ASSET MANAGEMENT PLAN

Township of Uxbridge

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HEMSON

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EXECUTIVE SUMMARY

The following summarizes the findings of the Township of Uxbridge Asset Management Plan (2017 Plan) as it relates to the Township's non-linear public works assets not completed under the independent engineered Asset Management Plans prepared (2015-2016 Plans). However, the results of the 2015-2016 Plans, as they relate to the Township's public works linear assets, have been incorporated into the State of the Local Infrastructure and Financing Strategy summary pages to provide a complete overview. Infrastructure in Uxbridge for which the Region of Durham is responsible – Regional roads, social housing, water and wastewater services for example, is not included. All figures are in current 2017$ and should be adjusted annually to account for the effects of inflation.

The 2017 Plan follows the format set out in the *Building Together: Guide for Municipal Asset Management Plans* document released by the Ontario Ministry of Infrastructure.

A. STATE OF THE LOCAL INFRASTRUCTURE

- The Township's infrastructure has a total replacement value of $410.3 million.
    - Public works linear assets represent the majority of Township infrastructure, amounting to $341.6 million; and
    - The remaining tax supported assets represent $68.7 million.
- Overall, a high proportion (about 68% or $279.2 million) of total Township assets, are considered to be in "Good" to "Very Good" condition. However, just under 20% ($78.2 million) of infrastructure is considered to be in "Poor" to "Very Poor" condition.
    - It should be noted that nearly 75% ($58.2 million) of the "Poor" to "Very Poor" condition assets are related to Township's roads.

B. LEVEL OF SERVICE

- Current service levels in Uxbridge have been developed based on a combination of internal asset management practices, community expectations, statutory requirements, and industry operation and safety standards;

- The Township has in the past been responsive to infrastructure repair needs to address immediate environmental or health risks and to infrastructure needs for new development; and

- The Township measures the level of services it provides using a number of key performance indicators. Service levels have remained relatively constant and in some cases are anticipated to increase moving forward.

C. ASSET MANAGEMENT STRATEGY

- The Township employs several actions to maintain assets in a state of good repair and to ensure that assets continue to be in service for their full life cycle, and in many cases, beyond the expected design life.

- The Township of Uxbridge currently has a corporate by-law for procurement. The Purchasing of Goods and Services by-law ensures openness, accountability and transparency of Township purchasing while protecting the financial best interest of the Township of Uxbridge.

D. FINANCING STRATEGY

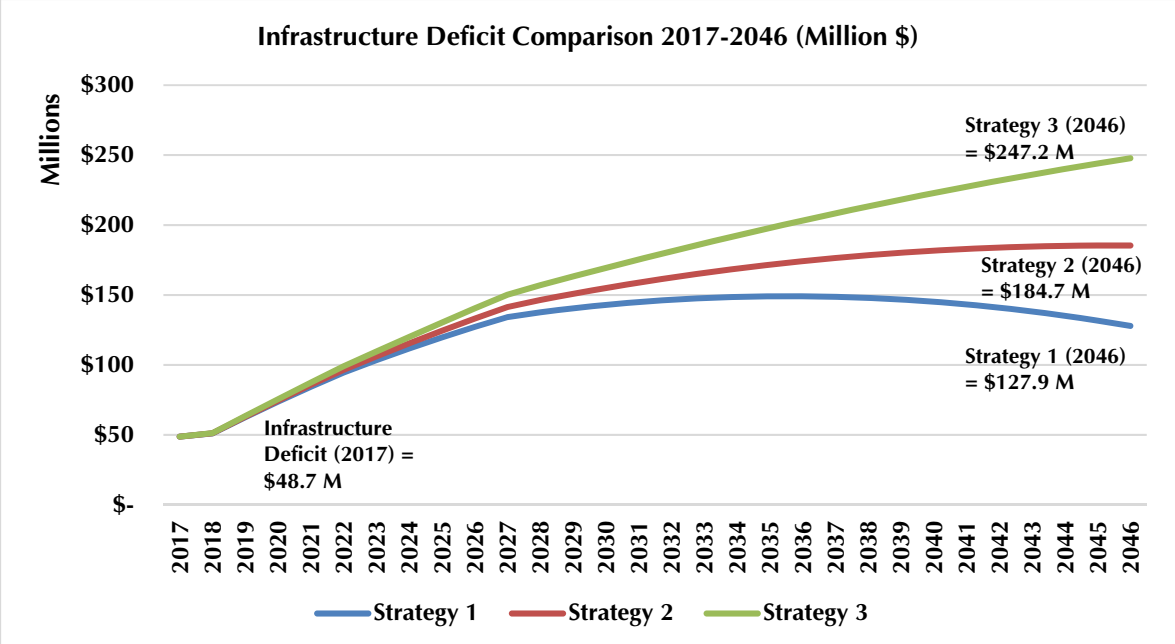
- The current 2016 infrastructure deficit for all tax supported assets is calculated to be about $48.7 million. This represents the difference between the required in-year contributions to capital and the current contributions to capital for both the assets in this 2017 Plan and the tax supported public works linear assets included in the 2015-2016 Plans.

- It is unrealistic in the current fiscal context to expect the Township to fully address the infrastructure deficit in the short-medium term;

- Three financing strategies were developed to determine what capital contributions would be required to meet asset replacement needs (Note: in any given year, actual capital expenditures may be greater or less than the noted capital contributions as reserves are assumed to accommodate variances between the contributions and actual expenditures);

Summary of Financing Strategies	
Financing Strategy	**Strategy Parameters**
Strategy 1 **Close in-year Funding Gap by 2036**	• Increase annual capital contributions by approximately $365,000 per year. • For 2018, the increase would be in addition to the $2.26 million tax supported capital funding and the $260,280 special capital levy outlined in the 2017 budget. • The yearly revenue requirement is equivalent to 3.1% of the Township's 2017 tax levy revenue.
Strategy 2 **Close in-year Funding Gap by 2046**	• Increase in annual capital contributions amount to approximately $235,000 per year. • For 2018, the increase would be in addition to the $2.26 million tax supported capital funding and the $260,280 special capital levy outlined in the 2017 budget. • The yearly revenue requirement is equivalent to a 2.0% of the Township's 2017 tax levy revenue.
Strategy 3 **Increase capital funding by 3% each year**	• Tax supported capital funding is increased at a rate of 3% each year • No significant changes in annual capital funding.

- Of the three financing strategies identified, strategy 3 poses the greatest risk to the organization as the infrastructure deficit continues to grow to 2046, and beyond. Strategies 1 and 2 demonstrate the infrastructure deficit being controlled over the planning period.



E. KEY FINDINGS AND RECOMMENDATIONS

The key report findings and asset management recommendations the Township should consider moving forward are identified below:

1. Key Findings

- The Township's asset base is extensive, valued at $410.3 million, in relation to the census population of about 21,200 persons.

- Overall, a high proportion (about 68% or $279.2 million) of Township assets are considered to be in "Good" to "Very Good" condition. At the same time, just under 20% ($78.2 million) of infrastructure is considered to be in "Poor" to "Very Poor" condition.

    - Nearly 75% of the "Poor" to "Very Poor" condition assets are related to the Township's roads.

- The Township of Uxbridge has made considerable effort in recent years to address the infrastructure gap and improve the condition of assets:

    - Implementation of a special capital levy to address capital infrastructure requirements;

    - The Township has created an asset preservation reserve, which annual contributions to this reserve have been regularly increased in recent years;

    - Gravel Road royalties received are directed to capital repair and replacement activities;

    - Through its annual capital budgeting process, the Township addresses critical issues and assets in need for repair or replacement; and

    - Overall, the Township has some reserves available to fund capital projects.

- The responsibility to maintain existing infrastructure is challenging, however, in addition to current capital funding, the Township should increase annual capital contributions to address current and future infrastructure requirements;

    - Property taxes are the most secure form of revenue and the Township should consider increasing tax base revenues, above current practices, to fund capital works;

    - Ensure user fees are being utilized to the full extent as allowed under provincial legislation. This will help alleviate funding pressures from the

tax base and allow for greater flexibility to fund capital asset repair and replacement activities; and

- Explore alternative arrangements to provide services – public private partnerships or shared services.

- The Township is considered to be in good fiscal standing with strong budgetary performance and no external debt - the Township currently operates well below the annual repayment limit of $3.8 million in total net debt charges. The Township has internally financed a few large projects (Arena and Library upgrades) by borrowing funds from the Township's Future Capital Projects Reserve, with funds to be repaid back to the reserve over future periods. This debt capacity could allow the Township to use debt to carry out emergency asset replacements, improvements, or other strategic projects which typically provide a return on investment such as reduction in operating costs.

- The Township should continue to seek funding from the federal and provincial government (when available) to undertake capital related works.

2. Continue to Improve Capital Development Planning Process

- The Township employs a multi-year capital budget and forecasts for all services based on a 10 year forecast horizon.

- In addition to the Township's current capital budget and forecast funding descriptions, each capital project should also include:

  - long-term costs, including operations, maintenance, and asset rehabilitation costs;
  - capacity to deliver; and
  - alternative service delivery and procurement options.

- A range of quantifiable service level targets that incorporate the quantity and quality of capital assets should be established for all services. Targets should be measured, reported on, and adjusted annually.

- Repair and replacement capital works should be prioritized based on asset condition ratings. For example, assets identified as "Very Poor" and "Poor" can be considered for immediate attention for many non-linear public works assets.

  - Advanced capital prioritization processes include the use of a risk matrix to assist in determining annual capital spending.
  - Continue to practice regular maintenance activities for Public Works linear assets (resurfacing, crack sealing, etc.) to prevent these assets from getting to the Now needs state as indicated in the 2015-2016 Plans.

- Infrastructure assets which have been provided a "Fair" condition rating should be targeted for maintenance to ensure they continue to perform at the expected level.

- The Township should, where possible, coordinate the construction of new (growth-related) infrastructure with infrastructure repairs and replacement to achieve cost efficiencies.

3. Ensure Asset Inventories are Updated Regularly

- The Township should establish an asset management internal network including department heads from the Chief Administrator's Office, Treasury, Arena and Parks, Recreation Programs and Culture, Planning, Fire Services, Library, Public Works and Operations. The internal network can be lead by the Treasurer as the champion of the non-linear assets and by the Director of Public Works as the champion of linear Public Works assets.

- Sound asset management decisions are only possible if information in the asset registry is accurate. The Township's designated asset management champion should regularly update the registry to account for asset purchases, upgrades and replacements, as well as asset condition ratings and information on useful life;

- The Township should continue to update and refine the condition assessments for all assets considered under this 2017 Plan;

- The Township should update this Asset Management Plan at a minimum every 3-5 years.

4. Optimize the Use of Existing Assets

- The Township should implement a range of engineering and non-engineering approaches to extend the useful life of current assets. A number of municipalities in Ontario have had success in this regard by:

    - Regular and ongoing maintenance work;

    - Daily vehicle and equipment inspections; and

    - Substituting retrofitting and rehabilitation work for (more costly) full replacement of an asset.

- The Township should explore opportunities to dispose under utilized infrastructure/facilities which may not warrant repair/replacement. For example, underutilized Township halls, or surplus land/parks, could be disposed and sold; and

- Coordinate assets into specific hubs to create operating and capital repair/maintenance efficiencies where possible. Example: Sport fields into centralized areas (e.g. Fields of Uxbridge).

I INTRODUCTION

The 2017 Asset Management Plan (2017 Plan) builds on the independent engineered Asset Management Plans completed for the Townships public works linear assets of roads, bridges, culverts, sidewalks, streetlights and stormwater ponds (2015-2016 Plans). The 2017 Plan covers the remaining non-linear public work assets of buildings, land improvements, vehicles, machinery and equipment, computer equipment & software and the Township's pumping station. The 2017 Plan follows the format set out by the Ministry of Infrastructure through the *Building Together: Guide for Municipal Asset Management Plans*. All figures reported in this 2017 Plan are in constant $2017 and therefore should be adjusted annually to account for the effects of inflation.

A. ASSET MANAGEMENT OVERVIEW

Well-managed public infrastructure is vital to the prosperity and quality of life of communities. Given the range and scope of services provided, Ontario municipalities have a special responsibility in ensuring that infrastructure is planned, built, and maintained in a sustainable way. A detailed asset management plan is essential to carry out this responsibility. Asset management has several benefits, including:

- Can make informed and traceable decisions;
- Risks are managed where necessary and in advance so the Township has the opportunity to coordinate accordingly;
- Higher customer satisfaction;
- Documents funding plan and strategy to manage infrastructure; and
- Demonstrates compliance with regulations and legislation.

Asset management is an ongoing practice in the Township of Uxbridge. Council and staff have applied sound asset management principles to maintain records on tangible capital assets, monitor asset performance, and plan for infrastructure acquisition, repair, rehabilitation, and replacement over the long-term.

The purpose of the 2017 Plan is to build on existing practices by identifying how best to manage Township infrastructure over the planning period to 2046. A strategy for maintaining infrastructure so that desired service levels are achieved is an important element. In this respect, the 2017 Plan has been prepared with reference to the Township's economic development strategic plan, The Vibrant North Durham

Economic Development Plan 2013-2018 and the North Durham Integrated Community Sustainability Plan. Ultimately, the Asset Management Plan will provide Council with information that can guide sustainable infrastructure investment decisions.

B. ASSETS INCLUDED IN THIS PLAN

The 2017 Plan addresses the remaining non-linear public works related assets the Township owns and operates, including; buildings, land improvements, vehicles, machinery and equipment and computer equipment & software in addition to the Township's pumping station. The 2017 Plan builds on the 2015-2016 Plans prepared for roads, bridges, culverts, sidewalks, streetlights and stormwater ponds. It should be noted that:

- Section II: State of the Local Infrastructure of this 2017 Plan summarizes the total value of all Township assets covered in this 2017 Plan and the independent public works linear asset plans prepared over the last two years.

- Section V: Financing Strategy of this 2017 Plan analyzes the funding requirements from a Township-wide perspective, therefore, includes tax-supported capital requirements identified in the 2015-2016 Plans.

- Section V: Heritage assets are not included in the financing strategy section of this plan. Many of the Township's heritage assets are historical in value and difficult to appraise, therefore it is assumed regular maintenance practices will continue and these assets will not be replaced.

- All other sections of this 2017 Plan refer only to the remaining assets not included in the 2015-2016 Plans.

- This Asset Management Plan focuses on the Township's existing assets and does not include the capital asset requirements associated with new growth related infrastructure. It is assumed as this Asset Management Plan is updated in the future, new infrastructure will be incorporated.

The assets included in the 2015-2016 Plans and this 2017 Plan are consistent with the asset categories included in Schedule 51 of the Township's Financial Information Return. Together, they meet the asset management plan requirements in the Township's Gas Tax Funding Agreement. Table 1 summarizes the assets included in all Plans.

Table 1 Assets Included in the 2015-2016 AMPs and 2017 AMP	
Public Works Linear (2015-2016 Plans)	**2017 Plan**
• Roads, Stormwater & Structures	• Buildings
• Bridges and Culverts	• Land Improvements
• Sidewalks	• Vehicles
• Streetlights	• Machinery and Equipment
	• Computer Equipment and Software
	• Pumping Station
Total Value: $341.6 Million*	**Total Value: $68.7 Million****

Note: The replacement values identified in the public works linear AMPs were inflated to current $2017 at 2%.*
*Note**: Excludes heritage assets. Heritage assets amount to about $8 million, however due to missing replacement values and difficulty of appraising these types of assets they have been excluded from this total.*

C. NET BOOK VALUE VS. REPLACEMENT VALUE

As specified in the Ministry Guide, the value of the Township's assets is presented in two different formats: 'Net Book Value' and 'Replacement Value'. These are described below.

Net Book Value (NBV) is consistent with the financial accounting practices defined by the Public Sector Accounting Board and is reported in the Township's financial statements. The Township of Uxbridge reported Net Book Value covers the full scope of the Township's Tangible Capital Assets, including land. It is noted that the same scope of assets are considered under this plan.

The Net Book Value is the original acquisition cost less accumulated depreciation, depletion or amortization. It is reported on annually in accordance with reporting standards established by the Public Sector Accounting Board (PSAB) of the Canadian Institute of Chartered Accountants. As shown on Table 2 below, the Township's 2015 Consolidated Financial Statement reported the Net Book Value of the Township's Tangible Capital Assets as of December 31, 2015 at $95.0 million, inclusive of land. Under the financial accounting approach many assets may be fully depreciated yet remain in use across the Township. Therefore, Net Book Value is not the appropriate methodology to be employed for infrastructure renewal planning.

Table 2 Summary of Tangible Capital Asset Values	
Asset Category	**2015 Closing NBV**
Land	$ 20,221,877
Land Improvements (parks, trails, sports fields etc.)	$ 2,820,122
Buildings	$ 7,489,406
Machinery and Equipment	$ 2,098,965
Vehicles	$ 2,830,804
Linear Assets (roads, stormwater, bridges)	$ 58,211,434
Other (computer equipment & software)	$ 140,166
Construction-In-Progress	$ 1,154,796
Total	**$ 94,967,570**

Note: Categories/information derived from the 2015 Financial Information Return.

Replacement Values are used to estimate the cost of replacing an asset when it reaches the end of its engineered design life. The total replacement cost of all assets is estimated at $410.3 million.

Replacement Cost Valuation

The three basic methods to estimate replacement costs needed for infrastructure renewal planning are outlined:

- Local price indices: This is the most accurate method. The Township has collected some recent acquisition data demonstrating similar replacement activities.

- Published price indices: Where local indices are not available, the Township uses published indices (e.g. Non-residential Building Construction Price Index).

- Accounting estimates: When assets cannot be estimated against either index, the Township uses historic cost, estimated useful life and inflationary effects to determine replacement value.

D. ASSET MANAGEMENT INTERNAL NETWORK

In order to operationalize a plan, it starts with involving the necessary Township staff in the asset management process. In order to address asset management, an internal network (Asset Management Committee) should be created and comprised of department heads from Township departments such as: Chief Administrator's Office, Treasury, Arena and Parks, Recreation Programs and Culture, Planning, Fire Services,

Library, Public Works and Operations. Furthermore, to facilitate execution of any asset management strategy, the Township can appoint individuals to be the asset management "champions". The champions are intended to be the people who maintain and regulate the quality of the asset register and are fully informed on all asset management matters. Potentially, the Treasurer can be the champion for non-linear Public Works assets and the Director of Public Works can be the champion for the linear Public Works assets.

The asset management champions should not be alone in the process. It is important that all other departments contribute to the process to ensure that reliable data is available. For example, as new assets are acquired for Recreation Programs and Culture services, it is required that Recreation Programs & Culture staff provide the information to the champions to update the asset register. This ensures that the register is up to date and that there is no data loss. These updates can be communicated as needed, but an annual review of assets for all departments can be done once a year.

To ensure buy-in and co-operation from all departments, the Committee representatives and the champions should meet frequently to identify and address any gaps or challenges that may arise throughout the process. This strengthens the internal network, and in turn, facilitates communication between departments. For example, regular senior management meetings can be used as a platform to initiate regular asset management discussions.

E. PLAN MONITORING

The Township should look to monitor the effectiveness of the Plan. This ensures that the Plan is utilized to its full extent and any gaps are identified. The Township should look to review these six compliance mechanisms:

1. Compliance with legislative requirements – Is the Township meeting all legislated mandates?

2. Service delivery – 100% compliance with service targets or targets exceeded.

3. Capital project delivery outputs delivered to schedule (or better) and on budget (or better).

4. Operational and maintenance budgets met (or better).

5. Risk Management—No events occurring outside the risk profile. How have projects with high risk been handled?

6. Benchmarking with comparable jurisdiction — Maintain performance.

F. TIMEFRAMES FOR REVIEW AND UPDATES

This Asset Management Plan should be reviewed and updated on a regular basis. Recognizing that a full Asset Management Plan and related policies should only be updated at key intervals, it is important that other asset management components such as capital budgeting exercises, risk assessments and updates to the asset register should be integrated into staff's regular routine. Table 3 below outlines the key timelines for updates and reviews.

Table 3
Timeframes for Reviews and Updates

Asset Management Framework	Timeframe
Asset Management Policy	3-5 Years
Asset Management Plan	3-5 Years
Capital Budget	Annually
Asset Register and Data	Semi-Annually or Annually
Risk assessment (capital prioritization)	Semi-Annually or Annually

G. ASSET MANAGEMENT PLAN STRUCTURE

The Asset Management Plan is structured as follows:

Section II summarizes the state of the Township's infrastructure with reference to infrastructure quantity and quality.

Section III current service levels and service level targets are described.

Section IV sets out several strategies that will assist the Township in maintaining assets so that desired service levels are achieved.

Section V establishes how asset management can be delivered in a financially sustainable way.

Section VI provides recommendations based on the analysis undertaken.

II STATE OF THE LOCAL INFRASTRUCTURE

This section provides a summary of the Township's assets with reference to asset quantity and quality. Many of the assets have condition assessments based on staff visual inspection and input, while the balance of assets considered are based on the useful life of the asset relative to its age. Useful life assumptions for the assets considered under this plan were acquired from the Township's tangible capital database and are summarized in Table 4 below.

Table 4
Useful Life and Replacement Value Assumptions by Asset Category

Asset Category	Useful Life Assumptions (Years)	Replacement Cost Valuation Assumptions
Buildings	5-50	• Local price indices (DC) Accounting Estimates • Insurance Values • Accounting Estimates
Land Improvements	15-50	• Local Price Indices • Accounting Estimates
Vehicles	5-20	• Local Price Indices • Insurance Values • Accounting Estimates
Machinery & Equipment	5-50	• Local Price Indices • Accounting Estimates
Pumping Station	10-100	• Local Price Indices • Accounting Estimates
Computer Equipment & Software	5-20	• Local Price Indices • Accounting Estimates

A. CONDITION ASSESSMENTS AND UPDATES

The Township's asset inventory is documented in a municipal asset registry which contains detailed information about the asset acquisition cost, year of emplacement, expansions and upgrades (if applicable), useful life, asset descriptions and year of asset replacement.

Consistent with the Canadian National Infrastructure Report Card as well as other major organization and institution reporting formats, a five-point rating scale was used to assign a condition to all assets. The percentage of remaining useful life was used for

assets where condition data based on inspection was not available. Table 5 summarizes the assumed parameters.

Table 5
Condition Assessment Parameters

Condition Assessment	Percentage of Useful Life Range	Definition
Very Good	80% - 100%	Well maintained, good condition, new or recently rehabilitated asset.
Good	60% - 80%	Good condition, few elements exhibit existing deficiencies.
Fair	40% - 60%	Some elements exhibit significant deficiencies. Asset requires attention.
Poor	20% - 40%	A large portion of the system exhibits significant deficiencies. Asset mostly below standard and approaching end of service life.
Very Poor	0% - 20%	Widespread signs of deterioration, some assets may be unusable. Service is affected.

Asset conditions based on staff assumptions and inspections took priority over accounting based remaining useful life. The inspection based condition assessments were consolidated into the 5-tier condition system as shown in Table 5 above. If an asset had a staff condition assumption, then the remaining useful life of the asset was set to a defined percentage of total useful life. In general, this resulted in assets having several more years of remaining useful life than what the accounting method suggested. Table 6 provides the parameters used in this calculation.

Table 6
Extension of Remaining Useful Life Assumptions

Condition Assessment	Percentage of Useful Life Remaining
Very Good	80%
Good	60%
Fair	40%
Poor	20%
Very Poor	10%

Moving forward, updating and identifying asset conditions should be part of regular inventory updates. There are several methods to identify asset conditions. The ideal methods are outlined as follows:

1. Condition rating systems based on engineered metrics and professional standards. For example, Facility Condition Index for buildings or professional mechanic inspections for vehicles. These metrics can then be translated into a 5-tier rating system.

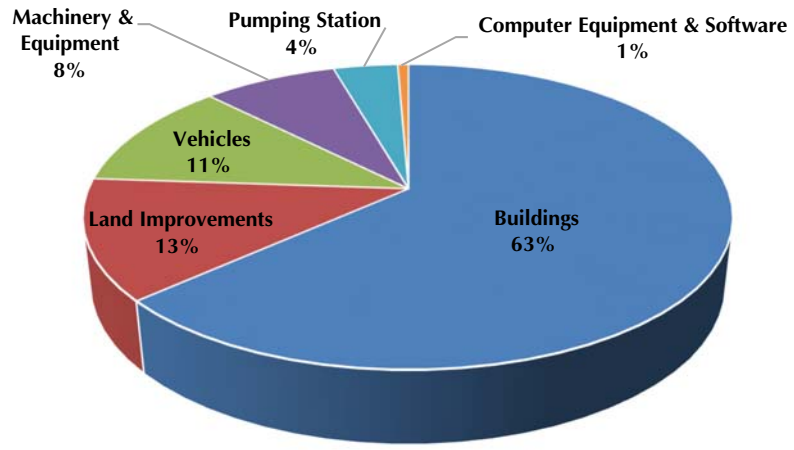
2. Estimates based on expert staff opinion. This approach is important where there is low confidence that age and useful life properly represents a particular asset.

3. Estimates based on age and the remaining useful life of the asset. This has been used for all assets which the Township was not able to provide a condition assessment based on existing knowledge or site inspection. It is the intention that the Township move towards a condition assessment methodology using approach 1 and 2 above.

B. STATE OF LOCAL INFRASTRUCTURE

The replacement cost of all non-linear Township assets considered in the 2017 Plan is estimated at $68.7 million (represented in constant $2017). The largest share is related to buildings and accounts for about $43.5 million (63%) of the total replacement cost. The next highest share is attributed to land improvements at $8.8 million (13%). This is followed by vehicles at $7.9 million (11%), machinery and equipment at $5.5 million (8%), pumping stations at $2.6 million (4%), and finally computer equipment & software at $444,000 (1%). Figure 1 below illustrates the value of assets by category.

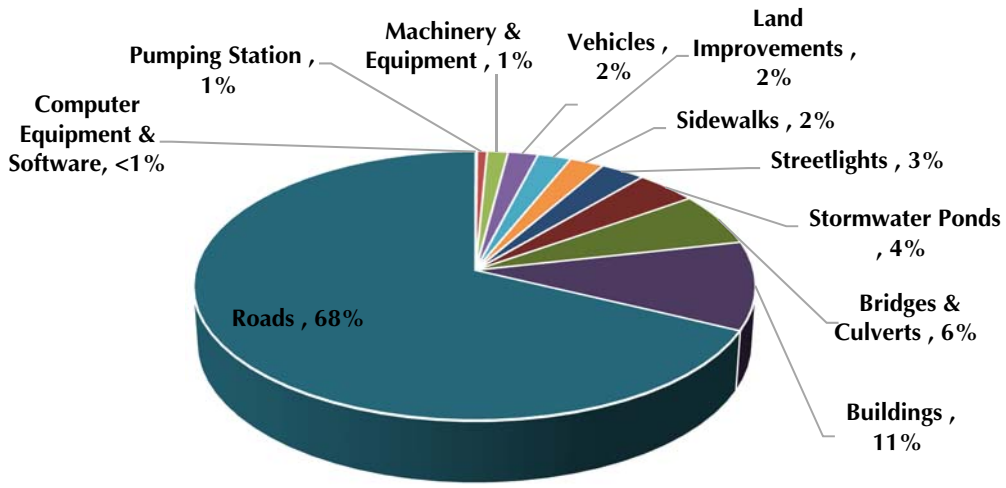
Figure 1:
Summary of 2017 Assets by Total Replacement Value (2017 $)



Total Replacement Value = $68.7 M

It should be noted that although this 2017 Plan relates primarily to non-engineering asset categories, the total replacement value of all infrastructure owned by the Township is estimated at $410.3 million. Of that amount, the Township's roads infrastructure represents 68%, or $278.4 million, and bridges and culverts account for an additional 6% or $25.9 million. Figure 2 illustrates the value of all assets by category, including engineering asset categories.

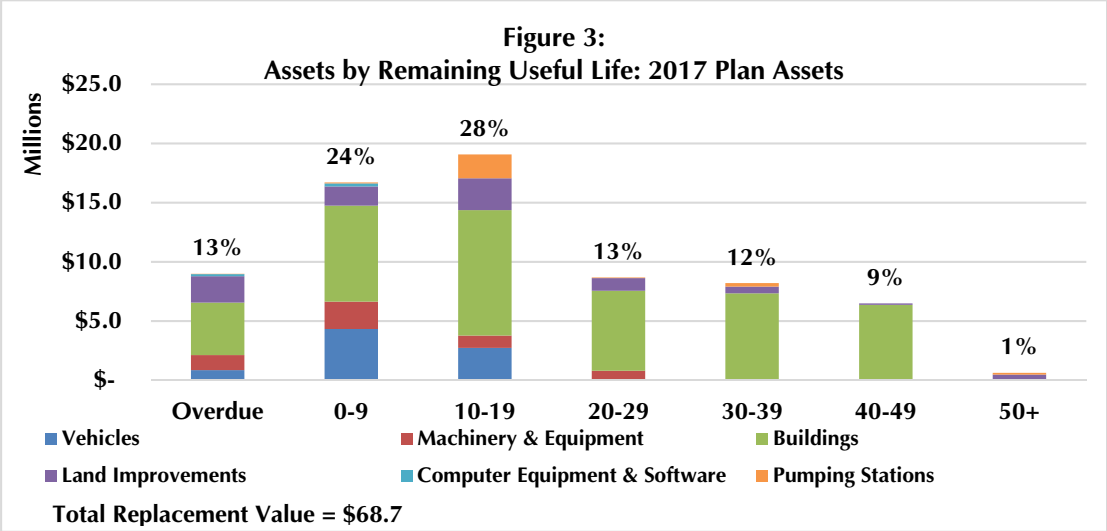
Figure 2:
Total Asset Replacement Value (2017 $)



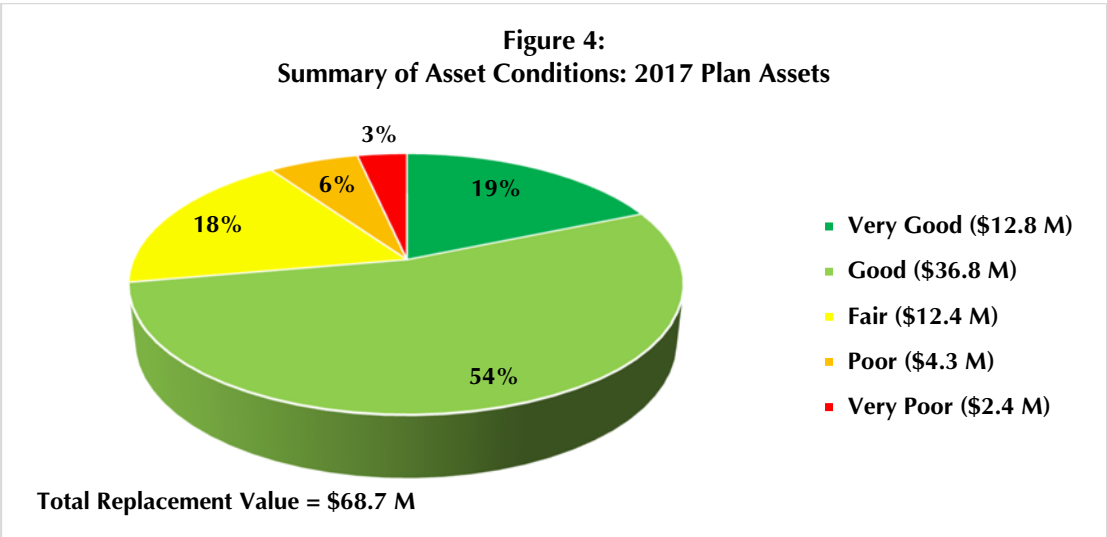
Total Replacement Value = $410.3 M

The majority of the assets, $44.7 million (65%), considered in this 2017 Plan have less than 20 years remaining useful life. Approximately $9.0 million (13%) of the assets are considered overdue for replacement and an additional $16.7 million (24%) are near the end of their useful life with less than 10 years remaining. That being said, $15.3 million (22%) are due for replacement in the long term with over 30 years of useful life remaining.

It should be noted that the "Assets by Remaining Useful Life" analysis identified in the figures below is based entirely on the Township's existing tangible capital asset database, while the asset condition assessments have been used to inform the schedule of asset replacement. The remaining useful life analysis is shown to illustrate an age profile analysis as required by the Building Together Guide and the condition analysis is considered to be the more reliable data source to qualify the state and condition of the Township's assets. Figure 3 below summarizes the assets by remaining useful life and by category.



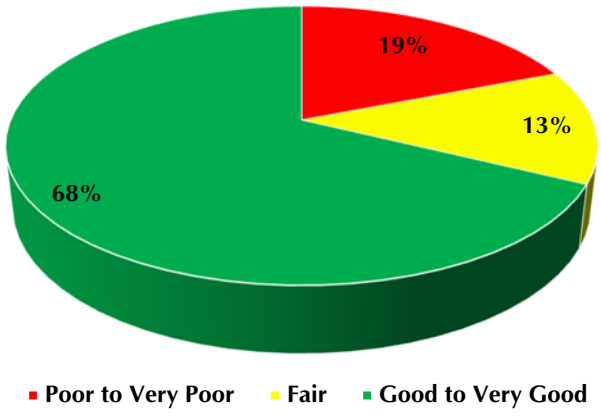
In total, the Township maintains about $49.6 million (73%) of the assets in Good to Very Good condition. Approximately $12.4 million (18%) are considered to be in Fair condition. The balance of the asset base, $6.7 million (9%), are considered to be in Poor to Very Poor condition and may require immediate repair/replacement. Many of the assets in the Very Poor to Poor condition category are attributed to the Township's land improvements (such as ball diamonds, lighting and fencing), vehicles (with useful life of 1-2 years left), and buildings (such as components of the Uxpool and Lion's Hall). As the Township moves to further refine and assess the assets based on engineered analyses and staff inspections, it can be expected that asset conditions will be adjusted. The asset replacement cost by condition rating is summarized in Figure 4.



Importantly, as this plan primarily examines all non-linear public works infrastructure assets, which represent only 17% of the total value of the Township assets; it is crucial the condition assessment be considered from a Township-wide perspective, inclusive of the public works linear infrastructure. Based on the independent Asset Management Plans prepared for Township roads, bridges and culverts, streetlights, sidewalks, and stormwater ponds, about $229.6 million of these works are identified to be in Good to Very Good condition.

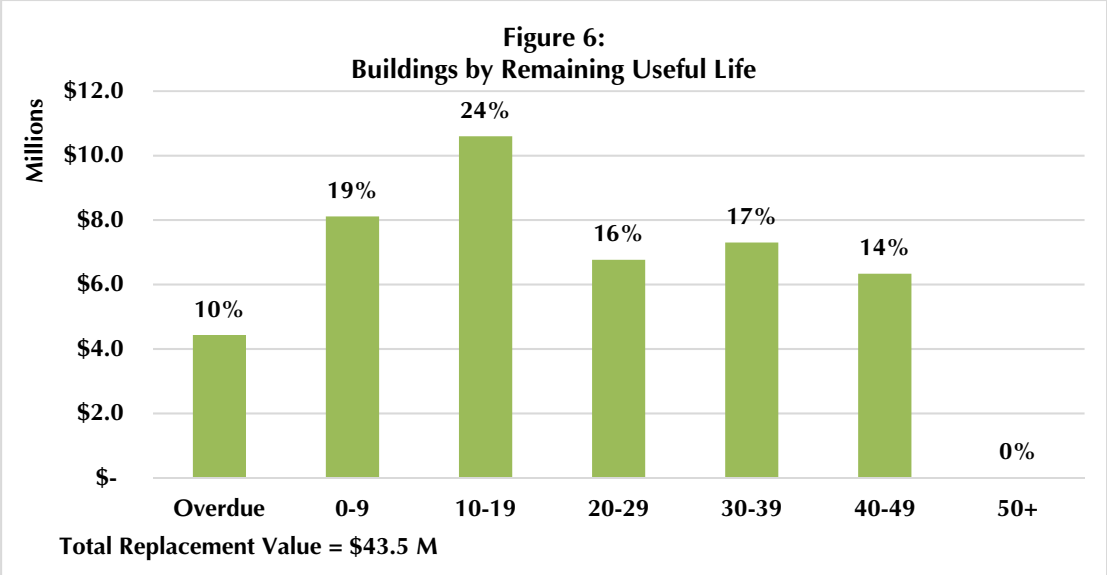
Figure 5 summarizes all Township assets including linear infrastructure by condition rating. About 68% or $279.2 million of all Township assets are in Good to Very Good condition. That being said, just under 20% of all Township infrastructure is considered to be in Poor to Very Poor condition. Township roads represents nearly 75% ($58.2 million) of the Poor to Very Poor condition assets.

Figure 5:
Summary of Township Wide Asset Conditions
Total Assets = $410.3 Million

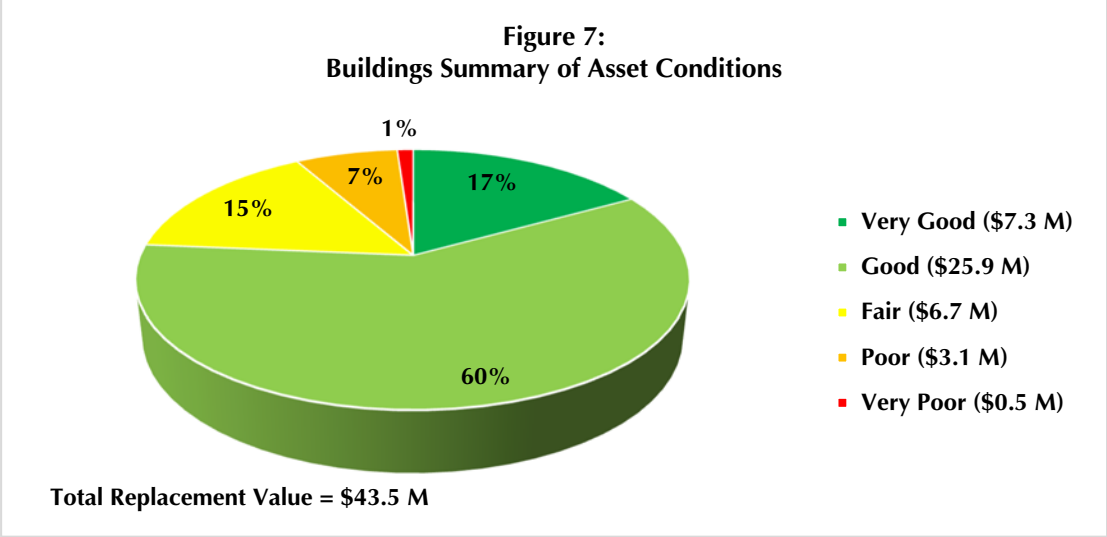


1. Buildings

The Township maintains over 14 landmark buildings (arenas, libraries, fire hall, etc.) with several other small structures valued at $43.5 million. Of this total inventory, $4.4 million (10%) of the building assets are considered overdue for replacement with an additional $8.1 million (19%) near the end of their useful life with less than ten years remaining. The largest share, $10.6 million (24%), have 10-19 years of remaining useful life. Although several buildings are still in use and are beyond their engineered life, most are in Good to Very Good condition, and do not require replacement in the short term. Figure 6 summarizes the remaining useful life for buildings.



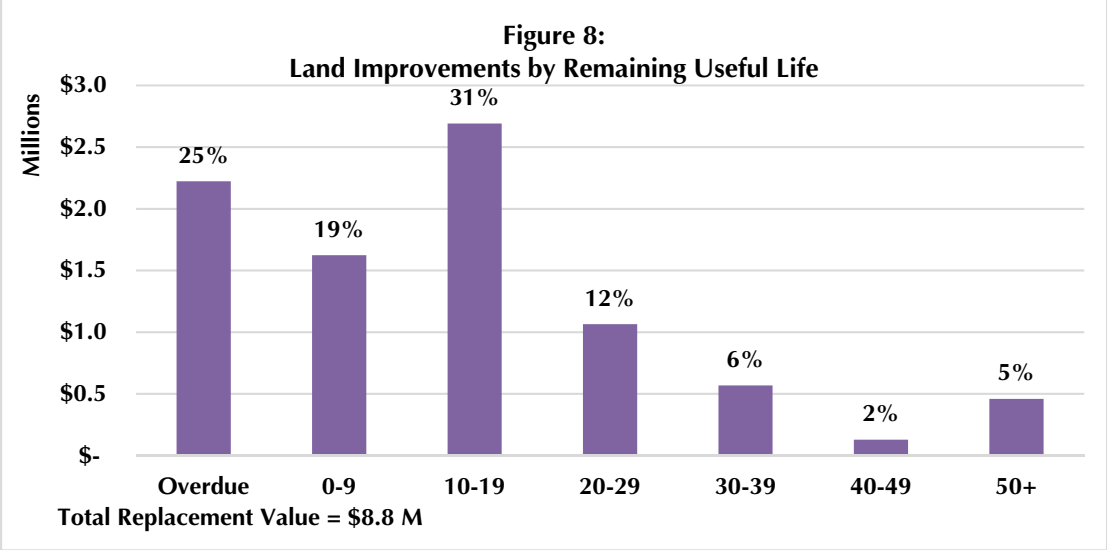
The Township maintains $7.3 million (17%) of the buildings in Very Good condition and $25.9 million (60%) are considered to be in Good condition. About $3.6 million (8%) of these assets are considered to be in Poor to Very Poor condition and may require immediate repair/replacement. The Poor to Very Poor building assets can be attributed largely to structural components of the Uxpool ($2.0 million) and the Lion's Club ($472,000). Figure 7 summarizes the condition of the building assets.



This information highlights that although a portion of the Township's facilities are not required for replacement immediately, future capital works may be required in the coming decades as those assets continue to age and the condition deteriorates.

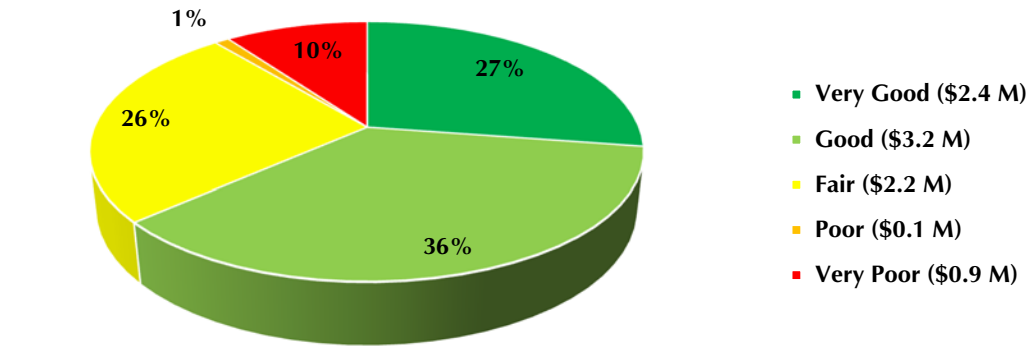
2. Land Improvements

The Township owns several land improvement assets valued at $8.8 million. Most of the land improvement related assets have less than 20 years remaining useful life. About $2.2 million (25%), of land improvement assets are considered overdue for replacement and an additional $1.6 million (19%) of the assets are near the end of their useful life with less than 10 years remaining. A large portion of the land improvement assets, $2.7 million (31%), have a remaining useful life between 10-19 years. Figure 8 summarizes the age and value of the land improvement inventory.



In total, the Township maintains about $5.6 million (63%) of the land improvements in Good to Very Good condition. However, about $961,000 (11%) of the land improvements are considered to be in Poor to Very Poor condition and may require immediate repair/replacement. The largest portions of assets in the Poor to Very Poor category include fencing at various locations ($407,000), a baseball diamond at Elgin Park ($100,000) and outdoor lights at Zephyr Hall ($130,000). Figure 9 summarizes the condition and value of the land improvement inventory.

Figure 9:
Land Improvements Summary of Asset Conditions

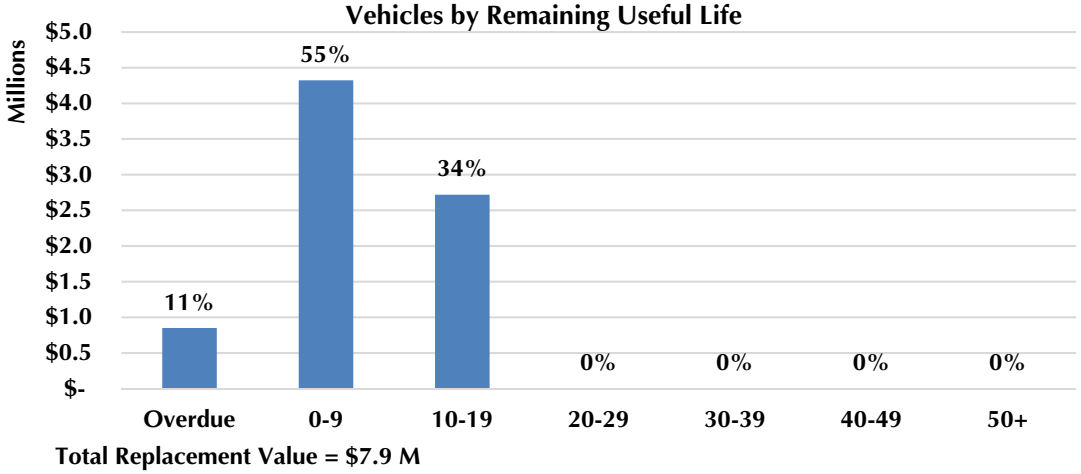


Total Replacement Value = $8.8 M

3. Vehicles

The Township maintains 57 vehicles valued at $7.9 million. Of this total inventory, approximately $849,000 (11%) are considered overdue for replacement based on remaining engineered useful life. A significant portion of $4.3 million (55%) are near the end of their useful life with less than ten years remaining. The remaining assets, $2.7 million (34%), are due for replacement in the medium term with 10-19 years of remaining useful life. It is important to note that although several vehicles remain operational beyond their engineered useful life, they are considered to be in Fair to Good condition due to proper maintenance and upkeep to maintain safety and operational standards. Figure 10 summarizes the remaining useful life for all vehicles.

Figure 10:
Vehicles by Remaining Useful Life

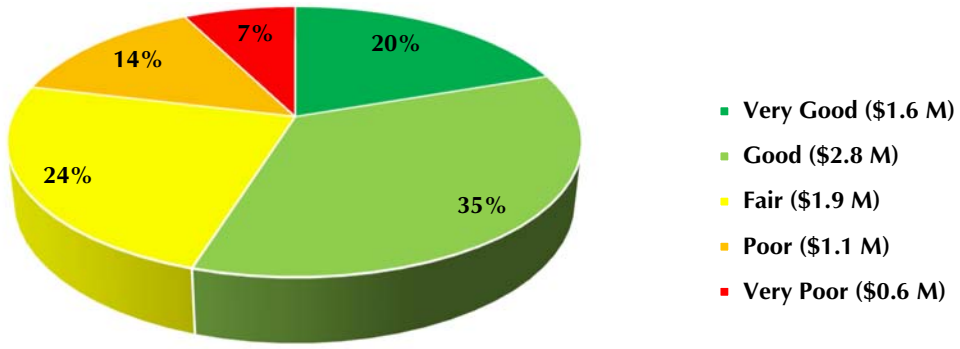


Total Replacement Value = $7.9 M

The Township maintains $4.4 million (55%) of its vehicles in Good to Very Good condition. Although, about $1.7 million (21%), of the vehicles are considered to be in Poor to Very Poor condition, they continue to go through regular maintenance to maintain safety and operational standards. The main vehicles in the Poor to Very Poor condition category largely relate to the Townships pumper, the 6-ton trucks and international tandem plow-wing sander and some vans/trucks – some of these vehicles have already been targeted for replacement in the short-term. The balance of the inventory, $1.9 million (24%) is in Fair condition. Figure 11 summarizes the condition and value of the vehicles.

This information highlights that a portion of Township's vehicles are currently in Poor condition and will be required for repair and replacement in the short-term. Although, as the vehicles continue to be used, perhaps the Township should be prepared to provide enhanced maintenance and repair activities to continue to extend the life of some of the assets.

Figure 11:
Vehicles Summary of Asset Conditions

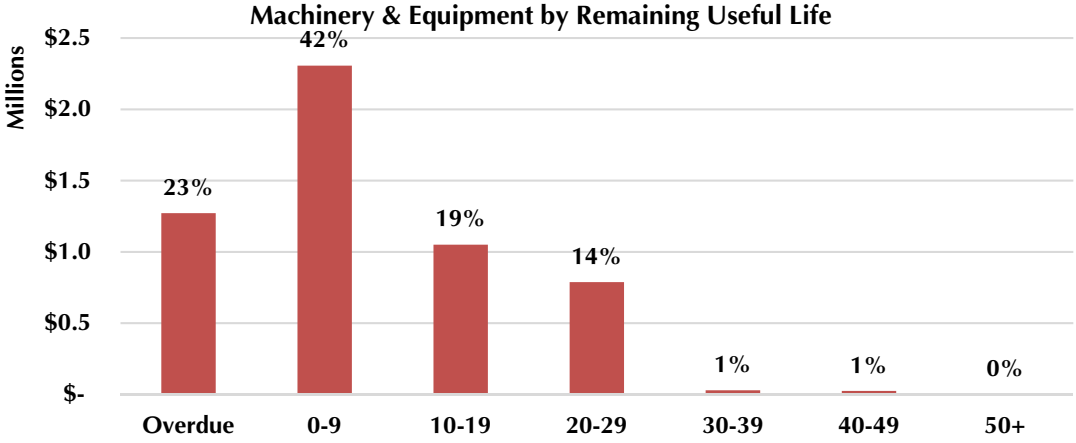


Total Replacement Value = $7.9 M

4. Machinery and Equipment

The Township's machinery and equipment assets are valued at $5.5 million. Of this amount, about $1.3 million (23%) of these assets are considered overdue for replacement and a further $2.3 million (42%) have less than 10 years of useful life remaining. Roughly $1.8 million (33%) have between 10 and 29 years useful life remaining. Figure 12 summarizes the age and value of these assets.

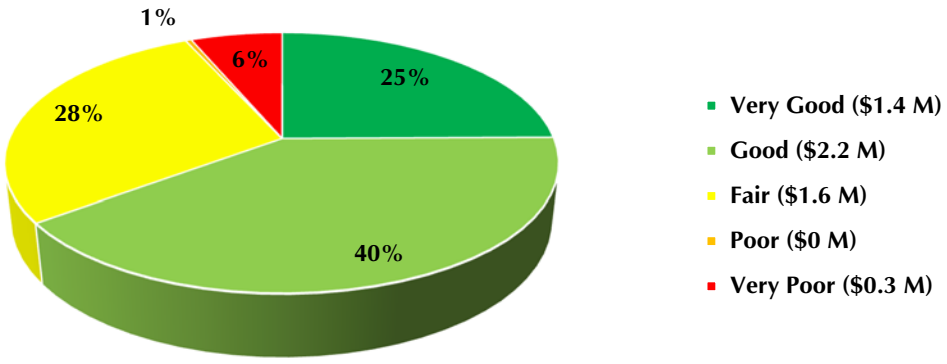
Figure 12:
Machinery & Equipment by Remaining Useful Life



Total Replacement Value = $5.5 M

The Township maintains $3.6 million (65%) of its machinery and equipment in Good to Very Good condition. Roughly $371,000 (7%), of the assets are considered to be in Poor to Very Poor condition. Included in the Very Poor and Poor categories are an Ice Resurface machine Olympia #2 ($74,000) and miscellaneous Library materials ($77,000). The remaining $1.6 million (28%) is in Fair condition. Figure 13 summarizes the condition and value of the assets.

Figure 13:
Machinery & Equipment Summary of Asset Conditions

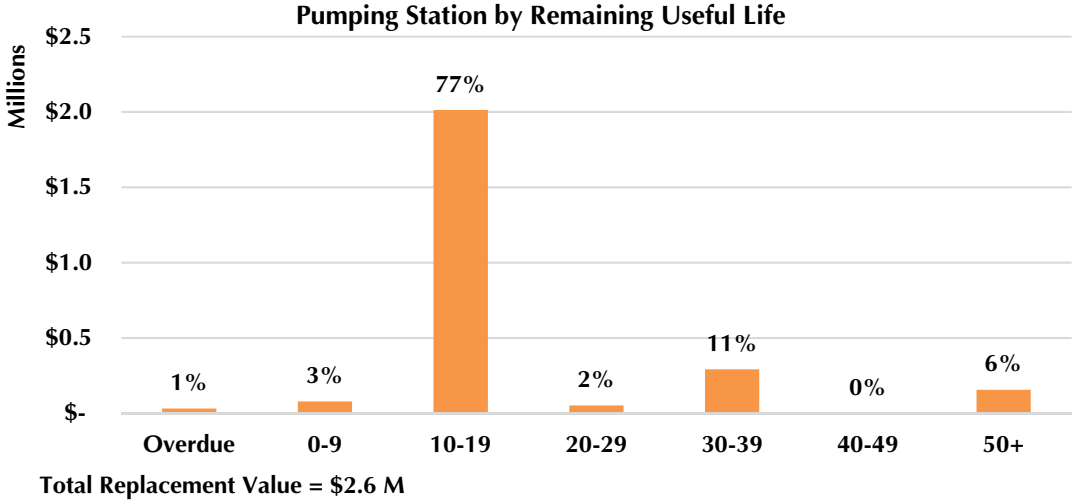


Total Replacement Value = $5.5 M

5. Pumping Station

The Township's pumping station and related components are valued at roughly $2.6 million. A significant majority of these assets, $2.0 million (77%), have a remaining useful life between 10 and 19 years. Only $109,000 (4%) are overdue or have a remaining useful life of less than 10 years, and the remaining assets have a useful life of 20 years or more. Figure 14 summarizes the remaining useful life of the pumping station and related assets.

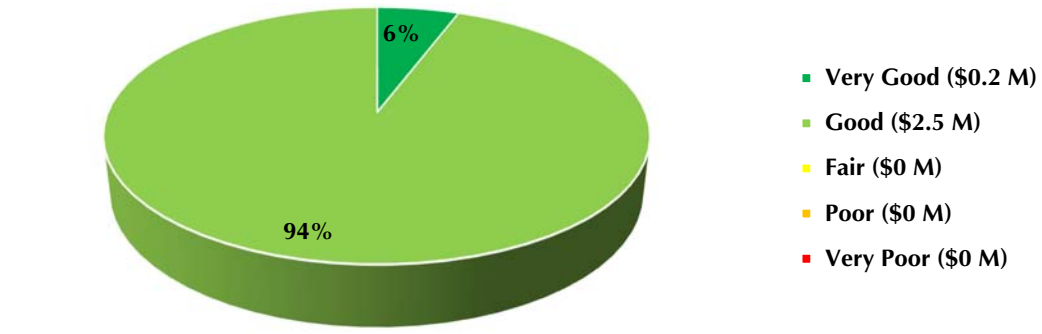
Figure 14:
Pumping Station by Remaining Useful Life



The Township's pumping station is maintained in Good to Very Good condition. More specifically, virtually the entire pumping station and related components are in Good to Very Good condition. Figure 15 summarizes the condition and the value of the pumping station.

This information highlights that although there are no immediate fiscal pressures to address pumping station needs, the Township should be cognisant of the future requirements as the assets continue to age over the coming decade.

Figure 15:
Pumping Station Summary of Asset Conditions

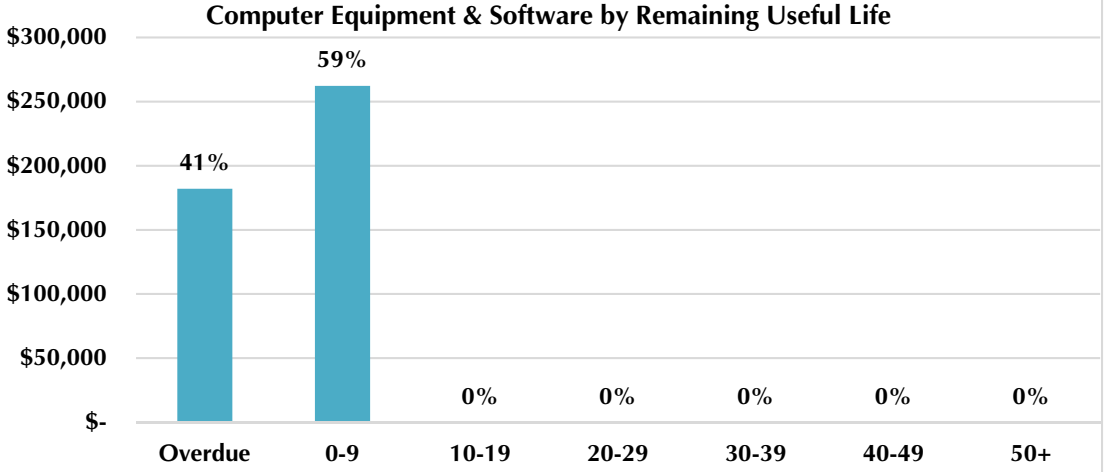


Total Replacement Value = $2.6 M

6. Computer Equipment & Software

Of the Township's $444,000 in computer equipment & software, roughly $182,000 (41%) of these assets are overdue for replacement. The remaining $262,000 (59%) will be due for replacement in less than 10 years. Figure 16 summarizes the remaining useful life of these assets.

Figure 16:
Computer Equipment & Software by Remaining Useful Life

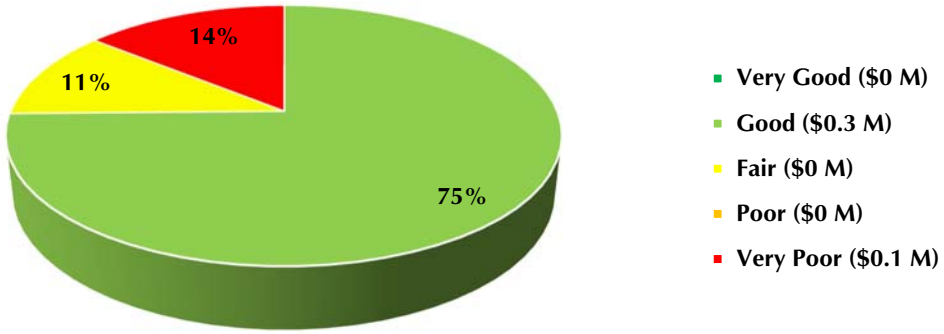


Total Replacement Value = $0.4 M

In total, about $332,000 (75%) of the computer equipment & software assets are considered to be in Good condition. Roughly $63,000 (14%) are in Very Poor condition and may require immediate repair/replacement. The remaining $50,000

(11%) are considered to be in Fair condition. Figure 17 summarizes the condition and value of the computer equipment & software assets.

Figure 17:
Computer Equipment & Software Summary of Asset Conditions



Total Replacement Value = $0.4 M

C. HERITAGE ASSETS

The Township owns and maintains heritage assets which include historical artifacts, paintings and heritage buildings. Due to the difficulty in appraising these assets (some are irreplaceable), heritage assets were excluded from this analysis. For those assets where valuation data was available, the total value amounts to $8.0 million, of which, the most notable is the Thomas Foster building valued at about $6.1 million.

That being said, it is recognized that the Township will provide perpetual maintenance for these assets to maintain them in a state of good repair, and they will not be replaced. Annual maintenance requirements associated with these assets is estimated at $100,000 per annum.

D. TOWNSHIP OWNED LAND

The Township also accounts for land assets in the tangible capital asset registry. According to the Township's 2015 Financial Information Return, the total value of Township owned lands is estimated at approximately $20.2 million. This category has been excluded from the analysis as land is generally an "appreciating" asset, which does not necessarily require renewal or replacement requirements.

III LEVEL OF SERVICE

A. LEVEL OF SERVICE OVERVIEW

Asset management decisions must be made with reference to the level of service planned for by the Township. Current service levels in Uxbridge have been developed based on a combination of internal asset management practices, community expectations, statutory requirements, and industry operation and safety standards. Typically, the level of asset investment made by the Township in any one year has been determined by funding availability. That said, the Township has in the past been responsive to repair needs to address immediate environmental or health risks.

In our experience, the community expects that services be delivered in a cost effective and efficient way. Generally, community expectations revolve around the Township's accessibility of "soft" services (e.g. recreation facilities; libraries; fire stations) within neighbourhoods.

Developing levels of service and tracking over time is essential to measuring the success of service delivery and the asset management strategy overall. This section outlines historical levels of service and performance of the non-engineered services.

B. COPORATE GOALS AND LEVELS OF SERVICE MEASURE

The Township completed the Vibrant North Durham Economic Development Plan 2013-2018 in an effort to set forth strategic priorities for the economic development of the Township. Priority 1 identifies the importance of building and maintaining municipal infrastructure to strengthen and support local business. These considerations, among others identified in this plan, consider asset management and infrastructure renewal to be at the forefront of future decision making.

The Vibrant North Durham Economic Development Plan 2013-2018 identifies several overarching corporate and strategic community goals that provide a high level expectation as to what should be achieved by Council, staff and through the services provided. Furthermore, The North Durham Integrated Community Sustainability Plan specifically identifies investment in infrastructure as a primary principle to sustain economic growth. The Table 7 below outlines some of the corporate goals established by the Township as they relate to the delivery of services.

Table 7
Township of Uxbridge Economic Development Strategies

Be Open for Business	Inspire & Support Entrepreneurship	Create a Vibrant Future for Young Adults	Build a Stronger Rural and Small Town Identity
Invest in infrastructure to sustain economic growth, capture new opportunities and create a competitive advantage.			

Source: Vibrant North Durham Economic Development Plan 2013-2018, The North Durham Integrated Community Sustainability Plan.

In order to measure if corporate goals are being met, levels of service need to be established and performance indicators need to be measured. Level of service measures vary widely across services and municipalities. Table 8 on the following page provides a range of service levels and associated performance measures which the Township should look to utilize. The Township has been tracking a select few. Moving forward, the Township should look to incorporate and track, at a minimum, the remaining performance measures so these indicators can be incorporated into future iterations of the Township's Asset Management Plan. In addition to asset management related levels of service, Appendix A includes operational levels of service the Township strives to maintain.

Key performance indicators for which the Township tracks relative to a target level is illustrated in Table 9. At this time, target levels of service have been developed in keeping with existing trends and through discussions with Township staff. Moving forward, as the Township continues to build and refine their level of service database, targeted levels of service should be developed in consultation with Council and the Public.

Table 8
Suggested Service Level Descriptions and Associated Level of Service Measures

Asset Specific Levels of Service		
Asset Category	**Level of Service**	**Level of Service Performance Indicator**
Buildings	• Facilities should comply with the Accessibility for Ontarians with Disabilities Act • All facilities should be maintained in state of good repair	• Number of facilities that do not comply with the Act • Percentage of facilities in good to very good condition • Number of outstanding repair/rehabilitation activities for all facilities.
Indoor Recreation (Buildings)	• Provide a variety of indoor recreation facility space for residents • Provide sufficient recreation facility space for residents • Facilities should comply with the Accessibility for Ontarians with Disabilities Act • All indoor recreation facilities should be maintained in state of good repair	• Square metres of indoor recreation facilities • Square metres of indoor recreation facilities per 1,000 persons • Number of facilities that do not comply with the Act • Number of days program space is closed due to mechanical issues or facility repairs
Land Improvements	• All land improvements should be maintained in state of good repair	• Percentage of land improvement assets in good to very good condition
Outdoor Recreation (Land Improvements)	• Provide a variety of parks and open spaces residents • Provide sufficient parks and open spaces for residents • Provide an extensive trail network • Provide sufficient trails for residents	• Number of parks of each size/type • Square metres of park space per 1,000 persons • Total kilometres of trails. • Total kilometres of trails per 1,000 persons
Vehicles	• All vehicles should be maintained in state of good repair • Maintain minimum fleet availability • Perform preventative maintenance and repairs to meet industry standards of safety and operation	• Percentage of vehicles in good to very good condition • Percentage of vehicles available for duty • Number of vehicle units inspected (weekly, monthly, etc) • Percentage of preventative maintenance inspections completed per year
Machinery & Equipment	• All machinery and equipment should be maintained in state of good repair • Perform preventative maintenance and repairs to meet industry standards of safety and operation	• Percentage of vehicles in good to very good condition • Number of equipment units inspected (weekly, monthly, etc) • Percentage of preventative maintenance inspections completed per year
Computer Equipment & Software	• All computer equipment & software should be maintained in state of good repair	• Percentage of computer equipment & software in good to very good condition
Pumping Station	• Perform preventative maintenance and repairs to meet industry standards of safety and operation	• Percentage of preventative maintenance inspections completed per year

Table 9
Key Performance Indicators

Demographics	2011	2012	2013	2014	2015	Target
Population	19,169	20,623	20,623	20,623	20,623	
Trails						
Trails : Total kilometres of trails (owned by municipality and third parties)	220	220	220	220	220	**220**
Total Kilometres of Trails per 1000 persons	11.48	10.67	10.67	10.67	10.67	**10.67**
Recreation						
Indoor recreation facility space : Square metres of indoor recreation facilities (municipally owned)	8581	8581	8581	8581	8581	**8,581**
Square metres of indoor recreation facilities per 1,000 persons (municipally owned)	448	416	416	416	416	**416**
Outdoor recreation facility space : Square metres of outdoor recreation facility space (municipally owned)	1721	1721	1721	1721	1721	**1,721**
Square metres of outdoor recreation facility space per 1,000 persons (municipally owned)	90	83	83	83	83	**83**
Fire & Emergency						
Average Emergency Call Response Times (Minutes):			9:00	8:00	8:43	8:43
Buildings & Facilities						
Number of facilites that do not meet AODA regulations						**0**

Source: 2015 Financial Information Return, Uxbridge Fire annual reports and Township staff.
Note: Fire response time includes time from dispatch receiving the call to arrival on location.

The table shows that by these numbers, service levels have remained relatively constant.

C. GAS TAX PROJECT OUTCOMES

Moving forward it is expected that municipalities will report on various performance metrics to meet the federal gas tax funding requirements. These "project outcomes" are due March 31st 2017 for projects completed between April 1st 2014 and December 31st 2016. Municipalities are required to report on at least one outcome per asset category to demonstrate positive benefits to communities and to show the benefits of gas tax funds as a predictable funding source. Best practice is for the Township to begin tracking these project outcomes for all assets. Table 10 shows project outcomes relevant to the assets included in the 2017 Plan.

Table 10
Relevant Project Outcomes Required for Gas Tax Funding

Category	Outcomes
Local Roads and Bridges Subcategory: Active Transportation	• Number of residents with access to new/ repaired/improved/replaced bike lanes, sidewalks, hiking and walking trails
Sport Infrastructure	• Number of visitors (sports tourism) to the community • Available ice/field time per year (hours) • Number of registered users per year • Sporting events held per year

Table 10 Relevant Project Outcomes Required for Gas Tax Funding	
Category	**Outcomes**
Recreational Infrastructure	• Number of registered users per year • Number of residents who will benefit from the new or upgraded recreational infrastructure
Cultural Infrastructure	• Number of residents benefitted from the investment • Number of cultural events held per year • Number of people participating in cultural activities in the community
Tourism Infrastructure	• Number of businesses positively affected by the investment • Number of visitors • Number of online or in-person inquiries at visitor information centre(s) • Number of room-nights sold in a year
Disaster Mitigation Infrastructure	• Area of properties projected to be less at-risk due to the investment • Emergency response costs

Source: AMO.

For 2017, it is expected that the Township report on the assets included in this Asset Management Plan as a percentage of total assets. It is expected that this 2017 Plan in conjunction with the independent plans for Public Works linear infrastructure will update this value to 100% of total assets included for 2017, meeting the asset management plan gas tax funding requirement.

IV ASSET MANAGEMENT STRATEGY

This section sets out an action plan that will assist the Township in maintaining assets so that desired service levels are achieved. The asset management strategy relates to a set of actions that, taken together, has the lowest total cost to maintain assets in a state of good repair as defined in the *Building Together: Guide for Municipal Asset Management Plans.*

The asset management strategy includes current practices and potential future practices related to non-infrastructure solutions, maintenance activities, renewal/rehabilitation, disposal and expansion activities. The final component of this section includes a risk matrix which can be used to assist Township staff and Council measure and manage risks to achieve desired levels of service.

A. SET OF PLANNED ACTIONS

The Township employs various practices to achieve desired levels of service. This set of existing actions involve activities to maintain assets in a state of good repair and to ensure that assets continue to be in service for their full life cycle, and in many cases, beyond the expected design life. The set of existing actions and planned activities are summarized for each of the asset categories in the 2017 Plan (Tables 11-15).

Buildings

There are a variety of buildings in the Township that are utilized for various purposes. Usually, customized maintenance plans are required for each facility depending on their purpose. Table 11 summarizes general actions that can be employed to ensure that Township buildings are maintained in a state of good repair.

Table 11
Planned Actions: Buildings

Areas	Planned Actions
Non-Infrastructure Solutions	• Operating budgets should be informed by condition assessments and regular inspections as needed. • Business cases, special studies and consultation with stakeholders should be done when constructing a new facility or modifying an existing facility.

Table 11 Planned Actions: Buildings	
Areas	**Planned Actions**
	• Review of the design and layout of buildings and properties, to take into account the minimization of maintenance costs. • Adjust service levels if necessary.
Maintenance Activities	• Township Wide General o Buildings and facilities inspected monthly in accordance with occupational health and safety regulations. o HVAC and heating systems inspected annually. HVAC is inspected in the spring and the heating system inspected in the fall. o Septic tanks are inspected regularly and pumped when necessary. o Maintain electrical systems to Electrical Safety Authority standards. o Fire alarms, fire extinguishers and emergency lights inspected monthly • Municipal Office o HVAC system is inspected and serviced six times per year (or semi-monthly) and the controlling system is monitored remotely. o Elevator is inspected and serviced semi-monthly by Elevator One and once per year by TSSA. o Clerks, Treasury, and Development Services/ Works department high density storage systems are inspected once per year as per the maintenance agreement. o Offices monitored daily by custodial staff and is ensured to meet accessibility standards and building maintenance codes. • Recreation o Community Halls are inspected monthly by staff. o Regular ice plant inspections are per TSSA o Pool inspections as per public health regulations. • Library o Library clock, chimes and fire systems are inspected and serviced once per year. Furnace, chiller and lift are inspected and serviced twice per year.

Table 11 Planned Actions: Buildings	
Areas	**Planned Actions**
Renewal/Rehabilitation	• Regular component repairs based on inspections.
Replacement	• Component replacement based on inspections.
Disposal	• Selling or demolishing buildings that are no longer in use. o Sale of Siloam Hall and other underutilized facility space. • Re-use or sell land not in use.
Expansion	• Identify needs through regular capital planning. • Assumptions on required facility space through development agreements. • Service improvements made where possible (accessibility, etc.)

Land Improvements

Land improvement assets are mostly encompassed in Township parks, trails and parking lots. Table 12 summarizes general actions that are taken to ensure that Township land improvement related assets are maintained in a state of good repair.

Table 12
Planned Actions: Land Improvements

Areas	Planned Actions
Non-Infrastructure Solutions	• Operating budgets should be informed by condition assessments and regular inspections as needed. • Business cases, special studies, consultation with stakeholders should be done when constructing a new park or playground. • Adjust service levels if necessary. • Annually provide the necessary departments with related information when new and additional land improvement assets are acquired. • Review the use and training of temporary or seasonal parks and recreation staff. • Developing a new master plan for parks and sports fields. This will include revised design and maintenance standards, levels of service commentary, consolidation of amenities and facilities, and a long-term projections regarding the types of sports fields needed to serve the community.
Maintenance Activities	• Playground equipment inspected monthly. • All Parks department equipment inspected daily before each use. • Soccer nets inspected twice per season by Parks staff. The soccer and baseball clubs are responsible for the lining of the fields. • Skate park and splash pad are visually inspected monthly, with a thorough inspection twice a season at opening and closing. • Township staff and a team of volunteers walk the trails frequently for inspections and reports to Parks department staff for repairs. • Trails are audited twice a year. • Regularly scheduled grass cutting, trimming and field observations of Township parks. • Regular review of the approach to snow removal on trails.

Table 12 Planned Actions: Land Improvements	
Areas	**Planned Actions**
Renewal/Rehabilitation	• Regular component repairs based on inspections. • Dragging of the baseball diamonds is completed daily for fields at the Uxbridge Arena and Bonner Fields. All other diamonds are dragged three times per week. • Implementing enhanced tree trimming and inspection programs to address damage due to storms before they occur. • Regular tree cutting/planting to curb Emerald Ash Borer infestation.
Replacement	• Component replacement based on inspections.
Disposal	• Dispose or sell assets that are no longer in use or are in poor condition. • The removal of fences in parks, which will result in reduced maintenance costs associated with their upkeep. • Re-use or sell land not in use.
Expansion	• Identify needs through regular capital planning. • Assumptions on required park space and assets through development agreements. • The development of Service Level Agreements covering the level of maintenance to be carried out for all parks, sports fields, boulevards and other green spaces to ensure they can be maintained within the agreed budgets. • Service improvements made where possible (new technologies, environmental impacts, etc.).

Vehicles

Vehicles are considered for all service areas including Fire Services, Parks, Recreation, Public Works and other general government vehicles. Actions related to maintaining vehicles are unique to each type of vehicle. Table 13 summarizes general actions that can be taken to ensure that Township vehicles are maintained in a state of good repair.

Table 13
Planned Actions: Vehicles

Areas	Planned Actions
Non-Infrastructure Solutions	• Township Wide General o Regularly scheduling of repair work orders. o Operating budgets should be informed by regular inspections as needed. o Adjust service levels if necessary. o Annually provide the necessary departments with related information when new and additional equipment is acquired. • Fire o Fleet records management - vehicle logbooks are filled out by the Emergency Vehicle Operator (EVO) upon returning to the station. Information such as the date, mileage and any defects or issues are recorded. The Mechanical Officer reviews each entry and takes action to conduct or schedule the repair or maintenance if required. o The FirePro2 inventory module is used to record testing and certification of all units and equipment. Each unit has a dedicated section to track defects, repairs and maintenance.
Maintenance Activities	• Township Wide General o Preventative maintenance program for all Township vehicles. o Annual inspection, service and certification performed on all applicable vehicles in accordance with MTO requirements. • Fire o Staff perform weekly basic checks on vehicles, including a check of equipment, pump and emergency lighting. Every four weeks a comprehensive check is done on Fire vehicles including pumps, motors, and ladders.

Table 13 Planned Actions: Vehicles	
Areas	**Planned Actions**
	○ For immediate or complex service needs vehicles are sent to outside contractors or manufacturers for repair. ○ Vehicles requiring MTO certificates have scheduled maintenance throughout the year. Examples include, brake checks, chassis greasing (auto greaser), fall coolant tests, as well as semi-annual oil and filter service, tire pressure checks and adjustments. ○ Preventative maintenance for Fire vehicles occur at the time of MTO certification and six months after. All units receive annual rust-proofing. ○ Fire Vehicles not requiring MTO certification follow a 5,000 km preventative maintenance program.
Renewal/Rehabilitation	• Regular component repairs based on inspections.
Replacement	• Vehicle replacement based on inspections.
Disposal	• Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	• Identify needs through regular capital planning. • Service improvements made where possible (new technologies, environmental impacts, etc.).

Machinery & Equipment

Machinery and equipment assets are encompassed in all Township services. These assets include various types of equipment including heavy machine equipment and library materials. This asset class requires specific types of maintenance unique to each type of asset. Table 14 summarizes general actions that can be taken to ensure that Township machinery and equipment is maintained in a state of good repair.

Table 14
Planned Actions: Machinery & Equipment

Areas	Planned Actions
Non-Infrastructure Solutions	• Operating budgets should be informed by regular inspections as needed. • Adjust service levels if necessary. • Regularly scheduling of repair work orders. • Annually provide the necessary departments with related information when new and additional equipment is acquired.
Maintenance Activities	• Township Wide General o Preventative maintenance program for all Township equipment. o Regular inspection of all Township machinery and equipment. o Certification of applicable equipment to meet regulatory requirements. • Fire o Pump testing (including foam system testing and calibration) is completed every two years. o Fire hose testing done on an annual basis by suppression staff. o Ground ladder inspections done on an annual basis by independent inspector to meet NFPA standards. o Bunker gear is sent out annually for cleaning, repairs or patching. After three years in service the gear undergoes annual moisture barrier testing to ensure proper performance. o The department's SCBA gear is flow tested annually and cleaned following each use. Minor repairs are completed in-house and other repair needs are outsourced. Cylinders are hydrostatically tested every five years. Air is exchanged every three months.

Table 14 Planned Actions: Machinery & Equipment	
Areas	**Planned Actions**
Renewal/Rehabilitation	• Regular component repairs based on inspections.
Replacement	• Machinery and equipment replacement based on inspections. • Machinery and equipment replacement forecast reviewed annually.
Disposal	• Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	• Identify needs through regular capital planning. • Service improvements made where possible (new technologies, environmental impacts, etc.).

Computer Equipment & Software

Computer equipment & software is related mainly to computer related hardware, servers and software. Routine maintenance and best practices for computer equipment & software is recommended. Table 15 summarizes general actions that can be taken to ensure that Township computer equipment is maintained in a state of good repair.

Table 15
Planned Actions: Computer Equipment & Software

Areas	Planned Actions
Non-Infrastructure Solutions	• Operating budgets should be informed by regular inspections as needed. • Adjust service levels if necessary. • Regularly scheduling of repair work orders. • Annually provide the necessary departments with related information when new and additional equipment is acquired.
Maintenance Activities	• Computer equipment concerns captured on a reactive basis based on user reported issues and concerns. • Regular software upgrades and maintenance to ensure proper operation.
Renewal/Rehabilitation	• Regular component repairs based on inspections.
Replacement	• Computer equipment and software replacement based on needs.
Disposal	• Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	• Identify needs through regular capital planning. • Service improvements made where possible (new technologies, etc.).

B. COST REDUCTION STRATEGIES

The *Guide for Municipal Asset Management Plans (Guide)* states that 'to ensure the most efficient allocation of resources, best practice is for a number of delivery mechanisms to be considered — such as working with other municipalities to pool projects and resources, or considering an AFP (Alternate Financing and Procurement) model.' The design-build-finance-maintain AFP model takes a lifecycle perspective

and builds effective asset management directly into a contract. The *Guide* also states that municipalities should have procurement by-laws in place to serve as the basis for considering various delivery mechanisms.

1. Procurement Policy

The Township of Uxbridge currently has a corporate by-law for procurement. Table 16 outlines its purpose:

Table 16
Purpose, Goals and Objectives of Procurement By-Law

a. To encourage competition among suppliers;
b. To maximize savings for tax payers;
c. To ensure service and product delivery efficiency and effectiveness;
d. To ensure service and product delivery quality;
e. To make service and product providers accountable to the municipality and the public;
f. To encourage the procurement of goods and services with due regard to the product being accessible to people with disabilities or be capable of being made accessible through the use of technology;
g. To provide the highest level of government service at the least possible cost;
h. To ensure fairness between bidders;
i. To ensure objectivity in the procurement process;
j. To the extent possible, to ensure openness, accountability and transparency while protecting the financial best interests of the municipality;
k. To obtain the best value for the municipality when procuring goods and services;
l. To avoid conflicts between the interest of the Corporation and those of the Corporation's employees and elected officials;
m. This policy will be reviewed 5 years or earlier to evaluate its effectiveness.

Source: By-law 2004-209, Procurement By-Law.

The By-law encompasses market fairness and equitability to ensure the Township can repair, maintain and acquire assets at a minimized cost.

2. Alternative Service Delivery Options – Shared Services

Alternative service delivery options should also be assessed for feasibility. Shared services for example, allow the Township to share the costs of acquiring and maintaining assets through joint agreements. Such agreements are typically done with neighbouring municipalities or as private public partnerships in an effort to share risk and minimize costs. The Township of Uxbridge shares the delivery of certain services. These cost savings can help offset and/or reduce future repair and replacement requirements. A few examples include:

- Animal Control in the Township of Uxbridge ensures the community is safe and healthy for animals and residents. The Animal Control program runs in partnership with the Township of Scugog.

- The Township has a Fire Protection Agreement in place with the bordering municipalities of Whitchurch-Stouffville and East Gwillimbury. The agreements arrange for fire protection services to areas of the Township which are too far removed from the Township's own fire station.

Moving forward, the Township could explore alternative shared service agreements to provide other services in collaboration with neighbouring municipalities. In many cost-sharing agreements, the objective of the provider is to reduce the cost while maintaining services and increasing the number of users. These agreements can help maximize benefits to a wide range of users while minimizing costs.

C. RISK MANAGEMENT

It is important to assess the risk associated with each asset and the likelihood of failure. Asset failure can occur as the asset reaches its limits and can jeopardize public/environmental safety. In addition, certain assets have a greater consequence of failure than others.

A risk matrix can help prioritize which assets should be repaired/replaced, even those which the Township has already identified to be in "Very Poor" or "Poor" condition. The evaluation rating is then linked to the condition assessment parameter discussed in Section II. Assigning probability of failure parameters to each asset would require an appropriate condition assessment and rating of the asset. The Township should look to implement a risk matrix approach for all assets in the next iteration of the Asset Management Plan. Table 17 illustrates a typical risk matrix.

Table 17 - The Risk Assessment Matrix

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

Risk Matrix Example: Probability of Failure level 5 (Very Poor Asset) multiplied by Consequence of Failure level 5 (Severe Consequence of Failure) = Risk Score of 25. This would illustrate that the particular asset assessed should be prioritized for replacement immediately as it would have the highest risk.

V FINANCING STRATEGY

This section of the 2017 Plan is intended to provide a framework for the Township to integrate asset management with annual budgeting and long-term financial planning.

The Township has traditionally followed a "pay-as-you-go" approach to financing infrastructure, whereby capital expenditures are prioritized and approved with reference to the availability of funds. In recent years, Council and staff have adopted some strategies to address the infrastructure gap and have been successful in undertaking a series of capital projects to improve the Township's position. Additionally, the implementation of a dedicated special capital levy and the creation of asset preservation reserve further enhances Council's commitment to its strategic objective to ensure infrastructure sustainability.

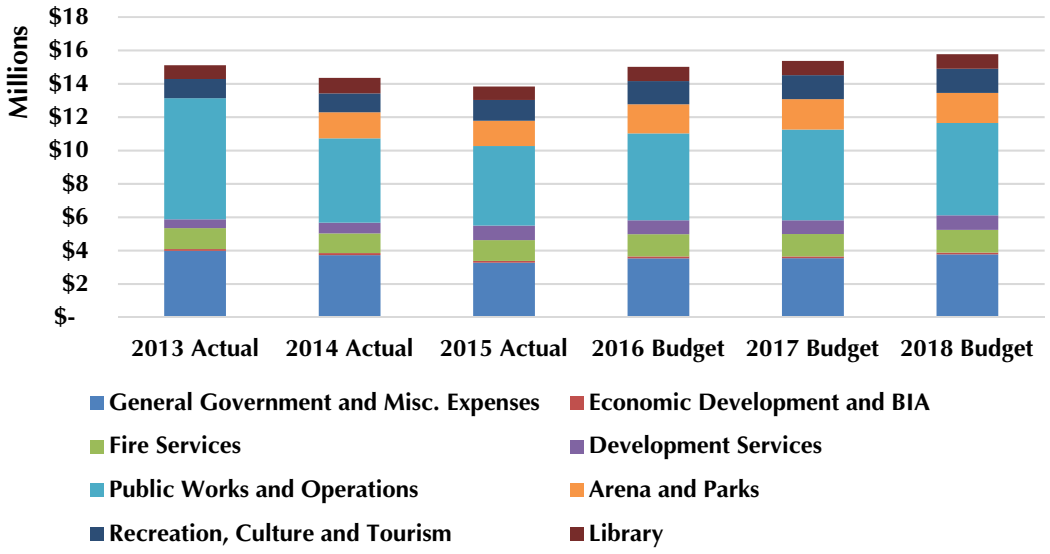
A. OPERATING BUDGET EXPENDITURES

The Township has historically set aside funds to maintain its capital assets in a state of good repair. This has meant that sufficient funds have typically been available to deal with immediate and critical asset repair and rehabilitation needs. Overall, the Township's budget has risen year-over-year in response to increased capital repair and operating needs.

Figure 18 illustrates total expenditures by major category based on the 2017/2018 budget report on the Township website. Total expenditures were $15.1 million in 2013 and decreased to $14.4 million in 2014. The 2017 budget shows an increase of $1.5 million from 2015 actual expenditures ($13.8 million) to $15.4 million. The largest share of expenditures, which includes regular maintenance of assets, was in Public Works and Operations which accounts for 35% of total expenditures in 2017.

It is anticipated that the Township's operating expenditures will be adjusted annually at minimum to account for the effects of inflation. Although, if additional asset management strategies are adopted by the Township, annual costs could exceed regular inflationary adjustments.

Figure 18
Township of Uxbridge Operating Budget Expenditures



Source: 2017/2018 budget report.

B. REPAIR AND REPLACEMENT SCHEDULE

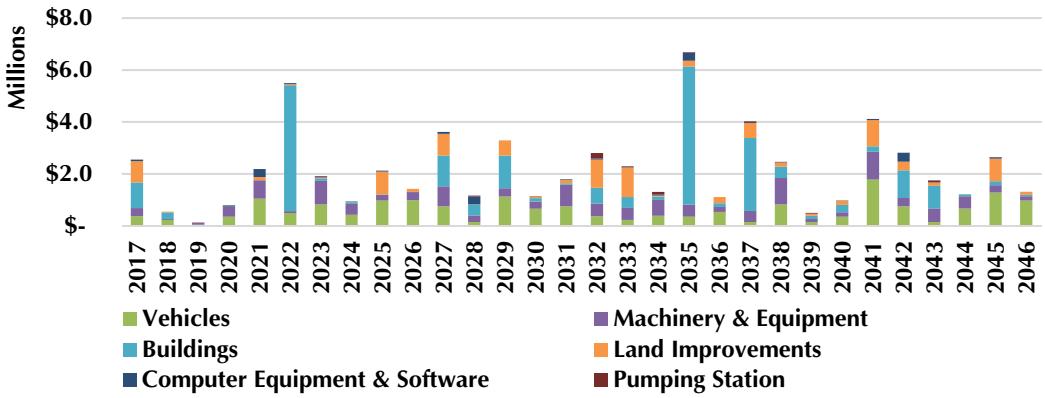
Figure 19 sets out the schedule of repair and replacement of non-linear public works assets required to meet service level targets for the assets considered in the 2017 Plan. Over the 30-year period, to 2046, the tax supported repair and replacement program totals about $65.0 million. The average yearly replacement costs of these assets amount to approximately $2.2 million.

In 2017, some expenditures have been identified that are required to repair or replace poor conditioned assets amounting to a total of $2.5 million. Of this amount, building and facility assets represent 39%, or $985,000, and land improvements represent 32%, or $818,000.

Despite the immediate replacement requirements being manageable, there are some notable building requirements identified for replacement in the forecast. In 2022, the existing portion of the Uxpool is expected to be replaced with a larger facility. The replacement cost of the current facility amounts to $4.7 million. In 2035, several components of the Uxbridge Arena are expected to reach the end of their useful life. The mechanical components of the community centre, the mechanical components of ice pad #2, interior office of ice pad #2, the roof of ice pad #1 and two roof top air

conditioners amount to $3.0 million in total replacements. Finally in 2037, the original Uxbridge Library main building structure amounts to a total of $1.2 million.

Figure 19
Capital Replacement Schedule 2017-2046
2017 AMP - Non-Linear Public Works Assets



C. CAPITAL PROVISION SCHEDULE

A key component of the financing strategy is to identify the level of expenditure required on an annual basis to pay for asset management. Costs to maintain and eventually repair or replace Township assets need to be understood and contributions to reserves and reserve funds need to be quantified. In this section, provisions for repair and replacement are calculated for each asset based on its remaining useful life and the anticipated cost of replacement in current $2017. The aggregate of all individual provisions form an annual contribution to reserves for the purpose of asset repair and replacement.

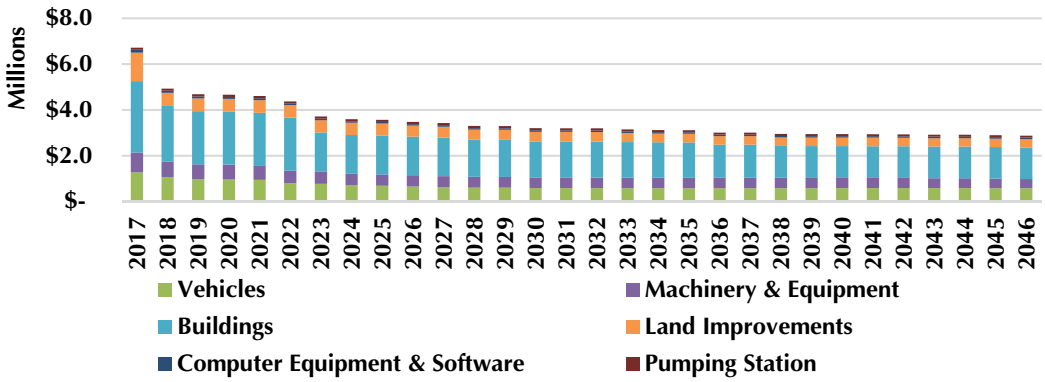
Figure 20 shows the funds that would have to be contributed annually to reserves to meet service level targets for all non-linear public works assets included in this 2017 Asset Management Plan to 2046.

Figure 20 demonstrates that:

- The Township has limited reserves on hand so a higher level of capital contributions is required over the long term in order to meet service level requirements.
- Excluding the assets considered under the public works linear asset plans (roads, bridges, culverts, streetlights, sidewalks and stormwater ponds), average

annual contributions over the 30-year period would have to be in the order of $3.5 million per year (net of existing reserve funds), mostly related to buildings.

Figure 20
Capital Contribution Schedule
2017 AMP - Non-Linear Public Works Assets



In addition to the non-linear public works assets included in this 2017 Plan, the findings outlined in the independent public works linear Asset Management Plans have been incorporated into the capital provision schedule. Total recommended work over the first 10-year period identified in the plans amounts to $76.2 million. The total depreciation of these assets amounts to approximately $7.3 million per year which is based on an assumed 50-year lifecycle for roads, 47-year blended lifecycle for bridges/culverts, 30-year blended lifecycle for streetlights, 64-year blended lifecycle for sidewalks, and a yearly identified provision of $644,000 per year for stormwater ponds. The depreciation of roads, structures, streetlights and sidewalk assets plus the recommended works in the first 10-year period was accounted for in the analysis. All values from the public works linear asset Plans have been adjusted to current dollars to account for the effects of inflation at a rate of 2%. A summary of the results including the 2017 Plan requirement are as follows:

- Average annual contributions over the 30-year period would have to be in the order of $13.2 million per year (net of existing reserve funds), mostly relating to the Township's public works linear infrastructure.

- Higher capital contributions would be required in the short-term to pay for significant infrastructure expenditures identified in 2017. However, there will likely be measures the Township could take to mitigate this financial pressure in 2017 (and future years). These measures are more fully discussed in Part E and G of this section.

- The Township will spend approximately $6.5 million (including gas tax and reserves) in 2017 for repair/replacement of assets. The $6.5 million in capital spending is comprised of:
    - $2.26 million in tax levy capital funding
    - $260,280 from the tax levy related to the special capital levy
    - $1.55 million from the Township's existing reserves;
    - $1.67 million in grant funding (net of other transfers);
    - $745,000 in gas tax funding; and
    - $65,000 from the Region of Durham.
- Investment in Township assets would need to increase by $6.7 million to achieve the $13.2 million requirement (including all linear infrastructure). It should be noted that of the 2017 capital funding sources, tax supported revenues are the most secure form of recurring revenue for the Township.

D. CURRENT INFRASTRUCTURE DEFICIT

To implement sustainable asset management practices the Township needs to have an understanding of the current "infrastructure deficit" as well as the funding gaps that would arise should the required annual contributions to capital, identified in Part C: Capital Provision Schedule, be delayed.

The current infrastructure deficit shown in Table 18 represents the difference between the required in-year contributions to capital and the current contributions to capital for both the assets in this 2017 Plan and the public works linear infrastructure assets included in the 2015-2016 Plans. The total 2017 capital provision required is $55.3 million (including infrastructure backlog) while current capital spending is $6.5 million (includes grants and reserve funding). The current in-year infrastructure deficit is therefore $48.7 million, which represents about 12% of the total replacement value. The infrastructure deficit would continue to grow should the required annual contributions to capital, identified in Part C, be delayed.

Table 18 Infrastructure Deficit for Base Year 2017		
Legend	**Calculation of Current Infrastructure Deficit**	
A	Projected 2017 Capital Provision (2017 AMP)	$ 6,715,306
B	Projected 2017 Capital Provision (2015-2016 AMPs for Linear Infrastructure)	$ 48,539,867
C	Total 2017 Capital Provision = (A+B)	$ 55,255,173
D	Total 2017 Capital Spending (Budget)	$ 6,540,923
E	Funding Gap = (C-D)	$ 48,714,250
F	Cumulative Infrastructure Deficit = (sum of E)	$ 48,714,250
	Cumulative Infrastructure Deficit as a Percentage of Total Replacement Value	12%
Note: Total 2017 capital funding (D) is derived from 2017 capital budget and includes in year-funding for capital from, tax levy, reserves, special capital levy, gas tax, gravel road royalties, and contributions from Durham Region and is net of debt payments. Does not include funding from development charges for growth-related projects.		

E. FINANCING STRATEGY

It is unrealistic to expect the Township to address the total $48.7 million infrastructure deficit in the short-term. Therefore, a long-term funding strategy that identifies options for addressing current and future asset expenditures is required. This analysis recognizes that the Township has not kept pace with the required contributions to perform the work set out in the calculated asset repair and replacement schedule in Part B: Repair and Replacement Schedule.

If the Township were to implement a funding strategy to eliminate the infrastructure deficit by 2046, the Township would be required to increase capital contributions on an annual basis by an average of about $660,000 for thirty years. For 2018, the increase would be in addition to the $2.26 million tax supported capital funding and the $260,280 special capital levy in 2017. The yearly revenue requirement is equivalent to 5.6% of the Township's 2017 tax levy revenues of about $11.8 million. A detailed table of this strategy can be found in Appendix B – Table 1.

Eliminating the infrastructure deficit by 2046 is an aggressive objective and is an initiative the Township is unlikely to explore at this time; a few reasons include:

- The required capital contributions (to eliminate the deficit) will necessitate an increase to property taxes beyond a reasonable measure;

- The Township may need to decrease or limit funding of other key Township services or initiatives in lieu for capital repair and replacement activity;

- Assets can remain in use past their engineered design life and are capable of performing to meet the Township's desired level of service under these circumstances. Therefore, in such instances, the asset does not necessarily need to be replaced by virtue of exceeding their design life; and

- Prudent asset management strategies which are currently employed by the Township (Section IV: Asset Management Strategies) can often extend the requirement of major repair or replacement of capital assets and may prolong the life of the asset.

Further to the above noted comments, three financing strategies were developed to illustrate a rational capital contribution level to meet asset replacement needs for tax supported assets (shown in Table 20). The financing strategies illustrate the "smoothed options" to the capital repair and replacement requirements identified in Part B. Assumptions for each of the three funding strategies is shown in Table 19 and each financing strategy is shown in Table 20. Under any of the three strategies, the infrastructure deficit is not eliminated by 2046.

Table 19
Financing Strategy Key Assumptions

Known Funding Source	Assumptions
Tax Levy Support	• Existing 2017 tax supported capital funding of $2.26 million is assumed to be the starting point and base case for increasing annual capital contributions.
Special Capital Levy	• Special capital levy of $260,280 per year is used to fund general capital repair and replacement activities.
Upper Level Funding Support	• In 2018, guaranteed funding from the Region of Durham and other upper levels of government (excl. Gas Tax) in the amount of about $7.5 million has been included in the analysis.
Gas Tax Reserve Fund	• Gas tax funding for 2017 is $745,000. In 2018 and onwards gas tax funding is assumed to remain constant at $657,000 per year.
Gravel Road Royalties	• Gravel road royalties are expected to continue throughout the forecast period at $180,000 per year.

Table 20 Summary of Financing Strategies	
Financing Strategy	**Strategy Parameters**
Strategy 1 **Close in-year Funding Gap by 2036**	• Increase annual capital contributions by approximately $365,000 per year. • For 2018, the increase would be in addition to the 2017 $2.26 million tax supported capital funding and the $260,280 special capital levy. • The yearly revenue requirement is equivalent to 3.1% of the Township's 2017 tax levy revenue.
Strategy 2 **Close in-year Funding Gap by 2046**	• Increase in annual capital contributions amount to approximately $235,000 per year. • For 2018, the increase would be in addition to the 2017 $2.26 million tax supported capital funding and the $260,280 special capital levy. • The yearly revenue requirement is equivalent to a 2.0% of the Township's 2017 tax levy revenue.
Strategy 3 **Increase capital funding at a rate of 3% each year**	• Tax supported capital funding is increased at a rate of 3% each year • No significant changes in annual capital funding.

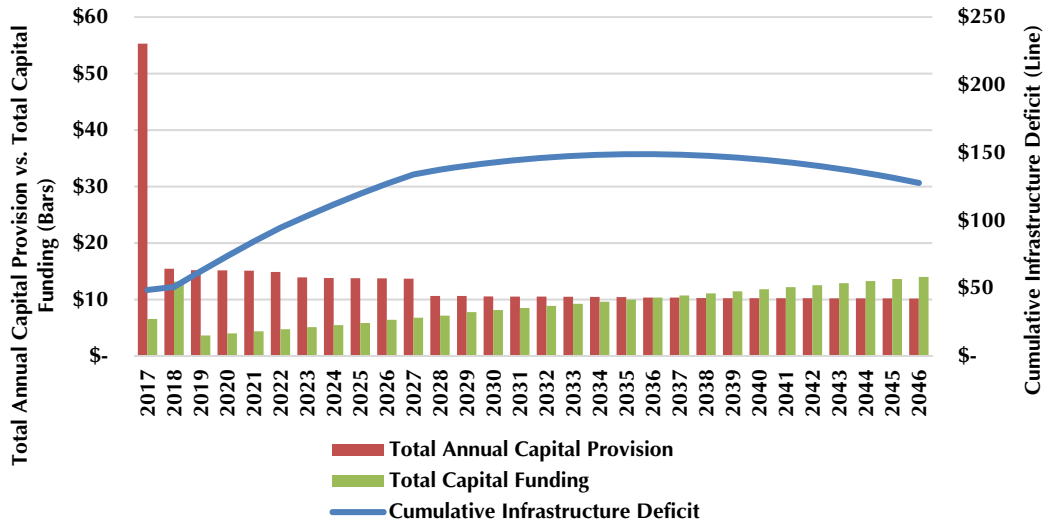
Note: Key assumptions noted in Table 19 are maintained for all three financing strategies.

1. Financing Strategy 1 – Close in-year Funding Gap by 2036

Given the capital expenditure requirement to meet the asset replacement needs, the cumulative infrastructure deficit will reach $148.8 million before the Township begins to reduce this amount by increasing capital contributions by more than the annual provision requirement in 2036 (Figure 21). The infrastructure deficit will increase by the annual funding gap and decrease once the annual contributions are greater than the annual provision. By 2046, the infrastructure deficit will be at $127.9 million. This strategy represents an annual increase in capital contributions (including transfers to reserves) of about $365,000 per year. This represents 3.1% of the Township's 2017 net tax levy budget of about $11.8 million. A detailed table of Strategy 1 can be found in Appendix B – Table 2.

It is important to note that even though the in-year funding gap has been addressed by 2036, the infrastructure deficit poses risk to the Township. The cumulative deficit in 2036 of $148.8 million, is indicative of overdue assets that have fully depreciated and may be in very poor condition. These assets would need to be addressed in a longer time frame and are at risk for asset failure.

Figure 21:
Financing Strategy 1: Close in-year Funding Gap by 2036 (Million $)



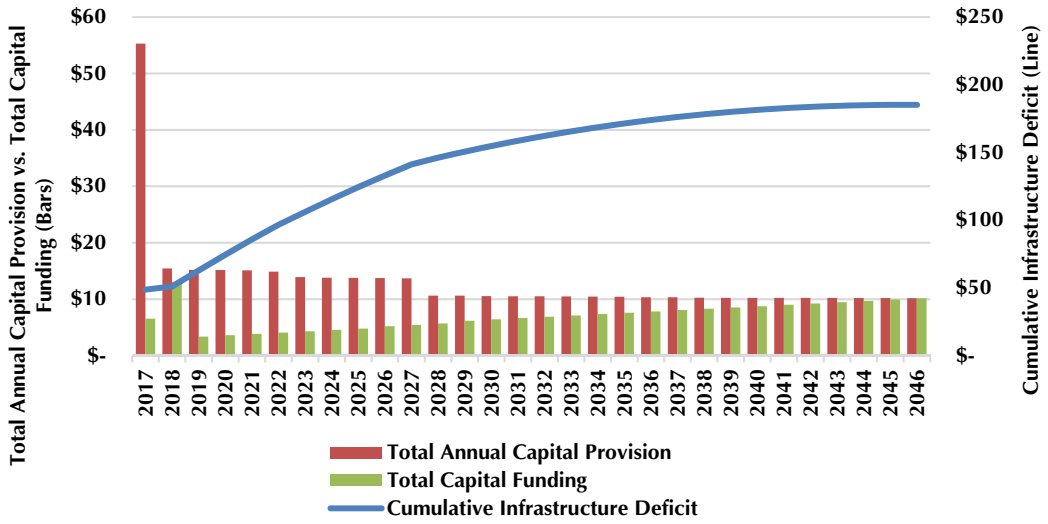
Note: The projected capital provision represents the annual requirement to repair and replace existing Township assets as scheduled, based on the condition of each asset and the remaining useful. The projected annual capital provision requirement shown is net of existing reserves (e.g. existing funds have been incorporated) and includes the asset requirements identified in the both the 2015-2016 Plans and the 2017 Plan.

2. Financing Strategy 2 – Close in-year Funding Gap by 2046

Given the capital expenditure requirement to meet the asset replacement needs, the cumulative infrastructure deficit will reach $184.7 million before the Township begins to reduce this amount by increasing capital contributions by more than the annual provision requirement in 2046 (Figure 22). The infrastructure deficit will increase by the annual funding gap and decrease once the annual contributions are greater than the annual provision. By 2046, the infrastructure deficit will be at $184.7 million. This strategy represents an annual increase in capital contributions (including transfers to reserves) of about $235,000 per year. This represents 2.0% of the Township's 2017 net budget of about $11.8 million. A detailed table of Strategy 1 can be found in Appendix B – Table 3.

It is important to note that even though the in-year funding gap has been addressed by 2046, the infrastructure deficit poses risk to the Township. The cumulative deficit in 2046 of $184.7 million, is indicative of overdue assets that have fully depreciated and may be in very poor condition. These assets would need to be addressed in a longer time frame and are at risk for asset failure.

Figure 22:
Financing Strategy 2: Close in-year Funding Gap by 2046 (Million $)



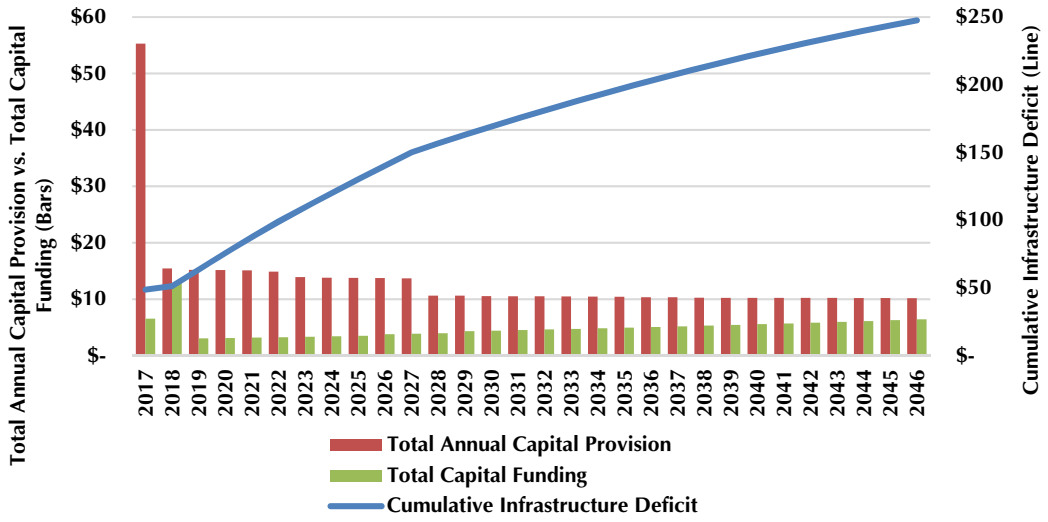
Note: The projected capital provision represents the annual requirement to repair and replace existing Township assets as scheduled, based on the condition of each asset and the remaining useful. The projected annual capital provision requirement shown is net of existing reserves (e.g. existing funds have been incorporated) and includes the asset requirements identified in the both the 2015-2016 Plans and the 2017 Plan.

3. Financing Strategy 3 – Maintain Status Quo

The third strategy assumes capital contributions are moderately increased at a rate of 3% per annum. Figure 23 illustrates the analysis of Strategy 3. A detailed table of Strategy 3 can be found in Appendix B – Table 4.

This analysis indicates that the Township would not close the in-year funding gap by 2046. The cumulative infrastructure deficit will reach $247.2 million by 2046 and will continue to grow beyond the planning period. Strategy 3 represents the scenario with the greatest risk. The growing infrastructure deficit represents an increasing number of assets that have fully depreciated and may be in very poor condition.

Figure 23:
Financing Strategy 3: Maintain Status Quo (Million $)



Note: The projected capital provision represents the annual requirement to repair and replace existing Township assets as scheduled, based on the condition of each asset and the remaining useful. The projected annual capital provision requirement shown is net of existing reserves (e.g. existing funds have been incorporated) and includes the asset requirements identified in the both the 2015-2016 Plans and the 2017 Plan.

F. AVAILABLE FUNDING TOOLS

The following section discusses, at a high level, the range of tools available to the Township for funding capital expenditures.

Federal and Provincial Grants

Historically, the Township has had some success in securing grant funding from higher orders of government to assist in funding capital projects. The Township will continue to seek financial assistance from upper levels of government (where available) to fund non-growth related capital works.

The Township of Uxbridge has indicated that it expects to continue receiving Gas Tax funds – these funds have been incorporated into the financing strategies at current levels. In addition, the Township is also expecting funding from upper levels of government to help assist in undertaking required work on the Brock Street Culvert. This funding has been incorporated into the analysis.

Development Charges

Development charges may be imposed to pay for increased capital costs required because of increased needs for services arising from development. Historically, the Township has used development charges to the extent possible to fund "development-related" capital costs. It is noted that capital costs of new infrastructure that benefit existing Township residents cannot be funded from development charges. Furthermore, 10% of all development-related capital costs for certain services must be funded from non-development charge sources (typically property taxes).

Property Taxes

According to the 2017 budget, property taxes represent about 67% of revenues. The use of property taxes to fund municipal services is the most secure source of funding for the Township. As such, the Township would likely be required to increase property tax revenue to fund additional capital expenditures.

The Township has taken initiative by implementing a special capital levy to fund general capital repair and replacement activities.

Rate Supported Funding Tools (Stormwater)

The Region of Durham is responsible for the operation of the Township's water and wastewater infrastructure, which is supported by utility rates. The replacement of stormwater infrastructure in the Township of Uxbridge is currently funded through property taxes.

Many municipalities have recently began the process of moving stormwater pond and linear infrastructure to a utility based charge to better align the nexus between who benefits and who pays for the service. As such, the Township of Uxbridge could explore the opportunity to undertake a Stormwater Financing Strategy with the intention of shifting the funding of this service from property taxes to utility rates. Shifting recovery of stormwater services to a user rate system away from property taxes will allow a traditionally underfunded service to generate sufficient revenues to cover costs, particularly as capital costs are expected to increase in the future.

User Fees

To the extent that user fees are being collected to fund repair and replacement of capital infrastructure, user fees should be allocated to capital reserves. The Township should look to review and ensure user fees are being utilized to the full extent as allowed under provincial legislation. This will help alleviate funding pressures from the tax base and allow for greater flexibility to fund capital asset repair and replacement activities. Most commonly, municipalities undertake detailed user fee reviews of their building, planning and engineering fees in order to recover the full cost of providing services – the full cost recovery user fee rates generally incorporate a component for building capital replacement.

Public Private Partnerships

Public Private Partnerships (P3s) are a common tool for delivering infrastructure services throughout communities across Canada to build roads, hospitals, light rail transit, water and wastewater treatment facilities and other infrastructure. P3s can offer more effective project and lifecycle cost control and risk management than traditional procurement methods. The Township could explore P3s as a tool to carry out capital related activities.

Local Improvement Charges

Municipalities, through local improvement charges, have the ability to recover the costs of capital improvements made on public or privately owned land from property owners who will benefit from improvement. The Township could use the local improvement process to undertake a capital project and recover all or part of the cost of the project.

Developer Contributions

Municipalities obtain a wide-range of assets through developer contributions; these contributions can be "in kind" direct provision of assets or funded, partially or fully, through agreement. The contributions are typically facilitated through condition of a subdivision or site plan agreement under the *Planning Act*. An important consideration in determining the level and extent of developer contributions is the municipality's "local service definitions" which, under the *Development Charges Act* and *Planning Act*, are used to establish which type, and shares, of capital expenses are considered eligible for direct development contribution or funding. It is recommended that the Township review local service definitions as part of future Development Charges Background Studies.

Assets funded, or provided, under developer contributions are typically "first round" assets but can, in certain circumstances, include replacement of existing assets and funding of non-DC recoverable shares. An example of replacement of an existing asset is when an existing road requires improvements or upgrades as a result of a specific development; the municipality could endeavour to require the developer to undertake, or fund, the road improvements as a condition of the subdivision agreement. The municipality benefits from the funding of the improved road, but is also an effective deferral of a capital renewal expense as the existing, and therefore depreciated asset, is also replaced or renewed.

G. FINANCING AND FINANCIAL MANAGEMENT PRACTICES

This section discusses, at a high level, the means by which capital revenue can be raised or secured.

Debt (as a financing tool)

Debt financing is a viable tool available to fund capital projects. Planned debt is a responsible way to spread the costs of a project over the life of an asset to ensure the tax payers who benefit from the asset share the cost. Therefore, the burden of capital is distributed equally between the current tax payer and future tax payers.

The amount of debt a municipality can carry is set by provincial regulations to ensure municipalities continue to operate in a fiscally sound environment. The Township currently operates well below the annual repayment limit of $3.8 million in total net debt charges as identified in the Township's 2015 Financial Information Return. As a safe practice, any potential debt should not be financed for a period longer than the average useful life of the asset. This will ensure the Township is not paying for an asset outside the design life beyond the asset's expected use.

Reserves and Reserve Funds

Reserves are to be used to cope with high capital investment periods by saving during low capital investment periods. This practice will smooth annual expenditures and ensure the Township can complete the required annual capital works. In addition to contributions during low investment periods, many municipalities use annual surpluses, should one arise, to increase reserves. There is no prescribed amount of reserves for a Township to have at any given time, but they should be sufficient to cover emergency work (if required).

As of January 1st 2017, the Township had a total capital reserve balance of $3.7 million. The reserve balances consider only the money the Township has on hand to carry out capital projects related to the services to which this asset management plan applies and excludes operating and rate stabilization reserves. The entire balance of capital reserves, has been considered in the calculation in the 2017 infrastructure deficit.

H. FUTURE DEMAND

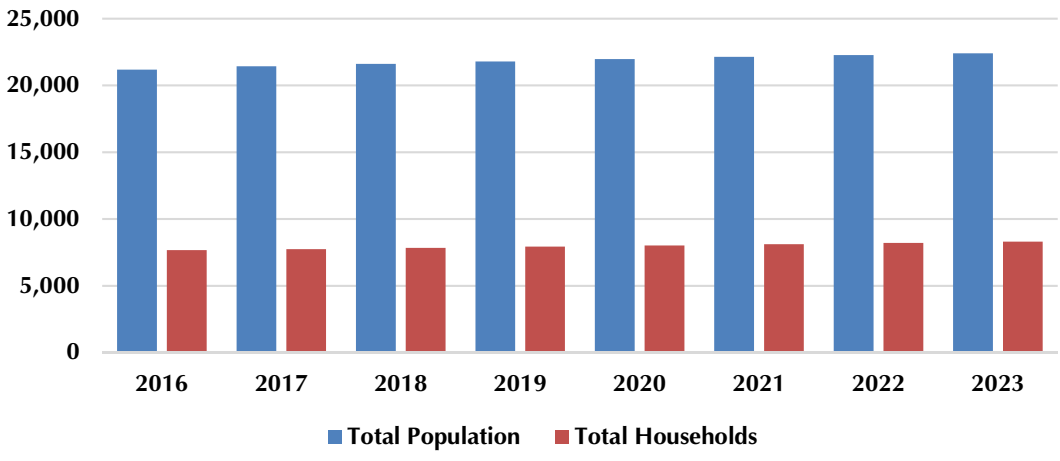
The 2017 Plan reflects the assets that the Township currently owns and operates. As the Township grows, it is expected that new growth related assets will be acquired to facilitate development. As a result, the financial requirements of the Township can be expected to increase relative to the assets acquired. Regular updates of the 2017 Plan will include newly acquired assets.

It should be noted that future updates to the Township's Development Charges Background Study must now include a detailed Asset Management Plan that demonstrates the financial sustainability of all assets to be funded by development charges. When the Development Charges Background Study is updated, currently planned for 2019, the new capital assets identified will be incorporated into the Township's next Asset Management Plan.

Figure 24 illustrates the growth anticipated in the Township from the period 2016 to 2023. Over this period, a total of about 630 new occupied units are expected with the census population growing to nearly 22,500 persons by 2023. As a result, the Township expects to acquire assets in all categories to meet increased demand.

Most notably, the Township expects to expand and rebuild the Uxpool in 2022 at an estimated cost of $10 million, partly funded from development charges and upper-tier provincial grants (although not confirmed). In addition, the Township expects to build a new Animal Services facility estimated between $1.7-$1.8 million partially funded from the tax levy, development charges, local donations and contributions from the Township of Scugog. These facilities will place increased pressure on the tax base to fund the repair and replacement of these newly acquired assets, while managing the existing infrastructure backlog.

Figure 24:
Population and Household Projections - Township Wide



Source: Township of Uxbridge Development Charges Background Study and 2016 Census data.

VI CONCLUSIONS AND RECOMMENDATIONS

The objective of this Asset Management Plan is to provide the Township of Uxbridge with the information it needs to make decisions on how best to manage capital assets in a sustainable way to 2046. In this section, recommendations based on the analysis undertaken as part of the 2017 Plan are made.

A. SUMMARY OF KEY FINDINGS

- The Township's asset base is extensive, valued at $410.3 million, in relation to the census population of about 21,200 persons.
- Overall, a high proportion (about 68% or $279.2 million) of Township assets are considered to be in "Good" to "Very Good" condition. At the same time, just under 20% ($78.2 million) of infrastructure is considered to be in "Poor" to "Very Poor" condition.
    - Nearly 75% of the "Poor" to "Very Poor" condition assets are related to the Township's roads.
- The Township of Uxbridge has made considerable effort in recent years to address the infrastructure gap and improve the condition of assets:
    - Implementation of a special capital levy to address capital infrastructure requirements;
    - The Township has created an asset preservation reserve, annual contributions to this reserve have been regularly increased in recent years;
    - Gravel Road royalties received are directed to capital repair and replacement activities;
    - Through its annual capital budgeting process, the Township addresses critical issues and assets in need for repair or replacement; and
    - Overall, the Township has some reserves available to fund capital projects.
- The responsibility to maintain existing infrastructure is challenging, however, in addition to current capital funding, the Township should increase annual capital contributions to address current and future infrastructure requirements;

- Property taxes are the most secure form of revenue and the Township should consider increasing tax base revenues, above current practices, to fund capital works;

- Ensure user fees are being utilized to the full extent as allowed under provincial legislation. This will help alleviate funding pressures from the tax base and allow for greater flexibility to fund capital asset repair and replacement activities.

- Explore alternative arrangements to provide services – public private partnerships or shared services.

- The Township is considered to be in good fiscal standing with strong budgetary performance and no external debt - the Township currently operates well below the annual repayment limit of $3.8 million in total net debt charges. The Township has internally financed a few large projects (Arena and Library upgrades) by borrowing funds from the Township's Future Capital Projects Reserve, with funds to be repaid back to the reserve over future periods. This debt capacity could allow the Township to use debt to carry out emergency asset replacements, improvements, or other strategic projects which typically provide a return on investment such as reduction in operating costs.

- The Township should continue to seek funding from the federal and provincial government (when available) to undertake capital related works.

B. SUMMARY OF RECOMMENDATIONS

Based on the research and analysis undertaken for this 2017 Plan the following conclusions can be reached:

1. Continue to Improve Capital Development Planning Process

- The Township employs a multi-year capital budget and forecasts for all services based on a 10-year forecast horizon.

- In addition to the Township's current capital budget and forecast funding descriptions, each capital project should also include:

  - long-term costs, including operations, maintenance, and asset rehabilitation costs;
  - capacity to deliver; and
  - alternative service delivery and procurement options.

- A range of quantifiable service level targets that incorporate the quantity and quality of capital assets should continue to be expanded on and established for all services. Targets should be measured, reported on, and adjusted annually.

- Repair and replacement capital works should be prioritized based on asset condition ratings. For example, assets identified as "Very Poor" and "Poor" can be considered for immediate attention.

    - Advanced capital prioritization processes include the use of a risk matrix to assist in determining annual capital spending.
    - Continue to practice regular maintenance activities for Public Works linear assets (resurfacing, crack sealing, etc.) to prevent these assets from getting to the Now needs state as indicated in the 2015-2016 Plans.
- Infrastructure assets which have been provided a "Fair" condition rating should be targeted for maintenance to ensure they continue to perform at the expected level.

- The Township should, where possible, coordinate the construction of new (growth-related) infrastructure with infrastructure repairs and replacement to achieve cost efficiencies.

2. Ensure Asset Inventories are Updated Regularly

- The Township should establish an asset management internal network including department heads from the Chief Administrator's Office, Treasury, Arena and Parks, Recreation Programs and Culture, Planning, Fire Services, Library, Public Works and Operations. The internal network can be lead by the Treasurer as the champion of the non-linear assets and by the Director of Public Works as the champion of linear Public Works assets.

- Sound asset management decisions are only possible if information in the asset registry is accurate. The Township designated data champion should regularly update the registry to account for asset purchases, upgrades, and replacements, as well as asset condition ratings and information on useful life.

- The Township should continue to refine the condition assessments for all assets considered under this 2017 Plan; and

- The Township should update this Asset Management Plan at a minimum every 3-5 years.

3. Optimize the Use of Existing Assets

- The Township should implement a range of engineering and non-engineering approaches to extend the useful life of current assets. A number of municipalities in Ontario have had success in this regard by:
    - Regular and ongoing maintenance work;
    - Daily vehicle and equipment inspections;
    - Substituting retrofitting and rehabilitation work for (more costly) full replacement of an asset; and
    - Land improvement assets, such as fencing, may be best suited for repair and maintenance rather than full capital replacement.
- The Township should explore opportunities to dispose under utilized infrastructure/facilities which may not warrant repair/replacement. For example, underutilized Township halls, or surplus land/parks, could be disposed and sold; and
- Coordinate assets into specific hubs to create operating and capital repair/maintenance efficiencies where possible. Example: Sport fields into centralized areas (ex. Fields of Uxbridge).

APPENDIX A

OPERATIONAL LEVELS OF SERVICE

Table A1
Township Operational Levels of Service

Department Specific Levels of Service	
Department	**Level of Service/Service Provided**
Fire	• All Fire Service policies adhere to regulatory and best practices including: • Fire Protection and Prevention Act 1997 (FPPA 1997) • Ontario Building and Fire Codes • Emergency Management and Civil protection Act • Other Provincial Acts, Regulations and National Standards (NFPA) • Occupational Health and Safety Act and Section 21 Guideline Notes • Office of the Fire Marshal and Emergency Management Directives and Public Fire Safety and Technical Guidelines • Fire Master Plan, Simplified Fire Risk/Threat Assessments • Municipal By-laws, Department and Corporate Policies and Standard Operating Procedures
	• Fire services deliver both emergency and community related services including: • Public Education/Relations (includes Learn Not to Burn in public schools and seniors' program development, radio and media PSA development and delivery, station tours and public events) • Fire Prevention • Fire Inspection/Code Enforcement (includes property/building inspections, plan reviews, new building construction inspections, oversized fire permit inspections, fire safety plan reviews and fire drills) • Fire suppression • Emergency Response • Training/ Recruitment of Volunteer Firefighters (training is on-going and in addition to the weekly in-house training, firefighters attend a number of educational programs) • Fire Investigation • Emergency Management Program Coordination • Auto extrication • Medical responses (including defibrillation and medical aid until paramedics arrive) • Hazardous material response (awareness level) • Cold water rescue (land based).
Library	• Township libraries provide educational and community based services, including: • Local libraries are strong contributors to community development, working in partnership with community agencies and residents to form a network, which connects people to their local neighborhoods and the Township as a whole. • The Township's libraries provide seating and public meeting rooms, literacy tutorial space, youth space, interactive centers for children and relaxed reading. Work space allows for quiet individual and group study, including technology-enabled collaborative workspace. • Programs include book clubs, seniors outreach, reading programs, art exhibit space, and computer courses. Additionally, the libraries offer summer, PD day and March break camps, mobile library delivery to seniors' homes and genealogy services providing local history archives. • Public access to computers and wireless service, reference and readers' services are also available. Computer and wireless services include extensive electronic resources, equipment and software, computers, labs and wired classrooms. Research and reference services provide specialized services for the entire library system, including a telephone information service, on-line programming, interlibrary loans, audio visual learning and listening technology, digital reproduction and collection development, and virtual information services. Exhibitions and events featuring high profile speakers to attract participants are also common.

Table A1
Township Operational Levels of Service

Department Specific Levels of Service	
Department	**Level of Service/Service Provided**
Library	• Township libraries have a variety of collection materials for customers, including: • Collections and information services include print materials, audiovisual and e-content. Reflecting such community needs, popular collections include, recreational children's and French collections, reference and other material. Adult, youth and children's leisure and informational material in all formats that range from basic to research level are circulated. Special collections of rare and valuable materials that are of historic importance, maintained in original state and format are also collected. Library staff actively develop digital collections to provide electronic and local history collections. Print collections are actively marketed through well-organized shelving and flexible displays.
Parks & Recreation	• Parks and Recreation provide a variety of services and service levels throughout the year, they include: • On-call Emergency System 7 days/24 hours • Ice rentals - 7 days per week 6 am-12 am from September to May • Leisure skating at the Arena • Ice floor rentals – June to August • Facility staff meet prospective patrons to provide facility tours • Public skating
	• Parks and Recreation aims to maintain customer service level standards including: • Complimentary items for local events/fundraisers (gift cards/swim and skate passes) • Customer Service inquiries either by e-mail and/or voice-mail are dealt within a 24 hour period
	• Parks and Recreation aims to maintain certain maintenance goals for parks, trails and open space: • Grass Cutting - 7 day cycle; approx. 24 cuts per season • Sports Field/Ball Diamond Grass Cutting - approx. 1 cut per week • Monthly inspection of all Playgrounds as per CSA standards • Outdoor Building/Cleaning - 5 days per week • Parks/Garbage Collection – 5 days per week • Updated and accurate signage • Horticulture along Main Street and at Municipal facilities
Recreation	• Recreation facility services provide a variety of services throughout the year, they include: • Four full time staff maintain On-call Emergency Systems 7 days/24 hours; • Facility coverage and daily operations and maintenance at the Uxpool; • Uxpool rentals - 7 days per week 6 am-10 pm; • Leisure swimming at the Uxpool; • Uxpool open 103 hours/week with recreational drop in swimming 57.5 hours/week including lane swims, aquafit, senior swims, parent and tot swims, and leisure swims; leisure swimming - 9 times per week; • Facility staff meet prospective patrons to provide facility tours (previously conducted by Facility Advisory Boards)

Table A1
Township Operational Levels of Service

Department Specific Levels of Service	
Department	**Level of Service/Service Provided**
Recreation	• Recreation aims to maintain customer service levels, they include: • In-person registration and memberships • Inclusive and adapted programming available • Communications and community outreach includes digital guide; electronic Leisure newsletter, flyers, ads, web updates, information sharing participation at local and regional events, liaison with corporate communications for social media • Part-time staffing (recruitment/hiring/training) • AED/risk management, ongoing training, records, policy updates, communications for safety awareness • In-house Leisure Guide development/print/distribution – twice per year • Sessional (daily when required) web updates to entire recreation tab area
	• Recreation programming aims to maintain customer service levels, they include: • Program Delivery - 4 sessions per year • Staff/Volunteer Training and Development - ongoing • Program Registration - ongoing • Complimentary items for local events/fundraisers (gift cards/swim and skate passes) • Ratio for camp: 6:1 for Juniors; 8:1 for Intermediates; 10:1 for ages 9 -13 • 1:1 support for Special Needs available for summer camp and where possible for integration into regular programming • Customer Service inquiries either by e-mail and/or voice-mail are dealt within a 24 hour period • Drop-in programs – (e.g. youth sports, afterschool program) • Indoor Walking Program available Monday and Wednesday November 1st to April 30th.
	• Aquatics programming aims to maintain customer service levels, they include: • Aquatic Centre open 7 days/week; 93 hours/week • Recreational swimming 57.5 hours/week including lane swims, aquafit, senior swims, parent/tot swims, leisure swims • Leisure Swims - 9 times per week • 141 shifts/week; 582 staff hours/week • 1162 average pool users/week • Pool inspections as per Public Health Regulations • 12+ Outreach Programs and special events/year

APPENDIX B

FINANCING STRATEGY DETAILED TABLES

Table 1
Township of Uxbridge
Asset Management Plan
Close Cumulative Infrastructure Deficit by 2046

Legend	A	B	C	D	E	F	G	H	I	J	K	L
Year	**Projected Annual Capital Provision (2017 AMP Assets)**	**Projected Annual Capital Provision (Public Works Linear Infrastructure)**	**Total Annual Capital Provision**	**Annual Capital Contributions (Tax Supported)**	**Annual Increase in Capital Contributions ($)**	**Special Capital Levy**	**Debt Payments**	**Gas Tax**	**Other Funding**	**Total Capital Funding**	**Annual Funding Gap = (C-J)**	**Cumulative Infrastructure Deficit**
			A + B = C						**Total - Other Funding**	**D+F+G+H+I=J**	**C - J = K**	**SUM OF K**
2014			$ -	$ 2,072,000								
2015			$ -	$ 1,988,956								
2016			$ -	$ 2,023,343		$ 260,280	$ -	$ 760,323	$ 5,281,725	$ 8,325,671		
2017	$ 6,715,306	$ 48,539,867	$ 55,255,173	$ 2,257,274		$ 260,280	$ (192,441)	$ 745,000	$ 3,470,810	$ 6,540,923	$ 48,714,250	$ 48,714,250
2018	$ 4,931,183	$ 10,459,977	$ 15,391,160	$ 2,916,654	$ 659,380	$ 260,280	$ (192,441)	$ 656,863	$ 9,820,412	$ 13,461,768	$ 1,929,392	$ 50,643,642
2019	$ 4,685,340	$ 10,459,977	$ 15,145,318	$ 3,576,034	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,208,777	$ 10,936,541	$ 61,580,183
2020	$ 4,664,882	$ 10,459,977	$ 15,124,859	$ 4,235,414	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,868,157	$ 10,256,702	$ 71,836,885
2021	$ 4,606,109	$ 10,459,977	$ 15,066,086	$ 4,894,795	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 5,527,537	$ 9,538,549	$ 81,375,433
2022	$ 4,368,926	$ 10,459,977	$ 14,828,903	$ 5,554,175	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 6,186,917	$ 8,641,986	$ 90,017,419
2023	$ 3,709,886	$ 10,168,321	$ 13,878,207	$ 6,213,555	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 6,846,297	$ 7,031,910	$ 97,049,329
2024	$ 3,597,975	$ 10,168,321	$ 13,766,296	$ 6,872,935	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 7,505,678	$ 6,260,619	$ 103,309,948
2025	$ 3,568,623	$ 10,168,321	$ 13,736,945	$ 7,532,315	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 8,165,058	$ 5,571,887	$ 108,881,835
2026	$ 3,474,041	$ 10,222,704	$ 13,696,745	$ 8,191,695	$ 659,380	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 8,824,438	$ 4,872,307	$ 113,754,141
2027	$ 3,429,524	$ 10,222,704	$ 13,652,228	$ 8,851,076	$ 659,380	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 9,676,259	$ 3,975,969	$ 117,730,110
2028	$ 3,301,832	$ 7,283,548	$ 10,585,380	$ 9,510,456	$ 659,380	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 10,335,639	$ 249,741	$ 117,979,851
2029	$ 3,290,986	$ 7,283,548	$ 10,574,534	$ 10,169,836	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 11,266,979	$ (692,445)	$ 117,287,406
2030	$ 3,205,580	$ 7,283,548	$ 10,489,128	$ 10,829,216	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 11,926,359	$ (1,437,231)	$ 115,850,175
2031	$ 3,198,746	$ 7,283,548	$ 10,482,294	$ 11,488,596	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 12,585,739	$ (2,103,445)	$ 113,746,730
2032	$ 3,194,481	$ 7,283,548	$ 10,478,029	$ 12,147,976	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 13,245,119	$ (2,767,090)	$ 110,979,640
2033	$ 3,148,740	$ 7,283,548	$ 10,432,288	$ 12,807,357	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 13,904,500	$ (3,472,212)	$ 107,507,429
2034	$ 3,117,079	$ 7,283,548	$ 10,400,627	$ 13,466,737	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 14,563,880	$ (4,163,252)	$ 103,344,176
2035	$ 3,112,803	$ 7,283,548	$ 10,396,351	$ 14,126,117	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 15,223,260	$ (4,826,909)	$ 98,517,267
2036	$ 3,010,538	$ 7,283,548	$ 10,294,086	$ 14,785,497	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 15,882,640	$ (5,588,554)	$ 92,928,713
2037	$ 3,008,705	$ 7,283,548	$ 10,292,253	$ 15,444,877	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 16,542,020	$ (6,249,767)	$ 86,678,946
2038	$ 2,952,876	$ 7,283,548	$ 10,236,424	$ 16,104,257	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 17,201,400	$ (6,964,976)	$ 79,713,969
2039	$ 2,942,654	$ 7,283,548	$ 10,226,202	$ 16,763,638	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 17,860,781	$ (7,634,578)	$ 72,079,391
2040	$ 2,942,316	$ 7,283,548	$ 10,225,864	$ 17,423,018	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 18,520,161	$ (8,294,297)	$ 63,785,094
2041	$ 2,941,078	$ 7,283,548	$ 10,224,626	$ 18,082,398	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 19,179,541	$ (8,954,915)	$ 54,830,179
2042	$ 2,933,600	$ 7,283,548	$ 10,217,148	$ 18,741,778	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 19,838,921	$ (9,621,772)	$ 45,208,407
2043	$ 2,918,598	$ 7,283,548	$ 10,202,146	$ 19,401,158	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 20,498,301	$ (10,296,156)	$ 34,912,251
2044	$ 2,914,411	$ 7,283,548	$ 10,197,959	$ 20,060,538	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 21,157,681	$ (10,959,722)	$ 23,952,529
2045	$ 2,897,295	$ 7,283,548	$ 10,180,843	$ 20,719,918	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 21,817,061	$ (11,636,218)	$ 12,316,311
2046	$ 2,876,583	$ 7,283,548	$ 10,160,131	$ 21,379,299	$ 659,380	$ 260,280	$ -	$ 656,863	$ 180,000	$ 22,476,442	$ (12,316,311)	$ 0
30-Year Infrastructure Deficit											**$ 0**	

Note: Assumed debt payments related to Brock Street Culvert and Fire Station. Debt payments are subject to change based on actual approved funding.

Other Funding includes:	**2017**	**2018**
Gravel Road Royalties	$ 180,000	$ 180,000
Region of Durham	$ 65,000	$ 2,750,000
Other Funding- Reserves	$ 1,546,822	$ -
Other Funding- Grants	$ 1,678,988	$ 4,790,412
Other Funding- Debt	$ -	$ 2,100,000
Total	**$ 3,470,810**	**$ 9,820,412**

Table 2
Township of Uxbridge
Asset Management Plan
Financing Strategy 1: Close in-year Funding Gap 2036

Legend	A	B	C	D	E	F	G	H	I	J	K	L
Year	**Projected Annual Capital Provision (2017 AMP Assets)**	**Projected Annual Capital Provision (Public Works Linear Infrastructure)**	**Total Annual Capital Provision**	**Annual Capital Contributions (Tax Supported)**	**Annual Increase in Capital Contributions ($)**	**Special Capital Levy**	**Debt Payments**	**Gas Tax**	**Other Funding**	**Total Capital Funding**	**Annual Funding Gap = (C-J)**	**Cumulative Infrastructure Deficit**
			A + B = C						**Total - Other Funding**	**D+F+G+H+I=J**	**C - J = K**	**SUM OF K**
2014			$ -	$ 2,072,000								
2015			$ -	$ 1,988,956								
2016	$ -	$ -	$ -	$ 2,023,343		$ 260,280	$ -	$ 760,323	$ 5,281,725	$ 8,325,671		
2017	$ 6,715,306	$ 48,539,867	$ 55,255,173	$ 2,257,274		$ 260,280	$ (192,441)	$ 745,000	$ 3,470,810	$ 6,540,923	$ 48,714,250	$ 48,714,250
2018	$ 4,931,183	$ 10,459,977	$ 15,391,160	$ 2,622,520	$ 365,246	$ 260,280	$ (192,441)	$ 656,863	$ 9,820,412	$ 13,167,634	$ 2,223,526	$ 50,937,776
2019	$ 4,685,340	$ 10,459,977	$ 15,145,318	$ 2,987,765	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,620,508	$ 11,524,810	$ 62,462,586
2020	$ 4,664,882	$ 10,459,977	$ 15,124,859	$ 3,353,011	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,985,754	$ 11,139,105	$ 73,601,691
2021	$ 4,606,109	$ 10,459,977	$ 15,066,086	$ 3,718,257	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,350,999	$ 10,715,086	$ 84,316,778
2022	$ 4,368,926	$ 10,459,977	$ 14,828,903	$ 4,083,503	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,716,245	$ 10,112,658	$ 94,429,436
2023	$ 3,709,886	$ 10,168,321	$ 13,878,207	$ 4,448,748	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 5,081,491	$ 8,796,716	$ 103,226,152
2024	$ 3,597,975	$ 10,168,321	$ 13,766,296	$ 4,813,994	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 5,446,737	$ 8,319,560	$ 111,545,712
2025	$ 3,568,623	$ 10,168,321	$ 13,736,945	$ 5,179,240	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 5,811,982	$ 7,924,962	$ 119,470,674
2026	$ 3,474,041	$ 10,222,704	$ 13,696,745	$ 5,544,486	$ 365,246	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 6,177,228	$ 7,519,517	$ 126,990,191
2027	$ 3,429,524	$ 10,222,704	$ 13,652,228	$ 5,909,731	$ 365,246	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 6,734,915	$ 6,917,313	$ 133,907,504
2028	$ 3,301,832	$ 7,283,548	$ 10,585,380	$ 6,274,977	$ 365,246	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 7,100,160	$ 3,485,220	$ 137,392,723
2029	$ 3,290,986	$ 7,283,548	$ 10,574,534	$ 6,640,223	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 7,737,366	$ 2,837,168	$ 140,229,892
2030	$ 3,205,580	$ 7,283,548	$ 10,489,128	$ 7,005,469	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,102,612	$ 2,386,517	$ 142,616,408
2031	$ 3,198,746	$ 7,283,548	$ 10,482,294	$ 7,370,714	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,467,857	$ 2,014,437	$ 144,630,845
2032	$ 3,194,481	$ 7,283,548	$ 10,478,029	$ 7,735,960	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,833,103	$ 1,644,926	$ 146,275,772
2033	$ 3,148,740	$ 7,283,548	$ 10,432,288	$ 8,101,206	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 9,198,349	$ 1,233,939	$ 147,509,711
2034	$ 3,117,079	$ 7,283,548	$ 10,400,627	$ 8,466,451	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 9,563,594	$ 837,033	$ 148,346,744
2035	$ 3,112,803	$ 7,283,548	$ 10,396,351	$ 8,831,697	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 9,928,840	$ 467,510	$ 148,814,254
2036	$ 3,010,538	$ 7,283,548	$ 10,294,086	$ 9,196,943	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 10,294,086	$ -	$ 148,814,254
2037	$ 3,008,705	$ 7,283,548	$ 10,292,253	$ 9,562,189	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 10,659,332	$ (367,079)	$ 148,447,176
2038	$ 2,952,876	$ 7,283,548	$ 10,236,424	$ 9,927,434	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 11,024,577	$ (788,153)	$ 147,659,022
2039	$ 2,942,654	$ 7,283,548	$ 10,226,202	$ 10,292,680	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 11,389,823	$ (1,163,621)	$ 146,495,402
2040	$ 2,942,316	$ 7,283,548	$ 10,225,864	$ 10,657,926	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 11,755,069	$ (1,529,205)	$ 144,966,196
2041	$ 2,941,078	$ 7,283,548	$ 10,224,626	$ 11,023,172	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 12,120,315	$ (1,895,688)	$ 143,070,508
2042	$ 2,933,600	$ 7,283,548	$ 10,217,148	$ 11,388,417	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 12,485,560	$ (2,268,412)	$ 140,802,096
2043	$ 2,918,598	$ 7,283,548	$ 10,202,146	$ 11,753,663	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 12,850,806	$ (2,648,660)	$ 138,153,436
2044	$ 2,914,411	$ 7,283,548	$ 10,197,959	$ 12,118,909	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 13,216,052	$ (3,018,093)	$ 135,135,343
2045	$ 2,897,295	$ 7,283,548	$ 10,180,843	$ 12,484,154	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 13,581,297	$ (3,400,454)	$ 131,734,889
2046	$ 2,876,583	$ 7,283,548	$ 10,160,131	$ 12,849,400	$ 365,246	$ 260,280	$ -	$ 656,863	$ 180,000	$ 13,946,543	$ (3,786,413)	$ 127,948,476
30-Year Infrastructure Deficit											**$ 127,948,476**	

Note: Assumed debt payments related to Brock Street Culvert and Fire Station. Debt payments are subject to change based on actual approved funding.

Other Funding includes:	**2017**	**2018**
Gravel Road Royalties	$ 180,000	$ 180,000
Region of Durham	$ 65,000	$ 2,750,000
Other Funding- Reserves	$ 1,546,822	$ -
Other Funding- Grants	$ 1,678,988	$ 4,790,412
Other Funding- Debt	$ -	$ 2,100,000
Total	**$ 3,470,810**	**$ 9,820,412**

Table 3
Township of Uxbridge
Asset Management Plan
Financing Strategy 2: Close in-year Funding Gap by 2046

Legend	A	B	C	D	E	F	G	H	I	J	K	L
Year	**Projected Annual Capital Provision (2017 AMP Assets)**	**Projected Annual Capital Provision (Public Works Linear Infrastructure)**	**Total Annual Capital Provision**	**Annual Capital Contributions (Tax Supported)**	**Annual Increase in Capital Contributions ($)**	**Special Capital Levy**	**Debt Payments**	**Gas Tax**	**Other Funding**	**Total Capital Funding**	**Annual Funding Gap = (C-J)**	**Cumulative Infrastructure Deficit**
			A + B = C						**Total - Other Funding**	**D+F+G+H+I=J**	**C - J = K**	**SUM OF K**
2014			$ -	$ 2,072,000								
2015			$ -	$ 1,988,956								
2016	$ -	$ -	$ -	$ 2,023,343		$ 260,280	$ -	$ 760,323	$ 5,281,725	$ 8,325,671		
2017	$ 6,715,306	$ 48,539,867	$ 55,255,173	$ 2,257,274		$ 260,280	$ (192,441)	$ 745,000	$ 3,470,810	$ 6,540,923	$ 48,714,250	$ 48,714,250
2018	$ 4,931,183	$ 10,459,977	$ 15,391,160	$ 2,491,954	$ 234,680	$ 260,280	$ (192,441)	$ 656,863	$ 9,820,412	$ 13,037,068	$ 2,354,092	$ 51,068,342
2019	$ 4,685,340	$ 10,459,977	$ 15,145,318	$ 2,726,634	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,359,376	$ 11,785,942	$ 62,854,284
2020	$ 4,664,882	$ 10,459,977	$ 15,124,859	$ 2,961,313	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,594,056	$ 11,530,803	$ 74,385,087
2021	$ 4,606,109	$ 10,459,977	$ 15,066,086	$ 3,195,993	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,828,735	$ 11,237,350	$ 85,622,437
2022	$ 4,368,926	$ 10,459,977	$ 14,828,903	$ 3,430,673	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,063,415	$ 10,765,488	$ 96,387,925
2023	$ 3,709,886	$ 10,168,321	$ 13,878,207	$ 3,665,353	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,298,095	$ 9,580,112	$ 105,968,037
2024	$ 3,597,975	$ 10,168,321	$ 13,766,296	$ 3,900,032	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,532,775	$ 9,233,521	$ 115,201,558
2025	$ 3,568,623	$ 10,168,321	$ 13,736,945	$ 4,134,712	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 4,767,455	$ 8,969,490	$ 124,171,048
2026	$ 3,474,041	$ 10,222,704	$ 13,696,745	$ 4,369,392	$ 234,680	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 5,002,134	$ 8,694,610	$ 132,865,659
2027	$ 3,429,524	$ 10,222,704	$ 13,652,228	$ 4,604,072	$ 234,680	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 5,429,255	$ 8,222,973	$ 141,088,631
2028	$ 3,301,832	$ 7,283,548	$ 10,585,380	$ 4,838,752	$ 234,680	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 5,663,935	$ 4,921,445	$ 146,010,076
2029	$ 3,290,986	$ 7,283,548	$ 10,574,534	$ 5,073,431	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 6,170,574	$ 4,403,960	$ 150,414,036
2030	$ 3,205,580	$ 7,283,548	$ 10,489,128	$ 5,308,111	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 6,405,254	$ 4,083,874	$ 154,497,910
2031	$ 3,198,746	$ 7,283,548	$ 10,482,294	$ 5,542,791	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 6,639,934	$ 3,842,360	$ 158,340,270
2032	$ 3,194,481	$ 7,283,548	$ 10,478,029	$ 5,777,471	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 6,874,614	$ 3,603,416	$ 161,943,686
2033	$ 3,148,740	$ 7,283,548	$ 10,432,288	$ 6,012,150	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 7,109,293	$ 3,322,995	$ 165,266,681
2034	$ 3,117,079	$ 7,283,548	$ 10,400,627	$ 6,246,830	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 7,343,973	$ 3,056,654	$ 168,323,335
2035	$ 3,112,803	$ 7,283,548	$ 10,396,351	$ 6,481,510	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 7,578,653	$ 2,817,698	$ 171,141,032
2036	$ 3,010,538	$ 7,283,548	$ 10,294,086	$ 6,716,190	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 7,813,333	$ 2,480,753	$ 173,621,786
2037	$ 3,008,705	$ 7,283,548	$ 10,292,253	$ 6,950,870	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,048,013	$ 2,244,240	$ 175,866,026
2038	$ 2,952,876	$ 7,283,548	$ 10,236,424	$ 7,185,549	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,282,692	$ 1,953,732	$ 177,819,758
2039	$ 2,942,654	$ 7,283,548	$ 10,226,202	$ 7,420,229	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,517,372	$ 1,708,830	$ 179,528,588
2040	$ 2,942,316	$ 7,283,548	$ 10,225,864	$ 7,654,909	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,752,052	$ 1,473,812	$ 181,002,400
2041	$ 2,941,078	$ 7,283,548	$ 10,224,626	$ 7,889,589	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 8,986,732	$ 1,237,895	$ 182,240,294
2042	$ 2,933,600	$ 7,283,548	$ 10,217,148	$ 8,124,268	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 9,221,411	$ 995,737	$ 183,236,031
2043	$ 2,918,598	$ 7,283,548	$ 10,202,146	$ 8,358,948	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 9,456,091	$ 746,054	$ 183,982,086
2044	$ 2,914,411	$ 7,283,548	$ 10,197,959	$ 8,593,628	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 9,690,771	$ 507,188	$ 184,489,274
2045	$ 2,897,295	$ 7,283,548	$ 10,180,843	$ 8,828,308	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 9,925,451	$ 255,393	$ 184,744,667
2046	$ 2,876,583	$ 7,283,548	$ 10,160,131	$ 9,062,988	$ 234,680	$ 260,280	$ -	$ 656,863	$ 180,000	$ 10,160,131	$ 0	$ 184,744,667
30-Year Infrastructure Deficit											**$ 184,744,667**	

Note: Assumed debt payments related to Brock Street Culvert and Fire Station. Debt payments are subject to change based on actual approved funding.

Other Funding includes:	**2017**	**2018**
Gravel Road Royalties	$ 180,000	$ 180,000
Region of Durham	$ 65,000	$ 2,750,000
Other Funding- Reserves	$ 1,546,822	$ -
Other Funding- Grants	$ 1,678,988	$ 4,790,412
Other Funding- Debt	$ -	$ 2,100,000
Total	**$ 3,470,810**	**$ 9,820,412**

Table 4
Township of Uxbridge
Asset Management Plan
Financing Strategy 3: Maintain Status Quo

Legend	A	B	C	D	E	F	G	H	I	J	K	L
Year	**Projected Annual Capital Provision (2017 AMP Assets)**	**Projected Annual Capital Provision (Public Works Linear Infrastructure)**	**Total Annual Capital Provision**	**Annual Capital Contributions (Tax Supported)**	**% Annual Increase in Capital Contributions**	**Special Capital Levy**	**Debt Payments**	**Gas Tax**	**Other Funding**	**Total Capital Funding**	**Annual Funding Gap = (C-J)**	**Cumulative Infrastructure Deficit**
			A + B = C						**Total - Other Funding**	**D+F+G+H+I=J**	**C - J = K**	**SUM OF K**
2014			$ -	$ 2,072,000								
2015			$ -	$ 1,988,956								
2016	$ -	$ -	$ -	$ 2,023,343		$ 260,280	$ -	$ 760,323	$ 5,281,725	$ 8,325,671		
2017	$ 6,715,306	$ 48,539,867	$ 55,255,173	$ 2,257,274		$ 260,280	$ (192,441)	$ 745,000	$ 3,470,810	$ 6,540,923	$ 48,714,250	$ 48,714,250
2018	$ 4,931,183	$ 10,459,977	$ 15,391,160	$ 2,324,992	3.0%	$ 260,280	$ (192,441)	$ 656,863	$ 9,820,412	$ 12,870,106	$ 2,521,053	$ 51,235,304
2019	$ 4,685,340	$ 10,459,977	$ 15,145,318	$ 2,394,742	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,027,484	$ 12,117,833	$ 63,353,137
2020	$ 4,664,882	$ 10,459,977	$ 15,124,859	$ 2,466,584	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,099,327	$ 12,025,532	$ 75,378,669
2021	$ 4,606,109	$ 10,459,977	$ 15,066,086	$ 2,540,582	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,173,324	$ 11,892,762	$ 87,271,431
2022	$ 4,368,926	$ 10,459,977	$ 14,828,903	$ 2,616,799	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,249,542	$ 11,579,361	$ 98,850,792
2023	$ 3,709,886	$ 10,168,321	$ 13,878,207	$ 2,695,303	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,328,046	$ 10,550,162	$ 109,400,954
2024	$ 3,597,975	$ 10,168,321	$ 13,766,296	$ 2,776,162	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,408,905	$ 10,357,392	$ 119,758,345
2025	$ 3,568,623	$ 10,168,321	$ 13,736,945	$ 2,859,447	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,492,190	$ 10,244,755	$ 130,003,100
2026	$ 3,474,041	$ 10,222,704	$ 13,696,745	$ 2,945,231	3.0%	$ 260,280	$ (464,401)	$ 656,863	$ 180,000	$ 3,577,973	$ 10,118,772	$ 140,121,872
2027	$ 3,429,524	$ 10,222,704	$ 13,652,228	$ 3,033,588	3.0%	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 3,858,771	$ 9,793,457	$ 149,915,329
2028	$ 3,301,832	$ 7,283,548	$ 10,585,380	$ 3,124,595	3.0%	$ 260,280	$ (271,960)	$ 656,863	$ 180,000	$ 3,949,779	$ 6,635,602	$ 156,550,930
2029	$ 3,290,986	$ 7,283,548	$ 10,574,534	$ 3,218,333	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 4,315,476	$ 6,259,058	$ 162,809,988
2030	$ 3,205,580	$ 7,283,548	$ 10,489,128	$ 3,314,883	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 4,412,026	$ 6,077,102	$ 168,887,091
2031	$ 3,198,746	$ 7,283,548	$ 10,482,294	$ 3,414,329	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 4,511,472	$ 5,970,822	$ 174,857,912
2032	$ 3,194,481	$ 7,283,548	$ 10,478,029	$ 3,516,759	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 4,613,902	$ 5,864,127	$ 180,722,039
2033	$ 3,148,740	$ 7,283,548	$ 10,432,288	$ 3,622,262	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 4,719,405	$ 5,712,883	$ 186,434,922
2034	$ 3,117,079	$ 7,283,548	$ 10,400,627	$ 3,730,930	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 4,828,073	$ 5,572,554	$ 192,007,477
2035	$ 3,112,803	$ 7,283,548	$ 10,396,351	$ 3,842,858	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 4,940,001	$ 5,456,350	$ 197,463,826
2036	$ 3,010,538	$ 7,283,548	$ 10,294,086	$ 3,958,144	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,055,287	$ 5,238,799	$ 202,702,626
2037	$ 3,008,705	$ 7,283,548	$ 10,292,253	$ 4,076,888	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,174,031	$ 5,118,222	$ 207,820,848
2038	$ 2,952,876	$ 7,283,548	$ 10,236,424	$ 4,199,195	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,296,338	$ 4,940,086	$ 212,760,934
2039	$ 2,942,654	$ 7,283,548	$ 10,226,202	$ 4,325,170	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,422,313	$ 4,803,889	$ 217,564,823
2040	$ 2,942,316	$ 7,283,548	$ 10,225,864	$ 4,454,926	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,552,069	$ 4,673,795	$ 222,238,618
2041	$ 2,941,078	$ 7,283,548	$ 10,224,626	$ 4,588,573	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,685,716	$ 4,538,910	$ 226,777,528
2042	$ 2,933,600	$ 7,283,548	$ 10,217,148	$ 4,726,230	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,823,373	$ 4,393,775	$ 231,171,303
2043	$ 2,918,598	$ 7,283,548	$ 10,202,146	$ 4,868,017	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 5,965,160	$ 4,236,985	$ 235,408,288
2044	$ 2,914,411	$ 7,283,548	$ 10,197,959	$ 5,014,058	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 6,111,201	$ 4,086,758	$ 239,495,046
2045	$ 2,897,295	$ 7,283,548	$ 10,180,843	$ 5,164,480	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 6,261,623	$ 3,919,221	$ 243,414,267
2046	$ 2,876,583	$ 7,283,548	$ 10,160,131	$ 5,319,414	3.0%	$ 260,280	$ -	$ 656,863	$ 180,000	$ 6,416,557	$ 3,743,573	$ 247,157,841
30-Year Infrastructure Deficit											**$ 247,157,841**	

Note: Assumed debt payments related to Brock Street Culvert and Fire Station. Debt payments are subject to change based on actual approved funding.

Other Funding includes:	**2017**	**2018**
Gravel Road Royalties	$ 180,000	$ 180,000
Region of Durham	$ 65,000	$ 2,750,000
Other Funding- Reserves	$ 1,546,822	$ -
Other Funding- Grants	$ 1,678,988	$ 4,790,412
Other Funding- Debt	$ -	$ 2,100,000
Total	**$ 3,470,810**	**$ 9,820,412**

APPENDIX C

SUMMARY OF CONDITION DEFINITIONS 2015-2016 PLANS

Township of Uxbridge
2017 Asset Management Plan
Summary of Condition Definitions in 2015-2016 Plans

Study Name	NOW	1 to 5	6 to 10	ADEQ
2016 State of the Infrastructure - Roads and Structures	Now needs represent road sections that require reconstruction or major rehabilitation. While these roads represent the backlog of work required on the road system, they may not necessarily be the priority projects, depending on funding levels. These roads have little or no service life left and are in poor condition. Decision may be made to let these roads further decline until road further deteriorates and funding is available.	1 to 5 identifies road sections where reconstruction is anticipated within the next 5 years. These roads can be good candidates for resurfacing treatments that would extend the life of the road, therefore deferring the need to reconstruct.	6 to 10 identifies road sections where reconstruction improvements are anticipated within 6 to 10 years. These roads can be good candidates for resurfacing treatments that would extend the life of the road, therefore deferring the need to reconstruct.	ADEQ identifies road sections that do not have reconstruction or resurfacing needs, although minor maintenance such as crack sealing or spot drainage may be required.
2016 State of the Infrastructure - Sidewalks	Now needs represent sidewalk sections that requires reconstruction or major rehabilitation. Now needs are the backlog of work required on the sidewalk system.	1 to 5 identifies sidewalk sections where reconstruction is anticipated within the next 5 years, based upon review of their current condition. These sidewalks can be good candidates for repair and rehabilitation treatments that would extend the life of the sidewalk (depending on any other deficiencies), deferring the need to reconstruct. These sidewalks would be considered to be in fair condition.	6 to 10 identifies sidewalk sections where reconstruction improvements are anticipated within 6 to 10 years, based upon review of their current condition. These sidewalks can be good candidates for repair and rehabilitation treatments that would extend the life of the sidewalk (depending on any other deficiencies), deferring the need to reconstruct. These sidewalks would be considered to be in good condition.	ADEQ identifies sections that do not have reconstruction or resurfacing needs, although minor maintenance such as crack sealing or spot drainage may be required. These sidewalks would be considered to be in good to excellent condition.
2016 State of the Infrastructure - Streetlights	Now needs represent streetlights that require replacement. Now needs are the backlog of work required on the streetlight inventory.	1 to 5 identifies streetlight assets where replacement is anticipated within the next 5 years, based upon a review of their current estimated condition. These streetlights would be considered to be in fair condition.	6 to 10 identifies streetlights where replacement is anticipated within 6 to 10 years, based upon a review of their estimated current condition. These Streetlights would be considered to be in good condition.	ADEQ identifies streetlights where only minor maintenance or re-lamping is required. These streetlights would be considered to be in good to excellent condition.

Note: The asset management plans for Public Works linear assets identified linear asset conditions in four categories. Asset needs were then categorized into these four criteria.