Township of Melancthon Asset Management Plan

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Executive Summary

This report contains the Asset Management Plan for the Township of Melancthon (Township). The report has been organized as follows:

- Chapter 1: Introduction;
- Chapter 2: State of Local Infrastructure;
- Chapter 3: Expected Levels of Service;
- Chapter 4: Asset Management Strategy;
- Chapter 5: Financing Strategy; and
- Chapter 6: Recommendations.

The "state of local infrastructure" chapter provides an overview of the capital assets owned by The Township. This includes detailed information on asset inventory, including asset attributes, accounting valuations, replacement costs, useful life, age and asset condition where available. This information provides the foundation for other sections of the asset management plan.

Based on data provided by the Township and discussions with Township Staff, it is believed that the Township's assets have a weighted average condition (with the weighting based on asset replacement cost) of the following table. Please note that weighted average conditions do not fully reflect the many assets that need to have capital improvement investments, but provide an overall perspective of all the assets found in that asset grouping/network.

Asset Type	Asset Sub-Type	Condition (weighted average)	Risk (weighted average)
Roads	Road Surface	Average	Moderate
	Road Base	Average	Moderate
	Bridges & Culverts	Good	Moderate
	Cross Road Culverts	Very Good	Low
	Street Lights	Very Good	Low
	Signs	Very Good	Low
	Sidewalks	Average	Moderate
Facilities	Municipal Office	Good	Moderate
	Horning's Mills Hall	Average	Moderate
	Public Works	Good	Moderate
	Salt Dome	Good	Low
	Equipment Storage	Very Good	Low
Vehicles		Good	Moderate
Storm Water	Catch Basins	Very Good	Moderate
	Storm Water Mains	Very Good	Low
Equipment & Machinery		Good	Low
Land Improvements		Good	Low
Software & Hardware		Average	Moderate

"Expected levels of service" compares the current level of service provided by the Township, and the recommended levels of service that will help extend the life of the above mentioned asset types. Melancthon Township takes great care in the service levels they offer their constituents and public. This report has made a few additional Levels of Service (LOS) recommendations that can extend the life of Township tangible capital assets and therefore reduce the total lifecycle costs of Township assets.

The "asset management strategy" provides a long term operating and capital forecast for asset related capital costs, indicating the requirements for maintaining, rehabilitating, replacing/disposing and expanding the Township's assets, while moving towards the specified expected levels of service identified above. The goal of the asset management strategy is to have the Township moving towards a more sustainable asset management position over the 20 year forecast period. We have also taken into consideration the potential risk of each asset by identifying the asset consequence of failure and probability of failure.

Asset risk was assessed based on the asset's age, condition, consequence of failure, and probability of failure. The following have been identified based on Township data as assets that need to be replaced or improved as soon as practicable:

Roads

- 2nd Line SW – To change the maximum speed from 80 km per hour to 60 km per hour. This is to try and reduce vehicular damage and public safety. It is also in preparation for the following key needs identified in the Asset Management Strategy.
- 2nd Line SW From: 250 Sideroad To: Melancthon / Southgate Boundary Line – Recommendation is to grind the current asphalt surface and roll this into trying to stabilize the road base with additional gravel. The following year to add more gravel and pack the road base well. Then in the subsequent year based on traffic counts to either put a new asphalt surface or to leave this as a gravel surface road. Traffic count will determine the surface type need (approximate cost 2017 $25,000; 2018 $10,000).
- 2nd Line SW From: Hwy 89 To: 300 Sideroad – Recommendation is to grind the current asphalt surface and roll this into trying to stabilize the road base with additional gravel. The following year to add more gravel and pack the road base well. Then in the subsequent year based on traffic counts to either put a new asphalt surface or to leave this as a gravel road. Traffic count will determine the surface type need (approximate cost 2017 $20,000; 2018 $7,500).
- Road bases are not expected to be fully replaced but improved and in localized places dug out and repacked. However there are several road pavements showing that their road bases need some additional support and stabilization.
  - 2nd Line SW from 250 Sideroad to Melancthon / Southgate Boundary Line – As noted above.
  - 2nd Line SW from Highway 89 to 300 Sideroad – As noted above.

- High Street in Horning's Mills– Is scheduled to be resurfaced, but before doing so it is recommended that this road base be improved (approximate cost 2017 $5,000).

- 4th Line NE from 240 Sideroad to County Road 9 – Recommendation is to grind the current asphalt surface and roll this into trying to stabilize the road base with additional gravel. The following year to add more gravel and pack the road base well. Then in the subsequent year based on traffic counts to either put a new asphalt surface or to leave this as a gravel road. Traffic count will determine the surface type need (approximate cost 2018 $25,000; 2019 $10,000).
- 5th Line OS (asphalt road segments) – Is showing real road base instability. It is recommended to grind the current asphalt surface and roll this into trying to stabilize the road base with additional gravel. The following year to add more gravel and pack the road base well. Then in the subsequent year based on traffic counts to either put a new asphalt surface or to leave this as a gravel road. Traffic count will determine the surface type need (approximate cost 2019 $50,000; 2020 $20,000).

Bridges

- Bridge 15 – Oldfield Bridge 2nd Line SW – This is an expensive bridge to replace, as well as the high traffic count on this road leads to the recommendation to rehabilitate this bridge so that it can extend the life of the bridge for an additional 40 years (approximate cost 2017 $218,000).
- Bridge 2003 – Culvert 3rd Line – There was found severe corrosion and localized section loss at the base of the culvert. Recommendation due to corrosion and growing traffic count is to replace this multi-plate culvert (approximate cost 2018 $380,000).
- Bridge 10 – Hutchinson Bridge 280 Sideroad – This bridge is in fair condition, and therefore to extend the life of the asset it is recommended to sandblast and paint the structural steel, replace the timber decking and some concrete repairs (approximate cost 2018 $185,000).
- Bridge 2013 – Timber Culvert 30th Sideroad – There are signs of timber deterioration and weathering. This is not surprising due to the age and excess granular material found above the deck. The recommendation is to remove the granular material from the deck surface and expose the timber deck, to better understand the best course of action (approximate cost 2018 $30,000).

Facilities

- Municipal Office HVAC – The old heating system is well past its life expectancy and therefore needs to be carefully monitored. Due to this building identified as a critical Township asset it is recommended that this system should be replaced (approximate cost 2017 $5,000).
- Municipal Office Well Pump – Water supply being critical for the proper functioning of this building the water well pump is still working but there is concern over its age.

The Township may want to ensure that money is set aside for a replacement as soon as it is required (approximate cost $5,000).

- Horning's Mills Hall Well Pump – Water supply being critical for the functioning of this building the water well pump is still working but there is concern over its age. The Township may want to ensure that money is set aside for a replacement as soon as it is required (approximate cost $5,000).

Vehicles

- 2000 Western Star Tandem Axel Plow Truck – Has exceeded its life expectancy and therefore is recommended to be replaced. These types of trucks are critical to ensuring that the Township roads are in good repair and safe to drive (approximate cost $275,000).

The above clearly identifies a growing gap in infrastructure funding, which is found not only in the Township of Melancthon but throughout Ontario and across Canada. The Township has been making steps over the last few years to start to close this funding gap, and has completed many required bridge projects, but more needs to be done to ensure that the Township can offer appropriate levels of service to the public. We have recommended that further more detailed inspections (eg. Road Needs Study, Storm Sewer Inspections) of some assets be undertaken to provide a more accurate asset condition, remaining life and potential risk of failure.

The "financing strategy" described in Chapter 5 of this report identifies a funding plan for the recommended asset management strategy, including a review of historical results and recommendations with respect to the required amounts and types of funding (revenue) annually over the forecast period. Also, any infrastructure funding gaps are identified and recommendations are made regarding potential approaches to reduce and mitigate these gaps over the 20 year forecast period.

Overall, this asset management plan is a tool to be used by the Township for capital and financial decision making. It can be tied to various existing reports (such as budget, official plan and strategic planning reports) to ensure the asset management plan can be updated to reflect any changes in the Township of Melancthon's priorities.

1.0 Introduction

1.1 Overview

R.J. Burnside & Associates Limited (Burnside) was retained by the Township of Melancthon (Township) to prepare an asset management plan. This plan is intended to be a tool for the Township to use during various decision making processes, including the annual budget process and Provincial/Federal capital grant application processes. This plan will serve as a road map for sustainable infrastructure planning going forward.

Assets included in this asset management plan are the following:

- Bridges & Culverts;
- Equipment & Machinery (Office, Other);
- Facilities (Administration Office, Horning's Mills Hall, Public Works Garage, Salt Dome, and new Equipment Storage Building);
- Land Improvements (Playing Surfaces, Parking Lots, Parks, Playground Equipment, Shelters);
- Roads (Bases and Surfaces - Asphalt, Gravel);
- Sidewalks;
- Signs;
- Software & Hardware;
- Storm Water (Catch basins, Mains, Manholes, Headwalls);
- Street Lights; and
- Vehicles.

It is recommended that this plan be updated on an annual basis to ensure that it is kept up to date.

1.2 Plan Objectives

The Township's goals and objectives with respect to their capital assets relate to the level of service being provided to Township constituents. Services should be provided at expected levels, as defined within this asset management plan. Township infrastructure and other capital assets are anticipated to be maintained at condition levels that provide for a safe and functional environment for its residents and visitors. Therefore, the asset management plan and its implementation will be evaluated based on the Township's ability to meet these goals and objectives.

1.3 Plan Development

The development of the Township's asset management plan was based on the steps summarized below:

1. Develop a complete listing of capital assets to be included in the plan, including attributes such as useful life, age, accounting valuation and current replacement valuation. Update the replacement cost of assets to 2016 dollars, and where required, using applicable inflationary indices.

2. Assess current condition of the assets, based on a combination of the following:
   - Existing reports;
   - Burnside field and/or desktop assessments;
   - Staff assessments; and
   - Asset age analysis.

3. Assess the risk of asset failure for each asset, based on determining the probability of each asset failing, as well as, the consequence of the asset failing. This risk analysis is one of the components used to identify priority projects for inclusion in the asset management plan, as well as, asset risk levels that require mitigation.

4. Determine current levels of service, based on standard practices and discussions with Township staff. Further analysis of the practices and identification of additional maintenance measures that can be applied to the assets to extend their lifecycle and potentially provide a lower asset total lifecycle cost.

5. Prepare an asset management strategy (i.e., operating and capital forecast) based on the asset inventory, identified priorities, forecast scenarios and level of service analysis discussed above.

6. Determine a financial strategy to support the asset management strategy, thus determining how the operating and capital related expenditure forecast will be funded over the plan period.

7. Prepare a final report, summarizing the process, strategy and results of the asset management plan.

1.4 Maintaining the Asset Management Plan

The asset management plan should be updated as the capital needs and priorities of the Township changes. This can be accomplished in conjunction with the Township's budget process. The Township will have the tools available to perform updates to the plan when needed.

When updating the asset management plan, note that the state of local infrastructure, expected levels of service, asset management strategy and financing strategy are integrated and impact each other. Looking at these components in reverse order, one can see the financing strategy outlines how the asset management strategy will be funded. The asset management strategy illustrates the costs required to maintain expected levels of service at a sustainable level. The expected levels of service component summarizes and links each service area to specific assets contained in the state of local infrastructure section and thus determines how these assets will be used to provide expected service levels.

This report covers a forecast period of 20 years; however, it is suggested that more focus and attention be put on the first 5 years of the asset management plan, to ensure accurate capital planning in the short term.

1.5 Plan Integration

The municipal environment is continually changing and demanding when it comes to legislation and other responsibilities. Integrating the asset management plan with Township's budget process, as well as, Public Standards Accounting Board Handbook Section 3150 (tangible capital asset) requirements can make updates in all three areas more efficient.

With respect to integrating the Township's budget process with asset management planning, both require a projection of capital and operating costs over a future period. The budget outlines total operating and capital requirements for the Township, while the asset management plan focuses in on specific asset related requirements. With this link to the annual budget, the budget update process can also become an asset management plan update process.

Both asset management and PSAB 3150 require a complete and accurate asset inventory. The significant difference between the two lies in valuation approaches (PSAB 3150 requires historical cost valuation, while asset management requires future replacement cost valuation). Using a single asset inventory as the developed Township asset management spreadsheets contain both historic and current replacement valuation methods as an effective approach to maintaining the Township's asset data (digital spreadsheets of all Township assets are provided in Appendix A).

2.0 State of Local Infrastructure

2.1 Scope and Process

This section of the plan provides an opportunity to develop a greater understanding of the capital assets owned by the Township. The state of local infrastructure analysis includes:

- An asset inventory documenting asset types, sub-types including quantities, materials and other similar asset attributes (where available);
- Financial accounting valuation (where available);
- Replacement cost valuation;
- Asset age distribution analysis and asset age as a proportion of expected useful life;
- Asset condition information (mostly based on report and/or staff assessment as well as the age of the asset, except where field or desktop assessments were completed);
- Draft Data Verification and Asset Condition policies; and
- Documentation of assumptions made in creating the asset inventory.

Burnside developed a detailed asset inventory listing for the Township which was used as a starting point in fulfilling the requirements for this report. This inventory provides current financial accounting valuations (i.e., historical cost, accumulated amortization and net book value), as well as, attributes such as replacement cost, useful life, and age). With respect to replacement cost, the Township provided various recent valuations, which were inflated in order to estimate current 2016 replacement costs. Other valuations were made using a current 2016 replacement cost and deflating the value to the year or estimated year that the asset was constructed and/or acquired.

The following data and reports were used to develop the Township's asset inventory during this project:

- Township PSAB 3150 asset inventory;
- Township reports;
- Burnside 2015 Bridge Inspection Report;
- Recent purchases information from the Township; and
- Discussions with Township staff.

Some adjustments to asset useful lives has been made but further analysis may reveal that the Township will want to update some useful life values so that they better reflect the lifecycle and remaining life of the Township's assets. Burnside engineers and the Township staff have reviewed the useful lives of the asset types identified in this project and believe they now reflect the conditions, maintenance practices and management of Township assets.

2.2 Capital Asset Overview

Melancthon Township presently owns capital assets with a 2016 replacement value of approximately $138.8 million or $33.2 million excluding the road base assets. Table 2-1, Figure 2-1 and Figure 2-2 outline the breakdown of these totals into the Township's asset categories.

The capital asset inventory was organized in a Microsoft Excel spreadsheet and delivered to the Township in digital form in Appendix A. Each of the asset types were assessed for their age, condition (where available) and for data accuracy and completeness. The Township reviewed the asset inventory over the course of this project.

Table 2-1 and Figure 2-1 show the Township's financial accounting valuation summary by asset type. Since 2009, municipalities have been required under the Public Sector Accounting Board Handbook Section 3150 (PSAB 3150) to maintain asset listings complete with historical cost (i.e., the original cost to purchase or construct an asset), accumulated amortization and net book value. These values were to be reported on the municipality's audited financial statements each year. Burnside has done the additional work of developing the Opening/Historic Cost for assets that have been added to the Township's asset inventory. If the Township chooses to use the asset inventory developed in this project to report the PSAB 3150 values the data/information is found in Appendix A.

Including all Township assets, the total tangible capital asset historical cost is approximately $16.2 million. This is approximately 12% of the total replacement cost of all the assets or 49% without road base replacement costs included. It is expected that historical cost totals are less than replacement cost totals, given inflationary adjustments that would occur between the original asset purchase/construction date and 2016. Total accumulated amortization for the Township's assets is $7.6 million or 47% of the total asset historical cost and $5.5 million or 44% without road base historic costs included. This represents the proportion of tangible capital assets that have been amortized (i.e. used up) to date from a financial valuation perspective.

Clearly Township owned road assets have the greatest percentage replacement cost if the road base values were included in the calculation (see Figure 2-2). Road bases are considered assets that will never be totally replaced, but will from time to time be improved and in small locations reconstructed on an as needed basis. Therefore by excluding road base asset values, Township bridges percentage replacement costs are over 63% of any other asset type. Other major asset types are Roads (made up of Road Surfaces, Cross Road Culverts, Signs, Street Lights, and Sidewalks) with 20%, Facilities with 7%, and Vehicles with 8%. More in depth discussion of these asset types follows below. Storm Water assets will also be addressed due to the proposed need to inspect these assets using closed circuit television inspection (CCTV).

Figure 2-1: Township Asset Distribution Replacement Costs (2016)

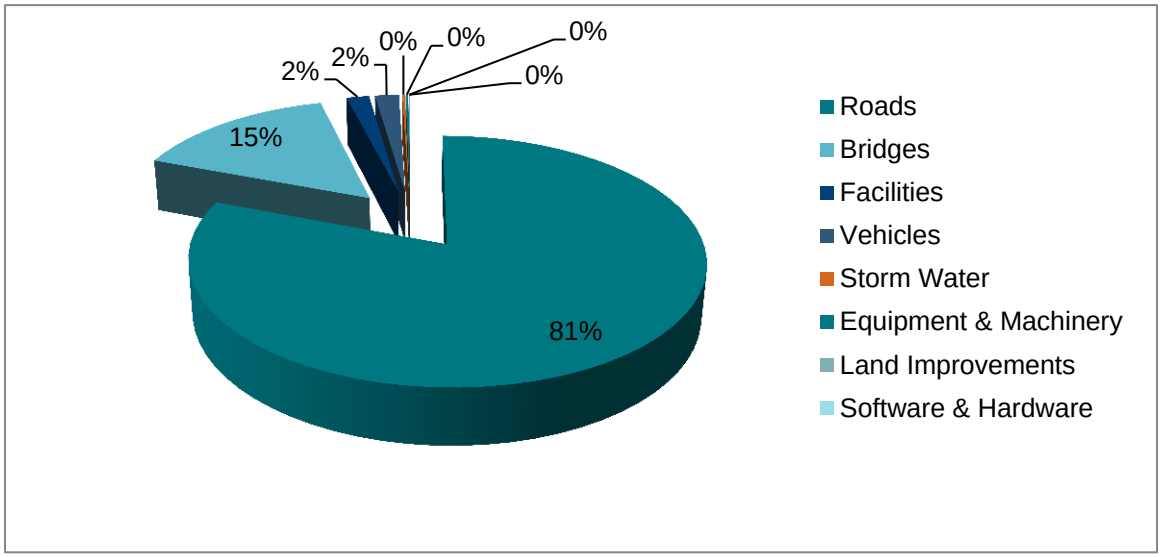


Figure 2-2: Township Asset Distribution Replacement Costs, Without Road Bases (2016)

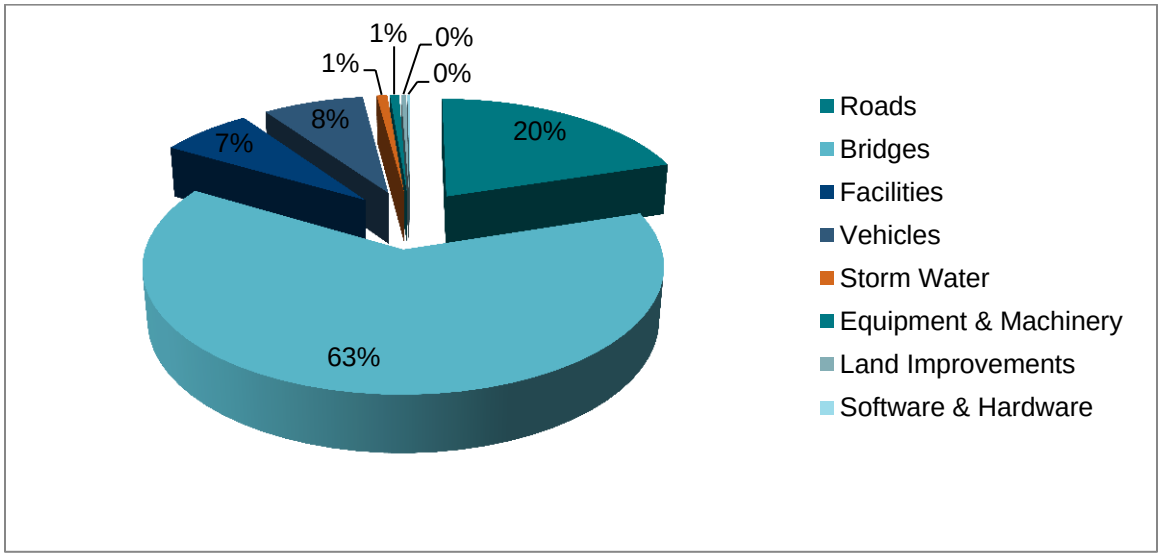


Table 2-1: Township Asset Summary

Asset Type	Asset Sub-Type	Historic Cost	2015 Accumulated Amortization	2015 Net Book Value	2016 Replacement Cost	Condition (weighted average)		Useful Life (years)	Age (weighted average)	Remaining Life (weighted average)	Risk (weighted average)	
						Value	Text				Value	Text
Roads	Road Surface	$4,266,527	$2,163,670	$2,500,733	$6,460,483	5.9	Average	15, 25, 3	18	4	2	Moderate
	Road Base	$3,825,618	$2,100,162	$1,725,456	$105,612,196	5.1	Average	N/A	112	10	2	Moderate
	Bridges & Culverts	$5,134,042	$1,874,523	$3,272,076	$20,889,250	7.0	Good	75, 50	34	38	2	Moderate
	Cross Road Culverts	$36,317	$354	$35,963	$58,700	10.0	Very Good	50	1	49	1	Low
	Street Lights	$44,372	$1,059	$43,312	$148,500	9.0	Very Good	20	2	38	1	Low
	Signs	$20,966	$2,076	$18,890	$21,150	9.0	Very Good	20, 10	1	10	1	Low
	Sidewalks	$4,073	$3,001	$1,072	$11,000	5.3	Average	40	30	9	2	Moderate
Facilities	Municipal Office	$117,551	$50,028	$252,169	$597,123	8.9	Good	100, 30, 25, 20, 15	22	66	2	Moderate
	Horning's Mills Hall	$222,606	$160,372	$68,842	$671,329	7.0	Average	50, 40, 30, 25, 20, 15	28	17	2	Moderate
	Public Works	$141,898	$83,091	$140,467	$693,928	7.9	Good	100, 30, 25, 20	42	38	2	Moderate
	Salt Dome	$74,040	$35,539	$38,501	$250,000	7.0	Good	50	25	25	1	Low
	Equipment Storage	$150,000	$0	$150,000	$150,000	10.0	Very Good	75	0	76	1	Low
Vehicles		$1,838,966	$992,026	$846,940	$2,535,000	7.0	Good	20, 15, 10	10	7	2	Moderate
Storm Water	Catch Basins	$47,368	$12,269	$35,099	$86,000	6.7	Very Good	50	25	25	2	Moderate
	Storm Water Mains	$86,104	$10,923	$75,180	$181,825	7.6	Very Good	100	21	79	1	Low
Equipment & Machinery		$138,025	$49,973	$88,052	$231,704	7.0	Good	75, 50, 30, 25, 20, 15, 10, 5	13	14	1	Low
Land Improvements		$38,023	$18,658	$33,234	$142,896	7.0	Good	50, 30, 20, 15	41	7	1	Low
Software & Hardware		$59,818	$41,113	$18,706	$56,912	6.0	Average	30, 20, 15, 10, 5	6	3	2	Moderate
	Total	**$16,246,314**	**$7,598,837**	**$9,344,691**	**$138,797,997**	**6.0**	**Average**		**92**	**15**	**2**	**Moderate**
	Total without Road Base Replacement Costs				**$33,185,801**	**7.1**	**Good**		**31**	**35**	**2**	**Moderate**

The Equipment & Machinery assets are mostly composed of Municipal Office equipment, Public Works equipment and Horning's Mills Hall equipment. These assets are numerous and a standard requirement for general operations of these department areas of the municipality. These assets also are used and/or tested for safety on a regular basis by Township staff and therefore maintained or replaced on a regular schedule or when required.

Land Improvements assets are mostly made up of parking lots and playing surfaces, as sports fields and park equipment. Township staff regularly inspect these assets to ensure they are well maintained. It is recommended that the Township review the lifecycles of these assets to ensure that they are appropriate for the Melancthon Township environment.

The Software and Hardware asset group is also regularly used by Township staff. Assets as computers are replaced when required to ensure staff effectiveness. Therefore this asset group is well maintained and controlled via appropriate timely replacements.

The Township sidewalks are only located in Horning's Mills and inspected annually for deficiencies. The identified issues are recorded and corrected as soon as practicable. The identification of when these sidewalks were constructed was approximated using inputs from the Township road construction.

Street signs have not been fully recorded by the Township. Recently installed important signs were identified and included in this study, but do not require any additional analysis. Township staff review sign reflectivity annually.

Township street lights have been replaced with new LED lights which will effectively reduce the Township's electrical energy consumption. As these are new energy efficient lights which are expected to have over a 20 year lifecycle (40 years used in this study), there was no further analysis done on this asset type.

2.3 Road Environment Assets

The Township's road assets make up a key service that reflects the economic and social development of the community. The road environment assets are made up of the following asset types:

- Road Surface – 23% of the total Township Road asset replacement costs;
- Bridges – 77% of the total Township Road asset replacement costs;
- Cross Road Culverts – 0% of the total Township Road asset replacement costs;
- Signs – 0% of the total Township Road asset replacement costs;
- Street Lights – less than 1% of the total Township Road asset replacement costs;
- Sidewalks – 0% of the total Township Road asset replacement costs.

Below we provide more detail on the two key asset groups in the Road Environment group of assets, Roads, and Bridges.

2.3.1 Roads

At the current replacement cost the road environment assets account for $27.8 million dollars or 83% of the Township's assets. The composition of the road surfaces are outlined in Table 2-2.

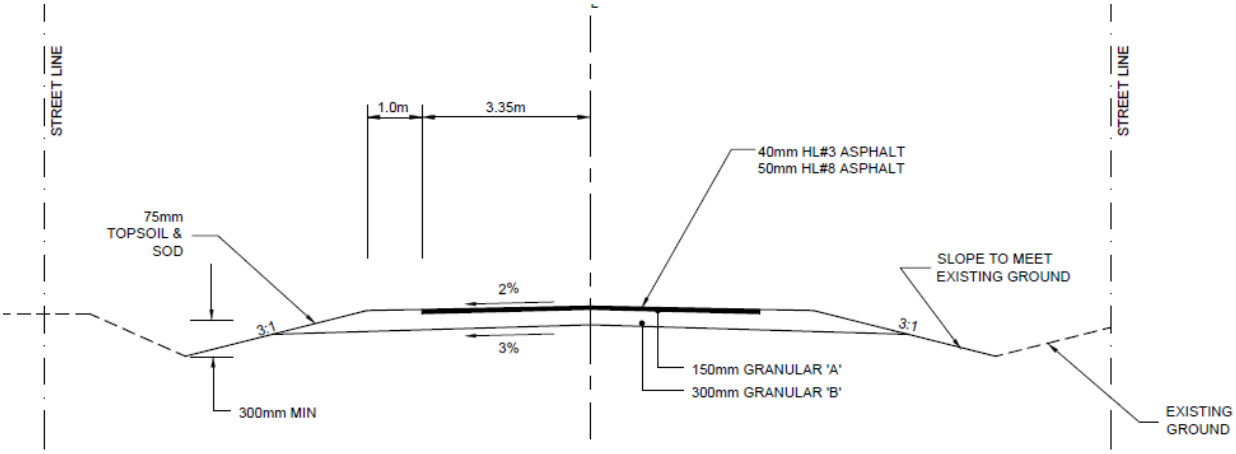
Table 2-2: Roadside Environment (Road Surfaces)

Roadside Environment	Length (km)	Asphalt Surface (km)	Gravel Surface (km)	Condition (weighted average)	Replacement Cost
Urban	3.4	3.4		5.5	$257,919
Semi-Urban	3.5	3.5		6.0	$262,402
Rural	241.6	74.2	167.3	5.9	$6,001,910
Total	**248.5**	**81.2**	**167.3**		**$6,522,231**

Burnside completed a desktop review of all Township roads to establish the road inventory. Many discussions with the Township Road Superintendent, helped to identify the road conditions, and identified needs for both asphalt and gravel surface roads.

It was identified that the Township is falling behind in trying to maintain good asphalt road surfaces, which can and eventually do affect the road bases. A presentation to the Township Roads Sub-Committee explained that it is very important to maintain the road surfaces which are comparatively a minor replacement cost to the major cost to replace a road base (see Figure 2-3). For some asphalt roads it is recommended that the asphalt surface be ground into the base along with some additional gravel. This will help to develop a more secure road base. Once the road base becomes soft it cannot economically support a hardtop road surface and it becomes a high maintenance gravel road.

Figure 2-3: Typical Road Cross-Section



The gravel surface roads are on an approximate three year rotation, of surface gravel replacement/top-up. In some locations additional gravel is at times required to help reinforce the road base. This rotation is recommended to continue to ensure that these roads remain safe.

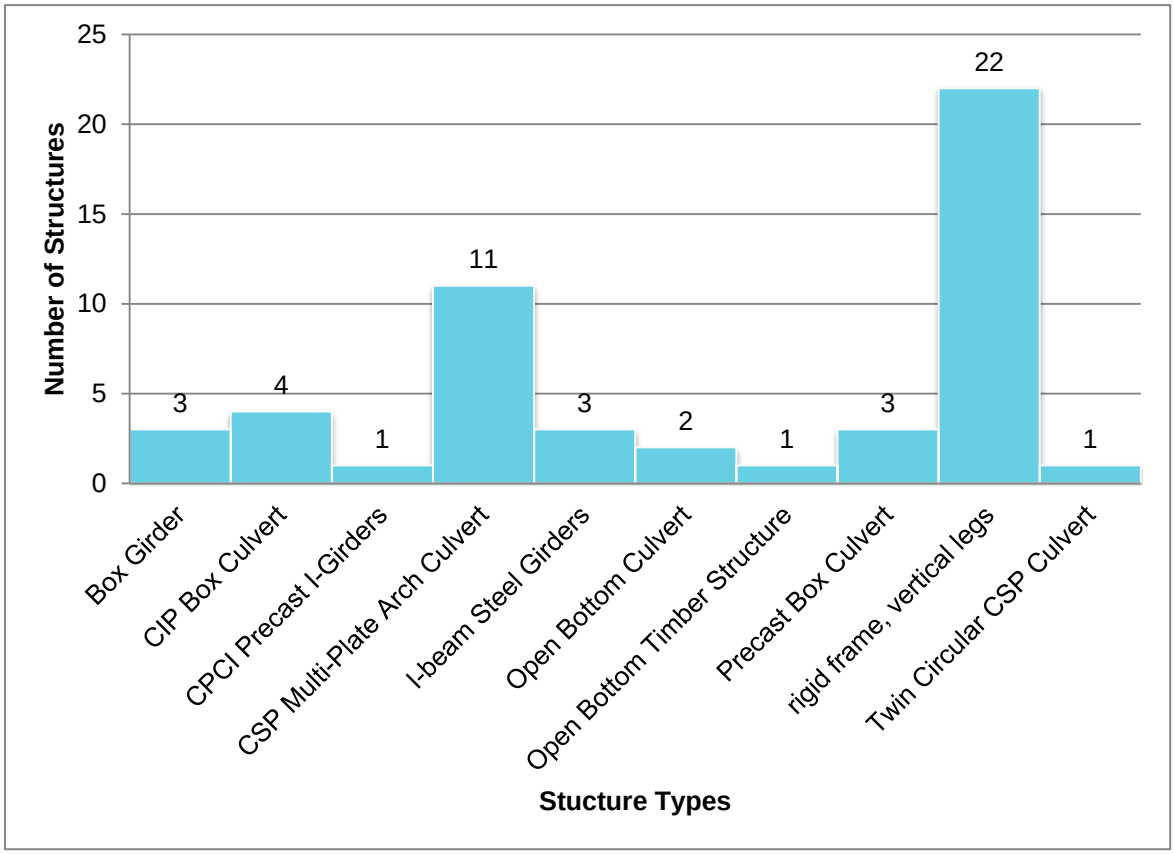
To gain a better understanding of the road conditions it is recommended that the Township complete a Road Needs study. This will provide a more detailed report of condition related deficiencies, and other deficiencies that may impact longevity or operations of Township roads, including road widths, drainage, surface type, alignment, and brushing maintenance where required.

2.3.2 Bridges & Culverts

Burnside in 2015 inspected the Township's 52 municipal bridge and culvert structures over the span of 3.0 m. One of these structures, Bridge 2 was mistakenly reviewed as it is owned by the County of Dufferin. This structure was removed from the Township's asset inventory, and not discussed in this Asset Management study. The complete detailed report was delivered to the Township in December 2015. Visual inspections are required to be carried out every two years in accordance with the Ministry of Transportation – Ontario Structure Inspection Manual (OSIM). The 2015 inspections were completed under the direction of a Professional Engineer to assess their condition and identify any material defects, performance deficiencies, maintenance needs, additional studies and/or repairs/rehabilitation work required on a structure by structure basis.

The Township has a total of just under $21 million replacement cost of bridge and culvert assets. Figure 2-4 provides the distribution of the types of bridges that the Township owns.

Figure 2-4: Township of Melancthon Types of Bridge Structures



Following the field inspections, recommendations were made based on the data collected and the review of the previous inspection reports. Depending on the condition of each structure, the remedial needs have been provided in three classifications; routine maintenance, additional investigations and repairs and rehabilitations (Capital Works).

The routine maintenance work often requires a minimal scope of work, and in most cases can be carried out by Township staff. The total estimated value of the maintenance work to be completed by the Township is $71,250. We recommend that a general allowance to complete the works described above over the next few years be included in the Township's annual road budget.

The capital works needs include any repair, rehabilitation or replacement work which would typically be completed by a Township hired Contractor, to assist in extending the service life of a structure and increasing the Bridge Condition Index (BCI). In accordance with the OSIM, the capital works required are based on a priority of six to ten years, one to five years, within one year, and urgent and have been estimated and presented in Table 2-3.

Table 2-3: Bridge Capital Works Costs

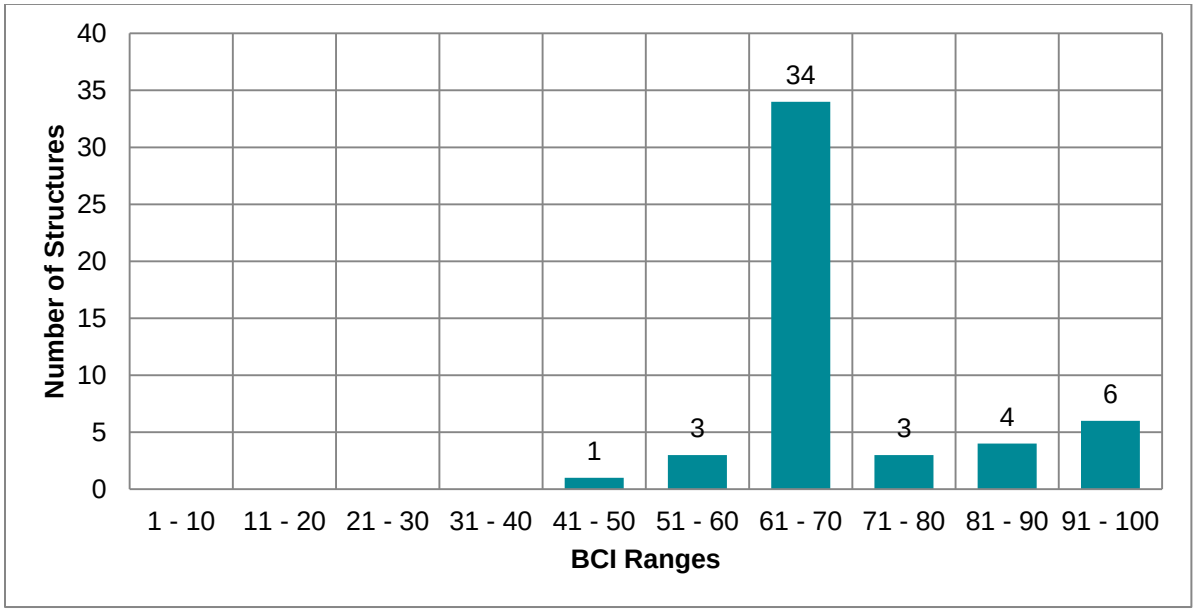
Time Frame	Capital Cost
< 1 year	$235,000
1 – 5 years	$1,449,000
6 – 10 years	$817,500
Total	**$2,501,500**

It should be noted that the Capital Works costs include recommended replacement or rehabilitation costs for structures in need.

Taking into consideration the structures calculated BCI's, several structures have been identified for rehabilitation. Within the next four years, six structures have been identified for rehabilitation capital works. The Township is moving forward with rehabilitation of Structure 15 Oldfield Bridge in 2017. The others are identified in the asset strategy.

Based on the biennial inspection of each structure, the Bridge Condition Index (BCI) is calculated for each structure. The Bridge Condition Index Distribution graph, shown in Figure 2-5 below, provides a summary of the current state of the Township's structures.

Figure 2-5: Bridge Condition Index Distribution (2016)



Currently, only approximately 25% of the Municipality's structures are within the "good" range (over 70 BCI), with 73% of the structures classified as "fair" (50 – 70 BCI) and 8% classified as "poor" (under 50 BCI), as illustrated in Figure 2-5. Of interest, the MTO has established a goal to have 85% of their structures in "good" condition (BCI ≥ 70) by the

year 2021, and to maintain that condition moving forward by addressing rehabilitations and replacements as necessary. Burnside recognizes that the above goal was not established by the Township, but it is noted that, based on the current state of the inspected structures, the Township appears to be performing fairly on the management of their bridge assets when compared to the MTO's established goal.

Continued maintenance and completion of rehabilitative or replacement works as recommended in the Bridge report will help to continue this trend of overall improvement of the Municipality's bridge assets.

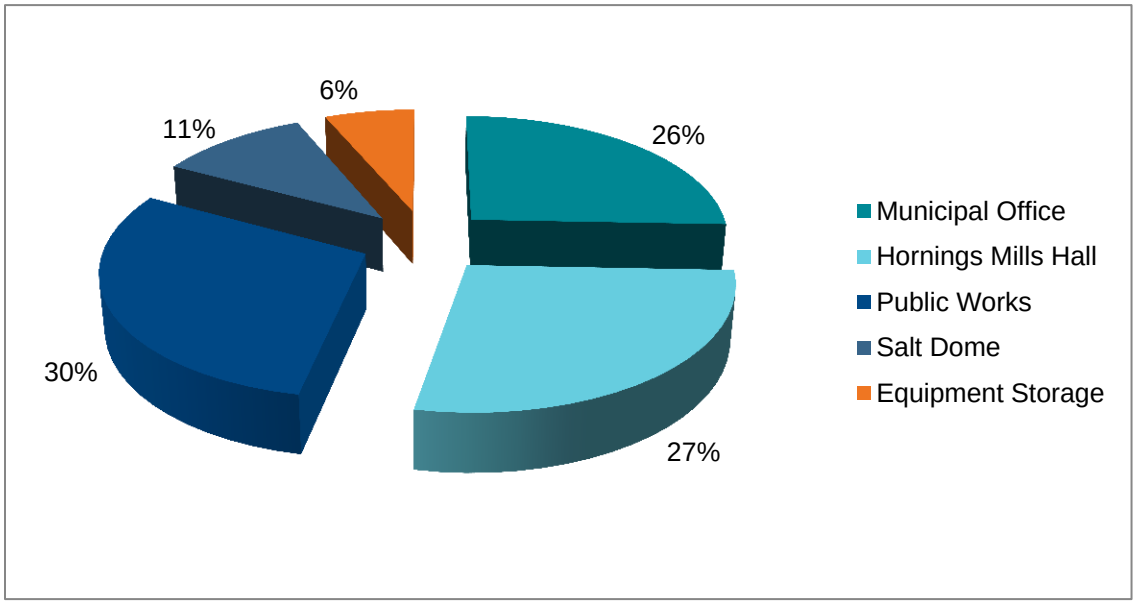
The MTO has also developed theoretical deterioration curves which were used as a backdrop to estimate the remaining service life of a structure before replacement, or to establish a time frame for future rehabilitations. The investigations indicate that the Township will need to invest approximately $360,000 per year over the next twenty years to maintain safe bridge and culvert structures.

2.3.3 Facilities

Facilities account for $2.3 million or 7% of the Township's assets replacement costs. Figure 2-6 shows the distribution of this $2.3 million across the asset type owned by the Township. A total of 5 facilities were identified as requiring an opinion of remaining life and replacement cost. Clearly the Township has invested in their facilities by expanding the main administration office, and adding a new equipment storage facility. Renovations were also completed to the Horning's Mills Hall to better serve the community.

Information that was provided by the Township as well as data included in the Township's asset management database was reviewed and organized for this project. Please note that the Equipment Storage building is being constructed in 2017, and has been identified for completeness.

Figure 2-6: Facilities Replacement Cost Distribution



2.3.3.1 Facilities Condition Rating

A rating system consisting of five categories, Very Good, Good, Fair, Poor, and Very Poor, was utilized in order to provide a general description of the condition of each facility or component thereof as compared with the average life expectancy of that facility or component. Condition ratings for individual components or groups of components with a facility was provided by the Township, or assumed based on age and average life expectancy where no rating was provided.

Table 2-4: Facility Weighted Average Condition

Facility	Condition (weighted average)	Replacement Cost
Municipal Office	8.9	$597,123
Horning's Mills Hall	6.9	$671,329
Public Works	7.9	$693,928
Salt Dome	7.0	$250,000
Equipment Storage	10.0	$150,000
	Total	**$2,362,381**

2.3.4 Vehicles

The Township as most municipalities maintain their vehicles very well. This is potentially due to staff's regular hands-on use of these assets. When vehicle assets are used

regularly the end users want to ensure that they are maintained to their manufacturer's specifications. Even though there are many vehicles that have exceeded their identified useful lives they are still safe to use. This does not mean that they will never have to be replaced.

It should not be surprising that all of the Township's vehicles have been identified for replacement over the 20 year period of this study. Some of these are currently only being used to cover more busy periods, and will eventually be replaced.

The Township owns $2.5 million in replacement cost vehicles. This is 8% of the Township's assets (without road bases included), however they are a key functional asset used to provide clear drivable roads, and safe recreational fields and facilities.

Over the next ten years it is recommended that the Township invest approximately $165,000 annually to overcome the Township's vehicle needs.

2.3.5 Storm Water Assets

The Township has two main areas Horning's Mills and Corbetton that have catch basins and storm sewer pipes estimated at potentially just under $300,000 in replacement cost assets. These assets are expected to have a long lifecycle of over 50 years, however it is important to inspect these assets as they approach their half-life period. Inspections with Closed Circuit Television cameras will provide a better understanding of the asset condition.

Table 2-1 provides more insight into the storm water assets. Please note that weighted averages do not fully reflect potential current needs, but provides a relative expression including all of the assets in this asset grouping.

The expected pipe lifecycle of 100 years indicates, as long as the asset is well maintained it provides for a long lasting cost effective storm water system.

2.4 Asset Condition

Each asset was tracked based on estimated total useful life and remaining service life. Using this data, along with staff information, and age analysis of Township assets assisted in identifying potential areas of focus where inspected asset condition was not available. We do wish to state that asset condition is always best defined via engineering best practices. Engineering based condition assessments can provide more realistic estimates of an asset's remaining service life, which can then be used to establish rehabilitation and/or replacement schedules. Age related condition values can be problematic if the asset's useful life is not appropriately defined. For example, if a useful life of an asset is defined shorter than the assets true performance, this will result

in a lower/poorer age assessed condition rating. This method of condition approximation was only used when inspected or staff commented conditions were not available.

A rating out of 10 was established for all assets and was based on a combination of past reported physical inspections, current inspections, staff assessment, and asset age analysis. This rating was then converted to a condition description of “Very Poor” to “Very Good” as shown in Table 2-5.

Table 2-5: Asset Condition Format for all Assets

Condition (Value 0-10)	Condition
9 – 10	Very Good
7 – 8	Good
5 – 6	Average
3 – 4	Poor
1 – 2	Very Poor

The condition of the assets is an important element of any lifecycle assessment process. The condition assessment process also identifies maintenance and operating practices that can be applied to ensure appropriate service, as well as extending the life of the asset to its maximum service life.

A draft policy has been proposed that will ensure all the Township’s assets are reviewed using established engineering methods and practices. Appendix B contains the draft Data Verification and Condition Assessment Policy, which identifies how often the Township assets are recommended to be assessed.

A high level summary of the average conditions for the Township assets are shown in Table 2-1. The conditions listed in Table 2-1 are for weighted average conditions. The weighting was to use the asset replacement costs so that the greater the cost the greater the weighting of that asset’s condition is used to determine the average. Using this method provides for more emphasis on the more expensive to replace assets. However please note that averages are a composition of many assets in a group. Averages can be misleading with respect to immediate needs as the new assets offset the old assets requiring urgent replacement.

2.5 Data Accuracy and Completeness

An important element of this asset management plan is ensuring that tools and procedures are in place to maintain accuracy and completeness of the asset data and calculations moving forward. As time passes, assets are used, maintained, improved, disposed of and replaced.

All of these lifecycle events can trigger changes to the asset database used within the asset management plan. Therefore, tools and procedures are essential to ensure the asset data remains accurate and complete. Please refer to Appendix B of this report for the draft “Data Verification and Condition Assessment Policy” for the Township. This policy illustrates how the asset data will be updated and verified going forward. This includes the timing of condition assessments for each asset type and what should be included within the condition assessment procedures.

3.0 Expected Levels of Service

The Township of Melancthon has been offering and maintaining for its municipality good service levels, during challenging economic times. The Province has become more demanding of all municipalities requiring residents to invest more and more into replacing older infrastructure. Reviewing past records has shown that small investments were being made into maintaining and replacing Township infrastructure. The last few years have seen improvements with greater investments in retaining proper service levels on Township assets. It is important to note that the long term objective of the Township needs to be infrastructure sustainability. In general the Township is performing maintenance activities when required.

3.1 Scope and Process

A levels of service (LOS) analysis gives the Township an opportunity to document the levels of service that are currently being provided and compare it to the levels of service that will ensure the assets achieve their full lifecycle potential. This can be done through a review of current practices and procedures, an examination of trends or issues facing the Township and/or through an analysis of performance measures and targets that staff can use to measure performance.

Expected LOS can be impacted by a number of factors, including:

- Legislative requirements;
- Strategic planning goals and objectives;
- Resident expectations;
- Visitor expectations;
- Council expectations; and
- Financial or resource constraints.

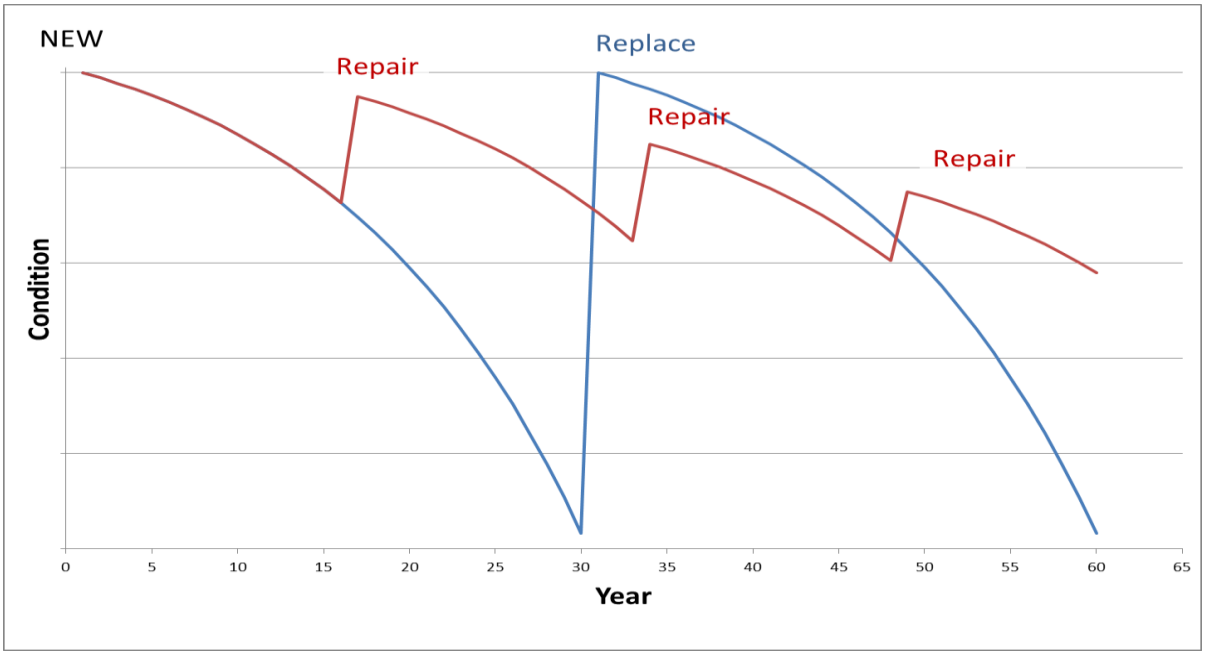
The previous task of determining the state of the Township's local infrastructure establishes the asset inventory and condition, as well as asset management policies and principles to guide the refinement and upkeep of asset infrastructure. The LOS analysis will utilize this information and factor in the impact of asset service level targets. It is important to document an expected LOS that is realistic to the community. It is common to strive for the highest LOS; however, these service levels usually come at a cost. It is also helpful to consider the risk associated with a certain LOS. Therefore, expected LOS should be determined in a way that balances both level of investment and associated risk to the Township.

Burnside received verbal confirmation of maintenance practices that the Township undertakes. The only additional practices that we recommend are to complete more rigorous condition assessments on Township owned assets, as this will help better determine the remaining life of the municipality's assets. This then will provide the

Township staff with time to find/develop appropriate funding to improve or replace these assets.

Figure 3-1 illustrates the recommended strategy of investing more often in smaller amounts provide higher levels of service and better asset condition with over all lower total cost over the lifecycle of the asset.

Figure 3-1: Small and Timely Renewal Investments Save Money



3.2 Current Levels of Service versus Expected Levels of Service

The Township's current LOS has resulted in the current state of infrastructure as discussed in the previous section of the report. This current LOS also relates to the risk assessment discussed in later report sections. Regarding the cost of this LOS, the municipality has established an operating and capital budget for the current year that includes the cost of providing this LOS to residents. Therefore in moving from the current LOS to an enhanced LOS, consideration has to be made for the associated cost (or impact on the Township's current budget) in moving to an enhanced LOS.

Table 3-1 outlines broad LOS descriptions (both current and enhanced LOS). This analysis was noted through discussions with the Township and engineering best practices. Based on the information provided there are a few enhanced maintenance related LOS identified.

Table 3-1: Township Expected Levels of Service

	Expected Strategic LOS	Level of Service (LOS) Analysis				
		Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Cost to Move to Expected LOS	Cost Description
Roads & Related Assets	Safe Roads	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02.	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02.	Regulation Standard	None	Township may want to incorporate a system that will assist in proving compliance to the Provincial Regulation
	Fix Public Identified Issues Quickly	Track complaints and resolve then as quickly as possible	Track complaints by road segment.	Respond to Public Inquiry within 7 days	None	Township delivers the Level of Service well
	Maintain Road System Network Condition for Safe Use	Road Maintenance is completed regularly and when required	Maintain adequate road network condition index to ensure safe roads	Assess Road Conditions every 10 years with Internal assessment annually	$20,000	Roads Needs Study every 10 years to include Network Condition analysis
	Asphalt Roads are Clean and Clear	Street sweeping and flushing are completed annually	Roads are swept and flushed to ensure they are clear of debris and safe.			Township delivers the Level of Service well
	Gravel Roads are Well Maintained and Dust Inhibited	Gravel roads are smoothed when required, and Calcium Chloride applied to control dust	Gravel roads are smoothed when required, and Calcium Chloride applied to control dust			Township delivers the Level of Service well
	Safe and Well Maintained Roadsides	Township provides brushing, ditching, grass mowing, and shoulder maintenance to ensure roadsides are safe and well maintained	Roadsides are clear of obstructions and well maintained for safe road travel.			Township delivers the Level of Service well
	Signs can be Seen Clearly	Signs: Visual inspections done in the evening. Replaced when required/needed.	Signs: Visual inspections. Replace when needed.	Reflectivity Standard		Township delivers the Level of Service well
	Sidewalks are Clear and Safe	Visual Inspections done annually	Annual visual inspections correcting all identified deficiencies	Regulation Standard		Township delivers the Level of Service well
	Safe Well-Lit Urban/Semi-Urban Street Areas	Maintenance activated by Public Notice for Street Lights and conversion to LED	Maintenance activated by Public Notice for Street Lights and completing conversion to LED lighting	Correction of Issues within MMS		Township to have proper Reserve fund for Light replacement

	Expected Strategic LOS	Level of Service (LOS) Analysis				
		Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Cost to Move to Expected LOS	Cost Description
Bridge & Culvert Assets	Safe Bridges	Maintain good bridge condition and load limits.	Maintain good condition and load limits.	MTO bridge guides		Township is completing this LOS
	Bridges Maintained	Follow Bridge Inspection Report recommendations for Bridge and Culvert maintenance.	Proactive Bridge and Culvert maintenance (based on bridge report).		$15,000	Township is completing this LOS, with improving the maintenance issues over the next 5 years with investment of $15,000 per year
	Proper Bridge Spring Maintenance	Blowing out Expansion Joints & Washing of Bridges in Spring	Blowing out Expansion Joints & Washing of Bridges in Spring			Township is completing this LOS
	Bridge Inspections	Bridge inspections (i.e., using OSIM reports) required every 2 years.	Bridge inspections (i.e., using OSIM reports) required every 2 years.	Completed every 2 years	$17,000	As per Provincial Requirements (next need year is 2018)

	Expected Strategic LOS	Level of Service (LOS) Analysis				
		Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Cost to Move to Expected LOS	Cost Description
Building Assets	Safe Buildings	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Provincial Guidelines		Township is completing this LOS
	Facility are Well Maintained	Condition assessments performed when needed.	Facility Condition Assessments showing remaining life of major asset components and required improvements completed			On-Site inspections completed when required
	Health & Safety Equipment is in Good Working Order	Health & Safety component assessments to ensure emergency alarms, lighting, generators, etc. are functioning to specifications	Health & Safety component assessments to ensure emergency alarms, lighting, generators, etc. are functioning to specifications	Provincial Guidelines		Township is completing this LOS
	All Facilities meet Accessibility Standards	All facilities meeting current accessibility standards.	All Facilities meet accessibility standards.	Provincial Guidelines		Township is completing this LOS
	Maximizing Energy Savings	Energy Audit is being undertaken by the Township	Resource Efficiency: Energy Audit - for all facilities			Township has a program in place with local electrical contractors to complete the Energy audits for buildings
	Water is Safe to Drink	UV light and other systems are used to ensure safe drinking water. Water is tested regularly.	Water is tested regularly and safe to drink	Provincial Guidelines		Township is completing this LOS
	Mechanical Systems are Inspected and Maintained	HVAC systems are inspected and maintained annually	Assess efficiencies in Maintenance contracts (i.e., generators, HVAC).			Township is completing this LOS
	Maintaining Heritage Buildings	Heritage: Maintain existing heritage elements of applicable buildings.	Heritage: Maintain existing heritage elements of applicable buildings.	Provincial Guidelines		Township is completing this LOS
	Clean and Well Maintained Facilities	Township has well maintained facilities	Proactive facility maintenance.			Township is completing this LOS

	Expected Strategic LOS	Level of Service (LOS) Analysis				
		Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Cost to Move to Expected LOS	Cost Description
Land Improvements	Safe & Accessible Parks	Meet legislative requirement (Inspections, Health & Safety, etc.)	Meet legislative requirement (Inspections, Health & Safety, etc.)	Provincial Guidelines		Township Staff complete inspections
	Parks are Well Maintained	Condition assessments performed when needed. Monthly inspections of playground equipment.	Monthly inspections of playgrounds and equipment	Provincial Guidelines		Township is completing this LOS
	Playgrounds are in Good Working Order	Health & Safety component assessments to ensure functioning to specifications	Health & Safety component assessments to ensure functioning to specifications	Provincial Guidelines		Appropriate maintenance measures are being undertaken by the Township.
	Parking Facilities are in Good Condition	Maintenance for Parking areas when required	Annual Inspections for maintenance for Parking areas			Township staff to complete and report
	Sports Fields are Safe and Maintained	Appropriate Maintenance for safe use	Appropriate Maintenance for safe use			Township is completing this LOS
	Fencing Is Safe	Responding to Public complaints	Annual inspection and fixing of maintenance issues	Annual Review		Township to review when complaints submitted. Inspections are completed by staff

	Expected Strategic LOS	Level of Service (LOS) Analysis				
		Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Cost to Move to Expected LOS	Cost Description
Vehicles & Equipment Assets	Safe & Well Maintained Vehicles	Proactive maintenance plan, as per Manufacturer's Guidelines	Proactive maintenance plan, as per Manufacturer's Guidelines			Township is completing this LOS
	Safe & Well Maintained Equipment	Proactive maintenance plan, as per Manufacturer's Guidelines	Proactive maintenance plan, as per Manufacturer's Guidelines			Township is completing this LOS
	Optimal Replacement of Vehicles & Equipment	Replace Equipment/Vehicles as required (some areas based on legislated replacements, others minimum safety).	Replace Equipment/Vehicles as required (some areas based on legislated replacements, others minimum safety).			Some concern over the age of some of the vehicles/equipment the Township uses, however they are safe to use. The older vehicles are being used sparingly

	Expected Strategic LOS	Level of Service (LOS) Analysis				
		Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Cost to Move to Expected LOS	Cost Description
Storm Water Assets	Effective Storm Water Management	Investigate and respond based on public complaints/concerns	Proper flows and clear system with little to no inhibitors	No storm water back-up incidents		Township is completing this LOS
	Catch Basins are Clear and Well Maintained	Bi-Annual Catch Basin cleaning	Annual Catch Basin cleaning	Clean out when required	$2,000	Township should complete catch basin cleaning on an annual basis (cost is for every other year)
	Storm Water Mains are Clear and Well Maintained	No identified issues	CCTV review and assessment completed every 15 years. Implement plan for repairs & maintenance that result in system efficiencies.		$15,000	CCTV program every 15 years

The Levels of Service cost impact analysis was factored into the financial strategy discussed in Chapter 5 of this report.

3.3 Level of Service Performance Measures

As mentioned above, using performance measures in the LOS review can also be helpful in measuring the Township's goals and objectives when it comes to capital assets. The municipality currently tracks specific performance measures as part of their Minimum Maintenance Standards for Roads. It is recommended that the Township start tracking some other key performance measures as this will assist the municipality to better define and achieve their desired LOS and asset strategies. As the municipality's asset management plan evolves over time, performance measures can be introduced to further measure the LOS being provided in each service area.

4.0 Asset Management Strategy

4.1 Scope and Process

The asset management strategy provides the recommended course of actions required to maintain (or move towards) a sustainable asset position while delivering the levels of service discussed in the previous chapter. The course of actions, when combined together, form a long-term operating and capital forecast that includes:

- Non-infrastructure solutions: Reduce costs and/or extend expected useful life estimates;
- Maintenance activities: Regularly scheduled activities to maintain existing levels of service levels, or repairs needed due to unplanned events;
- Renewal/Rehabilitation: Significant repairs or maintenance planned to maintain the levels of service and increase the remaining life of assets; and
- Replacement/Disposal: Complete disposal and replacement of assets, when renewal or rehabilitation is no longer an option.

Priority identification becomes a critical process during the development of an asset management strategy. Priorities have been determined based on assessment of the overall risk of asset failure, which is determined by looking at both the probability of an asset failing, as well as, the consequences of failure. The consequences of the municipality not meeting desired levels of service must also be considered in determining risk. As discussed in Chapter 3, adding enhanced levels of service results in both operating and capital budget impacts over the 20 year forecast period. This has to be taken into consideration, with the overall objective of reaching sustainable levels while mitigating risk.

4.2 Risk Assessment

The risk of an asset failing is defined by the following calculation:

Risk of Asset Failure = Probability of Failure X Consequence of Failure

Probability of failure has been linked to the condition assessment for each asset, assuming that an asset in “very good” condition has a “rare” probability of failure. The following table outlines the probability factor tied to each condition rating:

Table 4-1: Probability of Failure Matrix

Condition (Value)	Condition	Probability of Failure
9 – 10	Very Good	Rare
7 – 8	Good	Unlikely
5 – 6	Average	Possible
3 – 4	Poor	Likely
1 – 2	Very Poor	Almost Certain

Consequence of failure has been determined by examining each asset type separately. Consequence refers to the impact on the municipality if a particular asset were to fail.

Types of impacts include the following:

- Cost Impacts: the cost of failure to the Township (i.e., capital replacement, rehabilitation, fines and penalties, damages, etc.);
- Social impacts: potential injury or death to residents;
- Environmental impacts: the impact of the asset failure on the environment; and
- Service delivery impacts: the impact of the asset failure on the Township's ability to provide services at desired levels.

Each type of impact was reviewed and consequence of failure for each asset type was determined by using the information contained in Table 4-2 as a guide to assess the level of impact. Levels of impact were documented as ranging from "significant" to "insignificant".

Table 4-2: Consequence of Failure Matrix

	Cost	Social	Environmental	Service Delivery
Significant	Significant Cost – Difficult to Recover	Death, Serious Injury	Long-term Impact – Permanent	Major Interruptions
Major	Substantial Cost – Multi-year Budget Impacts	Major Injury	Long-term Impact – Fixable	Significant Interruptions
Moderate	Considerable Cost – Requires Revisions to Budget	Moderate Injury	Medium-term Impact – Fixable	Moderate Interruptions
Minor	Small/Minor Cost – within Budget Allocations	Minor Injury	Short-term/Minor Impact – Fixable	Minor Interruptions
Insignificant	Negligible or Insignificant Cost	No Injury	No Impact	No Interruptions

With both probability of failure and consequence of failure documented, total risk of asset failure was determined using the matrix contained in Table 4-3. Total risk has been classified under the following categories:

- Extreme Risk (E): Risk beyond acceptable levels;
- High Risk (H): Risk slightly beyond acceptable levels;
- Medium Risk (M): Risk at acceptable levels, monitoring required to ensure risk does not become high; and
- Low Risk (L): Very little risk.

Table 4-3: Total Risk of Asset Failure Matrix

Probability of Failure	Consequence of Failure				
	Significant	Major	Moderate	Minor	Insignificant
Almost Certain	E	E	H	H	M
Likely	E	H	H	M	M
Possible	E	H	M	M	L
Unlikely	H	M	M	L	L
Rare	H	M	L	L	L

Risk levels can be reduced or mitigated through planned maintenance, rehabilitation and/or replacement. An objective of this asset management plan is to reduce risk levels where they are deemed to be too high, as well as, ensure assets are maintained in a way that keeps risk at acceptable levels.

4.3 Priority Identification

Through a review of the asset risk of failure assessment, the assets/categories listed below were identified as being priorities of the Township for over the next few years.

- Vehicles – Plow Truck (approximate cost $275,000, 2018)
- Facilities – Municipal Office Heating system (approximate cost $5,000, 2019)
- Bridge 15 – Oldfield Bridge 2nd Line SW (approximate cost $218,000, 2017)
- Bridge 10 – Hutchinson Bridge 280 Sideroad (approximate cost $185,00, 2018)
- Bridge 2003 – Culvert 3rd Line OS (approximate cost $300,000, 2018)
- Bridge 7 – Gray Bridge 7th Line SW (approximate cost $110,000, 2019)
- Bridge 11 – G. Anderson Bridge 8th Line SW (approximate cost $180,000, 2019)
- Structure 2023 – Culvert 4th Line NE South of 260 SR (approximate cost $117,500)
- Road Base – 2nd Line SW from 250 SR to Melancthon / Southgate Boundary Line (approximate cost $25,000, 2017)

- Road Base – 2nd Line SW from Highway 89 to 300 SR (approximate cost $20,000, 2017)
- Road Base – 4th Line NE from 250 SR to 240 SR (approximate cost $20,000, 2018)
- Road Base – 4th Line NE from 240 SR to County Rd 9 (approximate cost $25,000)
- Road Base 5th Line OS from County Rd 17 to County Rd 21(approximate cost $80,000, 2019)
- Road Surface Asphalt – High St. from Main St to William St (approximate cost $13,000, 2017)
- Road Surface Asphalt – River Rd from Melancthon/Mulmur Townline to William St (approximate cost $105,000, 2017)
- Road Surface Asphalt – 15 SR from 3rd Line OS to County Rd 124 (approximate cost $85,000, 2018)
- Road Surface Asphalt – 4th Line OS from County Rd 17 to 15 SR (approximate cost $230,000, 2018)
- Road Surface Asphalt – 2nd Line SW from 250 to Melancthon / Southgate Boundary Line (approximate cost $10,000 for gravel surface depending on traffic count, 2019)
- Road Surface Asphalt – 2nd Line SW from Highway 89 to 300 SR (approximate cost $135,000, 2019)
- Road Asphalt Surface – 5 SR from 3rd Line OS to Melancthon/Mulmur Townline (approximate cost $205,000, 2019)

This list of capital asset replacements are only for the next few years, and do not limit the needs that the Township requires to become fully sustainable. The Finance Strategy will further outline the needs for investing in assets annually via reserves to ensure that funds are available for future asset replacements.

4.4 Long-term Forecast

For many years, lifecycle costing has been used in the field of engineering to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and use recently in the management of capital assets. By definition, lifecycle costs are all the costs which are incurred during the lifecycle of a capital asset, from the time it is purchased or constructed, to the time it is taken out of service for disposal.

In defining the long-term forecast for the Township's asset management strategy, costs incurred through an asset's lifecycle, the assets condition, expected LOS, and risk were considered and documented. Asset Replacement Analysis in forecasting the municipality's asset replacement needs are summarized in Figure 4-1, which we are calling Asset Strategy Scenario 1 based on expected levels of service. This asset strategy was further developed into a Scenario 2a, 2b, and 2c. This second developed scenario takes the developed asset strategy and applies a Capital Phased-In Approach as shown in Figure 4-2. Scenario 2 is fully discussed in Chapter 5.

The asset strategy incorporated all of the information discussed above in this report and based on the information provided by the Township, the completed field asset assessments, past reports, staff input, and understanding of the asset's reaction in their current environment as well as the expected asset maintenance levels, and the current asset condition, which is expected to produce a reduced asset potential risk of failure. The outcome of this scenario was to provide appropriate asset service levels, and assets are expected to meet or exceed their useful life which reduces expected infrastructure deficits. In total, $28.5 million in assets (inflated to appropriate year) are shown as replacement needs in the 20 year forecast. This is the recommended scenario for the Township of Melancthon.

Assets like Bridges, Storm Water, and Facility Structures, are not expected to be replaced for usually over 50 years. It needs to be stated to ensure that these assets have reserve funding for their replacement schedule in the future. These assets will need to be replaced beyond the 20 year analysis period and not having reserve funds to do so will elevate the risk of failure to extreme levels in the future. Scenario 2c makes an attempt at providing the Township with an investment plan into Township reserve accounts.

For the recommended scenario to be feasible, the level of service adjustments discussed in Chapter 3 are needed in conjunction with the current level of service amounts in order to effectively maintain and rehabilitate the assets as required.

The financing strategy discussed in the next chapter will incorporate the level of service adjustments into the recommended financing analysis. Please refer to Appendix C for the full 20 year details.

4.5 Procurement Methods

Section 270(1) of the Municipal Act, S.O. 2001, identifies that municipalities (and Local Service Boards) shall adopt and maintain policies with respect to their procurement of goods and services. The Township has a good functioning procurement process which is helping the Township acquire appropriate services at the current best price.

Figure 4-1: Scenario 1 - Proposed Asset Strategy Based on Expected Levels of Service

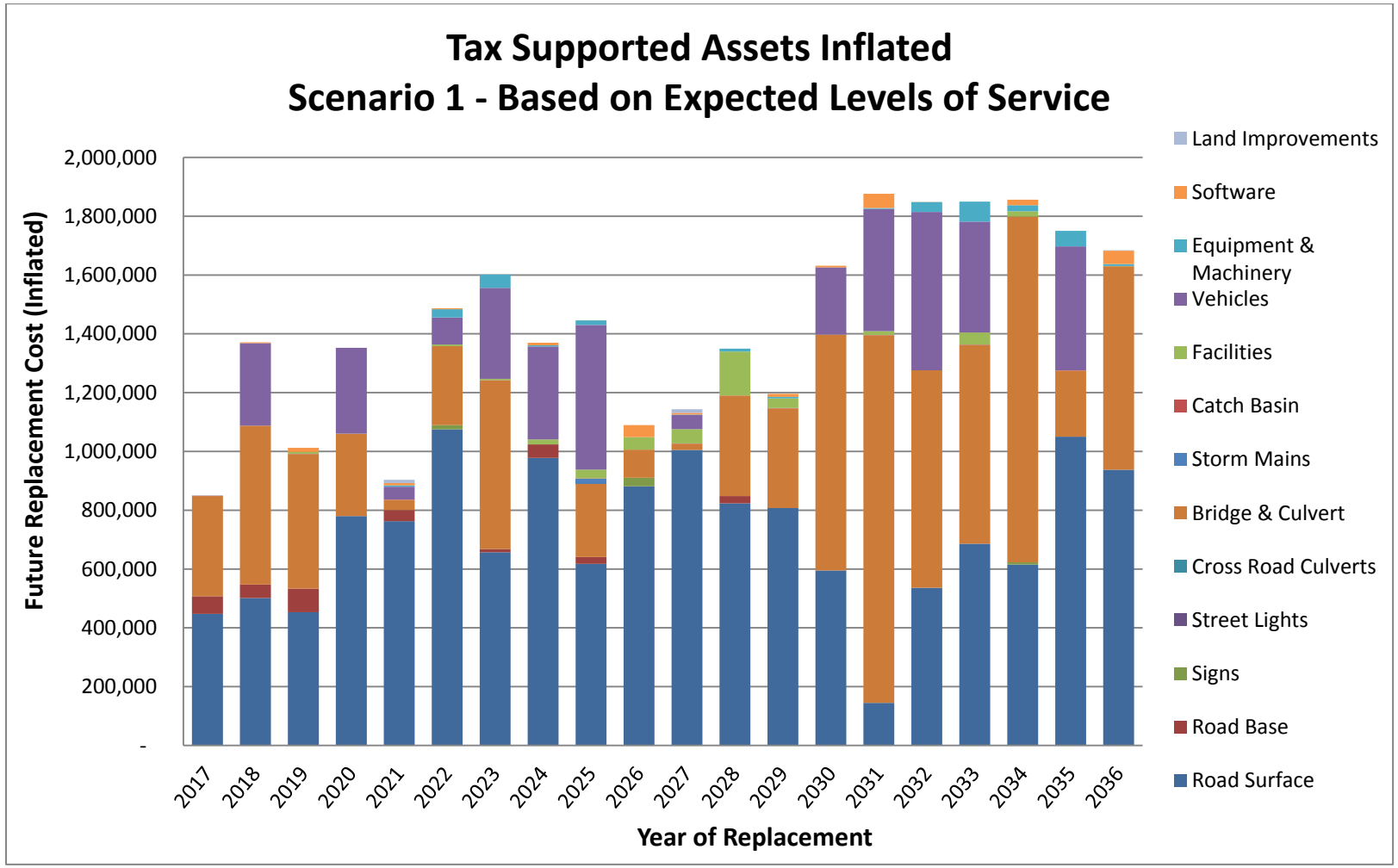
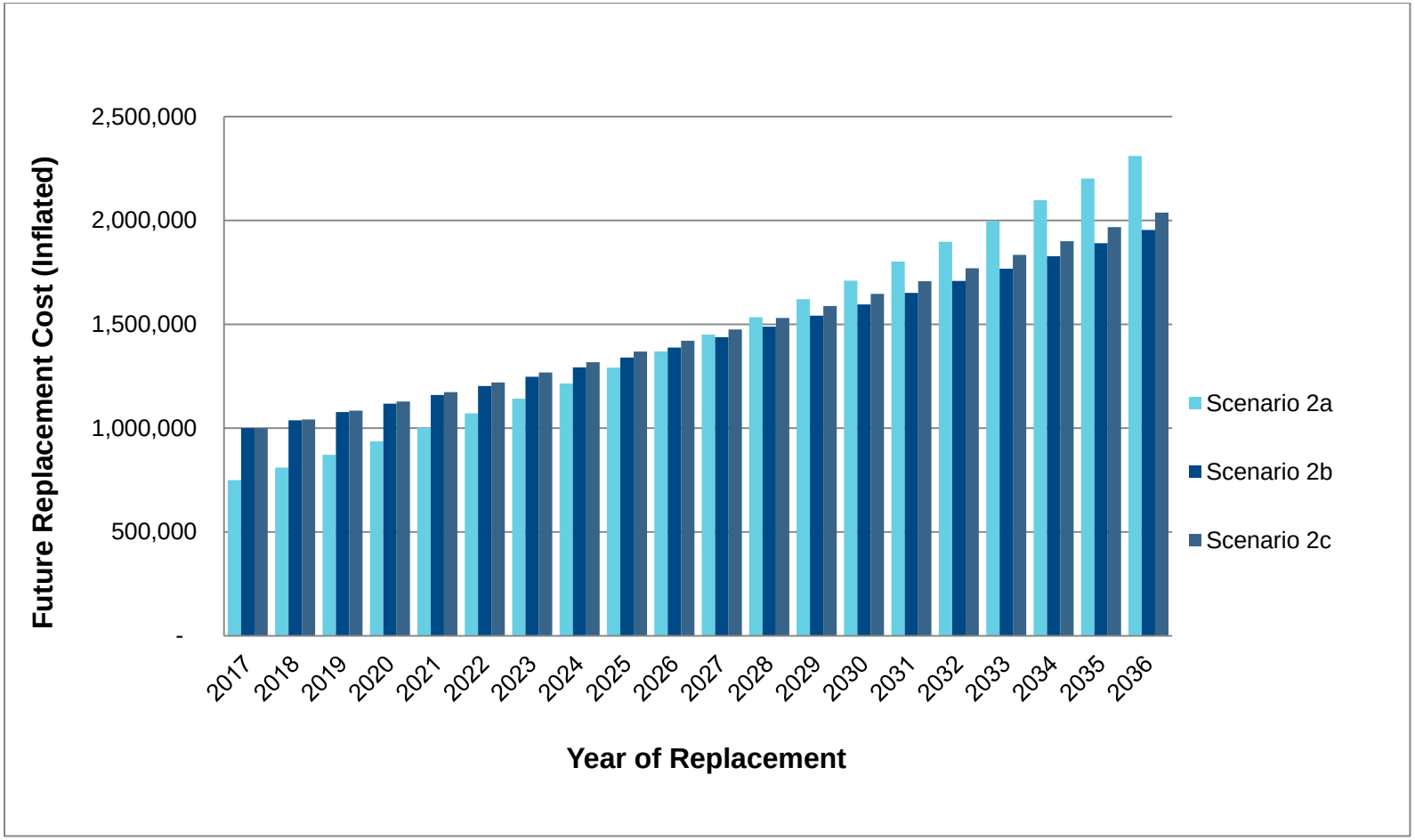


Figure 4-2: Scenario 2 – Capital Phased In Approach



5.0 Financing Strategy

5.1 Scope and Process

The financing strategy outlines the suggested financial approach to funding the asset management strategies outlined in Chapter 4, while utilizing the Township's existing budget structure and available funding sources. This section of the asset management plan includes:

- Annual expenditure forecasts broken down by lifecycle cost, including:
  - Maintenance/non-infrastructure solutions;
  - Renewal/rehabilitation activities;
  - Replacement/disposal activities; and
  - Expansion activities.
- Actual expenditures in the above-named categories for 2015 and 2016, and budgeted expenditures for 2017;
- An approximation of the annual funding devoted to Capital improvements/ Replacements;
- Identification of the funding shortfall and the infrastructure gap, including how the impact will be managed; and
- All key assumptions documented.

The financing strategy forecasts (including both expenditure and approximate capital revenue sources) were prepared consistent with the Township's budget structure so that it can be used in conjunction with the annual budget process. Various financing options, including user fees, reserve funds, debt, and grants were considered during the process.

For all financing strategy scenarios, a detailed twenty (20) year plan was generated. The plan identifies specific lifecycle costs and associated funding sources required for the asset management strategies described in Chapter 4.

5.2 Historical Results

Table 5-1 outlines the historical results for 2015 – 2016 and the 2017 budget for Township services (all tax supported), which includes all capital (i.e., renewal/ rehabilitation, replacement/disposal, and expansion). A value of $1,000,000 is the approximate capital funding the Township provides to capital annually. This includes the use of development charges for growth (expansion) related costs, reserve funds, Gas Tax funds, and grants/subsidies. Please note that the Township was unsuccessful obtaining the one-time Ontario Community Infrastructure Fund (OCIF) funding in 2015 that was hoped for to help with the infrastructure gap.

Table 5-1: Tax Supported Historical Results

Renewal/Rehabilitation, Replacement/Disposal & Expansion

Description	Actual 2015	Actual 2016	Budget 2017
Prior Capital Expenses			
Culvert 2005	$3,909		
Bridge 2028	$7,013		
Mulmur-Melancthon Townline Culvert	$18,910		
Culvert 2027	$318,529	$4,343	
Culvert 2027 Loan Payment		$40,908	$40,908
Culvert 2010		$102,090	
Culvert 2020		$125,433	
Culvert 2024		$127,361	
10th Line Guiderails at Highway 89	$20,196		
Bridge 15 Rehabilitation/ Improvement			$218,000
Hard Top Raod Work	$386,090	$178,905	$200,000
Hornings Mills Shoulders			$50,000
Gravel Resurfacing	$237,871	$230,161	$250,000
Dust Control (Calcium Chloride)	$78,676	$92,358	$125,000
Storage Building		$16,220	$110,000
Vehicle		$37,404	
Trailer for Mower			$3,000
Generator			$11,000
Total	**$1,041,362**	**$955,183**	**$1,007,908**

5.3 Tax Supported Financing Strategies

As discussed in Chapter 4, two asset management strategies were developed to provide different avenues of moving towards sustainable asset management planning. Scenario 1 outlines the preferred approach, allocating rehabilitation and replacement needs based on asset condition, risk and expected levels of service. Scenario 2, the recommended approach, provides for the same capital needs as Scenario 1 over the 20 year forecast period, however, some potential capital deferrals are used to phase-in the impact over earlier years to assist with affordability. Included in this chapter are four distinct financing strategies, one for Scenario 1 and three for Scenario 2 (referred to as 2a, 2b and 2c), that attempt to move the Township towards asset management sustainability.

Table 5-2 below provides a costing overview of the three financing strategies and the cumulative, non-inflated and inflated capital expenses over five, ten, and twenty years of the forecast. Please note that the totals below include not only rehabilitation and replacement needs identified in Chapter 4, but also levels of service and expansion related capital costs. Scenarios 2a, 2b and 2c provide the same capital forecast; however provide different options on how to finance the recommended asset management scenario. As noted above, Scenario 2 ensures all capital identified in Scenario 1 is completed by the end of the 20 year forecast, but achieves so at a marginally higher price due to capital inflation.

Table 5-2: Financing Strategy Scenarios – Capital

Capital	Over 5 Years	Over 10 Years	Over 20 Years	Total Potential Added to Reserves
Non-Inflated				
Scenario 1	$5,275,808	$11,382,370	$23,460,031	$0
Scenario 2a	$4,190,000	$9,480,000	$23,360,000	($100,031)
Scenario 2b	$5,178,000	$10,805,500	$23,410,500	($49,531)
Scenario 2c	$5,210,000	$10,945,000	$23,990,000	$529,969
Inflated				
Scenario 1	$5,488,788	$12,481,849	$28,667,457	$0
Scenario 2a	$4,370,053	$10,458,994	$29,081,415	$413,958
Scenario 2b	$5,392,993	$11,863,852	$28,727,789	$60,331
Scenario 2c	$5,426,937	$12,022,011	$29,479,782	$812,325

Several methods of funding capital expenditures are utilized across all three financing strategy scenarios, in particular:

- Taxation funding is suggested for all maintenance costs, reserve fund transfers, as well as levels of service adjustment related costs related to operations.
- Formula based Ontario Community Infrastructure Fund (OCIF) proceeds and Gas Tax proceeds have been shown as a stable and long-term funding source for capital projects.
- External Debt financing may be an additional measure required to help smooth capital financing in years where there are increases in funding requirements.
- Internal debt issued from the Township's Reserve Fund (when accumulated) can be utilized to help fund annual capital needs Understanding that these Reserve Funds need continuous investment to provide for potential unexpected capital needs as well as long term capital needs.

- The portion of newly acquired or constructed assets that are growth (DC) related can be financed by development charges.

The Township will be dependent upon maintaining healthy capital reserve funds in order to provide the remainder of the required funding over the forecast period. This will require the Township to proactively increase amounts being transferred to these capital reserve funds during the annual budget process. Scenario 2c is the most applicable for the Township to implement and increase the capital reserve accounts.

5.3.1 Scenario 1: Expected Levels of Service

Figure 5-1 below presents the first 10 years of the capital forecast for Scenario 1. This forecast ensures that capital assets are rehabilitated or replaced as identified, based on levels of service, risk and condition (see Chapter 4).

Figure 5-1: Tax Supported Assets

Scenario 1 – Based on Expected Levels of Service

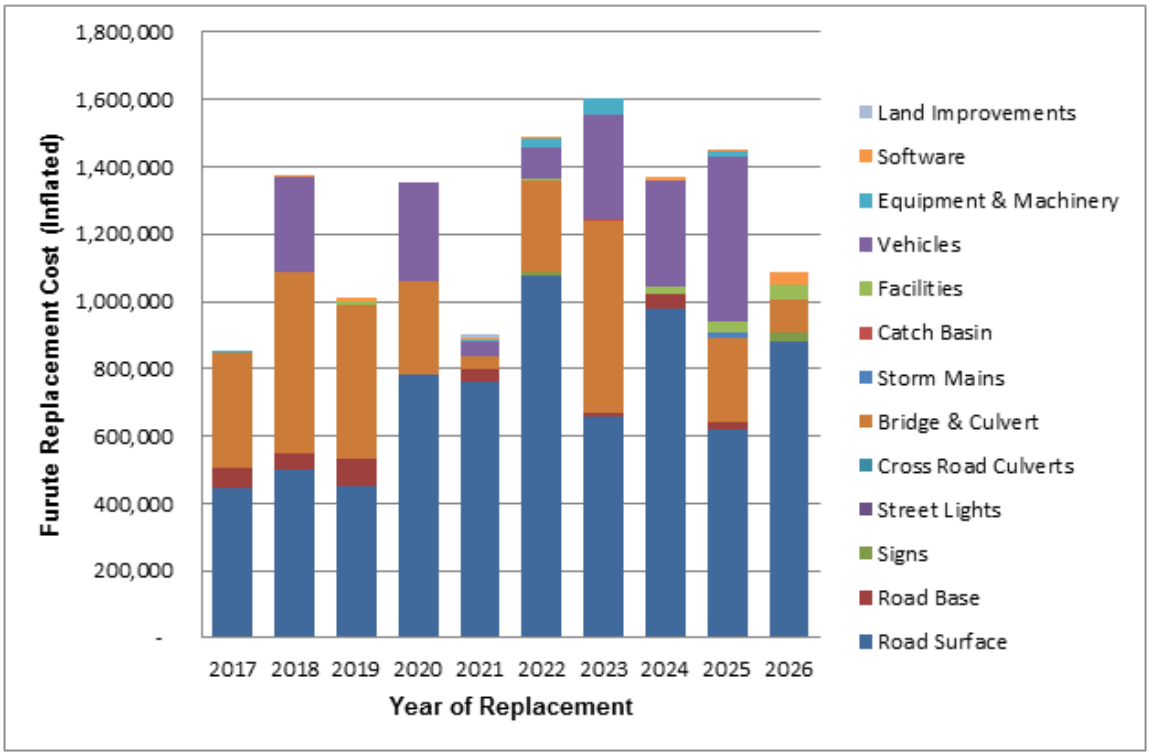


Table 5.3 shows the tax supported expenditure forecast for maintenance, renewal/rehabilitation, replacement/disposal and expansion for the first 10 years of the forecast. While this summary only shows high-level cost classifications, further detail (including the full 20-year forecast) can be obtained from Appendix A and Appendix C.

Table 5-3: Tax Supported Capital Expenditure Forecast

Scenario 1: Expected LOS

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total Scheduled Capital – Inflated	**849,883**	**1,371,132**	**1,012,106**	**1,352,284**	**903,382**	**1,486,908**	**1,601,659**	**1,369,581**	**1,445,582**	**1,089,331**
Road Surface	447,275	501,327	453,260	780,293	762,753	1,075,058	657,025	977,817	617,813	881,605
Road Base	60,000	45,900	80,069	-	37,885	-	11,262	45,947	23,433	-
Signs	-	-	-	-	-	14,353	-	-	-	28,682
Street Lights	-	-	-	-	-	-	-	-	-	-
Cross Road Culverts	-	-	-	-	-	-	-	-	-	-
Bridge & Culvert	340,908	540,600	457,256	280,159	34,638	268,844	572,654	-	248,392	95,607
Storm Mains	-	-	-	-	-	-	-	-	17,575	-
Catch Basin	1,200	-	1,248	-	1,299	-	1,351	-	1,406	-
Facilities	-	-	6,242	-	-	5,520	4,505	17,230	29,291	42,817
Vehicles	-	280,500	-	291,832	43,297	91,639	309,695	315,889	492,097	-
Equipment & Machinery	500	-	-	-	4,726	28,154	45,169	4,099	15,458	-
Software	-	2,805	14,030	-	7,960	3,340	-	8,598	117	40,620
Land Improvements	-	-	-	-	10,824	-	-	-	-	-

Table 5-4: LOS Adjustment

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total Scheduled Capital – Inflated	**33,200**	**15,300**	**34,541**	**15,918**	**57,585**	**-**	**20,496**	**-**	**38,899**	**-**
Road Surface	-	-	-	-	21,649	-	-	-	-	-
Road Base	-	-	-	-	-	-	-	-	-	-
Signs	-	-	-	-	-	-	-	-	-	-
Street Lights	-	-	-	-	-	-	-	-	-	-
Cross Road Culverts	-	-	-	-	-	-	-	-	-	-
Bridge & Culvert	32,000	15,300	33,293	15,918	34,638	-	19,145	-	19,918	-
Storm Mains	-	-	-	-	-	-	-	-	17,575	-
Catch Basin	1,200	-	1,248	-	1,299	-	1,351	-	1,406	-
Facilities	-	-	-	-	-	-	-	-	-	-
Vehicles	-	-	-	-	-	-	-	-	-	-
Equipment & Machinery	-	-	-	-	-	-	-	-	-	-
Software	-	-	-	-	-	-	-	-	-	-
Land Improvements	-	-	-	-	-	-	-	-	-	-

Items in Table 5-4 labelled as “LOS Adjustment” refer to the expanded levels of service analysis discussed in Chapter 3 and Appendix C.

In order to fund the recommended asset requirements over the forecast period using the Township’s own available funding sources (i.e., using taxation, Gas Tax funding, OCIF funding, reserves/reserve funds, and internal and external debentures), an increase in the Township’s taxation levy of approximately 1 – 2% annually would be required. However, if other funding sources become available (i.e., grant funding) or if maintenance and rehabilitation practices allow for the deferral of capital works, then the impact on the Township’s taxation levy would decrease under Scenario 1 implementation.

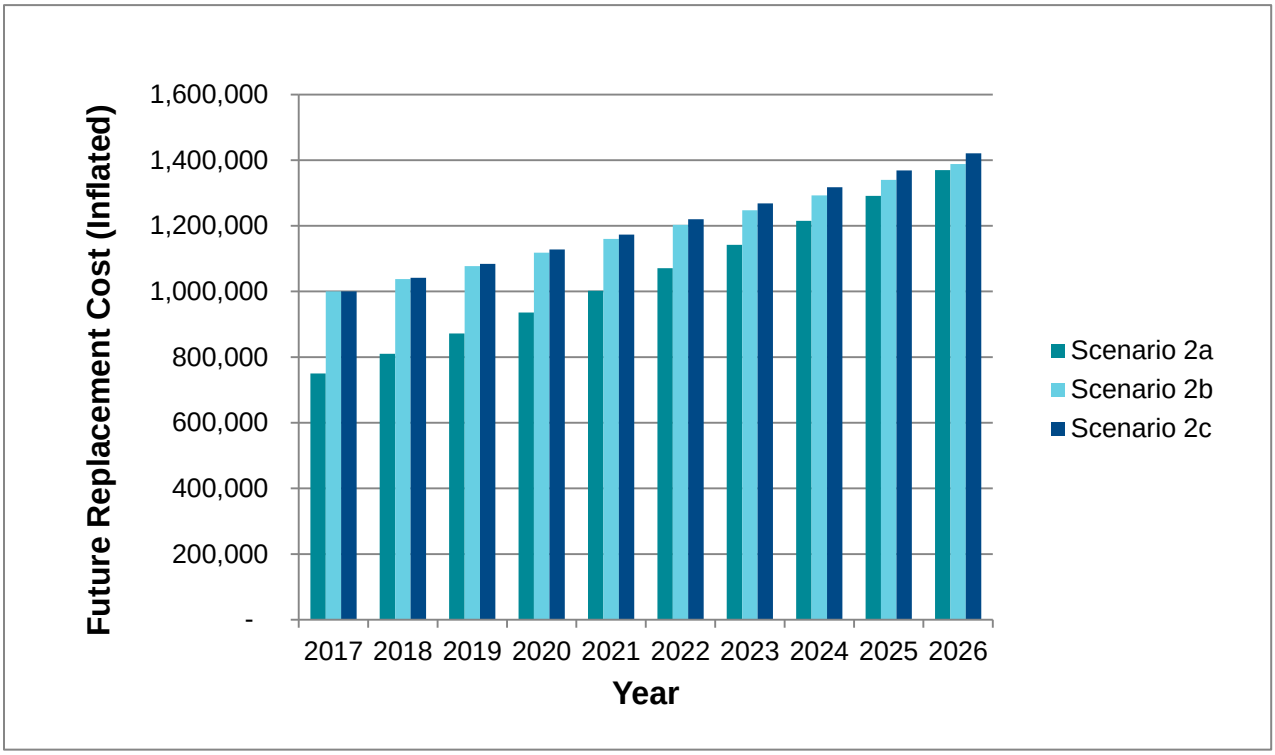
5.3.2 Scenarios 2a, 2b and 2c

As previously mentioned, Scenarios 2a, 2b and 2c present different funding options to finance the recommended asset management strategy, Scenario 2. The major difference between these three approaches is the extent to which capital assets are either financed through external debt, or deferred until funds are available as well as the resulting impact on projected taxation rates. Scenario 2a opts to use less external debentures, resulting in higher taxation rates, while Scenario 2b and 2c utilizes more potential external debentures, which has the effect of reducing the impact on taxation (by spreading capital costs out over many years). Note that even with a 1% annual tax increase towards capital funding it will take over 10 years in Scenario 2c to attain a positive investment into Capital Reserves.

Figure 5-2 below presents the first 10 years of the capital forecast for the recommended asset management strategy, Scenario 2. In this figure, the different Scenarios 2a, 2b and 2c are shown.

This forecast gradually increases the investment in capital assets over the forecast period, with Scenario 2a starting at $750,000, Scenario 2b starting at $1,000,000, and Scenario 2c starting at $1,000,000. The difference between Scenario 2b and 2c is that Scenario 2c has a higher annual increase in annual taxation.

Figure 5-2: Tax Supported Assets Scenario 2a and 2b



The Scenario 2 asset management strategy defers the timing of capital assets identified in Scenario 1 to assist in implementing sustainable funding. Please note that if additional funding is identified (i.e., grants) or cost efficiencies are found through annual budget processes going forward, this infrastructure gap could be reduced further.

Table 5-5: Tax Supported Capital Expenditure Forecast

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Scenario 2a	750,000	809,880	871,855	935,985	1,002,332	1,070,958	1,141,929	1,215,309	1,291,169	1,369,576
Scenario 2b	1,000,000	1,037,850	1,077,334	1,117,983	1,159,826	1,202,896	1,247,225	1,292,846	1,339,793	1,388,100
Scenario 2c	1,000,000	1,041,420	1,084,097	1,128,064	1,173,356	1,220,009	1,268,059	1,317,542	1,368,498	1,420,965

Table 5-5 shows the tax supported expenditure forecast for maintenance, renewal/ rehabilitation, replacement/disposal and expansion for the first 10 years of the forecast. While this summary only shows required investment, further detail (including the full 20 year forecast) can be obtained from Appendix C.

In order to fund the recommended asset requirements over the forecast period using the Township's own available funding sources (i.e., using taxation, Gas Tax funding, OCIF funding, reserves/reserve funds, and internal and external debentures), an increase in the

Township's taxation levy (which includes inflationary operating adjustments, assumed to be 2.0%). Scenario 2a has a starting point at $750,000 in year 2017, and increasing at a higher rate than Scenario 2b or 2c, starting at $1,000,000 but increasing at a lower rate each year. The objective of these three scenarios was to ensure that the total funding required was in place to complete the capital works over the 20 year period.

This Scenario 2 may require some debt or initial draining of reserve funds or capital project deferral. It is important to point out that debt would be a short term need as the tax levies catch up with the capital requirements of the Township in the second half of the 20 year forecast period. However, if other funding sources become available (i.e., grant funding) or if maintenance and rehabilitation practices allow for the deferral of capital works, then the impact on the Township's taxation levy would decrease.

5.3.3 Financing Strategies Summary

The main differences between the scenarios:

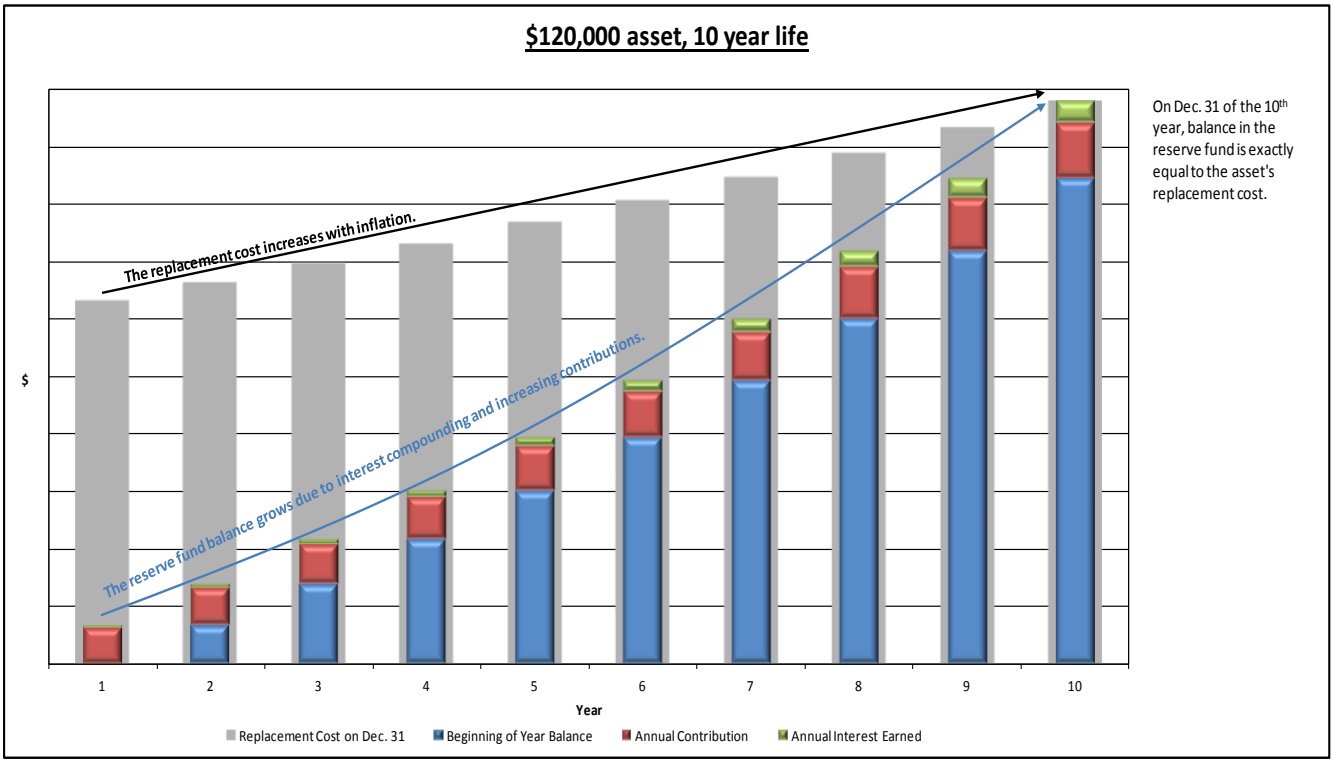
- The deferral of capital within the 20 year forecast period in Scenarios 2a, 2b and 2c;
- The use of external debentures to help finance capital in the early years of the forecast period; and
- The year-over-year increases to the taxation rate.

Assuming the Township maintains adequate capital reserve funds, all three financing strategies will fully fund all capital identified for replacement via their expected levels of service. While the annual funding requirement may fluctuate, it is important for the Township to implement a consistent, yet increasing annual investment in capital so that the excess annual funds can accrue in capital reserve funds.

5.4 Infrastructure Funding Gap

A fundamental approach to calculating the cost of using a capital asset and for the provision of the revenue required when the time comes to retire and replace it is the "sinking fund method." This method first estimates the future value of the asset at the time of replacement, by inflating the current value of the asset at an assumed annual capital inflation rate. A calculation is then performed to determine annual contributions which, when invested in a reserve fund, will grow with interest to a balance equal to the future replacement cost. The contributions are calculated such that they also increase annually with inflation. Under this approach, an annual capital investment amount is calculated where funds are available for short-term needs while establishing a funding plan for long-term needs. Annual contributions in excess of capital costs in a given year would be transferred to a "capital replacement reserve fund" for future capital replacement needs. This approach provides for a stable funding base, eliminating variances in annual funding requirements, particularly in years when capital replacement needs exceed typical capital levy funding. Please refer to Figure 5-3 for an illustration of this method.

Figure 5-3: Sinking Fund Method



This is the recommended approach to developing the optimal capital investment amounts that feeds into the Financing Strategy and infrastructure funding deficit calculation below.

5.4.1 Tax Supported Services

Capital investment is hereto referred as the sum of annual contributions to fund capital asset rehabilitation, replacement, and/or expansion. For the purposes of the Township, this can take the form of contributions to capital reserves/reserve funds, internal and external debt payments and consistent capital grant funding. This differs from the Township's annual budget and forecast, which includes asset maintenance from an operating perspective and one time funding for capital projects. The annual capital investment represents ongoing and constant investments in capital over the forecast period. From a tax supported asset base perspective, the estimated optimal annual capital investment is approximately $1.2 million. Based on the Township's 2017 budget, current annual capital investment is approximately $1,000,000. This would provide a high-level estimate of the Township's annual tax supported infrastructure funding gap at $200,000.

5.4.2 Improving the Annual Funding Deficit

Under the recommended financing strategies (2a, 2b, or 2c), the Township would be making proactive attempts to mitigate these funding gaps over the forecast period.

To further mitigate the potential infrastructure funding deficit, the Township could consider:

- Decreasing expected levels of service to make available capital funding;
- Issuing more debt for significant and/or unforeseen capital projects, in addition to the debt recommended within this report, while staying within the Township's debt capacity limits (this would have the impact of spreading out the capital repayment over a defined term);
- Actively seeking out and applying for grants;
- Consider approaching the community for funding assistance with respect to growth/expansion related projects;
- Rate increases, where needed (i.e., taxation); and/or
- Implementing net operating reductions or efficiencies. For example:
  - Reduced operating costs to allow more capital investment.

6.0 Recommendations

The following recommendations have been provided for the Township of Melancthon consideration:

- That this Asset Management Plan be received and approved by the Township of Melancthon Council; and
- That consideration of this Asset Management Plan be given as part of the annual budgeting process to ensure sufficient capital funds are available to fund capital requirements over the long-term.

The current level of funding for asset replacement and renewal at the Township will not sufficiently fund required capital needs or close the infrastructure funding gap. As such, it is recommended that the following be considered:

- That Council approve one of the recommended financing strategy scenarios, for Township staff to implement moving forward;
- That the “levels of service” strategies discussed in this report be approved;
- That the Township use “reserve funds” for asset management planning purposes;
- That this Asset Management Plan be updated and improved as needed over time to reflect the current priorities of the Township; and
- That the Township consider the capital priorities identified within this report when applying for future grants or deciding on how to utilize Gas Tax, OCIF funding and/or other funding that becomes available.

Substantial investment in asset capital needs will be required over the 20 year forecast period and beyond. Through the recommendations provided above, proactive steps will be made to increase capital investment, as well as, reduce the annual infrastructure funding gap for Township assets. Enhanced maintenance plans will assist in maintaining adequate asset conditions, mitigate asset risk as well as potentially defer capital needs within the forecast period. In addition, the Township of Melancthon should pursue all available capital grants wherever possible to further reduce the infrastructure funding gap.

Through the creation of this plan, the Township has been provided with Excel spreadsheets in which amendments and revisions can be made as needed by the Township. It is anticipated that this plan adopted by Township Council will be monitored and updated frequently as part of the budget process, with refinements and specific recommendations being provided with respect to the priority of each individual project.

Distribution List

No. of Hard Copies	PDF	Email	Organization Name
0	Yes	Yes	Township of Melancthon (Draft)
1	Yes	Yes	Township of Melancthon (Final)

Record of Revisions

Revision	Date	Description
1	May 3, 2017	Final edits from Township Staff recommendations
2	May 25, 2017	Final report submitted

R.J. Burnside & Associates Limited

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Business Manager Asset Management/GIS
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BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Township Asset Inventory & Asset Management Plan Assumptions

APPENDIX A: ASSET MANAGEMENT PLAN ASSUMPTIONS

The following assumptions were made and applied during the creation of the Township of Melancthon's asset management plan.

1. STATE OF LOCAL INFRASTRUCTURE

   a) All replacement costs were estimates based on current 2016 pricing.
   b) Historic Costs of assets that were added to the Township's asset inventory and did not have a historic cost identified made use of deflation tables from estimated current 2016 costs back to the installation date of the asset. Indexes were using Non-Residential Building Construction Price Index (NRBCPI).
   c) Amortization of assets was using a straight line amortization, starting the year after the year of acquisition.
   d) Useful life of an asset were provided by the Township, discussed with Township Staff and/or obtained from similar assets in other communities/municipalities.
   e) Condition was from asset inspections (live and/or desktop), from staff's understanding of the asset's relative condition, and finally via estimation from the asset's age were used to provide estimated remaining life to the assets.

2. ASSET MANAGEMENT STRATEGY

   a) Capital inflation rate was assumed to be 2.0% annually.
   b) Operating budget inflation rate was assumed to be 2.0% annually.
   c) Regarding operating expenses included in the Township's current budget, it is assumed that they will increase at an operating inflation rate annually.

3. FINANCING STRATEGY

   a) Gas Tax and OCIF Formula Based Funding revenue have been identified as a funding source for the purposes of this analysis (i.e. for asset replacement purposes), and has been assumed to continue throughout the forecast period.
   b) Interest rate earned on a Capital Replacement Reserve Funds will be 1.0% annually.
   c) Township of Melancthon past Annual Capital Investment was identified as $1,000,000.

Melancthon
Storm/Sanitary - Gravity Main

																											Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service												Expected Levels of Service + Town Input Replacement/Improvement Year Based on Expected Levels Service			
Fixed Asset #	Subtype	Street Name	Street ID	From	To	Pipe ID	Asset Name	Water Type	Diameter	Length (m)	Material	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost	Condition Based On Useful Life	Condition from Town	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life	Proposed Rehabilitation Cost (2015 $)	Year for Rehabilitation	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current + Condition better then expected for age	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	Revised Remaining Useful Life
										701			100	79	21	$86,104	$10,923	$75,180	$181,825			7.6					1							$0							
1297	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Catchbasin Lead	Storm	300	6	PVC	2009	100	93	7	$1,019	$61	$958	$1,600	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1298	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Catchbasin Lead	Storm	300	6	PVC	2009	100	93	7	$954	$57	$897	$1,500	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1299	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Catchbasin Lead	Storm	300	6	PVC	2009	100	93	7	$980	$59	$921	$1,525	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1300	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Water Collector	Storm	375	30	PVC	2009	100	93	7	$5,100	$306	$4,794	$7,425	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1301	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Water Collector	Storm	375	57	PVC	2009	100	93	7	$9,520	$571	$8,949	$14,225	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1302	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Water Collector	Storm	375	60	PVC	2009	100	93	7	$10,200	$612	$9,588	$15,000	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1303	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Water Collector	Storm	300	9	PVC	2009	100	93	7	$1,460	$88	$1,373	$2,275	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1304	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Water Collector	Storm	450	25	PVC	2009	100	93	7	$4,750	$285	$4,465	$6,275	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1305	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Water Collector	Storm	450	43	PVC	2009	100	93	7	$8,170	$490	$7,680	$10,775	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1306	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Sewer Collector	Storm	450	84	PVC	2009	100	93	7	$15,960	$958	$15,002	$21,050	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1307	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Storm Water Collector	Storm	375	28	PVC	2009	100	93	7	$4,760	$286	$4,474	$7,000	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1308	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Catchbasin Lead	Storm	300	4	PVC	2009	100	93	7	$699	$42	$657	$1,100	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1309	Storm/Sanitary - Gravity Main	Main Street Hornings Mills					Catchbasin Lead	Storm	300	6	PVC	2009	100	93	7	$947	$57	$890	$1,475	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
1296	Storm/Sanitary - Discharge Point	Main Street Hornings Mills					Hornings Mills North Head Wall	Storm	450		PVC	2009	100	93	7	$4,000	$480	$3,520	$7,500	9	9	9	Very Good	Rare	Moderate	L	1	2099	10	2109	2109	2209	93				0	2109	2109	2209	93
	Storm/Sanitary - Gravity Main	Main St. Corbetton					Storm Water Collector	Storm	300	84		1978	100	62	38	$2,666	$996	$1,670	$12,600	6		6	Average	Possible	Moderate	M	2	2068	10	2078	2078	2178	62				0	2078	2078	2178	62
	Storm/Sanitary - Gravity Main	Main St. Corbetton					Storm Water Collector	Storm	375	84		1978	100	62	38	$3,555	$1,329	$2,226	$16,800	6		6	Average	Possible	Moderate	M	2	2068	10	2078	2078	2178	62				0	2078	2078	2178	62
	Storm/Sanitary - Gravity Main	Main St. Corbetton					Storm Water Collector	Storm	450	84		1978	100	62	38	$4,444	$1,661	$2,783	$21,000	6		6	Average	Possible	Moderate	M	2	2068	10	2078	2078	2178	62				0	2078	2078	2178	62
	Storm/Sanitary - Gravity Main	Main St. Corbetton					Storm Water Collector	Storm	600	84		1978	100	62	38	$5,332	$1,993	$3,339	$25,200	6		6	Average	Possible	Moderate	M	2	2068	10	2078	2078	2178	62				0	2078	2078	2178	62
	Storm/Sanitary - Discharge Point	Main St. Corbetton					Corbetton Head Wall	Storm				1978	100	62	38	$1,587	$593	$994	$7,500	6		6	Average	Possible	Moderate	M	2	2068	10	2078	2078	2178	62				0	2078	2078	2178	62

Melancthon
Vehicles Inventory

Melanchton
Equipment Inventory

FIXED ASSET ID	Subtype	Asset Name - Equipment	Asset Type	Department	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost	Condition by Age	Condition (from Staff Assessment)	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life	Proposed Rehabilitation Cost (2016 $)	Year for Rehabilitation	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current + Condition better then expected for age	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	2nd Subsequent Replacement Year	Revised Remaining Useful Life
																							Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service							Expected Levels of Service Replacement/Improvement Year Based on Expected Levels Service				
						25	14	13	$ 138,025	$ 49,973	$ 88,052	$ 231,704			7					1							$ -								
1023	Equipment - Equipment	Admiral Refridgerator -	Other Equipment	Addimistration	1993	20	0	23	$563	$563	$0	$750	0	5	5	Average	Possible	Insignificant	L	1	2011	10	2013	2017	2041	1				40	2023	2023	2043	2063	7
1025	Equipment - Equipment	Water Depot - Cooler	Other Equipment	Addimistration	2001	10	0	15	$262	$262	$0	$300	0	9	9	Very Good	Rare	Insignificant	L	1	2010	10	2011	2017	2033	1				80	2023	2023	2033	2043	7
1026	Equipment - Equipment	Grandfather Clock -	Other Equipment	Addimistration	1993	50	27	23	$2,626	$1,155	$1,471	$3,500	5	6	6	Average	Possible	Insignificant	L	1	2038	10	2043	2043	2093	27				5	2046	2046	2096	2146	30
1316	Equipment - Equipment	John Deere 265 Roadside Mower	Other Equipment	Public Works	2006	10	0	10	$10,179	$9,161	$1,018	$25,000	0	7	7	Good	Unlikely	Insignificant	L	1	2015	10	2016	2017	2028	1				60	2022	2022	2032	2042	6
1320	Equipment - Equipment	Karcher Power Washer System	Power Tools	Public Works	2010	10	4	6	$12,980	$6,490	$6,490	$13,000	4	8	8	Good	Unlikely	Insignificant	L	1	2019	10	2020	2020	2030	4				30	2023	2023	2033	2043	7
1321	Equipment - Equipment	Two Stihl Chain Saw	Power Tools	Public Works	2010	10	4	6	$430	$215	$215	$800	4	8	8	Good	Unlikely	Insignificant	L	1	2019	10	2020	2020	2030	4				30	2023	2023	2033	2043	7
1322	Equipment - Equipment	Waste Oil Tank	Other Equipment	Public Works	2010	20	14	6	$2,378	$594	$1,783	$2,400	7	8	8	Good	Unlikely	Insignificant	L	1	2028	10	2030	2030	2050	14				5	2031	2031	2051	2071	15
1475	Equipment - Equipment	Traffic Analyzer	Other Equipment	Public Works	2013	20	17	3	$3,154	$315	$2,838	$32,000	9	7	7	Good	Unlikely	Insignificant	L	1	2031	10	2033	2033	2053	17				0	2033	2033	2053	2073	17
1534	Equipment - Equipment	Paper Shredder	Other Equipment	Addimistration	2014	10	8	2	$204	$20	$183	$210	8	8	8	Good	Unlikely	Insignificant	L	1	2023	10	2024	2024	2034	8				0	2024	2024	2034	2044	8
1535	Equipment - Equipment	Dyson Vacuum	Other Equipment	Addimistration	2014	10	8	2	$611	$61	$549	$650	8	8	8	Good	Unlikely	Insignificant	L	1	2023	10	2024	2024	2034	8				0	2024	2024	2034	2044	8
1556	Equipment - Equipment	Roller for Cat Grader	Other Equipment	Public Works	2015	20	19	1	$18,317	$0	$18,317	$18,500	10	7	7	Good	Unlikely	Insignificant	L	1	2033	10	2035	2035	2055	19				0	2035	2035	2055	2075	19
1557	Equipment - Equipment	Roller for John Deere Grader	Other Equipment	Public Works	2015	20	19	1	$18,317	$0	$18,317	$18,500	10	7	7	Good	Unlikely	Insignificant	L	1	2033	10	2035	2035	2055	19				0	2035	2035	2055	2075	19
1027	Equipment - Standby Power	APC Computer Battery Backup -	UPS Power Supply	Addimistration	2008	5	0	8	$125	$125	$0	$250	0	5	5	Average	Possible	Moderate	M	2	2013	10	2014	2017	2026	1				40	2017	2017	2022	2027	1
1028	Equipment - Standby Power	APC Computer Backup Unit With Battery -	UPS Power Supply	Addimistration	2008	5	0	8	$199	$199	$0	$250	0	5	5	Average	Possible	Moderate	M	2	2013	10	2014	2017	2026	1				40	2017	2017	2022	2027	1
1497	Facilities - Non-Spatial	2013 Office Furniture - 20 year Equipment Pool			2013	20	17	3	$1,659	$166	$1,493	$1,760	9		9	Very Good	Rare	Insignificant	L	1	2031	10	2033	2033	2053	17				0	2033	2033	2053	2073	17
1533	Facilities - Non-Spatial	2014 Chair			2014	20	18	2	$122	$3	$119	$155	9		9	Very Good	Rare	Insignificant	L	1	2032	10	2034	2034	2054	18				0	2034	2034	2054	2074	18
1526	Facilities - Non-Spatial	2014 Leather Chairs (6)			2014	20	18	2	$1,313	$33	$1,280	$1,545	9		9	Very Good	Rare	Insignificant	L	1	2032	10	2034	2034	2054	18				0	2034	2034	2054	2074	18
1527	Facilities - Non-Spatial	2014 Mesh Chairs (15)			2014	20	18	2	$788	$20	$768	$824	9		9	Very Good	Rare	Insignificant	L	1	2032	10	2034	2034	2054	18				0	2034	2034	2054	2074	18
992	Facilities - Non-Spatial	Administration Desks (x3) -			1992	30	6	24	$6,480	$4,968	$1,512	$7,970	2	5	5	Average	Possible	Minor	M	2	2019	10	2022	2022	2052	6				20	2028	2028	2058	2088	12
995	Facilities - Non-Spatial	Allsteel Fireproof Safe -			1968	75	27	48	$591	$370	$221	$6,149	4	5	5	Average	Possible	Moderate	M	2	2036	10	2044	2044	2120	28				5	2048	2048	2123	2198	32
998	Facilities - Non-Spatial	Bookshelf -			1993	30	7	23	$262	$192	$70	$615	2	5	5	Average	Possible	Insignificant	L	1	2020	10	2023	2023	2053	7				20	2029	2029	2059	2089	13
997	Facilities - Non-Spatial	CAO's Desk -			1993	50	27	23	$1,836	$808	$1,028	$2,258	5		5	Average	Possible	Moderate	M	2	2038	10	2043	2043	2093	27				0	2043	2043	2093	2143	27
1069	Facilities - Non-Spatial	Card Tables (x13) - Hornings Mills Hall -			1986	25	0	30	$217	$217	$0	$640	0	5	5	Average	Possible	Insignificant	L	1	2009	10	2012	2017	2048	1				40	2025	2025	2050	2075	9
1072	Facilities - Non-Spatial	Chairs (x150) - Hornings Mills Hall -			1986	25	0	30	$1,881	$1,881	$0	$5,534	0	5	5	Average	Possible	Insignificant	L	1	2009	10	2012	2017	2048	1				40	2025	2025	2050	2075	9
980	Facilities - Non-Spatial	Co-mingle Landfill Bin -			2008	25	17	8	$8,970	$2,512	$6,458	$11,032	7		7	Good	Unlikely	Insignificant	L	1	2031	10	2034	2034	2060	18				0	2034	2034	2059	2084	18
1531	Facilities - Non-Spatial	Conference Table			2014	30	28	2	$438	$7	$430	$451	9		9	Very Good	Rare	Insignificant	L	1	2041	10	2044	2044	2074	28				0	2044	2044	2074	2104	28
1068	Facilities - Non-Spatial	Cooking Utensils (x100) - Hornings Mills Hall -			1986	20	0	30	$125	$125	$0	$369	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1001	Facilities - Non-Spatial	Councillor Desks (x3) -			1993	50	27	23	$4,320	$1,901	$2,419	$5,534	5		5	Average	Possible	Insignificant	L	1	2038	10	2043	2043	2093	27				0	2043	2043	2093	2143	27
1089	Facilities - Non-Spatial	Cream & Sugar Sets (x48) - Hornings Mills Hall -			1986	20	0	30	$301	$301	$0	$886	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1074	Facilities - Non-Spatial	Deep Fryer - Hornings Mills Hall -			1986	15	0	30	$251	$251	$0	$738	0	5	5	Average	Possible	Insignificant	L	1	2000	10	2002	2017	2048	1				40	2021	2021	2036	2051	5
1004	Facilities - Non-Spatial	Delagates Desk -			1993	30	7	23	$105	$77	$28	$246	2	5	5	Average	Possible	Insignificant	L	1	2020	10	2023	2023	2053	7				20	2029	2029	2059	2089	13
1083	Facilities - Non-Spatial	Electric Stoves (x3) - Hornings Mills Hall -			1986	15	0	30	$627	$627	$0	$1,845	0	5	5	Average	Possible	Minor	M	2	2000	10	2002	2017	2048	1				40	2021	2021	2036	2051	5
1005	Facilities - Non-Spatial	Gallery Chairs (x40) -			1993	30	7	23	$1,830	$1,342	$488	$3,188	2	5	5	Average	Possible	Insignificant	L	1	2020	10	2023	2023	2053	7				20	2029	2029	2059	2089	13
1092	Facilities - Non-Spatial	Gravy Boats (x12) - Hornings Mills Hall -			1986	20	0	30	$30	$30	$0	$89	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1496	Facilities - Non-Spatial	Kitchen Set / Chairs / Dishwasher - 20 Year Equipment Pool			2013	20	17	3	$1,518	$152	$1,366	$1,611	9		9	Very Good	Rare	Insignificant	L	1	2031	10	2033	2033	2053	17				0	2033	2033	2053	2073	17
988	Facilities - Non-Spatial	Lateral 3 Drawer Filing Cabinet (x2) -			1993	50	27	23	$342	$150	$192	$804	5		5	Average	Possible	Insignificant	L	1	2038	10	2043	2043	2093	27				0	2043	2043	2093	2143	27
991	Facilities - Non-Spatial	Lateral 4 Drawer Filing Cabinet (x3) -			1992	50	26	24	$1,779	$818	$961	$3,075	5		5	Average	Possible	Insignificant	L	1	2037	10	2042	2042	2092	26				0	2042	2042	2092	2142	26
990	Facilities - Non-Spatial	Legal 3 Drawer Filing Cabinet (x2) -			2005	50	39	11	$821	$164	$657	$797	8		8	Good	Unlikely	Insignificant	L	1	2050	10	2055	2055	2105	39				0	2055	2055	2105	2155	39
989	Facilities - Non-Spatial	Legal 4 Drawer Filing Cabinet (x8) -			2005	50	39	11	$1,495	$299	$1,196	$3,682	8		8	Good	Unlikely	Insignificant	L	1	2050	10	2055	2055	2105	39				0	2055	2055	2105	2155	39
1070	Facilities - Non-Spatial	Long Tables (x20) - Hornings Mills Hall -			1986	25	0	30	$1,087	$1,087	$0	$3,198	0	5	5	Average	Possible	Insignificant	L	1	2009	10	2012	2017	2048	1				40	2025	2025	2050	2075	9
1530	Facilities - Non-Spatial	Magazine Rack			2014	20	18	2	$241	$6	$235	$258	9		9	Very Good	Rare	Insignificant	L	1	2032	10	2034	2034	2054	18				0	2034	2034	2054	2074	18
1528	Facilities - Non-Spatial	Mark Bennington - Cabinet			2014	30	28	2	$1,221	$20	$1,201	$1,545	9		9	Very Good	Rare	Insignificant	L	1	2041	10	2044	2044	2074	28				0	2044	2044	2074	2104	28
1075	Facilities - Non-Spatial	Meat Slicer - Hornings Mills Hall -			1986	15	0	30	$104	$104	$0	$307	0	5	5	Average	Possible	Insignificant	L	1	2000	10	2002	2017	2048	1				40	2021	2021	2036	2051	5
1571	Facilities - Non-Spatial	Office Furniture for Council Chambers		Administration	2016	50	50	0	$ 7,802.96		$ 7,802.96	$ 8,000.00	10		10	Very Good	Rare	Insignificant	L	1	2061	10	2066	2066	2116	50				0	2066	2066	2116	2166	50
1065	Facilities - Non-Spatial	Place Settings (x295) - Hornings Mills Hall -			1986	20	0	30	$4,932	$4,932	$0	$14,513	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1091	Facilities - Non-Spatial	Platters (x10) - Hornings Mills Hall -			1986	20	0	30	$42	$42	$0	$123	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1079	Facilities - Non-Spatial	Portable Counter - Hornings Mills Hall -			1986	20	0	30	$125	$125	$0	$369	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1078	Facilities - Non-Spatial	Pots & Pans (x10) - Hornings Mills Hall -			1986	15	0	30	$84	$84	$0	$246	0	5	5	Average	Possible	Insignificant	L	1	2000	10	2002	2017	2048	1				40	2021	2021	2036	2051	5
999	Facilities - Non-Spatial	Printer Cart -			1993	20	0	23	$711	$711	$0	$1,156	0	5	5	Average	Possible	Insignificant	L	1	2011	10	2013	2017	2041	1				40	2023	2023	2043	2063	7
1080	Facilities - Non-Spatial	Pulpit - Hornings Mills Hall -			1986	20	0	30	$209	$209	$0	$615	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1077	Facilities - Non-Spatial	Refrigerator (x2) - Hornings Mills Hall -			1986	15	0	30	$418	$418	$0	$1,230	0	5	5	Average	Possible	Insignificant	L	1	2000	10	2002	2017	2048	1				40	2021	2021	2036	2051	5
1090	Facilities - Non-Spatial	Relish Plates (x18) - Hornings Mills Hall -			1986	20	0	30	$53	$53	$0	$155	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1084	Facilities - Non-Spatial	Rolling Coat Racks (x2) - Hornings Mills Hall -			1986	20	0	30	$251	$251	$0	$738	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1085	Facilities - Non-Spatial	Rolling Storage Cart - Hornings Mills Hall -			1986	20	0	30	$251	$251	$0	$738	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1071	Facilities - Non-Spatial	Round Tables (x18) - Hornings Mills Hall -			1986	25	0	30	$978	$978	$0	$2,878	0	5	5	Average	Possible	Insignificant	L	1	2009	10	2012	2017	2048	1				40	2025	2025	2050	2075	9
1093	Facilities - Non-Spatial	Serving Bowls (x50) - Hornings Mills Hall -			1986	20	0	30	$104	$104	$0	$307	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1067	Facilities - Non-Spatial	Serving Spoons (x50) - Hornings Mills Hall -			1986	20	0	30	$104	$104	$0	$307	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1003	Facilities - Non-Spatial	Side Bookshelf -			1993	30	7	23	$73	$54	$20	$172	2	5	5	Average	Possible	Insignificant	L	1	2020	10	2023	2023	2053	7				20	2029	2029	2059	2089	13
1066	Facilities - Non-Spatial	Silverware (x200) - Hornings Mills Hall -			1986	20	0	30	$836	$836	$0	$2,460	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1081	Facilities - Non-Spatial	Stainless Steel Sinks (x2) - Hornings Mills Hall -			1986	20	0	30	$418	$418	$0	$1,230	0	5	5	Average	Possible	Minor	M	2	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1000	Facilities - Non-Spatial	Storage Cabinet -			1993	50	27	23	$157	$69	$88	$369	5		5	Average	Possible	Insignificant	L	1	2038	10	2043	2043	2093	27				0	2043	2043	2093	2143	27
1088	Facilities - Non-Spatial	Support Bars (x4) - Hornings Mills Hall -			1986	20	0	30	$59	$59	$0	$172	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1006	Facilities - Non-Spatial	Tables (x2) -			1993	50	27	23	$367	$161	$205	$861	5		5	Average	Possible	Insignificant	L	1	2038	10	2043	2043	2093	27				0	2043	2043	2093	2143	27
1082	Facilities - Non-Spatial	Toilets (x5) - Hornings Mills Hall -			1986	20	0	30	$313	$313	$0	$922	0	5	5	Average	Possible	Moderate	M	2	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
1094	Facilities - Non-Spatial	Trays (x6) - Hornings Mills Hall -			1986	20	0	30	$38	$38	$0	$111	0	5	5	Average	Possible	Insignificant	L	1	2004	10	2006	2017	2048	1				40	2023	2023	2043	2063	7
[illegible]	Facilities - Non-Spatial	Plastic Round Tables 20 - Hornings Mills			2016	25	25	0	$2,674	$0	$2,674	$3,000	10	10	10	Very Good	Rare	Insignificant	L	1	2039	10	2042	2042	2068	26				0	2042	2042	2067	2092	26
994	Facilities - Non-Spatial	Utility Cabinet -			1992	50	26	24	$104	$48	$56	$246	5		5	Average	Possible	Insignificant	L	1	2037	10	2042	2042	2092	26				0	2042	2042	2092	2142	26
1529	Facilities - Non-Spatial	Visitor Chairs (2)			2014	20	18	2	$305	$8	$298	$361	9		9	Very Good	Rare	Insignificant	L	1	2032	10	2034	2034	2054	18				0	2034	2034	2054	2074	18
1073	Facilities - Non-Spatial	Wooden Benches (x8) - Hornings Mills Hall -			1986	25	0	30	$167	$167	$0	$492	0	5	5	Average	Possible	Insignificant	L	1	2009	10	2012	2017	2048	1				40	2025	2025	2050	2075	9
1007	Facilities - Non-Spatial	Wooden Chairs (x3) -			1993	50	27	23	$157	$69	$88	$369	5		5	Average	Possible	Insignificant	L	1	2038	10	2043	2043	2093	27				0	2043	2043	2093	2143	27
1318	Facilities - Non-Spatial	Workstation			2010	30	24	6	$590	$98	$492	$684	8		8	Good	Unlikely	Insignificant	L	1	2037	10	2040	2040	2070	24				0	2040	2040	2070	2100	24
1055	Facilities - Non-Spatial	Workstation Chairs (x2) -			2009	15	8	7	$367	$147	$220	$451	5		5	Average	Possible	Insignificant	L	1	2023	10	2025	2025	2041	9				0	2025	2025	2040	2055	9
993	Facilities - Non-Spatial	Workstation Chairs (x6) -			2008	15	7	8	$2,202	$1,028	$1,174	$2,708	5		5	Average	Possible	Minor	M	2	2022	10	2024	2024	2040	8				0	2024	2024	2039	2054	8
1054	Facilities - Non-Spatial	Workstation with Hutch (x2) -			2009	30	23	7	$2,041	$408	$1,633	$2,510	8		8	Good	Unlikely	Insignificant	L	1	2036	10	2039	2039	2069	23				0	2039	2039	2069	2099	23

Melancthon
Software Inventory

																						Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service												Expected Levels of Service Replacement/Improvement Year Based on Expected Levels Service							
FIXED ASSET ID	Subtype	Asset Name	Description	Department	Make	Model	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost	Condition Based On Useful Life	Staff Assessed Condition	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life	Proposed Rehabilitation Cost (2016 $)	Year for Rehabilitation	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current + Condition better then	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	2nd Subsequent Replacement Year	3rd Subsequent Replacement Year	4th Subsequent Replacement Year	Revised Remaining Useful Life
								8	3	6	$ 59,818	$ 41,113	$ 18,706	$ 56,912			6					2							$ 6,000											
1043	Other - Support	Radio System -	Cell Phone/Pager	Public Works			1993	30	7	23	$ 340	$ 250	$ 91	$ 650	2	5	5	Average	Possible	Moderate	M	2	2020	10	2023	2023	2053	7				20	2029	2029	2059	2089	2119	2149	13
1045	Other - Support	HP Laserjet4 -	Computer Hardware	Administration			2005	20	9	11	$ 86	$ 43	$ 43	$ 100	5		5	Average	Possible	Minor	M	2	2023	10	2025	2025	2045	9				0	2025	2025	2045	2065	2085	2105	9
1047	Other - Support	Keystone Complete -	Computer Software	Administration			2008	5	0	8	$ 29,239	$ 29,239	$ -	$ 29,239	0	5	5	Average	Possible	Minor	M	2	2013	10	2014	2017	2026	1		$6,000	2019		40	2016	2026	2031	2036	2041	2046	10
1056	Other - Support	Phone System (2009) -	Cell Phone/Pager	Administration			2009	15	8	7	$ 4,551	$ 1,820	$ 2,731	$ 4,551	5	7	7	Good	Unlikely	Major	M	2	2023	10	2025	2025	2041	9				10	2027	2027	2042	2057	2072	2087	11
1057	Other - Support	Wireless Router -	Computer Hardware	Administration			2009	5	0	7	$ 220	$ 220	$ -	Disposed	0	5	5	Average	Possible	Moderate	M	2	2014	10	2015	2017	2025	1				40	2017	2017	2022	2027	2032	2037	1
1059	Other - Support	Canon Calculators -	Computer Hardware	Administration			2009	6	0	7	$ 389	$ 389	$ -	Disposed	0	5	5	Average	Possible	Insignificant	L	1	2014	10	2015	2017	2025	1				40	2017	2017	2023	2029	2035	2041	1
1060	Other - Support	MSI Laptop -	Computer Hardware	Administration			2009	5	0	7	$ 702	$ 702	$ -	Disposed	0	5	5	Average	Possible	Insignificant	L	1	2014	10	2015	2017	2025	1				40	2017	2017	2022	2027	2032	2037	1
1061	Other - Support	ACER Monitor -	Computer Hardware	Administration			2009	5	0	7	$ 194	$ 194	$ -	Disposed	0	5	5	Average	Possible	Insignificant	L	1	2014	10	2015	2017	2025	1				40	2017	2017	2022	2027	2032	2037	1
1317	Other - Support	HP LaserJet P4014dn Printer	Computer Hardware	Administration			2010	20	14	6	$ 880	$ 220	$ 660	$ 880	7		7	Good	Unlikely	Insignificant	L	1	2028	10	2030	2030	2050	14				0	2030	2030	2050	2070	2090	2110	14
1319	Other - Support	Bar Code Scanners (x3)	Computer Hardware	Administration			2010	20	14	6	$ 478	$ 120	$ 359	$ 478	7		7	Good	Unlikely	Insignificant	L	1	2028	10	2030	2030	2050	14				0	2030	2030	2050	2070	2090	2110	14
1360	Other - Support	1 Dell Laptop & Software	Computer Hardware	Administration			2011	5	0	5	$ 1,527	$ 1,222	$ 305	Disposed	0	5	5	Average	Possible	Moderate	M	2	2016	10	2017	2017	2023	1				40	2019	2019	2024	2029	2034	2039	3
1362	Other - Support	Memory/Computer Program	Computer Hardware	Administration			2011	5	0	5	$ 201	$ 161	$ 40	Disposed	0	5	5	Average	Possible	Minor	M	2	2016	10	2017	2017	2023	1				40	2019	2019	2024	2029	2034	2039	3
1363	Other - Support	Canon MP49D Calculator	Computer Hardware	Administration			2011	5	0	5	$ 132	$ 106	$ 26	$ 130	0	5	5	Average	Possible	Minor	M	2	2016	10	2017	2017	2023	1				40	2019	2019	2024	2029	2034	2039	3
1364	Other - Support	HP Printer	Computer Hardware	Administration			2011	5	0	5	$ 278	$ 222	$ 56	$ 275	0	5	5	Average	Possible	Minor	M	2	2016	10	2017	2017	2023	1				40	2019	2022	2027	2032	2037	2042	6
1365	Other - Support	Brother Typewriter	Computer Hardware	Administration			2011	5	0	5	$ 249	$ 199	$ 50	not to be replac	0	5	5	Average	Possible	Insignificant	L	1	2016	10	2017	2017	2023	1				40	2019	2019	2024	2029	2034	2039	3
1366	Other - Support	Monitor/Keyboard Stand	Computer Hardware	Administration			2011	5	0	5	$ 359	$ 288	$ 72	$ 355	0	5	5	Average	Possible	Insignificant	L	1	2016	10	2017	2017	2023	1				40	2019	2019	2024	2029	2034	2039	3
1429	Other - Support	Desktop Computers (x3)	Computer Hardware	Administration			2012	5	1	4	$ 2,968	$ 1,781	$ 1,187	$ 3,000	2	5	5	Average	Possible	Insignificant	L	1	2017	10	2018	2018	2024	2				20	2019	2019	2024	2029	2034	2039	3
1430	Other - Support	Dell Server & HDDs	Computer Hardware	Administration			2012	5	1	4	$ 3,387	$ 2,032	$ 1,355	$ 3,400	2	5	5	Average	Possible	Moderate	M	2	2017	10	2018	2018	2024	2				20	2019	2019	2024	2029	2034	2039	3
1431	Other - Support	iPad	Computer Hardware	Administration			2012	5	1	4	$ 598	$ 359	$ 239	$ 600	2	5	5	Average	Possible	Moderate	M	2	2017	10	2018	2018	2024	2				20	2019	2019	2024	2029	2034	2039	3
1474	Other - Support	GPS Fleet Tracking systems	Computer Hardware	Public Works			2013	10	7	3	$ 5,354	$ 1,071	$ 4,283	$ 5,354	7		7	Good	Unlikely	Minor	L	1	2022	10	2023	2023	2033	7				0	2023	2021	2031	2041	2051	2061	5
1501	Other - Support	Security System	Computer Hardware	Administration			2014	20	18	2	$ 3,150	$ 158	$ 2,993	$ 3,150	9		9	Very Good	Rare	Moderate	L	1	2032	10	2034	2034	2054	18				0	2034	2034	2054	2074	2094	2114	18
1504	Other - Support	Council iPads	Computer Hardware	Administration			2014	-4	2	2	$ 2,543	$ 318	$ 2,225	$ 2,750	5		5	Average	Possible	Moderate	M	2	2018	10	2018	2018	2022	2				0	2018	2018	2022	2026	2030	2034	2
1558	Other - Support	Laptop - Roads Department	Computer Hardware	Public Works			2015	5	4	1	$ 1,991	$ -	$ 1,991	$ 2,000	8		8	Good	Unlikely	Minor	L	1	2020	10	2021	2021	2027	5				0	2021	2021	2026	2031	2036	2041	5

Melancthon
Land Improvements

Melancthon
Facilities Components Inventory

Fixed Asset #	Subtype	Location	Asset Name - Facility Components	Description	Department	Make	Model	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost	Condition Based On Useful Life	Condition	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Consequence of Failure	Probability of Failure (Based on Condition or Expected Condition)	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life	Proposed Rehabilitation Cost (2016 $)	Year for Rehabilitation	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current + Condition better then expected for age	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	Revised Remaining Useful Life
									67	24	18	$ 706,095	$ 329,030	$ 649,979	$ 2,362,381			4.8					1							$ -							
			Admin Office																																		
974	Facilities - Buildings	Admin Office	Township Administration Office - Highway1	Administration Building	Administration			1993	100	77	23	$66,150	$21,165	$229,631	500000	8	9	9	Very Good	Rare	Major	M	2	2083	10	2093	2093	2193	77				5	2098	2098	2198	82
1008	Facilities - Non-spatial	Admin Office	Administration HVAC - Old Part of Building	Special HVAC Systems & Equipment	Administration			1993	20	0	23	$2,618	$2,618	$0	$6,000	0	4	4	Poor	Likely	Moderate	H	3	2011	10	2013	2017	2041	1				30	2019	2018	2039	3
1051	Facilities - Non-spatial	Admin Office	Administration Roof - Highway 10	Roof Coverings	Administration			1993	20	0	23	$8,859	$8,859	$0	$20,000	0	9	9	Very Good	Rare	Major	M	2	2011	10	2013	2017	2041	1				80	2029	2029	2049	13
978	Water - Well	Admin Office	Administration Well	Production Well	Administration			1992	30	6	24	$5,201	$3,988	$1,214	$10,000	2	7	7	Good	Unlikely	Major	M	2	2019	10	2022	2022	2052	6				40	2034	2034	2064	18
979	Equipment - Motor		Administration Building Well Pump -	AC Electric	Administration			1992	25	1	24	$2,601	$2,393	$208	$5,000	0	5	5	Average	Possible	Major	H	3	2015	10	2018	2016	2041	0				40	2028	2028	2053	12
1107	Facilities - Non-spatial	Admin Office	Administration Septic System -	Sanitary Waste	Administration			1992	25	1	24	$10,403	$9,571	$832	$30,000	0	8	8	Good	Unlikely	Moderate	M	2	2015	10	2018	2018	2044	2				60	2033	2033	2058	17
1009	Facilities - Non-spatial	Admin Office	John Wood Hot Water Heater -	Hot water heater	Administration			2008	20	12	8	$300	$105	$195	$369	6		6	Average	Possible	Moderate	M	2	2026	10	2028	2028	2048	12				0	2028	2028	2048	12
1469	Facilities - Non-spatial	Admin Office	Admin Office Air Conditioner	Air Conditioner	Administration			2013	15	12	3	$2,997	$400	$2,597	$3,179	8		8	Good	Unlikely	Moderate	M	2	2027	10	2029	2029	2045	13				0	2029	2029	2044	13
1532	Facilities - Non-spatial	Admin Office	Blinds - Admin Office	Blinds	Administration			2014	20	18	2	$2,391	$60	$2,332	$2,575	9		9	Very Good	Rare	Insignificant	L	1	2032	10	2034	2034	2054	18				0	2034	2034	2054	18
1010	Facilities - Non-Spatial	Admin Office	Broan Central Vac System -	Central Vac	Administration			1993	20	0	23	$471	$471	$0	not to be replaced	0	5	5	Average	Possible	Insignificant	L	1	2011	10	2013	2017	2041	1				30	2019	2019	2039	3
1469	Facilities - Non-spatial	Admin Office	Admin Office HVAC - New Part of Building	Special HVAC Systems & Equipment	Administration			2013	15	12	3	$2,997	$400	$2,597	$5,000	8	9	9	Very Good	Rare	Moderate	L	1	2027	10	2329	2329	2645	313				0	2329	2329	2344	313
1569	Equipment - Standby P	Admin Office	Generator for Emergency Readiness					2016	30	30	0	$12,563	$0	$12,563	$15,000	10		10	Very Good	Rare	Major	M	2	2043	10	2646	2646	3276	630				0	2646	2646	2676	630
			Sub-Total						88	66	22	**$117,551**	**$50,028**	**$252,169**	**$597,123**			8.9					2							$0							
			Hornings Mills Hall																																		
1062	Facilities - Buildings	Hornings Mills Hall	Horning's Mill Community Centre - Mill Stree	Community Centre	Hornings Mills Hall Board			1986	50	20	30	$139,910	$114,492	$25,417	$500,000	4	7	7	Good	Unlikely	Major	M	2	2031	10	2036	2036	2086	20				10	2041	2041	2091	25
1095	Facilities - Non-spatial	Hornings Mills Hall	Roof - Hornings Mills Hall -	Roof Coverings	Hornings Mills Hall Board			1986	25	0	30	$4,376	$4,376	$0	$15,000	0	8	8	Good	Unlikely	Major	M	2	2009	10	2012	2017	2048	1				60	2027	2027	2052	11
1097	Facilities - Non-spatial	Hornings Mills Hall	Interior - Hornings Mills Hall -	Interior Finishes	Hornings Mills Hall Board			1986	40	10	30	$18,632	$13,508	$5,124	$54,829	3	5	5	Average	Possible	Insignificant	L	1	2022	10	2026	2026	2066	10				5	2028	2028	2068	12
1096	Facilities - Non-spatial	Hornings Mills Hall	HVAC - Hornings Mills Hall -	Special HVAC Systems & Equipment	Hornings Mills Hall Board			1986	20	0	30	$5,901	$7,223	$5,286	$10,000	0	8	8	Good	Unlikely	Major	M	2	2004	10	2006	2017	2048	1				60	2018	2026	2046	10
1076	Facilities - Non-Spatial	Hornings Mills Hall	Central Vacuum - Hornings Mills Hall -	Central Vac	Hornings Mills Hall Board			1986	15	0	30	$84	$84	$0	not to be replaced	0	5	5	Average	Possible	Insignificant	L	1	2000	10	2002	2017	2048	1				30	2007	2017	2032	1
1087	Facilities - Non-Spatial	Hornings Mills Hall	Bathroom Sinks (x6) - Hornings Mills Hall -		Hornings Mills Hall Board			1986	20	0	30	$150	$150	$0	$2,500	0	5	5	Average	Possible	Moderate	M	2	2004	10	2006	2017	2048	1				40	2023	2023	2043	7
1086	Facilities - Non-Spatial	Hornings Mills Hall	Urinals (x2) - Hornings Mills Hall -		Hornings Mills Hall Board			1986	20	0	30	$209	$209	$0	$1,500	0	5	5	Average	Possible	Moderate	M	2	2004	10	2006	2017	2048	1				40	2023	2023	2043	7
1110	Facilities - Non-spatial	Hornings Mills Hall	Septic System - Hornings Mills - Mill	Sanitary Waste	Hornings Mills Hall Board			1986	25	0	30	$10,448	$10,448	$0	$25,000	0	7	7	Good	Unlikely	Moderate	M	2	2009	10	2012	2017	2048	1				50	2025	2025	2050	9
		Hornings Mills Hall	Hornings Mills - Well	Production Well	Hornings Mills Hall Board			1986	30	0	30	$3,838	$3,838	$0	$10,000	0	7	7	Good	Unlikely	Major	M	2	2013	10	2016	2017	2048	1				50	2031	2031	2061	15
	Equipment - Motor	Hornings Mills Hall	Hornings Mills Well Pump	AC Electric	Hornings Mills Board			1986	25	0	30	$1,919	$1,919	$0	$5,000	0	5	5	Average	Possible	Major	H	3	2009	10	2012	2017	2048	1				40	2022	2022	2047	6
		Hornings Mills Hall	UV System	Water Purification	Hornings Mills Hall Board			2009	20	13	7	$1,375	$413	$963	$2,500	7	7	7	Good	Unlikely	Major	M	2	2027	10	2029	2029	2049	13				0	2029	2029	2049	13
		Hornings Mills Hall	Handicap Lift					2011	25	20	5	$23,200	$3,712	$19,488	$30,000	8		8	Good	Unlikely	Major	M	2	2034	11	2037	2037	2063	21				0	2037	2037	2062	21
1570	Equipment - Standby P	Hornings Mills Hall	Generator for Emergency Readiness		Hornings Mills Hall Board			2016	30	30	0	$12,563	$0	$12,563	$15,000	10		10	Very Good	Rare	Major	M	2	2043	10	2046	2046	2076	30				0	2046	2046	2076	30
			Sub-Total						45	17	28	**$222,605.79**	**$160,372.28**	**$68,841.51**	**$671,329.27**			7.0					2							**$0.00**							
			Public Works Garage																																		
975	Facilities - Buildings	Public Works Garage	Public Works Garage - Highway 10	Garage	Public Works			1965	100	49	51	$17,506	$23,425	$75,741	$500,000	5	8	8	Good	Unlikely	Moderate	M	2	2055	10	2065	2065	2165	49				10	2075	2075	2175	59
1052	Facilities - Non-spatial	Public Works Garage	Public Works Garage Roof - Highway 10	Roof Coverings	Public Works			2006	20	10	10	$51,378	$23,120	$28,258	$60,000	5	8	8	Good	Unlikely	Moderate	M	2	2024	10	2026	2026	2046	10				10	2028	2028	2048	12
1111	Water - Well	Public Works Garage	Public Works - Well	Production Well	Public Works			1965	30	0	51	$1,503	$1,503	$0	$10,000	0	7	7	Good	Unlikely	Moderate	M	2	1992	10	1995	2017	2069	1				50	2010	2024	2054	8
1112	Equipment - Motor	Public Works Garage	Public Works Garage Well Pump -	AC Electric	Public Works			1965	25	0	51	$ 2,601	$ 2,601	$ -	$ 5,000	0	5	5	Average	Possible	Moderate	M	2	1988	10	1991	2017	2069	1				40	2001	2024	2049	8
1108	Facilities - Non-spatial	Public Works Garage	Public Works Septic System -	Sanitary Waste	Public Works			1965	25	0	51	$2,004	$2,004	$0	$20,000	0	8	8	Good	Unlikely	Minor	L	1	1988	10	1991	2017	2069	1				60	2006	2037	2062	21
1566	Facilities - Non-spatial	Public Works Garage	Septic System Pump	Latter's Plumbing	Public Works			2016	20	20	0	$638	$0	$638	$750	10		10	Very Good	Rare	Minor	L	1	2034	10	2036	2036	2056	20				0	2036	2036	2056	20
984	Facilities - Non-spatial	Public Works Garage	Public Works Garage Furnace -	Heat Generating Systems	Public Works			2005	20	9	11	$11,000	$5,500	$5,500	$25,000	5	8	8	Good	Unlikely	Moderate	M	2	2023	10	2025	2025	2045	9				10	2027	2027	2047	11
986	Facilities - Non-spatial	Public Works Garage	Public Works Garage Window Replacement	Exterior Windows	Public Works			2008	30	22	8	$9,192	$2,145	$7,048	$10,000	7	8	8	Good	Unlikely	Minor	L	1	2035	10	2038	2038	2068	22				0	2038	2038	2068	22
987	Facilities - Non-Spatial	Public Works Garage	Public Works Garage Insulation and Siding	Insulation and Siding	Public Works			2008	30	22	8	$30,370	$7,086	$23,284	$37,351	7		7	Good	Unlikely	Minor	L	1	2035	10	2038	2038	2068	22				0	2038	2038	2068	22
983	Facilities - Non-Spatial	Public Works Garage	6 - 16'x14' Garage Doors -	6 - 16'x14' Garage Doors -	Public Works			1993	20	0	23	$15,706	$15,706	$0	$25,827	0	7	7	Good	Unlikely	Minor	L	1	2011	10	2013	2017	2041	1				65	2026	2026	2046	10
			Sub-Total						79	38	42	**$141,898.36**	**$83,090.75**	**$140,467.30**	**$693,928.49**			7.9					2							**$0.00**							
			Salt Storage Dome																																		
973	Facilities - Buildings	Public Works Garage	Sand/Salt Storage Building - Highway 10	Sand/Salt Dome	Public Works			1991	50	25	25	$74,040	$35,539	$38,501	$250,000	5	7	7	Good	Unlikely	Minor	L	1	2036	10	2041	2041	2091	25				5	2044	2044	2094	28
									50			**$74,039.81**	**$35,539.14**	**$38,500.67**	**$250,000.00**																						
			Equipment Storage Building																																		
1568	Facilities - Buildings	Public Works Garage	**Building (work in Progress)**					2017	75	76		150000		150000	150000	10		10	Very Good	Rare	Minor	L	1	2085	10	2093	2093	2169	77				0	2093	2093	2168	77
									75			**$150,000.00**	**$0.00**	**$150,000.00**	**$150,000.00**																						

Current Leveles of Service
Replacement/Improvement Year Based on Current Levels Service

Expected Levels of Service
Replacement/Improvement Year Based on Expected Levels Service

Melancthon
Street Light Inventory

																						Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service										Expected Levels of Service Replacement/Improvement Year Based on Expected Levels Service						
Fixed Asset #	**Subtype**	**Location**	**Street ID**	**From**	**To**	**Install Year**	**Useful Life**	**Remaining Useful Life**	**Age**	**Historic Cost**	**2015 Accumulated Amortization System**	**2015 Net Book Value System**	**Replacement Cost**	**Condition Based On Useful Life**	**StaffAssessed Condition**	**Condition Used for Analysis**	**Asset Condition** (As per Priority Rating)	**Probability of Failure** (Based on Condition or Expected Condition)	**Consequence of Failure**	**Risk of Failure**	**Numerical Value of Risk of Failure**	**Year Replacement due to minimmal maintenance practices**	**Current Levels of Service % benefit**	**Revised Levels Service Replacement Year**	**Year Replacement Applying Risk Score**	**Subsequent Replacement Year**	**Revised Remaining Useful Life**		**Rehabiliation Year**	**Rehabiliation Cost (2016)**	**Extended Life (Years) due to Betterment**	**Expected Levels of Service % benefit over Current**	**Revised Levels Service Replacement Year**	**Year Replacement Applying Risk Score - or Staff Override**	**Subsequent Replacement Year**	**Revised Remaining Useful Life**
							40	**38**	**2**	**$ 44,372**	**$ 1,059**	**$ 43,312**	**$ 148,500**			**9**					**1**									**$ -**						
1525	Roads - Street Lights	Riverview LED Street Lights (seven in group)				2014	40	38	2	$4,064	$102	$3,962	$14,000	10	9	9	Very Good	Rare	Insignificant	L	1	2050		2050	2050	2090	34					0	2050	2050	2090	34
1537	Roads - Street Lights	Corbetton LED Street Lights (10 in group)				2014	40	38	2	$5,805	$145	$5,660	$20,000	10	9	9	Very Good	Rare	Insignificant	L	1	2050		2050	2050	2090	34					0	2050	2050	2090	34
1538	Roads - Street Lights	Hornings Mills LED STreet Lights (48 in group)				2014	40	38	2	$27,864	$697	$27,168	$96,000	10	9	9	Very Good	Rare	Insignificant	L	1	2050		2050	2050	2090	34					0	2050	2050	2090	34
1539	Roads - Street Lights	Bretton Estates LED Street Lights (8 in group)				2014	40	38	2	$4,644	$116	$4,528	$16,000	10	9	9	Very Good	Rare	Insignificant	L	1	2050		2050	2050	2090	34					0	2050	2050	2090	34
		2 Street Lights (2016)				2016	40	40	0	$1,995	$0	$1,995	$2,500	10.00		10	Very Good	Rare	Insignificant	L	1	2052		2052	2052	2092	36					0	2052	2052	2092	36

Melancthon
Roads - Sign Inventory

																										Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service							Expected Levels of Service Replacement/Improvement Year Based on Expected Levels Service						
Fixed Asset #	Subtype	Sign Description	Street ID	Street Location of Sinage	Sign Type	Sign Size (cm)	Sign Shape	Sign Colour	Reflectivity (2015)	Comments (2015)	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization	2015 Net Book Value	Replacement Cost	Condition Based On Useful Life	Assessed Condition (Based on Reflectivity)	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life		Rehabiliation Year	Rehabiliation Cost (2016)	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	Revised Remaining Useful Life
												11	10	1	$20,966	$2,076	$18,890	$21,150			9					1									$0						
1434	Roads - Sign	No Trucks									2012	10	6	4	$6,486	$1,946	$4,540	$6,500	6	8	8	Very Good	Rare	Insignificant	L	1	2021	10	2022	2022	2032	6						2022	2022	2032	6
1524	Roads - Sign	No Trucks									2014	20	18	2	$2,609	$130	$2,479	$2,650	9	9	9	Very Good	Rare	Insignificant	L	1	2032	10	2034	2034	2054	18						2034	2034	2054	18
1572	Roads - Sign	Two Solar Radar Units			Davtech Analytical Services (Canada) Inc.						2016	10	10	0	$11,871	$0	$11,871	$12,000	10		10	Very Good	Rare	Insignificant	L	1	2025	10	2026	2026	2036	10						2026	2026	2036	10

Melanchton
Roads - Bridge Inventory

Link ID	AMS Asset ID	Structure Number	Asset Name	Asset Type	Bridge Type	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost	Condition Based On Useful Life	Engineer Inspection BCI	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service: Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life	Proposed Rehabilitation Cost (2016 $)	Year for Rehabilitation	Extended Life (Years) due to Betterment	2nd Rehabilitation Cost	Year for 2nd Rehabilition	Extended life due to 2nd Betterment	Expected Levels of Service % benefit over Current + Condition	Expected Levels of Service Replacement/Improvement Year Based on Expected Levels: Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	Revised Remaining Useful Life
							72	38	34	$ 5,134,042	$ 1,874,523	$ 3,272,076	$ 20,889,250			7					2						$ 2,479,500			$ 250,000							
939	939	4	Curphey Bridge - 5th Sideroad	rigid frame, vertical legs	BR-1	1930	75	0	86	$ 127,665	$ 51,066	$ 76,599		0	4	4	Poor	Likely	Minor	M	2	1998	10	2006	2017	2104	1							30	2029	2029	2104	13
933	933	10	Hutchinson Bridge - 280 Sideroad	I-beam Steel Girders	BR-1	2000	75	59	16	$ 51,426	$ 10,285	$ 41,141	$ 700,000	8	6	6	Average	Possible	Major	H	3	2015	10	2076	2068	2143	52	$185,000	2018	40				0	2058	2068	2143	52
954	954	2003	Culvert - 3rd Line	Multi-Plate Culverts	CS	1970	50	4	46	$ 22,912	$ 20,621	$ 2,291	$ 300,000	1	6	6	Average	Possible	Major	H	3	2015	10	2020	2015	2065	-1							40	2040	2015	2065	-1
945	945	2013	Culvert - 30th Sideroad	Open Bottom Timber Structu	Wood	1950	50	0	66	$ 8,063	$ 8,063	$ -	$ 275,000	0	6	6	Average	Possible	Major	H	3	1995	10	2000	2017	2084	1	$30,000	2018	10				50	2028	2028	2076	12
942	942	1	RBRIDGE - 4th Line SW	rigid frame, vertical legs	BR	1960	75	19	56	$ 15,662	$ 11,485	$ 4,177	$ 350,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20							30	2059	2032	2107	16
940	940	3	Lyons Bridge - 4th Line	rigid frame, vertical legs	BR	1993	75	52	23	$ 209,440	$ 61,436	$ 148,004	$ 400,000	7	7	7	Good	Unlikely	Major	M	2	2061	10	2069	2069	2145	53							0	2069	2031	2106	15
938	938	5	Leader Bridge - 2nd Line SW	rigid frame, vertical legs	BR-1	1978	75	34	41	$ 98,546	$ 52,558	$ 45,988	$ 600,000	5	7	7	Good	Unlikely	Major	M	2	2043	10	2051	2051	2127	35	$69,000	2022	40				10	2062	2062	2137	46
936	936	7	Gray Bridge - 7th Line SW	rigid frame, vertical legs	BR-1	1960	75	19	56	$ 43,815	$ 32,131	$ 11,684	$ 650,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20	$110,000	2019	40				30	2059	2059	2134	43
935	935	8	RBRIDGE - 7th Line SW	rigid frame, vertical legs	BR-1	1980	75	39	36	$ 165,010	$ 77,005	$ 88,005	$ 584,250	5	7	7	Good	Unlikely	Major	M	2	2048	10	2056	2056	2132	40	$86,000	2022	40				10	2062	2062	2137	46
934	934	9	Anderson Bridge - 8th Line SW	Box Girder	BR-1	1980	75	39	36	$ 149,123	$ 69,591	$ 79,532	$ 700,000	5	7	7	Good	Unlikely	Major	M	2	2048	10	2056	2056	2132	40	$156,500	2023	40				10	2063	2063	2138	47
932	932	11	G. Anderson Bridge - 8th Line SW	rigid frame, vertical legs	BR-1	1960	75	19	56	$ 84,769	$ 62,164	$ 22,605	$ 1,200,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20	$180,000	2019	40				30	2059	2059	2134	43
930	930	13	Riverview East Bridge - 260 Sideroad	CPCI Precast I-Girders	BR-1	1980	75	39	36	$ 302,200	$ 141,027	$ 161,173	$ 1,070,000	5	7	7	Good	Unlikely	Major	M	2	2048	10	2056	2056	2132	40	$249,000	2020	40				10	2060	2060	2135	44
929	929	14	Witowski Bridge - 4th Line SW	Box Girder	BR-1	1977	75	36	39	$ 164,283	$ 83,237	$ 81,046	$ 1,000,000	5	7	7	Good	Unlikely	Major	M	2	2045	10	2053	2053	2129	37	$185,000	2023	40				10	2063	2063	2138	47
928	928	15	Oldfield Bridge - 2nd Line SW	rigid frame, vertical legs	BR-1	1960	75	19	56	$ 59,438	$ 43,588	$ 15,850	$ 1,020,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20	$218,000	2017	40				30	2057	2057	2132	41
927	927	16	Jack Bridge - 250 Sideroad	I-beam Steel Girders	BR-1	1998	75	57	18	$ 94,128	$ 21,336	$ 72,792	$ 880,000	8	7	7	Good	Unlikely	Major	M	2	2066	10	2074	2074	2150	58	$195,000	2025	40				0	2065	2065	2140	49
958	958	17	Isaac Bridge - 250 Sideroad	CSP Multi-Plate Arch Culvert	BR-1	2003	75	62	13	$ 193,629	$ 30,981	$ 162,648	$ 750,000	8	7	7	Good	Unlikely	Major	M	2	2071	10	2079	2079	2155	63	$150,000	2023	40				0	2063	2063	2138	47
957	957	18	Fluney Bridge - 2nd Line NE	rigid frame, vertical legs	BR-1	1960	75	19	56	$ 24,455	$ 17,934	$ 6,521	$ 470,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20	$88,500	2022	40				30	2062	2062	2137	46
956	956	2001	Silk Bridge - 3rd Line	CSP Multi-Plate Arch Culvert	CS	1989	50	23	27	$ 78,000	$ 41,388	$ 36,612	$ 275,000	5	7	7	Good	Unlikely	Major	M	2	2034	10	2039	2039	2089	23							10	2044	2033	2088	17
953	953	2004	Culvert - 5th Sideroad	rigid frame, vertical legs	BR-1	1990	75	49	26	$ 502,936	$ 169,911	$ 333,025	$ 400,000	7	7	7	Good	Unlikely	Major	M	2	2058	10	2066	2066	2142	50	$80,000	2026	40				0	2066	2066	2141	50
951	951	2006	Culvert - 3rd Line	rigid frame, vertical legs	BR	1990	75	49	26	$ 191,881	$ 64,825	$ 127,056	$ 275,000	7	7	7	Good	Unlikely	Major	M	2	2058	10	2066	2066	2142	50							0	2066	2036	2111	20
972	972	2007	Culvert - 15th Sideroad East of 3rd Line OS	rigid frame, vertical legs	BR	1980	75	39	36	$ 86,424	$ 40,876	$ 45,548	$ 275,000	5	7	7	Good	Unlikely	Major	M	2	2048	10	2056	2056	2132	40							10	2064	2038	2113	22
950	950	2008	Culvert - 15th Sideroad	rigid frame, vertical legs	BR	1970	75	29	46	$ 25,929	$ 15,768	$ 10,161	$ 250,000	4	7	7	Good	Unlikely	Major	M	2	2038	10	2046	2046	2122	30							20	2061	2037	2112	21
947	947	2011	Culvert - 20th Sideroad	rigid frame, vertical legs	CC	1985	75	44	31	$ 121,272	$ 49,164	$ 72,108	$ 370,000	6	7	7	Good	Unlikely	Major	M	2	2053	10	2061	2061	2137	45							5	2065	2030	2105	14
946	946	2012	Culvert - 30th Sideroad	rigid frame, vertical legs	BR	1960	75	19	56	$ 15,662	$ 11,640	$ 4,022	$ 200,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20							30	2059	2036	2111	20
944	944	2014	Culvert - 4th Line	rigid frame, vertical legs	BR	1950	75	9	66	$ 28,198	$ 24,769	$ 3,429	$ 270,000	1	7	7	Good	Unlikely	Major	M	2	2018	10	2026	2026	2102	10							50	2064	2038	2113	22
971	971	2016	Culvert - 4th Line NE South of County Rd 9	rigid frame, vertical legs	CC	1980	75	39	36	$ 96,379	$ 45,585	$ 50,794	$ 200,000	5	7	7	Good	Unlikely	Major	M	2	2048	10	2056	2056	2132	40							10	2064	2038	2113	22
970	970	2017	Culvert - 2nd Line NE North of 240 SR	CSP Multi-Plate Arch Culvert	CS	1980	50	14	36	$ 144,745	$ 101,322	$ 43,424	$ 200,000	3	7	7	Good	Unlikely	Major	M	2	2025	10	2030	2030	2080	14							30	2045	2033	2083	17
969	963	2018	Culvert - 2nd Line NE South of 260 SR	CIP Box Culvert	CC	1960	75	19	56	$ 21,853	$ 15,242	$ 6,611	$ 200,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20							30	2059	2032	2107	16
967	697	2019	Culvert - 4th Line NE North of 250 SR	rigid frame, vertical legs	BR	1980	75	39	36	$ 156,438	$ 73,991	$ 82,447	$ 350,000	5	7	7	Good	Unlikely	Major	M	2	2048	10	2056	2056	2132	40							10	2064	2037	2112	21
966	966	2021	Culvert - 2nd Line NE North of 250 SR	CSP Multi-Plate Arch Culvert	CS	1980	50	14	36	$ 64,606	$ 45,224	$ 19,382	$ 330,000	3	7	7	Good	Unlikely	Major	M	2	2025	10	2030	2030	2080	14							30	2045	2031	2081	15
965	965	2022	Culvert - 4th Line NE North of 260 SR	CIP Box Culvert	CC	1980	75	39	36	$ 63,547	$ 30,056	$ 33,491	$ 300,000	5	7	7	Good	Unlikely	Major	M	2	2048	10	2056	2056	2132	40							10	2064	2038	2113	22
964	964	2023	Culvert - 4th Line NE South of 260 SR	CIP Box Culvert	CC	1960	75	19	56	$ 27,317	$ 20,303	$ 7,014	$ 350,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20	$117,500	2019	20				30	2039	2039	2114	23
962	962	2025	Culvert - 260 Sideroad West of 2nd Line SW	CSP Multi-Plate Arch Culvert	CS	1970	50	4	46	$ 40,946	$ 40,812	$ 135	$ 200,000	1	7	7	Good	Unlikely	Major	M	2	2013	10	2020	2020	2070	4							50	2045	2037	2087	21
1434		2029	220 SR east of 4th Line NE	rigid frame, vertical legs	BR	1960	75	19	56	$ 21,900	$ 15,768	$ 6,132	$ 275,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20							30	2059	3037	3112	1021
1492		2030	240 SR West of 6th Line NE	rigid frame, vertical legs	BR	1968	75	14	61	$ 16,948	$ 13,332	$ 3,616	$ 250,000	2	7	7	Good	Unlikely	Major	M	2	2023	10	2031	2031	2107	15							40	2061	2029	2104	13
1493		2032	2nd Line NE north of 280 SR	Twin Circular CSP Culvert	CS	1975	50	9	41	$ 50,990	$ 39,772	$ 11,218	$ 200,000	2	7	7	Good	Unlikely	Major	M	2	2020	10	2025	2025	2075	9							40	2045	2031	2081	15
1491		2033	7th Line SW South of 260 SR	Open Bottom Culvert	CC	1968	75	19	56	$ 23,891	$ 17,202	$ 6,689	$ 300,000	3	7	7	Good	Unlikely	Major	M	2	2028	10	2036	2036	2112	20							30	2059	2034	2109	18
1494		2034	Melanchton / Mulmur Townline between 15th and 20th	rigid frame, vertical legs	BR	1978	75	37	38	$ 69,829	$ 33,518	$ 36,311	$ 250,000	5	7	7	Good	Unlikely	Major	M	2	2046	10	2054	2054	2130	38							10	2062	2030	2105	14
937	937	6	Held Bridge - 4th Line SW	rigid frame, vertical legs	BR-1	2003	75	62	13	$ 146,733	$ 23,477	$ 123,256	$ 700,000	8	8	8	Good	Unlikely	Major	M	2	2071	10	2079	2079	2155	63	$140,000	2035	40				0	2075	2075	2150	59
931	931	12	Riverview South Bridge - 7th Line SW	I-beam Steel Girders	BR-2	2008	75	67	8	$ 570,676	$ 54,435	$ 528,799	$ 1,200,000	9	8	8	Good	Unlikely	Major	M	2	2076	10	2084	2084	2160	68	$240,000	2034	40	$250,000	2074	40	0	2114	2114	2189	98
955	955	2002	Clark Bridge - 5th Sideraod	CSP Multi-Plate Arch Culvert	CS	1988	50	22	28	$ 43,332	$ 23,877	$ 19,455	$ 300,000	4	8	8	Good	Unlikely	Major	M	2	2033	10	2038	2038	2088	22							30	2053	2034	2084	18
949	949	2009	Culvert - 15th Sideroad	Box Culvert	BR	2008	75	67	8	$ 247,311	$ 23,394	$ 223,917	$ 600,000	9	9	9	Very Good	Rare	Major	M	2	2076	10	2084	2084	2160	68							0	2084	2050	2125	34
943	943	2015	Culvert - 10th Line NE	Precast Box Culvert	BR	2008	75	67	8	$ 194,843	$ 18,431	$ 176,412	$ 300,000	9	9	9	Very Good	Rare	Major	M	2	2076	10	2084	2084	2160	68							0	2084	2050	2125	34
961	961	2026	Culvert - 8th Line SW North of Highway 89	CSP Multi-Plate Arch Culvert	CS	2008	50	42	8	$ 74,755	$ 10,466	$ 64,289	$ 250,000	8	9	9	Very Good	Rare	Major	M	2	2053	10	2058	2058	2108	42							5	2061	2041	2091	25
959	959	2031	Culvert - 240 Sideroad East of Highway 10	CSP Multi-Plate Arch Culvert	CS	2005	50	39	11	$ 43,979	$ 8,796	$ 35,183	$ 200,000	8	9	9	Very Good	Rare	Major	M	2	2050	10	2055	2055	2105	39							5	2058	2041	2091	25
1433	1432	2005	Culvert - 3rd Line OS South of County RD 17	CSP Multi-Plate Arch Culvert	CS	2013	50	47	3	$ 143,757	$ 5,674	$ 138,083	$ 200,000	9	10	10	Very Good	Rare	Major	M	2	2058	10	2063	2063	2113	47							5	2066	2047	2097	31
948	1564	2010	Culvert - 3rd Line	CSP Multi-Plate Arch Culvert	CS	2016	50	50	0	$ 102,090	$ -	$ 102,090	$ 110,000	10	10	10	Very Good	Rare	Major	M	2	2061	10	2066	2066	2116	50							0	2066	2066	2116	50
968	1563	2020	Culvert - 4th Line NE South of 240 SR	CIP Box Culvert	CC	2016	75	75	0	$ 125,433	$ -	$ 125,433	$ 150,000	10	10	10	Very Good	Rare	Major	M	2	2084	10	2092	2092	2168	76							0	2092	2092	2167	76
963	1562	2024	Culvert - 2nd Line NE South of 240 SR and Bridge 2018	Open Bottom Culvert	CC	2016	75	75	0	$ 127,361	$ -	$ 127,361	$ 150,000	10	10	10	Very Good	Rare	Major	M	2	2084	10	2092	2092	2168	76							0	2092	2092	2167	76
960	1559	2027	Culvert 2027 - 15 SR 2km West of County Road 124 (Lot	Precast Box Culvert	CC	2015	75	74	1	$ 318,529	$ -	$ 318,529	$ 300,000	10	10	10	Very Good	Rare	Major	M	2	2083	10	2091	2091	2167	75							0	2091	2061	2136	45
1117	1471	2028	Bridge 2028 - Main St Horning's Mills, South of 15 SR	Precast Box Culvert	CC	2013	75	72	3	$ 378,883	$ 7,578	$ 371,305		10	10	10	Very Good	Rare	Major	M	2	2081	10	2089	2089	2165	73							0	2089	2060	2135	44

Melancthon
Roads - Cross Road Culverts

																					Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service											Expected Levels of Service Replacement/Improvement Year Based on Expected Levels Service				
ASSET ID	Structure Number	Asset Name	Asset Type	Bridge Type	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost	Condition Based On Useful Life	Engineer Inspection BCI	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life		Proposed Rehabilitation Cost (2016 $)	Year for Rehabilitation	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current + Condition better then expected for age	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	Revised Remaining Useful Life
						50	49	1	$ 36,317	$ 354	$ 35,963	$ 58,700			10					1								$ -							
1433	Roads - Bridge	Culvert - 250 Sideroad & 4th Line NE	Unknown	CS	2012	50	46	4	$ 5,900	$ 354	$ 5,546	$ 6,000	9	9	9	Very Good	Rare	Major	M	2	2057	10	2062	2062	2112	46					0	2062	2062	2112	46
1551	Roads - Bridge	CPS Culvert 6th Line NE between 5th Line OS and County Rd 21	Unknown	CS	2015	50	49	1	$ 1,786	$ -	$ 1,786	$ 2,500	10	10	10	Very Good	Rare	Moderate	L	1	2060	10	2065	2065	2115	49					0	2065	2065	2115	49
1552	Roads - Bridge	CPS Culvert 6th Line NE between 5th Line OS and County Rd 21	Unknown	CS	2015	50	49	1	$ 2,200	$ -	$ 2,200	$ 2,200	10	10	10	Very Good	Rare	Moderate	L	1	2060	10	2065	2065	2115	49					0	2065	2065	2115	49
1553	Roads - Bridge	CSP Culvert 4th Line OS north of County Rd 21	Unknown	CS	2015	50	49	1	$ 2,225	$ -	$ 2,225	$ 2,500	10	10	10	Very Good	Rare	Moderate	L	1	2060	10	2065	2065	2115	49					0	2065	2065	2115	49
1554	Roads - Bridge	CSP Culvert 270 SR west of Highway 10	Unknown	CS	2015	50	49	1	$ 2,361	$ -	$ 2,361	$ 2,500	10	10	10	Very Good	Rare	Moderate	L	1	2060	10	2065	2065	2115	49					0	2065	2065	2115	49
1555	Roads - Bridge	CSP Culvert 2nd Line SW just North of 280 SR	Unknown	CS	2015	50	49	1	$ 2,935	$ -	$ 2,935	$ 3,000	10	10	10	Very Good	Rare	Major	M	2	2060	10	2065	2065	2115	49					0	2065	2065	2115	49
1561	Roads - Bridge	Culvert Melancthon / Mulmur Townline	Unknown	CS	2015	50	49	1	$ 18,910	$ -	$ 18,910	$ 40,000	10	10	10	Very Good	Rare	Moderate	L	1	2060	10	2065	2065	2115	49					0	2065	2065	2115	49

Melancthor
Roads - Road Base Inventory

Fixed Asset #	Subtype	Asset Name - Roads	GIS ID/Map Link	Street ID (RDG/SIS)	From	To	Name	Surface Material	Length(m)	# of Lanes	Total Lane (m)	Width (m)	Square meters (m)	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost/Section	Condition Based On Useful Life	Condition from Town	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimum maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life	Proposed Rehabilitation Cost (2015 $)	Year for Rehabilitation	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current + Condition better than expected for age	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	Revised Remaining Useful Life
									264,939	0	0	0	0		41	10	112	$3,825,618	$2,100,162	$1,725,456	$105,612,196.08			5.1					2.0							$336,988							
201	Roads - Road Base Valuation	Municipal Road Base - 15TH SIDEROAD	176	176	3RD LINE OS	CTY RD 124	15TH SIDEROAD	Asphalt	1141.18		0		0	1981	60	27	32	$45,646	$24,238	$21,298	$456,632	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
202	Roads - Road Base Valuation	Municipal Road Base - 15TH SIDEROAD	177	1493	MAIN ST.	END OF ASPHALT (Bridge 2009)	15TH SIDEROAD	Asphalt	690.73		0		0	1983	60	27	32	$27,611	$14,735	$12,885	$276,284	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$5,000	2021		0	2025	2025	2085	9
718	Roads - Road Base Valuation	Municipal Road Base - 15TH SIDEROAD	194	194	CTY RD 124	MAIN ST	15TH SIDEROAD	Asphalt	227.24		0		0	1983	60	27	32	$9,088	$4,845	$4,230	$90,896	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
689	Roads - Road Base Valuation	Municipal Road Base - 20TH SIDEROAD	1345	1345	3RD LINE OS	CTY RD 124	20TH SIDEROAD	Asphalt	1377.72		0		0	1983	60	27	32	$55,074	$29,373	$25,701	$551,088	5	8	8	Good	Unlikely	Moderate	M	2	2025		2025	2025	2085	9				5	2028	2028	2088	12
567	Roads - Road Base Valuation	Municipal Road Base - 26D SIDEROAD	29	29	2ND LINE SW	ARGYLE ST	26D SIDEROAD	Asphalt	1525.86		0		0	1983	60	27	32	$60,994	$32,531	$28,463	$610,344	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$10,000	2021		0	2025	2025	2085	9
569	Roads - Road Base Valuation	Municipal Road Base - 26D SIDEROAD	31	31	7TH LINE SW	4TH LINE SW	26D SIDEROAD	Asphalt	2012.82		0		0	1983	60	27	32	$80,463	$42,913	$37,549	$805,128	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$10,000	2021		0	2025	2025	2085	9
570	Roads - Road Base Valuation	Municipal Road Base - 26D SIDEROAD	32	32	6TH LINE SW	2ND LINE SW	26D SIDEROAD	Asphalt	2228.06		0		0	1983	60	27	32	$89,066	$47,002	$41,564	$891,224	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$10,000	2021		0	2025	2025	2085	9
623	Roads - Road Base Valuation	Municipal Road Base - 2ND LINE SW	83	83	26D SDRD	25D SDRD	2ND LINE SW	Asphalt	2054.32		0		0	1983	60	27	32	$82,120	$43,798	$38,323	$821,728	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
624	Roads - Road Base Valuation	Municipal Road Base - 2ND LINE SW	82	82	25D SDRD	Melancthon / Southgate Bounda	2ND LINE SW	Asphalt	2349.58		0		0	1983	60	27	32	$93,828	$50,053	$43,831	$939,836	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$25,000	2017		0	2025	2025	2085	9
621	Roads - Road Base Valuation	Municipal Road Base - 2ND LINE SW	117	117	280 Sideroad	270 Sideroad	2ND LINE SW	Asphalt	2028.71		0		0	1986	60	30	29	$93,087	$44,902	$48,065	$811,484	5		5	Average	Possible	Moderate	M	2	2028		2028	2028	2088	12	$10,000	2028		0	2028	2028	2088	12
622	Roads - Road Base Valuation	Municipal Road Base - 2ND LINE SW	118	1598	270 SDRD	260 SDRD	2ND LINE SW	Asphalt	2044.68		0		0	1983	60	27	32	$81,735	$43,582	$38,153	$817,872	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$10,000	2028		0	2025	2025	2085	9
672	Roads - Road Base Valuation	Municipal Road Base - 2ND LINE SW	147	147	HWY 89	300 SDRD	2ND LINE SW	Asphalt	1799.47		0		0	1983	60	27	32	$71,979	$38,384	$33,595	$719,788	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$20,000	2017		0	2025	2025	2085	9
620	Roads - Road Base Valuation	Municipal Road Base - 2ND LINE SW	1279	1279	CTY RD 17	280 SDRD	2ND LINE SW	Asphalt	2051.39		0		0	1983	60	27	32	$82,055	$43,745	$38,308	$820,556	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
634	Roads - Road Base Valuation	Municipal Road Base - 3RD LINE	93	1507	HWY 10	5 SR	3RD LINE	Asphalt	1632.37		0		0	1983	60	27	32	$65,373	$35,186	$30,187	$653,148	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
635	Roads - Road Base Valuation	Municipal Road Base - 3RD LINE	93	93	5 SR	2 KM N OF 5TH SIDEROAD	3RD LINE	Asphalt	2010.5		0		0	1987	60	31	28	$102,464	$47,817	$54,648	$804,202	5	6	6	Average	Possible	Moderate	M	2	2029		2029	2029	2089	13				0	2029	2029	2089	13
636	Roads - Road Base Valuation	Municipal Road Base - 3RD LINE	96	96	CTY RD 17	15 SR	3RD LINE	Asphalt	2688.55		0		0	1988	60	32	27	$147,745	$66,485	$81,260	$1,075,420	5	6	6	Average	Possible	Moderate	M	2	2030		2030	2030	2090	14				0	2030	2030	2090	14
644	Roads - Road Base Valuation	Municipal Road Base - 3RD LINE	102	102	1.5 KM SOUTH OF 20TH	20TH SIDEROAD	3RD LINE	Asphalt	3044.97		0		0	1983	60	27	32	$121,721	$64,918	$56,803	$1,217,988	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
680	Roads - Road Base Valuation	Municipal Road Base - 3RD LINE	105	1490	20 SR	RD 21	3RD LINE	Asphalt	3054.67		0		0	1983	60	27	32	$122,186	$65,125	$56,984	$1,221,868	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
900	Roads - Road Base Valuation	Municipal Road Base - 3RD LINE	548	548	2 KM N OF 5TH SIDER	CTY RD 17	3RD LINE	Asphalt	1048.49		0		0	1988	60	32	27	$57,618	$25,928	$31,690	$419,396	5	6	6	Average	Possible	Moderate	M	2	2030		2030	2030	2090	14				0	2030	2030	2090	14
901	Roads - Road Base Valuation	Municipal Road Base - 3RD LINE	540	540	CTY RD 17	15 SR	3RD LINE	Asphalt	362.61		0		0	1983	60	27	32	$14,495	$7,731	$6,764	$145,044	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
637	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE	95	95	CTY RD 17	15 SR	4TH LINE	Asphalt	3051.12		0		0	1983	60	27	32	$121,973	$65,053	$56,922	$1,220,528	5	7	7	Good	Unlikely	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
677	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE	152	1495	HWY 10	5TH SDRD	4TH LINE	Asphalt	713.18		0		0	1983	25	0	32	$31,383	$31,383	$0	$285,352	0	7	7	Good	Unlikely	Moderate	M	2	2001		2001	2017	2051	1				40	2026	2026	2051	10
678	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE	153	1494	5TH SR	CTY RD 17	4TH LINE	Asphalt	3038.47		0		0	1983	60	27	32	$121,461	$64,785	$56,682	$1,215,388	5	7	7	Good	Unlikely	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
599	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE NE	63	63	25D SDRD	24D SDRD	4TH LINE NE	Asphalt	2446.76		0		0	1983	60	27	32	$97,808	$52,164	$45,644	$978,704	5	5	5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$20,000	2018		0	2025	2025	2085	9
660	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE NE	64	64	CTY RD 21	26D SDRD	4TH LINE NE	Asphalt	1633.98		0		0	1986	60	28	31	$67,243	$34,741	$32,502	$653,593	5	6	6	Average	Possible	Moderate	M	2	2026		2026	2026	2086	10	$10,000	2024		0	2026	2026	2086	10
661	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE NE	65	65	5TH LINE OS	CTY RD 21	4TH LINE NE	Asphalt	3937.16		0		0	1987	60	31	28	$200,655	$93,639	$107,016	$1,574,864	5	6	6	Average	Possible	Moderate	M	2	2029		2029	2029	2089	13	$20,000	2025		0	2029	2029	2089	13
608	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE NE	72	72	240 SDRD	RD 9 AND CTY RD 2	4TH LINE NE	Asphalt	2047.75		0		0	1983	60	27	32	$81,858	$43,658	$38,200	$819,100	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$25,000	2018		0	2025	2025	2085	9
897	Roads - Road Base Valuation	Municipal Road Base - 4TH LINE OS	1279	1279	Railway Tracks	HWY 10	4TH LINE	Asphalt	956		0		0	1983	60	27	32	$25,224	$14,514	$10,710	$182,400	5	7	7	Good	Unlikely	Moderate	M	2	2025		2025	2025	2085	9	$10,000	2023		0	2025	2025	2085	9
631	Roads - Road Base Valuation	Municipal Road Base - 5TH LINE	94	94	CTY RD 17 5TH LINE JE	280 SR	5TH LINE	Asphalt	2292.94		0		0	1983	60	27	32	$91,635	$48,881	$42,753	$917,176	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$22,928	2017		0	2025	2025	2085	9
639	Roads - Road Base Valuation	Municipal Road Base - 5TH LINE	97	97	6TH LINE NE	15 SIDEROAD	5TH LINE	Asphalt	570.2		0		0	1983	60	27	32	$22,787	$12,159	$10,628	$228,120	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$5,707	2014		0	2025	2025	2085	9
643	Roads - Road Base Valuation	Municipal Road Base - 5TH LINE	101	101	280 SDRD	4TH LINE NE	5TH LINE	Asphalt	305.49		0		0	1983	60	27	32	$8,215	$4,381	$3,833	$82,196	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$2,057	2014		0	2025	2025	2085	9
685	Roads - Road Base Valuation	Municipal Road Base - 5TH LINE	166	166	6TH LINE NE	28th SIDEROAD	5TH LINE	Asphalt	465.73		0		0	1983	60	27	32	$18,613	$9,925	$8,688	$186,292	5	3	3	Poor	Likely	Moderate	H	3	2025		2025	2045	2100	24	$4,657	2019		0	2025	2037	2097	21
686	Roads - Road Base Valuation	Municipal Road Base - 5TH LINE	161	161	10 SR	RD 21 5TH LINE JOG	5TH LINE	Asphalt	1577.34		0		0	1983	60	27	32	$63,045	$33,624	$29,421	$630,854	5	3	3	Poor	Likely	Moderate	H	3	2025		2025	2045	2100	24	$15,773	2019		0	2025	2037	2097	21
684	Roads - Road Base Valuation	Municipal Road Base - 5th Line 05 - 15th SR - 270 SR	159	159	15TH SIDEROAD	270 SIDEROAD	5TH LINE	Asphalt	1930.35		0		0	1983	60	27	32	$77,165	$41,155	$36,010	$772,142	5	3	3	Poor	Likely	Moderate	H	3	2025		2025	2045	2100	24	$19,308	2019		0	2025	2037	2097	21
683	Roads - Road Base Valuation	Municipal Road Base - 5th Line 05 - 270 SR - 6th Line NE	158	158	270 SIDEROAD	6th LINE NE	5TH LINE	Asphalt	654.08		0		0	1983	60	27	32	$26,145	$13,944	$12,201	$261,616	5	3	3	Poor	Likely	Moderate	H	3	2025		2025	2045	2100	24	$6,540	2019		0	2025	2037	2097	21
729	Roads - Road Base Valuation	Municipal Road Base - 5TH SIDEROAD	208	208	CTY RD 124	TL	5TH SIDEROAD	Asphalt	1249.74		0		0	1983	60	27	32	$65,236	$34,793	$30,444	$499,896	5	6	6	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
730	Roads - Road Base Valuation	Municipal Road Base - 5TH SIDEROAD	207	207	3RD LINE OS	CTY RD 124	5TH SIDEROAD	Asphalt	1487.81		0		0	1983	60	27	32	$54,797	$29,223	$25,572	$595,124	5	7	7	Good	Unlikely	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
653	Roads - Road Base Valuation	Municipal Road Base - 7TH LINE SW	111	111	280 SDRD	270 SDRD	7TH LINE SW	Asphalt	2033.38		0		0	1983	60	27	32	$81,284	$43,351	$37,932	$813,352	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$7,500	2024		0	2025	2025	2085	9
668	Roads - Road Base Valuation	Municipal Road Base - 7TH LINE SW	142	142	CTY RD 17	280 SDRD	7TH LINE SW	Asphalt	2039.88		0		0	1983	60	27	32	$81,595	$43,486	$38,050	$815,870	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$7,500	2024		0	2025	2025	2085	9
669	Roads - Road Base Valuation	Municipal Road Base - 7TH LINE SW	143	143	HWY 89	CTY RD 17	7TH LINE SW	Asphalt	852.88		0		0	1983	60	27	32	$34,092	$18,182	$15,909	$341,136	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$7,500	2024		0	2025	2025	2085	9
666	Roads - Road Base Valuation	Municipal Road Base - 7TH LINE SW	1489	1489	270 SR	260 SR	7TH LINE SW	Asphalt	2047.71		0		0	1983	60	27	32	$81,855	$43,657	$38,200	$819,086	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$7,500	2024		0	2025	2025	2085	9
710	Roads - Road Base Valuation	Municipal Road Base - ADDESON	186	186	GEORGE	LLOYD	ADDESON	Asphalt	155.03		0		0	1983	60	27	32	$4,620	$2,467	$2,158	$62,008	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
715	Roads - Road Base Valuation	Municipal Road Base - CHARLES ST W	201	201	MAIN	END OF ROAD	CHARLES ST W	Asphalt	141.37		0		0	1983	60	27	32	$5,651	$3,016	$2,637	$56,548	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
724	Roads - Road Base Valuation	Municipal Road Base - CHURCH	200	200	MAIN	END OF ROAD	CHURCH	Asphalt	242.65		0		0	1983	60	27	32	$9,676	$5,165	$4,515	$96,820	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
706	Roads - Road Base Valuation	Municipal Road Base - FIELDWAY	182	182	MAIN	END OF ROAD	FIELDWAY	Asphalt	800.48		0		0	1983	60	27	32	$31,999	$17,082	$14,921	$320,192	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
712	Roads - Road Base Valuation	Municipal Road Base - GEORGE	188	188	ADDESON	MAIN	GEORGE	Asphalt	113.31		0		0	1983	60	27	32	$3,387	$1,807	$1,581	$45,426	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
709	Roads - Road Base Valuation	Municipal Road Base - HIGH	185	185	MAIN	70 M E OF MAIN	HIGH	Asphalt	170.38		0		0	1983	60	27	32	$6,810	$3,632	$3,178	$68,148	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$5,000	2017		0	2025	2025	2085	9
728	Roads - Road Base Valuation	Municipal Road Base - HUNTER	205	205	CTY ROAD 124	END OF ROAD	HUNTER PKWY	Asphalt	290.57		0		0	1983	60	27	32	$11,623	$6,195	$5,428	$116,228	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
711	Roads - Road Base Valuation	Municipal Road Base - LLOYD	187	187	ADDESON	MAIN	LLOYD	Asphalt	110.1		0		0	1983	60	27	32	$3,290	$1,755	$1,536	$44,120	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
564	Roads - Road Base Valuation	Municipal Road Base - MAIN	24	24	GREGSON ST	MANITOBA ST	MAIN	Asphalt	158.61		0		0	1978	37	37	37	$14,735	$7,286	$7,449	$63,444	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
563	Roads - Road Base Valuation	Municipal Road Base - MAIN	25	25	MANITOBA ST	CEDAR ST	MAIN	Asphalt	74.08		0		0	1978	37	37	37	$6,807	$3,493	$3,494	$29,628	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
564	Roads - Road Base Valuation	Municipal Road Base - MAIN	26	26	CEDAR ST	SHOOK ST	MAIN	Asphalt	153.25		0		0	1978	37	37	37	$14,271	$7,040	$7,231	$61,300	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
649	Roads - Road Base Valuation	Municipal Road Base - MAIN	107	107	VICTORIA ST RD ALLEN	HWY 10	MAIN	Asphalt	418.17		0		0	1983	60	27	32	$16,734	$8,931	$7,801	$167,268	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
707	Roads - Road Base Valuation	Municipal Road Base - MAIN	183	183	15 SR	CTY RD 124	MAIN	Asphalt	365.52		0		0	1983	60	27	32	$14,612	$7,793	$6,819	$146,208	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
717	Roads - Road Base Valuation	Municipal Road Base - MAIN	193	193	MILL LANE	15 SR	MAIN	Asphalt	335.27		0		0	1983	60	27	32	$13,402	$7,148	$6,254	$134,108	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
721	Roads - Road Base Valuation	Municipal Road Base - MAIN	1310	1310	MILL ST	CHURCH ST	MAIN	Asphalt	214.1		0		0	1978	37	37	37	$19,938	$9,838	$10,102	$85,640	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
722	Roads - Road Base Valuation	Municipal Road Base - MAIN	1311	1311	HIGH ST	MILL ST	MAIN	Asphalt	119.91		0		0	1978	37	37	37	$11,167	$5,508	$5,658	$47,968	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
723	Roads - Road Base Valuation	Municipal Road Base - MAIN	1312	1312	CHURCH ST	CHARLES ST W	MAIN	Asphalt	152.78		0		0	1978	37	37	37	$14,228	$11,460	$2,828	$61,112	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
725	Roads - Road Base Valuation	Municipal Road Base - MAIN	1313	1313	CHARLES ST W	GEORGE	MAIN	Asphalt	126.41		0		0	1978	37	37	37	$11,772	$9,432	$2,340	$50,568	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
727	Roads - Road Base Valuation	Municipal Road Base - MAIN	1314	1314	GEORGE ST	TO LLOYD ST	MAIN	Asphalt	211.73		0		0	1978	37	37	37	$19,713	$15,798	$3,919	$84,692	5		5	Average	Possible	Moderate	M	2	2031		2031	2031	2106	15				0	2031	2031	2106	15
701	Roads - Road Base Valuation	Municipal Road Base - MAIN	1315	1315	FIELDWAY CRT	HIGH ST	MAIN	Asphalt	323.12		0		0	1983	60	27	32	$12,925	$6,890	$6,032	$129,328	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
714	Roads - Road Base Valuation	Municipal Road Base - MAIN	1346	1346	OLDFIELD CRT	FIELDWAY CRT	MAIN	Asphalt	276.91		0		0	1983	60	27	32	$11,069	$5,904	$5,166	$110,764	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
716	Roads - Road Base Valuation	Municipal Road Base - MAIN	1347	1347	CTY RD 124	OLDFIELD CRT	MAIN	Asphalt	692.43		0		0	1983	60	27	32	$27,679	$14,742	$12,917	$276,972	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
719	Roads - Road Base Valuation	Municipal Road Base - MILL LN	195	195	MAIN	END OF ROAD	MILL	Asphalt	654.78		0		0	1983	60	27	32	$26,174	$13,940	$12,215	$261,912	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
722	Roads - Road Base Valuation	Municipal Road Base - MILL ST	196	196	MAIN	WILLIAM	MILL	Asphalt	95.12		0		0	1983	60	27	32	$3,802	$2,028	$1,774	$38,048	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
708	Roads - Road Base Valuation	Municipal Road Base - OLDFIELD	184	184	MAIN	END OF ROAD	OLDFIELD	Asphalt	643.28		0		0	1983	60	27	32	$25,716	$13,714	$12,003	$257,304	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
713	Roads - Road Base Valuation	Municipal Road Base - RIVER	189	189	Mulmur-Melancthon T	WILLIAM	RIVER RD	Asphalt	1401.47		0		0	1983	60	27	32	$56,023	$29,879	$26,144	$560,588	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9	$10,000	2017		0	2025	2025	2085	9
703	Roads - Road Base Valuation	Municipal Road Base - WILLIAM	181	181	HIGH	MILL	WILLIAM	Asphalt	119.88		0		0	1983	60	27	32	$4,795	$2,557	$2,238	$47,936	5		5	Average	Possible	Moderate	M	2	2025		2025	2025	2085	9				0	2025	2025	2085	9
1052	Roads - Road Base Valuation	Municipal Road Base 2nd Line SW	1351	1351	30D SDRD	CTY RD 17	2ND LINE SW	Asphalt	1980		0		0	2011	60	55	4	$71,745	$4,780	$66,962	$792,400	9		9	Very Good	Rare	Moderate	L	1	2053		2053	2053	2113	37				0	2053	2053	2113	37
592	Roads - Road Base Valuation	Municipal Road Base - 10TH LINE NE	56	1485	24D SDRD	Grey Road 9	10TH LINE NE	Gravel	856.14		0		0	1853	30	0	162	$491	$491	$0	$142,456	0	5	5	Average	Possible	Minor	M	2	1874		1874	2017	2181	1				20	2022	2022	2052	6
632	Roads - Road Base Valuation	Municipal Road Base - 10TH LINE NE	1238	1486	5TH LINE OS	24D SDRD	10TH LINE NE	Gravel	858.55		0		0	1853	30	0	162	$492	$492

Melanchthor
Roads - Road Section Inventory

Fixed Asset #	Subtype	Asset Name - Roads	Map Link	From	To	Classification	Surface Material	Type	Length (m)	# of Lanes	Total Lane (m)	Width (m)	Square meters (m)	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization in System	2015 Net Book Value System	Replacement Cost/Section	Condition Based On Useful Life	Condition from Town	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Current Levels of Service Replacement/Improvement Year Based on Current Levels: Numerical Value of Risk of Failure	Year Replacement due to minimum maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life	Proposed Rehabilitation Cost ($2015 $)	Year for Rehabilitation	Extends Life (Years) due to Betterment	Expected Levels of Service % benefit over Current + Condition better than expected for age	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Expected Levels of Service + Town inps Replacement/Improvement Year Based on Expected Levels Service: Subsequent Replacement Year	2nd Subsequent Replacement Year	3rd Subsequent Replacement Year	4th Subsequent Replacement Year	5th Subsequent Replacement Year	6th Subsequent Replacement Year	Revised Remaining Useful Life
									233,074	339	455,939	73	########		15	4	18	$4,266,527	$2,163,670	$2,300,733	$6,460,483			5.9					2							50															
176	Roads - Road Section	15TH SIDEROAD From: 3RD LINE OS To: CTY RD 124	176	3RD LINE OS	CTY RD 124	Rural	Asphalt		1142	2	2,240	6.7	7649	1986	15	0	29	$32,693	$32,693	$0	$85,610	0	5	5	Average	Possible	Moderate	M	2	1997	20	2000	2017	2048	1				20	2018	2018	2033	2048	2063	2078	2093	2108	2
184	Roads - Road Section	15TH SIDEROAD From: CTY RD 124 To: MAIN ST	184	CTY RD 124	MAIN ST	Rural	Asphalt		227	2	454	6.7	1523	1983	15	0	32	$5,704	$5,704	$0	$17,040	0	9	9	Very Good	Rare	Moderate	L	1	1994	20	1997	2017	2051	1				60	2035	2035	2040	2055	2070	2085	2100	2115	9
149	Roads - Road Section	15th SR - Main to end of asphalt	177	MAIN ST.	END OF ASPHALT (Bridge 2009)	Rural	Asphalt		691	2	1,381	6.7	4628	2013	15	12	2	$2,872	$575	$2,302	$51,903	5	5	5	Average	Possible	Moderate	M	2	2024	20	2027	2027	2042	11				0	2027	2027	2042	2057	2072	2087	2102	2117	11
134	Roads - Road Section	20TH SIDEROAD	134	3RD LINE OS	CTY RD 124	Rural	Asphalt		1378	2	2,755	6.7	9231	2010	15	9	5	$108,016	$21,603	$86,413	$103,326	9	9	9	Very Good	Rare	Moderate	L	1	2021	20	2024	2024	2039	8				5	2025	2025	2040	2055	2070	2085	2100	2115	9
29	Roads - Road Section	260 SIDEROAD From: 2ND LINE SW To: ARGYLE ST	29	2ND LINE SW	Gierson St	Rural	Asphalt		1526	2	3,052	6.7	10223	1983	15	0	32	$38,202	$41,762	$0	$114,439	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2114	8
32	Roads - Road Section	260 SIDEROAD From: 4TH LINE SW To: 2ND LINE SW	32	4TH LINE SW	2ND LINE SW	Urban	Asphalt		2228	2	4,456	6.7	14928	1983	15	0	32	$55,826	$59,389	$0	$167,105	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2114	8
31	Roads - Road Section	260 SIDEROAD From: 7TH LINE SW To: 4TH LINE SW	31	7TH LINE SW	4TH LINE SW	Rural	Asphalt		2012	2	4,026	6.7	13486	1983	15	0	32	$50,526	$50,526	$0	$150,982	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2114	8
127	Roads - Road Section	2ND LINE SW	127	CTY RD 17	280 SDRD	Rural	Asphalt		2051	2	4,102	6.7	13744	2009	15	8	6	$102,282	$24,546	$77,736	$153,854	5	7	7	Good	Unlikely	Moderate	M	2	2020	20	2023	2023	2038	7				0	2023	2023	2038	2053	2068	2083	2098	2113	7
127	Roads - Road Section	2ND LINE SW	127	280 Sideroad	270 Sideroad	Rural	Asphalt		449	2	898	6.7	2802	2009	15	8	6	$20,852	$5,004	$15,847	$31,365	3	7	7	Good	Unlikely	Moderate	M	2	2020	20	2023	2023	2038	7				0	2023	2023	2038	2053	2068	2083	2098	2113	7
118	Roads - Road Section	2nd Line SW from 270 SR - 280 SR	118	270 SDRD	280 SDRD	Rural	Asphalt		2045	2	4,090	6.7	13699	2014	15	13	1	$106,075	$2,122	$104,445	$153,351	0	8	8	Good	Unlikely	Moderate	M	2	2025	20	2028	2028	2043	12				0	2028	2028	2043	2058	2073	2088	2103	2118	12
135	Roads - Road Section	2ND LINE SW from 300 SR to County RD 17	135	300 SDRD	County ROAD 17	Rural	Asphalt		1981	2	3,962	6.7	13273	2011	15	10	4	$97,558	$57,381	$40,177	$148,578	7	9	9	Very Good	Rare	Moderate	L	1	2022	20	2025	2025	2040	9				0	2025	2025	2040	2055	2070	2085	2100	2115	9
82	Roads - Road Section	2ND LINE SW From: 250 SDRD To: Melancthon / Southgate Boundary Line	82	250 SDRD	Melancthon/Sou thgate Boundary Line	Rural	Asphalt		2350	2	4,698	6.7	15742	1983	15	0	32	$58,980	$58,980	$0	$9,445	0	3	3	Poor	Likely	Moderate	H	3	1994	20	1997	2017	2051	1				5	2017	2017	2024	2029	2034	2039	2044	2049	3
81	Roads - Road Section	2ND LINE SW From: 360 SDRD To: 250 SDRD	81	360 SDRD	250 SDRD	Rural	Asphalt		2054	2	4,109	6.7	13764	1983	15	0	32	$51,568	$92,218	$140,762	$154,074	0	9	9	Very Good	Rare	Moderate	L	1	1994	20	1997	2017	2061	1				60	2035	2035	2040	2055	2070	2085	2100	2115	14
117	Roads - Road Section	2ND LINE SW from 280: Sideroad To: 270 Sideroad	117	280 Sideroad	270 Sideroad	Rural	Asphalt		1611	2	3,221	6.7	10790	2006	15	5	9	$119,587	$41,496	$104,159	$120,788	3	7	7	Good	Unlikely	Moderate	M	2	2017	20	2020	2020	2035	4				10	2022	2022	2045	2060	2075	2090	2105	2120	14
147	Roads - Road Section	2ND LINE SW From: HWY 89 To: 300 SDRD	147	HWY 89	300 SDRD	Rural	Asphalt		1799	2	3,599	6.7	12056	1981	15	0	32	$45,171	$45,171	$0	$134,992	0	3	3	Poor	Likely	Moderate	M	3	1994	20	1997	2017	2051	1				5	2017	2017	2034	2049	2064	2079	2094	2109	3
102	Roads - Road Section	3RD LINE From: 1.5 KM SOUTH OF 20TH SIDEROAD To: 20TH SIDEROAD	102	1.5 KM SOUTH OF 20TH SIDEROAD	20TH SIDEROAD	Rural	Asphalt		1522	2	3,045	6.7	10201	1983	15	0	32	$38,218	$38,218	$0	$114,189	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2111	5
140?	Roads - Road Section	3rd Line From: 15th Sideroad To: 1.5km S of 20th Sideroad	140?	15th Sideroad	1.5km S of 20th Sideroad	Rural	Asphalt		1522	2	3,045			1983	15	0	32	$38,218	$38,218	$0	$114,189	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2111	5
144	Roads - Road Section	3RD LINE From: 2 KM N OF STH SIDEROAD To: CTY RD 17	144	2 KM N OF STH SIDEROAD	CTY RD 17	Rural	Asphalt		3348	2	2,097	6.7	7025	2008	15	7	7	$72,288	$20,240	$52,048	$78,627	4	7	7	Good	Unlikely	Moderate	M	2	2019	20	2022	2022	2037	6				0	2022	2022	2037	2052	2067	2082	2097	2112	6
93	Roads - Road Section	3RD LINE From: 5 SR To: 2 KM N OF STH SIDEROAD	93	5 SR	2 KM N OF STH SIDEROAD	Rural	Asphalt		2011	2	4,021	6.7	13470	2007	15	6	8	$126,932	$40,806	$88,798	$150,788	4	7	7	Good	Unlikely	Moderate	M	2	2018	20	2021	2021	2036	5				5	2021	2021	2037	2052	2067	2082	2097	2112	6
98	Roads - Road Section	3RD LINE From: CTY RD 17 To: 15 SR	98	CTY RD 17	15 SR	Rural	Asphalt		3052	2	6,104	6.7	20448	2008	15	7	7	$185,357	$51,900	$133,457	$229,903	4	7	7	Good	Unlikely	Moderate	M	2	2019	20	2022	2022	2037	6				0	2022	2022	2037	2052	2067	2082	2097	2112	6
148?	Roads - Road Section	3rd Line OS - 20th SR to 21	148?	20 SR	RD 21	Rural	Asphalt		3052	2	6,109	6.7	20456	2013	15	12	2	$250,460	$24,904	$225,561	$229,103	0	7	7	Good	Unlikely	Moderate	M	2	2024	20	2027	2027	2042	11				0	2027	2027	2042	2057	2072	2087	2102	2117	13
150?	Roads - Road Section	3rd Line OS - from Highway 10 to 5th SR	92	HWY 10	5 SR	Rural	Asphalt		3350	2	3,201	6.7	11057	2014	15	13	1	$88,673	$1,774	$86,903	$122,776	9	9	9	Very Good	Rare	Moderate	L	1	2025	20	2028	2028	2043	12				0	2028	2028	2043	2058	2073	2088	2103	2118	12
127?	Roads - Road Section	8TH LINE	127?	Railway Tracks	HWY 10	Rural	Asphalt		956	2	1,912	6.7	6406	2009	3	0	6	$35,440	$8,506	$26,934	$3,825	0	5	5	Average	Possible	Minor	M	2	2012	20	2013	2017	2025	1				20	2017	2025	2028	2031	2034	2037	2040	2043	9
72	Roads - Road Section	8TH LINE NE From: 240 SDRD To: RD 9 AND CTY RD 2	72	240 SDRD	8th RD 2 AND CTY RD 2	Rural	Asphalt		3048	2	4,096	6.7	13720	1983	15	0	32	$51,403	$62,922	$46,077	$153,581	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2110	4
63	Roads - Road Section	8TH LINE NE From: 250 SDRD To: 240 SDRD	63	250 SDRD	240 SDRD	Rural	Asphalt		2447	2	4,894	6.7	16393	1983	15	0	32	$61,418	$61,418	$0	$183,557	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2110	4
65	Roads - Road Section	8TH LINE NE From: 5TH LINE OS To: CTY RD 21	65	5TH LINE OS	CTY RD 21	Rural	Asphalt		3937	2	7,874	6.7	26379	2007	15	6	8	$247,726	$79,273	$168,456	$295,287	4	5	5	Average	Possible	Moderate	M	2	2018	20	2021	2021	2036	5				0	2021	2021	2036	2051	2066	2081	2096	2111	5
64	Roads - Road Section	8TH LINE NE From: CTY RD 21 To: 250 SDRD	64	CTY RD 21	250 SDRD	Rural	Asphalt		1634	2	3,268	6.7	10948	2004	15	3	11	$85,730	$37,722	$48,010	$122,548	2	5	5	Average	Possible	Moderate	M	2	2015	20	2018	2018	2033	2				5	2018	2018	2033	2048	2063	2078	2093	2108	10
149?	Roads - Road Section	8th Line OS - 5th SR to 17	153	5TH SR	CTY RD 17	Rural	Asphalt		3038	2	6,077	6.7	20358	2013	15	12	2	$22,515	$4,503	$18,012	$227,880	0	6	6	Average	Possible	Moderate	M	2	2024	20	2027	2027	2042	11				0	2027	2027	2042	2057	2072	2087	2102	2117	11
149?	Roads - Road Section	8th Line OS - Highway 10 to 5th SR	152	HWY 10	5TH SDRD	Rural	Asphalt		713	2	1,427	6.7	4780	2013	15	12	2	$2,877	$575	$2,302	$53,503	0	8	8	Good	Unlikely	Moderate	M	2	2024	20	2027	2027	2042	11				0	2027	2027	2042	2057	2072	2087	2102	2117	11
95	Roads - Road Section	8TH LINE OS From: CTY RD 17 To: 15 SR	95	CTY RD 17	15 SR	Rural	Asphalt		3051	2	6,103	6.7	20444	1983	15	0	32	$76,595	$76,595	$0	$228,886	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2114	8
159	Roads - Road Section	8TH LINE From: 15TH SIDEROAD To: 270 SIDEROAD	159	15TH SIDEROAD	270 SIDEROAD	Rural	Asphalt		1930	2	3,861	6.7	12933	1983	15	0	32	$48,496	$48,496	$0	$144,778	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2112	6
161	Roads - Road Section	8TH LINE From: 20 SR To: RD 21 5TH LINE JOG	161	20 SR	RD 21 5TH LINE JOG	Rural	Asphalt		1577	2	3,154	6.7	10567	1983	15	0	32	$39,590	$39,590	$0	$118,285	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2114	8
181	Roads - Road Section	8TH LINE From: 280 SDRD To: 4TH LINE NE	181	280 SDRD	4TH LINE NE	Rural	Asphalt		205	2	411	6.7	1377	1983	15	0	32	$5,158	$5,158	$0	$15,412	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2111	5
160	Roads - Road Section	8TH LINE From: 4TH LINE NE To: 20th SIDEROAD	160	4TH LINE NE	20th SIDEROAD	Rural	Asphalt		466	2	931	6.7	3120	1983	15	0	32	$11,691	$11,691	$0	$34,926	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2114	8
84	Roads - Road Section	8TH LINE From: CTY RD 17 STH LINE JOG To: 280 SR	84	LINE JOG	280 SR	Rural	Asphalt		2293	2	4,586	6.7	15363	1983	15	0	32	$57,558	$57,558	$0	$171,971	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2111	5
149?	Roads - Road Section	8th Line OS - 270 SR to 6th Line NE	158	270 SIDEROAD	6th LINE NE	Rural	Asphalt		654	2	1,308	6.7	4382	2013	15	12	2	$17,383	$3,597	$14,387	$49,053	0	5	5	Average	Possible	Moderate	M	2	2024	20	2027	2027	2042	11				0	2027	2024	2039	2054	2069	2084	2099	2114	8
149?	Roads - Road Section	8th Line OS - 4th Line NE to 15th SR	97	4TH LINE NE	15 SIDEROAD	Rural	Asphalt		570	2	1,141	6.7	3821	2013	15	12	2	$19,422	$3,884	$15,538	$42,773	0	5	5	Average	Possible	Moderate	M	2	2024	20	2027	2027	2042	11				0	2027	2027	2042	2057	2072	2087	2102	2111	5
207	Roads - Road Section	8TH SIDEROAD From: 3RD LINE OS To: CTY RD 124	207	3RD LINE OS	CTY RD 124	Rural	Asphalt		1371	2	2,742	6.7	9184	1983	15	0	32	$34,410	$39,048	$18,554	$102,808	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2048	2064	2079	2094	2106	3
208	Roads - Road Section	8TH SIDEROAD From: CTY RD 124 To: TL	208	CTY RD 124	TL	Rural	Asphalt		1367	2	2,734	8	10934	1983	15	0	32	$40,965	$40,965	$0	$102,507	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2048	2064	2079	2094	2106	3
148?	Roads - Road Section	8th Line SW - 270 SR to 260 SR	148?	270 SR	260 SR	Rural	Asphalt		2048	2	4,095	6.7	13719	2013	15	12	2	$5,365	$1,079	$4,316	$153,574	0	5	5	Average	Possible	Moderate	M	2	2024	20	2027	2027	2042	11				0	2027	2027	2042	2057	2072	2087	2102	2117	11
111	Roads - Road Section	8TH LINE SW From: 280 SDRD To: 270 SDRD	111	280 SDRD	270 SDRD	Rural	Asphalt		2010	2	4,067	6.7	13624	1983	15	0	32	$51,042	$51,042	$0	$152,584	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2117	11
142	Roads - Road Section	8TH LINE SW From: CTY RD 17 To: 280 SDRD	142	CTY RD 17	280 SDRD	Rural	Asphalt		2046	2	4,079	6.7	13668	1983	15	0	32	$51,201	$51,201	$0	$152,971	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2116	10
143	Roads - Road Section	8TH LINE SW From: HWY 89 To: CTY RD 17	143	HWY 89	CTY RD 17	Rural	Asphalt		853	2	1,706	6.7	5714	1983	15	0	32	$21,458	$21,458	$0	$63,982	0	5	5	Average	Possible	Moderate	M	2	1994	20	1997	2017	2051	1				20	2019	2019	2034	2054	2069	2084	2099	2116	10
186	Roads - Road Section	ADDISON From: GEORGE To: LLOYD	186	GEORGE	LLOYD	Urban Semi	Asphalt		102	2	210	5	775	1981	25	0	32	$2,904	$2,904	$0	$11,627	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2047	2072	2097	2122	2147	2172	6
201	Roads - Road Section	CHARLES ST W From: MAIN To: END OF ROAD	201	MAIN	END OF ROAD	Urban Semi	Asphalt		141	2	283	6.7	947	1983	25	0	32	$3,546	$3,546	$0	$10,602	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2047	2072	2097	2122	2147	2172	6
200	Roads - Road Section	CHURCH From: MAIN To: END OF ROAD	200	MAIN	END OF ROAD	Urban Semi	Asphalt		242	2	484	6.7	1622	1983	25	0	32	$6,076	$6,076	$0	$18,154	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2047	2072	2097	2122	2147	2172	6
182	Roads - Road Section	FIELDWAY From: MAIN To: END OF ROAD	182	MAIN	END OF ROAD	Urban Semi	Asphalt		800	2	1,601	6.7	5363	1983	25	0	32	$20,094	$20,094	$0	$60,282	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2047	2072	2097	2122	2147	2175	9
188	Roads - Road Section	GEORGE From: ADDISON To: MAIN	188	ADDISON	MAIN	Urban Semi	Asphalt		116	2	227	5	568	1983	25	0	32	$2,127	$2,127	$0	$8,510	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2047	2072	2097	2122	2147	2172	6
185	Roads - Road Section	HIGH From: MAIN To: 70 M E OF MAIN	185	MAIN	70 M E OF MAIN	Rural	Asphalt		170	2	341	6.7	1141	1983	25	0	32	$4,276	$4,276	$0	$12,777	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2042	2067	2092	2117	2142	2167	1
205	Roads - Road Section	HUNTER From: CTY ROAD 124 To: END OF ROAD	205	CTY ROAD 124	END OF ROAD	Rural	Asphalt		291	2	581	6.7	1947	1983	25	0	32	$7,294	$7,294	$0	$21,882	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2026	2049	2074	2099	2124	2149	2174	8
187	Roads - Road Section	LLOYD From: ADDISON To: MAIN	187	ADDISON	MAIN	Urban Semi	Asphalt		110	2	221	5	551	1983	25	0	32	$2,066	$2,066	$0	$8,272	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2047	2072	2097	2122	2147	2172	6
183	Roads - Road Section	MAIN Hemings Mills From: MILL LANE To: 15 SR	183	MILL LANE	15 SR	Rural	Asphalt		335	2	671	6.7	2245	1983	25	0	32	$8,416	$8,416	$0	$25,248	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2022	2047	2072	2097	2122	2147	2172	6
26	Roads - Road Section	MAIN 3l Cortbetton From: CEDAR ST To: SHOOK ST	26	CEDAR ST	SHOOK ST	Urban	Asphalt		153	2	307	6.7	1027	1978	25	0	37	$5,072	$5,072	$0	$11,494	0	5	5	Average	Possible	Moderate	M	2	1996	20	2001	2017	2056	1				20	2021	2025	2050	2075	2100	2125	2150	2175	9
24	Roads - Road Section	MAIN 3l Cortbetton From: GRIERSON ST To: MANITOBA ST	24	GRIERSON ST	MANITOBA ST	Urban	Asphalt		159	2	317	6.7	1063	1978	25	0	37	$5,249	$5,249	$0	$11,898	0	5	5	Average	Possible	Moderate	M	2	1996	20	2001	2017	2056	1				20	2021	2025	2050	2075	2100	2125	2150	2175	9
25	Roads - Road Section	MAIN 3l Cortbetton From: MANITOBA ST To: CEDAR ST	25	MANITOBA ST	CEDAR ST	Urban	Asphalt		76	2	148	6.7	496	1978	25	0	37	$2,451	$2,451	$0	$5,565	0	5	5	Average	Possible	Moderate	M	2	1996	20	2001	2017	2056	1				20	2021	2025	2050	2075	2100	2125	2150	2175	9
107	Roads - Road Section	MAIN 3l Cortbetton From: VICTORIA ST TO ALLOW To: HWY 10	107	VICTORIA ST RD ALLOW	HWY 10	Rural	Asphalt		418	2	836	6.7	2802	1983	25	0	32	$10,497	$10,497	$0	$31,362	0	5	5	Average	Possible	Moderate	M	2	2001	20	2006	2017	2051	1				20	2021	2025	2050	2075	2100	2125	2150	2175	9
131?	Roads - Road Section	MAIN 3l Hemings Mills	131?	FIELDWAY CRT	HIGH ST	Semi-Urban	Asphalt		322	2	647	6.7	2166	2009	25	18	8	$111,762	$22,352	$89,408	$24,248	0	7	7	Good	Unlikely	Moderate	M	2	2027	20	2032	2032	2057	16				0	2032	2022	2047	2072	2097	2122	2147	2172	6
134?	Roads - Road Section	MAIN 3l Hemings Mills	134?	OLDFIELD CRT	FIELDWAY CRT	Semi-Urban	Asphalt		277	2	554	6.7	1855	2010	25	19	5	$17,632	$3,526	$14,105	$20,788	0	8	8	Good	Unlikely	Moderate	M	2	2028	20	2033	2033	2058	17				0	2033	2022	2047	2072	2097	2122	2147	2172	6
134?	Roads - Road Section	MAIN 3l Hemings Mills	134?	CTY RD 124	OLDFIELD CRT	Semi-Urban	Asphalt		692	2	1,385	6.7	4639	2010	25	19	5	$44,088	$8,818	$35,271	$51,933	0	8	8	Good	Unlikely	Moderate	M	2	2028	20	2033	2033	2058	17				0	2033	2022	2047	2072	2097	2122	2147	2172	6
131?	Roads - Road Section	MAIN 3l Hemings Mills	131?	MILL ST	CHURCH ST	Urban	Asphalt		214	2	428	6.7	1434	2009	25	18	6	$74,008	$14,801	$59,208	$16,058	0	7	7	Good	Unlikely	Moderate	M	2	2027	20	2032	2032	2057	16				0	2032	2022	2047	2072	2097	2122	2147	2172	6
131?	Roads - Road Section	MAIN 3l Hemings Mills	131?	HIGH ST	MILL ST	Urban	Asphalt		120	2	240	6.7	803	2009	25	18	6	$41,448	$8,290	$33,158	$8,992	0	7	7	Good	Unlikely	Moderate	M	2	2027	20	2032	2032	2057	16				0	2032	2022	2047	2072	2097	2122	2147	2172

Melancthon
Roads - Sidewalk Inventory

| | | |

Melancthon
Storm/Sanitary - Catch Basin Inventory

																								Current Leveles of Service Replacement/Improvement Year Based on Current Levels Service										Expected Levels of Service Replacement/Improvement Year Based on Expected Levels Service						
Fixed Asset #	Subtype	Road Name	Asset Name	Access diameter	Access Type	Water Type	On Road	Install Year	Useful Life	Remaining Useful Life	Age	Historic Cost	2015 Accumulated Amortization System	2015 Net Book Value System	Replacement Cost	Condition Based On Useful Life	Assessed Condition	Condition Used for Analysis	Asset Condition (As per Priority Rating)	Probability of Failure (Based on Condition or Expected Condition)	Consequence of Failure	Risk of Failure	Numerical Value of Risk of Failure	Year Replacement due to minimmal maintenance practices	Current Levels of Service % benefit	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score	Subsequent Replacement Year	Revised Remaining Useful Life		Rehabiliation Year	Rehabiliation Cost (2016)	Extended Life (Years) due to Betterment	Expected Levels of Service % benefit over Current	Revised Levels Service Replacement Year	Year Replacement Applying Risk Score - or Staff Override	Subsequent Replacement Year	Revised Remaining Useful Life
									50	25	25	$ 47,368	$ 12,269	$ 35,099	$ 86,000			6.7					1.6									$ -						
1282	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Catchbasin	0	Grate	Storm	Y	2009	50	43	7	$1,500	$180	$1,320	$1,500	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1283	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Catchbasin	0	Grate	Storm	Y	2009	50	43	7	$1,500	$180	$1,320	$1,500	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1284	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Manhole Catchbasin	1200	Grate	Storm	Y	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1285	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Manhole Catchbasin	1200	Grate	Storm	Y	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1286	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Manhole Catchbasin	0	Grate	Storm	Y	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1287	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Manhole Catchbasin	1200	Grate	Storm	Y	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1288	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Catchbasin	0	Grate	Storm	Y	2009	50	43	7	$1,500	$180	$1,320	$1,500	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1289	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Storm Water Collector	1200	Grate	Storm	N	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1290	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Manhole Catchbasin	1200	Grate	Storm	N	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1291	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Lyod Street Ditch Inlet Catchbasin	600	Grate	Storm	N	2009	50	43	7	$1,500	$180	$1,320	$1,500	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1292	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Manhole Catchbasin	1200	Grate	Storm	Y	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1293	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Manhole Catchbasin	1200	Grate	Storm	N	2009	50	43	7	$3,300	$396	$2,904	$3,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1294	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Double Catchbasin	600	Grate	Storm	Y	2009	50	43	7	$2,300	$276	$2,024	$2,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
1295	Storm/Sanitary - Catch Basin	Main Street Hornings Mills	Main Street Double Catchbasin	600	Grate	Storm	Y	2009	50	43	7	$2,300	$276	$2,024	$2,300	9	9	9	Very Good	Rare	Moderate	L	1	2054		2054	2054	2104	38					0	2054	2054	2104	38
	Storm/Sanitary - Catch Basin	Main Street Corbetton	8 Single Catch Basins Main St. Corbetton	600	Grate	Storm	Y	1978	50	12	38	$4,232	$3,196	$1,036	$20,000	2	5	5	Average	Possible	Moderate	M	2	2023		2023	2023	2073	7					5	2026	2026	2076	10
	Storm/Sanitary - Catch Basin	Main Street Corbetton	2 Double Catch Basins	600	Grate	Storm	Y	1978	50	12	38	$1,481	$1,118	$363	$7,000	2	5	5	Average	Possible	Moderate	M	2	2023		2023	2023	2073	7					5	2026	2026	2076	10
	Storm/Sanitary - Catch Basin	Main Street Corbetton	4 Storm Manholes	1200	Grate	Storm	Y	1978	50	12	38	$4,655	$3,515	$1,140	$22,000	2	5	5	Average	Possible	Moderate	M	2	2023		2023	2023	2073	7					5	2026	2026	2076	10

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Appendix B

Draft Data Verification and Condition Assessment Policy

APPENDIX B: Draft Data Verification and Condition Assessment Policy

Data Verification

1. The main source of asset data updating and editing will be through Township of Melancthon's PSAB 3150 compliance procedures and/or annual reporting process.

2. Asset additions, disposals, betterments, and write-offs will be recorded based on the Township's PSAB 3150 Compliance Policies and/or general updates to the Asset Management Spreadsheets.

3. Verification of the correct treatment of asset revisions will be completed through frequent annual reviews by Township staff, as well as an annual review by the Township's auditor.

4. During years which condition assessments are not being performed, asset replacement cost will be determined based on a combination of inflating previous values or through the use of the current year's historical invoice data. Where indices are being used, the Non-Residential Building Construction Price Index (NRBCP) shall be used for construction related assets (i.e., infrastructure) and Consumer Price Index (CPI) shall be used for all other assets (i.e., furniture, interior finishes, appliances, etc.).

Condition Assessment

1. Condition assessments shall be performed as outlined in Table B-1 below.

2. Condition assessments shall be performed by qualified individuals (or companies) and shall include a review of the following:
   a) Current asset condition (consistent with the rating format used within this report, unless the Township stipulates a new format, or regulatory body required format);
      i. Identify any unusual wear from asset use that may hinder asset performance and eventually reduce useful life.
      ii. Assess asset performance and identify (if any) capital improvements that can be applied to extend the asset's useful life and/or bring the asset back to proper service levels.
   b) Current asset replacement cost. This is to be based on replacing the asset under current legislation/requirements using Township specification; and
   c) Remaining service life, assuming current identified maintenance and usage levels.

Table B-1

Condition Assessment Time Table

Asset Type	Frequency of Condition Assessment	Comments
Bridges	Every two years	As per Provincial Regulation using OSIM Inspection format
Equipment (Office, Other)		As identified by Staff, so Equipment is safe and in good working order
Facilities	Every ten - fifteen years	Complete detailed assessment every ten years but annual staff and specialized inspection/cleaning of some components (eg. HVAC, Fans, Pumps, etc.)
Land Improvements (Playing Surfaces, Parking Lots, Parks, Landscaping)	Annually	Staff assessment annually
Roads	Every five - ten years	Complete Roads Needs study every five years but internal staff review annually
Road Signs		As per Regulation 239 Minimum Maintenance Standards
Sidewalks		As per Regulation 239 Minimum Maintenance Standards
Software & Hardware		As identified by Staff, so software and hardware operating well
Storm Water Mains	Every fifteen years	CCTV scans and review of Storm Water system
Storm Water (Catch Basins, Manholes, Stormceptors)	Annually	To be assessed while doing a clean out
Street Lights	Every month	To ensure they are working
Vehicles		As per Manufacturer's Warranty and Maintenance Program
Generators	Every season	Minimum four times per year

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Appendix C

20 Year Detailed Asset Management Strategy & Financing Strategy

2016 Asset Management Plan
Scheduled Capital Replacement - Uninflated
Scenario 1

Tax Supported Assets

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Replacement - Uninflated	**447,775**	**1,069,248**	**449,144**	**1,010,288**	**746,386**	**1,103,238**	**902,528**	**1,152,302**	**985,590**	**831,504**	**919,834**	**1,065,347**	**924,780**	**1,261,208**	**1,383,756**	**1,373,475**	**1,329,176**	**1,085,778**	**1,067,288**	**1,156,020**	**20,264,663**
Road Surface	447,275	491,498	435,659	735,288	684,666	973,713	583,419	851,249	527,297	737,688	824,507	662,179	636,745	460,099	89,763	398,200	499,706	439,484	735,288	643,765	11,857,488
Road Base																					-
Signs	-	-	-	-	-	13,000	-	-	-	24,000	-	-	-	-	-	-	-	5,300	-	-	42,300
Street Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cross Road Culverts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge & Culvert	-	300,000	-	-	-	-	-	-	-	-	-	275,000	250,000	620,000	930,000	550,000	475,000	600,000	-	475,000	4,475,000
Storm Mains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Facilities	-	-	6,000	-	-	5,000	4,000	15,000	25,000	35,827	40,000	120,198	25,679	-	10,000	-	30,000	12,575	-	750	330,030
Vehicles	-	275,000	-	275,000	40,000	83,000	275,000	275,000	420,000	-	40,000	-	-	177,000	315,000	400,000	275,000	-	295,000	-	3,145,000
Equipment & Machinery	500	-	-	-	4,366	25,500	40,109	3,568	13,193	-	500	7,970	4,221	-	2,400	25,000	49,470	15,033	37,000	4,366	233,196
Software	-	2,750	7,485	-	7,354	3,025	-	7,485	100	33,989	4,826	-	8,135	4,108	36,593	275	-	13,385	-	31,239	160,749
Land Improvements	-	-	-	-	10,000	-	-	-	-	-	10,000	-	-	-	-	-	-	-	-	900	20,900

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Rehabilitation - Uninflated	**278,000**	**260,000**	**490,460**	**249,000**	**35,000**	**243,500**	**501,500**	**40,000**	**215,000**	**80,000**	**-**	**20,000**	**-**	**-**	**-**	**-**	**-**	**240,000**	**140,000**	**-**	**2,792,460**
Road Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Road Base	60,000	45,000	76,960	-	35,000	-	10,000	40,000	20,000	-	-	20,000	-	-	-	-	-	-	-	-	306,960
Signs																					-
Street Lights																					-
Cross Road Culverts																					-
Bridge & Culvert	218,000	215,000	407,500	249,000	-	243,500	491,500	-	195,000	80,000	-	-	-	-	-	-	-	240,000	140,000	-	2,479,500
Storm Mains																					-
Catch Basin																					-
Facilities																					-
Vehicles																					-
Equipment & Machinery																					-
Software			6,000																		6,000
Land Improvements																					-

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Total Scheduled Capital - Uninflated	**849,883**	**1,344,248**	**972,804**	**1,274,288**	**834,586**	**1,346,738**	**1,422,228**	**1,192,302**	**1,233,790**	**911,504**	**938,034**	**1,085,347**	**942,980**	**1,261,208**	**1,421,956**	**1,373,475**	**1,347,376**	**1,325,778**	**1,225,488**	**1,156,020**	**23,460,031**
Road Surface	447,275	491,498	435,659	735,288	704,666	973,713	583,419	851,249	527,297	737,688	824,507	662,179	636,745	460,099	109,763	398,200	499,706	439,484	735,288	643,765	11,897,488
Road Base	60,000	45,000	76,960	-	35,000	-	10,000	40,000	20,000	-	-	20,000	-	-	-	-	-	-	-	-	306,960
Signs	-	-	-	-	-	13,000	-	-	-	24,000	-	-	-	-	-	-	-	5,300	-	-	42,300
Street Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cross Road Culverts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge & Culvert	340,908	530,000	439,500	264,000	32,000	243,500	508,500	-	212,000	80,000	17,000	275,000	267,000	620,000	947,000	550,000	492,000	840,000	157,000	475,000	7,290,408
Storm Mains	-	-	-	-	-	-	-	-	15,000	-	-	-	-	-	-	-	-	-	-	-	15,000
Catch Basin	1,200	-	1,200	-	1,200	-	1,200	-	1,200	-	1,200	-	1,200	-	1,200	-	1,200	-	1,200	-	12,000
Facilities	-	-	6,000	-	-	5,000	4,000	15,000	25,000	35,827	40,000	120,198	25,679	-	10,000	-	30,000	12,575	-	750	330,030
Vehicles	-	275,000	-	275,000	40,000	83,000	275,000	275,000	420,000	-	40,000	-	-	177,000	315,000	400,000	275,000	-	295,000	-	3,145,000
Equipment & Machinery	500	-	-	-	4,366	25,500	40,109	3,568	13,193	-	500	7,970	4,221	-	2,400	25,000	49,470	15,033	37,000	4,366	233,196
Software	-	2,750	13,485	-	7,354	3,025	-	7,485	100	33,989	4,826	-	8,135	4,108	36,593	275	-	13,385	-	31,239	166,749
Land Improvements	-	-	-	-	10,000	-	-	-	-	-	10,000	-	-	-	-	-	-	-	-	900	20,900

Levels of Service Costs - Uninflated

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Total Scheduled LOS	**33,200**	**15,000**	**33,200**	**15,000**	**53,200**	**-**	**18,200**	**-**	**33,200**	**-**	**18,200**	**-**	**18,200**	**-**	**38,200**	**-**	**18,200**	**-**	**18,200**	**-**	**312,000**
Road Surface					20,000										20,000						40,000
Road Base																					
Signs																					
Street Lights																					
Cross Road Culverts																					
Bridge & Culvert	32,000	15,000	32,000	15,000	32,000		17,000		17,000		17,000		17,000		17,000		17,000		17,000		245,000
Storm Mains									15,000												15,000
Catch Basin	1,200		1,200		1,200		1,200		1,200		1,200		1,200		1,200		1,200		1,200		12,000
Facilities																					
Vehicles																					
Equipment & Machinery																					
Software																					
Land Improvements																					

2016 Asset Management Plan
Scheduled Capital Replacement - Inflated
Scenario 1: Expected LoS (Optimal)

Tax Supported Assets

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Inflation Factor	100.0%	102.0%	104.0%	106.1%	108.2%	110.4%	112.6%	114.9%	117.2%	119.5%	121.9%	124.3%	126.8%	129.4%	131.9%	134.6%	137.3%	140.0%	142.8%	145.7%	
Capital Replacement - Inflated	**447,775**	**1,090,632**	**467,290**	**1,072,126**	**807,912**	**1,218,064**	**1,016,393**	**1,323,633**	**1,154,776**	**993,724**	**1,121,272**	**1,324,625**	**1,172,845**	**1,631,507**	**1,825,837**	**1,848,516**	**1,824,674**	**1,520,351**	**1,524,350**	**1,684,103**	**25,070,403**
Road Surface	447,275	501,327	453,260	780,293	741,104	1,075,058	657,025	977,817	617,813	881,605	1,005,070	823,336	807,547	595,188	118,440	535,924	685,989	615,384	1,050,172	937,844	14,307,472
Road Base	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Signs	-	-	-	-	-	14,353	-	-	-	28,682	-	-	-	-	-	-	-	7,421	-	-	50,457
Street Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cross Road Culverts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge & Culvert	-	306,000	-	-	-	-	-	-	-	-	-	341,928	317,060	802,036	1,227,115	740,228	652,073	840,145	-	691,985	5,918,571
Storm Mains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Facilities	-	-	6,242	-	-	5,520	4,505	17,230	29,291	42,817	48,760	149,451	32,568	-	13,195	-	41,184	17,608	-	1,093	409,464
Vehicles	-	280,500	-	291,832	43,297	91,639	309,695	315,889	492,097	-	48,760	-	-	228,968	415,636	538,347	377,516	-	421,333	-	3,855,508
Equipment & Machinery	500	-	-	-	4,726	28,154	45,169	4,099	15,458	-	609	9,909	5,353	-	3,167	33,647	67,912	21,050	52,845	6,361	298,959
Software	-	2,805	7,787	-	7,960	3,340	-	8,598	117	40,620	5,883	-	10,317	5,314	48,283	370	-	18,742	-	45,509	205,647
Land Improvements	-	-	-	-	10,824	-	-	-	-	-	12,190	-	-	-	-	-	-	-	-	1,311	24,325

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Inflation Factor	100.0%	102.0%	104.0%	106.1%	108.2%	110.4%	112.6%	114.9%	117.2%	119.5%	121.9%	124.3%	126.8%	129.4%	131.9%	134.6%	137.3%	140.0%	142.8%	145.7%	
Capital Rehab & Maint.- Inflated	**278,000**	**265,200**	**510,274**	**264,241**	**37,885**	**268,844**	**564,770**	**45,947**	**251,907**	**95,607**	**-**	**24,867**	**-**	**-**	**-**	**-**	**-**	**336,058**	**199,954**	**-**	**3,143,556**
Road Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Road Base	60,000	45,900	80,069	-	37,885	-	11,262	45,947	23,433	-	-	24,867	-	-	-	-	-	-	-	-	329,364
Signs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Street Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cross Road Culverts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge & Culvert	218,000	219,300	423,963	264,241	-	268,844	553,509	-	228,474	95,607	-	-	-	-	-	-	-	336,058	199,954	-	2,807,950
Storm Mains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch Basin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Facilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vehicles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment & Machinery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Software	-	-	6,242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,242
Land Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Inflation Factor	100.0%	102.0%	104.0%	106.1%	108.2%	110.4%	112.6%	114.9%	117.2%	119.5%	121.9%	124.3%	126.8%	129.4%	131.9%	134.6%	137.3%	140.0%	142.8%	145.7%	
Total Scheduled Capital - Inflated	**849,883**	**1,371,132**	**1,012,106**	**1,352,284**	**903,382**	**1,486,908**	**1,601,659**	**1,369,581**	**1,445,582**	**1,089,331**	**1,143,458**	**1,349,492**	**1,195,927**	**1,631,507**	**1,876,241**	**1,848,516**	**1,849,658**	**1,856,409**	**1,750,298**	**1,684,103**	**28,667,457**
Road Surface	447,275	501,327	453,260	780,293	762,753	1,075,058	657,025	977,817	617,813	881,605	1,005,070	823,336	807,547	595,188	144,830	535,924	685,989	615,384	1,050,172	937,844	14,355,510
Road Base	60,000	45,900	80,069	-	37,885	-	11,262	45,947	23,433	-	-	24,867	-	-	-	-	-	-	-	-	329,364
Signs	-	-	-	-	-	14,353	-	-	-	28,682	-	-	-	-	-	-	-	7,421	-	-	50,457
Street Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cross Road Culverts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bridge & Culvert	340,908	540,600	457,256	280,159	34,638	268,844	572,654	-	248,392	95,607	20,723	341,928	338,621	802,036	1,249,546	740,228	675,411	1,176,203	224,235	691,985	9,099,972
Storm Mains	-	-	-	-	-	-	-	-	17,575	-	-	-	-	-	-	-	-	-	-	-	17,575
Catch Basin	1,200	-	1,248	-	1,299	-	1,351	-	1,406	-	1,463	-	1,522	-	1,583	-	1,647	-	1,714	-	14,434
Facilities	-	-	6,242	-	-	5,520	4,505	17,230	29,291	42,817	48,760	149,451	32,568	-	13,195	-	41,184	17,608	-	1,093	409,464
Vehicles	-	280,500	-	291,832	43,297	91,639	309,695	315,889	492,097	-	48,760	-	-	228,968	415,636	538,347	377,516	-	421,333	-	3,855,508
Equipment & Machinery	500	-	-	-	4,726	28,154	45,169	4,099	15,458	-	609	9,909	5,353	-	3,167	33,647	67,912	21,050	52,845	6,361	298,959
Software	-	2,805	14,030	-	7,960	3,340	-	8,598	117	40,620	5,883	-	10,317	5,314	48,283	370	-	18,742	-	45,509	211,889
Land Improvements	-	-	-	-	10,824	-	-	-	-	-	12,190	-	-	-	-	-	-	-	-	1,311	24,325

Levels of Service Costs - Inflated

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Total Scheduled Capital - Inflated	**33,200**	**15,300**	**34,541**	**15,918**	**57,585**	**-**	**20,496**	**-**	**38,899**	**-**	**22,186**	**-**	**23,082**	**-**	**50,404**	**-**	**24,985**	**-**	**25,994**	**-**	**362,591**
Road Surface					21,649	-	-	-	-	-	-	-	-	-	26,390	-	-	-	-	-	48,038
Road Base																					
Signs																					
Street Lights																					
Cross Road Culverts																					
Bridge & Culvert	32,000	15,300	33,293	15,918	34,638	-	19,145	-	19,918	-	20,723	-	21,560	-	22,431	-	23,337	-	24,280	-	282,543
Storm Mains	-	-	-	-	-	-	-	-	17,575	-	-	-	-	-	-	-	-	-	-	-	17,575
Catch Basin	1,200	-	1,248	-	1,299	-	1,351	-	1,406	-	1,463	-	1,522	-	1,583	-	1,647	-	1,714	-	14,434
Facilities																					
Vehicles																					
Equipment & Machinery																					
Software																					
Land Improvements																					

2016 Asset Management Plan
Scheduled Capital Replacement - Uninflated
Scenario 2

Tax Supported Assets

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Scenario 2a - $750,000 Start	750,000	794,000	838,000	882,000	926,000	970,000	1,014,000	1,058,000	1,102,000	1,146,000	1,190,000	1,234,000	1,278,000	1,322,000	1,366,000	1,410,000	1,454,000	1,498,000	1,542,000	1,586,000	**23,360,000**
Scenario 2b - $1,000,000 Start - needs	1,000,000	1,017,500	1,035,500	1,053,500	1,071,500	1,089,500	1,107,500	1,125,500	1,143,500	1,161,500	1,179,500	1,197,500	1,215,500	1,233,500	1,251,500	1,269,500	1,287,500	1,305,500	1,323,500	1,341,500	**23,410,500**
Scenario 2c - $1,000,000 Start - Needs + Reserves	1,000,000	1,021,000	1,042,000	1,063,000	1,084,000	1,105,000	1,126,000	1,147,000	1,168,000	1,189,000	1,210,000	1,231,000	1,252,000	1,273,000	1,294,000	1,315,000	1,336,000	1,357,000	1,378,000	1,399,000	**23,990,000**
																					-

2016 Asset Management Plan
Scheduled Capital Replacement - Inflated
Scenario 2: Capital Phased-In Approach - Medium Deferral (Recommended)

Tax Supported Assets

Inflation Factor	100.0%	102.0%	104.0%	106.1%	108.2%	110.4%	112.6%	114.9%	117.2%	119.5%	121.9%	124.3%	126.8%	129.4%	131.9%	134.6%	137.3%	140.0%	142.8%	145.7%

Asset Type	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	TOTAL
Scenario 2a	750,000	809,880	871,855	935,985	1,002,332	1,070,958	1,141,929	1,215,309	1,291,169	1,369,576	1,450,603	1,534,324	1,620,813	1,710,148	1,802,408	1,897,674	1,996,030	2,097,562	2,202,356	2,310,503	**29,081,415**
Scenario 2b	1,000,000	1,037,850	1,077,334	1,117,983	1,159,826	1,202,896	1,247,225	1,292,846	1,339,793	1,388,100	1,437,804	1,488,941	1,541,548	1,595,664	1,651,328	1,708,580	1,767,462	1,828,015	1,890,284	1,954,312	**28,727,789**
Scenario 2c	1,000,000	1,041,420	1,084,097	1,128,064	1,173,356	1,220,009	1,268,059	1,317,542	1,368,498	1,420,965	1,474,983	1,530,594	1,587,839	1,646,761	1,707,406	1,769,817	1,834,042	1,900,128	1,968,123	2,038,079	**29,479,782**