c/w wiring	40	2019	\$5,000.00	5	Low
59MC	Buildings and Facilities	Replacement of Roads Department Circulating Fans.	40	2019	\$750.00	5	Low
59MC	Buildings and Facilities	Replacement of Hot Water Tank	40	2020	\$5,000.00	5	Low

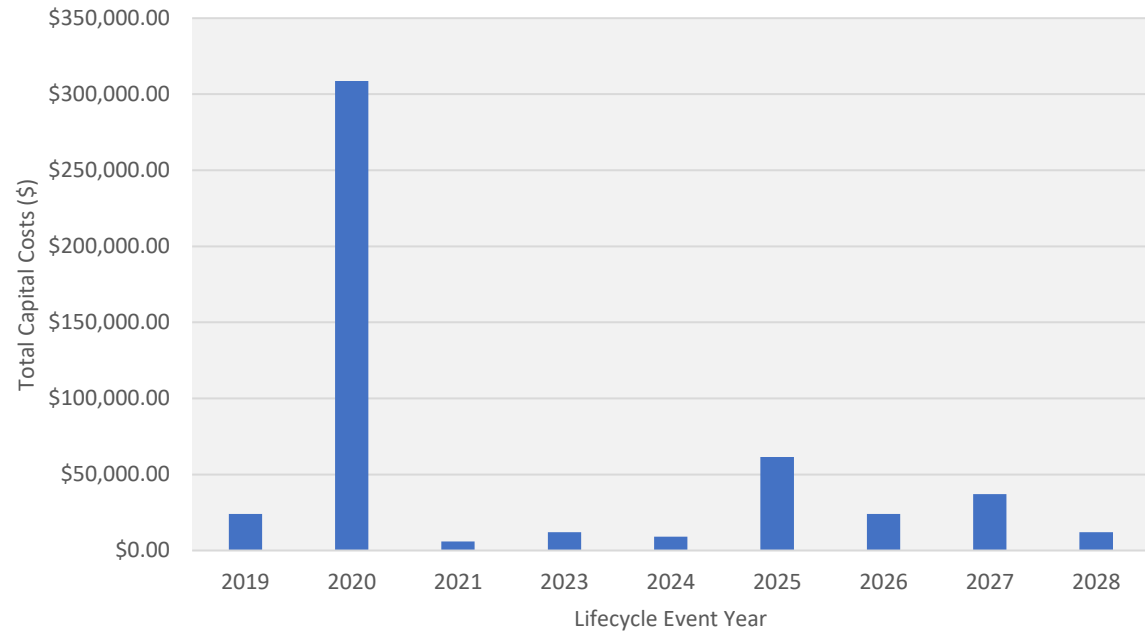
Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
59MC	Buildings and Facilities	Replacement of condenser units CU-3, CU-4 - Fire area	40	2020	\$7,000.00	5	Low
4002	Buildings and Facilities	Computer Replacement	5	2020	\$10,000.00	5	Low
46PCC	Buildings and Facilities	New cabinets, dishwasher replacement, fridge replacement, flooring, bar door, bar counter, and kitchen washroom.	40	2021	\$100,000.00	5	Low
4002	Buildings and Facilities	Computer Replacement	5	2021	\$10,000.00	5	Low
4002	Buildings and Facilities	Computer Replacement	5	2022	\$10,000.00	5	Low
59MC	Buildings and Facilities	Replacement of HRV Unit	40	2022	\$5,000.00	5	Low
4004	Buildings and Facilities	Microsoft Office License Upgrades	5	2022	\$15,000.00	5	Low
59MC	Buildings and Facilities	Condenser Units FU-1, FU-2, CU-1, CU2	40	2022	\$20,000.00	5	Low
59MC	Buildings and Facilities	Replacement of Municipal Offices Damper Control System	40	2022	\$10,000.00	5	Low
4002	Buildings and Facilities	Computer Replacement	5	2023	\$10,000.00	5	Low
21MC	Buildings and Facilities	Power Distribution Equipment (feeders, panels, main disconnect switch)	40	2023	\$20,000.00	5	Low
93PCC	Buildings and Facilities	Replacement of sanitary pumps and control system	40	2024	\$5,000.00	5	Low
59MC	Buildings and Facilities	Replacement of Roads Department Gas Fired Infra-Red Heaters	40	2024	\$6,000.00	5	Low
59MC	Buildings and Facilities	Replacement of UV Water Treatment System	40	2024	\$10,000.00	5	Low
40PCC	Buildings and Facilities	Fire extinguishers	40	2024	\$750.00	5	Low
93PCC	Buildings and Facilities	Replacement of Water Treatment Equipment	40	2024	\$7,500.00	5	Low
46MC	Buildings and Facilities	Window and door replacement	20	2024	\$100,000.00	4	Medium
4001	Buildings and Facilities	Server Replacement	5	2024	\$42,000.00	5	Low

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
4002	Buildings and Facilities	Computer Replacement	5	2024	\$10,000.00	5	Low
4002	Buildings and Facilities	Computer Replacement	5	2025	\$10,000.00	5	Low
93PCC	Buildings and Facilities	Replacement of Existing Commercial Hot Water Tank (Rheem)	40	2026	\$5,000.00	5	Low
4002	Buildings and Facilities	Computer Replacement	5	2026	\$10,000.00	5	Low
4004	Buildings and Facilities	Microsoft Office License Upgrades	5	2027	\$15,000.00	5	Low
4002	Buildings and Facilities	Computer Replacement	5	2027	\$10,000.00	5	Low
93PCC	Buildings and Facilities	Rebalancing of the HVAC System	40	2027	\$5,000.00	5	Low
56MC	Buildings and Facilities	Replace metal roofing panels	40	2028	\$125,000.00	5	Low
71BSBBP CC	Buildings and Facilities	Blue Storage Building Behind PCC Roof Rehabilitation	40	2028	\$30,000.00	3	Medium
67PCC	Buildings and Facilities	Replace metal roofing panels	40	2028	\$100,000.00	5	Low
15002	Buildings and Facilities	Municipal Complex: Parking Lot Municipal Complex	25	2028	\$162,750.00	2	Medium
4002	Buildings and Facilities	Computer Replacement	5	2028	\$10,000.00	5	Low
95RSB	Buildings and Facilities	Roads Storage Building Roof Rehabilitation	40	2028	\$14,337.00	4	Medium

## 9.7 Fire Equipment

### Capital Plan Summary

The Township of Puslinch through its internal resources created a remediation schedule for all known Fire Equipment assets. For the majority of the assets the replacement year is triggered by its end of life (linear deterioration rate). However, for some assets staff intervention dynamic inputs were applied to the replacement date and have been incorporated into the model.



Total Capital Expenditure: \$491,150.00

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition (2018)	Risk
67_60FE	Fire Equipment	Bunker Gear #395 1307006351 1104007407	10	2019	\$3,000.00	1	Very High
8_93FE	Fire Equipment	Thermal Imaging Camera	10	2019	\$6,000.00	1	Very High
66_21FE	Fire Equipment	Bunker Gear #317 907001148 907001150	10	2019	\$3,000.00	1	Very High
68_80FE	Fire Equipment	Bunker Gear #376 1104007399 3707960	10	2019	\$3,000.00	1	Very High
69_51FE	Fire Equipment	Bunker Gear #386 1104007401 907001149	10	2019	\$3,000.00	1	Very High
FE_122_1	Fire Equipment	Bunker Gear #351	10	2019	\$3,000.00	1	Very High



Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition (2018)	Risk
52_95FE	Fire Equipment	Air Cylinder:347	15	2020	\$1,500.00	3	High
65_29FVT	Fire Equipment	Fire Hawk M7	15	2020	\$7,450.00	4	Medium
40_31FE	Fire Equipment	Air Cylinder:334	15	2020	\$1,500.00	3	High
41_37FE	Fire Equipment	Air Cylinder:335	15	2020	\$1,500.00	3	High
42_79FE	Fire Equipment	Air Cylinder:336	15	2020	\$1,500.00	3	High
43_107FE	Fire Equipment	Air Cylinder:337	15	2020	\$1,500.00	3	High
44_55FE	Fire Equipment	Air Cylinder:339	15	2020	\$1,500.00	3	High
45_27FE	Fire Equipment	Air Cylinder:340	15	2020	\$1,500.00	3	High
46_91FE	Fire Equipment	Air Cylinder:341	15	2020	\$1,500.00	3	High
47_55FE	Fire Equipment	Air Cylinder:342	15	2020	\$1,500.00	3	High
48_109FE	Fire Equipment	Air Cylinder:343	15	2020	\$1,500.00	3	High
49_104FE	Fire Equipment	Air Cylinder:344	15	2020	\$1,500.00	3	High
38_15FE	Fire Equipment	Air Cylinder:320	15	2020	\$1,500.00	3	High
51_94FE	Fire Equipment	Air Cylinder:346	15	2020	\$1,500.00	3	High
37_107FE	Fire Equipment	Air Cylinder:319	15	2020	\$1,500.00	3	High
53_40FE	Fire Equipment	Air Cylinder:348	15	2020	\$1,500.00	3	High
54_31FE	Fire Equipment	Air Cylinder:349	15	2020	\$1,500.00	3	High
55_41FE	Fire Equipment	Air Cylinder:350	15	2020	\$1,500.00	3	High
56_58FE	Fire Equipment	Air Cylinder:351	15	2020	\$1,500.00	3	High
57_105FE	Fire Equipment	Air Cylinder:352	15	2020	\$1,500.00	3	High
58_88FE	Fire Equipment	Air Cylinder:353	15	2020	\$1,500.00	3	High
59_35FE	Fire Equipment	Air Cylinder:354	15	2020	\$1,500.00	3	High
60_57FE	Fire Equipment	Air Cylinder:355	15	2020	\$1,500.00	3	High
61_17FE	Fire Equipment	Air Cylinder:356	15	2020	\$1,500.00	3	High
65_4FE	Fire Equipment	Air Cylinder:360	15	2020	\$1,500.00	3	High
63_48FE	Fire Equipment	Air Cylinder:358	15	2020	\$1,500.00	3	High
72_79FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
50_57FE	Fire Equipment	Air Cylinder:345	15	2020	\$1,500.00	3	High
24_94FE	Fire Equipment	Air Cylinder:106	15	2020	\$1,500.00	3	High
6_70FE	Fire Equipment	Power Hydraulic Tool set	20	2020	\$52,500.00	1	Very High
66_17FVT	Fire Equipment	Fire Hawk M7	15	2020	\$7,450.00	4	Medium

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition (2018)	Risk
11_103FE	Fire Equipment	Rapid Deployment Water Craft	10	2020	\$6,000.00	4	Medium
14_25FE	Fire Equipment	Air Cylinder:84	15	2020	\$1,500.00	3	High
15_87FE	Fire Equipment	Air Cylinder:85	15	2020	\$1,500.00	3	High
16_87FE	Fire Equipment	Air Cylinder:87	15	2020	\$1,500.00	3	High
17_76FE	Fire Equipment	Air Cylinder:88	15	2020	\$1,500.00	3	High
18_90FE	Fire Equipment	Air Cylinder:100	15	2020	\$1,500.00	3	High
19_90FE	Fire Equipment	Air Cylinder:101	15	2020	\$1,500.00	3	High
20_85FE	Fire Equipment	Air Cylinder:102	15	2020	\$1,500.00	3	High
21_85FE	Fire Equipment	Air Cylinder:103	15	2020	\$1,500.00	3	High
39_99FE	Fire Equipment	Air Cylinder:323	15	2020	\$1,500.00	3	High
23_42FE	Fire Equipment	Air Cylinder:105	15	2020	\$1,500.00	3	High
64_106FE	Fire Equipment	Air Cylinder:359	15	2020	\$1,500.00	3	High
25_35FE	Fire Equipment	Air Cylinder:107	15	2020	\$1,500.00	3	High
26_23FE	Fire Equipment	Air Cylinder:108	15	2020	\$1,500.00	3	High
27_67FE	Fire Equipment	Air Cylinder:109	15	2020	\$1,500.00	3	High
28_48FE	Fire Equipment	Air Cylinder:310	15	2020	\$1,500.00	3	High
29_64FE	Fire Equipment	Air Cylinder:311	15	2020	\$1,500.00	3	High
30_89FE	Fire Equipment	Air Cylinder:312	15	2020	\$1,500.00	3	High
31_89FE	Fire Equipment	Air Cylinder:313	15	2020	\$1,500.00	3	High
32_104FE	Fire Equipment	Air Cylinder:314	15	2020	\$1,500.00	3	High
33_34FE	Fire Equipment	Air Cylinder:315	15	2020	\$1,500.00	3	High
34_30FE	Fire Equipment	Air Cylinder:316	15	2020	\$1,500.00	3	High
35_104FE	Fire Equipment	Air Cylinder:317	15	2020	\$1,500.00	3	High
36_48FE	Fire Equipment	Air Cylinder:318	15	2020	\$1,500.00	3	High
22_9FE	Fire Equipment	Air Cylinder:104	15	2020	\$1,500.00	3	High
62_23FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
70_84FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
67_17FVT	Fire Equipment	SCBA Masks	15	2020	\$8,250.00	4	Medium
68_20FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	4	Medium
61_92FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
73_30FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium

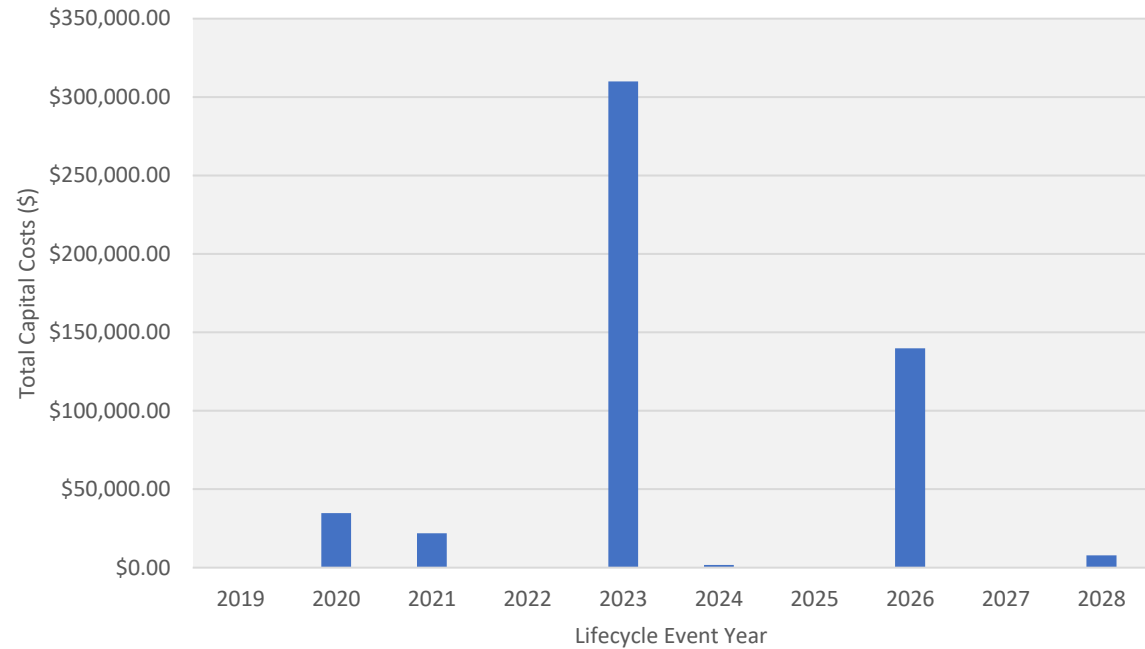
Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition (2018)	Risk
77_9FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	3	High
78_16FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	3	High
79_57FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	3	High
80_30FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	3	High
69_41FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	4	Medium
74_27FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
75_43FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	4	Medium
62_96FE	Fire Equipment	Air Cylinder:357	15	2020	\$1,500.00	3	High
59_56FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
67_99FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
60_51FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
71_45FVT	Fire Equipment	Fire Hawk 2002	15	2020	\$7,450.00	4	Medium
64_69FVT	Fire Equipment	Fire Hawk M7	15	2020	\$7,450.00	4	Medium
63_86FVT	Fire Equipment	Fire Hawk M7	15	2020	\$7,450.00	4	Medium
76_67FVT	Fire Equipment	Ultralight MMR 2000	15	2020	\$7,450.00	4	Medium
72_58FE	Fire Equipment	Bunker Gear #378 1104007403 1104007408	10	2021	\$3,000.00	3	High
71_102FE	Fire Equipment	Bunker Gear #308	10	2021	\$3,000.00	3	High
74_22FE	Fire Equipment	Bunker Gear #336 1301002757 1301002762	10	2023	\$3,000.00	3	High
75_67FE	Fire Equipment	Bunker Gear #392 1301002758 1301002763	10	2023	\$3,000.00	4	Medium
76_55FE	Fire Equipment	Bunker Gear #337 1301002760 1301002765	10	2023	\$3,000.00	4	Medium
73_67FE	Fire Equipment	Bunker Gear #301 1301002761 1301002766	10	2023	\$3,000.00	3	High
77_100FE	Fire Equipment	Bunker Gear #388 4748801 4749620	10	2024	\$3,000.00	4	Medium
78_9FE	Fire Equipment	Bunker Gear #318	10	2024	\$3,000.00	4	Medium
79_75FE	Fire Equipment	Bunker Gear #310 4748800 4749619	10	2024	\$3,000.00	4	Medium
93_73FE	Fire Equipment	Bunker Gear #320 4924094 4924087	10	2025	\$3,000.00	4	Medium
1212_41FE	Fire Equipment	Defibrillators - Municipal Buildings	8	2025	\$4,500.00	5	Medium

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition (2018)	Risk
12_41FE	Fire Equipment	Defibrillators Fire & Rescue Service Trucks	8	2025	\$15,000.00	3	High
90_29FE	Fire Equipment	Bunker Gear #380 4992303 4992306	10	2025	\$3,000.00	4	Medium
80_57FE	Fire Equipment	Bunker Gear #333 4924090 4924085	10	2025	\$3,000.00	4	Medium
81_37FE	Fire Equipment	Bunker Gear #387 4924092 4924080	10	2025	\$3,000.00	4	Medium
83_94FE	Fire Equipment	Bunker Gear #326 4924091 4924082	10	2025	\$3,000.00	4	Medium
84_89FE	Fire Equipment	Bunker Gear #321 4992302 4924081	10	2025	\$3,000.00	4	Medium
85_11FE	Fire Equipment	Bunker Gear #370 4924095 4924083	10	2025	\$3,000.00	4	Medium
86_72FE	Fire Equipment	Bunker Gear #381 4924093 4924086	10	2025	\$3,000.00	4	Medium
87_51FE	Fire Equipment	Bunker Gear #306 4992301 4992304	10	2025	\$3,000.00	4	Medium
89_97FE	Fire Equipment	Bunker Gear #307 4924089 4924079	10	2025	\$3,000.00	4	Medium
91_44FE	Fire Equipment	Bunker Gear #375 4924077 4992305	10	2025	\$3,000.00	4	Medium
92_20FE	Fire Equipment	Bunker Gear #303 5017234 5017235	10	2025	\$3,000.00	4	Medium
94_89FE	Fire Equipment	Bunker Gear #355 4924088 4924078	10	2025	\$3,000.00	4	Medium
88_35FE	Fire Equipment	Bunker Gear #309 4924096 4924084	10	2025	\$3,000.00	4	Medium
95_47FE	Fire Equipment	Bunker Gear #315 5085806 5085940	10	2026	\$3,000.00	5	Medium
13_89FE	Fire Equipment	Portable Pumps	20	2026	\$15,000.00	4	Medium
96_14FE	Fire Equipment	Bunker Gear #319 5122954 5085938	10	2026	\$3,000.00	5	Medium
97_58FE	Fire Equipment	Bunker Gear #391 5085805 5085939	10	2026	\$3,000.00	5	Medium
9_104FE	Fire Equipment	Washer/Extractor	10	2027	\$10,000.00	4	Medium
98_23FE	Fire Equipment	Bunker Gear #379 5312492 5312493	10	2027	\$3,000.00	5	Medium
10_2FE	Fire Equipment	Gear Dryer	10	2027	\$6,000.00	4	Medium
102_20FE	Fire Equipment	Bunker Gear #322 5310556 5310561	10	2027	\$3,000.00	5	Medium
101_49FE	Fire Equipment	Bunker Gear #385 5310557 5310562	10	2027	\$3,000.00	5	Medium
99_1FE	Fire Equipment	Bunker Gear #382 5310558 5310560	10	2027	\$3,000.00	5	Medium
8_94FE	Fire Equipment	Thermal Imaging Camera Replacement	10	2027	\$6,000.00	3	High
100_87FE	Fire Equipment	Bunker Gear #323 5310555 5310559	10	2027	\$3,000.00	5	Medium
106_92FE	Fire Equipment	Bunker Gear #305 5483613 5483618	10	2028	\$3,000.00	5	Medium
105_24FE	Fire Equipment	Bunker Gear #302 5483614 5483619	10	2028	\$3,000.00	5	Medium
104_60FE	Fire Equipment	Bunker Gear #335 5483615 5483621	10	2028	\$3,000.00	5	Medium
103_101FE	Fire Equipment	Bunker Gear #350 5483616 5483622	10	2028	\$3,000.00	5	Medium

## 9.8 Parks and Recreation

### Capital Plan Summary

Parks and Recreation assets lifecycle activity schedule has been developed exclusively from their modelled end of expected life. Thus, the illustrated capital plan in the chart and table has been developed exclusively from the defined static conditions in the asset registry and as well life expectancy.



Total Capital Expenditure: \$516,036

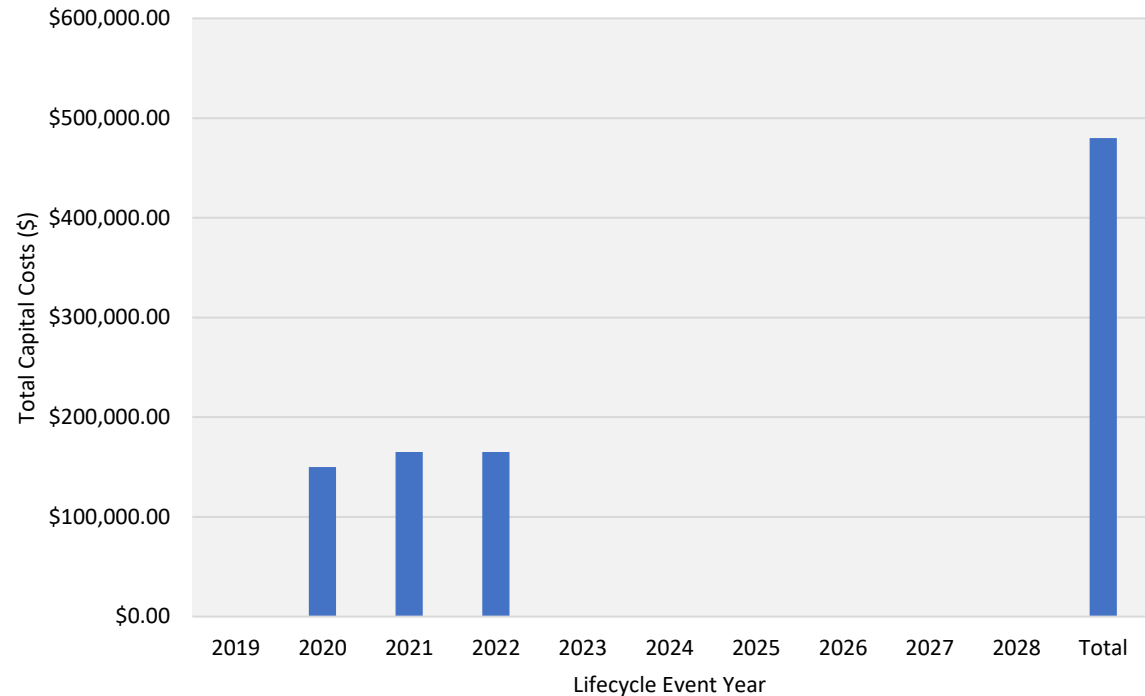
Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Lifecycle Event Cost	Condition Index (2018)	Risk
3047	Parks and Recreation	Morrison Meadows: Benches Replacement	20	2020	\$1,000.00	1	High
3036	Parks and Recreation	Community Centre Complex: Horse Paddock Bleachers Replacement	20	2020	\$30,000.00	1	High
3059	Parks and Recreation	Old Morrison: Fencing Backstop Replacement	20	2020	\$3,668.00	1	High

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Lifecycle Event Cost	Condition Index (2018)	Risk
3053	Parks and Recreation	Morrison Meadows: 6 Seat High Bleachers Replacement	25	2021	\$5,000.00	1	High
3052	Parks and Recreation	Morrison Meadows: 6 Seat High Bleachers Replacement	25	2021	\$5,000.00	1	High
3068	Parks and Recreation	Badenoch Soccer Field: 3 Seat Bleacher Replacement	25	2021	\$2,000.00	1	High
3046	Parks and Recreation	Morrison Meadows: Bleachers Replacement	25	2021	\$10,000.00	1	High
3060	Parks and Recreation	Old Morrison: 6 seat Concrete Bleachers Replacement	50	2023	\$10,000.00	1	High
3082	Parks and Recreation	Parking Lot & Associated Enhancements (curbing, entrance, and additional lighting)	25	2023	\$300,000.00	2	High
3025	Parks and Recreation	Community Centre Complex: Wooden Fences Beside Batting Cages Replacement	15	2024	\$1,800.00	2	High
3070	Parks and Recreation	Badenoch Soccer Field: Fencing (East Side) Replacement	20	2026	\$14,934.00	2	High
3075	Parks and Recreation	Modernizing the playground at Boreham Park with creative play equipment	25	2026	\$100,000.00	5	Medium
14003	Parks and Recreation	Community Centre Complex Tennis Court Fencing: installation of wind and noise screening) and to convert the third court (furthest from the road) into a public court	40	2026	\$10,000.00	5	Medium
3029	Parks and Recreation	Community Centre Complex: Fencing Replacement	20	2026	\$9,694.00	2	High
3028	Parks and Recreation	Community Centre Complex: Light Poles Replacement	20	2026	\$5,200.00	2	High
3056	Parks and Recreation	Old Morrison: Gravel Road Rehabilitation	25	2028	\$7,740.00	2	High

## 9.9 Storm Water Management Ponds

### Capital Plan Summary

As stated in the State of The Infrastructure section of this report, Storm Water Management Ponds do not follow a linear deterioration rate for lifecycle events. Instead, they follow the schedule of the qualified engineer upon inspection of the pond. As of 2017, The Township of Puslinch employed a consultant to do such inspections. The graph and table reflect the recommendations set out by the firm.



Total Capital Expenditure: \$480,000.00

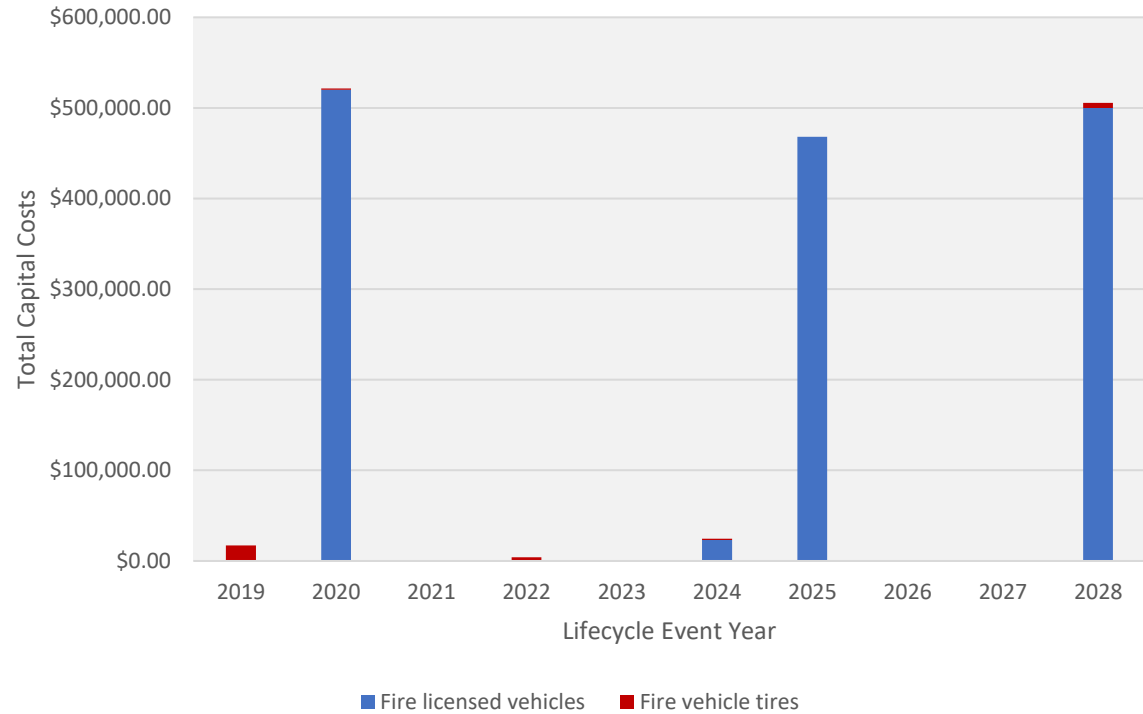
### Capital Plan Summary Cont'd

The Capital costs for remediation works over the next 10 years are for three different Storm Water Management Ponds. The first, being Kerr Crescent Storm Water Management Facility at cost of \$150,000, the second for Fox Run Drive Storm Water Management Pond 1 at a cost of \$165,000 and the third at Carriage Lane Storm Water Management Pond at a cost of \$165,000.

### 9.10 Fire Vehicles – Licensed Vehicles & Tires

#### Capital Plan Summary

As stated in the State of the Infrastructure section of this report all Fire Vehicle assets have been loaded into the asset registry with high level of dynamic input. The expected remediation schedule set out for fire vehicle's lifecycle attributes has not been applied. The schedule that is visualized in the graph and chart has been formulated from staff and recommendations from the 2017 Fleet Management Report.



Total Capital Expenditure: \$1,541,100

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
15_73FVT	Fire vehicle tires	Tire Replacement	8	2019	\$825.00	3	Medium
31_1FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
30_35FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
29_40FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
28_4FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
27_69FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
32_77FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High



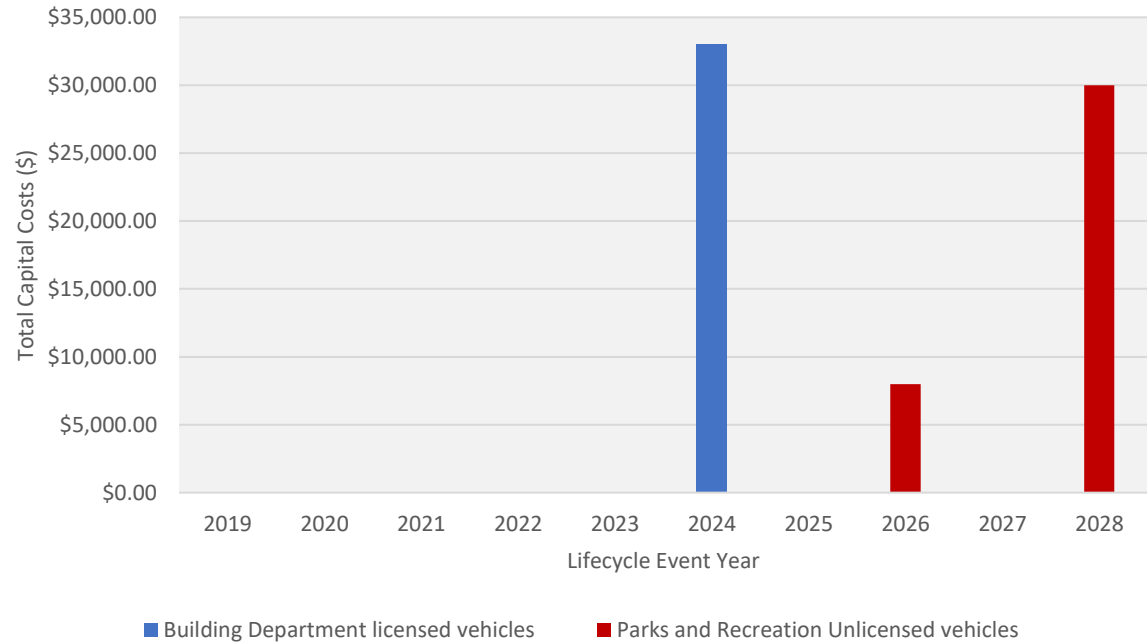
Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
16_16FVT	Fire vehicle tires	Tire Replacement	8	2019	\$825.00	3	Medium
18_76FVT	Fire vehicle tires	Tire Replacement	8	2019	\$825.00	3	Medium
6_77FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
5_81FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
4_96FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
3_3FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
2_11FVT	Fire vehicle tires	Tire Replacement	10	2019	\$648.00	1	High
1_66FVT	Fire vehicle tires	Tire Replacement	10	2019	\$648.00	1	High
17_74FVT	Fire vehicle tires	Tire Replacement	8	2019	\$825.00	3	Medium
45_1FVT	Fire vehicle tires	Tire Replacement	10	2019	\$250.00	1	High
46_31FVT	Fire vehicle tires	Tire Replacement	10	2019	\$250.00	1	High
47_71FVT	Fire vehicle tires	Tire Replacement	10	2019	\$250.00	1	High
48_70FVT	Fire vehicle tires	Tire Replacement	10	2019	\$250.00	1	High
34_59FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
41_1FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
40_1FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
33_70FVT	Fire vehicle tires	Tire Replacement	10	2019	\$825.00	1	High
14_38FVT	Fire vehicle tires	Tire Replacement	8	2020	\$825.00	3	Medium
5035	Fire licensed vehicles	Rescue Truck 35 Replacement	20	2020	\$520,000.00	3	Medium
13_63FVT	Fire vehicle tires	Tire Replacement	8	2020	\$825.00	3	Medium
10_14FVT	Fire vehicle tires	Tire Replacement	10	2022	\$686.00	3	Medium
7_64FVT	Fire vehicle tires	Tire Replacement	10	2022	\$686.00	3	Medium
9_22FVT	Fire vehicle tires	Tire Replacement	10	2022	\$686.00	3	Medium
11_90FVT	Fire vehicle tires	Tire Replacement	10	2022	\$686.00	3	Medium
12_46FVT	Fire vehicle tires	Tire Replacement	10	2022	\$686.00	3	Medium
8_19FVT	Fire vehicle tires	Tire Replacement	10	2022	\$686.00	3	Medium
26_100FVT	Fire vehicle tires	Tire Replacement	10	2024	\$825.00	4	Medium
7005A	Fire licensed vehicles	2013 Vehicle For Fire & Rescue Replacement	7	2024	\$23,000.00	4	Medium

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
25_57FVT	Fire vehicle tires	Tire Replacement	10	2024	\$825.00	4	Medium
5031	Fire licensed vehicles	Fire Pumper 31 Replacement	20	2025	\$468,000.00	3	Medium
43_24FVT	Fire vehicle tires	Tire Replacement	10	2028	\$648.00	1	High
42_14FVT	Fire vehicle tires	Tire Replacement	10	2028	\$648.00	1	High
38_76FVT	Fire vehicle tires	Tire Replacement	10	2028	\$648.00	1	High
14_38FVT	Fire vehicle tires	Tire Replacement	8	2028	\$825.00	3	Medium
36_27FVT	Fire vehicle tires	Tire Replacement	10	2028	\$825.00	1	High
5033	Fire licensed vehicles	Aerial 33 Replacement	25	2028	\$500,000.00	3	Medium
37_60FVT	Fire vehicle tires	Tire Replacement	10	2028	\$648.00	1	High
44_8FVT	Fire vehicle tires	Tire Replacement	10	2028	\$648.00	1	High
35_18FVT	Fire vehicle tires	Tire Replacement	10	2028	\$825.00	1	High
39_53FVT	Fire vehicle tires	Tire Replacement	10	2028	\$648.00	1	High

### 9.11 Parks and Recreation and Building Department Vehicles

#### Capital Plan Summary

As stated in the State of the Infrastructure section of this report all Parks and Recreation and Building Department Vehicle assets were loaded into the asset registry with high level of dynamic input. The schedule that is visualized in the graph and chart has been formulated exclusively from staff and recommendations from the 2017 Fleet Management Report.



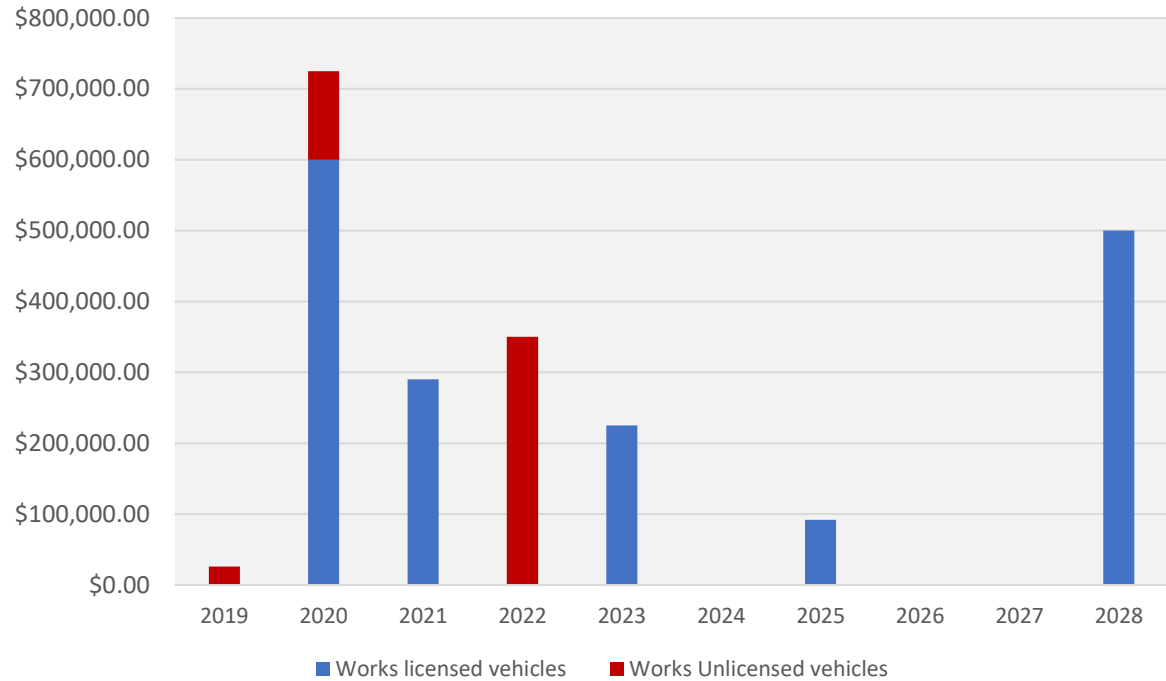
Total Capital Expenditure: \$71,000.00

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
7005B	Building Department licensed vehicles	2016 Mid-Size Pickup	7	2024	\$33,000.00	3	Medium
4060	Parks and Recreation Unlicensed vehicles	Floor Scrubber	10	2026	\$8,000.00	4	Medium
7007	Parks and Recreation Unlicensed vehicles	Lawn Tractor	10	2028	\$30,000.00	4	Medium

## 9.12 Works Department – Licensed and Unlicensed Vehicles & Equipment

### Capital Plan Summary

As stated in the State of the Infrastructure section of this report all Works Vehicle assets were loaded into the asset registry with high level of dynamic input. The schedule that is visualized in the graph and chart has been formulated exclusively from staff and recommendations from the 2017 Fleet Management Report



Total Capital Expenditure: \$2,208,000.00

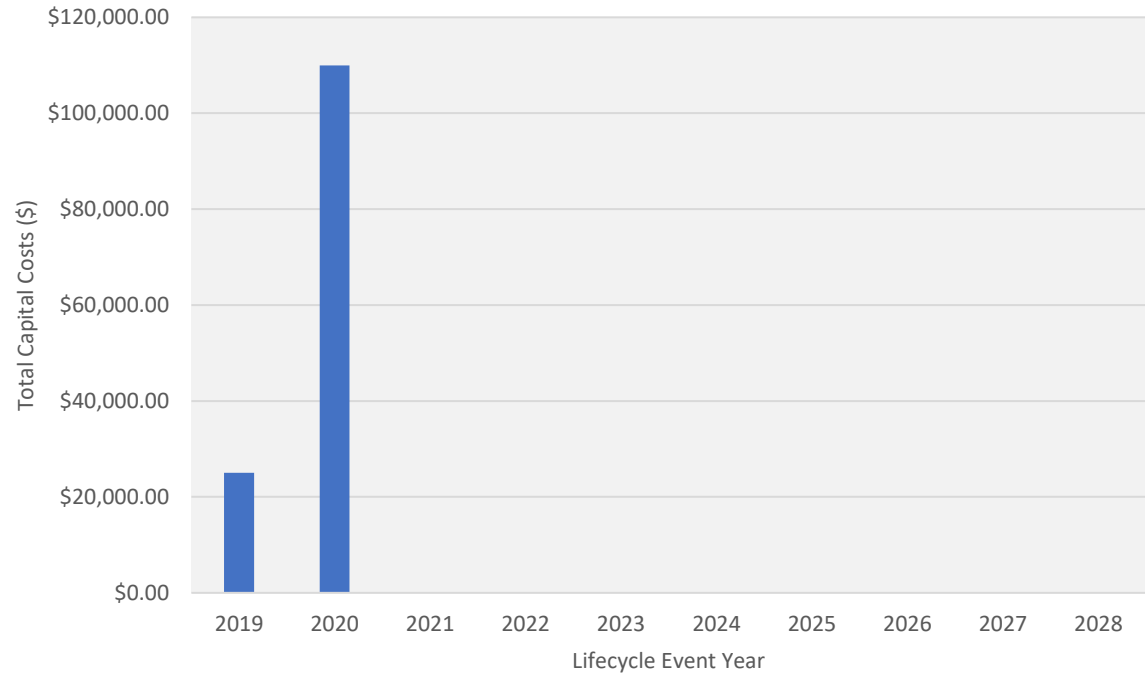
Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
8002	Works Unlicensed vehicles	2000 Gravel Packer – New Equipment for Grader	25	2019	\$26,000.00	2	Medium
7003	Works licensed vehicles	2008 1 Ton Dump/Plow 305 Replacement	12	2020	\$100,000.00	2	Medium
8013	Works licensed vehicles	2011 Single Axle Truck 304 Replacement	8	2020	\$250,000.00	1	High
8014	Works licensed vehicles	2012 Dump/Plow 302 Replacement	8	2020	\$250,000.00	2	Medium

Asset #	Asset Class	Lifecycle Event Description	L.E	Replacement Year	Total Capital Costs	Condition Index (2018)	Risk
8001	Works Unlicensed vehicles	2008 JCB Backhoe 6 Replacement	12	2020	\$125,000.00	2	Medium
7008	Works licensed vehicles	2011 Chevy Silverado Pickup 4 Replacement	10	2021	\$40,000.00	1	High
8016	Works licensed vehicles	2013 International Plow Truck 301 Replacement	8	2021	\$250,000.00	2	Medium
8002	Works Unlicensed vehicles	2000 Road Grader G740 501 Replacement	25	2022	\$350,000.00	2	Medium
8017	Works licensed vehicles	2015 International Plow Truck - 303 Replacement	8	2023	\$225,000.00	2	Medium
7009	Works licensed vehicles	2017 Pickup Truck - Staff - 3/4 Ton Replacement	8	2025	\$52,000.00	3	Medium
8019	Works licensed vehicles	2020 GMC Sierra 1500 Replacement	10	2025	\$40,000.00	3	Medium
8013	Works licensed vehicles	2020 Single Axle Truck 304 Replacement	8	2028	\$250,000.00	1	High
8014	Works licensed vehicles	2020 Dump/Plow 302 Replacement	8	2028	\$250,000.00	2	Medium

### 9.13 Sidewalks

#### Capital Plan Summary

Sidewalk assets lifecycle activity schedule has been developed in the asset registry from their modelled end of expected life. However, the capital expenditure illustrated in the included graph and chart has been generated exclusively from the recommended remediation schedule provided by staff.



Total Capital Expenditure: \$135,000.00

Asset #	Asset Class	Lifecycle Event Description	L.E	Lifecycle Event Year	Lifecycle Event Cost	Condition Index (2018)	Risk
304	Sidewalk	Brock Road Sidewalk Remediation for AODA Compliance (Phase 1)	20	2019	\$25,000.00	4	Medium
304	Sidewalk	Brock Road Sidewalk Remediation for AODA Compliance (Phase 2)	20	2020	\$110,000.00	4	Medium

## 10.0 Risk

The asset management strategy & framework for this asset management plan takes a risk-centric approach. Risk is an important measure in asset management. Besides cost, risk is one of the few measures that can be compared across asset classes. The comparison of risk across asset classes is only appropriate if risk is calculated using an appropriate methodology. The methodology for assessing asset risk utilized in the Township's Asset Management Strategy and Framework developed as part of this project allows for the comparison of assets across asset classes, categories, and programs.

Risk is the combination of the Consequence of Failure CoF and the Probability of Failure PoF of an asset as shown in Figure 10.0 - 1. The PoF of an asset is determined using the estimated service life of the asset, the age of the asset, and the assessed condition of the asset. CoF is determined for each asset class based on five weighted consequence of failure factors such as Health and Safety, Financial, Environmental, Legal & Regulatory, and Operational & Internal Demand.

Workshops were held with the departments responsible for maintaining assets to determine the CoF for each asset class. The PoF and CoF were combined into a risk matrix, as shown in Figure 1, to determine an asset's Risk Level which determined its priority for replacement. Risk levels were based on a five-point scale: Very High, High, Medium, Low, and Insignificant. The risk matrix shows the highest risk in the top right and the lowest risk in the bottom left.

Risk Matrix		Consequence of Failure (CoF)				
		Insignificant	Low	Medium	High	Very High
Probability of Failure (PoF)	Almost Certain	High	High	Very High	Very High	Very High
	Highly Likely	Moderate	Moderate	High	High	Very High
	Likely	Low	Low	Moderate	High	High
	Unlikely	Very Low	Low	Low	Moderate	Moderate
	Almost Certainly Not	Very Low	Very Low	Very Low	Low	Low

10.0 - 1 Risk Matrix

## 10.1 Probability of Failure

The probability of failure is the first of two variables required to calculate risk. Probability of failure is the likelihood that an asset will not achieve a desired level of service. Levels of service can be based on the condition of the asset or the performance of the asset.

While asset performance is often tied directly to the condition of the asset, there are performance measures that do not relate to the condition of an asset. These measures can include:

- The appropriateness/size of an asset
- The availability of backups for critical assets
- The ability to meet legislated requirements

The Township of Puslinch does not currently collect the data required to assess assets based on performance. For the purpose of this project probability of failure is based solely on condition and serviceable life.

For this asset management plan, condition and remaining serviceable life were the sole determinants of Probability of Failure. For example, an asset with a condition rating of “1” would have a “Very High” probability of failure, while an asset with a condition rating of “5” would have a “Very Low” probability of failure. For this asset management plan, the thresholds for probability of failure were scaled based on the technical levels of service for the asset class. For all asset classes except for Hard Surface Roads and Bridges and Culverts, the probability of failure calculation was the inverse of the condition rating.

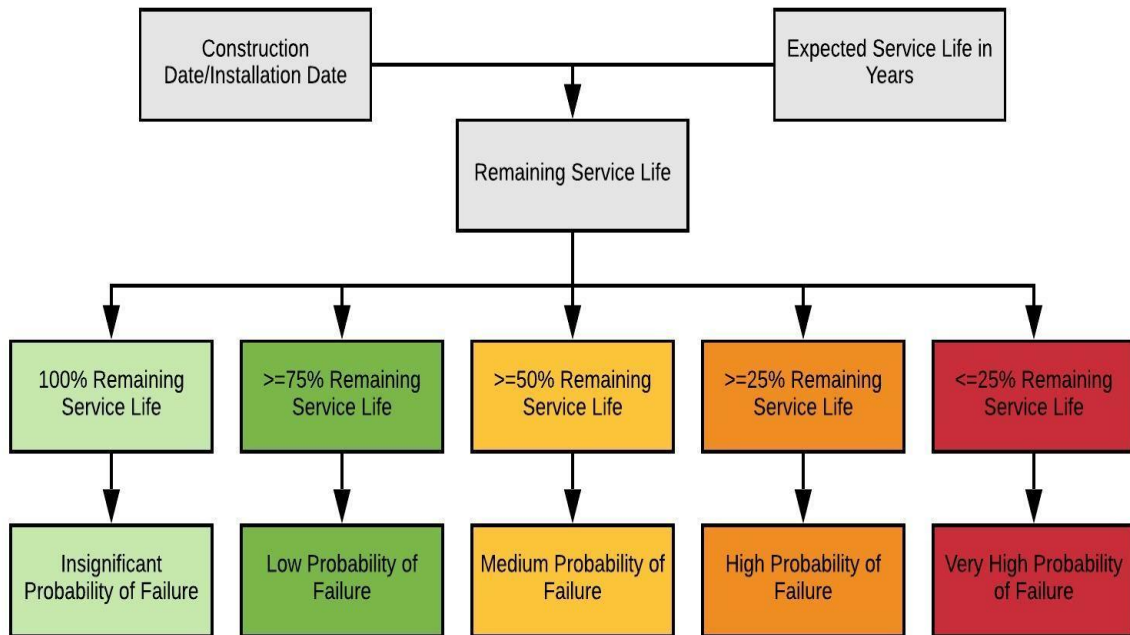
Further, when condition data was not available an assets risk was calculated based on the remaining service life of the asset. For example, for many of the vehicles in the asset registry condition data was not available. Thus, in order to create a risk profile for the asset the remaining service life of the asset was used. Both of the above processes to calculate Probability of Failure are illustrated in Sections 10.3 (Calculating Probability of Failure Based on Remaining Service Life) and 10.4 (Calculating Probability of Failure Based on Condition).

## 10.2 Consequence of Failure

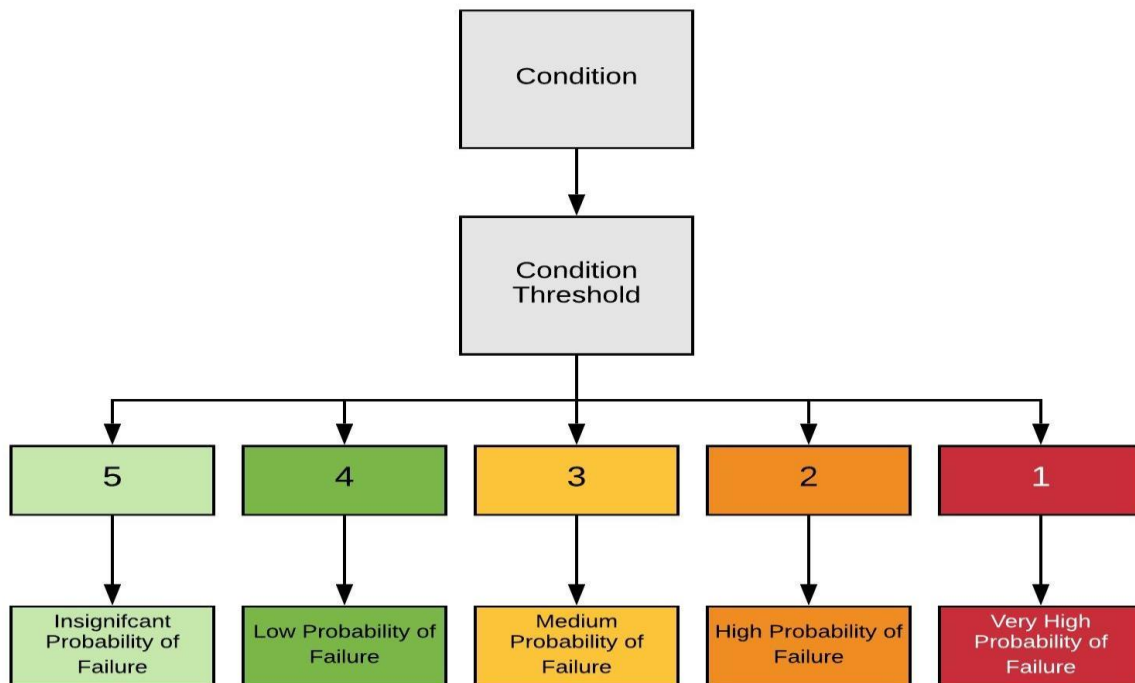
The Consequence of Failure is determined for each asset class based on five weighted consequence of failure factors: *Health and Safety, Operational & Internal Demand, Environmental, Financial, and Legal & Regulatory Compliance*



### 10.3 Calculating Probability of Failure Based on Remaining Service Life



### 10.4 Calculating Probability of Failure Based on Condition



## 10.5 Consequence of Failure Factors

Health and Safety: Considers the impacts to Public and Employee health

Operational & Internal Demand: Considers losses or interruptions to internal operations and services provided both internally and externally as a result of asset failure

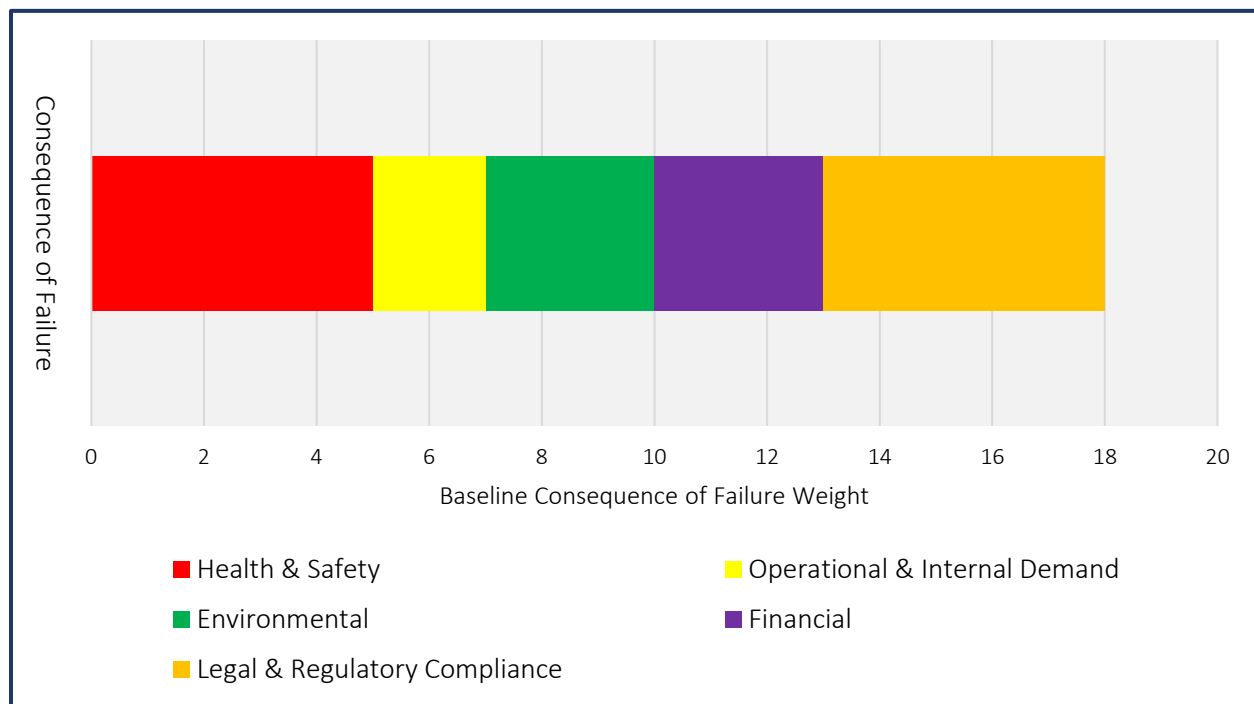
Environmental: Considers the direct impacts to the natural environment as the result of asset failure

Financial: Considers the financial impacts to the organization as a result of asset failure

Legal & Regulatory Compliance: Considers the legal implications and ability to meet regulatory requirements as a result of asset failure

## 10.6 Consequence of Failure: Establishing Baseline Risk

These factors, when considered collectively were given a baseline weighting factor in order to justify their relative importance against other factors. This weighting factor is a number that would give each asset class a pre-conceived/overall risk weighting. This was necessitated in order to justify each assets baseline risk despite it's condition ratings. To establish this Baseline Risk workshops were held with Staff in order to classify the most important (highest weighted) consequence of failure factors. The results of these workshops are illustrated in Figure 10.0 - 2.



10.0 - 2 Baseline Risk Calculation

## 10.7 Consequence of Failure: Quantifying the Qualitative Methodology

To further quantify each asset class and create full risk profiles for each of the factors: Health and Safety, Operational & Internal Demand, Environmental, Financial and Legal & Regulatory Compliance. UEM converted the qualitative consequence of failure matrix (charts 10.0 – 3 to 10.0 – 7) into a quantitative format which are illustrated in chart 10.0 – 8. Each respective qualitative category was converted to a number that ranged from 1-10. Where 1 means insignificant consequence of failure impact and 10 means very high consequence of failure impact.

Consequence of Failure		Health & Safety
1-2	Insignificant	No obvious potential for injury or affects to health.
3-4	Low	Potential for minor injury or affects to health of an individual. Full recovery is expected.
5-6	Medium	Possibility of serious injuries or affects to health. May affect one or more individuals and/or result in short-term disabilities.
7-8	High	Probable likelihood for serious injury or affects to the health of one or more individuals with a possibility for loss of a life and the possibility of long-term disabilities.
9-10	Very High	Definite certainty for death or multiple deaths with possible permanent disabilities.

10.0 - 3 Qualitative Methodology: Health and Safety

Consequence of Failure		Operational & Internal Demand
1-2	Insignificant	Small number of customers experiencing service disruption: Under 10 people affected
3-4	Low	Service disruption at a localized level: 10 - 200 people affected, service interrupted 1 day
5-6	Medium	Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days
7-8	High	Major localized disruption: 1,000 - 5,000 people affected, Service interrupted 5-30 days
9-10	Very High	Township-wide service disruption: Over 5,000 people affected service interruption over 30 days

10.0 - 4 Qualitative Methodology: Operational & Internal Demand

Consequence of Failure		Environmental
1-2	Insignificant	Very negligible impact. Reversible within 1 week.
3-4	Low	Material damage of local importance. Minor, short-term (within 6 months) very isolated damage to the environment.
5-6	Medium	Significant short-term (< 1 year) local damage to the environment.
7-8	High	Significant long-term (> 1 year) widespread damage to the environment.
9-10	Very High	Major long-term (+5 years) or permanent widespread damage to the environment.

#### 10.0 - 5 Qualitative Methodology: Environmental

Consequence of Failure		Financial
1-2	Insignificant	Cost of Reactive response and replacement is 100% of the cost of proactive replacement and an increase cost to providing service is negligible
3-4	Low	Cost of Reactive response and replacement is 110% to 120% of proactive replacement and an Increase in cost to providing service is over 5%
5-6	Medium	Cost of Reactive response and replacement is over 110% to 125% of proactive replacement and an Increase in cost to providing service is over 10%
7-8	High	Cost of Reactive response and replacement is over 125% to 200% of proactive replacement and an Increase in cost to providing service is over 25%
9-10	Very High	Cost of Reactive response and replacement is over 200% of proactive replacement and an Increase in cost to providing service is over 50%

#### 10.0 - 6 Qualitative Methodology: Financial

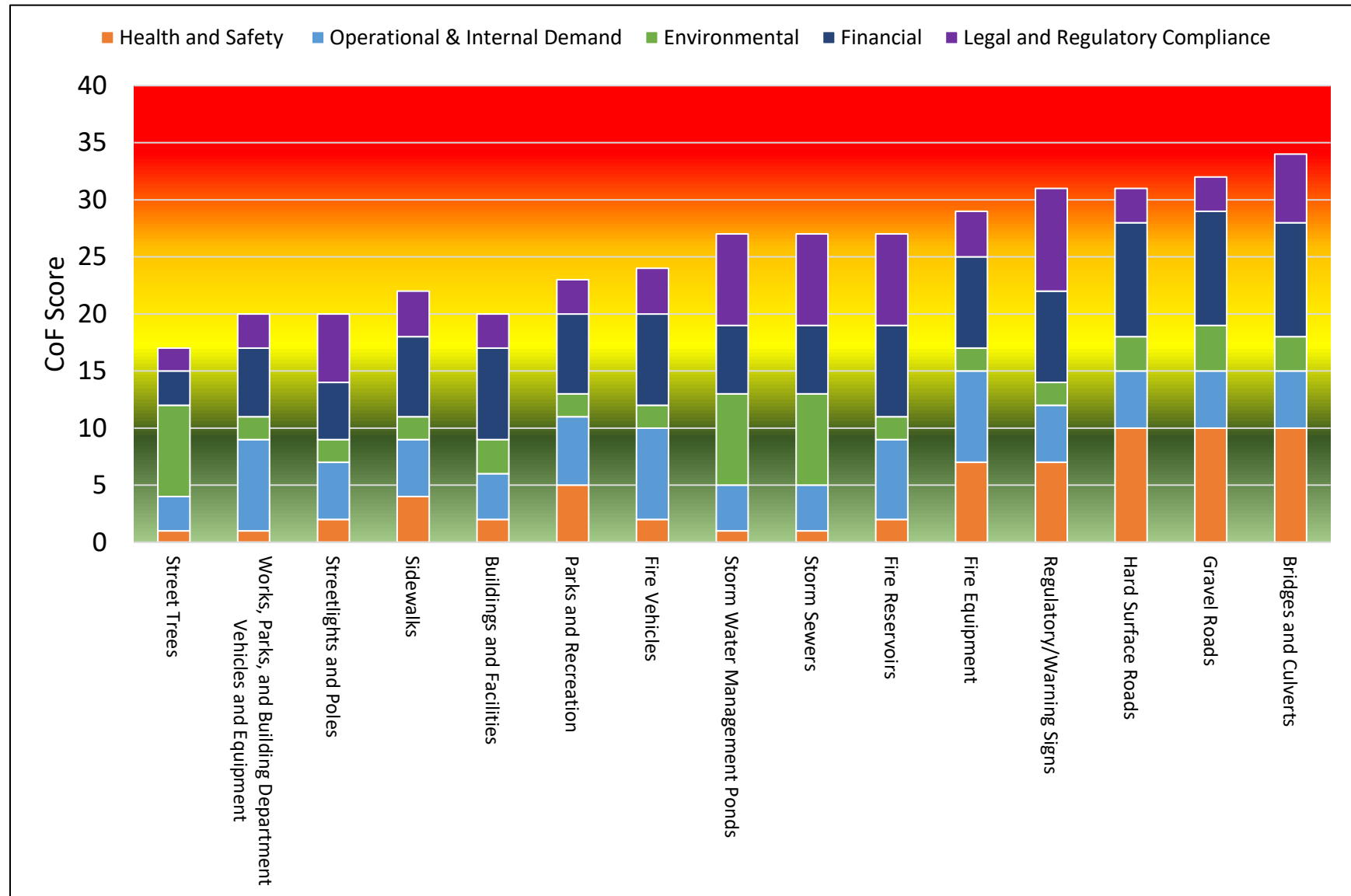
Consequence of Failure		Legal & Regulatory Compliance
1-2	Insignificant	No claims or charges
3-4	Low	Potential claims by an individual possible.
5-6	Medium	Possible Claims and charges by interest groups or Government Agencies.
7-8	High	Probable Claims and charges by interest groups or Government Agencies.
9-10	Very High	Definite claims and charges by interest groups or government agencies.

#### 10.0 – 7 Qualitative Methodology: Operational & Internal Demand

Consequence of Failure Score Card							
	Baseline Weight	Health and Safety	Internal Demand & Operational	Environmental	Financial	Legal and Regulatory Compliance	Total Consequence of Failure Score
Bridges and Culverts	27	10	5	3	10	6	<b>61</b>
Gravel Roads	27	10	5	4	10	3	<b>59</b>
Hard Surface Roads	27	10	5	3	10	3	<b>58</b>
Regulatory/Warning Signs	27	7	5	2	8	9	<b>58</b>
Fire Equipment	27	7	8	2	8	4	<b>56</b>
Fire Reservoirs	27	2	7	2	8	8	<b>54</b>
Storm Water Management Ponds and Storm Sewers	27	1	4	8	6	8	<b>54</b>
Fire Vehicles and Tires	27	2	8	2	8	4	<b>51</b>
Parks and Recreation	27	5	6	2	7	3	<b>50</b>
Sidewalks	27	4	5	2	7	4	<b>49</b>
Buildings and Facilities	27	2	4	3	8	3	<b>47</b>
Works, Parks, and Building Department Vehicles and Equipment	27	1	8	2	6	3	<b>47</b>
Street lights and Poles	27	2	5	2	5	6	<b>47</b>
Trees	27	1	3	8	3	2	<b>44</b>

10.0 - 8 Consequence of Failure Scores all Asset Classes

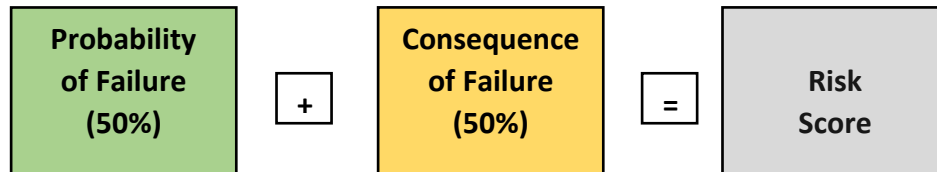
## 10.8 Consequence of Failure Classifications: Puslinch Asset Classes



10.0 - 9 Consequence of Failure Classification all Asset Classes (Stacked Bar Chart)

## 10.9 Technical Walkthrough: Calculating Risk & Risk Profiling

Once calculated, Probability of Failure and Consequence of Failure were combined to create a Risk Score. Risk Scores were set on a five-point scale: *Very High, High, Moderate, Low, and Insignificant*.



10.0 - 10 Risk Calculation

There are many methods for calculating a risk score, UEM for this asset management plan employed a simple ratio algorithm where a risk score is weighted 50% on its Consequence of Failure and 50% on its Probability of Failure. Figure 10.0 – 11 illustrates that a risk score is devised first from the addition of the Probability of Failure and Consequence of Failure scores and second divided by two to generate a Risk Score.

Table 10.0 – 11 was intentionally designed to illustrate that a high Probability of Failure when joined to a low Consequence of Failure results in a Risk score of 3. The result is the same if there is a high Consequence of Failure and low Probability of Failure, resulting in a Risk score of 3.

Probability of Failure	Addition	Consequence of Failure	Division	Risk Score
5	+	1	÷2	3
4	+	2	÷2	3
3	+	3	÷2	3
2	+	4	÷2	3
1	+	5	÷2	3

10.0 - 11 Example Risk Calculation

## 10.10 Risk: Summary of Methods

The methodology for how Consequence of Failure and the Probability of Failure is combined to generate a risk score is as follows:

1. Classification of Probability of Failure
  - a. The condition data for each asset was converted from its condition index score (BCI, PCI, Vehicle Kilometers or Condition Rating) to a number between 1 and 5. If an asset was in “Critical” condition then it would have a high Probability of Failure or a 5. Further, if an asset was in “Excellent” condition then it would have

a low Probability of Failure or a 1. This classification procedure is summarized below.

- i. Excellent = 1
  - ii. Good = 2
  - iii. Fair = 3
  - iv. Poor = 4
  - v. Critical = 5
2. Classification of Consequence of Failure – Based on UEM’s experience, the Consequence of Failure for each asset type in the asset registry for the Township of Puslinch was quantified as follows:
  - a. Each Asset was given a baseline Consequence of Failure score – which is consistent across all asset types. This is to indicate that Risk is always a factor to an asset. (Reference to 10.6)
  - b. Subsequently, each of the Consequence of Failure factors was given a score on a scale between 1 to 10 and then summed to give a total Consequence of Failure score.
    - i. A score of 1 means that the Consequence of Failure impact of that factor would be low on that asset class.
    - ii. A score of 10 means that the Consequence of Failure impact of that factor would be high on that asset class.
  - c. Standardization of the Consequence of Failure Score
    - i. The next step was to standardize the Consequence of Failure score to the same maximum and minimum values as the Probability of Failure score.

Standardizing Consequence of Failure Scores		
Hard Surface Roads COF Score: 31 -> 5	Gravel Roads COF Score: 32 -> 5	Bridges and Culverts COF Score: 34 -> 5
Buildings and Facilities COF Score: 20 -> 3	Works, Parks, and Building Department Vehicles and Equipment COF Score: 20 -> 2	Fire Vehicles COF Score: 20 -> 3
Parks and Recreation COF Score: 24 -> 3	Fire Reservoirs COF Score: 23 -> 4	Street lights and Poles COF Score: 20 -> 2
Sidewalks COF Score: 22 -> 2	Fire Equipment COF Score: 29 -> 4	Regulatory/Warning Signs COF Score: 31 -> 4
Storm Water Management Ponds COF Score: Ponds 27 -> 3	Storm Sewers COF Score: 27 -> 3	Street Trees COF Score: 17 -> 1

10.0 - 12 Standardization of Consequence of Failure Scores



### 10.11 10 Year Capital Plan Risk Matrix

The following table 10.0 – 13 illustrates the relative risk across all asset classes included in the 10-year capital plan. The table below encompasses the spread of risk in a risk matrix in order to map the relative risk incurred by the Township should they defer the projects proposed in the capital plan.

**Risk Matrix: 10 Year Capital Plan Total Costs**

(POF)					
All Assets Consequence of Failure	(COF)	\$-	\$-	\$-	\$8,672,357.22
		\$-	\$-	\$4,154,979.85	\$-
		\$-	\$4,323,173.40	\$-	\$-
		\$651,000.00	\$586,987.00	\$-	\$-
		\$-	\$-	\$-	\$-

*10.0 -13 10 Year Capital Plan Total Expenditure*

## 11.0 Asset Class Risk Summaries

This section summarizes each asset class in the asset registry using the logic and procedures necessary for risk profiling each asset class. These logics have already been stated in Section 10.7 Quantifying the Qualitative Methodology. The financial figures included in each summary page represent the outputs from the 10-year capital plan. Thus, for all asset classes that are not included in the capital plan, there will be a “No Data” in the title header.

## 11.1 Bridges

### Consequence of Failure Descriptions

**Health and Safety:** Definite certainty for death or multiple deaths with possible permanent disabilities.

**Operational & Internal Demand:** Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days.

**Environmental:** Material damage of local importance. Minor, short-term (within 6 months) very isolated damage to the environment.

**Financial:** Cost of Reactive response and replacement are over 200% of proactive replacement and increase in cost to providing service is over 50%.

**Legal & Regulatory Compliance:** Possible Claims and charges by interest groups or Government Agencies.



Probability of Failure (PoF)					
Bridges	Consequence of Failure (CoF)	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ 910,000.00
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -

## 11.2 Culverts

### Consequence of Failure Descriptions

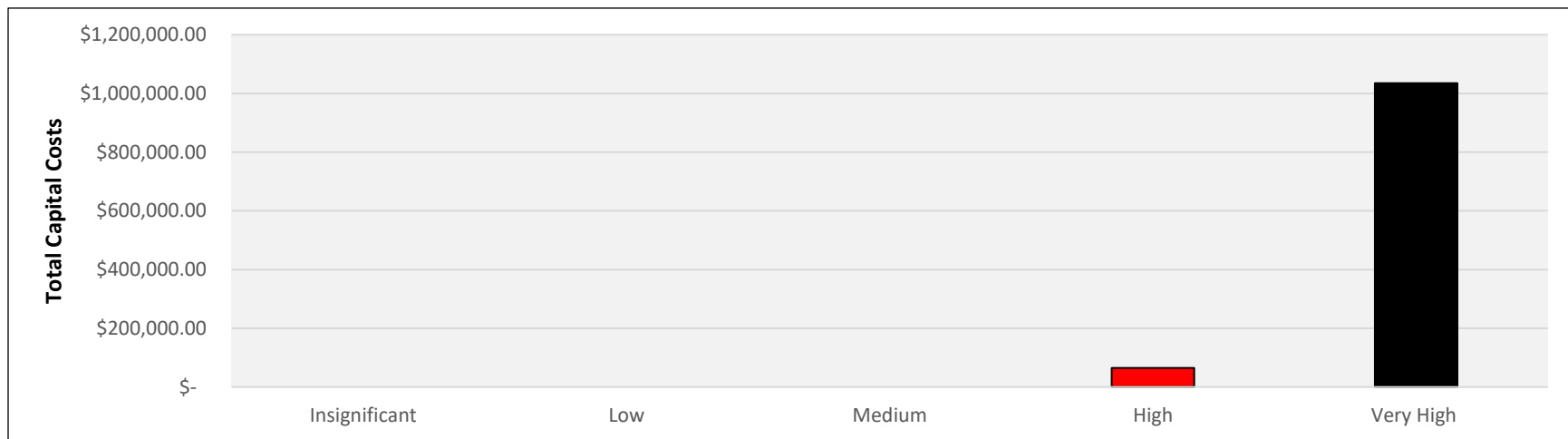
**Health and Safety:** Definite certainty for death or multiple deaths with possible permanent disabilities.

**Operational & Internal Demand:** Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days.

**Environmental:** Material damage of local importance. Minor, short-term (within 6 months) very isolated damage to the environment.

**Financial:** Cost of Reactive response and replacement are over 200% of proactive replacement and Increase in cost to providing service is over 50%.

**Legal & Regulatory Compliance:** Possible Claims and charges by interest groups or Government Agencies.



Probability of Failure (PoF)					
Culverts	Consequence of Failure (CoF)	\$ -	\$ -	\$ -	\$ 1,035,000.00
		\$ -	\$ -	\$ -	\$ 65,000.00
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -

### 11.3 1 Lift, 2 Lift, Gravel and Surface Treated Roads

#### Consequence of Failure Descriptions

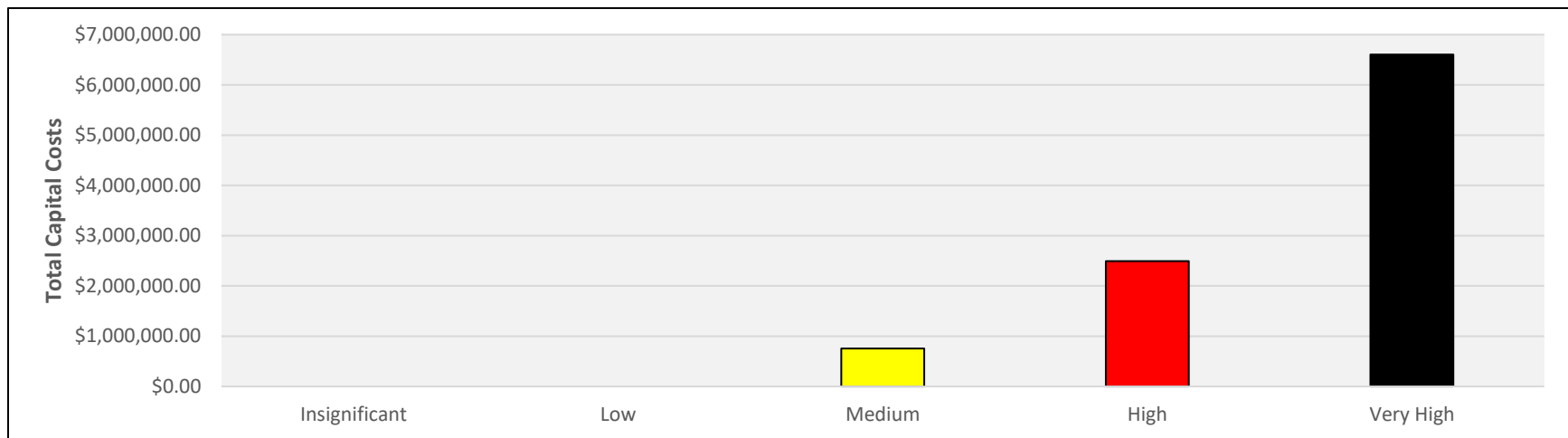
**Health and Safety:** Definite certainty for death or multiple deaths with possible permanent disabilities.

**Operational & Internal Demand:** Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days.

**Environmental:** Material damage of local importance. Minor, short-term (within 6 months) very isolated damage to the environment.

**Financial:** Cost of Reactive response and replacement are over 200% of proactive replacement and Increase in cost to providing service is over 50%.

**Legal & Regulatory Compliance:** Potential claims by an individual possible.



Probability of Failure (PoF)					
Road Surfaces	Consequence of Failure (CoF)	\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$6,653,857.22
		\$-	\$-	\$2,543,759.85	\$-
		\$-	\$-	\$780,507.40	\$-
		\$-	\$-	\$-	\$-

## 11.4 Buildings and Facilities

### Consequence of Failure Descriptions

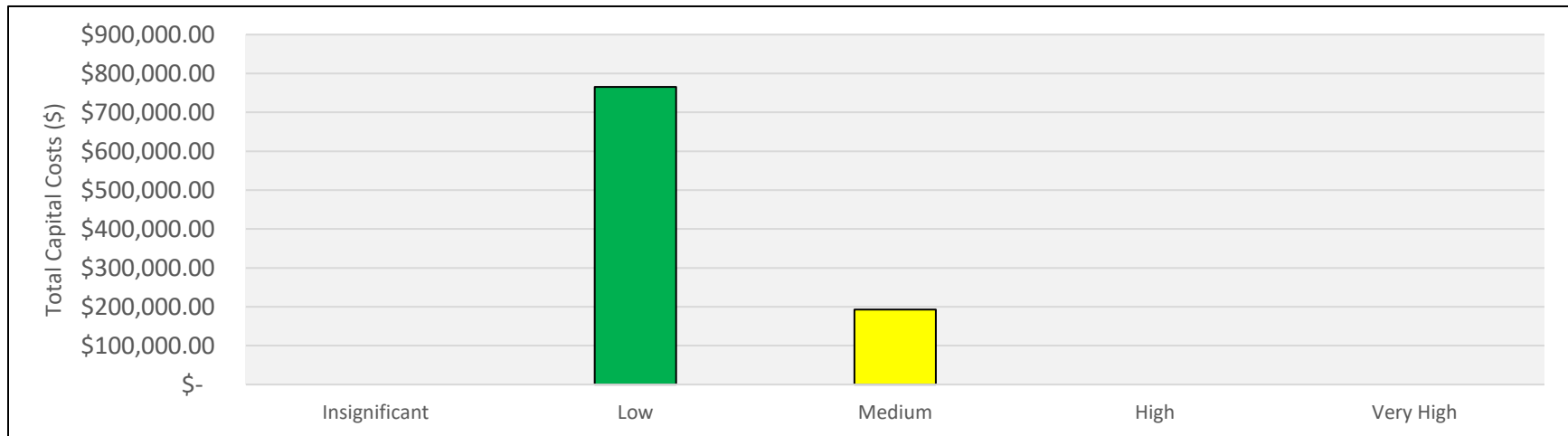
**Health & Safety:** No obvious potential for injury or impacts to health.

**Legal & Regulatory Compliance:** Claims by an individual possible.

**Financial:** Cost of Reactive response and replacement are over 125% to 200% of proactive replacement and Increase in cost to providing service is over 25%.

**Environmental:** Material damage of local importance. Minor, short-term (within 6 months) very isolated damage to the environment.

**Operational & Internal Demand:** Service disruption at a localized level: 10 - 200 people affected, service interrupted 1 day.



Buildings and Facilities	Consequence of Failure (CoF)	Probability of Failure (PoF)				
		\$-	\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$-	\$-
		\$-	\$-	\$192,750.00	\$-	\$-
		\$-	\$651,000.00	\$114,337.00	\$-	\$-
		\$-	\$-	\$-	\$-	\$-

## 11.5 Parks and Recreation

### Consequence of Failure Descriptions

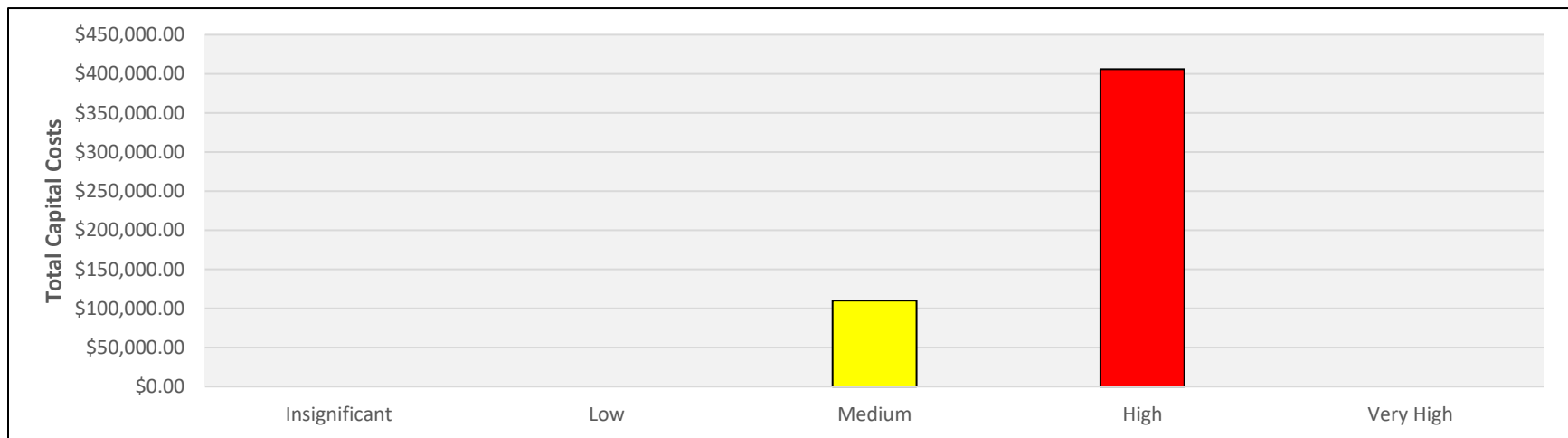
**Health and Safety:** Possibility of serious injuries or impacts to health. May affect one or more individuals and/or result in short-term disabilities.

**Operational & Internal Demand:** Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement are over 125% to 200% of proactive replacement and Increase in cost to providing service is over 25%.

**Legal & Regulatory Compliance:** Potential claims by an individual possible.



Probability of Failure (PoF)					
Parks and Recreation	Consequence of Failure (CoF)	\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$406,036.00
		\$-	\$-	\$-	\$-
		\$-	\$-	\$110,000.00	\$-
		\$-	\$-	\$-	\$-

## 11.6 Works Department – Licensed & Unlicensed Vehicles and Equipment

### Consequence of Failure Descriptions

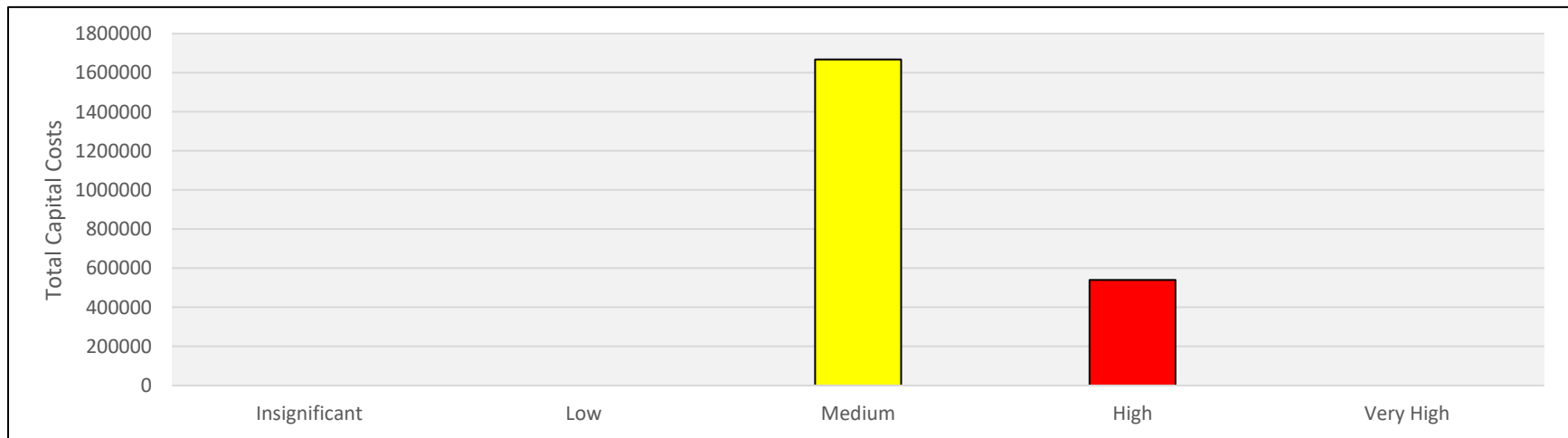
**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Major localized disruption: 1,000 - 5,000 people affected, Service interrupted 5-30 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement is over 110% to 125% of proactive replacement and Increase in cost to providing service is over 10%.

**Legal & Regulatory Compliance:** Potential claims by an individual possible.



Probability of Failure (PoF)					
Works, Parks, Building Dpts.	Consequence of Failure (CoF)	\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$540,000.00
		\$-	\$-	\$1,576,000.00	\$-
		\$-	\$-	\$92,000.00	\$-
		\$-	\$-	\$-	\$-

## 11.7 Parks and Recreation Unlicensed vehicles

### Consequence of Failure Descriptions

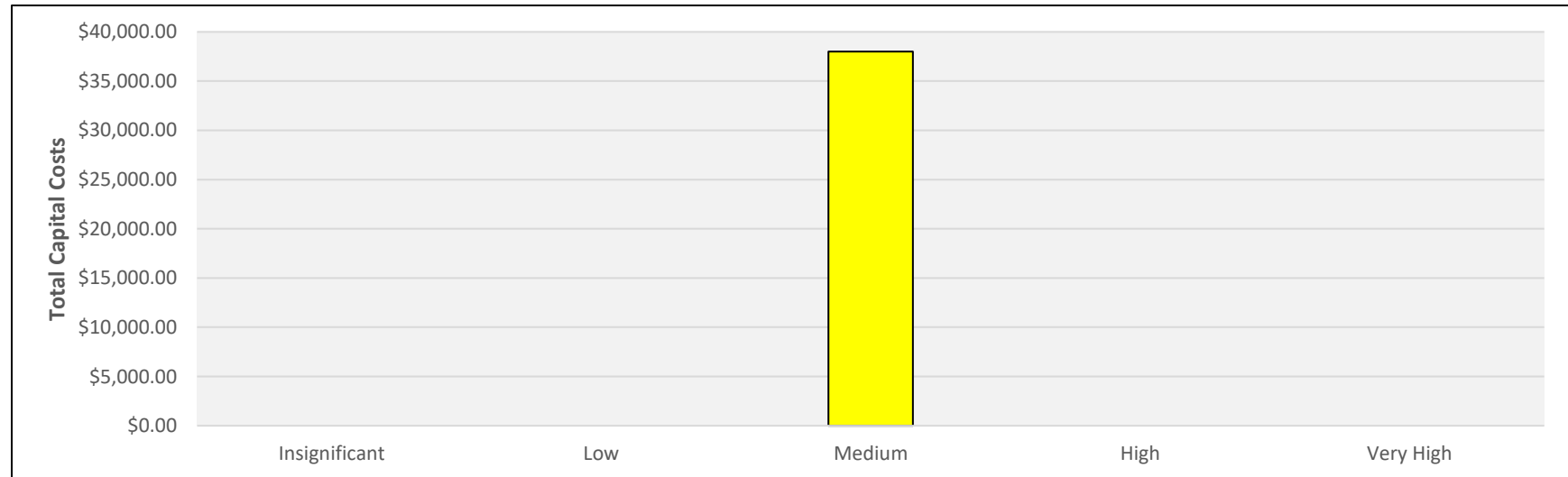
**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Major localized disruption: 1,000 - 5,000 people affected, Service interrupted 5-30 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement is over 110% to 125% of proactive replacement and Increase in cost to providing service is over 10%.

**Legal & Regulatory Compliance:** Potential claims by an individual possible.



Probability of Failure (PoF)					
P & R Unlicensed Consequence of Failure (CoF)	\$-	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-	\$-
	\$-	\$-	\$	\$-	\$-
	\$-	\$-	\$38,000.00	\$-	\$-
	\$-	\$-	\$-	\$-	\$-



## 11.8 Building Department Licensed Vehicles

### Consequence of Failure Descriptions

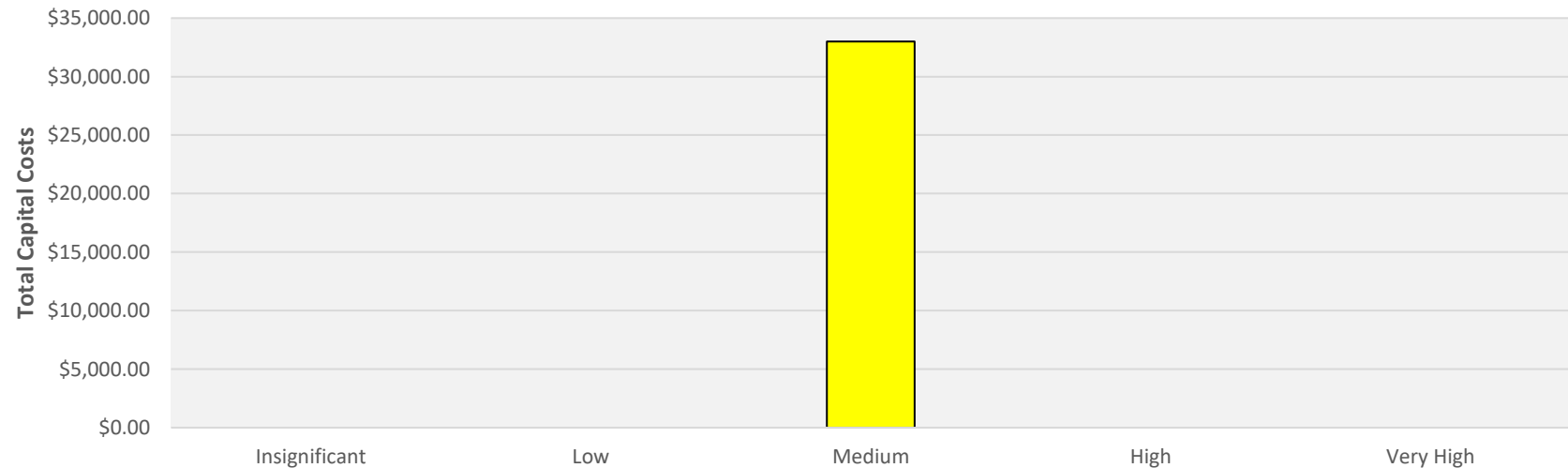
**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Major localized disruption: 1,000 - 5,000 people affected, Service interrupted 5-30 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement is over 110% to 125% of proactive replacement and Increase in cost to providing service is over 10%.

**Legal & Regulatory Compliance:** Potential claims by an individual possible.



Probability of Failure (PoF)				
BD Licensed Vehicles	Consequence of Failure (CoF)	\$-	\$-	\$-
		\$-	\$-	\$-
		\$-	\$33,000.00	\$-
		\$-	\$-	\$-
		\$-	\$-	\$-

## 11.9 Fire Licensed Vehicles (Vehicles and Tires)

### Consequence of Failure Description

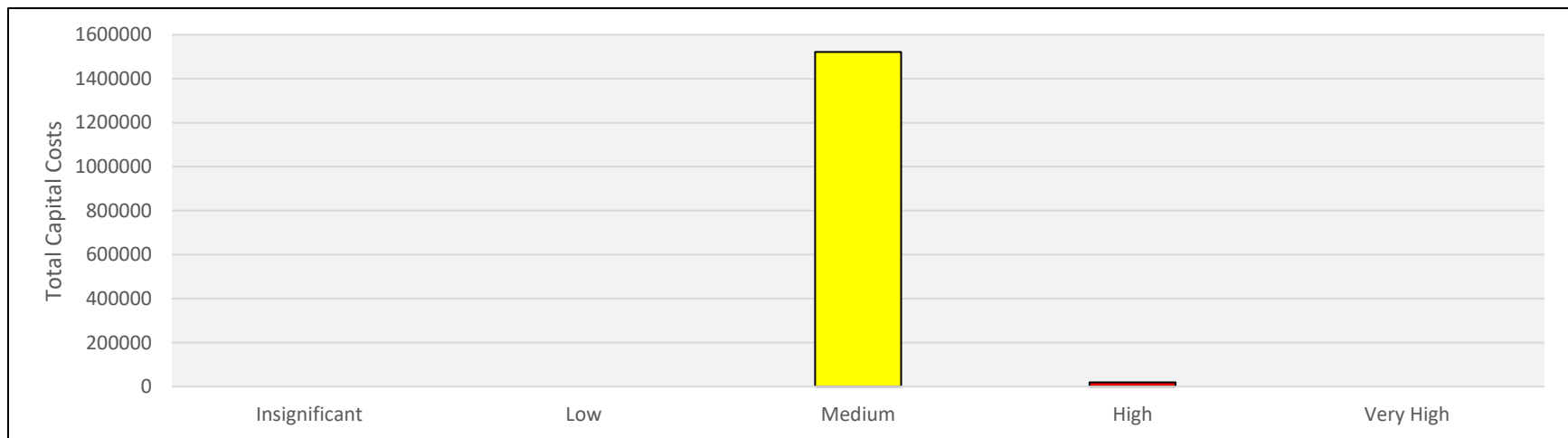
**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Major localized disruption: 1,000 - 5,000 people affected, Service interrupted 5-30 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement are over 125% to 200% of proactive replacement and Increase in cost to providing service is over 25%.

**Legal & Regulatory Compliance:** Cost of Reactive response and replacement is 110% to 120% of proactive replacement or Increase in cost to providing service is over 5%.



Probability of Failure (PoF)				
Fire Licensed Vehicles	Consequence of Failure (CoF)	\$-	\$-	\$-
		\$-	\$-	\$19,384.00
		\$-	\$1,497,066.00	\$-
		\$-	\$24,650.00	\$-
		\$-	\$-	\$-

## 11.10 Fire Equipment

### Consequence of Failure Descriptions

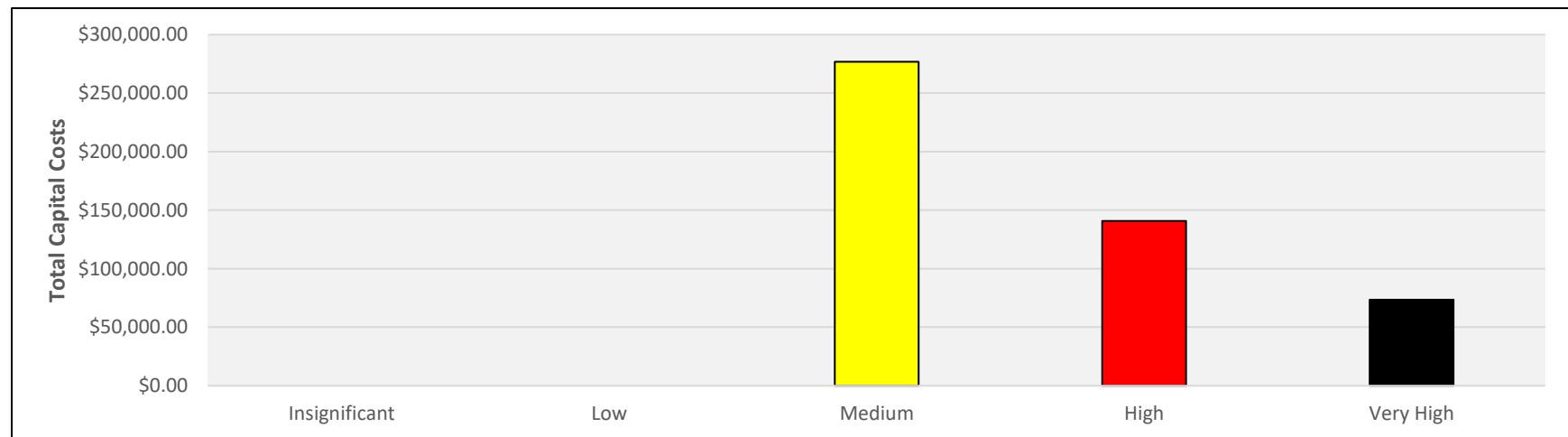
**Health and Safety:** Probable likelihood for serious injury or impacts to the health of one or more individuals with a possibility for loss of a life and the possibility of long-term disabilities.

**Operational & Internal Demand:** Major localized disruption: 1,000 - 5,000 people affected, Service interrupted 5-30 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement are over 125% to 200% of proactive replacement and Increase in cost to providing service is over 25%.

**Legal & Regulatory Compliance:** Potential claims by an individual possible.



Probability of Failure (PoF)						
Fire Equipment	Consequence of Failure (CoF)	\$-	\$-	\$-	\$-	\$73,500.00
		\$-	\$-	\$-	\$140,800.00	\$-
		\$-	\$-	\$276,850.00	\$-	\$-
		\$-	\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$-	\$-

### 11.11 Storm Water Management Ponds

#### Consequence of Failure Descriptions

**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Service disruption at a localized level: 10 - 200 people affected, service interrupted 1 day.

**Environmental:** Significant long-term (> 1 year) widespread damage to the environment.

**Financial:** Cost of Reactive response and replacement is over 110% to 125% of proactive replacement and Increase in cost to providing service is over 10%.

**Legal & Regulatory Compliance:** Possible Claims and charges by interest groups or Government Agencies.



Probability of Failure (PoF)					
Storm Water Management Ponds	Consequence of Failure (CoF)	\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$480,000.00
		\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$-

## 11.12 Street lights and Poles (No Data)

### Consequence of Failure Descriptions

**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement is over 110% to 125% of proactive replacement and Increase in cost to providing service is over 10%.

**Legal & Regulatory Compliance:** Probable Claims and charges by interest groups or Government Agencies.

Insignificant	Low	Medium	High	Very High

Probability of Failure (PoF)					
Street light and Poles	Consequence of Failure (CoF)				

### 11.13 Sidewalks

#### Consequence of Failure Descriptions

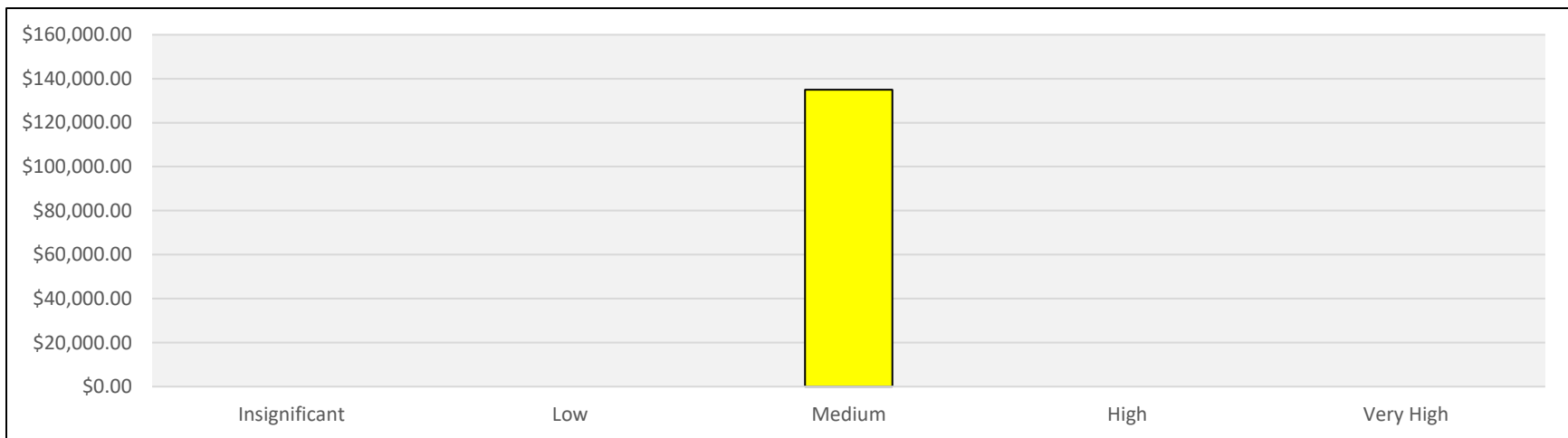
**Health and Safety:** Potential for minor injury or impacts to health of an individual. Full recovery is expected.

**Operational & Internal Demand:** Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement are over 125% to 200% of proactive replacement and Increase in cost to providing service is over 25%.

**Legal & Regulatory Compliance:** Potential claims by an individual possible.



Probability of Failure (PoF)					
Sidewalks	Consequence of Failure (CoF)	\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$-
		\$-	\$-	\$-	\$-
		\$-	\$-	\$135,000.00	\$-
		\$-	\$-	\$-	\$-

### 11.14 Fire Reservoirs (No Data)

#### Consequence of Failure Descriptions

**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Major localized disruption: 1,000 - 5,000 people affected, Service interrupted 5-30 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement are over 125% to 200% of proactive replacement and Increase in cost to providing service is over 25%.

**Legal & Regulatory Compliance:** Probable Claims and charges by interest groups or Government Agencies.


Probability of Failure (PoF)					
Fire Reservoirs	Consequence of Failure (CoF)				

### 11.15 Regulatory/Warnings Signs (No Data)

#### Consequence of Failure Descriptions

**Health and Safety:** Probable likelihood for serious injury or impacts to the health of one or more individuals with a possibility for loss of a life and the possibility of long-term disabilities.

**Operational & Internal Demand:** Significant localized service disruption: 200 - 1,000 people affected, Service interrupted 1-5 days.

**Environmental:** Very negligible impact. Reversible within 1 week.

**Financial:** Cost of Reactive response and replacement are over 125% to 200% of proactive replacement and Increase in cost to providing service is over 25%.

**Legal & Regulatory Compliance:** Definite claims and charges by interest groups or government agencies.

Insignificant	Low	Medium	High	Very High

Probability of Failure (PoF)					
Regulatory/ Warnings Signs	Consequence of Failure (CoF)				



## 11.16 Storm Sewers (No Data)

### Consequence of Failure Descriptions

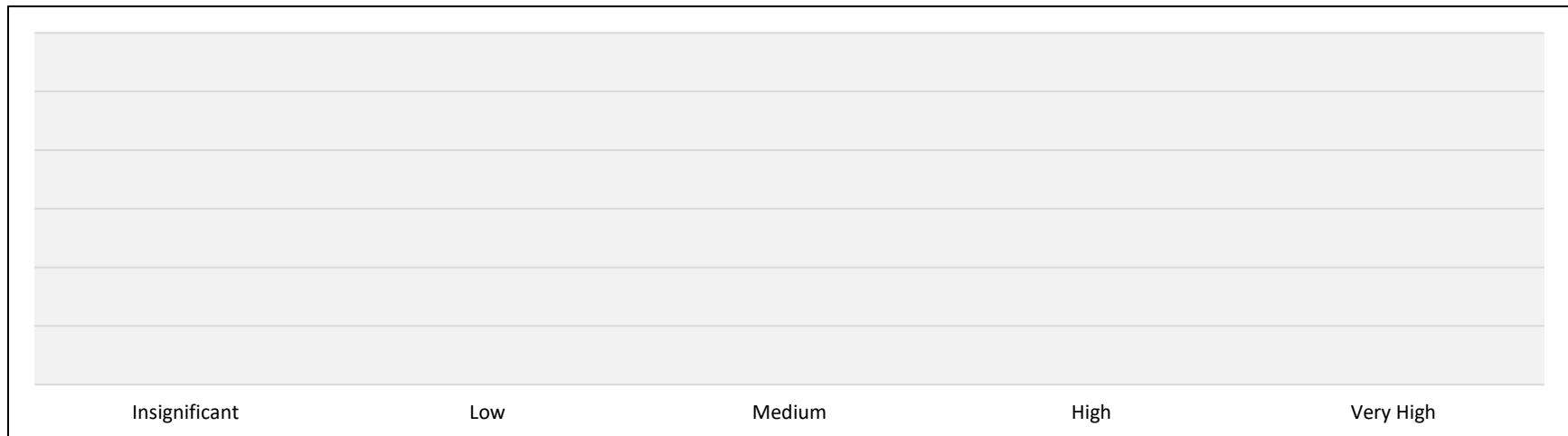
**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Service disruption at a localized level: 10 - 200 people affected, service interrupted 1 day.

**Environmental:** Significant long-term (> 1 year) widespread damage to the environment.

**Financial:** Cost of Reactive response and replacement is over 110% to 125% of proactive replacement and Increase in cost to providing service is over 10%.

**Legal & Regulatory Compliance:** Probable Claims and charges by interest groups or Government Agencies.



Probability of Failure (PoF)					
Storm Sewers	Consequence of Failure (CoF)				

### 11.17 Street Trees (No Data)

#### Consequence of Failure Descriptions

**Health and Safety:** No obvious potential for injury or impacts to health.

**Operational & Internal Demand:** Service disruption at a localized level: 10 - 200 people affected, service interrupted 1 day.

**Environmental:** Significant long-term (> 1 year) widespread damage to the environment.

**Financial:** Cost of Reactive response and replacement is 110% to 120% of proactive replacement and Increase in cost to providing service is over 5%.

**Legal & Regulatory Compliance:** No claims or charges.

</

Probability of Failure (PoF)					
Street Trees	Consequence of Failure (CoF)				

## 12.0 Financial Plan

### 12.1 Legislative Requirement

Ontario Regulation 588/17 requires that for the proposed levels of service a municipality shall prepare a 10-year lifecycle management and financial strategy. The regulation requires that the lifecycle management and financial strategy set out the following:

- An identification of the lifecycle activities that would need to be undertaken to achieve the proposed level of service for each asset category;
- An identification of the costs of undertaking the lifecycle activities;
- An identification of the annual funding projected to be available;
- An explanation of the financial options examined; and
- An identification of any funding shortfall and an explanation of how the funding shortfall and associated risks will be addressed.

Sections 8-9 identified the lifecycle activities (and the projected costs associated with those activities) that would need to be undertaken to achieve the proposed level of service for each asset category. Sections 12-13 identify the proposed annual funding projected to be available, an explanation of the financial strategy options examined and an explanation of how any funding shortfall and associated risks will be addressed.

Under this section three financial strategy options were developed. It should be noted that a number of assumptions were required to be made in the development of these options, as well as financial policy considerations. These assumptions and financial policy considerations are discussed below.

### 12.2 Financial Strategy Assumptions

The information used in the development of the financial strategy options was provided by Township staff and UEM, with the three financial strategy options being based on funding the asset management lifecycle activities as detailed in Sections 8-9. The following assumptions used in the development of these options were reviewed with Township staff and considered reasonable.

### 12.3 Capital Financing Assumptions

It has been assumed that certain capital grants would be available towards financing the asset management lifecycle activities. The grant amounts contained in the financial strategy are consistent with those outlined in the Township's 2019 Proposed Capital Budget, Township staff direction, and consist of the following grant sources:

- Ontario Community Infrastructure Grant (OCIF)
- Gas Tax Funding
- County Accessibility Grant

It should be noted that the OCIF grant is assumed to only be available to 2020 as this is the last year of the official grant program. Should this grant program be renewed it is recommended that the financial strategy be reviewed, and adjustments made at that time.

It has also been assumed that a portion of the Aggregate Revenue received annually by the Township would be available for financing Asset Management Plan capital related activities. As well, approximately \$80,000 has been assumed to be available from the Public Works Development Charges (DC) Restricted Reserves for financing the asset management lifecycles activities. This is consistent with the 2014 Development Charges Study that identified 15.6% of roads projects to be deemed growth-related, and therefore eligible for use of DC funds.

The balance of capital financing necessary to undertake the recommended lifecycle activities is assumed to come from the capital asset replacement discretionary reserve, or the use of long-term debt. It should be noted that the use of long-term debt will only be considered for financing asset management lifecycles activities when available funds are insufficient in the capital asset replacement discretionary reserve. Insufficient funds are deemed to occur when the capital asset replacement discretionary reserve reaches its recommended minimum target balance. The financial policies regarding the use of long-term debt and the capital asset replacement discretionary reserve recommended target balances are discussed later in this section.

Assumptions on the sources of capital financing are also discussed under Annual Capital Levy Assumptions and Debt Management Assumptions, as well as under Financial Policy Considerations regarding the Recommended Asset Management Lifecycle Activity Funding Target and Recommended Long-Term Debt Capacity Restrictions.

## **12.4 Capital Asset Replacement Discretionary Reserve Assumptions**

There are several discretionary reserves which have been established by the Township for a variety of purposes. All discretionary reserves were reviewed with Township staff, and capital asset replacement related reserves were identified. It is assumed that the projected balances contained in these capital asset replacement related discretionary reserves would be available towards the funding of asset management lifecycle activities as recommended in this report. A one-time infusion of \$507,627 was provided into these reserves from the Township's 2018 Surplus. The sum-total of the 2019 opening balances of these capital asset replacement related discretionary reserves is estimated at \$2,838,841. For purposes of the development of the financing strategy options it is assumed that there will be one consolidated discretionary reserve for capital asset management lifecycle activities. It is assumed that contributions to this reserve will come from the Township's annual capital levy, with annual draws going towards funding the recommended asset management lifecycle activities. Assumptions regarding the annual Asset Management Plan capital levy and the asset management lifecycle activities are discussed below.

Assumptions have also been made regarding the extent to which annual draws can be made from this reserve. It is assumed that the capital asset replacement discretionary reserve can only be drawn on to fund annual asset management lifecycle activities to the extent that funds in the reserves exceed the recommended minimum target balance. Policies on the Recommended Capital Asset Replacement Discretionary Target Balances are discussed further under Financial Policy Considerations.

## **12.5 Asset Management Lifecycle Activities Assumptions**

The asset management lifecycle activities and associated costs used in the development of the financial strategy options are as detailed in Sections 8-9 of this report. The costs as detailed in Sections 8-9 are however reflected in 2019 dollars. For purposes of developing the financial strategy options, the asset management lifecycle activities costs have been inflated to the year in which they are recommended to be incurred. The inflation of these costs is necessary in developing a realistic financial strategy as the Township's tax levy that will be required to, in-part, fund the asset management lifecycle activities will be in future dollars. It is assumed that the asset management lifecycle activities costs inflate annually by 2%.

## **12.6 Annual Asset Management Plan Capital Levy Assumptions**

Each year, as part of the Township's annual budget setting process a capital levy is provided for in the annual estimates of costs to be funded from the current tax levy. In 2018 the Township's capital levy was established at \$690,849, with a one-time adjustment of \$232,500 being made to accommodate an operational matter related to OMERS. It is assumed that the base budget for the capital levy has been adjusted back in 2019 to a normalized level of \$923,349. Upon discussions with Township staff it was directed that 75% of the 2019 base capital levy, or \$692,512, be assumed to be dedicated towards the funding of asset management related operating costs. For purposes of developing the three financial strategy options the asset management related operating costs shall consist of:

- transfers to the capital asset replacement discretionary reserve, and
- servicing of any asset management lifecycle activity related long-term debt.

## **12.7 Debt Management Assumptions**

In each year of the 10-year asset management lifecycle activity forecast, total capital financing must equal total capital expenditures. In years where available Asset Management Plan capital financing from all sources, including available funds from the capital asset replacement discretionary reserve are insufficient to finance the inflated costs related to the asset management lifecycle activities, it is assumed that long-term debt will be used to balance capital financing with capital expenditures.

When debt is considered necessary in a given year, it is assumed that the long-term debt is issued at the end of that year, with long-term debt servicing commencing in the following year. It is assumed that long-term debt will have a term of 10 years, with an interest rate of 3.5%. This is considered conservative as the Township has authority to issue long-term debt for financing capital assets for a term of the lesser of 40 years, or the useful life of the asset being financed by the long-term debt. The majority of assets impacted by the asset management lifecycle activities have useful lives far in excess of 10 years.

It is assumed that servicing of long-term debt will be provided from the annual capital levy, with the unallocated balance of the annual capital levy being transferred into the capital asset replacement discretionary reserve where it will be available, subject to the minimum balance policy, to fund the asset management lifecycle activities.

The financial policies regarding the use of long-term debt are discussed later in this section.

## 13.0 Financial Policy Considerations

### 13.1 Recommended Asset Management Lifecycle Activity Target Funding Levels

One of main objectives of the financial strategy options is to achieve a sustainable level of funding towards asset management related costs. For purposes of this Financial Policy Consideration, asset management related costs include the cost associated with asset management lifecycle activities, and the costs associated with servicing long-term debt incurred for financing past asset management lifecycle activities.

It is recommended that a sustainable level of asset management funding is deemed to be achieved when total Township asset management funding is equivalent to 2% of the projected estimated capital asset replacement values of all asset classes as contained in the Township's Asset Registry. Capital asset replacement values are currently estimated at approximately \$80 million and are assumed to appreciate each year by 2%. This target level of asset management funding is considered best practice and is within the range of asset management target funding levels of other municipalities.

As noted previously it is assumed for the purposes of developing the Township's financial strategy options, the funding sources of asset management related costs consists of:

- Ontario Community Infrastructure Grant (OCIF)
- Gas Tax Funding
- County Accessibility Grant
- Aggregate Levy
- Public Works Development Charges
- Asset Management Plan Capital Levy

Other than the Asset Management Plan Capital Levy, all sources of funding asset management related costs have been clearly identified and quantified from the Township's 2019 Proposed Capital Budget and Township staff direction. Only the Asset Management Plan Capital Levy will vary under each financial strategy option. For each financial strategy option, the Asset Management Plan capital levy will increase each year at the % impact rate for each of the respective financial strategy options until the recommended asset management target funding level is achieved. Once this target funding level is achieved then only necessary increases in the Capital Levy will occur each year to ensure that the asset management target funding level is maintained.

### 13.2 Recommended Capital Asset Replacement Discretionary Reserve Target Balances

It is not uncommon for a municipality to have upper and lower target balances for their respective reserves. Under this Financial Policy Consideration, the minimum and maximum target balances of the capital asset replacement discretionary reserve be recommended such that the minimum reserve balance be set at an amount that would represent 10% of the inflated 10-year asset management lifecycle activity expenditures, with the maximum target balance not to exceed an amount that would represent 20% of the inflated 10-year asset management lifecycle activity expenditures. For purposes of the financial strategy options, the capital asset replacement discretionary reserve shall have a minimum balance of \$2.0 million and a target balance of \$4 million. This Financial Policy Consideration regarding target balances are considered best practice for asset replacement related reserves and is in-line with target balances of other municipalities.

As noted earlier in this section it is assumed that contributions to this reserve will come from the Township's annual capital levy, with annual draws going towards funding the recommended asset management lifecycle activities. Assumptions have also been made regarding the extent to which annual draws can be made from this reserve. It is assumed that the capital asset replacement discretionary reserve can only be used to fund annual asset management lifecycle activities to the extent that funds in the reserves exceed the recommended minimum target balance.

### **13.3 Recommended Long-Term Debt Capacity Restrictions**

The use of long-term debt is an important financing tool that is available to the Township in providing flexibility for the financing of capital projects. The financial strategy options presented in this section identify the need for long-term debt to finance asset management lifecycle activities in years in which available funds in the capital asset replacement discretionary reserve are insufficient. When considering the use of long-term debt in the financing of capital works it is deemed best practice for a municipality to adopt a debt management policy to ensure the long-term debt is used and managed appropriately. While beyond the scope of this project to detail all possible considerations of a debt management policy, long-term debt capacity restrictions are discussed with the view to establishing a perspective on the degree to which long-term debt plays a role in the financial strategy options.

While statutory limitations of a municipality's indebtedness are provided annually by the Province, it is best practice for a municipality's debt management policy to contain tighter restrictions on the level of debt that the Township is willing to incur. Under Provincial regulation a municipality is not allowed to issue long-term debt which would result in the annual repayment of long-term debt and interest to exceed an amount that would represent 25% of that municipality's own source (net) revenues. Under this Financial Policy Consideration, it is recommended that this limit be reduced to long-term debt servicing that would not exceed an amount that would represent 10% of the Township's net revenues. Again, this is considered best practice and is used by many municipalities as an internal long-term debt capacity restriction.

## **14.0 Financial Strategy Options**

As noted earlier in this section three financial strategy options were developed. Under the financial strategy options, different levels of annual Asset Management Plan capital levy funding increases are presented. The financial details of each of these options can be found in Financial Strategy Options Appendices 20.1, 20.2 and 20.3.

### **14.1 Asset Management Plan Capital Levy**

The three options for annual Asset Management Plan capital levy funding increases are based on the tax impact that each respective increase in the annual Asset Management Plan capital levy will have on the typical single family detached dwelling (median valued single family detached dwelling within the Township).

The Asset Management Plan capital levy funding increase considered under the three financial strategy options are:

- Option 1 – Annual Asset Management Plan Capital Levy Increase is Equivalent to a 1% Tax Impact on the Typical Single Family Detached Dwelling.

- Option 2 – Annual Asset Management Plan Capital Levy Increase is Equivalent to a 2% Tax Impact on the Typical Single Family Detached Dwelling.
- Option 3 – Annual Asset Management Plan Capital Levy Increase is Equivalent to a 3% Tax Impact on the Typical Single Family Detached Dwelling.

In 2019 a \$38,500 increase in the capital levy represents an approximate 1% tax impact on the typical single detached dwelling. \$77,300 represents a 2% impact, with \$115,950 representing an approximate 3% impact. The dollar amounts of the capital levy increases will increase each year as projected changes occur in the Township's future assessment values, as well as changes in the median value of a typical single family detached dwelling. A comparison of projected annual capital levy increases over the forecast period for the three financial strategy options can be found below in Table 14.0 - 1 (Comparison of Annual Capital Levy Increases - \$).

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	38,500	39,000	39,400	39,700	40,100	40,500	40,900	41,300	41,700	42,200
Option 2	77,300	78,800	80,400	82,000	84,000	83,761	34,222	34,907	35,604	36,317
Option 3	115,950	91,310	122,400	100,272	22,778	33,551	34,222	34,907	35,604	36,317

14.0 – 1 (Comparison of Annual Capital Levy Increases - \$)

It should be noted however that the annual Asset Management Plan capital levy increase will occur each year at the same % impact rate for each of the respective financial strategy options when the recommended Asset Management Plan target funding, or sustainable funding level is not achieved. In years when the Asset Management Plan target funding level is achieved then only necessary increases in the Capital Levy will occur to ensure that the Asset Management Plan target funding level is maintained. A comparison of projected annual capital levy % impact rates over the forecast period for the three financial strategy options can be found below in Table 14.0 - 2 (Comparison of Annual Capital Levy Increases - %)

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Option 2	2.00%	2.00%	2.00%	2.00%	2.00%	1.96%	0.79%	0.80%	0.81%	0.82%
Option 3	3.00%	2.29%	3.00%	2.40%	0.54%	0.79%	0.80%	0.81%	0.82%	0.83%

14.0 – 2 (Comparison of Annual Capital Levy Increases - %)

Table 14.0 - 3 (Comparison of Annual Capital Levy - \$) provides a comparison of the total capital levy generated each year under the three financial strategy options.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	731,012	770,012	809,412	849,112	889,212	929,712	970,612	1,011,912	1,053,612	1,095,812
Option 2	769,812	848,612	929,012	1,011,012	1,095,012	1,178,773	1,212,995	1,247,902	1,283,506	1,319,823
Option 3	808,462	899,772	1,022,172	1,122,444	1,145,222	1,178,773	1,212,995	1,247,902	1,283,506	1,319,823

14.0 – 3 (Comparison of Annual Asset Management Plan Capital Levy - \$)

The total capital levy is allocated between two Asset Management Plan related costs:

- transfers to the capital asset replacement discretionary reserve, and
- servicing of any asset management lifecycle activity related long-term debt.

Table 14.0 – 4 (Comparison of Transfers of Capital Levy to Capital Asset Replacement Discretionary Reserve - \$) details for each financial strategy option the amounts that the Asset Management Plan Reserve will receive from the annual capital Levy. As can be noted in this table, the transfers under Option 1 are decreasing. This is due to the significant increase in debt servicing noted in Table 14.0 - 5. The increased debt servicing is the direct result



of the need for larger amounts of long-term debt to finance the asset management lifecycle activities under that option.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	731,012	770,012	695,652	632,346	633,562	497,859	453,499	451,529	334,093	367,151
Option 2	769,812	848,612	829,368	824,440	892,654	831,366	820,429	855,336	781,209	817,526
Option 3	808,462	899,772	933,327	959,171	981,949	881,603	876,705	911,612	851,019	887,336

14.0 – 4 (Comparison of Transfers of Capital Levy to Capital Asset Replacement Reserve - \$)

Table 14.0 - 5 (Comparison of Servicing of Asset Management Plan Long Term Debt) details for each financial strategy option the amount of debt servicing which results from the financing of the asset management lifecycle activities. As noted, all three financial strategy options will require long-term debt in financing the asset management lifecycle activities.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	-	-	113,760	216,766	255,650	431,852	517,113	560,383	719,519	728,661
Option 2	-	-	99,643	186,572	202,358	347,406	392,566	392,566	502,297	502,297
Option 3	-	-	88,844	163,273	163,273	297,170	336,289	336,289	432,487	432,487

14.0 – 5 (Comparison of Servicing of Asset Management Plan Long-Term Debt - \$)

## 14.2 Asset Management Plan Funding

Total Asset Management Plan funding represents the funding sources that the Township has directed towards funding asset management related costs. For the purposes for developing the Township's Financial Strategy options, the Asset Management Plan funding sources consist of:

- Ontario Community Infrastructure Grant (OCIF)
- Gas Tax Funding
- County Accessibility Grant
- Aggregate Levy
- Public Works Development Charges
- Asset Management Plan Capital Levy

The capital levy amount shown in Table 14.0 - 3, when combined with the other Asset Management Plan funding sources as detailed in Table 14.0 - 6 (Other Sources of Asset Management Plan Funding - \$) show the total funds dedicated by the Township towards funding asset management related costs (see Table 14.0 - 7).

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Provincial/Federal Grants (OCIF)	169,421	168,923	-	-	-	-	-	-	-	-
Gas Tax Funding	222,547	222,547	232,662	232,662	242,778	242,778	242,778	242,778	242,778	242,778
Other (County Accessibility Grant Funding)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Aggregate Revenue	228,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Public Works Development Charges	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560
<b>Total Other Sources of AMP Funding</b>	<b>709,528</b>	<b>681,030</b>	<b>522,222</b>	<b>522,222</b>	<b>532,338</b>	<b>532,338</b>	<b>532,338</b>	<b>532,338</b>	<b>532,338</b>	<b>532,338</b>

14.0 – 6 (Other Sources of Asset Management Plan Funding - \$)

Table 14.0 - 7 (Comparison of Asset Management Plan Funding Levels - \$) details the Target Asset Management Plan funding levels over the forecast period and compares that target level to the Asset Management Plan Funding Levels provided under each financial strategy option. As can be seen in Table 14.0 - 7, Option 1 does not achieve a sustainable level of funding over the forecast period, whereas Option 2 achieves sustainable funding by 2024 and maintained for the balance of the forecast period. Option 3 achieves sustainable funding by 2020, however due to a reduction in Asset Management Plan funding from other

sources in 2021, a sustainable level of funding is not achieved in that year. A sustainable level of Asset Management Plan funding is again achieved in 2022 and maintained for the balance of the forecast period under Option 3.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Target AMP Funding Level (2% of Capital Asset Values)	1,549,806	1,580,802	1,612,418	1,644,666	1,677,559	1,711,111	1,745,333	1,780,239	1,815,844	1,852,161
Option 1	1,440,540	1,451,042	1,331,634	1,371,334	1,421,550	1,462,050	1,502,950	1,544,250	1,585,950	1,628,150
Option 2	1,479,340	1,529,642	1,451,234	1,533,234	1,627,350	1,711,111	1,745,333	1,780,240	1,815,844	1,852,161
Option 3	1,517,990	1,580,802	1,544,394	1,644,666	1,677,560	1,711,111	1,745,333	1,780,240	1,815,844	1,852,161

#### 14.0 - 7 (Comparison of Asset Management Plan Funding Levels - \$)

Table 14.0 - 8 (Inflated Asset Management Lifecycle Activities - \$) presents the 2019-2028 asset management lifecycle activities' expenditures. As noted earlier in this section, these amounts reflect the asset management lifecycle activities' expenditure as presented in Sections 8-9 but have been adjusted to account for inflation over the forecast period.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bridges	-	-	426,564	-	-	-	-	574,343	-	-
Culverts	-	-	561,816	-	-	-	-	643,264	-	-
Buildings and Facilities	15,750	22,440	114,444	63,672	32,473	200,115	11,262	17,230	35,150	528,335
Fire Equipment	21,000	314,823	6,242	-	12,989	9,937	69,259	27,568	43,351	14,341
Parks and Recreation	-	35,361	22,889	-	335,554	1,987	-	160,618	-	9,250
Asphalt Road 1 Lift	1,509,346	626,983	167,647	751,961	1,534,372	750,696	492,165	653,942	257,736	1,055,247
Asphalt Road 2 Lift	-	281,926	275,544	-	402,012	497,275	52,434	146,515	233,286	144,747
Asphalt Road Surface Treated	-	-	-	-	-	143,853	16,723	-	-	-
Gravel Road	140,000	66,300	67,626	68,979	70,358	71,765	73,201	74,665	76,158	77,681
Storm Water Management Ponds	-	153,000	171,666	175,099	-	-	-	-	-	-
Fire licensed vehicles	-	530,400	-	-	-	25,394	527,044	-	-	597,546
Fire vehicle tires	17,146	1,683	-	4,368	-	1,822	-	-	3,866	8,590
Sidewalk	25,000	112,200	-	-	-	-	-	-	-	-
Works licensed vehicles	-	652,800	260,100	-	243,547	-	103,607	-	292,915	298,773
Works Unlicensed vehicles	26,000	127,500	-	413,871	-	-	-	-	-	-
Building Department licensed vehicles	-	-	-	-	-	36,435	-	-	-	-
Parks and Recreation Unlicensed vehicles	-	-	-	-	-	-	-	9,189	-	35,853
<b>Total Inflated Asset Management Lifecycle Activities Expenditures</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>

#### 14.0 - 8 (Inflated Asset Management Lifecycle Activities - \$)

The asset management lifecycle activities expenditure is financed from various Asset Management Plan financing sources. These Asset Management Plan financing sources consist of:

- Ontario Community Infrastructure Grant (OCIF)
- Gas Tax Funding
- County Accessibility Grant
- Aggregate Levy
- Public Works Development Charges
- Transfers to the Capital Asset Replacement Discretionary Reserve
- Long-Term Debt

Only the mix of transfers from the Capital Asset Replacement Discretionary Reserve and the use of long-term debt vary among the three financial strategy options. This mix of reserve transfer/debt is determined by the financial strategy option and the proposed increase in the Asset Management Plan Capital Levy in that option. Table 14.0 - 9 (Asset Management Plan Capital Financing Sources - \$) details the 2019 – 2028 sources of capital financing.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Provincial/Federal Grants (OCIF)	169,421	168,923	-	-	-	-	-	-	-	-
Gas Tax Funding	222,547	222,547	232,662	232,662	242,778	242,778	242,778	242,778	242,778	242,778
Other (County Accessibility Grant Funding)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Aggregate Revenue	228,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Public Works Development Charges	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560
(Total of AMP Reserve / Long-Term Debt)	1,044,714	2,244,386	1,552,316	955,728	2,098,967	1,206,940	813,356	1,774,998	410,124	2,238,026
<b>Total AMP Capital Financing Sources</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>

## 14.0 – 9 (Asset Management Plan Capital Financing Sources - \$)

The 2019-2028 Asset Management Plan Reserve Financing is detailed for each financial strategy option in Table 14.0 - 10 (Comparison of Asset Management Plan Reserve Financing - \$). The 2019-2028 Long-Term Debt Financing under each financial strategy option is detailed in Table 14.0 - 11 (Comparison of Asset Management Plan Debt Financing - \$)

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	1,044,714	1,298,292	695,652	632,346	633,562	497,859	453,499	451,529	334,093	367,151
Option 2	1,044,714	1,415,692	829,368	824,441	892,654	831,366	813,356	862,409	410,124	1,188,610
Option 3	1,044,714	1,505,502	933,327	955,728	985,393	881,602	813,356	974,962	410,124	1,328,232

## 14.0 – 10 (Comparison of Asset Management Plan Reserve Financing - \$)

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	-	946,094	856,664	323,382	1,465,405	709,081	359,857	1,323,469	76,031	1,870,875
Option 2	-	828,694	722,948	131,287	1,206,313	375,574	-	912,589	-	1,049,416
Option 3	-	738,884	618,989	-	1,113,574	325,338	-	800,036	-	909,794

## 14.0 – 11 (Comparison of Asset Management Plan Debt Financing - \$)

### 14.3 Capital Asset Replacement Discretionary Reserve

As noted earlier, contributions to the capital asset replacement discretionary reserve come from the Township's annual capital levy, with annual draws going towards funding the recommended asset management lifecycle activities. With consideration given to the recommended financial policy regarding the minimum target balance of the capital asset replacement discretionary reserve, Table 14.0 - 12 (Comparison of Asset Management Plan Reserve Balances - \$) provides a comparison of the recommended minimum target balance with the forecast reserve balances under each financial strategy option. As can be seen in this table, for each option the reserve levels are at the minimum recommended balances for many of the years in the forecast period. This is due to the magnitude of the asset management lifecycle activities and the need for long-term debt to finance these costs. The associated long-term debt servicing reduces the amount of capital levy that is able to be transferred into the capital asset replacement discretionary reserve, thereby reducing the reserve funds available to finance future asset management lifecycle activities, which in-turn leads to the need for more long-term debt financing.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Minimum Balance at 10% of 10 year Capital Plan	1,996,859	1,996,859	1,996,859	1,996,859	1,996,859	1,996,859	1,996,859	1,996,859	1,996,859	1,996,859
Option 1	2,525,139	1,996,859	1,996,859	1,996,858	1,996,858	1,996,859	1,996,858	1,996,858	1,996,858	1,996,858
Option 2	2,563,939	1,996,859	1,996,859	1,996,858	1,996,858	1,996,859	2,003,931	1,996,858	2,367,943	1,996,859
Option 3	2,602,589	1,996,859	1,996,859	2,000,302	1,996,858	1,996,859	2,060,208	1,996,859	2,437,754	1,996,858

## 14.0 – 12 (Comparison of Asset Management Plan Reserve Balances - \$)

### 14.4 Long-Term Debt

Long-term debt is required under each financing strategy option to fund the asset management lifecycle activities. The amount of required debt was previously detailed in Table 14.0 - 11 (Comparison of Asset

Management Plan Debt Financing - \$) with the resulting long-term debt servicing being previously detailed in Table 14.0-5 (Comparison of Servicing of Asset Management Plan Long-Term Debt - \$).

Table 14.0 - 13 (Comparison of Outstanding Long-Term Debt - \$) details the outstanding debt balances over the forecast period for each financial strategy option. As can be seen Option 1 contains the highest level of outstanding debt at the end of the forecast period at \$5.2 million, with Option 3 with the lowest level of outstanding debt at \$2.8 million.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	-	946,094	1,722,112	1,889,001	3,164,872	3,552,871	3,519,965	4,406,250	3,916,981	5,196,290
Option 2	-	828,694	1,481,003	1,477,554	2,533,223	2,650,054	2,350,240	2,952,521	2,553,562	3,190,056
Option 3	-	738,884	1,294,890	1,176,938	2,168,432	2,272,495	2,015,744	2,550,041	2,206,806	2,761,352

14.0 - 13 (Comparison of Outstanding Long-Term Debt - \$)

The recommended long-term debt capacity restriction noted in the Financial Policy Considerations limits the repayment of long-term debt to an amount that would represent 10% of the Township's net revenues. Table 14.0 - 14 (Comparison of Debt Repayment Limit - \$) details the remaining debt servicing capacity under each financial strategy option.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
10% of Net Revenues	556,512	584,337	613,554	644,232	676,444	710,266	745,779	783,068	822,221	863,332
Option 1	556,512	584,337	499,795	427,466	420,794	278,413	228,666	222,685	102,703	134,672
Option 2	556,512	584,337	513,911	457,660	474,086	362,859	353,213	390,502	319,924	361,036
Option 3	556,512	584,337	524,710	480,959	513,171	413,096	409,490	446,779	389,735	430,846

14.0 - 14 (Comparison of Remaining Debt Repayment Limit - \$)

Table 14.0 - 15 (Comparison of Remaining Debt Servicing Limit - %) views the long-term debt capacity restrictions from the perspective of a percentage of the limit remaining. Option 1 at the end of the forecast period has approximately 16% of the debt capacity available at the end of the forecast period. Option 2 has approximately 42% of the debt capacity remaining at the end of the forecast period, with Option 3 having half of the debt capacity available at the end of the forecast period.

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Option 1	100%	100%	81%	66%	62%	39%	31%	28%	12%	16%
Option 2	100%	100%	84%	71%	70%	51%	47%	50%	39%	42%
Option 3	100%	100%	86%	75%	76%	58%	55%	57%	47%	50%

14.0 - 15 (Comparison of Remaining Debt Servicing Limit - %)

## 14.5 Assessment of Financial Strategy Options

All three financial strategy options presented identify the annual funding projected to be available over a 10-year period to finance the asset management lifecycle activities needed to deliver the proposed levels of services detailed in this report.

In assessing the three financial strategy options the overall level of Asset Management Plan funding available, and the degree of use of long-term debt to underwrite shortfalls in available capital asset replacement discretionary reserves is considered.

Table 14.0 - 16 (2019-2028 Asset Management Plan Funding - \$) totals all Asset Management Plan funding sources over the forecast period, including other sources of Asset Management Plan funding as well as the capital levy funding, which will vary by financial strategy option. As noted in Table 14.0 - 16, Option 3 provides the highest level of Asset Management Plan financing over the forecast period, with \$16.9 million.

Description	Total Other AMP Funding Sources	Total AMP Capital Levy	Total AMP Funding
Option 1	5,629,030	9,110,418	14,739,448
Option 2	5,629,030	10,896,457	16,525,487
Option 3	5,629,030	11,241,069	16,870,099

14.0 – 16 (2019-2028 Asset Management Plan Funding- \$)

Table 14.0 - 17 (2019-2028 Capital Levy Allocation) allocates the capital levy funding noted in Table 14.0 - 16 between the transfers to the capital asset replacement discretionary reserve and servicing of Asset Management Plan related long-term debt.

Description	Total AMP Capital Levy	Total AMP Debt Servicing	Total Transferred in AMP Reserve
Option 1	9,110,418	3,543,703	5,566,714
Option 2	10,896,457	2,625,705	8,270,752
Option 3	11,241,069	2,250,111	8,990,957

14.0 – 17 (2019-2028 Capital Levy Allocation - \$)

As noted in Table 14.0 - 17, Option 1 provides the lowest level of tax supported funding (capital levy) over the forecast period with \$9.1 million, with Option 2 at \$10.9 million and Option 3 with the highest level of tax supported funding at \$11.2 million. While it should be noted that no funding shortfalls occurred in any of the financial strategy options presented, the use of long-term debt was necessary in all options to ensure that required asset management lifecycle activities could be undertaken.

The use of long-term debt requires debt servicing in the future, and therefore reduces the amount of the capital levy that can be transferred into the capital asset replacement discretionary reserve. The degree to which long-term debt was required under each option over the forecast period is evidenced by the amount Asset Management Plan debt servicing shown in Table 14.0 - 17.

Option 3 has the least debt servicing with \$2.3 million of the total capital levy going towards servicing long-term debt that was required to fund the asset management lifecycle activities, with Option 2 requiring \$2.6 million and Option 1 requiring \$3.5 million of the capital levy to servicing long-term debt.

While the capital asset replacement discretionary reserve balances over the forecast period under all financial strategy options are relatively the same, the degree to which the reserve can be drawn upon to fund the asset management lifecycle activities varies greatly. The differences among the three financial strategy options in regard to the funding of the asset management lifecycle activities from the capital asset replacement discretionary reserve is due to the Asset Management Plan capital levy being transferred into the reserve.

As can be seen in Table 14.0 - 17, over the forecast period, Option 1 transferred the least amount of funds into the capital asset replacement discretionary reserve at \$5.6 million, with Option 2 transferring \$8.3 million and Option 3 transferring the most at \$9.0 million. The transfers into the capital asset replacement discretionary reserve allow for the reserve financing of the asset management lifecycle activities, thereby reducing the need for long-term debt financing, and therefore the need to service that debt in the future.

Table 14.0 - 18 (2019-2028 Reserve vs Debt Financing) provides the level of total reserve financing vs. the level of total debt financing for each financial strategy option over the forecast period.

Description	Total AMP Reserve Financing	Total AMP Debt Financing	Total AMP Reserve/Debt Financing
Option 1	6,408,697	7,930,858	14,339,555
Option 2	9,112,734	5,226,821	14,339,555
Option 3	9,832,940	4,506,615	14,339,555

14.0 - 18 (2019-2028 Reserve vs Debt Financing - \$

## 15.0 Resources

### 15.1 Information Technology Strategy

As part of the project, UEM conducted a review of the available computer technology to support Asset Management at the Township. Regulation 588/17 requires the Township to maintain an Asset Registry and keep all data related to assets updated at least every two years.

### 15.2 Possible Database/Software Solutions

Puslinch has three valid options for achieving the automation of the process:

1. Maintain and upgrade the custom database and interface that was developed in 2018 as part of the Asset Management Project and is currently utilized for all asset data.
2. Purchase a purpose build software solution from a software vendor.
3. Contract a software developer for the development of a new custom build solution.

A “corporate approach” to information and data management is a pre-requisite for all the above options. This includes people, processes and technology. Functionality determination must be made by Puslinch. Basic information about the “inventory” should be freely accessible for use by any application in Puslinch or beyond. This means that the information should not be encumbered by software.

The Township of Puslinch should consider several requirements for their asset management software. They are as follows: the data should be hosted locally (if possible); the software should facilitate two-way data integration with GIS software (if possible); the ability to modify the database schema & associated attribute data; supporting multiple users with different access levels; the ability to hyperlink to site plans, as-built drawings etc.; and the creation of reports.

Additionally, UEM has identified several criteria for future asset management software. The criteria are as follows: the software must integrate PSAB management; inclusion of capital planning functionality; work order management system; GIS Integration; support multiple inventories (capital vs. non-capital); data is hosted locally; there should be two-way integration with existing databases.

### 15.3 Technology-Related Requirements

Upon review of the Township’s existing data processes, UEM has identified some areas for improvement. The foundation of any asset management plan is the data pertaining to each asset. The entire process is reliant on solid, up to date information from the databases.

The current software environment has some associated risks, foremost being limited external database and technological support. It is recommended that the Township of Puslinch acquire software or establish a relationship with a reputable organization to provide support to facilitate the use of these new measurements.

By using Asset Management software, Puslinch will be able to produce detailed capital plans and create maintenance schedules based on the data in addition to meeting PSAB reporting requirements. A significant benefit to the procurement of asset management and maintenance management software is the ability to update asset registers and asset data to be performed directly by the programs and departments responsible for the assets. Prior to the procurement of any software, demonstrations should be arranged where software vendors demonstrate the capability of their software using Township of Puslinch data in order to ensure compatibility with Puslinch's existing IT environment.

#### **15.4 Asset Management Tools**

- The Ontario Goods Roads Association (OGRA) makes available, at no cost, to all Municipalities in Ontario a Municipal Data Works (MDW) tool that will enable the full maintenance of the Asset Registry. This tool is provided with a set of applications that will provide full update, maintenance and reporting of asset data.
- While full accounting reporting in MDW as required by MFOA is not yet available, these reports can be obtained through the export of data to Microsoft Excel and the reports can be formatted from Excel. It should be noted that OGRA working with the MFOA intends to build the reports to be available at MDW in the near future.
- Data in MDW should be updated at least once a year, but ideally semiannually.

### **16.0 Council Approval and Public Engagement**

#### **16.1 Council Approval**

Council is responsible for approving the Township's goals and priorities. The planning process puts a spotlight on service delivery outcomes expected by the community. Municipalities rely heavily on their capital assets to carry out service delivery to the public. As a result, the asset management process supports the goals of service delivery and is fundamentally linked to many service delivery outcomes. This makes the asset management plan a key document that underpins Council's directions. Therefore, obtaining Council approval of the asset management process and the asset management plan ensures the asset management direction aligns with Council's corporate direction.

Once Council has approved the asset management process/plan, staff are able to undertake ongoing asset management actions knowing that they have council's support/direction, and that they are operating in a manner consistent with The Township's overall direction. Going forward, where asset management related issues are brought to Council, the asset management process provides content for discussions between Council, staff, and the public. However, the question becomes, "How will Council use this asset management process as a tool to make decisions on an ongoing basis?"

Council approves asset management reports and provides specific recommendations to include in the budget process. The recommendations are specific and include priority project identification, lifecycle cost investment levels, estimated impacts on rates, amongst others. Township staff would then incorporate the asset management recommendations into future budgets.



## 16.2 Public Engagement

Municipalities can benefit from seeking the public's involvement in developing, reviewing, and approving various aspects of the asset management process. The public's input may be directly sought as part of asset management plan discussions concerning levels of service, lifecycle management strategy scenarios, various financing strategy options, and/or other elements of the asset management process. In addition, feedback related to asset management plan issues can be indirectly derived from other public processes such as budget approvals or master plan approvals. Overall, ensuring some level of public engagement throughout the asset management process not only assists in gaining a level of public acceptance on asset management, but also a level of public ownership in the process.

O. Reg 588/17 outlines the following requirements with respect to AM Public Engagement:

- An Asset Management Policy must be developed and adopted by July 1, 2019 and reviewed and updated at least every 5 years. The Asset Management Policy outlines a requirement to include a commitment to provide opportunities for municipal residents and other interested parties to provide input into asset management planning.
- The Township will be required to post their Asset Management Policy and Asset Management Plan on the Township's website and make copies of these documents available to the public, if requested.

In reference to Puslinch, the public were invited to provide input during the development stages of asset management planning. In this manner, the public had the opportunity to shape the direction of asset management processes by having the opportunity to comment on the Asset Management Policy and on Levels of Service Policies as well as impacts on the Capital Budgets.

The Public were made aware of a public meeting. The public were encouraged to provide comments on asset management topics in general. Prior to the meeting, the presentation was posted online on the Township's website.

The Public Meeting was held on February 5, 2019 in the Council Chambers of Puslinch. The Sign-in-sheet indicated that 7 individuals attended. As of February 8<sup>th</sup> two emails were received by the Township. One individual requested response. A copy of the response provided by UEM may be found in Appendix 20.6

Verbal concerns were as follows:

1. There is a need to establish a process that would allow the surface treatment of gravel roads or the paving of roads on which there are homes.
2. There was concern in regard to needed improvements to Old Morriston Park which were not identified in the Township capital budget.

Verbal areas of clarification were as follows:

3. The methodologies used in order to quantify the condition of building components.
4. The methodologies use in determining the need for upgrading gravel roads.
5. The methodologies used to define level of service policies and their technical levels of service.

Areas of concern in the emails were as follows:

6. Service Level Policy for Gravel Roads.
7. Lack of Data in regard to condition of Gravel Roads.
8. Change in condition of roads to poor.
9. Opinion not to borrow money.
10. Staff levels for the Fire Department and the Township as a whole.

In regard to concerns and areas of clarification information is as follows:

1. UEM in development of the service level policy for Gravel Roads did not consider the spatial significance of gravel roads as they relate to proximity to lived in homes.
2. UEM identified in the asset registry that Old Morriston Park has many assets that are in poor condition. However, the decision for remediation activities to assets at the park are subject to the policies and objectives of the Township.
3. The methodologies used to quantify the condition of buildings have been extracted from the recent Building Condition Assessment. This assessment did not use a condition index in order to assess condition but instead a visual inspection of relevant components of the building structure.
4. The methodologies used to determine the need to upgrade a gravel road have been developed through the review of reports, staff input, input from neighboring municipalities in Wellington County, Minimum Maintenance Standards Ontario Regulation 239/02, and policies of jurisdictions primarily in the United States.
5. Asset Class Level of service policies were developed using information sourced from relevant provincial policies, regulations, internal expert opinion, and the recommendations of staff.
6. The lack of Data for Gravel Roads is an issue that may be improved by way of the regular collection of maintenance information for each gravel road segment.
7. The condition of road surfaces has not changed, only the methodology for classifying how their condition is interpreted has changed. This asset management plan considers that a road surface is in “poor” or “critical” condition based on how soon it is expected to be scheduled for remediation work. The capital planning methodology for road surfaces for the Township for this asset management plan is more conservative and specific than the last asset management plans past methodologies. The current condition classification methodology states that a road is to be remediated when it’s pavement condition index (PCI) reaches a threshold of 65 for class 3 roads, and 60 for class 4 and 5 roads. Based on the adopted expected deterioration rate of 2 pavement condition points per year class roads 3 are expected to be remediated every 17 years and class 4 and 5 roads every 20. This results in the majority of roads being classified as “Good” to “Fair” with the balance “Poor” to “Critical” due to expected remediation work for the road surface.
8. UEM and DFA have stated what is required by way of capital costs to maintain the Township assets based on the level of service policies included in the report. Any change in the financial recommendations would result in the Township not meeting the level of service.
9. A review of staffing levels of the Fire Department and the Township as a whole are beyond the scope of this Asset Management Plan.

## 17.0 Conclusions

The Township of Puslinch has implemented an Asset Management Strategy and Plan, which assesses the Township's assets based on condition assessments, lifecycles, Levels of Service requirements, and Risk Analysis. The decision process is executed through a model created by UEM. The model applies the Asset Management strategies to the Township's asset data. The outputs of the model are used to develop and prioritize assets for Capital Plans, which address those assets that pose the greatest risk. The Asset Management Plan is expected to achieve improved performance of the Township's services as well as:

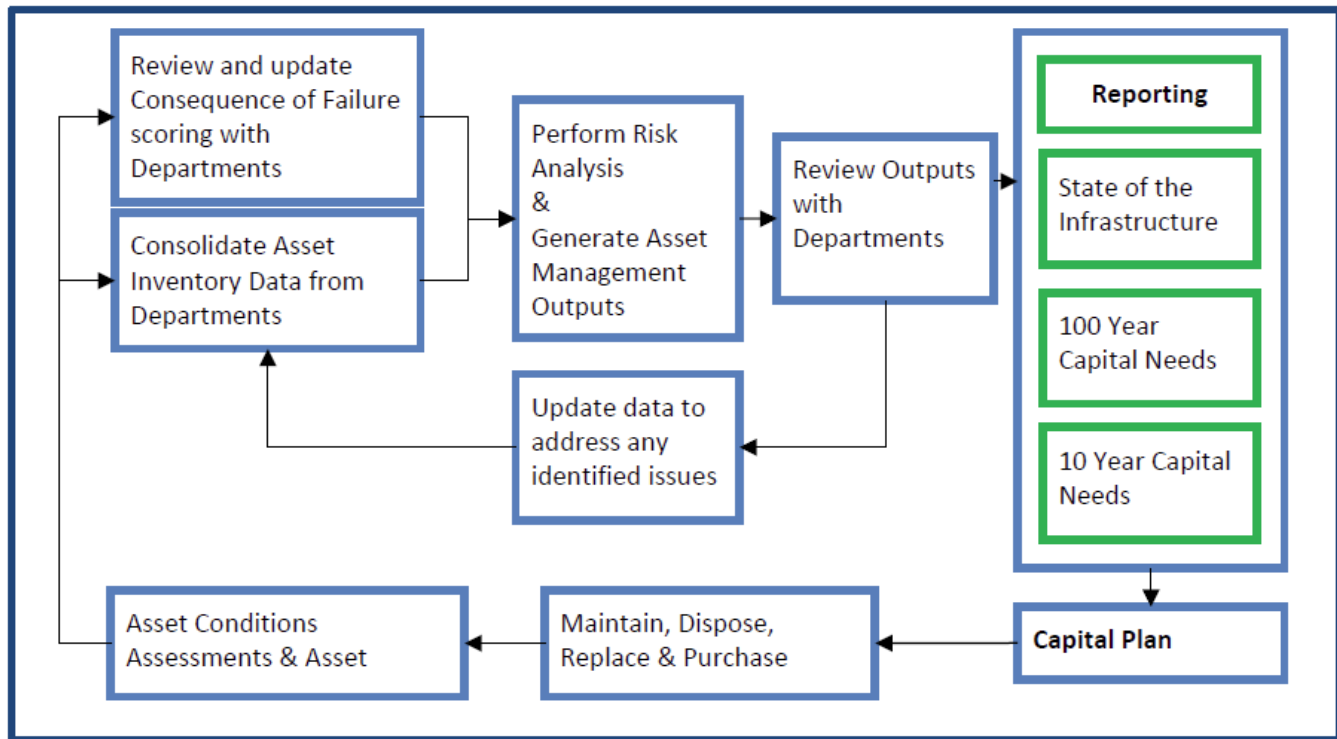
- Enhanced customer satisfaction from improved performance;
- Improved financial planning for maintenance and replacement of key infrastructure assets;
- Improved Risk Management Strategies;
- Optimized return on investment and/or growth;
- Improved health, safety and environmental performance;
- Sustainable long-term planning and performance; and
- Improved corporate stewardship, including greater staff satisfaction.

The Asset Management Plan will be improved yearly through improved data collection, data confidence, data architecture, business processes, and Asset Management procedures. The Township of Puslinch is committed to Asset Management Policies and Plans that can be used to provide appropriate information to the Township's Council for decision making during the annual budget process.

Scientific evidence that human activity is resulting in climate change is documented and accepted as changes in climate are now a significant factor in the design and management of assets. However, the ability to project the impact of climate change and establish a time frame for impacts on infrastructure is very limited. Engineers and asset managers make effective use of a limited capacity in order to accurately project environmental conditions over the lifetime of assets and asset systems. If adaptation to climate change is to be effective, engineers and asset managers must learn to work with uncertain information about a future climate that will be significantly different to that of the past.

### 17.1 Ongoing Maintenance of the Asset Management Program

Asset Management requires ongoing updates to the data and reviews of the processes and assumptions used in the development of the Asset Management Plan. At a minimum, on a yearly basis the Asset Hierarchy as well as the Consequence of Failure weightings and scoring should be reviewed by the Asset Management Team and representatives from each department to ensure that the decision-making parameters inherent in the Asset Management Framework remain valid. All departments should work with the Asset Management Team on an ongoing basis to ensure that the asset registry is up to date and reflects the most recent condition assessments and replacement costs available.



17 - 1 Asset Management Maintenance

In undertaking this assignment and observing the working relationships of staff it became apparent that there is very little if any support staff between the Director of Finance/Treasurer and those Department Heads who are responsible for operations. Although skilled from an operations perspective the Department Heads will need assistance in the ongoing maintenance of the asset management system, especially with the updating of the asset registry.

The Township of Puslinch should consider additional staff and technical resources to assist the Director of Finance/Treasurer with the consolidation of the asset inventory into the asset registry and the generation of reports consistent with the requirements of Regulation 588/17 and Council as well as any other reports associated with the management of the physical assets of the Township.

## 17.2 Capital Program

The capital program was developed based on studies that have been completed by the Township, the knowledge of staff, and the knowledge and expertise of the UEM Team. Capital needs over a 10-year period were identified in the plan based upon reducing risk to the Township. Such an approach created “peaks” and “valleys” in the capital plan based upon the lifecycle of current assets and or the policies and practices adopted by the Township. Council in their wisdom may defer a capital project in order to reduce such “peaks” and “valleys” and should recognize that a consequence of doing so may be an increase in risk. However, the normal practice of municipalities is to finance a project prior to undertaking the design, tendering and construction of such a project that often leads to the reconstruction of the project a year after the funding of the project. In many cases the funding of the debt associated with the reconstruction of the project occurs after completion of the project.

### 17.3 Service Level Policy: Hard Surface Roads

The Township of Puslinch through their Pavement Condition Study accepts a Remediation Pavement Condition Index for hard surface roads of 65 for class 3 roads, 65 for class 4 roads, and 65 for class 5 roads. However, the Township takes into consideration other factors in preparing their capital budget as outlined in Section 9.0 of this report. Rather than relying on the Remediation Pavement Condition Index such other factors impact in part inclusion in the capital budget. Based upon a review of previous projects Pavement Condition Index has not fallen below 60 for class 3 roads, 60 for class 4 roads and 60 for class 5 roads prior to a recommendation being formulated for inclusion into the capital budget. Therefore, the UEM team is prepared to recommend that the minimum Remediation Pavement Condition Index be 65 for class 3 roads, 60 for class 4 roads and 60 for class 5 roads. This recommendation is presented in the UEM proposed level of service policy for Hard Surface Roads.

## 18.0 Recommendations

The following is a list of recommendations for ongoing improvement of the management of the Township's assets. The identified costs are estimates only and should not be considered as quotes.

### 18.1 Proposed Level of Service Policies

**Recommendation:** That the level of the service policies in Section 5 of this report be approved.

The levels of service were developed based upon input from staff and the Council of the Township of Puslinch. These level of service policies reflect in principle the existing practices of the Township of Puslinch. The policies were presented to the public on February 5, 2019.

**Estimated Cost:** As per the budget implications table outlined in the end of this section.

### 18.2 Staff

Formalized Asset Management Policies should be developed to detail roles, responsibilities and procedures for the execution of the Asset Management Plan.

**Recommendation:** Identify an Asset Management champion in each Department to ensure ownership of Asset Management processes.

**Estimated Cost:** Minimal internal cost

**Recommendation:** Assign responsibility for maintaining asset data to the programs and departments responsible for the assets.

**Estimated Cost:** Minimal internal cost

**Recommendation:** Additional staff and technical resources consistent with section 17.1, paragraph 3.

**Estimated Cost:** \$50,000 per year in salary & benefits

**Recommendation:** Identify the Director of Finance/Treasurer as the lead responsible for asset management.

**Estimated Cost:** Minimal internal cost

### 18.3 Financial Strategy

In considering the explanation of the three financial strategy options, it is recommended that Option 3 as detailed in Appendix 20.3 be adopted by the Township towards a 10-year financial strategy for the funding of asset management lifecycle activities as noted in this report.

It is also recommended that the following Financial Policy Considerations be adopted in the implementation of the asset management financial strategy.

- A lifecycle activity target funding level be set at an amount equal to 2% of estimated replacement value of the Township's Capital assets contained in the Asset Registry;
- That an upper and lower target balances of asset replacement related reserves be set at amounts of 10% and 20% of the inflated 10-year asset management lifecycle activity expenditure; and
- That a long-term debt repayment limit be established at an amount not to exceed 10% of the Township's net revenues, and that consideration be given towards development of a comprehensive debt management policy.

Finally, it is recommended that the long-term financial strategy be reviewed annually subject to any material changes that may occur.

### 18.4 Fleet

All Vehicle Assets (Fire, Works, Building Department and Parks & Recreation) were entered into the Asset Registry utilizing replacement costs provided in the 2017 BDO Fleet Management Report. Council in an initial review raised the question of purchasing used vehicles rather than new vehicles. The UEM Team are not experts that would be capable of assessing the value of used vehicles nor the purchase price of used equipment especially when dealing with fire and works department vehicles. The Asset Registry cannot project the year in which Council may wish to purchase used vehicles. However, the Asset Registry could be modified subsequent to the purchasing of used vehicles.

Council also requested that the asset registry and 10-year capital plan include the residual value (sale) of fleet (or equipment) at the time of disposal. As with the purchase of used equipment the UEM team are not experts in evaluating the value of used equipment in that value of used equipment tends to be very subjective based upon the opinion of equipment suppliers.

### 18.5 Boundary Roads – Road Structures & Bridges and Culverts

The Township entered into boundary road agreements with adjacent municipalities. The information provided to the UEM Team was that the responsibility for capital improvements to such boundary roads lies with the adjacent municipalities. However, in completing the Asset Registry capital improvements were provided in the

registry based on 50% the total reconstruction costs of such boundary roads. In the future, the Township should request a capital program for boundary roads that would include replacement costs and proposed year of improvements. Although the UEM Team was not provided with the boundary road agreements it is only natural that if there are conflicts that discussions occur between municipal staff to determine accurate data to be entered into the asset registry that would impact the capital program of Puslinch.

Replacement Costs in regard to Bridge and Culverts on boundary roads were based on full replacement cost. However, remediation costs that have been entered into the asset inventory were based upon the costs identified in the 2017 OSIM report. Appendix D of the OSIM report relate to roadside safety improvements which were the installation of guard rails as an unfunded component of bridge rehabilitation. In reviewing the 2017 OSIM report such guard rails are to be installed on the approaches to the Bridge and or Culvert structures. It is suggested that the terms of reference for the next update of the OSIM report include direction that such guard rails deemed necessary to meet the design standards of the Province of Ontario include that guardrails are a component of either rehabilitation or replacement.

## 18.6 Technical Levels of Service

Currently the sole Technical Levels of Service (TLOS) used to determine the Probability of Failure is condition or remaining service life. Condition is based on the visual or physical analysis of the asset whereas remaining service life is based on the age and condition of assets. For higher quality technical levels of service tracking UEM recommends incorporating Performance-based levels of service in the future. Performance-based TLOS relate to measurements that are not directly related to condition/remaining service life such as the accessibility of buildings for persons with disabilities. Performance TLOS may be mandated by legislation, like the Storm Water Management Planning and Design Manual, or explicitly identified by the Township in a Service Level Agreement. New business and reporting practices will need to be implemented in order to collect and maintain the data required to evaluate performance- based TLOS.

**Recommendation:** Develop & incorporate Performance TLOS

**Estimated Cost:** \$30,000 in consultant fees.

## 18.7 Technology Related Requirements

As previously indicated in Section 15.4 of this report, the Ontario Good Roads Association makes available, at no cost, a tool identified as the Municipal Data Works (MDW) that will maintain asset data.

**Recommendation:** Negotiate with the Ontario Good Road Association for access to Municipal Data Works and allow the importation of Puslinch data into MDW.

**Estimated Cost:** minimal costs.

## 18.8 Climate Change

**Recommendation:** Climate Change should be a consideration in all asset condition assessment reports in the future in order to project deterioration rates associated with such climate change.

**Estimated Cost:** Minimal internal cost.



## 19.0 Asset Registry Recommendations

### 19.1 Bridges and Culverts:

**Recommendation:** The Township of Puslinch is recommended to follow the remediation schedule provided by the qualified engineer for all Bridge and Culvert structures. Any further improvements to a structure should be implemented as a sub-component to the total remediation cost.

This recommendation is in response to the Bridge and Culvert Inspection report conducted in 2017. This report separates guardrails as a “Road Improvement Safety” Cost. UEM recommends that the next report integrate the costs for Road Improvements in the final remediation cost of each structure if it is mandated by the Roadside Safety Manual and Geometric Design Guide.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

### 19.2 Hard Surface Roads:

**Recommendation:** Hard Road surfaces (1 Lift, 2 Lift & Surface Treated) and Gravel Roads be inspected by a qualified engineer every 5 years. Subsequent inspections should follow the same methodologies of the one prior.

The 2016 pavement condition study used Pavement Condition Index as a condition rating methodology. Thus, every subsequent study should be consistent unless some revolutionary methodology is deemed more appropriate. Following the same condition methodologies will help the Township better update their asset registry and as well allow for the ability to conduct trend analysis. Each replacement/remediation schedule should be integrated into the Asset Registry as a separate table in order to track remediations to each road segment over time. Furthermore, the delivered report should maintain the current data structure as it’s been formed in the asset registry and as well should be stored in a data format that allows for seamless updating of the asset registry. Future pavement condition studies should include a determination of providing a hard surface to existing gravel roads as outlined in the following section 19.3 Gravel Roads.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

### 19.3 Gravel Roads:

**Recommendation:** The Township should collect condition data for each gravel road segment during routine inspections. When and if a Gravel Road requires regrading it should be documented according to the grading triggers listed in the proposed service level policy (Section 5.2) provided in this document. Each regrading activity should be considered as a lifecycle event. Grading events result from frost leaving the gravel road, Pot holes in the gravel road, Rainfall resulting in a significant number of washouts and rutting due to truck traffic. In addition to grading events, the Township should be tracking any ditching that could improve drainage and any other activities that may have a positive or negative impact on the condition of the road base.



Tracking of lifecycle events will assist the Township in long-term financial planning for gravel road surfaces and as well assist in achieving the proposed service level policy for Gravel Roads. Further, the proposed service level policy states that to qualify a gravel road for hard surfacing certain data be available for consideration. Such data can be collected through regular inspections of the surface, collection and storage of grading frequencies and traffic volume studies.

In addition to data collected by staff, Puslinch should include the inspection of gravel roads as a part of the Pavement Condition Index Study by a qualified engineer every 5 years. In order to determine as a minimum, the following:

- granular thickness
- adequacy of drainage
- presence of contaminants in the granular
- presence of organic material
- adequacy of underlying soil

**Estimated Cost:** Refer to Budget Implications in Section 19.15

#### 19.4 Traffic Volume Study

**Recommendation:** To better manage the lifecycle of each road segment UEM recommends that a traffic volume study be completed every 5 years for all road surfaces. Traffic volume data will help the Township optimize their lifecycle model for roads by increasing or decreasing the deterioration rate of two PCI points per year based on the expected traffic on that surface over time.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

#### 19.5 Buildings and Facilities:

**Recommendation:** Each Building and Facility in the Township of Puslinch should be inspected every 5 years. Subsequent inspections should follow the same methodologies of the one prior such as the vernacular used to describe each building component and data structure that surrounds it. A remediation schedule will be provided and delivered in the same template as the previous report to allow for seamless updating of the asset registry. Furthermore, each schedule should be integrated into the Asset Registry as a separate table to track remediations to each component over time. The Township should conduct Arch Flash Studies and Infra-Red Scanning of all electric equipment and wire terminations every 5 years.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

## 19.6 Storm Water Management Ponds

**Recommendation:** Follow the remediation schedule provided by the qualified engineer.

The remediation schedule should be in a tabular format that can easily distinguish each Stormwater Management Pond component and the repairs if necessary, to such component. If no applicable component can be identified, then the repair and its costs should be applied to the pond enclosure. Furthermore, each pond component should be provided a condition score that ranges from 1 (Very Poor Condition) to 5 (Excellent Condition) Subsequent inspections should follow the same methodologies as the one prior.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

## 19.7 Fire Reservoirs

**Recommendation:** Document each inspection of each Fire Reservoir in a tabular format and update the condition of each Fire Reservoir in the asset registry with a condition score that ranges from 1 (Very Poor Condition) to 5 (Excellent Condition) subsequent to each inspection. The condition score that was rated prior should be stored as a separate record in order to track how the lifecycle of each fire reservoir is being managed overtime.

**Estimated Cost:** No Costs.

## 19.8 Fire Equipment

**Recommendation:** Standardize Fire Equipment assets in the asset registry for more effective management of lifecycle, lifecycle events, and condition ratings.

Implement an inspection table and a lifecycle event activity table for Fire Equipment assets.

**Estimated Cost:** No Costs.

## 19.9 Fleet: Works, Building, Parks and Fire Department Vehicles

**Recommendation:** The Township implement an inspection table for each vehicle and as well a lifecycle event activity table.

Each inspection should document vehicle hours (if applicable to the service level policy) and vehicle kilometers. Documented vehicle hours should be standardized to a 1-5 scale in order to be consistent with the condition standard for other asset classes. The Lifecycle activity table should document any major vehicle servicing and any major accident or mechanical failure associated with the vehicle. These tables should become the primary methodology for establishing vehicle condition and lifecycle.

**Estimated Cost:** No Costs.

### 19.10 Parks and Recreation, Sidewalks

**Recommendation:** Implement an inspection table and lifecycle event table for each Parks and Recreation, Sidewalk, and Street Light & Pole asset.

Each inspection should at the very minimum apply a condition rating to the asset. Each lifecycle event that occurs should be documented for each asset in order to track the lifecycle of the parks and recreation asset.

**Estimated Cost:** No Costs.

### 19.11 Street Lights and Poles

**Recommendation:** Implement an inspection table and lifecycle event table for each Street Light & Pole asset.

Each inspection should at the very minimum apply a condition rating to the asset. Each lifecycle event that occurs should be documented for each asset in order to track the lifecycle of the parks and recreation asset.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

### 19.12 Street Trees

**Recommendation:** Update the asset registry in order to create a more comprehensive inventory of the current stock of street trees managed by the Township. Including an inspection table and lifecycle event table for each Street Tree asset.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

### 19.13 Storm Sewers

**Recommendation:**

**Recommendation:** Update the GIS information and Inspection requirements for all storm sewer assets.

The spatial structure of the Storm Sewer assets in the asset registry has been formulated through consultation with staff without referencing to as constructed drawings. Each Storm Sewer should be georeferenced according to their ground truth location.

Each Storm Sewer should have each cleaning event loaded into a lifecycle event table to account for the condition of the asset. Such condition shall be established by observing the amount of waste in each catch basin and manhole in the storm sewer system based

upon the installation date of the storm sewer system, a structural inspection should not be necessary for the next 10-year period. However, if any significant repairs occur to a Storm Sewer asset such repairs should be loaded into an asset lifecycle event table.

**Estimated Cost:** Refer to Budget Implications in Section 19.15

#### 19.14 Inspection & Lifecycle Tables

**Recommendation:** The storage of condition assessment data and lifecycle events data should be documented in separate tables than in the Asset Tables in the Asset Registry Database. By storing the data in separate tables, the historical data quality is maintained and allows for multi-step data verification and over time the ability to conduct trend analysis.

If the Township chooses to rely on only “updating” the condition column, and replacement year column of an asset table with current condition data, or impending lifecycle events historical data will be lost.

**Estimated Cost:** No Costs.

## 19.15 Budget Implications

The following table summarizes recommendations that have an associated cost

Budget Implications for this Asset Management Plan				
Major Grouping	Budget Item	Description	Frequency	Cost
Service Level Policies	Bridges and Culverts	Bridge and Culvert Inspection Reports	Every 2 Years	\$15,000
	Gravel Roads	Gravel Base Inspection	Subject to Review of Gravel Road Surface Treatment	\$6,000
		Gravel Road Study	Once.	\$25,000
		Gravel Road surface treatment. Costs associated with reconstruction of base and drainage works excluded.	Subject to Review of Gravel Road Surface Treatment.	\$52,000/km
	Hard Surface Roads	Pavement Condition Study	Every 5 Years	\$24,500
		Traffic Volume Study	Every 5 Years	\$25,000
	Storm Water Management Ponds	Pond Inspections	At Least Once Per Year	\$5,000
	Storm Sewer	Sewer Inspections and Cleaning	At Least Once Per Year	\$5,000 per Inspection and \$1,200 per km for Cleaning
	Storm Sewer	Geolocation of catch basins	Once	\$5,000
	Street Trees	Tree Inspections	On the Year of Inspection	\$6,000
	Street Light & Poles	Pole and Arm Inspections	Every 5 Years	\$20,000
	Buildings and Facilities	Building Condition Assessment	Every 5 Years	\$25,000
		Infra-Red Scanning	Every 5 Years	\$3,000
		Arc Flash Study	Every 5 Years	\$7,500
	Sidewalks	Sidewalk Winter Maintenance	Routine Maintenance of Sidewalks During Winter Periods	\$20,000
Asset Management Maintenance	Staffing	Additional staff and technical resources	-	\$50,000.00/ Year

## 20.0 Appendices

## 20.1 Financial Strategy Option 1 (1 Percent Impact)

Township of Puslinch  
Option 1  
2019 - 2028 AMP Forecast  
Inflated \$  
Table 1

Description	Forecast									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Capital Expenditures</b>										
Bridges	-	-	426,564	-	-	-	-	574,343	-	-
Culverts	-	-	561,816	-	-	-	-	643,264	-	-
Buildings and Facilities	15,750	22,440	114,444	63,672	32,473	200,115	11,262	17,230	35,150	528,335
Fire Equipment	21,000	314,823	6,242	-	12,989	9,937	69,259	27,568	43,351	14,341
Parks and Recreation	-	35,361	22,889	-	335,554	1,987	-	160,618	-	9,250
Asphalt Road 1 Lift	1,509,346	626,983	167,647	751,961	1,534,372	750,696	492,165	653,942	257,736	1,055,247
Asphalt Road 2 Lift	-	281,926	275,544	-	402,012	497,275	52,434	146,515	233,286	144,747
Asphalt Road Surface Treated	-	-	-	-	-	143,853	16,723	-	-	-
Gravel Road	140,000	66,300	67,626	68,979	70,358	71,765	73,201	74,665	76,158	77,681
Storm Water Management Ponds	-	153,000	171,666	175,099	-	-	-	-	-	-
Fire licensed vehicles	-	530,400	-	-	-	25,394	527,044	-	-	597,546
Fire vehicle tires	17,146	1,683	-	4,368	-	1,822	-	-	3,866	8,590
Sidewalk	25,000	112,200	-	-	-	-	-	-	-	-
Works licensed vehicles	-	652,800	260,100	-	243,547	-	103,607	-	292,915	298,773
Works Unlicensed vehicles	26,000	127,500	-	413,871	-	-	-	-	-	-
Building Department licensed vehicles	-	-	-	-	-	36,435	-	-	-	-
Parks and Recreation Unlicensed vehicles	-	-	-	-	-	-	-	9,189	-	35,853
<b>Total Capital Expenditures - Capital Program</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>
<b>Capital Financing</b>										
Provincial/Federal Grants (OCIF)	169,421	168,923	-	-	-	-	-	-	-	-
Gas Tax Funding	222,547	222,547	232,662	232,662	242,778	242,778	242,778	242,778	242,778	242,778
Other (County Accessibility Grant Funding)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Aggregate Revenue	228,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Public Works Development Charges	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560
Non-Growth Related Debenture Requirements	-	946,094	856,664	323,382	1,465,405	709,081	359,857	1,323,469	76,031	1,870,875
Capital Asset Replacement Discretionary Reserve	1,044,714	1,298,292	695,652	632,346	633,562	497,859	453,499	451,529	334,093	367,151
<b>Total Capital Financing</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>

Township of Puslinch  
 Option 1  
 Capital Asset Replacement Discretionary Reserve

Table 2

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Opening Balance	2,838,841	2,525,139	1,996,859	1,996,859	1,996,858	1,996,858	1,996,859	1,996,858	1,996,858	1,996,858
Transfer from Operating (AMP Capital Levy)	731,012	770,012	695,652	632,346	633,562	497,859	453,499	451,529	334,093	367,151
Transfer to Capital	1,044,714	1,298,292	695,652	632,346	633,562	497,859	453,499	451,529	334,093	367,151
Closing Balance	2,525,139	1,996,859	1,996,859	1,996,858	1,996,858	1,996,859	1,996,858	1,996,858	1,996,858	1,996,858
<b>Reserve Target Balances</b>										
Minimum Balance at 10% of 10 year Capital Plan	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859
Closing Reserve Balance	\$ 2,525,139	\$ 1,996,859	\$ 1,996,859	\$ 1,996,858	\$ 1,996,858	\$ 1,996,859	\$ 1,996,858	\$ 1,996,858	\$ 1,996,858	\$ 1,996,858
Target Balance at 20% of 10 year Capital Plan	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717

Township of Puslinch  
 Option 1  
 Operating Budget Forecast - AMP Capital Related

Table 3

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Capital-Related</b>										
New Non-Growth Related Debt (Principal)	-	-	80,646	156,492	189,535	321,082	392,763	437,184	565,300	591,566
New Non-Growth Related Debt (Interest)	-	-	33,113	60,274	66,115	110,771	124,350	123,199	154,219	137,094
Transfer to Capital Asset Replacement Discretionary Reserve	731,012	770,012	695,652	632,346	633,562	497,859	453,499	451,529	334,093	367,151
<b>Total AMP Capital Related Expenditures</b>	<b>731,012</b>	<b>770,012</b>	<b>809,412</b>	<b>849,112</b>	<b>889,212</b>	<b>929,712</b>	<b>970,612</b>	<b>1,011,912</b>	<b>1,053,612</b>	<b>1,095,812</b>

Township of Puslinch  
 Option 1  
 AMP Capital Levy Impact

Table 4

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
AMP Capital Levy (Previous Year)	692,512	731,012	770,012	809,412	849,112	889,212	929,712	970,612	1,011,912	1,053,612
AMP Capital Levy Increase	38,500	39,000	39,400	39,700	40,100	40,500	40,900	41,300	41,700	42,200
<b>Percent Tax Impact on Median Value SFD</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>	<b>1.00%</b>
AMP Capital Levy (Current Year)	731,012	770,012	809,412	849,112	889,212	929,712	970,612	1,011,912	1,053,612	1,095,812
Total Non-Growth Debt Servicing	-	-	113,760	216,766	255,650	431,852	517,113	560,383	719,519	728,661
Transfer to Capital Asset Replacement Discretionary Reserve	731,012	770,012	695,652	632,346	633,562	497,859	453,499	451,529	334,093	367,151



**Township of Puslinch  
Option 1  
AMP Funding Target Levels**

**Table 5**

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Estimated Value of Capital Assets	77,490,278	79,040,084	80,620,885	82,233,303	83,877,969	85,555,528	87,266,639	89,011,972	90,792,211	92,608,055
Target AMP Funding Level (2% of Capital Asset Values)	1,549,806	1,580,802	1,612,418	1,644,666	1,677,559	1,711,111	1,745,333	1,780,239	1,815,844	1,852,161
AMP Capital Levy	731,012	770,012	809,412	849,112	889,212	929,712	970,612	1,011,912	1,053,612	1,095,812
Other Sources of AMP Capital Financing	709,528	681,030	522,222	522,222	532,338	532,338	532,338	532,338	532,338	532,338
Total Available AMP Funding	1,440,540	1,451,042	1,331,634	1,371,334	1,421,550	1,462,050	1,502,950	1,544,250	1,585,950	1,628,150
Above or (below) target level of AMP Funding	(109,266)	(129,760)	(280,784)	(273,332)	(256,010)	(249,061)	(242,383)	(235,990)	(229,894)	(224,011)

**Township of Puslinch  
Option 1  
AMP Debt**

**Table 6a**

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Opening Debt Balance	-	-	946,094	1,722,112	1,889,001	3,164,872	3,552,871	3,519,965	4,406,250	3,916,981
Total Debt Servicing	-	-	113,760	216,766	255,650	431,852	517,113	560,383	719,519	728,661
Interest on Debt	-	-	33,113	60,274	66,115	110,771	124,350	123,199	154,219	137,094
Principal Repayment	-	-	80,646	156,492	189,535	321,082	392,763	437,184	565,300	591,566
New Debt Issue	-	946,094	856,664	323,382	1,465,405	709,081	359,857	1,323,469	76,031	1,870,875
Closing Balance	-	946,094	1,722,112	1,889,001	3,164,872	3,552,871	3,519,965	4,406,250	3,916,981	5,196,290

**Township of Puslinch  
Option 1  
AMP Annual Repayment Limit - 10%**

**Table 6b**

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Estimated Net Township Revenues	5,565,118	5,843,374	6,135,543	6,442,320	6,764,436	7,102,657	7,457,790	7,830,680	8,222,214	8,633,325
10% of Net Revenues	556,512	584,337	613,554	644,232	676,444	710,266	745,779	783,068	822,221	863,332
Debt Limit Remaining \$	556,512	584,337	499,795	427,466	420,794	278,413	228,666	222,685	102,703	134,672
Percent of Limit Remaining	100%	100%	81%	66%	62%	39%	31%	28%	12%	16%

## 20.2 Financial Strategy Option 2 (2 Percent Impact)

Township of Puslinch  
Option 2  
2019 - 2028 AMP Forecast  
Inflated \$  
Table 1

Description	Forecast									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Capital Expenditures</b>										
-	-	-	426,564	-	-	-	-	574,343	-	-
-	-	-	561,816	-	-	-	-	643,264	-	-
-	15,750	22,440	114,444	63,672	32,473	200,115	11,262	17,230	35,150	528,335
-	21,000	314,823	6,242	-	12,989	9,937	69,259	27,568	43,351	14,341
-	-	35,361	22,889	-	335,554	1,987	-	160,618	-	9,250
-	1,509,346	626,983	167,647	751,961	1,534,372	750,696	492,165	653,942	257,736	1,055,247
-	-	281,926	275,544	-	402,012	497,275	52,434	146,515	233,286	144,747
-	-	-	-	-	-	143,853	16,723	-	-	-
-	140,000	66,300	67,626	68,979	70,358	71,765	73,201	74,665	76,158	77,681
-	-	153,000	171,666	175,099	-	-	-	-	-	-
-	-	530,400	-	-	-	25,394	527,044	-	-	597,546
-	17,146	1,683	-	4,368	-	1,822	-	-	3,866	8,590
-	25,000	112,200	-	-	-	-	-	-	-	-
-	-	652,800	260,100	-	243,547	-	103,607	-	292,915	298,773
-	26,000	127,500	-	413,871	-	-	-	-	-	-
<b>Total Capital Expenditures - Capital Program</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>
<b>Capital Financing</b>										
Provincial/Federal Grants (OCIF)	169,421	168,923	-	-	-	-	-	-	-	-
Gas Tax Funding	222,547	222,547	232,662	232,662	242,778	242,778	242,778	242,778	242,778	242,778
Other (County Accessibility Grant Funding)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Aggregate Revenue	228,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Public Works Development Charges	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560
Non-Growth Related Debenture Requirements	-	828,694	722,948	131,287	1,206,313	375,574	-	912,589	-	1,049,416
Capital Asset Replacement Discretionary Reserve	1,044,714	1,415,692	829,368	824,441	892,654	831,366	813,356	862,409	410,124	1,188,610
<b>Total Capital Financing</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>

Township of Puslinch  
Option 2  
Capital Asset Replacement Discretionary Reserve

Table 2

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Opening Balance	2,838,841	2,563,939	1,996,859	1,996,859	1,996,858	1,996,858	1,996,859	2,003,931	1,996,858	2,367,943
Transfer from Operating (AMP Capital Levy)	769,812	848,612	829,368	824,440	892,654	831,366	820,429	855,336	781,209	817,526
Transfer to Capital	1,044,714	1,415,692	829,368	824,441	892,654	831,366	813,356	862,409	410,124	1,188,610
Closing Balance	2,563,939	1,996,859	1,996,859	1,996,858	1,996,858	1,996,859	2,003,931	1,996,858	2,367,943	1,996,859
<b>Reserve Target Balances</b>										
Minimum Balance at 10% of 10 year Capital Plan	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859
Closing Reserve Balance	\$ 2,563,939	\$ 1,996,859	\$ 1,996,859	\$ 1,996,858	\$ 1,996,858	\$ 1,996,859	\$ 2,003,931	\$ 1,996,858	\$ 2,367,943	\$ 1,996,859
Target Balance at 20% of 10 year Capital Plan	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717

Township of Puslinch  
Option 2  
Operating Budget Forecast - AMP Capital Related

Table 3

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Capital-Related</b>										
New Non-Growth Related Debt (Principal)	-	-	70,639	134,736	150,643	258,744	299,814	310,308	398,959	412,922
New Non-Growth Related Debt (Interest)	-	-	29,004	51,835	51,714	88,663	92,752	82,258	103,338	89,375
Transfer to Capital Asset Replacement Discretionary Reserve	769,812	848,612	829,368	824,440	892,654	831,366	820,429	855,336	781,209	817,526
<b>Total AMP Capital Related Expenditures</b>	<b>769,812</b>	<b>848,612</b>	<b>929,012</b>	<b>1,011,012</b>	<b>1,095,012</b>	<b>1,178,773</b>	<b>1,212,995</b>	<b>1,247,902</b>	<b>1,283,506</b>	<b>1,319,823</b>

Township of Puslinch  
Option 2  
AMP Capital Levy Impact

Table 4

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
AMP Capital Levy (Previous Year)	692,512	769,812	848,612	929,012	1,011,012	1,095,012	1,178,773	1,212,995	1,247,902	1,283,506
AMP Capital Levy Increase	77,300	78,800	80,400	82,000	84,000	83,761	34,222	34,907	35,604	36,317
<b>Percent Tax Impact on Median Value SFD</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
AMP Capital Levy (Current Year)	769,812	848,612	929,012	1,011,012	1,095,012	1,178,773	1,212,995	1,247,902	1,283,506	1,319,823
Total Non-Growth Debt Servicing	-	-	99,643	186,572	202,358	347,406	392,566	392,566	502,297	502,297
Transfer to Capital Asset Replacement Discretionary Reserve	769,812	848,612	829,368	824,440	892,654	831,366	820,429	855,336	781,209	817,526

**Township of Puslinch**  
**Option 2**  
**AMP Funding Target Levels**

Table 5

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Estimated Value of Capital Assets	77,490,278	79,040,084	80,620,885	82,233,303	83,877,969	85,555,528	87,266,639	89,011,972	90,792,211	92,608,055
Target AMP Funding Level (2% of Capital Asset Values)	1,549,806	1,580,802	1,612,418	1,644,666	1,677,559	1,711,111	1,745,333	1,780,239	1,815,844	1,852,161
AMP Capital Levy	769,812	848,612	929,012	1,011,012	1,095,012	1,178,773	1,212,995	1,247,902	1,283,506	1,319,823
Other Sources of AMP Capital Financing	709,528	681,030	522,222	522,222	532,338	532,338	532,338	532,338	532,338	532,338
Total Available AMP Funding	1,479,340	1,529,642	1,451,234	1,533,234	1,627,350	1,711,111	1,745,333	1,780,240	1,815,844	1,852,161
Above or (below) target level of AMP Funding	(70,466)	(51,160)	(161,184)	(111,432)	(50,210)	0	(0)	0	(0)	(0)

**Township of Puslinch**  
**Option 2**  
**AMP Debt**

Table 6a

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Opening Debt Balance	-	-	828,694	1,481,003	1,477,554	2,533,223	2,650,054	2,350,240	2,952,521	2,553,562
Total Debt Servicing	-	-	99,643	186,572	202,358	347,406	392,566	392,566	502,297	502,297
Interest on Debt	-	-	29,004	51,835	51,714	88,663	92,752	82,258	103,338	89,375
Principal Repayment	-	-	70,639	134,736	150,643	258,744	299,814	310,308	398,959	412,922
New Debt Issue	-	828,694	722,948	131,287	1,206,313	375,574	-	912,589	-	1,049,416
Closing Balance	-	828,694	1,481,003	1,477,554	2,533,223	2,650,054	2,350,240	2,952,521	2,553,562	3,190,056

**Township of Puslinch**  
**Option 2**  
**AMP Annual Repayment Limit - 10%**

Table 6b

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Estimated Net Township Revenues	5,565,118	5,843,374	6,135,543	6,442,320	6,764,436	7,102,657	7,457,790	7,830,680	8,222,214	8,633,325
10% of Net Revenues	556,512	584,337	613,554	644,232	676,444	710,266	745,779	783,068	822,221	863,332
Debt Limit Remaining \$	556,512	584,337	513,911	457,660	474,086	362,859	353,213	390,502	319,924	361,036
Percent of Limit Remaining	100%	100%	84%	71%	70%	51%	47%	50%	39%	42%

## 20.3 Financial Strategy Option 3 (3 Percent Impact)

Township of Puslinch  
Option 3  
2019 - 2028 AMP Forecast  
Inflated \$  
Table 1

Description	Forecast									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Capital Expenditures</b>										
Bridges	-	-	426,564	-	-	-	-	574,343	-	-
Culverts	-	-	561,816	-	-	-	-	643,264	-	-
Buildings and Facilities	15,750	22,440	114,444	63,672	32,473	200,115	11,262	17,230	35,150	528,335
Fire Equipment	21,000	314,823	6,242	-	12,989	9,937	69,259	27,568	43,351	14,341
Parks and Recreation	-	35,361	22,889	-	335,554	1,987	-	160,618	-	9,250
Asphalt Road 1 Lift	1,509,346	626,983	167,647	751,961	1,534,372	750,696	492,165	653,942	257,736	1,055,247
Asphalt Road 2 Lift	-	281,926	275,544	-	402,012	497,275	52,434	146,515	233,286	144,747
Asphalt Road Surface Treated	-	-	-	-	-	143,853	16,723	-	-	-
Gravel Road	140,000	66,300	67,626	68,979	70,358	71,765	73,201	74,665	76,158	77,681
Storm Water Management Ponds	-	153,000	171,666	175,099	-	-	-	-	-	-
Fire licensed vehicles	-	530,400	-	-	-	25,394	527,044	-	-	597,546
Fire vehicle tires	17,146	1,683	-	4,368	-	1,822	-	-	3,866	8,590
Sidewalk	25,000	112,200	-	-	-	-	-	-	-	-
Works licensed vehicles	-	652,800	260,100	-	243,547	-	103,607	-	292,915	298,773
Works Unlicensed vehicles	26,000	127,500	-	413,871	-	-	-	-	-	-
Building Department licensed vehicles	-	-	-	-	-	36,435	-	-	-	-
Parks and Recreation Unlicensed vehicles	-	-	-	-	-	-	-	9,189	-	35,853
<b>Total Capital Expenditures - Capital Program</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>
<b>Capital Financing</b>										
Provincial/Federal Grants (OCIF)	169,421	168,923	-	-	-	-	-	-	-	-
Gas Tax Funding	222,547	222,547	232,662	232,662	242,778	242,778	242,778	242,778	242,778	242,778
Other (County Accessibility Grant Funding)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Aggregate Revenue	228,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Public Works Development Charges	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560	79,560
Non-Growth Related Debenture Requirements	-	738,884	618,989	-	1,113,574	325,338	-	800,036	-	909,794
Capital Asset Replacement Discretionary Reserve	1,044,714	1,505,502	933,327	955,728	985,393	881,602	813,356	974,962	410,124	1,328,232
<b>Total Capital Financing</b>	<b>1,754,242</b>	<b>2,925,416</b>	<b>2,074,538</b>	<b>1,477,950</b>	<b>2,631,305</b>	<b>1,739,278</b>	<b>1,345,694</b>	<b>2,307,336</b>	<b>942,462</b>	<b>2,770,364</b>

Township of Puslinch  
 Option 3  
 Capital Asset Replacement Discretionary Reserve  
 Table 2

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Opening Balance	2,838,841	2,602,589	1,996,859	1,996,859	2,000,302	1,996,858	1,996,859	2,060,208	1,996,859	2,437,754
Transfer from Operating (AMP Capital Levy)	808,462	899,772	933,327	959,171	981,949	881,603	876,705	911,612	851,019	887,336
Transfer to Capital	1,044,714	1,505,502	933,327	955,728	985,393	881,602	813,356	974,962	410,124	1,328,232
Closing Balance	2,602,589	1,996,859	1,996,859	2,000,302	1,996,858	1,996,859	2,060,208	1,996,859	2,437,754	1,996,858
<b>Reserve Target Balances</b>										
Minimum Balance at 10% of 10 year Capital Plan	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859	\$ 1,996,859
Closing Reserve Balance	\$ 2,602,589	\$ 1,996,859	\$ 1,996,859	\$ 2,000,302	\$ 1,996,858	\$ 1,996,859	\$ 2,060,208	\$ 1,996,859	\$ 2,437,754	\$ 1,996,858
Target Balance at 20% of 10 year Capital Plan	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717	\$ 3,993,717

Township of Puslinch  
 Option 3  
 Operating Budget Forecast - AMP Capital Related  
 Table 3

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Capital-Related</b>										
New Non-Growth Related Debt (Principal)	-	-	62,983	117,951	122,080	221,275	256,752	265,738	343,235	355,248
New Non-Growth Related Debt (Interest)	-	-	25,861	45,321	41,193	75,895	79,537	70,551	89,251	77,238
Transfer to Capital Asset Replacement Discretionary Reserve	808,462	899,772	933,327	959,171	981,949	881,603	876,705	911,612	851,019	887,336
<b>Total AMP Capital Related Expenditures</b>	<b>808,462</b>	<b>899,772</b>	<b>1,022,172</b>	<b>1,122,444</b>	<b>1,145,222</b>	<b>1,178,773</b>	<b>1,212,995</b>	<b>1,247,902</b>	<b>1,283,506</b>	<b>1,319,823</b>

Township of Puslinch  
 Option 3  
 AMP Capital Levy Impact  
 Table 4

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
AMP Capital Levy (Previous Year)	692,512	808,462	899,772	1,022,172	1,122,444	1,145,222	1,178,773	1,212,995	1,247,902	1,283,506
AMP Capital Levy Increase	115,950	91,310	122,400	100,272	22,778	33,551	34,222	34,907	35,604	36,317
<b>Percent Tax Impact on Median Value SFD</b>	<b>3.00%</b>	<b>2.29%</b>	<b>3.00%</b>	<b>2.40%</b>	<b>0.54%</b>	<b>0.79%</b>	<b>0.80%</b>	<b>0.81%</b>	<b>0.82%</b>	<b>0.83%</b>
AMP Capital Levy (Current Year)	808,462	899,772	1,022,172	1,122,444	1,145,222	1,178,773	1,212,995	1,247,902	1,283,506	1,319,823
Total Non-Growth Debt Servicing	-	-	88,844	163,273	163,273	297,170	336,289	336,289	432,487	432,487
Transfer to Capital Asset Replacement Discretionary Reserve	808,462	899,772	933,327	959,171	981,949	881,603	876,705	911,612	851,019	887,336

Township of Puslinch  
 Option 3  
 AMP Funding Target Levels  
 Table 5

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Estimated Value of Capital Assets	77,490,278	79,040,084	80,620,885	82,233,303	83,877,969	85,555,528	87,266,639	89,011,972	90,792,211	92,608,055
Target AMP Funding Level (2% of Capital Asset Values)	1,549,806	1,580,802	1,612,418	1,644,666	1,677,559	1,711,111	1,745,333	1,780,239	1,815,844	1,852,161
AMP Capital Levy	808,462	899,772	1,022,172	1,122,444	1,145,222	1,178,773	1,212,995	1,247,902	1,283,506	1,319,823
Other Sources of AMP Capital Financing	709,528	681,030	522,222	522,222	532,338	532,338	532,338	532,338	532,338	532,338
Total Available AMP Funding	1,517,990	1,580,802	1,544,394	1,644,666	1,677,560	1,711,111	1,745,333	1,780,240	1,815,844	1,852,161
Above or (below) target level of AMP Funding	(31,816)	0	(68,024)	(0)	0	0	(0)	0	(0)	(0)

Township of Puslinch  
 Option 3  
 AMP Debt  
 Table 6a

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Opening Debt Balance	-	-	738,884	1,294,890	1,176,938	2,168,432	2,272,495	2,015,744	2,550,041	2,206,806
Total Debt Servicing	-	-	88,844	163,273	163,273	297,170	336,289	336,289	432,487	432,487
Interest on Debt	-	-	25,861	45,321	41,193	75,895	79,537	70,551	89,251	77,238
Principal Repayment	-	-	62,983	117,951	122,080	221,275	256,752	265,738	343,235	355,248
New Debt Issue	-	738,884	618,989	-	1,113,574	325,338	-	800,036	-	909,794
Closing Balance	-	738,884	1,294,890	1,176,938	2,168,432	2,272,495	2,015,744	2,550,041	2,206,806	2,761,352

Township of Puslinch  
 Option 3  
 AMP Annual Repayment Limit - 10%  
 Table 6b

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Estimated Net Township Revenues	5,565,118	5,843,374	6,135,543	6,442,320	6,764,436	7,102,657	7,457,790	7,830,680	8,222,214	8,633,325
10% of Net Revenues	556,512	584,337	613,554	644,232	676,444	710,266	745,779	783,068	822,221	863,332
Debt Limit Remaining \$	556,512	584,337	524,710	480,959	513,171	413,096	409,490	446,779	389,735	430,846
Percent of Limit Remaining	100%	100%	86%	75%	76%	58%	55%	57%	47%	50%

## **20.4 The Township of Puslinch Asset Management Policy**

### **Purpose**

An Asset Management Policy formalizes the Township of Puslinch's commitment to asset management, aligns its asset management actions with strategic goals and objectives, and provides direction to guide Council and staff in carrying out its business. Such a policy will support the Township in focusing its infrastructure efforts on managing risks, addressing priorities, and meeting short and long-term needs within the bounds of possible funding.

### **Vision**

The Township's vision is to proactively manage its assets to best serve the Township's objectives, including:

- Prioritizing the need for existing and future assets to effectively deliver services,
- Supporting sustainability and economic development, and
- Maintaining prudent financial planning and decision making.

### **Objectives**

The objectives of this policy are to:

- Provide a consistent framework for implementing asset management throughout the Township in compliance with Regulation 588/17.
- Demonstrate transparent, accountable, and informed decision-making that considers the Township's strategic plans, budget, service levels and risks.

### **Strategic Alignment**

The Township adopted in principle a Community Based Strategic Plan, a Master Fire Plan, a Parks and Recreation Master Plan, a Community Improvement Plan and an Asset Management Plan. These plans were designed to meet the legislative requirements and work together to achieve the Township's mission of providing innovation and excellence in service delivery. Spending requirements defined in the budgeting process and in long-term financial planning will reflect the objectives of these plans.

All of the Township's plans rely to some extent on the physical assets owned by the Township and the commitment of staff to ensure their strategic use. This includes the long-term maintenance, repair and replacement of existing assets along with the acquisition of new assets to meet the evolving needs of the Township.

Asset Management Planning therefore will not occur in isolation from other municipal goals, plans and policies.



## Stakeholder Engagement

The Township recognizes the importance of stakeholder engagement as an integral component of a comprehensive Asset Management Plan. The Township fosters informed dialogue with all stakeholders by:

- Providing residents and other stakeholders served by the Township opportunities to provide input; and
- Coordinating Asset Management Planning with other infrastructure owning government agencies and bodies.

## Guiding Principles

The Infrastructure for Jobs and Prosperity Act, 2015 establishes principles to guide Asset Management Planning. The Township will strive, where possible, to incorporate the following principles into decisions respecting infrastructure planning and investment:

- **Forward looking:** Take a long-term view while considering demographic and economic trends in the County.
- **Budgeting and planning:** Take into account any applicable budgets or fiscal plans.
- **Prioritizing:** Clearly identify infrastructure priorities which will drive investment decisions.
- **Economic development:** Promote economic competitiveness, productivity, job creation, and training opportunities.
- **Transparency:** Promote an open and transparent decision-making process through the sharing, posting or access to information subject to any restrictions or prohibitions on the collection, use or disclosure of information.
- **Consistency:** Ensure the delivery of core public services such as Roads, Infrastructure and Fire.
- **Environmentally conscious:** Consider the impact of infrastructure on the environment and climate change. Endeavour to make use of acceptable recycled aggregates.
- **Health and safety:** ensure that the health and safety of workers involved in the construction and maintenance of infrastructure assets is protected.
- **Community focused:** Consider the community benefits arising from an infrastructure project such as improvements to public space within the Township and promoting accessibility. The Township shall coordinate planning for asset management when municipal infrastructure assets connect or are interrelated with the County and neighboring Municipalities.

- **Innovation:** foster innovation by creating opportunities to make use of innovative technologies, services, and practices, particularly where doing so would utilize technology, techniques, and practices developed in Ontario.
- **Integration:** where relevant and appropriate, be mindful and consider the principles and content of non-binding provincial or municipal plans and strategies established under an Act or otherwise, in planning and making decisions surrounding the infrastructure that supports them.

### **Community Planning**

Asset Management Planning will align with the County of Wellington Official Plan. The Township will achieve this by consulting with those responsible for managing the services to analyze the future costs and viability of projected changes.

### **Climate Change**

The Township where applicable and appropriate will consider designing infrastructure to be resilient to the effects of climate change and support disaster planning to facilitate business continuity.

### **Scope and Capitalization Thresholds**

The Township will use a service-based (qualitative) perspective when applying this policy to municipal assets, rather than a monetary value (quantitative). The capitalization threshold developed for financial reporting will not be the guide in selecting assets covered by the Asset Management Planning process.

### **Financial Planning and Budgeting**

The Township will integrate Asset Management Planning into the annual capital budget, operating budget, and its long-term financial plan. The Asset Management Plan will be used as a resource in order to:

- Identify all potential revenues and costs (including operating, maintenance, replacement and decommissioning) associated with forthcoming infrastructure asset decisions;
- Evaluate the validity and need of each significant new capital asset, including considering the impact on future operating costs; and Incorporate new revenue tools and alternative funding strategies where possible.

The department level budget submission will be reviewed and evaluated by the CAO and Director of Finance in the preparation of the Township's annual budget. Service area personnel will reference the Asset Management Plan for their area in order to look up forecasted spending needs identified in the plan, verify progress made on the Plan to identify potential gaps, prioritize spending needs and recent developments. Finance staff will be involved in the

Asset Management Planning process to coordinate the information from service personnel in the preparation of the budget submission.

### **Governance and Continuous Improvement**

Council is entrusted with the responsibility of overseeing, on behalf of citizens, a large range of services provided through a diverse portfolio of assets. Council, having stewardship responsibility, is the final decision maker on all matters related to asset management in the Township. The Council and staff are committed to the success of Asset Management Planning. The following details the responsibilities of the key stakeholders within the Township:

#### **Council:**

- Approve by resolution the Asset Management Plan and its updates every five years;
- Conduct an annual review of the Asset Management Plan on or before July 1<sup>st</sup> of every year, that includes:
  - Progress on ongoing efforts to implement the Asset Management Plan;
  - Consideration of the Asset Management Policy;
  - Any factors affecting the ability of the Township to implement its Asset Management Plan;
  - Consultation with staff;
  - Support efforts to improve and implement the Asset Management Plan.

#### **Director of Finance/Treasurer:**

- Maintain compliance with the Asset Management Policy and Provincial Asset management regulations.

#### **Senior Management:**

- Oversee Asset Management Planning activities that fall within their service area.

## 20.5 Puslinch Asset Registry (No Regulatory/Warning Signs) - Reduced Fields

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
1001	Bridges	Cook's Mill Bridge	1992	\$593,190	50	70	4	High
1003	Bridges	Little's Bridge	1910	\$219,765	50	22	2	Very High
1005	Bridges	Leslie Road West Between Lots 35/36	1965	\$445,900	50	74	4	High
1006	Bridges	Concession 1, Lots 9/10, West Of SR 10S	1970	\$783,510	50	61	3	High
1007	Bridges	French's Bridge	1984	\$309,140	50	67	3	High
1008	Bridges	Galt Creek Bridge Gore Road Lot 2	1948	\$745,875	50	60	2	Very High
1009	Bridges	Moyer's Bridge	1931	\$495,040	50	63	2	Very High
2002	Culverts	Culvert Of Cook's Mill Race	2013	\$97,200	50	52	2	Very High
2004	Culverts	McFarlane's Culvert	2002	\$126,585	50	75	4	High
2006	Culverts	Victoria Road Culvert Over Galt Creek	1960	\$225,630	50	72	2	Very High
2007	Culverts	Irish Creek Culvert On Townline Road	1936	\$239,400	50	57	2	Very High
2008	Culverts	7th Concession Culvert	2012	\$55,688	50	75	4	High
2009	Culverts	Gilmour Rd Culvert Over Aberfoyle Creek	1930	\$138,600	50	50	2	Very High
2010	Culverts	Ellis Road Culvert Over Puslinch Lake Irish Creek	1920	\$283,500	50	43	2	Very High
2011	Culverts	Ellis Road Culvert At Lot 10 Conc 2	2010	\$131,670	50	75	3	High
2012	Culverts	Concession 2 Bridge/Culvert Over Mill Creek	1994	\$560,700	50	75	3	High
2013	Culverts	Victoria Road Culvert North Of Leslie	1950	\$177,165	50	70	3	High
2014	Culverts	Leslie Road Culvert West Of Victoria	1945	\$171,450	50	55	2	Very High
2015	Culverts	Culvert Of Flamborough T/L West Of Victoria	2010	\$264,735	50	75	4	High
2016	Culverts	Flamborough T/L Bridge/Culvert East Of Macpherson Ln	2010	\$219,240	50	75	4	High
2017	Culverts	Gore Road Culvert	1960	\$84,546	50	100	4	High
2018	Culverts	Gore Road Dual Culvert	1950	\$63,135	50	100	4	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
2019	Culverts	7th Concession Culvert	1960	\$194,400	50	74	4	High
13OCCIR	Buildings and Facilities	Optimist Community Centre Ice Rink: Walls & Windows	2010	\$122,300	40	4	4	Medium
14BSBBPCC	Buildings and Facilities	Blue Storage Building Behind PCC: Interior Finishes		\$1,794	40	3	3	Medium
15002	Buildings and Facilities	Municipal Complex: Parking Lot Municipal Complex	1984	\$162,750	25	2	2	Medium
15RSB	Buildings and Facilities	Roads Storage Building: Mechanical		\$39,241	40	4	4	Medium
17OCCIR	Buildings and Facilities	Optimist Community Centre Ice Rink: Mechanical	2010	\$76,315	40	4	4	Medium
18OCC	Buildings and Facilities	Optimist Community Centre: Fire, Life-Safety	2010	\$26,455	40	4	4	Medium
1MC	Buildings and Facilities	Municipal Complex: Fire, Life-Safety	1984	\$35,987	40	5	5	Low
210MC	Buildings and Facilities	Municipal Complex: Generator				5	5	Low
210PCC	Buildings and Facilities	Puslinch Community Centre: Generator				5	5	Low
21MC	Buildings and Facilities	Municipal Complex: Electrical	1984	\$56,979	40	5	5	Low
22OCC	Buildings and Facilities	Optimist Community Centre: Electrical	2010	\$75,076	40	5	5	Low
24RSB	Buildings and Facilities	Roads Storage Building: Interior Finishes		\$3,019	20	4	4	Medium
26PCC	Buildings and Facilities	Puslinch Community Centre: Electrical	1983	\$61,000	40	5	5	Low
3009MM	Buildings and Facilities	Old Morriston: Booth/Washroom Building	1988	\$20,000	40	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
3011	Buildings and Facilities	Community Centre Complex: Concession Booth At Community Centre Ball Diamond, C Road 46	1992	\$20,000	40	3	3	Medium
3035	Buildings and Facilities	Community Centre Complex: Storage Building at Horse Paddock		\$20,000	30	3	3	Medium
3066	Buildings and Facilities	Old Morriston: Equipment Storage Room		\$400	40	3	3	Medium
3067	Buildings and Facilities	Badenoch Soccer Field: Storage Shed		\$20,000	40	4	4	Medium
3281	Buildings and Facilities	Old Morriston: Equipment Storage Room, Panel		\$10,000	20	3	3	Medium
33OCC	Buildings and Facilities	Optimist Community Centre:Structure	2010	\$175,892	40	5	5	Low
39OCCIR	Buildings and Facilities	Optimist Community Centre Ice Rink: Structure	2010	\$125,235	40	4	4	Medium
4001	Buildings and Facilities	Server	2019	\$42,000	5	5	5	Low
4002	Buildings and Facilities	Computer Assets		\$10,000	5	5	5	Low
4004	Buildings and Facilities	Microsoft Office Licenses		\$15,000	5	5	5	Low
40PCC	Buildings and Facilities	Puslinch Community Centre: Fire, Life-Safety	1983	\$5,750	40	5	5	Low
41MC	Buildings and Facilities	Municipal Complex: Septic Tank	1983	\$15,000	30	3	3	Medium
41MM	Buildings and Facilities	Morriston Meadows: Septic Tank		\$15,000	30	5	5	Low
41OCC	Buildings and Facilities	Optimist Community Centre Ice Rink: Septic Tank	2010	\$15,000	30	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
41OMM	Buildings and Facilities	Old Morriston: Septic Tank		\$15,000	30	5	5	Low
41PCC	Buildings and Facilities	Puslinch Community Centre: Septic Tank	1983	\$15,000	30	3	3	Medium
42OMM	Buildings and Facilities	Old Morriston Park: Concession Booth		\$20,000		3	3	Medium
44BSBPCC	Buildings and Facilities	Blue Storage Building Behind PCC: Fire, Life-Safety		\$20,038	40	3	3	Medium
44OCC	Buildings and Facilities	Optimist Community Centre: Interior Finishes	2010	\$143,002	20	5	5	Low
46MC	Buildings and Facilities	Municipal Complex: Walls & Windows	1984	\$147,695	20	4	4	Medium
46PCC	Buildings and Facilities	Puslinch Community Centre: Interior Finishes	1983	\$125,757	40	5	5	Low
51OCC	Buildings and Facilities	Optimist Community Centre: Walls & Windows	2010	\$76,506	40	5	5	Low
51OCCIR	Buildings and Facilities	Optimist Community Centre Ice Rink: Electrical	2010	\$66,042	40	1	1	High
53PCC	Buildings and Facilities	Puslinch Community Centre: Structure	1983	\$3,000	40	4	4	Medium
56MC	Buildings and Facilities	Municipal Complex: Roof	1984	\$42,734	40	5	5	Low
58OCCIR	Buildings and Facilities	Optimist Community Centre Ice Rink: Interior Finishes	2010	\$5,870	20	4	4	Medium
59MC	Buildings and Facilities	Municipal Complex: Mechanical	1984	\$222,667	40	5	5	Low
64BSBPCC	Buildings and Facilities	Blue Storage Building Behind PCC: Structure		\$38,282	40	3	3	Medium
66BSBPCC	Buildings and Facilities	Blue Storage Building Behind PCC: Walls & Windows		\$37,384	20	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
66OCC	Buildings and Facilities	Optimist Community Centre: Roof	2010	\$28,600	40	5	5	Low
67PCC	Buildings and Facilities	Puslinch Community Centre: Roof	1983	\$100,000	40	5	5	Low
70BSBPCC	Buildings and Facilities	Blue Storage Building Behind PCC:Mechanical		\$23,328	40	3	3	Medium
71BSBPCC	Buildings and Facilities	Blue Storage Building Behind PCC:Roof		\$30,000	40	3	3	Medium
77MC	Buildings and Facilities	Municipal Complex: Interior Finishes	1984	\$103,461	40	5	5	Low
7RSB	Buildings and Facilities	Roads Storage Building: Walls & Windows		\$62,886	40	4	4	Medium
81RSB	Buildings and Facilities	Roads Storage Building: Electrical		\$33,958	40	4	4	Medium
86RSB	Buildings and Facilities	Roads Storage Building: Fire, Life-Safety		\$33,707	40	4	4	Medium
88OCCIR	Buildings and Facilities	Optimist Community Centre Ice Rink: Fire, Life-Safety	2010	\$65,553	40	4	4	Medium
89BSBPCC	Buildings and Facilities	Blue Storage Building Behind PCC: Electrical		\$20,188	40	3	3	Medium
92RSB	Buildings and Facilities	Roads Storage Building: Structure		\$64,395	40	4	4	Medium
93PCC	Buildings and Facilities	Puslinch Community Centre: Mechanical	1983	\$45,000	40	5	5	Low
95MC	Buildings and Facilities	Municipal Complex: Structure	1984	\$144,921	40	4	4	Medium
95OCCIR	Buildings and Facilities	Optimist Community Centre Ice Rink: Roof	2010	\$27,884	40	4	4	Medium
95RSB	Buildings and Facilities	Roads Storage Building: Roof		\$14,338	40	4	4	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
97OCC	Buildings and Facilities	Optimist Community Centre: Mechanical	2010	\$148,007	40	5	5	Low
9PCC	Buildings and Facilities	Puslinch Community Centre: Walls & Windows	1983	\$140,000	20	4	4	Medium
1	Asphalt Road 1 Lift	Gore Road	2015	\$1,318,519	25	64	1	Very High
10	Asphalt Road 1 Lift	Puslinch-Flamborough Townline	2002	\$423,819	25	79	3	High
100	Gravel Road	Sideroad 12 North	2002	\$59,580	50	90	4	High
101	Gravel Road	Sideroad 12 N	2001	\$184,577	50	90	4	High
103	Gravel Road	Pioneer Trail	2000	\$301,750	50	90	4	High
104	Gravel Road	Sideroad 20 South	2000	\$335,435	50	90	4	High
105	Gravel Road	Sideroad 20 South	2000	\$371,540	50	90	4	High
106	Gravel Road	Sideroad 20 North	2000	\$185,238	50	90	4	High
108	Asphalt Road 1 Lift	Sideroad 20 North	2004	\$651,901	25	69	2	Very High
110	Gravel Road	Sideroad 25 South	2000	\$336,664	50	90	4	High
111	Gravel Road	Sideroad 25 South	2000	\$371,176	50	90	4	High
112	Gravel Road	Sideroad 25 North	2000	\$100,564	50	90	4	High
113	Gravel Road	Concession 7	1990	\$340,978	50	90	4	High
114	Gravel Road	Concession 7	1990	\$470,198	50	90	4	High
115	Asphalt Road 2 Lift	Concession 7	2013	\$197,428	25	76	3	High
116	Asphalt Road 2 Lift	Concession 7	2000	\$143,334	25	76	3	High
118	Gravel Road	Concession 7	1990	\$364,220	50	90	4	High
12	Asphalt Road 1 Lift	Concession 1	2013	\$182,643	25	91	4	High
120	Asphalt Road Surface Treated	Maddaugh Road	1997	\$24,785	7	67	2	Very High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
121A	Asphalt Road 1 Lift	Maddaugh Road	2004	\$155,390	25	67	2	Very High
121B	Asphalt Road 1 Lift	Maddaugh Road	2003	\$161,851	25	67	2	Very High
122	Asphalt Road 1 Lift	Victoria Road South	2014	\$225,460	25	89	4	High
123	Asphalt Road 1 Lift	Victoria Road South	2014	\$711,618	25	89	4	High
124	Asphalt Road 1 Lift	Victoria Road South	2012	\$925,640	25	62	1	Very High
125A	Asphalt Road 1 Lift	Victoria Road South	2000	\$193,535	25	62	1	Very High
125B	Asphalt Road 1 Lift	Victoria Road South	2016	\$164,074	25	95	5	Medium
126	Asphalt Road 1 Lift	Victoria Road South	2013	\$660,891	25	85	3	High
129	Gravel Road	Carter Road	2003	\$328,113	50	90	4	High
132	Asphalt Road 1 Lift	McRae Station Road	1996	\$214,909	25	74	2	Very High
133	Asphalt Road 1 Lift	Watson Road South	1997	\$315,092	25	65	2	Very High
134	Asphalt Road 1 Lift	Watson Road South	1996	\$197,037	25	66	2	Very High
135	Asphalt Road 1 Lift	Watson Road South	1990	\$182,905	25	66	2	Very High
136	Asphalt Road 1 Lift	Watson Road South	1998	\$271,867	25	66	2	Very High
137	Asphalt Road 1 Lift	Watson Road South	1996	\$1,320,708	25	64	1	Very High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
138	Asphalt Road 1 Lift	Watson Road South	2016	\$678,845	25	95	5	Medium
139	Asphalt Road 1 Lift	Watson Road South	2001	\$650,584	25	66	2	Very High
13A	Asphalt Road 1 Lift	Concession 1	2007	\$1,013,067	25	79	3	High
13B	Asphalt Road 1 Lift	Concession 1	1999	\$115,752	25	91	4	High
14	Asphalt Road 1 Lift	Concession 1	2013	\$659,171	25	75	3	High
140	Asphalt Road 1 Lift	Watson Road South	2001	\$524,575	25	66	2	Very High
142	Gravel Road	Concession 11	2002	\$366,533	50	90	4	High
143	Gravel Road	Concession 11	2000	\$234,387	50	90	4	High
144	Gravel Road	Concession 11	2000	\$346,743	50	90	4	High
145	Gravel Road	Concession 11	2000	\$364,394	50	90	4	High
146	Gravel Road	Concession 11	2002	\$364,390	50	90	4	High
148	Asphalt Road 1 Lift	Puslinch-Flamborough Townline	2003	\$96,036	25	69	2	Very High
149	Gravel Road	Darkwood	1997	\$25,028	50	90	4	High
15	Asphalt Road 1 Lift	Concession 1	1996	\$660,788	25	67	2	Very High
150	Gravel Road	Nassagaweya-Puslinch Townline	2001	\$366,034	50	90	4	High
152	Gravel Road	Midway Lane	2001	\$146,615	50	90	4	High
153	Asphalt Road Surface Treated	Nassagaweya-Puslinch Townline	2017	\$54,921	7	98	5	Medium
154	Asphalt Road Surface Treated	Nassagaweya-Puslinch Townline	2017	\$28,974	7	98	5	Medium
155	Asphalt Road Surface Treated	Nassagaweya-Puslinch Townline	2017	\$21,613	7	98	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
157	Gravel Road	Jones Baseline	2003	\$76,148	50	90	4	High
158	Asphalt Road 1 Lift	McLean Road East	1996	\$207,799	25	67	2	Very High
159	Gravel Road	McLean Road East	2004	\$64,192	50	90	4	High
16	Asphalt Road 1 Lift	Concession 1	1999	\$657,152	25	73	2	Very High
160	Asphalt Road 1 Lift	Concession 4	2004	\$142,387	25	75	2	Very High
161	Asphalt Road 1 Lift	Concession 4	2004	\$107,682	25	75	2	Very High
162_SURFA CE	Asphalt Road 2 Lift	Nicholas Beaver Road	2007	\$441,761	25	82	3	High
164_SURFA CE	Asphalt Road 2 Lift	McLean Road/Concession 7	2004	\$492,285	25	72	2	Very High
165_SURFA CE	Asphalt Road 2 Lift	McLean Road/Concession 7	2004	\$382,470	25	72	2	Very High
166	Asphalt Road 1 Lift	Sideroad 20 North	2003	\$354,891	25	72	2	Very High
17	Asphalt Road 1 Lift	Concession 1	1997	\$658,028	25	69	2	Very High
175	Gravel Road	Rhodes Road		\$151,585	50	90	4	High
176	Gravel Road	Eagle Lane		\$133,303	50	90	4	High
177_SURFA CE	Asphalt Road 2 Lift	Old Ruby Lane						
178_SURFA CE	Asphalt Road 2 Lift	Elizabeth Place						
179_SURFA CE	Asphalt Road 2 Lift	Catherine Court						
18	Asphalt Road 1 Lift	Concession 1/Leslie Rd W	1999	\$776,119	25	72	2	Very High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
180	Asphalt Road 1 Lift	Currie Drive	2015	\$196,555	25	93	4	High
181	Asphalt Road 1 Lift	Ochs Drive	2015	\$183,332	25	93	4	High
182_SURFA CE	Asphalt Road 2 Lift	Ikonkar Place - Morriston Estates						
185_SURFA CE	Asphalt Road 2 Lift	Bridle Path	1990	\$205,657	25	70	2	Very High
188_SURFA CE	Asphalt Road 2 Lift	Whitcombe Way						
19	Asphalt Road 1 Lift	Concession 1	2001	\$147,053	25	72	2	Very High
190	Asphalt Road 2 Lift	Telfer Glen	1996	\$321,772	25	80	3	High
191	Asphalt Road 2 Lift	Settler's Road	1995	\$147,056	25	85	4	High
195	Asphalt Road 2 Lift	Deer View Ridge	2004	\$306,895	25	76	3	High
196	Asphalt Road 2 Lift	Fox Run Drive	2004	\$190,078	25	77	3	High
198	Asphalt Road 2 Lift	Kerr Crescent	1995	\$384,857	25	86	4	High
2	Asphalt Road 1 Lift	Gore Road	2015	\$487,415	25	93	4	High
20	Asphalt Road 1 Lift	Leslie Road W	2016	\$600,992	25	95	5	Medium
200	Gravel Road	Boyce Drive	2003	\$44,973	50	90	4	High
201_SURFA CE	Asphalt Road 2 Lift	Carriage Lane	2000	\$340,271	25	86	4	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
202_SURFA CE	Asphalt Road 2 Lift	Cassin Court	2007	\$130,866	25	86	4	High
203_SURFA CE	Asphalt Road 2 Lift	Daymond Drive	2007	\$150,295	25	87	4	High
204_SURFA CE	Asphalt Road 2 Lift	Bridle Path	1990	\$514,571	25	70	2	Very High
205	Asphalt Road 2 Lift	Fox Run Drive	2000	\$108,410	25	77	3	High
206	Asphalt Road 2 Lift	Fox Run Drive	2000	\$57,511	25	77	3	High
207	Asphalt Road 2 Lift	Fox Run Drive	2000	\$301,634	25	77	3	High
208_SURFA CE	Asphalt Road 2 Lift	Boreham Drive	1999	\$140,930	25	81	3	High
209	Asphalt Road 2 Lift	Winer Court	2015	\$41,238	25	93	4	High
21	Asphalt Road 1 Lift	Leslie Road West	2003	\$642,266	25	76	3	High
210	Asphalt Road 1 Lift	Lang Court	2015	\$34,267	25	93	4	High
211	Gravel Road	Anne Street	2003	\$11,201	50	90	4	High
212A	Asphalt Road 1 Lift	Winer Road	2000	\$189,390	25	70	2	Very High
212B_SURF ACE	Asphalt Road 2 Lift	Winer Road	2007	\$165,696	25	70	2	Very High
213_SURFA CE	Asphalt Road 2 Lift	Tawse Place	1990	\$71,054	25	88	4	High
214	Asphalt Road 2 Lift	Beiber Road	2004	\$78,269	25	79	3	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
22	Asphalt Road 1 Lift	Leslie Road West	2003	\$171,807	25	69	2	Very High
23	Asphalt Road 1 Lift	Leslie Road West	2003	\$389,820	25	69	2	Very High
25	Asphalt Road 1 Lift	Leslie Road West	2004	\$323,909	25	69	2	Very High
26	Gravel Road	Small Road	2001	\$76,786	50	90	4	High
27	Gravel Road	Calfass Road	2000	\$368,608	50	90	4	High
27B	Asphalt Road 2 Lift	Calfass Road	2016	\$44,716	25	95	5	Medium
28_SURFAC E	Asphalt Road 2 Lift	Victoria Street And Church Street	2000	\$130,336	25	71	2	Very High
29	Asphalt Road 1 Lift	Main Street	2001	\$155,895	25	80	3	High
3	Asphalt Road 1 Lift	Gore Road	2013	\$658,618	25	91	4	High
30	Asphalt Road 1 Lift	Main St And Back	2011	\$110,087	25	80	3	High
31	Gravel Road	Little Road	2001	\$69,183	50	90	4	High
32	Asphalt Road 1 Lift	Concession 2	2014	\$669,541	25	74	2	Very High
33	Asphalt Road 1 Lift	Concession 2	2014	\$657,503	25	91	4	High
34	Asphalt Road 1 Lift	Concession 2	2010	\$667,781	25	77	3	High
35	Asphalt Road 2 Lift	Concession 2	2013	\$945,359	25	77	3	High
36	Asphalt Road 2 Lift	Concession 2/2A	1999	\$411,923	25	77	3	High
37	Gravel Road	Concession 2	2000	\$42,245	50	90	4	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
38	Asphalt Road 1 Lift	Mason Road	2000	\$70,941	25	74	2	Very High
4	Asphalt Road 1 Lift	Gore Road	2004	\$830,576	25	71	2	Very High
40_SURFAC E	Asphalt Road 2 Lift	McLean Road West	1995	\$912,914	25	68	2	Very High
43	Gravel Road	Sideroad 17	2000	\$66,804	50	90	4	High
44	Asphalt Road 1 Lift	Ellis Road	2017	\$696,391	25	98	5	Medium
45A	Asphalt Road 1 Lift	Ellis Road	2010	\$162,927	25	82	3	High
45B	Asphalt Road 1 Lift	Ellis Road	1995	\$574,749	25	82	3	High
46_SURFAC E	Asphalt Road 2 Lift	Gilmour Road	2007	\$79,051	25	75	2	Very High
47	Gravel Road	Gilmour Road	2002	\$306,805	50	90	4	High
48	Asphalt Road 1 Lift	Smith Road	1990	\$105,774	25	76	3	High
5	Asphalt Road 1 Lift	Gore Road	1990	\$486,434	25	70	2	Very High
50_SURFAC E	Asphalt Road 2 Lift	Cockburn Street	2000	\$56,932	25	84	3	High
51_SURFAC E	Asphalt Road 2 Lift	Old Brock Road	2000	\$153,783	25	73	2	Very High
52	Asphalt Road 1 Lift	Maple Leaf Lane	2000	\$226,827	25	65	2	Very High
53	Gravel Road	Hammersley Road	2002	\$177,891	50	90	4	High
54A	Asphalt Road 1 Lift	Roszell Road 2013	2012	\$420,896	25	68	2	Very High



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
55	Asphalt Road 1 Lift	Concession 4	2010	\$394,785	25	83	3	High
56	Asphalt Road 1 Lift	Concession 4	2012	\$660,207	25	64	1	Very High
57	Asphalt Road 1 Lift	Concession 4	2004	\$262,338	25	65	2	Very High
58	Asphalt Road 1 Lift	Concession 4	2003	\$393,745	25	64	1	Very High
59	Asphalt Road 1 Lift	Concession 4	2003	\$659,044	25	67	2	Very High
6	Asphalt Road 1 Lift	Gore Road	2002	\$305,620	25	64	1	Very High
63A	Asphalt Road 1 Lift	Maltby Road East	2011	\$324,700	25	70	2	Very High
63B	Asphalt Road 1 Lift	Maltby Road East	2012	\$321,929	25	70	2	Very High
64	Gravel Road	Maltby Road East	2001	\$367,343	50	90	4	High
65	Gravel Road	Maltby Road East	1990	\$54,652	50	90	4	High
66	Asphalt Road 1 Lift	Forestell Road	2018	\$388,958	25	99	5	Medium
67	Asphalt Road 1 Lift	Forestell Road	2017	\$662,722	25	98	5	Medium
68	Asphalt Road 1 Lift	Forestell Road	2018	\$261,686	25	98	5	Medium
69	Asphalt Road 1 Lift	Forestell Road	2018	\$395,009	25	98	5	Medium
7	Asphalt Road Surface Treated	Gore Road	1999	\$64,965	7	64	1	Very High
71	Asphalt Road 1 Lift	Laird Road West	2007	\$71,000	25	70	2	Very High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
72_SURFAC E	Asphalt Road 2 Lift	Laird Road West	2017	\$951,590	25	96	5	Medium
73_SURFAC E	Asphalt Road 2 Lift	Laird Road West	2017	\$381,987	25	96	5	Medium
74_SURFAC E	Asphalt Road 2 Lift	Laird Road West	2017	\$571,335	25	96	5	Medium
77	Asphalt Road 1 Lift	Hume Road	2010	\$747,037	25	81	3	High
78	Asphalt Road 1 Lift	Niska Road	2012	\$193,510	25	85	3	High
79	Gravel Road	Farnham Road	2003	\$170,773	50	90	4	High
8	Gravel Road	MacPherson's Lane	2000	\$155,895	50	90	4	High
81	Gravel Road	Cooks Mill Road	2003	\$107,488	50	90	4	High
82	Asphalt Road 1 Lift	Cooks Mill Road	2013	\$136,438	25	83	3	High
88	Asphalt Road 1 Lift	Townline Road	1990	\$464,824	25	68	2	Very High
9	Asphalt Road 1 Lift	Puslinch-Flamborough Townline	2003	\$344,544	25	79	3	High
90	Asphalt Road 1 Lift	Roszell Road	1990	\$316,669	25	68	2	Very High
91	Gravel Road	Sideroad 10 South	2000	\$333,431	50	90	4	High
92	Gravel Road	Sideroad 10 South	2001	\$370,103	50	90	4	High
93	Gravel Road	Sideroad 10 South	2000	\$131,053	50	90	4	High
94	Asphalt Road 1 Lift	Sideroad 10 North	2000	\$637,500	25	82	4	High
95A	Gravel Road	Sideroad 10 North	2000	\$337,250	25	90	4	High
95b	Asphalt Road 1 Lift	Side Road 10 North	2010	\$13,668	25	82	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
96	Asphalt Road 1 Lift	Sideroad 10 North	2007	\$153,832	25	78	3	High
97	Asphalt Road 1 Lift	Sideroad 10 North	1998	\$330,654	25	69	2	Very High
98	Gravel Road	Sideroad 10 North	2007	\$84,074	50	90	4	High
99A	Asphalt Road 1 Lift	SR 10	2011	\$95,748	25	92	4	High
99B	Gravel Road	Sideroad 10 North	2000	\$70,389	50	90	4	High
GRM	Gravel Road	All Gravel Road Maintenance					5	Medium
FR_1	Fire Reservoir	Tank: (Arkell) #30 Boreham Dr	1999	\$50,000	50	3	3	High
FR_10	Fire Reservoir	Tank: (Hammersley) #7480 Hammersley Dr	1999	\$50,000	50	3	3	High
FR_11	Fire Reservoir	Tank: (Puslinch Fire) 7404 Well Rd 34	2002	\$50,000	50	3	3	High
FR_12	Fire Reservoir	Tank: (Puslinch Fire) 6495 Roszell Rd		\$50,000	50	3	3	High
FR_13	Fire Reservoir	Tank: ( Estate Homes) #37 Fox Run Dr	1989	\$50,000	50	3	3	High
FR_14	Fire Reservoir	Tank: (1719303 Ontario Inc.) Morriston Estates Subdivision		\$50,000	50	3	3	High
FR_15	Fire Reservoir	Tank: DRS Developments		\$50,000	50	3	3	High
FR_2	Fire Reservoir	Tank: (Arkell) #38 Boreham Dr	1999	\$50,000	50	3	3	High
FR_3	Fire Reservoir	Tank: (Audrey Meadows) Catherine Ct	2011	\$50,000	50	3	3	High
FR_4	Fire Reservoir	Tank: (Audrey Meadows) Old Ruby	2011	\$50,000	50	3	3	High
FR_5	Fire Reservoir	Tank: (Audrey Meadows) Old Ruby	2011	\$50,000	50	3	3	High
FR_6	Fire Reservoir	Tank: (Community Center) #23 Brock Rd	2010	\$50,000	50	3	3	High
FR_7	Fire Reservoir	Tank: (Estate Homes) #33 Carriage Ln	2000	\$50,000	50	3	3	High
FR_8	Fire Reservoir	Tank: (Estate Homes) 65 Carriage Ln	2000	\$50,000	50	3	3	High
FR_9	Fire Reservoir	Tank: (Estate Subdivision) #32 Daymond Dr	2009	\$50,000	50	3	3	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
14003	Parks and Recreation	Community Centre Complex: Tennis Court Fencing	1988	\$21,615	40	5	5	Medium
14004	Parks and Recreation	Community Centre Complex: Horse Run Fencing	2010	\$5,030	40	2	2	High
14005	Parks and Recreation	Community Centre Complex: Paving Tennis Court	2009	\$44,625	40	3	3	Medium
14006	Parks and Recreation	Community Centre Complex: Light Poles at Horse Paddock	2009	\$15,510	40	4	4	Medium
230100000 512100000 0	Parks and Recreation	Morrison Historic Corner Block Park Area	2010		50			Insignificant
230100000 605431000 0	Parks and Recreation	Fox Run Park	2010		50			Insignificant
3010	Parks and Recreation	Morrison Meadows: Picnic Pavilion, Morrison Meadows Park	1993	\$30,000	40	5	5	Medium
3013	Parks and Recreation	Community Centre Complex: Light Poles		\$161,385	40	5	5	Medium
3013-1	Parks and Recreation	Community Centre Complex: Light Fixtures		\$28,000	25	5	5	Medium
3014	Parks and Recreation	Community Centre Complex: Wooden Bleacher		\$5,000	20	3	3	Medium
3015	Parks and Recreation	Community Centre Complex: Metal Bleacher		\$13,725	30	5	5	Medium
3016	Parks and Recreation	Community Centre Complex: Fencing Outfield		\$28,689	20	4	4	Medium
3017	Parks and Recreation	Community Centre Complex: Fencing Backstop		\$1,572	20	4	4	Medium
3019	Parks and Recreation	Community Centre Complex: Netting Backstop		\$250	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
3020	Parks and Recreation	Community Centre Complex: Fencing Infield		\$6,550	20	4	4	Medium
3024	Parks and Recreation	Community Centre Complex: Batting Cages		\$9,000	20	3	3	Medium
3025	Parks and Recreation	Community Centre Complex: Wooden Fences Beside Batting Cages		\$1,800	15	2	2	High
3026	Parks and Recreation	Community Centre Complex: Concrete Hydropole		\$4,000	20	5	5	Medium
3028	Parks and Recreation	Community Centre Complex: Light Poles		\$5,200	20	2	2	High
3029	Parks and Recreation	Community Centre Complex: Fencing		\$9,694	20	2	2	High
3031	Parks and Recreation	Community Centre Complex: Aberfoyle Playground		\$25,000	25	4	4	Medium
3032	Parks and Recreation	Community Centre Complex: Fencing Outside Aberfoyle Playground		\$3,930	20	3	3	Medium
3033	Parks and Recreation	Community Centre Complex: Aerial Transformers				4	4	Medium
3036	Parks and Recreation	Community Centre Complex: Horse Paddock Bleachers		\$30,000	20	1	1	High
3037	Parks and Recreation	Community Centre Complex: Light Poles at Back Field		\$15,600	20	5	5	Medium
3039	Parks and Recreation	Community Centre Complex: Gravel Parking Lot & Road		\$86,000	50	5	5	Medium
3041	Parks and Recreation	Morrison Meadows: Morrison Playground		\$25,000	25	4	4	Medium
3042	Parks and Recreation	Morrison Meadows: Gravel Parking Lot		\$47,300	25	4	4	Medium
3043	Parks and Recreation	Morrison Meadows: Picnic Tables		\$3,500	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
3044	Parks and Recreation	Morrison Meadows: Basketball Court		\$22,425	20	4	4	Medium
3046	Parks and Recreation	Morrison Meadows: Bleachers		\$10,000	25	1	1	High
3047	Parks and Recreation	Morrison Meadows: Benches		\$1,000	20	1	1	High
3048	Parks and Recreation	Morrison Meadows: Fencing Backstop		\$1,638	20	4	4	Medium
3049	Parks and Recreation	Morrison Meadows: Fencing Outfield		\$29,344	20	4	4	Medium
3050	Parks and Recreation	Morrison Meadows: Fencing Backstop		\$1,965	20	4	4	Medium
3051	Parks and Recreation	Morrison Meadows: Fencing Infield		\$3,930	20	4	4	Medium
3052	Parks and Recreation	Morrison Meadows: 6 Seat High Bleachers		\$5,000	25	1	1	High
3053	Parks and Recreation	Morrison Meadows: 6 Seat High Bleachers		\$5,000	25	1	1	High
3054	Parks and Recreation	Morrison Meadows: Fencing Around Park		\$26,200	20	5	5	Medium
3055	Parks and Recreation	Morrison Meadows: Fencing Behind Large Baseball Diamond		\$13,100	20	5	5	Medium
3056	Parks and Recreation	Old Morrison: Gravel Road		\$7,740	25	2	2	High
3057	Parks and Recreation	Old Morrison: Fencing Outfield		\$28,820	20	3	3	Medium
3058	Parks and Recreation	Old Morrison: Fencing Infield		\$1,834	20	4	4	Medium
3059	Parks and Recreation	Old Morrison: Fencing Backstop		\$3,668	20	1	1	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
3060	Parks and Recreation	Old Morriston: 6 seat Concrete Bleachers		\$10,000	50	1	1	High
3061	Parks and Recreation	Old Morriston: Ball Park Benches		\$500	20	3	3	Medium
3063	Parks and Recreation	Old Morriston: Light Towers		\$161,385	40	1	1	High
3064	Parks and Recreation	Old Morriston: Light Fixtures		\$24,500	20	3	3	Medium
3065	Parks and Recreation	Old Morriston: Batting Cages		\$13,100	20	3	3	Medium
3068	Parks and Recreation	Badenoch Soccer Field: 3 Seat Bleacher		\$2,000	25	1	1	High
3070	Parks and Recreation	Badenoch Soccer Field: Fencing (East Side)		\$14,934	20	2	2	High
3071	Parks and Recreation	Badenoch Soccer Field: Fencing (North and West Side)		\$27,641	20	5	5	Medium
3072	Parks and Recreation	Badenoch Soccer Field: Septic Tank		\$15,000	30	3	3	Medium
3074	Parks and Recreation	Boreham Drive Park: Basketball Court		\$22,425	25	5	5	Medium
3075	Parks and Recreation	Boreham Drive Park: Arkell Playground		\$25,000	25	5	5	Medium
3076	Parks and Recreation	Boreham Drive Park: Sign		\$1,500	20	5	5	Medium
3077	Parks and Recreation	Telfer Glen Park Trail			50	5	5	Medium
3078	Parks and Recreation	Community Centre Complex: Puslinch Community Centre Sidewalks		\$1,500	20	4	4	Medium
3079	Parks and Recreation	Community Centre Complex: Swing Gates		\$9,000	30	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
307989	Parks and Recreation	Wayne Stokley Trail	2016		50	5	5	Medium
3080	Parks and Recreation	Community Centre Complex: Soccer Field		\$575,000	25	5	5	Medium
3081	Parks and Recreation	Community Centre Complex: Light Fixtures		\$3,500	20	5	5	Medium
3082	Parks and Recreation	Community Centre Complex: Parking Lot Community Centre Complex		\$91,875	25	2	2	High
3087	Parks and Recreation	Community Centre Complex: Fencing Around Community Centre		\$65,500	20	5	5	Medium
3260	Parks and Recreation	Boreham Drive Park: Basketball Court Post and Hoops		\$1,000	20	4	4	Medium
3279	Parks and Recreation	Morrison Meadows: Basketball Court Post and Hoops		\$1,000	20	4	4	Medium
3822	Parks and Recreation	Community Centre Complex: Puslinch Community Gardens Cobblestone Walkways		\$2,520	20	5	5	Medium
3823	Parks and Recreation	Community Centre Complex: Puslinch Community Gardens Benches		\$500	20	5	5	Medium
1_66FVT	Fire vehicle tires	P-31	2004	\$648	10		1	High
10_14FVT	Fire vehicle tires	P-32	2012	\$686	10		3	Medium
11_90FVT	Fire vehicle tires	P-32	2012	\$686	10		3	Medium
12_46FVT	Fire vehicle tires	P-32	2012	\$686	10		3	Medium
13_63FVT	Fire vehicle tires	A-33	2012	\$825	8		3	Medium
14_38FVT	Fire vehicle tires	A-33	2012	\$825	8		3	Medium
15_73FVT	Fire vehicle tires	A-33	2011	\$825	8		3	Medium
16_16FVT	Fire vehicle tires	A-33	2011	\$825	8		3	Medium
17_74FVT	Fire vehicle tires	A-33	2011	\$825	8		3	Medium
18_76FVT	Fire vehicle tires	A-33	2011	\$825	8		3	Medium
19_36FVT	Fire vehicle tires	R-35	2016	\$648	10		4	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
2_11FVT	Fire vehicle tires	P-31	2004	\$648	10		1	High
20_20FVT	Fire vehicle tires	R-35	2016	\$648	10		4	Medium
2002PW	Works Unlicensed vehicles	2002 Water Pump and Hose			10			
21_91FVT	Fire vehicle tires	R-35	2017	\$370	10		4	Medium
22_65FVT	Fire vehicle tires	R-35	2017	\$370	10		4	Medium
23_30FVT	Fire vehicle tires	R-35	2017	\$370	10		4	Medium
24_66FVT	Fire vehicle tires	R-35	2017	\$370	10		4	Medium
25_57FVT	Fire vehicle tires	T-37	2014	\$825	10		4	Medium
26_100FVT	Fire vehicle tires	T-37	2014	\$825	10		4	Medium
27_69FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
28_4FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
29_40FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
3_3FVT	Fire vehicle tires	P-31	2003	\$825	10		1	High
30_35FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
31_1FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
32_77FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
33_70FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
34_59FVT	Fire vehicle tires	T-37	2009	\$825	10		1	High
35_18FVT	Fire vehicle tires	T-38	2018	\$825	10		1	High
36_27FVT	Fire vehicle tires	T-38	2018	\$825	10		1	High
37_60FVT	Fire vehicle tires	T-38	2018	\$648	10		1	High
38_76FVT	Fire vehicle tires	T-38	2018	\$648	10		1	High
39_53FVT	Fire vehicle tires	T-38	2018	\$648	10		1	High
4_96FVT	Fire vehicle tires	P-31	2003	\$825	10		1	High
40_1FVT	Fire vehicle tires	T-38-FT	2006	\$825	10		1	High
4060	Parks and Recreation	Floor Scrubber	2016	\$8,000	10		4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
	Unlicensed vehicles							
41_1FVT	Fire vehicle tires	T-38-FT	2009	\$825	10		1	High
42_14FVT	Fire vehicle tires	T-38	2018	\$648	10		1	High
43_24FVT	Fire vehicle tires	T-38	2018	\$648	10		1	High
44_8FVT	Fire vehicle tires	T-38	2018	\$648	10		1	High
45_1FVT	Fire vehicle tires	C-1	2014	\$250	10		1	High
46_31FVT	Fire vehicle tires	C-1	2014	\$250	10		1	High
47_71FVT	Fire vehicle tires	C-1	2014	\$250	10		1	High
48_70FVT	Fire vehicle tires	C-1	2014	\$250	10		1	High
49_56FVT	Fire vehicle tires	C-1 Winter	2017	\$250	10		1	High
5_81FVT	Fire vehicle tires	P-31	2003	\$825	10		1	High
50_57FVT	Fire vehicle tires	C-1 Winter	2017	\$250	10		1	High
5030	Fire licensed vehicles	Antique Fire Truck						
5031	Fire licensed vehicles	Fire Pumper 31	2005	\$468,000	20		3	Medium
5033	Fire licensed vehicles	Aerial 33	2003	\$500,000	25	55667	3	Medium
5035	Fire licensed vehicles	Rescue Truck 35	2000	\$520,000	20		3	Medium
5038	Fire licensed vehicles	Freightliner Pumper Tanker 38	2012	\$450,000	20		4	Medium
5040	Fire licensed vehicles	Pumper 32	2010	\$300,000	20		4	Medium
51_94FVT	Fire vehicle tires	C-1 Winter	2017	\$250	10		1	High
52_10FVT	Fire vehicle tires	C-1 Winter	2017	\$250	10		1	High
53_10FVT	Fire vehicle tires	P-30	2002	\$370	10		1	High
54_43FVT	Fire vehicle tires	P-30	2002	\$370	10		1	High
55_80FVT	Fire vehicle tires	P-30	2002	\$370	10		1	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
56_8FVT	Fire vehicle tires	P-30	2002	\$370	10		1	High
57_20FVT	Fire vehicle tires	P-30	2002	\$370	10		1	High
58_81FVT	Fire vehicle tires	P-30	2002	\$370	10		1	High
6_77FVT	Fire vehicle tires	P-31	2003	\$825	10		1	High
7_64FVT	Fire vehicle tires	P-32	2012	\$686	10		3	Medium
7003	Works licensed vehicles	2008 1 Ton Dump/Plow 305	2008	\$100,000	12	103534	2	Medium
7005A	Fire licensed vehicles	2013 Vehicle For Fire & Rescue	2016	\$23,000	7		4	Medium
7005B	Building Department licensed vehicles	2016 Mid-Size Pickup	2016	\$33,000	7		3	Medium
7006	Fire licensed vehicles	Tanker 37	2010	\$410,000	20		4	Medium
7007	Parks and Recreation Unlicensed vehicles	Lawn Tractor	2018	\$30,000	10		4	Medium
7008	Works licensed vehicles	2011 Chevy Silverado Pickup 4	2011	\$40,000	10	125958	1	High
7009	Works licensed vehicles	2017 Pickup Truck - Staff - 3/4 Ton	2017	\$52,000	8	4198	3	Medium
8_19FVT	Fire vehicle tires	P-32	2012	\$686	10		3	Medium
8001	Works Unlicensed vehicles	2008 JCB Backhoe 6	2008	\$125,000	12	2	2	Medium
8002	Works Unlicensed vehicles	Road Grader G740 501	2000	\$350,000	25		2	Medium
8003	Works Unlicensed vehicles	Road Grader G740 501	2000	\$350,000	25		5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
8012	Parks and Recreation Unlicensed vehicles	Trailers (1) - Parks Department	2014	\$5,000	20		4	Medium
8013	Works licensed vehicles	2011 Single Axle Truck 304	2011	\$250,000	8	77523	1	High
8014	Works licensed vehicles	2012 Dump/Plow 302	2012	\$250,000	8	96095	2	Medium
8015	Works Unlicensed vehicles	Anti-Ice Equipment			20		5	Medium
8015-1	Works Unlicensed vehicles	Slide in Spray Unit		\$5,000	20	5	5	Medium
8015-2	Works Unlicensed vehicles	Storage Tank		\$14,000	20	5	5	Medium
8015-3	Works Unlicensed vehicles	Pumps		\$5,000	20	5	5	Medium
8016	Works licensed vehicles	2013 International Plow Truck 301	2013	\$250,000	8	74804	2	Medium
8017	Works licensed vehicles	2015 International Plow Truck - 303	2015	\$225,000	8	31032	2	Medium
8018	Works Unlicensed vehicles	2015 Brush Chipper	2015	\$40,000	10	81	5	Medium
8019	Works licensed vehicles	2015 GMC Sierra 1500	2015	\$40,000	10	42610	3	Medium
8020	Parks and Recreation Unlicensed vehicles	Olympia Ice Resurfacer	2017	\$80,000	25	4	5	Medium
9_22FVT	Fire vehicle tires	P-32	2012	\$686	10		3	Medium
1_26FE	Fire Equipment	Air Cylinder Compressor	2014	\$29,490	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
10_2FE	Fire Equipment	Gear Dryer	2017	\$6,000	10	4	4	Medium
100_87FE	Fire Equipment	Bunker Gear #323 5310555 5310559	2017	\$3,000	10	5	5	Medium
101_49FE	Fire Equipment	Bunker Gear #385 5310557 5310562	2017	\$3,000	10	5	5	Medium
102_20FE	Fire Equipment	Bunker Gear #322 5310556 5310561	2017	\$3,000	10	5	5	Medium
103_101FE	Fire Equipment	Bunker Gear #350 5483616 5483622	2018	\$3,000	10	5	5	Medium
104_60FE	Fire Equipment	Bunker Gear #335 5483615 5483621	2018	\$3,000	10	5	5	Medium
105_24FE	Fire Equipment	Bunker Gear #302 5483614 5483619	2018	\$3,000	10	5	5	Medium
106_92FE	Fire Equipment	Bunker Gear #305 5483613 5483618	2018	\$3,000	10	5	5	Medium
11_103FE	Fire Equipment	Rapid Deployment Water Craft	2010	\$6,000	10	4	4	Medium
12_41FE	Fire Equipment	Defibrillators Fire & Rescue Service Trucks	2017	\$15,000	8	3	3	High
1212_41FE	Fire Equipment	Defibrillators - Municipal Buildings	2017	\$4,500	8	5	5	Medium
13_89FE	Fire Equipment	Portable Pumps	2006	\$15,000	20	4	4	Medium
14_25FE	Fire Equipment	Air Cylinder:84	2005	\$1,500	15	3	3	High
15_87FE	Fire Equipment	Air Cylinder:85	2006	\$1,500	15	3	3	High
16_87FE	Fire Equipment	Air Cylinder:87	2007	\$1,500	15	3	3	High
17_76FE	Fire Equipment	Air Cylinder:88	2008	\$1,500	15	3	3	High
18_90FE	Fire Equipment	Air Cylinder:100	2004	\$1,500	15	3	3	High
19_90FE	Fire Equipment	Air Cylinder:101	2005	\$1,500	15	3	3	High
2_46FE	Fire Equipment	Portable Radios		\$45,000		4	4	Medium
20_85FE	Fire Equipment	Air Cylinder:102	2006	\$1,500	15	3	3	High
21_85FE	Fire Equipment	Air Cylinder:103	2007	\$1,500	15	3	3	High
22_9FE	Fire Equipment	Air Cylinder:104	2006	\$1,500	15	3	3	High
23_42FE	Fire Equipment	Air Cylinder:105	2005	\$1,500	15	3	3	High
24_94FE	Fire Equipment	Air Cylinder:106	2006	\$1,500	15	3	3	High
25_35FE	Fire Equipment	Air Cylinder:107	2005	\$1,500	15	3	3	High
26_23FE	Fire Equipment	Air Cylinder:108	2005	\$1,500	15	3	3	High
27_67FE	Fire Equipment	Air Cylinder:109	2005	\$1,500	15	3	3	High
28_48FE	Fire Equipment	Air Cylinder:310	2008	\$1,500	15	3	3	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
29_64FE	Fire Equipment	Air Cylinder:311	2008	\$1,500	15	3	3	High
3_18FE	Fire Equipment	Mobile/Truck Radios		\$40,000		4	4	Medium
30_89FE	Fire Equipment	Air Cylinder:312	2005	\$1,500	15	3	3	High
31_89FE	Fire Equipment	Air Cylinder:313	2005	\$1,500	15	3	3	High
32_104FE	Fire Equipment	Air Cylinder:314	2008	\$1,500	15	3	3	High
33_34FE	Fire Equipment	Air Cylinder:315	2008	\$1,500	15	3	3	High
34_30FE	Fire Equipment	Air Cylinder:316	2010	\$1,500	15	3	3	High
35_104FE	Fire Equipment	Air Cylinder:317	2011	\$1,500	15	3	3	High
36_48FE	Fire Equipment	Air Cylinder:318	2012	\$1,500	15	3	3	High
37_107FE	Fire Equipment	Air Cylinder:319	2013	\$1,500	15	3	3	High
38_15FE	Fire Equipment	Air Cylinder:320	2007	\$1,500	15	3	3	High
39_99FE	Fire Equipment	Air Cylinder:323	2007	\$1,500	15	3	3	High
4_35FE	Fire Equipment	Pagers		\$22,000		3	3	High
40_31FE	Fire Equipment	Air Cylinder:334	2007	\$1,500	15	3	3	High
41_37FE	Fire Equipment	Air Cylinder:335	2005	\$1,500	15	3	3	High
42_79FE	Fire Equipment	Air Cylinder:336	2007	\$1,500	15	3	3	High
43_107FE	Fire Equipment	Air Cylinder:337	2006	\$1,500	15	3	3	High
44_55FE	Fire Equipment	Air Cylinder:339	2006	\$1,500	15	3	3	High
45_27FE	Fire Equipment	Air Cylinder:340	2007	\$1,500	15	3	3	High
46_91FE	Fire Equipment	Air Cylinder:341	2008	\$1,500	15	3	3	High
47_55FE	Fire Equipment	Air Cylinder:342	2009	\$1,500	15	3	3	High
48_109FE	Fire Equipment	Air Cylinder:343	2010	\$1,500	15	3	3	High
49_104FE	Fire Equipment	Air Cylinder:344	2011	\$1,500	15	3	3	High
5_44FE	Fire Equipment	Vehicle Extrication Equipment		\$25,000		4	4	Medium
50_57FE	Fire Equipment	Air Cylinder:345	2012	\$1,500	15	3	3	High
51_94FE	Fire Equipment	Air Cylinder:346	2013	\$1,500	15	3	3	High
52_95FE	Fire Equipment	Air Cylinder:347	2014	\$1,500	15	3	3	High
53_40FE	Fire Equipment	Air Cylinder:348	2015	\$1,500	15	3	3	High
54_31FE	Fire Equipment	Air Cylinder:349	2011	\$1,500	15	3	3	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
55_41FE	Fire Equipment	Air Cylinder:350	2011	\$1,500	15	3	3	High
56_58FE	Fire Equipment	Air Cylinder:351	2010	\$1,500	15	3	3	High
57_105FE	Fire Equipment	Air Cylinder:352	2011	\$1,500	15	3	3	High
58_88FE	Fire Equipment	Air Cylinder:353	2012	\$1,500	15	3	3	High
59_35FE	Fire Equipment	Air Cylinder:354	2012	\$1,500	15	3	3	High
59_56FVT	Fire Equipment	Fire Hawk 2002	2006	\$7,450	15	4	4	Medium
6_70FE	Fire Equipment	Power Hydraulic Tool set	2000	\$52,500	20	1	1	Very High
60_51FVT	Fire Equipment	Fire Hawk 2002	2007	\$7,450	15	4	4	Medium
60_57FE	Fire Equipment	Air Cylinder:355	2013	\$1,500	15	3	3	High
61_17FE	Fire Equipment	Air Cylinder:356	2014	\$1,500	15	3	3	High
61_92FVT	Fire Equipment	Fire Hawk 2002	2007	\$7,450	15	4	4	Medium
62_23FVT	Fire Equipment	Fire Hawk 2002	2006	\$7,450	15	4	4	Medium
62_96FE	Fire Equipment	Air Cylinder:357	2015	\$1,500	15	3	3	High
63_48FE	Fire Equipment	Air Cylinder:358	2016	\$1,500	15	3	3	High
63_86FVT	Fire Equipment	Fire Hawk M7	2013	\$7,450	15	4	4	Medium
64_106FE	Fire Equipment	Air Cylinder:359	2017	\$1,500	15	3	3	High
64_69FVT	Fire Equipment	Fire Hawk M7	2013	\$7,450	15	4	4	Medium
65_29FVT	Fire Equipment	Fire Hawk M7	2013	\$7,450	15	4	4	Medium
65_4FE	Fire Equipment	Air Cylinder:360	2018	\$1,500	15	3	3	High
66_17FVT	Fire Equipment	Fire Hawk M7	2013	\$7,450	15	4	4	Medium
66_21FE	Fire Equipment	Bunker Gear #317 907001148 907001150	2009	\$3,000	10	1	1	Very High
67_17FVT	Fire Equipment	SCBA Masks	2005	\$8,250	15	4	4	Medium
67_60FE	Fire Equipment	Bunker Gear #395 1307006351 1104007407	2009	\$3,000	10	1	1	Very High
67_99FVT	Fire Equipment	Fire Hawk 2002	2006	\$7,450	15	4	4	Medium
68_20FVT	Fire Equipment	Ultralight MMR 2000	2007	\$7,450	15	4	4	Medium
68_80FE	Fire Equipment	Bunker Gear #376 1104007399 3707960	2009	\$3,000	10	1	1	Very High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
69_41FVT	Fire Equipment	Ultralight MMR 2000	2005	\$7,450	15	4	4	Medium
69_51FE	Fire Equipment	Bunker Gear #386 1104007401 907001149	2009	\$3,000	10	1	1	Very High
7_82FE	Fire Equipment	Edraulic Combination Tool		\$15,000	20	4	4	Medium
70_84FVT	Fire Equipment	Fire Hawk 2002	2007	\$7,450	15	4	4	Medium
71_102FE	Fire Equipment	Bunker Gear #308	2011	\$3,000	10	3	3	High
71_45FVT	Fire Equipment	Fire Hawk 2002	2007	\$7,450	15	4	4	Medium
72_58FE	Fire Equipment	Bunker Gear #378 1104007403 1104007408	2011	\$3,000	10	3	3	High
72_79FVT	Fire Equipment	Fire Hawk 2002	2007	\$7,450	15	4	4	Medium
73_30FVT	Fire Equipment	Fire Hawk 2002	2007	\$7,450	15	4	4	Medium
73_67FE	Fire Equipment	Bunker Gear #301 1301002761 1301002766	2013	\$3,000	10	3	3	High
74_22FE	Fire Equipment	Bunker Gear #336 1301002757 1301002762	2013	\$3,000	10	3	3	High
74_27FVT	Fire Equipment	Fire Hawk 2002	2005	\$7,450	15	4	4	Medium
75_43FVT	Fire Equipment	Ultralight MMR 2000	2005	\$7,450	15	4	4	Medium
75_67FE	Fire Equipment	Bunker Gear #392 1301002758 1301002763	2013	\$3,000	10	4	4	Medium
76_55FE	Fire Equipment	Bunker Gear #337 1301002760 1301002765	2013	\$3,000	10	4	4	Medium
76_67FVT	Fire Equipment	Ultralight MMR 2000	2005	\$7,450	15	4	4	Medium
77_100FE	Fire Equipment	Bunker Gear #388 4748801 4749620	2014	\$3,000	10	4	4	Medium
77_9FVT	Fire Equipment	Ultralight MMR 2000	2004	\$7,450	15	3	3	High
78_16FVT	Fire Equipment	Ultralight MMR 2000	2004	\$7,450	15	3	3	High
78_9FE	Fire Equipment	Bunker Gear #318	2014	\$3,000	10	4	4	Medium
79_57FVT	Fire Equipment	Ultralight MMR 2000	2004	\$7,450	15	3	3	High
79_75FE	Fire Equipment	Bunker Gear #310 4748800 4749619	2014	\$3,000	10	4	4	Medium
8_93FE	Fire Equipment	Thermal Imaging Camera	2009	\$6,000	10	1	1	Very High
8_94FE	Fire Equipment	Thermal Imaging Camera	2017	\$6,000	10		3	High



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
80_30FVT	Fire Equipment	Ultralight MMR 2000	2004	\$7,450	15	3	3	High
80_57FE	Fire Equipment	Bunker Gear #333 4924090 4924085	2015	\$3,000	10	4	4	Medium
81_37FE	Fire Equipment	Bunker Gear #387 4924092 4924080	2015	\$3,000	10	4	4	Medium
83_94FE	Fire Equipment	Bunker Gear #326 4924091 4924082	2015	\$3,000	10	4	4	Medium
84_89FE	Fire Equipment	Bunker Gear #321 4992302 4924081	2015	\$3,000	10	4	4	Medium
85_11FE	Fire Equipment	Bunker Gear #370 4924095 4924083	2015	\$3,000	10	4	4	Medium
86_72FE	Fire Equipment	Bunker Gear #381 4924093 4924086	2015	\$3,000	10	4	4	Medium
87_51FE	Fire Equipment	Bunker Gear #306 4992301 4992304	2015	\$3,000	10	4	4	Medium
88_35FE	Fire Equipment	Bunker Gear #309 4924096 4924084	2015	\$3,000	10	4	4	Medium
89_97FE	Fire Equipment	Bunker Gear #307 4924089 4924079	2015	\$3,000	10	4	4	Medium
9_104FE	Fire Equipment	Washer/Extractor	2017	\$10,000	10	4	4	Medium
90_29FE	Fire Equipment	Bunker Gear #380 4992303 4992306	2015	\$3,000	10	4	4	Medium
91_44FE	Fire Equipment	Bunker Gear #375 4924077 4992305	2015	\$3,000	10	4	4	Medium
92_20FE	Fire Equipment	Bunker Gear #303 5017234 5017235	2015	\$3,000	10	4	4	Medium
93_73FE	Fire Equipment	Bunker Gear #320 4924094 4924087	2015	\$3,000	10	4	4	Medium
94_89FE	Fire Equipment	Bunker Gear #355 4924088 4924078	2015	\$3,000	10	4	4	Medium
95_47FE	Fire Equipment	Bunker Gear #315 5085806 5085940	2016	\$3,000	10	5	5	Medium
96_14FE	Fire Equipment	Bunker Gear #319 5122954 5085938	2016	\$3,000	10	5	5	Medium
97_58FE	Fire Equipment	Bunker Gear #391 5085805 5085939	2016	\$3,000	10	5	5	Medium
98_23FE	Fire Equipment	Bunker Gear #379 5312492 5312493	2017	\$3,000	10	5	5	Medium
99_1FE	Fire Equipment	Bunker Gear #382 5310558 5310560	2017	\$3,000	10	5	5	Medium
FE_122_1	Fire Equipment	Bunker Gear #351	2009	\$3,000	10	1	1	Very High
FE_Ant_3	Fire Equipment	Antennae Roof		\$600		3	3	High
FE_Ant_4	Fire Equipment	Antennae Tower		\$11,400		3	3	High
FE_Ant_5	Fire Equipment	Antennae		\$2,000		3	3	High
FE_Bas_1	Fire Equipment	Base Radio		\$5,000		3	3	High
FE_Bas_2	Fire Equipment	Base Radio County		\$5,000		3	3	High
FE_Blu_8	Fire Equipment	Blue tooth Headset		\$2,200		3	3	High
FE_Pan_6	Fire Equipment	Panda Vox Recorder Radio		\$1,400		3	3	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
FE_Pan_7	Fire Equipment	Panda Vox Recorder		\$5,700		3	3	High
300	Sidewalk	Watson Road Sidewalk	1990	\$64,350	20	5	5	Medium
301	Sidewalk	Arkell Road Sidewalk	1990	\$39,325	20	3	3	Medium
303	Sidewalk	Church Street	2000	\$12,012	20	5	5	Medium
304	Sidewalk	Brock Road Sidewalk	2001	\$131,131	20	4	4	Medium
305	Sidewalk	Badenoch Rd Sidewalk	2001	\$58,773	20	5	5	Medium
307	Sidewalk	Victoria Street	2000	\$25,311	20	5	5	Medium
308	Sidewalk	Calfass Road		\$11,440	20	5	5	Medium
309	Sidewalk	Queen Street		\$128,700	20	5	5	Medium
310	Sidewalk	Main Street		\$9,295	20	3	3	Medium
SL 1_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 1_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 10_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 10_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 100_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 100_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 101_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 101_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 102_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 102_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 103_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 103_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 104_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 104_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 105_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 105_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 106_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 106_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 107_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 107_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 108_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 108_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 109_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 109_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 11_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 11_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 110_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 110_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 111_F	Street Light Fixture	Cobrahead HPS Lampheight: 35 Location: Overhead Wood		\$300	20	3	5	Medium
SL 111_P	Street Light Pole	Cobrahead HPS Lampheight: 35 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 112_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 112_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 113_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 113_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 114_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 114_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 115_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 115_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 116_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 116_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 117_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 117_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 118_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 118_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 119_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 119_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 12_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 12_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 120_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 120_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 121_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 121_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 122_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 122_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 123_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 123_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 124_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 124_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 125_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 125_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 126_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 126_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 127_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 127_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 128_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 128_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 129_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 129_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 13_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 13_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 130_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 130_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 131_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 131_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 132_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 132_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 133_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 133_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 134_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 134_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 135_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 135_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 136_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 136_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 137_F	Street Light Fixture	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 137_P	Street Light Pole	Decorative - Acorn Post Top Type 1 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 138_F	Street Light Fixture	Decorative - Acorn Post Top Type 2 HPS Lampheight: 12 Location: Underground Metal		\$300	20	4	5	Medium
SL 138_P	Street Light Pole	Decorative - Acorn Post Top Type 2 HPS Lampheight: 12 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 139_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 139_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 14_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 14_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 140_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 140_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 141_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 141_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 142_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 142_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 143_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 143_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 144_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 144_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 145_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 145_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 146_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 146_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 147_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 147_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 148_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 148_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 149_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 149_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 15_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 15_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 150_F	Street Light Fixture	Decorative - Top Hat Type 1 HPS Lampheight: 20 Location: Underground Concrete		\$300	20	4	5	Medium
SL 150_P	Street Light Pole	Decorative - Top Hat Type 1 HPS Lampheight: 20 Location: Underground Concrete		\$4,027	20	4	4	Medium
SL 151_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 151_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 152_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 152_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 153_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 153_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 154_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 154_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 155_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 155_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 156_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 156_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 157_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 157_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 158_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 158_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 159_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 159_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 16_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 16_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 160_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 160_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 161_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 161_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 162_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 162_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 163_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 163_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 164_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 164_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 165_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 165_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 166_F	Street Light Fixture	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$300	20	4	5	Medium
SL 166_P	Street Light Pole	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 167_F	Street Light Fixture	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$300	20	4	5	Medium
SL 167_P	Street Light Pole	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$4,027	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 168_F	Street Light Fixture	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$300	20	4	5	Medium
SL 168_P	Street Light Pole	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 169_F	Street Light Fixture	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$300	20	4	5	Medium
SL 169_P	Street Light Pole	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 17_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 17_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 170_F	Street Light Fixture	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$300	20	4	5	Medium
SL 170_P	Street Light Pole	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$4,027	20	4	4	Medium
SL 171_F	Street Light Fixture	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$300	20	4	5	Medium
SL 171_P	Street Light Pole	Decorative - Box Top Type 1 HPS Lampheight: 15 Location: Underground Metal		\$4,027	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 172_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 172_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 18_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 18_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 182_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 182_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 183_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 183_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 184_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 184_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 185_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 185_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 186_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 186_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 187_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 187_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 188_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 188_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 189_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 189_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 19_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 19_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 190_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 190_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 191_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 191_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 192_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 192_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 193_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 193_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 194_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 194_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 195_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 195_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 196_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 196_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 197_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 197_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 198_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 198_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 199_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 199_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 2_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 2_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 20_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 20_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 200_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 200_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 201_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 201_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 202_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 202_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 203_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 203_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 204_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 204_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 205_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 205_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 206_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 206_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 207_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 207_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 208_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 208_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 209_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 209_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 21_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 21_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 210_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 210_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 211_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 211_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 212_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 212_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 213_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 213_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 214_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 214_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 215_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 215_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 216_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 216_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 217_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 217_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 218_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 218_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 219_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 219_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 22_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 22_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 220_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 220_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 221_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 221_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 222_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 222_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 223_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 223_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 224_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 224_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 225_F	Street Light Fixture	Cobrahead HPS Lampheight: 20 Location: Underground Wood		\$300	20	4	5	Medium
SL 225_P	Street Light Pole	Cobrahead HPS Lampheight: 20 Location: Underground Wood		\$1,304	20	4	4	Medium
SL 226_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 226_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 227_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 227_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 228_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 228_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 229_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 229_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 23_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 23_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 230_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 230_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 231_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 231_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 232_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 232_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 233_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 233_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 234_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 234_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 235_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 235_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 236_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 236_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 237_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 237_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 238_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 238_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 239_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 239_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 24_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 24_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 240_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 240_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 241_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 241_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 242_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 242_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 243_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 243_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 244_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 244_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 245_F	Street Light Fixture	Cobrahead HPS Lampheight: 30 Location: Overhead Wood		\$300	20	5	5	Medium
SL 245_P	Street Light Pole	Cobrahead HPS Lampheight: 30 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 246_F	Street Light Fixture	Cobrahead HPS Lampheight: 30 Location: Overhead Wood		\$300	20	5	5	Medium
SL 246_P	Street Light Pole	Cobrahead HPS Lampheight: 30 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 247_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 247_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 248_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 248_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 249_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 249_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 25_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 25_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 250_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 250_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 251_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 251_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 252_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 252_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 253_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 253_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 254_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 254_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 255_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 255_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 256_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 256_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 257_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 257_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 258_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 258_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 259_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 259_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 26_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 26_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 260_F	Street Light Fixture	Sentinel Type 1 HPS Lampheight: 25 Location: Overhead Concrete		\$300	20	4	5	Medium
SL 260_P	Street Light Pole	Sentinel Type 1 HPS Lampheight: 25 Location: Overhead Concrete		\$1,304	20	4	4	Medium
SL 261_F	Street Light Fixture	Floodlight Type 1 HPS Lampheight: 25 Location: Overhead Concrete		\$300	20	4	5	Medium
SL 261_P	Street Light Pole	Floodlight Type 1 HPS Lampheight: 25 Location: Overhead Concrete		\$4,027	20	4	4	Medium
SL 262_F	Street Light Fixture	Floodlight Type 1 HPS Lampheight: 25 Location: Overhead Concrete		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 262_P	Street Light Pole	Floodlight Type 1 HPS Lampheight: 25 Location: Overhead Concrete		\$4,027	20	4	4	Medium
SL 263_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 263_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 264_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 264_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 265_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 265_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 266_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 266_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 267_F	Street Light Fixture	Cobrahead HPS Lampheight: 20 Location: Overhead Wood		\$300	20	5	5	Medium
SL 267_P	Street Light Pole	Cobrahead HPS Lampheight: 20 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 268_F	Street Light Fixture	Cobrahead HPS Lampheight: 30 Location: Overhead Wood		\$300	20	5	5	Medium
SL 268_P	Street Light Pole	Cobrahead HPS Lampheight: 30 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 269_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 269_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 27_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 27_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 270_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 270_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 271_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 271_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 272_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 272_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 273_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 273_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 274_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 274_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 275_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 275_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 276_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 276_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 277_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 277_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 278_F	Street Light Fixture	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 278_P	Street Light Pole	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 279_F	Street Light Fixture	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 279_P	Street Light Pole	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 28_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 28_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 280_F	Street Light Fixture	Wallpack Type 2 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 280_P	Street Light Pole	Wallpack Type 2 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 281_F	Street Light Fixture	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 281_P	Street Light Pole	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 282_F	Street Light Fixture	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 282_P	Street Light Pole	Wallpack Type 1 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 283_F	Street Light Fixture	Wallpack Type 2 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 283_P	Street Light Pole	Wallpack Type 2 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 284_F	Street Light Fixture	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$300	20	4	5	Medium
SL 284_P	Street Light Pole	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$1,304	20	4	4	Medium
SL 285_F	Street Light Fixture	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$300	20	4	5	Medium
SL 285_P	Street Light Pole	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$1,304	20	4	4	Medium
SL 286_F	Street Light Fixture	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$300	20	4	5	Medium
SL 286_P	Street Light Pole	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$1,304	20	4	4	Medium
SL 287_F	Street Light Fixture	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$300	20	4	5	Medium
SL 287_P	Street Light Pole	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$1,304	20	4	4	Medium
SL 288_F	Street Light Fixture	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$300	20	4	5	Medium
SL 288_P	Street Light Pole	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$1,304	20	4	4	Medium
SL 289_F	Street Light Fixture	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$300	20	4	5	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 289_P	Street Light Pole	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$1,304	20	4	4	Medium
SL 29_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 29_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 290_F	Street Light Fixture	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$300	20	4	5	Medium
SL 290_P	Street Light Pole	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$1,304	20	4	4	Medium
SL 291_F	Street Light Fixture	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$300	20	4	5	Medium
SL 291_P	Street Light Pole	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$1,304	20	4	4	Medium
SL 292_F	Street Light Fixture	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$300	20	4	5	Medium
SL 292_P	Street Light Pole	Wallpack Type 4 HPS Lampheight: 6 Location: Underground		\$1,304	20	4	4	Medium
SL 293_F	Street Light Fixture	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$300	20	4	5	Medium
SL 293_P	Street Light Pole	Wallpack Type 3 HPS Lampheight: 10 Location: Underground		\$1,304	20	4	4	Medium
SL 294_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 294_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 295_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 295_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 296_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 296_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 297_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 297_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 298_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 298_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 299_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 299_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 3_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 3_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 30_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 30_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 300_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 300_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 301_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 301_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 302_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 302_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 303_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium
SL 303_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
SL 304_F	Street Light Fixture	Cobrahead Type 2 HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 304_P	Street Light Pole	Cobrahead Type 2 HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 305_F	Street Light Fixture	Floodlight LED Lampheight: 15 Location: Underground		\$300	20	4	5	Medium
SL 305_P	Street Light Pole	Floodlight LED Lampheight: 15 Location: Underground		\$4,027	20	4	4	Medium
SL 306_F	Street Light Fixture	Floodlight LED Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 306_P	Street Light Pole	Floodlight LED Lampheight: 20 Location: Underground		\$4,027	20	4	4	Medium
SL 307_F	Street Light Fixture	Floodlight Type 2 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 307_P	Street Light Pole	Floodlight Type 2 HPS Lampheight: 20 Location: Underground		\$4,027	20	4	4	Medium
SL 308_F	Street Light Fixture	Wallpack HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 308_P	Street Light Pole	Wallpack HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 309_F	Street Light Fixture	Wallpack HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 309_P	Street Light Pole	Wallpack HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 31_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 31_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 310_F	Street Light Fixture	Wallpack HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 310_P	Street Light Pole	Wallpack HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 311_F	Street Light Fixture	Wallpack Type 5 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 311_P	Street Light Pole	Wallpack Type 5 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 312_F	Street Light Fixture	Wallpack Type 5 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 312_P	Street Light Pole	Wallpack Type 5 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 313_F	Street Light Fixture	Wallpack Type 5 HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 313_P	Street Light Pole	Wallpack Type 5 HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 314_F	Street Light Fixture	Wallpack HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 314_P	Street Light Pole	Wallpack HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 315_F	Street Light Fixture	Wallpack HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 315_P	Street Light Pole	Wallpack HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 316_F	Street Light Fixture	Cobrahead Type 2 HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 316_P	Street Light Pole	Cobrahead Type 2 HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 317_F	Street Light Fixture	Sentinel Type 1 HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 317_P	Street Light Pole	Sentinel Type 1 HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 318_F	Street Light Fixture	Wallpack HPS Lampheight: 20 Location: Underground		\$300	20	4	5	Medium
SL 318_P	Street Light Pole	Wallpack HPS Lampheight: 20 Location: Underground		\$1,304	20	4	4	Medium
SL 32_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 32_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 33_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 33_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 34_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 34_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 35_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 35_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 36_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 36_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 37_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 37_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 38_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 38_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 39_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 39_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 4_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 4_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 40_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 40_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 41_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 41_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 42_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 42_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 43_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 43_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 44_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 44_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 45_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 45_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 46_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 46_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 47_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 47_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 48_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 48_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 49_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 49_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 5_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 5_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 50_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 50_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 51_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 51_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 52_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 52_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 53_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 53_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 54_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 54_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 2 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 55_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 55_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 56_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 56_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 57_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 57_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 58_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 58_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 59_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 59_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 6_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 6_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 60_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 60_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 61_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 61_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 3 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 62_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	4	5	Medium
SL 62_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	4	4	Medium
SL 63_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 63_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 64_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 64_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 65_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 65_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 66_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 66_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 67_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 67_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 68_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 68_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 69_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 69_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 7_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	4	5	Medium
SL 7_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	4	4	Medium
SL 70_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 70_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 71_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 71_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 72_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 72_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 73_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 73_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 74_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 74_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 75_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 75_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 76_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 76_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 77_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 77_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 78_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 78_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 79_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 79_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 8_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	5	5	Medium
SL 8_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	5	5	Medium
SL 80_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 80_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 81_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 81_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 82_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 82_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 83_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 83_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 84_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 84_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 85_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 85_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 86_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 86_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 87_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 87_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 88_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 88_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 89_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 89_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 9_F	Street Light Fixture	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$300	20	3	5	Medium
SL 9_P	Street Light Pole	Decorative - Victorian Lantern Post Top Type 1 HPS Lampheight: 14 Location: Underground Metal		\$4,027	30	3	3	Medium
SL 90_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 90_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 91_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 91_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 92_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 92_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 93_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 93_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 94_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 94_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 95_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	4	5	Medium
SL 95_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	4	4	Medium
SL 96_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	5	5	Medium
SL 96_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	5	5	Medium
SL 97_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	3	5	Medium
SL 97_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	3	3	Medium
SL 98_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$300	20	3	5	Medium
SL 98_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Underground Concrete		\$1,304	20	3	3	Medium
SL 99_F	Street Light Fixture	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$300	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SL 99_P	Street Light Pole	Cobrahead HPS Lampheight: 25 Location: Overhead Wood		\$1,304	20	5	5	Medium
12001	Storm Water Management Ponds	Boreham Drive SWM Pond	1999	\$13,860	50	4	4	Medium
12001 - 1	Storm Water Management Ponds	Boreham Drive SWM: Tail Wall	1999	\$2,000	50	4	4	Medium
12001 - 2	Storm Water Management Ponds	Boreham Drive SWM: Pond Enclosure	1999	\$7,860	50	4	4	Medium
12001 - 3	Storm Water Management Ponds	Boreham Drive SWM: Outlet Device (Hicken Bottom)	1999	\$2,000	20	4	4	Medium
12001 - 4	Storm Water Management Ponds	Boreham Drive SWM: Headwall	1999	\$2,000	50	4	4	Medium
12002	Storm Water Management Ponds	Daymond Drive SWM Pond	2005	\$165,756	50	4	4	Medium
12002 - 1	Storm Water Management Ponds	Daymond Drive SWM: Tail Wall	2005	\$2,000	50	4	4	Medium
12002 - 2	Storm Water Management Ponds	Daymond Drive SWM: Pond Enclosure	2005	\$159,756	50	4	4	Medium
12002 - 3	Storm Water Management Ponds	Daymond Drive SWM: Outlet Device (Hicken Bottom)	2005	\$2,000	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12002 - 4	Storm Water Management Ponds	Daymond Drive SWM: Headwall	2005	\$2,000	50	4	4	Medium
12003	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 6	2007	\$258,420	50	4	4	Medium
12003 - 1	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 6: Tail Wall	2007	\$2,000	50	4	4	Medium
12003 - 2	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 6: Pond Enclosure	2007	\$252,420	50	4	4	Medium
12003 - 3	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 6: Outlet Device (Hicken Bottom)	2007	\$2,000	20	4	4	Medium
12003 - 4	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 6: Headwall	2007	\$2,000	50	4	4	Medium
12004	Storm Water Management Ponds	Kerr Crescent SWM Pond	1988	\$150,000	50	1	1	High
12004 - 1	Storm Water Management Ponds	Kerr Crescent SWM: Tail Wall	1988	\$2,000	50	4	4	Medium
12004 - 2	Storm Water Management Ponds	Kerr Crescent SWM: Pond Enclosure	1988	\$144,000	50	4	4	Medium
12004 - 3	Storm Water Management Ponds	Kerr Crescent SWM: Outlet Device (Hicken Bottom)	1988	\$2,000	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12004 - 4	Storm Water Management Ponds	Kerr Crescent SWM: Headwall	1988	\$2,000	50	4	4	Medium
12005	Storm Water Management Ponds	Telfer Glen SWM Pond	1990	\$32,644	50	4	4	Medium
12005 - 1	Storm Water Management Ponds	Telfer Glen SWM Pond: Tail Wall	1990	\$2,000	50	4	4	Medium
12005 - 2	Storm Water Management Ponds	Telfer Glen SWM Pond: Pond Enclosure	1990	\$26,644	50	4	4	Medium
12005 - 3	Storm Water Management Ponds	Telfer Glen SWM Pond: Outlet Device (Hicken Bottom)	1990	\$2,000	20	4	4	Medium
12005 - 4	Storm Water Management Ponds	Telfer Glen SWM Pond: Headwall	1990	\$2,000	50	4	4	Medium
12006	Storm Water Management Ponds	Bridle Path SWM Ponds	1990	\$134,146	50	4	4	Medium
12006 - 1	Storm Water Management Ponds	Bridle Path SWM Ponds: Tail Wall	1990	\$2,000	50	4	4	Medium
12006 - 2	Storm Water Management Ponds	Bridle Path SWM Ponds: Pond Enclosure	1990	\$128,146	50	4	4	Medium
12006 - 3	Storm Water Management Ponds	Bridle Path SWM Ponds: Outlet Device (Hicken Bottom)	1990	\$2,000	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12006 - 4	Storm Water Management Ponds	Bridle Path SWM Ponds: Headwall	1990	\$2,000	50	4	4	Medium
12007	Storm Water Management Ponds	Carriage Lane SWM Pond	2000	\$85,488	50	1	1	High
12007 - 1	Storm Water Management Ponds	Carriage Lane SWM: Tail Wall	2000	\$2,000	50	4	4	Medium
12007 - 2	Storm Water Management Ponds	Carriage Lane SWM: Pond Enclosure	2000	\$79,488	50	4	4	Medium
12007 - 3	Storm Water Management Ponds	Carriage Lane SWM: Outlet Device (Hicken Bottom)	2000	\$2,000	20	4	4	Medium
12007 - 4	Storm Water Management Ponds	Carriage Lane SWM: Headwall	2000	\$2,000	50	4	4	Medium
12008	Storm Water Management Ponds	Aberfoyle Business Park SWM Pond Block 3	1995	\$73,227	50	5	5	Medium
12008 - 1	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 3: Tail Wall	1995	\$2,000	50	5	5	Medium
12008 - 2	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 3: Pond Enclosure	1995	\$67,227	50	5	5	Medium
12008 - 3	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 3: Outlet Device (Hicken Bottom)	1995	\$2,000	20	5	5	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12008 - 4	Storm Water Management Ponds	Aberfoyle Business Park SWM Block 3: Headwall	1995	\$2,000	50	5	5	Medium
12009	Storm Water Management Ponds	Carroll Pond Cell 1 Pond	2011	\$9,262	50	4	4	Medium
12009 - 1	Storm Water Management Ponds	Carroll Pond Cell 1: Tail Wall	2011	\$2,000	50	4	4	Medium
12009 - 2	Storm Water Management Ponds	Carroll Pond Cell 1:Pond Enclosure	2011	\$3,262	50	4	4	Medium
12009 - 3	Storm Water Management Ponds	Carroll Pond Cell 1: Outlet Device (Hicken Bottom)	2011	\$2,000	20	4	4	Medium
12009 - 4	Storm Water Management Ponds	Carroll Pond Cell 1: Headwall	2011	\$2,000	50	4	4	Medium
12010	Storm Water Management Ponds	Carroll Pond Cell 2 Pond	2010	\$8,870	50	4	4	Medium
12010 - 1	Storm Water Management Ponds	Carroll Pond Cell 2: Tail Wall	2010	\$2,000	50	4	4	Medium
12010 - 2	Storm Water Management Ponds	Carroll Pond Cell 2: Pond Enclosure	2010	\$2,870	50	4	4	Medium
12010 - 3	Storm Water Management Ponds	Carroll Pond Cell 2: Outlet Device (Hicken Bottom)	2010	\$2,000	20	4	4	Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12010 - 4	Storm Water Management Ponds	Carroll Pond Cell 2: Headwall	2010	\$2,000	50	4	4	Medium
12011	Storm Water Management Ponds	Carroll Pond Cell 3 Pond	2010	\$4,435	50	4	4	Medium
12011 - 1	Storm Water Management Ponds	Carroll Pond Cell 3: Tail Wall	2010	\$2,000	50	4	4	Medium
12011 - 2	Storm Water Management Ponds	Carroll Pond Cell 3: Pond Enclosure	2010	-\$1,565	50	4	4	Medium
12011 - 3	Storm Water Management Ponds	Carroll Pond Cell 3: Outlet Device (Hicken Bottom)	2010	\$2,000	20	4	4	Medium
12011 - 4	Storm Water Management Ponds	Carroll Pond Cell 3: Headwall	2010	\$2,000	50	4	4	Medium
12012	Storm Water Management Ponds	Fox Run Drive SWM Pond 2		\$165,756	50	3	3	High
12012 - 1	Storm Water Management Ponds	Fox Run Drive SWM 2: Tail Wall		\$2,000	50	3	3	High
12012 - 2	Storm Water Management Ponds	Fox Run Drive SWM 2: Pond Enclosure		\$159,756	50	3	3	High
12012 - 3	Storm Water Management Ponds	Fox Run Drive SWM 2: Outlet Device (Hicken Bottom)		\$2,000	20	3	3	High

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12012 - 4	Storm Water Management Ponds	Fox Run Drive SWM 2: Headwall		\$2,000	50	3	3	High
12013	Storm Water Management Ponds	Fox Run Drive SWM Pond 1		\$165,000	50	1	1	High
12013 - 1	Storm Water Management Ponds	Fox Run Drive SWM 1: Tail Wall		\$2,000	50	1	1	High
12013 - 2	Storm Water Management Ponds	Fox Run Drive SWM 1: Pond Enclosure		\$159,000	50	1	1	High
12013 - 3	Storm Water Management Ponds	Fox Run Drive SWM 1: Outlet Device (Hicken Bottom)		\$2,000	20	1	1	High
12013 - 4	Storm Water Management Ponds	Fox Run Drive SWM 1: Headwall		\$2,000	50	1	1	High
12014	Storm Water Management Ponds	Morrison Pond		\$12,418	50	3	3	High
12014 - 1	Storm Water Management Ponds	Morrison Pond: Tail Wall		\$2,000	50	3	3	High
12014 - 2	Storm Water Management Ponds	Morrison Pond: Pond Enclosure		\$6,418	50	3	3	High
12014 - 3	Storm Water Management Ponds	Morrison Pond: Outlet Device (Hicken Bottom)		\$2,000	20	3	3	High



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12014 - 4	Storm Water Management Ponds	Morrison Pond: Headwall		\$2,000	50	3	3	High
12015	Storm Water Management Ponds	Morrison Park Estates Pond		\$165,756	50	3	3	High
12015 - 1	Storm Water Management Ponds	Morrison Estates Park Pond: Tail Wall		\$2,000	50	3	3	High
12015 - 2	Storm Water Management Ponds	Morrison Park Estates Pond: Pond Enclosure		\$159,756	50	3	3	High
12015 - 3	Storm Water Management Ponds	Morrison Park Estates Pond: Outlet Device (Hicken Bottom)		\$2,000	20	3	3	High
12015 - 4	Storm Water Management Ponds	Morrison Park Estates Pond: Headwall		\$2,000	50	3	3	High
12016	Storm Water Management Ponds	Audrey Meadows SWM Pond			50			
12016 - 1	Storm Water Management Ponds	Audrey Meadows SWM: Tail Wall			50			
12016 - 2	Storm Water Management Ponds	Audrey Meadows SWM: Pond Enclosure			50			
12016 - 3	Storm Water Management Ponds	Audrey Meadows SWM: Outlet Device (Hicken Bottom)			20			

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
12016 - 4	Storm Water Management Ponds	Audrey Meadows SWM: Headwall			50			
12017	Storm Water Management Ponds	Whitcombe Way (DRS) SWM Pond			50			
12017 - 1	Storm Water Management Ponds	Whitcombe Way (DRS) SWM: Tail Wall			50			
12017 - 2	Storm Water Management Ponds	Whitcombe Way (DRS) SWM: Enclosure			50			
12017 - 3	Storm Water Management Ponds	Whitcombe Way (DRS) SWM:Outlet Device (Hicken Bottom)			20			
12017 - 4	Storm Water Management Ponds	Whitcombe Way (DRS) SWM: Headwall			50			
1_SWI_202_SURFACE	Storm Sewer Inlet	Cassin Court Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
1_SWI_27B	Storm Sewer Inlet	Fox Run Drive Storm Sewer Storm Sewer Inlet	2016	\$3,724	50			Medium
1_SWO_20_2_SURFACE	Storm Sewer Outflow	Cassin Court Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium
1_SWO_27_B	Storm Sewer Outflow	Fox Run Drive Storm Sewer Storm Sewer Outflow	2016	\$5,000	50			Medium
1_SWI_203_SURFACE	Storm Sewer Inlet	Daymond Drive Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
1_SWO_20_3_SURFACE	Storm Sewer Outflow	Daymond Drive Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
2_SWI_203_SURFACE	Storm Sewer Inlet	Daymond Drive Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
2_SWO_203_SURFACE	Storm Sewer Outflow	Daymond Drive Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium
3_SWI_203_SURFACE	Storm Sewer Inlet	Daymond Drive Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
3_SWO_203_SURFACE	Storm Sewer Outflow	Daymond Drive Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium
15_SWI_205	Storm Sewer Inlet	Fox Run Drive Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
15_SWO_205	Storm Sewer Outflow	Fox Run Drive Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
16_SWI_205	Storm Sewer Inlet	Fox Run Drive Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
16_SWO_205	Storm Sewer Outflow	Fox Run Drive Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
17_SWI_206	Storm Sewer Inlet	Fox Run Drive Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
17_SWO_206	Storm Sewer Outflow	Fox Run Drive Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
18_SWI_201_SURFACE	Storm Sewer Inlet	Carriage Lane Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
18_SWO_201_SURFACE	Storm Sewer Outflow	Carriage Lane Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
19_SWI_201_SURFACE	Storm Sewer Inlet	Carriage Lane Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
19_SWO_201_SURFACE	Storm Sewer Outflow	Carriage Lane Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
2_SWI_202_SURFACE	Storm Sewer Inlet	Cassin Court Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
2_SWO_202_SURFACE	Storm Sewer Outflow	Cassin Court Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium
20_SWI_201_SURFACE	Storm Sewer Inlet	Carriage Lane Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
20_SWO_201_SURFACE	Storm Sewer Outflow	Carriage Lane Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
21_SWI_201_SURFACE	Storm Sewer Inlet	Carriage Lane Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
21_SWO_201_SURFACE	Storm Sewer Outflow	Carriage Lane Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
22_SWI_201_SURFACE	Storm Sewer Inlet	Carriage Lane Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
22_SWO_201_SURFACE	Storm Sewer Outflow	Carriage Lane Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
23_SWI_201_SURFACE	Storm Sewer Inlet	Carriage Lane Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
23_SWO_201_SURFACE	Storm Sewer Outflow	Carriage Lane Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
24_SWI_201_SURFACE	Storm Sewer Inlet	Carriage Lane Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
24_SWO_201_SURFACE	Storm Sewer Outflow	Carriage Lane Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
25_SWI_204_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
25_SWO_204_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
26_SWI_204_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
26_SWO_204_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
27_SWI_204_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
27_SWO_204_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
28_SWI_204_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
28_SWO_204_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
29_SWI_204_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
29_SWO_204_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
3_SWI_202_SURFACE	Storm Sewer Inlet	Cassin Court Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
3_SWO_202_SURFACE	Storm Sewer Outflow	Cassin Court Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
30_SWI_204_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
30_SWO_204_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
31_SWI_204_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
31_SWO_204_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
32_SWI_185_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
32_SWO_185_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
33_SWI_185_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
33_SWO_185_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
34_SWI_185_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
34_SWO_185_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
35_SWI_185_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
35_SWO_185_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
36_SWI_51_SURFACE	Storm Sewer Inlet	Old Brock Road Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
36_SWO_51_SURFACE	Storm Sewer Outflow	Old Brock Road Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
37_SWI_51_SURFACE	Storm Sewer Inlet	Old Brock Road Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
37_SWO_51_SURFACE	Storm Sewer Outflow	Old Brock Road Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
38_SWI_51_SURFACE	Storm Sewer Inlet	Old Brock Road Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
38_SWO_51_SURFACE	Storm Sewer Outflow	Old Brock Road Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
39_SWI_50_SURFACE	Storm Sewer Inlet	Cockburn Street Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
39_SWO_50_SURFACE	Storm Sewer Outflow	Cockburn Street Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
40_SWI_46_SURFACE	Storm Sewer Inlet	Gilmour Road Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
40_SWO_46_SURFACE	Storm Sewer Outflow	Gilmour Road Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium
41_SWI_46_SURFACE	Storm Sewer Inlet	Gilmour Road Storm Sewer Storm Sewer Inlet	2007	\$3,724	50			Medium
41_SWO_46_SURFACE	Storm Sewer Outflow	Gilmour Road Storm Sewer Storm Sewer Outflow	2007	\$5,000	50			Medium
42_SWI_28_SURFACE	Storm Sewer Inlet	Victoria Street And Church Street Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
42_SWO_28_SURFACE	Storm Sewer Outflow	Victoria Street And Church Street Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
43_SWI_28_SURFACE	Storm Sewer Inlet	Victoria Street And Church Street Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
43_SWO_28_SURFACE	Storm Sewer Outflow	Victoria Street And Church Street Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
44_SWI_28_SURFACE	Storm Sewer Inlet	Victoria Street And Church Street Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
44_SWO_28_SURFACE	Storm Sewer Outflow	Victoria Street And Church Street Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
45_SWI_28_SURFACE	Storm Sewer Inlet	Victoria Street And Church Street Storm Sewer Storm Sewer Inlet	2000	\$3,724	50			Medium
45_SWO_28_SURFACE	Storm Sewer Outflow	Victoria Street And Church Street Storm Sewer Storm Sewer Outflow	2000	\$5,000	50			Medium
36_SWI_185_SURFACE	Storm Sewer Inlet	Bridle Path Storm Sewer Storm Sewer Inlet	1990	\$3,724	50			Medium
36_SWO_185_SURFACE	Storm Sewer Outflow	Bridle Path Storm Sewer Storm Sewer Outflow	1990	\$5,000	50			Medium
SW_185_SURFACE	Storm Sewer	Bridle Path Storm Sewer	1990	\$59,269	50			Medium
SW_201_SURFACE	Storm Sewer	Carriage Lane Storm Sewer	2000	\$104,428	50			Medium
SW_202_SURFACE	Storm Sewer	Cassin Court Storm Sewer	2007	\$13,487	50			Medium
SW_203_SURFACE	Storm Sewer	Daymond Drive Storm Sewer	2007	\$31,584	50			Medium
SW_204_SURFACE	Storm Sewer	Bridle Path Storm Sewer	1990	\$175,848	50			Medium
SW_205	Storm Sewer	Fox Run Drive Storm Sewer	2000	\$34,422	50			Medium
SW_206	Storm Sewer	Fox Run Drive Storm Sewer	2000	\$18,565	50			Medium
SW_27B	Storm Sewer	Calfass Road Storm Sewer	2016	\$13,144	50			Medium
SW_28_SURFACE	Storm Sewer	Victoria Street And Church Street Storm Sewer	2000	\$28,406	50			Medium



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
SW_46_SURFACE	Storm Sewer	Gilmour Road Storm Sewer	2007	\$36,873	50			Medium
SW_50_SURFACE	Storm Sewer	Cockburn Street Storm Sewer	2000	\$18,328	50			Medium
SW_51_SURFACE	Storm Sewer	Old Brock Road Storm Sewer	2000	\$407,604	50			Medium
SWI_182_SURFACE	Storm Sewer	Ikonkar Place - Morriston Estates Storm Sewer						
SWI_188_SURFACE	Storm Sewer	Whitcombe Way Storm Sewer						
SWO_182_SURFACE	Storm Sewer	Ikonkar Place - Morriston Estates Storm Sewer						
SWO_188_SURFACE	Storm Sewer	Whitcombe Way Storm Sewer						
1__BP_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
1_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
1_ST_Flamme	StreetTree	Morrison Flame	2016	\$624	50			Low
1_ST_Locust	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
1_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
1_ST_QM	StreetTree	Morrison Quercus macrocarpa	2016	\$724	50			Low
1_ST_Spruce	StreetTree	Carriage Lane Spruce	2003	\$354	50			Low

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
10_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
10_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
10_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
10_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
11_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
11_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
11_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
11_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
12_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
12_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
12_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
12_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
13_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
13_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
13_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
13_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
14_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
14_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
14_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
14_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
15_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
15_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
15_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
15_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
16_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
16_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
16_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
16_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
17_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
17_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
17_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
17_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
18_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
18_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
18_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
18_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
19_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
19_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
19_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
19_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
2_BP_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
2_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
2_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
2_ST_Locust	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
2_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
2_ST_QM	StreetTree	Morrison Quercus macrocarpa	2016	\$724	50			Low
2_ST_Spruce	StreetTree	Carriage Lane Spruce	2003	\$354	50			Low
20_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
20_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
20_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
20_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
21_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
21_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
21_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
21_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
22_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
22_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
22_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
23_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
23_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
23_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
24_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
24_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
24_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
25_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
25_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
26_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
26_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
27_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
27_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
28_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
28_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
29_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
29_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
3_BP_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
3_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
3_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
3_ST_Locust	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
3_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
3_ST_QM	StreetTree	Morrison Quercus macrocarpa	2016	\$724	50			Low
3_ST_Spruce	StreetTree	Carriage Lane Spruce	2003	\$354	50			Low
30_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
31_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
32_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
4_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
4_ST_Flame	StreetTree	Morrison Flame	2016	\$624	50			Low
4_ST_Locust	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
4_ST_Picea_Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
4_ST_QM	StreetTree	Morrison Quercus macrocarpa	2016	\$724	50			Low
4_ST_Spruce	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
5_ST_AutumnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low

Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
5_ST_Flam e	StreetTree	Morrison Flame	2016	\$624	50			Low
5_ST_Locus t	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
5_ST_Picea _Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
5_ST_Spruc e	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
6_ST_Autu mnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
6_ST_Flam e	StreetTree	Morrison Flame	2016	\$624	50			Low
6_ST_Locus t	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
6_ST_Picea _Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
6_ST_Spruc e	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
7_ST_Autu mnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
7_ST_Flam e	StreetTree	Morrison Flame	2016	\$624	50			Low
7_ST_Locus t	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
7_ST_Picea _Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
7_ST_Spruc e	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
8_ST_Autu mnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low



Asset #	Asset Class	Description	Acquisition Date	Replacement Cost	L.E	Condition Index	Condition	Risk
8_ST_Flam e	StreetTree	Morrison Flame	2016	\$624	50			Low
8_ST_Locus t	StreetTree	Fox Run Drive Locust	1993	\$354	50			Low
8_ST_Picea _Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
8_ST_Spruc e	StreetTree	Bridal Path Spruce	1998	\$354	50			Low
9_ST_Autu mnB	StreetTree	Morrison Autumn Brilliance	2016	\$624	50			Low
9_ST_Flam e	StreetTree	Morrison Flame	2016	\$624	50			Low
9_ST_Picea _Pung	StreetTree	Morrison Picea Pungens	2016	\$449	50			Low
9_ST_Spruc e	StreetTree	Bridal Path Spruce	1998	\$354	50			Low

## 20.6 Comments from the Public

-----Original Message-----

From: Allan Gregg [REDACTED]

Sent: Wednesday, February 6, 2019 11:54 AM

[REDACTED]  
[REDACTED]  
Subject: Township of Puslinch Asset Management Plan - Allan Comments

Good morning

Thank you for hosting the Public meeting last night. Compliments to You Mayor Seeley for setting and enforcing the way the meeting was to run. Thanks Jessica for the heads up about the meeting and Mathew for your follow up note.

It appeared that Gravel Roads has a separate project being considered at the direction of Council so I did not continue to question the Consultants last night.

However, I would like to restate my concerns with the proposed Puslinch Asset Management document as presented last night;

- \* It appears that certain assumptions were made regarding gravel roads
  - o "As per the proposed service level policy all gravel roads have been assumed to have a PCL score of 90. This assumption is based strictly off staff understanding of the gravel surface" See 6.11 (Attached)
- \* It appears that "the Township does NOT have a formal policy for documenting gravel road condition" See 6.10 (Attached)
- \* It appears that Gravel Roads are deemed to be Good. See 7.4 Page 65 66 70 (Attached)
- \* It appears that Carter Road has a "Acquisition date 2003, Replacement Year 2034, Replacement cost 328113.2899, Condition 4 with Risk High" see page 276 (Attached)

This data and lack of data along with the conditions of gravel roads in the Township leads me to believe that the value and the condition of the Gravel Roads in the document is over stated. If correct then the cost to the Township to bring the roads up to the stated value will cost the township more money and a need to restate the financials in the Puslinch Asset Management document as presented last night.

Further I have concerns with the UEM Proposed Level of Service: Gravel Roads See 5.2 (Attached) 1. With the lack of data, as stated by Consultant Wayne Wood, setting the criteria for consideration of "surface treatment including asphalt and/or reconstruction" is not based on facts 2. No other UEM Proposed Level of Service of Policy has the mandate of "if all of the following criteria are met"

It appears that the UEM Proposed Level of Service for Gravel Roads is written to be very restrictive to limit the Township to entertain surfacing gravel road. I would suggest that the criteria be removed from the proposal at this time. Pending the results of the Gravel Roads Project set by Council the criteria should be set at a later date.

Here are my requests;

Please

- \* Comment on my concerns
- \* Pass on this document to other council members
- \* Clarify what "Acquisition date 2003" for Carter Road means on page 276
- \* Add my comments to the Public Meeting recorded notes
- \* When completed please send me the Public Meeting notes
- \* Advise when the completed report will be ready for review and when it will go to council for final approval.
- \* Advise how I would get the details (Mandate, scope and timelines etc.) on the Mayor referenced Gravel Road Council directed project

In addition am I to email with Township Staff rather than You - not sure of the protocol- please advise.

Thank You.

Gregg

## R.E Puslinch Asset Management Plan

Mr. Gregg Allan,

Please accept this letter as a response to your email of February 6<sup>th</sup>, 2019 in regard to the Township of Puslinch Asset Management Plan. We appreciate your comments, and initially want to indicate that your email has been placed into the report documenting the plan as part of appendix 20.6 of the Asset Management Plan.

As part of the project the UEM Team was required to draft service level policies for infrastructure that is the responsibility of the Township. The UEM Team reviewed gravel roads, and any activities used to maintain Gravel Roads by the Township. It was determined that there was not a documented policy nor records in regard to how Gravel Roads are to be maintained, nor how reconstruction of such roads including improvements to the surface are reported to Council.

Therefore, the UEM Team was required to develop a service level policy for Gravel Roads. The UEM Team was requested by staff of Puslinch to initiate discussions with municipalities in the County of Wellington and to review of what other road authorities have adopted as policies relating to the maintenance and improvement of gravel roads. All Municipalities in the County were contacted, and it was established that the Municipalities had not established formalized policies associated with maintaining or upgrading the surface of gravel roads. In addition, informal discussions occurred with members of the Ontario Good Roads Association (OGRA). A data review of road authorities in the United States was undertaken by the UEM Team and based upon all of the above the UEM Team established that the primary indicators for improving the surface of a gravel road is volume of traffic and budget limitations. The concept of volume of traffic was integrated into the service level policy for gravel roads for Puslinch that is a component of the Asset Management Plan.

In regard to your email the Township undertakes a Pavement Condition Index Study that documents condition and needed improvements. However, in the past gravel roads were excluded from this pavement condition study. As result, the UEM Team recommended that in the next Pavement Condition Index Study gravel roads be included as a component to determine needed improvements including the application of a hard surface. The study should include a review of a number of factors to determine the need for applying a hard surface versus complete reconstruction. Such factors such as granular thickness, presence of contaminants in the granular, presence of organic material and adequacy of underlying soil should be considered as part of the study.

You are correct in that assumption that gravel roads were classified as “Good”. Because of the lack of data in regard to gravel roads, a recommendation in the report was to document gravel road maintenance activities in a tabular format to be stored in the Asset Registry. It is recognized that Township staff inspect gravel roads and grade such roads as required and documenting such activities will then allow a direct comparison to the recommended gravel road service level policy in part to be a factor in presenting recommendations to Council in regard to road improvements.

Replacement costs project total reconstruction and not limited to surface treatment or the application of asphalt. This is a conservative methodology and can be modified in the future once the next pavement condition index study is completed.

## THE TOWNSHIP OF PUSLINCH ASSET MANAGEMENT PLAN

In regard to Carter Road, the acquisition date of 2003 was sourced from the 2013 Asset Management Plan. The replacement year of 2034 was based upon a linear depreciation rate of 2 PCI points per year. The Risk associated with Carter Road has been developed from a risk profile explained in detail in the Asset Management Plan and inputted into the Asset Registry. The risk is consistent for all gravel roads but increased or decreased depending on the condition of the surface of the gravel road.

Asset Management Plans in general were never intended to be static documents. Such plans are “living plans” in that Asset Management Plans should be updated at least annually to reflect updated data.

Council at its meeting held on January 30, 2019 passed Council Resolution No. 2019-060 to continue the gravel roads study in 2019 as outlined below:

*WHEREAS the Township has approximately 200km of paved roads and 50km of unpaved roads;*

*AND WHEREAS road works are a significant portion of the Capital Budget and it is highly desirable to reduce these costs;*

*AND WHEREAS new technologies are available for extending the life of paved roads and which are being used by various municipalities in Ontario;*

*AND WHEREAS it is desirable to pave unpaved roads with appropriate pavement;*

*NOW THEREFORE that staff obtain a funding estimate from an Engineering company to produce a report to:*

- 1. Identify an appropriate and cost-effective method of extending the life of paved roads;*
- 2. Develop criteria to prioritize the paving of unpaved roads, including the trigger points/ criteria suggested by the asset management plan; as well as impact to the area residents;*
- 3. Identifying an appropriate and cost-effective pavements (such as tar and chip) to be used for unpaved roads;*
- 4. Developing a listing and schedule for the paving of unpaved roads.*

*And that these costs be identified at the earliest opportunity for inclusion in the Capital Budget, with a commitment to pave the roads at the earliest opportunity.*

Staff are presently in discussions with a consultant to produce such a report that would result in improved data that could be Inputted into the Asset Registry.

The Asset Management Plan including service level policies will be presented to Council on April 17<sup>th</sup>, 2019. The document is available at the Township website at [www.puslinch.ca](http://www.puslinch.ca).

Sincerely,

Wayne Wood P. Eng





## THE TOWNSHIP OF PUSLINCH ASSET MANAGEMENT PLAN

From: Margaret Hauwert [REDACTED]

Sent: Thursday, February 7, 2019 11:20 AM

To: Nina Lecic [REDACTED]

Subject: budget

Questions for capital budget

1. Why are the roads in such poor shape all of a sudden, have they not been properly maintained over the last couple years?
2. I do not want the township to borrow any money?
3. Has council looked into how many firefighters do we have and is it too much?
4. Has council looked into how many people are on the payroll and maybe it is too much?

These are some of my concerns after looking at recommendations by the asset manager presentation.

Margaret Hauwert  
[REDACTED]