



2024 Stormwater Rate Study

Municipality of Thames Centre

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Acronym Full Description of Acronym

C.C.B.F. Canada Community-Building Fund

cu. m Cubic Metre

D.C.A. Development Charges Act, 1997, as amended

D.C. Development Charges

E.C.A. Environmental Compliance Approval

G.F.A. Gross Floor Area

G.I.S. Geographic Information System

H.E.W.S.F. Housing-Enabling Water Systems Fund

I.J.P.A. Infrastructure for Jobs and Prosperity Act, 2015

I.O. Infrastructure Ontario

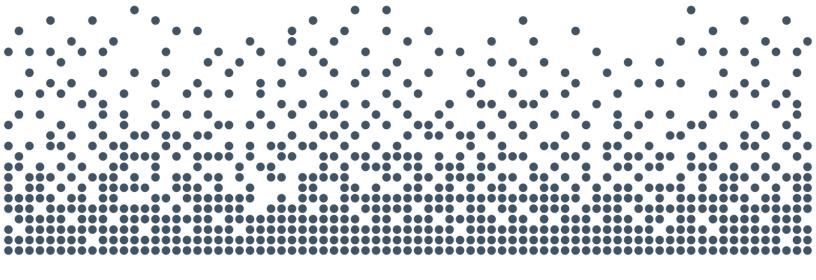
O.C.I.F. Ontario Community Infrastructure Fund

OLT Ontario Land Tribunal

O. Reg. Ontario Regulation

O.S.I.F.A. Ontario Strategic Infrastructure Financing Authority

sq.ft. Square Feet



Executive Summary



Executive Summary

The Municipality of Thames Centre retained Watson & Associates Economists Ltd. (Watson) to undertake a stormwater rate study. Stormwater services are currently funded primarily from a dedicated uniform flat rate that is imposed on all water customers in the urban serviced areas of Dorchester and Thorndale, and grant funding (where available). With increasing financial pressures on the stormwater system and the unpredictability of grant funding, the Municipality is seeking an alternative rate structure for stormwater services, to recover the costs associated with the service that are anticipated to 2033. The primary goals of this study are to identify, review, and evaluate an alternative preferred rate structure to support the Municipality's Stormwater Management Program, and calculate stormwater rates for 2025 to 2033.

The Municipality's tax roll and property data provided the profile of existing customers at the end of 2023, with additional information provided by Municipal staff, where data gaps existed. Within the Municipality of Thames Centre, the majority of stormwater-related costs are associated with infrastructure in the urban boundaries of Dorchester and Thorndale. Therefore, properties outside the urban boundaries have not been included in the stormwater rate analysis. Additionally, vacant properties and schools within the public and/or separate school board systems have been excluded from the stormwater rate analysis.

A growth forecast was developed based on the Municipality's 2021 D.C. Background Study for 2024 to 2033. The Municipality is anticipated to grow by approximately 1,400 residential units and 600,500 square feet (sq. ft.) or gross floor area (G.F.A.) located within its urban area. This growth translates to 1,743 new stormwater customers by the end of 2033. Overall, the number of stormwater customers is projected to increase from 3,179 in 2023 to 4,922 in 2033.

The forecasted rates took the following items into consideration:

- The 2024 to 2033 capital spending program for stormwater is approximately \$5.69 million (inflated). This amount provides for necessary capital upgrades as well as the replacement of aging infrastructure; and
- Total annual operating expenditures are assumed to increase by 21% per annum for all expenditures from approximately \$178,300 in 2023 to \$1.22 million in 2033.



In order to move towards a user-pay model that recognizes that stormwater runoff differs by residential and non-residential customers, as well as based on the size of properties, a few funding model/rate structure options that are available to the Municipality include:

- Flat rate per property (may vary by use or size);
- Area rate:
- Utility rate;
- Run-off coefficient by property type;
- Run-off coefficient by actual land area per property; and
- Actual impervious area per property.

These funding models/rate structures were evaluated against a variety of service criteria including ease of calculation, linkage between fee paid and benefits derived from services, cost of administration, and user control over charging mechanism to determine the preferred alternatives for further evaluation and the Municipality's consideration. Table ES-1 provides the scoring of each funding model/rate structure against these criteria.

Under the preferred funding model/rate structure, each property would be charged a rate based on its type (residential vs. non-residential), and size (categorized as small, medium, or large), to consider the difference in stormwater runoff generated. Generally, a property with a bigger building footprint and a large proportion of paved area (i.e. parking lots) would have a higher stormwater runoff than a smaller property such as a single-family home on a property that is less than 0.25 acres.



Table ES-1 Municipality of Thames Centre Spectrum of Options for Stormwater Cost Recovery

Funding Model			Linkage between Amount Paid and Benefit Derived from Services	Cost of Administration	Users' Control over Charging Mechanism	
Property Taxes	Tax rate applied to assessed value	Easy	Low	Low	Medium	
Flat Rate per Property						
(may vary by use or	\$/property	Easy	Low	Low	Low	
size)						
Area Rate	\$/area of property	Medium	Low	Low	Low	
Utility Rate	\$/cu. m of water consumption	Easy	Low	Low	High	
Run-off Coefficient by	C/unit (varied by type)	Medium	Medium	Medium	Low	
Property Type	\$/unit (varied by type)	Medium	iviedium	iviedium	LOW	
Run-off Coefficient by						
Actual Land Area per	\$/acre (varied by type)	Hard	High	Medium	Medium	
Property						
Actual Impervious Area	\$/measured	Hord	Lligh	Lliah	Lliab	
per Property	impervious area	Hard	High	High	High	



Through discussions with staff, a preliminary analysis of stormwater rate structures, and available data, two rate structure options were selected for further evaluation:

- Option 1 Uniform Flat Rate (Status Quo). This is the Municipality's existing rate structure whereby all customers in the urban serviced areas of Dorchester and Thorndale pay the same rate; and
- Option 2 Tiered Flat Rate Varied by Type and Size of Property. In this case, the charge imposed varies based on the type and size category of the property within the urban area of the Municipality.

The type and size categories for Option 2 are summarized below:

Residential:

Small: Less than or equal to 0.25 acres

Medium: Greater than 0.25 acres and less than 1 acre

Large: 1 acre or larger

Non-Residential

- Small: Commercial, industrial, and institutional properties less than 5 acres
- Medium: Commercial, industrial, and institutional properties greater than
 5 acres and less than 15 acres
- Large: Commercial, industrial, and institutional properties 15 acres or larger.

Rate forecasts for Option 1 are provided in Table ES-2. The charge per property, is forecasted to increase from \$70.74 in 2024 to \$247.07 in 2033, reflecting an average annual increase of 27% from 2025 to 2033.

Rate forecasts for Option 2 are provided in Table ES-3. The calculated annual stormwater management rates under Option 2 for 2025 are as follows:

Residential properties:

- Small: The rate is forecasted to increase by 2% from \$70.74 to \$72.03;
- Medium: The rate is forecasted to increase by 104% from \$70.74 in 2024 to \$144.07 in 2025; and
- Large: The rate is forecasted to increase by 205% from \$70.74 to \$216.10.



- Non-residential properties:
 - Small: The rate is forecasted to increase by 275% from \$70.74 to \$265.00;
 - Medium: The rate is forecasted to increase by 649% from \$70.74 in 2024 to \$530.00 in 2025; and
 - Large: The rate is forecasted to increase by 1024% from \$70.74 to \$795.00.

The rates for all properties are forecasted to increase by 13% annually from 2026 to 2028, 14% annually from 2028 to 2030, and 4% annually from 2031 to 2033.

Based on an analysis of these rate structures and considering the input received from staff, it is recommended that the Municipality adopt rate structure Option 2, a varied flat rate structure based on land area and type of property. This method provides a fairer, and equitable rate calculation without imposing a significant administrative time and cost burden on the Municipality. This would entail a flat rate that differs for the type of property (i.e., residential and non-residential) and is varied property size for small, medium, and large customers, within each type of property.



Table ES-2 Municipality of Thames Centre Stormwater Rate Forecast – Rate Structure Option 1 (flat rate per property)

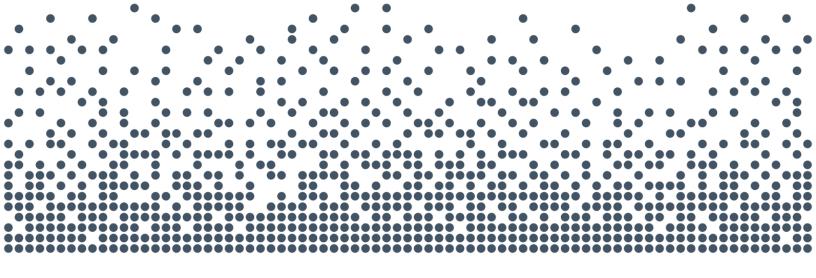
Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Stormwater Billing Recovery	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Total Number of Properties	2,615	3,185	3,252	3,387	3,548	3,728	3,928	4,144	4,384	4,645	4,922
Uniform Flat Annual Rate	\$68.16	\$70.74	\$106.11	\$122.03	\$140.33	\$161.38	\$185.59	\$213.43	\$224.10	\$235.30	\$247.07
Uniform Flat Monthly Rate	\$5.68	\$5.90	\$8.84	\$10.17	\$11.69	\$13.45	\$15.47	\$17.79	\$18.67	\$19.61	\$20.59
Annual Percentage Change - Per Property		4%	50.0%	15.0%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	5.0%

Table ES-3

Municipality of Thames Centre

Stormwater Rate Forecast – Rate Structure Option 2 (Tiered Flat Rate Varied by Type and Size)

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Stormwater Billing Recovery	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Annual Rates:											
Residential <=0.25 acres (Flat Rate)	\$68.16	\$70.74	\$72.03	\$81.28	\$91.94	\$104.24	\$118.50	\$134.97	\$140.54	\$146.49	\$152.97
Residential >0.25 & < 1 acre (Flat Rate)	\$68.16	\$70.74	\$144.07	\$162.56	\$183.87	\$208.49	\$236.99	\$269.95	\$281.09	\$292.98	\$305.94
Residential >=1 acre (Flat Rate)	\$68.16	\$70.74	\$216.10	\$243.84	\$275.81	\$312.73	\$355.49	\$404.92	\$421.63	\$439.48	\$458.91
Non-Residential <=5 acres (Flat Rate)	\$68.16	\$70.74	\$265.00	\$299.01	\$338.21	\$383.49	\$435.93	\$496.54	\$517.03	\$538.92	\$562.75
Non-Residential >5 & <= 15 acres (Flat Rate)	\$68.16	\$70.74	\$530.00	\$598.02	\$676.43	\$766.99	\$871.85	\$993.09	\$1,034.07	\$1,077.84	\$1,125.51
Non-Residential >15 acres (Flat Rate)	\$68.16	\$70.74	\$795.00	\$897.03	\$1,014.64	\$1,150.48	\$1,307.78	\$1,489.63	\$1,551.10	\$1,616.76	\$1,688.26
Annual Percentage Change:											
Residential <=0.25 acres (Flat Rate)		4%	2%	13%	13%	13%	14%	14%	4%	4%	4%
Residential >0.25 & < 1 acre (Flat Rate)		4%	104%	13%	13%	13%	14%	14%	4%	4%	4%
Residential >=1 acre (Flat Rate)		4%	205%	13%	13%	13%	14%	14%	4%	4%	4%
Non-Residential <=5 acres (Flat Rate)		4%	275%	13%	13%	13%	14%	14%	4%	4%	4%
Non-Residential >5 & <= 15 acres (Flat Rate)		4%	649%	13%	13%	13%	14%	14%	4%	4%	4%
Non-Residential >15 acres (Flat Rate)		4%	1024%	13%	13%	13%	14%	14%	4%	4%	4%



Report



Chapter 1 Introduction



1. Introduction

1.1 Background

Stormwater, which is rainwater, snowmelt, or other forms of precipitation, must be managed within a municipality to prevent flooding and related issues. In Ontario, municipalities are responsible for stormwater management for more localized storm related surface water. This can be provided in a number of ways; through municipal drains as defined in the *Drainage Act*, streams, rivers, and creeks, or through municipal infrastructure.

The Municipality of Thames Centre (Municipality) owns, operates, and maintains a stormwater management system consisting of approximately 43 kilometers of linear stormwater infrastructure, various stormwater management ponds, 1,509 catch basins, and 629 manholes with a total replacement value of \$53.84 million. The stormwater management system collects stormwater to protect properties and roads from flooding, effectively remove contaminants from stormwater runoff, and manage the discharge rate back into the natural environment.

1.2 Study Purpose

Stormwater management in the Municipality is currently funded from various sources, including stormwater user fees, general tax levy, grants, and other sources. The Municipality's stormwater user fees for 2023 and 2024 are provided in Table 1-1 below and a bi-monthly (i.e., every other month) and annual basis.

Table 1-1
Municipality of Thames Centre
Stormwater User Rate

Stormwater Rate	2023	2024
Lifecycle Rate - Bi-Monthly	\$11.36	\$11.79
Lifecycle Rate - Annually	\$68.16	\$70.74

The Municipality retained Watson & Associates Economists Ltd. (Watson) to undertake an assessment of the full cost of stormwater management services and develop rate



structure alternatives and a rate forecast to recover the full costs of service, including capital and operating costs, as well as funding asset management (i.e., lifecycle) needs.

The objectives of the study and the steps involved in carrying out this assignment are summarized below:

- Identify all current and future stormwater system capital needs to assess the immediate and longer-term implications;
- Identify potential methods of cost recovery from the capital needs listing. These recovery methods may include other statutory authorities (e.g., *Development Charges Act*, 1997 (D.C.A.), *Municipal Act*, grant funding, etc.) as an offset to recovery through the proposed stormwater rates;
- Identify existing operating costs and estimate future operating costs over the next ten years. This assessment identifies fixed and variable costs in order to project those costs sensitive to changes to the existing infrastructure inventory, as well as costs which may increase commensurate with growth;
- Develop rate structure alternatives, undertake rate calculations, and assess the impacts on the Municipality's ratepayers impacts of each of the rate structure alternatives; and
- Provide staff and Council the findings to assist in obtaining approval of a rate structure and the associated calculated rates over a 10-year forecast period.

This report provides an overview of the process undertaken, the analysis of potential rate structures and the associated rates for the Municipality.

1.3 Regulatory Requirements for Stormwater Management Service

In the last 25 years, numerous regulatory changes have been made in Ontario which impact water, wastewater, and stormwater management services. A summary of some of the changes relating to stormwater management is provided in the following sections.

1.3.1 Water Opportunities Act, 2010

As noted, refinements to various legislation have been introduced which may impact stormwater management services. The Act provides for the following elements for Stormwater:



- The fostering of innovative water, wastewater, and stormwater technologies, services and practices in the private and public sectors;
- Preparation of sustainability plans for municipal water services, municipal wastewater services, and municipal stormwater management services.

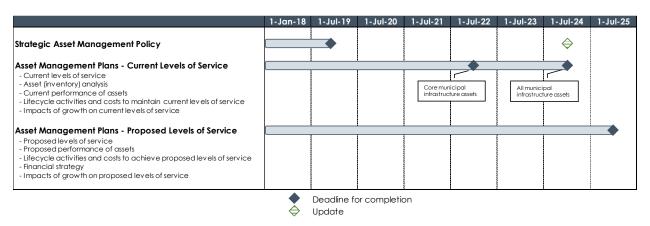
Regarding the sustainability plans:

- The Act requires a detailed review of a financial plan for water, wastewater, and stormwater management services; and
- Regulations will provide performance targets for each service these targets may vary based on the jurisdiction of the regulated entity or the class of entity.

1.3.2 Infrastructure for Jobs and Prosperity Act, 2015

On June 4, 2015, the Province passed the *Infrastructure for Jobs and Prosperity Act*, 2015 (I.J.P.A.) which, over time, will require municipalities to undertake and implement asset management plans for all infrastructure they own. On December 27, 2017, the Province of Ontario released Ontario Regulation (O. Reg.) 588/17 under I.J.P.A. which has three phases that municipalities must meet. The timelines associated with the three phases were later extended by O. Reg. 193/21 which was filed on March 15, 2021. The timelines are presented in Figure 1-1 below.

Figure 1-1
Legislative Timelines set out by the Jobs and Prosperity Act
Legislation related to Asset Management Plans



Every municipality in Ontario was required to prepare a strategic asset management policy by July 1, 2019. Municipalities will be required to review their strategic asset



management policies at least every five years and make updates as necessary. The subsequent phases are as follows:

- Phase 1 Asset Management Plan (by July 1, 2022):
 - For core assets Municipalities must have the following:
 - Inventory of assets;
 - Current levels of service, including some prescribed measures; and
 - Lifecycle management strategies and associated costs to maintain current levels of service.
- Phase 2 Asset Management Plan (by July 1, 2024):
 - o Same steps as Phase 1 but for all assets.
- Phase 3 Asset Management Plan (by July 1, 2025):
 - o Builds on Phase 1 and 2 by adding:
 - Proposed levels of service; and
 - Financial strategy that supports achieving proposed levels of service.

In relation to stormwater (which are considered core assets), municipalities were required to have an asset management plan that addressed the related infrastructure by July 1, 2022 (Phase 1). O. Reg. 588/17 specifies that the Municipality's asset management plan must include the following for each asset category:

- The current levels of service being provided, determined in accordance with the following qualitative descriptions and technical metrics and based on data from at most the two calendar years prior to the year in which all information required under this section is included in the asset management plan;
- The current performance of each asset category, including:
 - a summary of the assets in the category;
 - the replacement cost of the assets in the category;
 - the average age of the assets in the category, determined by assessing the average age of the components of the assets;
 - o the information available on the condition of the assets in the category;
 - a description of the municipality's approach to assessing the condition of the assets in the category, based on recognized and generally accepted good engineering practices where appropriate; and
- The lifecycle activities that would need to be undertaken to maintain the current levels of service.



The Municipality undertook its Asset Management Plan that identified key stormwater infrastructure works in 2022. As part of Phase 3 of I.J.P.A., the Municipality will need to identify a financial strategy to fund future infrastructure replacement needs.

1.3.3 Drainage Act, 1990

A municipal drain is generally a drainage system that is constructed, repaired or maintained under the authority of the *Drainage Act* as well as a municipal by-law. Municipal drains tend to be located in rural agricultural areas and can include berms, ponds, culverts, pipes, open ditches, etc. More specifically, the *Drainage Act* defines drainage works as:

"a drain constructed by any means, including the improving of a natural watercourse, and includes work necessary to regulate the water table or water level within or on any lands or to regulate the level of the waters of a drain, reservoir, lake or pond, and includes a dam, embankment, wall, protective works or any combination thereof."

The process for any works on a new or existing municipal drain is initiated by landowners but is ultimately approved by Council and administered by the municipality. Under Sections 4, 74, 76 and 78 of the *Drainage Act* the municipality is required to construct, maintain, and repair municipal drains located within its boundaries; however, the costs are borne by the landowners within its watershed that benefit from the system.

Currently, properties outside the urban serviced areas of Dorchester and Thorndale are not subject to the uniform flat rate for stormwater charges. Therefore, costs associated with municipal drains in the rural areas of the Municipality have not been embraced in this rate study. It is anticipated that the agricultural properties will continue to be exempt from the recommendations contained herein, therefore, if there is work required on municipal drains in the rural areas, the Municipality will need to recover the costs from other sources.

1.3.4 Environmental Compliance Approval

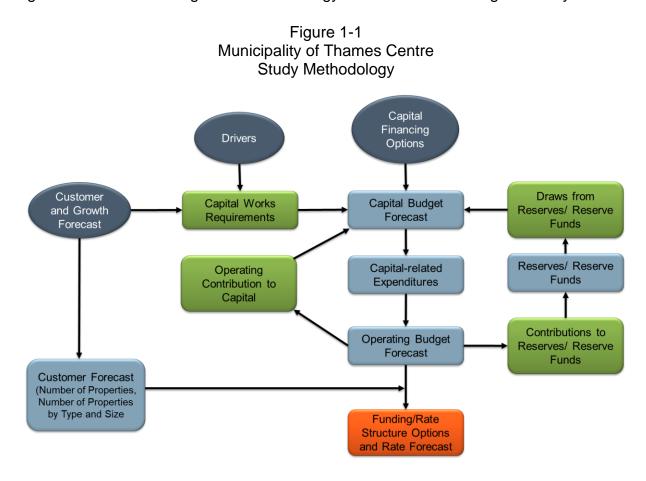
Stormwater infrastructure is predominately approved by Provincial agencies under the *Ontario Water Resources Act* as an Environmental Compliance Approval (E.C.A.). The Province has specific requirements and expectations of municipalities on how stormwater infrastructure is operated and maintained. To comply with the Provincial legislation, the Municipality manages its stormwater infrastructure under a system-wide E.C.A. that requires regular inspections, monitoring, maintenance, and reporting to the



Province the status of its entire stormwater system to demonstrate it is functioning properly and is in compliance with Provincial approvals. The E.C.A. requires that the stormwater system be properly operated and maintained with a specific reference to "adequate funding."

1.4 Study Methodology

Figure 1-1 illustrates the general methodology utilized in undertaking this study.



The methodology employed generally consists of 5 major elements:

1. Customer Profile and Growth Forecast

This step in the analysis is important as it informs the need for services and development of the capital program. In addition, it produces the denominator in the rate calculation. The first step is to understand the number, use, and types of properties in



the municipality as well as the land area they occupy. A detailed description on how this was undertaken is provided in Chapter 2 of this report.

2. Capital Needs Forecast

Capital needs forecasts are developed to measure program/service level adjustments, lifecycle requirements, and growth-related needs. Developing the capital needs forecasts involves reviewing servicing studies such as master plans, needs assessment studies, and D.C. background studies. Growth-related infrastructure is typically identified in D.C. background studies. Additional growth-related infrastructure may be funded directly by developers as local services and then assumed by the municipality. Once assumed, the municipality is responsible for maintenance and replacement of the infrastructure. Capital expenditures are forecast with inflationary adjustments based on capital cost indices.

Stormwater needs due to the anticipated growth are often identified in a municipality's development charges (D.C.) Background Study. Those related to asset lifecycle and replacement requirements to maintain the current level of service are commonly identified in capital budget, master planning documents, and asset management plans. Contributed assets are directly funded by developers once they put works in place, as a requirement of their development agreement (i.e., local service requirements). Once assumed, the lifecycle needs associated with these assets will become a municipality's responsibility and will need to be operated, maintained and eventually replaced, these costs would be included in future studies as the assets become the responsibility of the Municipality. Detailed discussion on capital needs and lifecycle costing is provided in Chapters 3 and 4.

3. Capital Funding Plan

The capital funding plans consider the potential funding sources available to address the capital needs forecast. The sources of capital funding include development contributions for local services, development charges (D.C.s), grants, and debt financing, with the remaining costs funded from reserves or the tax levy. Growth-related sources of funding include D.C.s, if imposed by a municipality, and debt financing. The use of levy or rate-based funding is measured against the revenue projections and affordability impacts. The reserve/reserve fund sources are measured against the sustainability of these funds, relative to lifecycle demands, revenue projections, and affordability impacts. Debt financing is considered for significant capital expenditures



where funding is required to assist with cash flow needs, to assist in funding growth initiatives, or to facilitate rate transition policies and/or rate fluctuations. Debt financing is measured against the municipality's debt policies and annual repayment limits to ensure a practical and sustainable funding mix.

4. Operating Budget Forecast

The operating budget forecast considers adjustments to the municipality's base budget reflecting program/service level changes, operating fund impacts associated with infrastructure, and financing for capital needs. The operating expenditures are forecast with inflationary adjustments and growth in service demand, based on fixed and variable cost characteristics. The operating budget forecast ties the capital funding plan and reserve/reserve fund continuity forecast to the rate-based revenue projections. This ensures sufficient funding for both the ongoing annual operation and maintenance of stormwater management services, as well as the capital cost requirements to ensure service sustainability. Operating revenues to be recovered from the levy or rates are projected net of any other anticipated operating revenues.

5. Funding/Rate Structure Options and Rate Forecast

There are a number of funding/rate structure options used by municipalities in Ontario to fund stormwater management services. These include:

- Property taxes;
- Flat rate per property (may vary by use/type and/or by size);
- Area rate:
- Utility rate;
- Run-off coefficient by property type;
- Run-off coefficient by actual land area per property; and
- Actual impervious area per property.

In this step, these funding options are assessed against the following criteria to determine what the Municipality's preferred options for further evaluation are: ease of calculation, linkage between cost of and benefit derived from service, cost of administration, and user control over charging mechanism. A detailed discussion on this assessment is provided in Chapter 7 of this report. Once the preferred options are determined, the rate forecast for each of the options is developed.



Rates in their simplest form can be defined as total costs to maintain the utility function divided by the total expected amount of a charging parameter to be generated for the period. The charging parameter could, for example, be the volume of water consumption, number of properties, or hectares of impervious area. Total costs are usually a combination of operating costs (e.g., staff costs, materials and supplies, contracted services, maintenance, administration, etc.) and capital-related costs (e.g., past debt to finance capital projects, transfers to reserves to finance future expenditures, etc.). These operating and capital expenditures will vary over time. Examples of factors that will affect the expenditures over time are provided below.

Operations:

- Inflation;
- Increased maintenance as system ages;
- Changes in costs reflecting level of service investments; and
- Changes to provincial legislation.

Capital Related:

- · Replacement capital needed as system ages;
- New capital emplaced or built as areas expand;
- Financing of capital costs which is a function of policy regarding reserves and direct financing from rates (pay as you go), debt, and user pay methods (e.g., development charges).

The rate forecast and structure component of the analysis considers various rate structures to recover the forecast rate-based revenue from the projected customer demands. At this stage in the analysis the full costs of service are measured against the customer base plus anticipated growth and service demands to determine full cost recovery rates. To contextualize the rate forecast, the calculated rates are quantified for representative hypothetical customers to measure the impacts on a range of customer types and in relation to other municipalities.



Chapter 2 Forecast Growth and Servicing Requirements



2. Forecast Growth and Servicing Requirements

An analysis of the Municipality's property data and profile was undertaken to understand the current profile and forecast potential changes resulting from new growth from 2024 to 2033. A growth forecast has also been developed based on the Municipality's 2021 D.C. Background Study. The property analysis, classification, and growth forecast are described in the following sections.

2.1 Property Analysis and Classification

Municipality staff provided the 2023 tax roll, which includes all properties within the Municipality. As part of the analysis of the 2023 tax roll, a comparison to the current properties receiving a stormwater bill was undertaken, and a number of properties within the urban serviced areas of Dorchester and Thorndale were identified for future inclusion in the stormwater rate forecast. The tax roll includes 81 unique property codes, and each roll number is assigned one of these property codes. The Municipality has a limited number of properties currently classified as agricultural lands.

The 81 unique property codes were mapped to the following six broad property types:

- Agricultural;
- Urban Residential;
- Non-Residential Commercial;
- Non-Residential Industrial;
- Non-Residential Institutional;
- Special and Exempt;
- · Government; and
- School Lands.

A detailed listing of the property codes and associated classifications is provided in Appendix A.

Once the property codes were classified by property type, the total land area of each parcel was extracted from the Municipality's tax roll, supplemented by G.I.S. data where information was missing. There were a few parcels with missing land area in both databases, and in these cases land area was imputed based on average land area of other properties with the same property code.



The properties were then grouped into six classifications based on property size as follows:

Residential:

Small: Less than or equal to 0.25 acres

o Medium: Greater than 0.25 acres and less than 1 acre

o Large: 1 acre or larger

Non-Residential

 Small: Commercial, industrial, and institutional properties less than 5 acres

Medium: Commercial, industrial, and institutional properties greater than
 5 acres and less than 15 acres

 Large: Commercial, industrial, and institutional properties 15 acres or larger.

A summary of the property types is provided in Table 2-1. The summary includes the number of existing properties within a classification and the total land area for the classification. Schools exempted, as per the *Education Act*, from fees imposed under the *Municipal Act* will be excluded from the calculations.

Table 2-1
Municipality of Thames Centre
2023 Property Classification and Total Land Area (acres)

Property Type		Number of	Customers		Land Area (Acres) within Each Category						
Residential	Small Medium <=0.25 >0.25 & < 1 acres acre		Large >=1 acre	Total	Small <=0.25 acres	Medium >0.25 & < 1 acre	Large >=1 acre	Total			
Urban Residential	2,094	901	72	3,067	386	384	165	936			
Total	2,094	901	72	3,067	386	384	165	936			
						-					
Non-Residential	Small <=5 acres	Medium >5 & < 15 acre	Large >=15 acre	Total	Small <=5 acres	Medium >5 & < 15 acre	Large >=15 acre	Total			
Agriculture	-	1	-	1	-	11	-	11			
Industrial	24	8	6	38	43	61	90	194			
Commercial	53	2	1	56	40	21	15	76			
Institutional*	2	-	-	2	4	-	-	4			
Special & Exempt	10	-	3	13	9	-	45	54			
Government	2	1	-	3	1	13	-	13			
Total	91	12	10	113	97	105	150	352			
School Lands	-	4	1	5	_	32	15	47			
Grand Total	2,185	917	83	3,185	483	522	330	1,335			
Total Excluding Agricult	ure and Scho	ol Lands		3,179				1,277			

^{*} Excluding School Lands Public/Separate Schools under the Thames Valley Public School Board and the London District Catholic School Board



2.2 Growth Forecast

To estimate the potential impacts of imposing a stormwater charge based on a per property basis or tiered basis by type and land area, a forecast of property numbers by size was required. As the Municipality undergoes development, vacant developable lands become subdivided and in turn are developed as occupied lots/properties. Furthermore, lands that have already been designated as future urban lands will often convert over time from agricultural lands to residential and non-residential urban lands. The agricultural lands in the Municipality's property database are slated for residential and non-residential development and have been classified based on the planned/approved development on that land over the forecast period.

The growth forecast was developed based on the residential unit growth forecast and non-residential G.F.A. forecast from the Municipality's 2021 Development Charges (D.C.) Background Study (dated December 27,2021), with timing of growth being updated based on a conservative approach through discussions with Municipal staff.

Over the 10-year period, 2024 to 2033, the Municipality is anticipated to grow by approximately 1,454 residential units, with 55 of these units projected to be in the rural area. In addition, the Municipality is anticipated to increase employment by1,035 jobs, in approximately 838,200 square feet (sq. ft.) of gross floor area (G.F.A.). Of the total jobs, 900 (resulting in approximately 600,500 sq. ft. of G.F.A.) are projected to be in the Municipality's Urban areas and the remainder in the rural area.

New residential and non-residential units were added to the forecast period. It was assumed that when a new unit is added, it would generate a half year of stormwater rate revenue in the first year of occupancy, this is to recognize that some units will be developed and occupied at various times throughout a year.

For residential properties, each unit is considered a property for the purposes of the study. For non-residential development, the G.F.A. forecast from the 2021 D.C. Background Study is first converted to a land area forecast based on the assumption that lot coverage for commercial and institutional developments is 25% and for industrial development is 20%. This land area is then converted to properties based on the average size of existing non-residential (0.42 acres). As provided in Table 2-1, the number of properties is anticipated to increase from 3,179 at the end of 2023 to 4,922 by the end of 2033.



Table 2-1 Municipality of Thames Centre Stormwater Customer Forecast – Number of Properties

Stormwater Customer Forecast	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Existing Urban Residential (Small)	2,094	2,094	2,094	2,094	2,094	2,094	2,094	2,094	2,094	2,094	2,094
Existing Urban Residential (Medium)	901	901	901	901	901	901	901	901	901	901	901
Existing Urban Residential (Large)	72	72	72	72	72	72	72	72	72	72	72
Existing Industrial	38	38	38	38	38	38	38	38	38	38	38
Existing Commercial	56	56	56	56	56	56	56	56	56	56	56
Existing Institutional*	2	2	2	2	2	2	2	2	2	2	2
Existing Government	3	3	3	3	3	3	3	3	3	3	3
Existing Special & Exempt	13	13	13	13	13	13	13	13	13	13	13
New Residential - Urban Growth (Small)	-	6	41	111	199	301	419	551	699	861	1,038
New Residential - Urban Growth (Medium)	-	-	3	10	23	40	60	80	103	128	153
New Residential - Urban Growth (Large)	-	-	2	6	12	19	27	37	52	72	93
New Non-Residential - Urban Growth	-	-	27	81	135	189	243	297	351	405	459
Total	3,179	3,185	3,252	3,387	3,548	3,728	3,928	4,144	4,384	4,645	4,922

^{*} Excluding School Lands Public/Separate Schools under the Thames Valley Public School Board and the London District



Chapter 3 Capital Infrastructure Needs



3. Capital Infrastructure Needs

3.1 Capital Forecast

A capital forecast has been provided for the stormwater system and is presented in Table 3-1 (note: the costs are provided in uninflated dollars). This capital forecast has been prepared based on a review of the Municipality's Capital Budget forecast as well as works identified as asset replacement needs based on the Municipality's inventory data for the stormwater system.

As noted in Chapter 2, the Municipality is expected to experience continued growth with an additional 1,454 residential units and approximately 838,200 sq. ft. of non-residential G.F.A. to be developed over the 10-year period. Along with additional growth, capital expenditures are required for upgrading the existing infrastructure to mitigate significant stormwater events and maintain the level of service needed. The Municipality must also plan to sustainably fund the replacement of aging infrastructure. Given these requirements, the anticipated capital expenditures total \$4.82 million over the 2024-2033 forecast period. These expenditures and financial pressures on the Municipality's stormwater system provide the impetus to prepare this long-term financial plan to ensure the user rate is sufficient to cover the costs of the service. Note, Chapter 5 provides a detailed discussion regarding the options for capital financing.

A summary of the capital works related to stormwater management services is provided on the following table.



Table 3-1 Municipality of Thames Centre Stormwater 2024 Capital and 10-year Forecast (Uninflated \$)

Description	Actual	lotai					Fore	cast						
Description	2023	(2024-	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
Capital Expenditures														
Porter Subdivision Watermain														
Replacement - Phase 2 Stormwater	420,543	-	-	-	-	-	-	-	-	-	-	-		
component (Combination with Roads and														
Porter Subdivision Watermain														
Replacement - Phase 3 Stormwater	-	611,500	50,000	-	561,500	-	-	-	-	-	-	-		
component (Combination with Roads and														
Upper Queen Street/Railway Street -	-	951,000	150,000	801,000	-	-	-	-	-	-	-	-		
2022 & Prior Year Commitments	440,238	-	-	-	-	-	-	-	-	-	-	-		
Storm Pond Inspections	-	47,500	-	-	-	47,500	-	-	-	-	-	-		
Thorndale Industrial Drain		1,650,000	-	-	1,650,000	-	-	-	-	-	-	-		
Thorndale Road/King Street Urbanization		769,700	-	374,000	395,700	-	-	-	-	-	-	-		
Dale Drive Reconstruction		165,000	-	-	-	20,000	145,000	-	-	-	-	-		
Mill Road Urbanization		406,500	-	-	-	-	-	-	30,500	376,000	-	-		
Studies:														
Stormwater Rate Study	-	60,000	-	-	-	-	30,000	-	-	-	-	30,000		
Asset Management:														
Stormwater Facilities	-	109,200	-	-	-	-	53,500	-	-	-	55,700	-		
Linear Inventory	-	47,180	-	-	47,180	-	-	-	-	-	-			
Manholes	-	-	-	-	-	-	-	-	-	-	-	-		
Catch Basins	-	4,460	-	-	-			4,460	-		-	-		
Total Capital Expenditures	\$860,781	\$4,822,040	\$200,000	\$1,175,000	\$2,654,380	\$67,500	\$228,500	\$4,460	\$30,500	\$376,000	\$55,700	\$30,000		



Chapter 4 Lifecycle Costing



4. Lifecycle Costing

4.1 Overview of Lifecycle Costing

4.1.1 Definition

For many years, lifecycle costing has been used in the field of maintenance engineering and to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and use in the areas of industrial decision-making and the management of physical assets.

By definition, lifecycle costs are all the costs which are incurred during the lifecycle of a physical asset, from the time its acquisition is first considered to the time it is taken out of service for disposal or redeployment. The stages which the asset goes through in its lifecycle are specification, design, manufacture (or build), install, commission, operate, maintain and disposal. Figure 4-1 depicts these stages in a schematic form.

4.1.2 Financing Costs

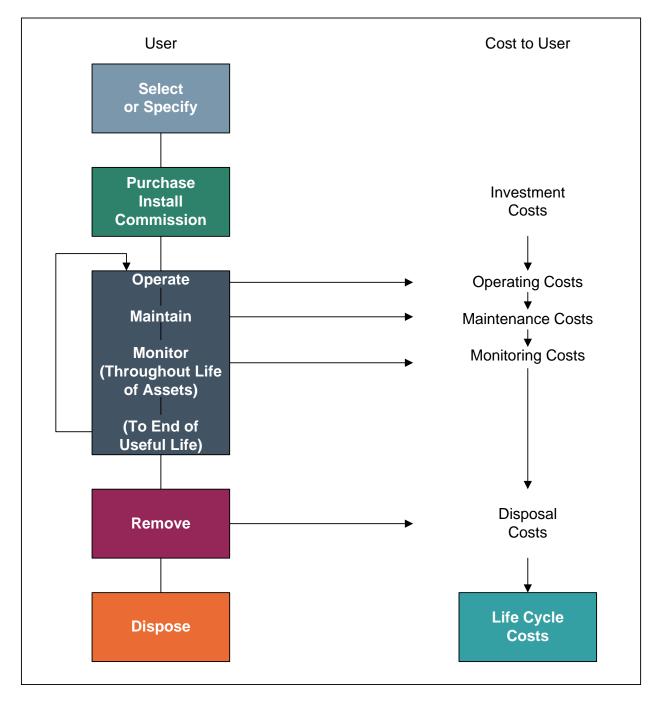
This section will focus on financing mechanisms in place to fund the costs incurred throughout the asset's life.

In a municipal context, services are provided to benefit tax/rate payers. Acquisition of assets is normally timed in relation to direct needs within the community. At times, economies of scale or technical efficiencies will lead to oversizing an asset to accommodate future growth within the Municipality. Over the past few decades, new financing techniques such as D.C.s have been employed based on the underlying principle of having tax/rate payers who benefit directly from the service paying for that service. Operating costs which reflect the cost of the service for that year are charged directly to all existing tax/rate payers who have received the benefit. Operating costs are normally charged through the tax base or user rates.

Capital expenditures are recouped through several methods, with operating budget contributions, D.C.s, reserves, developer contributions and debentures, being the most common.



Figure 4-1 Lifecycle Costing



New construction related to growth could produce D.C.s and developer contributions (e.g., works internal to a subdivision which are the responsibility of the developer to construct) to fund a significant portion of projects, where new assets are being acquired to allow growth within the Municipality to continue. As well, debentures could be used



to fund such works, with the debt charge carrying costs recouped from rate payers in the future.

Capital construction to replace existing infrastructure, however, is largely not growth-related and will therefore not yield D.C.s or developer contributions to assist in financing these works. Hence, a municipality will be dependent upon debentures, reserves, and contributions from the operating budget to fund these works.

Figure 4-2 depicts the costs of an asset from its initial conception through to replacement and then continues to follow the associated costs through to the next replacement.

As referred to earlier, growth-related financing methods such as D.C.s and developer contributions could be utilized to finance the growth-related component of the new asset. These revenues are collected (indirectly) from the new homeowner/business who benefits directly from the installation of this asset. Other financing methods may be used as well to finance the non-growth-related component of this project, such as reserves which have been collected from past rate payers, operating budget contributions collected from existing rate payers and debentures which will be carried by future rate payers. Ongoing costs for monitoring, operating, and maintaining the asset will be charged annually to the existing ratepayer.

When the asset requires replacement, the sources of financing will be limited to reserves, debentures, and contributions from the operating budget. At this point, the question is raised: "If the cost of replacement is to be assessed against the ratepayer who benefits from the replacement of the asset, should the past ratepayer pay for this cost, or should future rate payers assume this cost?" If the position is taken that the past user has used up the asset, hence he should pay for the cost of replacement, then a charge should be assessed annually through the life of the asset, to have funds available to replace it when the time comes. If the position is taken that the future ratepayer should assume this cost, then debentures and, possibly, a contribution from the operating budget should be used to fund this work.

Charging for the cost of using up an asset is the fundamental concept behind depreciation methods utilized by the private sector. This concept allows for expending the asset as it is used up in the production process. Tracking of these costs' forms part of the product's selling price and, hence, end-users are charged for the asset's depreciation. The same concept can be applied in a municipal setting to charge



existing users for the asset's use and set those funds aside in a reserve to finance the cost of replacing the asset in the future.

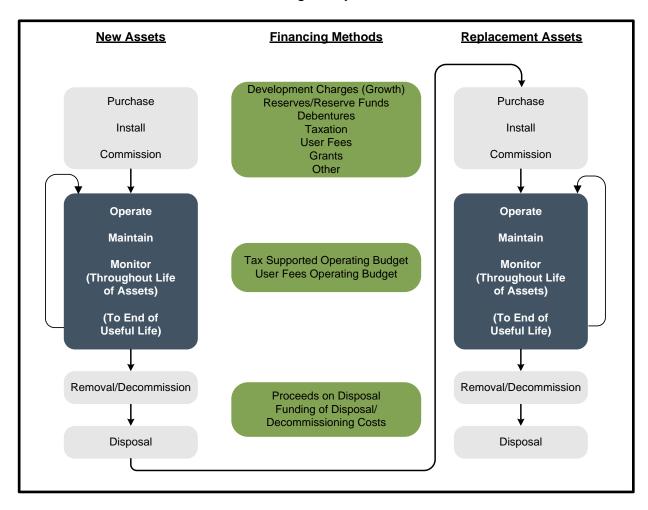


Figure 4-2
Financing Lifecycle Costs

4.1.3 Costing Methods

There are two fundamental methods of calculating the cost of the usage of an asset and for the provision of the revenue required when the time comes to retire and replace it. The first method is the Depreciation Method. This method recognizes the reduction in the value of the asset through wear and tear and aging. There are two commonly used forms of depreciation: the straight-line method and the reducing balance method (shown graphically in Figure 4-3).



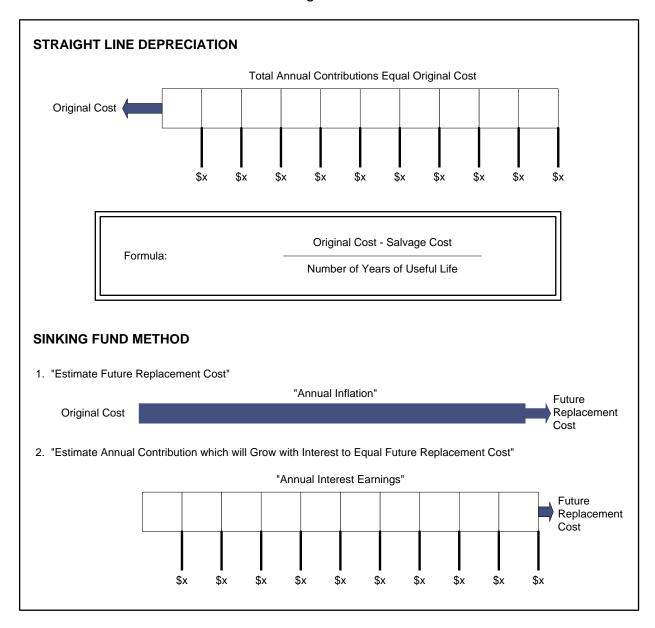
The straight-line method is calculated by taking the original cost of the asset, subtracting its estimated salvage value (estimated value of the asset at the time it is disposed of) and dividing this by the estimated number of years of useful life. The reducing balance method is calculated by utilizing a fixed percentage rate and this rate is applied annually to the undepreciated balance of the asset value.

The second method of lifecycle costing is the sinking fund method. This method first estimates the future value of the asset at the time of replacement. This is done by inflating the original cost of the asset at an assumed annual inflation rate. A calculation is then performed to determine annual contributions (equal or otherwise) which, when invested, will grow with interest to equal the future replacement cost.

The preferred method used herein for forecasting purposes is the sinking fund method of lifecycle costing.



Figure 4-3



4.2 Impact on Budgets

Detailed stormwater inventory information was obtained from the Municipality. The age of the stormwater system dates back to the early 1950s, and the total value of existing stormwater infrastructure including ponds, catch basis, manholes, and linear infrastructure (e.g., storm sewers) is \$53.84 million. This represents an investment of approximately \$18,900 per property.



The lifecycle "sinking fund" contribution amounts for infrastructure have also been calculated. These calculations determine the level of investment annually that the Municipality may wish to consider as part of its budgeting process to meet future lifecycle needs. Table 4-1 summarizes the estimated replacement value, capital costs forecast to be included in this financial plan and annual lifecycle contributions for future lifecycle needs.

Table 4-1 Municipality of Thames Centre Summary of Stormwater Infrastructure

Area	Total Replacement Value	Suggested amount to be included in 10- year forecast based on estimated life	Amount included in 10-year forecast	Net Replacement for Future Lifecycle	Annual Lifecycle Replacement		
Stormwater							
Stormwater Facilities	2,706,400	109,200	109,200	2,597,200	123,725		
Linear Inventory	39,123,930	47,180	47,180	39,076,750	1,495,558		
Manholes	5,407,470	-	-	5,407,470	196,895		
Catch Basins	6,602,470	249,909	249,909	6,352,561	4,460		
Total Stormwater	\$53,840,270	\$406,289	\$406,289	\$53,433,981	\$1,820,637		

Of the \$53.8 million in current stormwater assets, there is a need to undertake a minimum of \$406,300 of capital asset replacement over the 10-year forecast. The \$406,300 represents the cost to replace assets that have reached or are approaching the end of their useful lives by 2033, based on in-service dates and the estimated useful life.

Lifecycle needs for the assets that will require capital replacement/rehabilitation beyond the 10-year forecast period, with a total value of over \$53.43 million will need to be replaced in the future. The annual lifecycle requirements to address these future needs is approximately \$1.8 million. Hence, if the Municipality was to transfer this amount of funding to reserves annually, with investment of the funds, future capital financing would be available to meet the infrastructure needs as they come due.



Chapter 5 Capital Cost Financing Options



5. Capital Cost Financing Options

5.1 Summary of Capital Cost Financing Alternatives

Historically, the powers that municipalities had to raise alternative revenues to taxation to fund capital services have been restrictive. Over the past number of years, a number of legislative reforms have been introduced. Some of these have expanded municipal powers (e.g., Bill 26 introduced in 1996 to provide for expanded powers for imposing fees and charges), while others appear to restrict them (e.g., Bill 98 in 1997 and Bill 23 in 2022 providing amendments to the D.C.A.).

The current *Municipal Act* came into force on January 1, 2003, with significant amendments in 2006 through the *Municipal Statute Law Amendment Act*. Part XII of the Act and O. Reg. 584/06 govern a municipality's ability to impose fees and charges. This legislation provides municipalities with broadly defined powers and the ability to impose fees for both operating and capital purposes. Under s.484 of *Municipal Act*, 2001, the *Local Improvement Act* was repealed with the in-force date of the *Municipal Act* (January 1, 2003). The municipal powers granted under the *Local Improvement Act* now fall under the jurisdiction of the *Municipal Act*.

The methods of capital cost recovery available to municipalities are provided as follows:

Recovery Methods Section Reference Development Charges Act, 1997, as amended 5.2 5.3 Municipal Act Fees and Charges Stormwater Area Charges Connection Fees Local Improvements Grant Funding Availability 5.4 5.5 Existing Reserves/Reserve Funds 5.6 Debenture Financing Recommended Capital Financing Approach 5.8



5.2 Development Charges Act, 1997

Development charges are a revenue tool used by municipalities to recover the capital costs associated with new development and redevelopment. These costs are in addition to what a developer/builder normally constructs as part of their subdivision (i.e., Local Services). Empowered by the *D.C.A.*, as amended (D.C.A.), municipalities may pass by-laws to impose charges to recover the capital costs associated with development and redevelopment.

The Municipality adopted By-law 17-2022, to impose D.C.s on residential and non-residential development on a Municipality-wide and, in some instances, on an area-specific basis. By-law 17-2022 does not impose a D.C. for stormwater management service infrastructure although it does recover the cost of studies related to the service.

Stormwater drainage infrastructure (e.g. storm sewers) are included in the cost of new/expanded roads within the D.C. calculations. Stormwater management facilities (e.g. ponds) as well as localized storm sewers within anticipated developments in Dorchester and Thorndale, are identified as a local service requirement of the developing landowners in the Municipality's Local Service Policy. These initial capital works are to be paid for by the developments that directly benefit from these works. As a result, no funding for the localized stormwater infrastructure is anticipated to be funded from D.C.s. However, once these growth assets are put in place and assumed by the Municipality, the future operating, maintenance, and replacement will be required to be funded through the stormwater rate revenue.

5.3 Municipal Act

Part XII of the *Municipal Act* provides municipalities with broad powers to impose fees and charges via passage of a by-law. These powers, as presented in s.391(1), include imposing fees or charges:

"for services or activities provided or done by or on behalf of it;

for costs payable by it for services or activities provided or done by or on behalf of any other municipality or local board; and

for the use of its property including property under its control."



Restrictions are provided to ensure that the form of the charge is not akin to a poll tax. Any charges not paid under this authority may be added to the tax roll and collected in a like manner. The fees and charges imposed under this part are not appealable to the Ontario Land Tribunal (OLT).

Section 221 of the previous *Municipal Act* permitted municipalities to impose charges, by by-law, on owners or occupants of land who would or might derive benefit from the construction of sewage (storm and sanitary) or water works being authorized (in a specific benefit area). For a by-law imposed under this section of the previous Act:

- A variety of different means could be used to establish the rate and recovery of the costs and could be imposed by a number of methods at the discretion of Council (i.e., lot size, frontage, number of benefiting properties, etc.);
- Rates could be imposed with respect to costs of major capital works, even though an immediate benefit was not enjoyed;
- Non-abutting owners could be charged;
- Recovery was authorized against existing works, where a new water or sewer main was added to such works, "notwithstanding that the capital costs of existing works have in whole or in part been paid;"
- Charges on individual parcels could be deferred;
- Exemptions could be established;
- · Repayment was secured; and
- OLT approval was not required.

While under the new *Municipal Act* no provisions are provided specific to the previous s.221, the intent to allow capital cost recovery through fees and charges is embraced within s.391. The new *Municipal Act* also maintains the ability of municipalities to impose capital charges for water and sewer services on landowners not receiving an immediate benefit from the works. Under s.391(2) of the Act, "a fee or charge imposed under subsection (1) for capital costs related to sewage or water services or activities may be imposed on persons not receiving an immediate benefit from the services or activities but who will receive a benefit at some later point in time." Also, capital charges imposed under s.391 are not appealable to the OLT on the grounds that the charges are "unfair or unjust."

Section 222 of the previous *Municipal Act* permitted municipalities to pass a by-law requiring buildings to connect to the municipality's sewer and water systems, charging



the owner for the cost of constructing services from the mains to the property line. Under the new *Municipal Act*, this power still exists under Part II, General Municipal Powers (s.9 (3) b of the *Municipal Act*). Enforcement and penalties for this use of power are contained in s.427 (1) of the *Municipal Act*.

Under the previous Local Improvement Act.

- A variety of different types of works could be undertaken, such as watermain, storm and sanitary sewer projects, supply of electrical light or power, bridge construction, sidewalks, road widening and paving;
- Council could pass a by-law for undertaking such work on petition of a majority of benefiting taxpayers, on a 2/3 vote of Council and on sanitary grounds, based on the recommendation of the Minister of Health. The by-law was required to go to the OLT, which might hold hearings and alter the by-law, particularly if there were objections;
- The entire cost of a work was assessed <u>only</u> upon the lots abutting directly on the work, according to the extent of their respective frontages, using an equal special rate per metre of frontage; and
- As noted, this Act was repealed as of April 1, 2003; however, O. Reg. 119/03
 was enacted on April 19, 2003 which restores many of the previous Local
 Improvement Act provisions; however, the authority is now provided under the
 Municipal Act.

5.4 Grant Funding Availability

5.4.1 Federal Infrastructure Funding

The Government of Canada has provided funding to help municipalities with their water and wastewater systems, including repair and rehabilitation projects. Some funding programs are time-limited, for example, the Investing in Canada Infrastructure Program. Other programs are ongoing and provide a permanent source of funding. For example, the Canada Community-Building Fund (C.C.B.F.) (formerly know as the Federal Gas Tax Fund). The C.C.B.F. provides over \$2 billion each year to communities across Canada. Each municipality then selects how best to direct the funds with the flexibility provided to make strategic investments across 18 different project categories, which include stormwater.



5.4.2 Ontario Government

The Province has taken steps to increase municipal infrastructure funding. The Ontario Community Infrastructure Fund (O.C.I.F.) was launched in 2014 and currently provides \$400 million in formula-based funding to help eligible communities renew and rehabilitate their infrastructure. The Municipality received approximately \$846,800 in O.C.I.F. grant funding in 2023.

The Ontario government also provides funding through the Connecting Links program (\$30 million in 2023-2024) to help pay for the construction and repair costs of municipal roads that connect communities to provincial highways. This is on top of the Building Ontario Up investment of \$130 billion in public infrastructure over 10 years starting in 2015.

Additionally, in the 2023 budget, the Province announced it was providing \$825 million over three years through the Housing-Enabling Water Systems Fund (H.E.W.S.F.). Funding through the H.E.W.S.F. would help municipalities repair, rehabilitate, and expand drinking water, wastewater, and stormwater infrastructure needed to build more homes. Since the original announcement, the Province has increased the total available funding through the H.E.W.S.F. to over \$1.0 billion.

The rate calculations provided in subsequent chapters assume the Municipality will receive O.C.I.F. grant funding totalling \$3.02 million from 2025 to 2026 to assist in funding stormwater management projects. The Municipality is encouraged to continue to pursue funding opportunities from higher levels of government as they are announced or made available to assist with funding its stormwater management infrastructure and mitigate future rate increases.

5.5 Existing Reserves/Reserve Funds

The Municipality has established a lifecycle reserve fund for stormwater capital funding purposes. Table 5-1 summarizes the stormwater reserves utilized in this analysis and the balance on December 31, 2023. The Lifecycle Reserve had a balance of \$25,484 at the end of 2023 and is projected to be in a deficit of \$41,736 by the end of 2024. The forecast has projected increases to the reserve fund over the forecast to an estimated balance of approximately \$4.46 million by 2033 (see Appendix B, Table B-4).



Table 5-1 Municipality of Thames Centre Estimated Reserve Fund Balances as of December 31, 2023

Reserve Fund	Year-End Balance
Lifecycle Reserve	\$25,484

5.6 Debenture Financing

Although it is not a direct method of minimizing the overall cost to the ratepayer, debentures are used by municipalities to assist in cash flowing large capital expenditures.

The Ministry of Municipal Affairs and Housing regulates the level of debt incurred by Ontario municipalities, through its powers established under the *Municipal Act*. Ontario Regulation (O. Reg.) 403/02 provides the current rules respecting municipal debt and financial obligations. Through the rules established under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own purpose revenue may be allotted for servicing the debt (i.e., debt charges). The Municipality's 2024 Annual Repayment Limit is \$3.78 million based on calculations by the Ministry of Municipal Affairs and Housing. The schedule from the Ministry of Municipal Affairs and housing notes that the available debt for the Municipality is approximately \$47.15 million based on 20-year financing at an assumed rate of 5%.

It should be noted, however, that the issuance of debt should be managed at levels sustainable by the municipality. Issuance of large amounts of debt in any one year can have dramatic impacts on taxes and rates. Hence, proper management of capital spending and the level of debt issued annually must be monitored and evaluated over the longer-term period.

Within the context of the Municipality's 10-year stormwater capital program, projections show that \$935,000 in debt financing will be required over the forecast period. The Municipality anticipates receiving an interest-free loan from Middlesex County to fund this amount of capital. As a result, loan repayments in this study have been calculated



based on a 15-year borrowing term with an annual interest rate of 0%. The annual debt payments are then funded through the stormwater rate revenue in future years.

5.6.1 Financing Options for Loans and Debentures – Infrastructure Ontario

Infrastructure Ontario (I.O.) is an arms-length crown corporation, which has been set up as a tool to offer low-cost and longer-term financing to assist municipalities in renewing their infrastructure (this corporation merged the former Ontario Strategic Infrastructure Financing Authority (O.S.I.F.A.) into its operations). I.O. combines the infrastructure renewal needs of municipalities into an infrastructure investment "pool." I.O. will raise investment capital to finance loans to the public sector by selling Infrastructure Renewal Bonds to individual and institutional investors.

I.O. provides access to infrastructure capital that would not otherwise be available to smaller borrowers. Larger borrowers receive a longer term on their loans than they could obtain in the financial markets and can also benefit from significant savings on transaction costs such as legal costs and underwriting commissions. Under the I.O. approach, all borrowers receive the same low interest rate. I.O. will enter into a financial agreement with each municipality subject to technical and credit reviews, for a loan up to the maximum amount of the loan request.

To be eligible to receive these loans, municipalities must submit a formal application along with pertinent financial information. Allotments are prioritized and distributed based upon the Province's assessment of need. The analysis provided herein assumes that the Municipality will not require debt financing for the capital projects identified, other than the loan anticipated from the County.

5.7 Recommended Capital Financing Approach

Table 5-2 provides for the full capital expenditures (inflated \$) provided in Chapter 3. These costs were provided in 2024\$ and have also been inflated at a rate of 6% for 2025 and 3% annually for the remainder of the forecast period. Note that no inflation has been applied to the costs for 2023 and 2024.

Table 5-2 also provides the recommended funding alternatives for further consideration by the Municipality to finance the capital expenditures (inflated). The forecast indicates that the Municipality will utilize debt financing in 2026 when the reserve fund balances



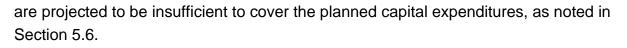




Table 5-2 Municipality of Thames Centre Capital Budget Forecast (inflated \$)

Description	Actual	Total	Budget Forecast									
Description	2023	(2024-2033)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Capital Expenditures												
Porter Subdivision Watermain Replacement -												
Phase 2 Stormwater component (Combination	420,543	-	-	-	-	-	-	-	-	-	-	-
with Roads and Water)												
Porter Subdivision Watermain Replacement -												
Phase 3 Stormwater component (Combination	-	700,000	50,000	-	650,000	-	-	-	-	-	-	-
with Roads and Water)												
Upper Queen Street/Railway Street - Design	-	1,050,000	150,000	900,000	-	-	-	-	1	-	-	-
2022 & Prior Year Commitments	440,238	-	-	-	-	-	-	-	-	-	-	-
Storm Pond Inspections	-	60,000	-	-	-	60,000	-	-	-	-	-	-
Thorndale Industrial Drain	-	1,700,000	-	-	1,700,000	-	-	-	-	-	-	-
Thorndale Road/King Street Urbanization	-	877,900	-	420,000	457,900	-	-	-	-	-	-	-
Dale Drive Reconstruction	-	225,000	-	-	-	25,000	200,000	-	-	-	-	-
Mill Road Urbanization	-	725,000	-	-	-	-	-	-	50,000	675,000	-	-
Studies:	-	-	-	-	-	-	-	-	-	-	-	-
Stormwater Rate Study	-	105,000	-	-	-	-	41,000	-	-	-	-	64,000
Asset Management:	-	-	-	-	-	-	-	-	-	-	-	-
Stormwater Facilities	-	183,000	-	-	-	-	74,000	-	-	-	109,000	-
Linear Inventory	-	55,000	-	-	55,000	-	-	-	-	-	-	-
Manholes	-	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	7,000	-	-	-	-	-	7,000	-	-	-	-
Total Capital Expenditures	860,781	5,687,900	200,000	1,320,000	2,862,900	85,000	315,000	7,000	50,000	675,000	109,000	64,000
Capital Financing												
Provincial/Federal Grants	846,795	3,020,000	-	1,320,000	1,700,000	-	-	-	-	-	-	-
Middlesex County Loan Requirements	-	935,000			935,000							
Lifecycle Reserve Fund	13,986	1,732,900	200,000	-	227,900	85,000	315,000	7,000	50,000	675,000	109,000	64,000
Total Capital Financing	\$860,781	\$5,687,900	\$200,000	\$1,320,000	\$2,862,900	\$85,000	\$315,000	\$7,000	\$50,000	\$675,000	\$109,000	\$64,000



Chapter 6 Operating Expenditures and Revenues



6. Operating Expenditures and Revenues

6.1 Stormwater Operating Expenditures

In this report, the actual expenditures in 2023 and operating budget for 2024 and 2025 were provided by Municipal staff. The forecast (2026-2033) was developed by inflating the 2025 budgeted cost by 3% annually. Operating expenditures, excluding capital-related operating costs (i.e., transfers to reserve and land/debt payments), are anticipated to initially decrease by approximately \$40,600 due to the reduction in the cost of studies, assessment, and survey works that was required in 2024 that are not required in 2025. The expenditures are then anticipated to increase by 3% each year throughout the forecast from approximately \$39,800 in 2023 to \$66,200 in 2033.

Capital-related operating expenditures include reserve transfers and annual debt repayments. Transfers to the lifecycle reserve have also been built into the operating expenditure forecast to minimize the need for future debt to finance the capital program as infrastructure is required to be replaced and/or rehabilitated. The capital-related operating expenditures are forecasted to increase from approximately \$138,500 in 2023 to \$1.15 million in 2033 reflecting an average annual increase of approximately 24%. The majority of this increase relates to increased transfers to reserves to begin planning for additional asset management/replacement requirements anticipated in the later half of the forecast period and the post 2033 forecast period, with approximately \$62,300 also related to loan repayments to the County on anticipated financing assistance required over a 15-year term from 2027 to 2041.

Overall, total operating expenditures will increase from approximately \$178,300 in 2023 to \$1.22 million representing an average annual increase rate of approximately 21%.

Table 6-1 provides for the operating expenditures for the stormwater management service.

6.2 Stormwater Operating Revenues

No other revenue sources have been identified to contribute to operating expenditures over the forecast period to 2033. The operating expenditures, including day-to-day expenditures and the capital-related expenditures, will be funded from stormwater rates as presented in Table 6-1.



Table 6-1 Municipality of Thames Centre Operating Budget Forecast (inflated \$)

	Actual	Budget					Forecast				
Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Expenditures											
Operating Costs											
Benefits	3,340	2,911	2,351	2,400	2,500	2,600	2,700	2,800	2,900	3,000	3,100
Studies / Assessments / Surveys	17,444	45,000	5,000	5,200	5,400	5,600	5,800	6,000	6,200	6,400	6,600
Sub-Contract / Contracted Services	1,674	35,000	35,000	36,100	37,200	38,300	39,400	40,600	41,800	43,100	44,400
Wages - Regular	17,327	9,617	9,622	9,900	10,200	10,500	10,800	11,100	11,400	11,700	12,100
Sub Total Operating	\$39,786	\$92,528	\$51,973	\$53,600	\$55,300	\$57,000	\$58,700	\$60,500	\$62,300	\$64,200	\$66,200
Capital-Related											
New Non-Growth Related Loan (Principal)	-	-	-	-	62,333	62,333	62,333	62,333	62,333	62,333	62,333
New Non-Growth Related Loant (Interest)	-	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Charge - Reserve Contribution (\$)	138,486	132,780	293,098	359,706	380,262	482,294	607,956	761,605	857,810	966,446	1,087,533
Sub Total Capital Related	\$138,486	\$132,780	\$293,098	\$359,706	\$442,595	\$544,628	\$670,290	\$823,938	\$920,143	\$1,028,779	\$1,149,866
Total Expenditures	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Revenues											
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stormwater Billing Recovery - Operating	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066



Chapter 7 Funding Structure and Options



7. Rate Structure Options

7.1 Current Funding Structure

As mentioned previously, the Municipality's stormwater management services are currently funded from the stormwater user rates. Other funding sources include grant funding. Additionally, developer-built infrastructure required to service growth, is funded by the developing landowners as a local service requirement and is then assumed by the Municipality upon completion of the development and approval of the works by the Municipality. Finally, where stormwater works are being put in place in development charge eligible road projects, the cost of the storm sewer network is paid for through development charge funding through the Services Related to a Highway reserve fund, and therefore, are not embraced in the capital expenditures or revenues identified herein. The grant and stormwater reserve stormwater revenues are generally provided to fund capital projects that are non-growth related. The following sections provide a review of various rate structures utilized throughout Ontario.

7.2 Alternative Funding Structures

An important consideration with respect to establishing a stormwater funding model is identifying the underlying charging parameters that most closely relate to the benefits of service received. In this regard, there are several approaches which have been used by municipalities across Ontario. A brief commentary is provided for each type of funding model:

Property Taxes – this is the predominant funding approach used by municipalities throughout Ontario and is currently the main funding source utilized in the Municipality. The net expenditures for the service are added to the tax levy and recovered from properties based on the assessed value of each property. There is no clear relationship between the benefits of service received by a property and the basis for paying the cost for the service; other than ability to pay.

Flat Rates – Generally, the total cost for the service is divided by the number of properties to provide a "per property" charge. The rate may be varied by type of user to denote some variation in the service received (e.g., modification for non-permeable land



area). Dependent on the use of service benefit factors to modify flat rates, the level of service received, and cost of service may not necessarily directly correlate.

Land Area – This approach recognizes that there is some relationship between the size of a property and the volume of stormwater runoff which may be generated by the property. While area is a key factor for the amount of rainfall absorbed by a property, this approach does not directly reflect the rate at which the water migrates from the property into the municipal storm system. Similar to the modified flat rate approach described above, modifications of land area for storm water run-off produce a charging basis that more closely relates to the benefits of service received.

Utility Rate – this approach imposes a charge based upon the metered volumes of water consumed by constituents as measured through water meters. This is used by municipalities that recover stormwater management service costs through water and wastewater rates. While this approach provides a segregated revenue source (i.e., user rate funded vs tax funded) and stormwater is traditionally included within the definition of wastewater, there is little correlation between the benefit of service and cost of service. Moreover, not all benefiting landowners may be included in the recovery of water and wastewater fees, whereby rural or private service customers without municipal water meters would be exempt from such fees.

Run-off Coefficient – The percentage of rainfall that migrates as stormwater run-off from a property (or surface) is referred to as the run-off coefficient. These coefficients are used by engineers as part of a formula for calculating the amount of run-off from a property. Generally, very grassy, vegetated lands have a low run-off coefficient whereas lands with large amounts of hard surfaces (parking lots, buildings, etc.) have a high run-off coefficient. Applying these factors to a flat rate or a land area fee structure would provide a calculation which takes the size of the property (or class of property) and the character of the property into account when determining the charge. Under this approach a run-off coefficient could be developed for various property classes and imposed on a property specific basis based on the constituent land area, or on a flat rate basis reflecting the characteristics of the broader property class (e.g., residential, non-residential, etc.).

Impervious Area of the Properties – this approach is based on the actual measured amount of imperviousness for each property. Impervious area refers to surface area of a property that has water-resistant materials (e.g., roofs, paved areas, concrete, etc.).



To calculate this rate structure, a detailed analysis of each property in the Municipality must be undertaken through a geographic information system (G.I.S.) and aerial mapping measurements.

7.3 Assessment of Alternative Funding Models

7.3.1 Assessment Criteria

There are four key criteria for the Municipality to consider when choosing a funding model/rate structure, including variations to the model/structure. These criteria are discussed below. The Municipality will need to assess and find the right balance for the community when selecting a rate structure.

- "Ease of Calculation" is a criterion to capture the relative data intensity required to support a given funding model. In the presence of good data, any given funding structure can be calculated with relative ease, but the difficulty lies in the ability to obtain and maintain a comprehensive and accurate data source.
- 2. "Linkage between Cost Paid and Benefit Derived from Services" measures how closely the amount paid by any given property owner reflects the benefits of service received. Although all Municipality residents benefit from a well-functioning stormwater system, property owners with more impervious areas on their properties produce more stormwater runoff, and hence place higher demands on the Municipality's infrastructure. Under the current funding model utilized by the Municipality, property owners with higher assessment values pay more for stormwater management services, even though there is no clear link between assessment and stormwater management service benefits. A more direct linkage between the amount paid and the benefit derived from services is considered desirable, and funding structures that provide this are therefore preferred.
- 3. "Cost of Administration" reflects the fact that although a funding structure that is well supported by data and provides a tight relationship between the ultimate cost to, and benefits received by, the person paying them may be more desirable, the costs of administering such a funding structure typically rise. This is an important consideration because any increase in the costs of administration would have the effect of diverting funding from actual stormwater system needs. Therefore, the



- benefit of recovering service costs from benefiting parties needs to be measured against the costs of implementation.
- 4. "Users' Control over Charging Mechanism" considers how much control a property owner has over the amount they have to pay. More control in this regard is considered a positive attribute, and therefore funding structures that provide the property owner with a greater degree of control are ranked higher. For example, under a funding model that charges flat rate per property, the property owner would have little control over the charge for service.

7.3.2 Assessment of Alternatives

Table 7-1 provides the spectrum of options for stormwater cost recovery and the ranking of each relative to various service criteria discussed in the previous section.



Table 7-1 Municipality of Thames Centre Spectrum of Options for Stormwater Cost Recovery

Funding Model	Basis of Calculation	Linkage between Ease of Amount Paid and Calculation Benefit Derived from Services		Cost of Administration	Users' Control over Charging Mechanism
Property Taxes	Tax rate applied to assessed value	Easy	Low	Low	Medium
Flat Rate per Property (may vary by use or size)	\$/property	Easy	Low	Low	Low
Area Rate (may vary by category of property sizes and/or type)	\$/area of property	Medium	Low	Low	Low
Utility Rate	\$/cu. m of water consumption	Easy	Low	Low	High
Run-off Coefficient by Property Type	\$/unit (varied by type)	Medium	Medium	Medium	Low
Run-off Coefficient by Actual Land Area per Property	\$/acre (varied by type)	Hard	High	Medium	Medium
Actual Impervious Area per Property	\$/measured impervious area	Hard	High	High	High

Generally, moving from the top of the table to the bottom, the relationship between the amount paid and benefits derived from the service becomes more direct. However, the costs to populate and maintain the "denominator" for the calculation also increases as the options progress down the table.



Property Taxes

Property taxes are presently utilized by the Municipality to fund the vast majority of the stormwater management service needs. Property taxes are considered easy to calculate since this is a funding model currently in use and hence data is readily available to support assessment calculations. Similarly, the cost of administration is considered low since the Municipality already maintains a tax database and has the resources in place to maintain and update it as needed. Property assessment is not considered a good proxy for the benefits that a given property receives from the Municipality's stormwater system. However, property owners have some control over how much they pay, as they may choose a property with a different (i.e., lower) assessment.

Flat Rate per Property

Charging a uniform flat rate per property would be the easiest approach both computationally and administratively (this is the current rate structure in place for the Municipality). Data on the number of properties is readily available through the Municipality's tax database and determining an appropriate flat fee would simply entail dividing the net costs of the stormwater program by the number of properties. From an administrative perspective, a flat rate approach would be quite inexpensive, as each year the number of properties would simply be adjusted for any subdivisions/severances (i.e., growth) that take place. However, this type of funding structure provides no direct link between the amount paid and the benefits derived from the stormwater system, as it does not capture any property characteristics and simply treats every property the same. Additionally, property owners would not have any control over how much they pay, since every property owner pays the same amount under this approach. It is noted that a flat rate my be varied by property type (i.e., residential or non-residential) and/or by size (i.e., small, medium, large).

Area Rate

Another relatively simple rate structure would be to charge each property based on its size using a uniform rate per acre. Generally, stormwater rates recognize a relationship between the volume of water which may be derived from the size of the property. While area is a key factor for the amount of stormwater to fall on a particular property, this approach does not directly reflect the rate at which the water migrates from the property



into the municipal storm system. It is noted that an area rate may be varied by property type and/or size.

Utility Rate

Similar to property taxation, utility billing is an established mechanism, and therefore consumption data is readily available to support rate calculations. Cost of administration is also considered low since this would be no different than the current annual updates to water and wastewater rates. Volumetric utility rates provide customers with a high degree of control over how much they pay, by giving them the option of adjusting water consumption patterns. A weak area of the utility rate approach is its disconnect from system benefits. There is little evidence of a correlation between water usage and the impacts on the municipal stormwater system.

Run-off Coefficient by Property Type

This funding structure would group properties into categories (e.g., low-density residential, commercial, industrial, etc.) and subsequently runoff coefficients would be applied to the land area within each category to create an estimate of weighted land area within each category, and within the Municipality as a whole. The relative share of total weighted land area would drive the share of system costs that are attributed to each property category. The share of costs attributed to a category would then be spread evenly over the number of properties within it. As such, all properties within a single category (e.g., single family residential) would pay the same fee, but this amount would be different from the amount paid by other property categories. Such an approach recognizes that there are distinct physical differences between different types of development and property types. For example, residential properties tend to have a lower runoff coefficient and therefore lower weighted land area relative to commercial properties that would carry a much higher runoff coefficient. Users' control over the charging mechanism would be low under this approach. There is an improvement of the linkage between costs and benefits as compared to the funding structures described above. Data needed for this type of calculation is generally readily available from the Municipality's tax and G.I.S. databases, although the calculations are considered somewhat more difficult, since weighted land area needs to be calculated for each property category. Administratively it becomes somewhat more difficult and expensive to maintain such a funding structure, because the relative distribution of costs between



property categories would need to be recalculated with regular frequency to account for the effects of continued development in the Municipality.

Run-off Coefficient by Actual Land Area per Property

Taking the Run-off Coefficient by Property Type approach a step further, this method would apply run-off coefficients to each individual property's land area, thereby estimating each property's land area weighted by the runoff coefficient. Summing the weighted areas of all properties would facilitate the calculation of a charge per acre, which would then be applied to each property's area. The data requirements to support these calculations are greater, as the land area of each property would have to be known. The Municipality's tax database contains size information for most properties and can be supplemented by G.I.S. data where there are properties with missing size parameters. There would be additional effort requirements and costs associated with assessing the properties with missing size information. The main database, however, would be the Municipality's tax roll. With some adjustments to the software, the administrative costs could be kept to a minimum. Since each property's size would be taken into account individually, the linkage between the cost paid and the benefits derived from the system would potentially be greatly improved. Furthermore, property owners would exercise some control over the charging mechanism through their choice of property.

Actual Impervious Area per Property

As the heading suggests, this approach would require actual measurement of the impervious area of each property, either physically, through G.I.S., or through a combination of both. Each property owner would then pay an amount directly proportionate to the amount of impervious area on their property, and consequently the link between costs and benefits would be very strong. Property owners would also have a high degree of control over the amount they are required to pay, since they have direct control over pertinent site characteristics such as the amount of paved cover (size of driveway, patio, etc.). On the other hand, the desirable attributes of this rate structure come at a significant cost from an initial data acquisition and rate calculation perspective, as well as from the annual data maintenance perspective. Ongoing administration of the database would most likely require additional staff resources. It is noted that relative to the run-off coefficient method, the costs are significantly higher but



the linkage between the amount paid, and benefit derived from services is only marginally improved.

7.4 Evaluation of Funding Model Options

The funding model or rate structure options described in the previous section were discussed with Municipality staff and evaluated based on the five criteria provided above. The Run-off Coefficient by Actual Land Area per Property and Actual Impervious Area per Property models scored low on the "Ease of Calculation" criterion. Due to this and the potential need for additional staffing resources to implement, these models were not preferred and removed from further analysis. The Utility Rate model was also excluded from further analysis because of the lack of direct connection between water use and stormwater management service demands. Additionally, under this model, properties not receiving water services from the Municipality would not be charged for the service, despite benefiting from stormwater management services. Further the Run-off Coefficient model was reviewed however, data related to the run-off coefficients were not available in enough detail by varying types of properties and therefore, would have needed to be based on averages run-off coefficients used for new growth and/or from data in neighbouring municipalities.

The Municipality's current funding model, i.e., a uniform flat rate, along with a varied flat rate model were left for further consideration and analysis. The varied flat rate model considered the following:

- The type of properties (i.e., Residential, Non-Residential, Agriculture and Vacant Lands, and School Lands); and
- Size of properties to be group into three categories (small, medium, and large) for Residential and Non-Residential property types.

Rate forecasts for the status quo and alternative tiered flat rate funding models were modelled to provide the Municipality with the potential impacts on residents and businesses of changing the funding model. It is noted that the amount of funding required to be recovered does not change between the two funding model options.

For the alternative funding model, which combines elements of the per property and area rate funding models, was developed for the Municipality's consideration. In this option, the Municipality would impose a flat rate, varied by property type and size for



stormwater management services. The flat rate would vary based on use (residential or non-residential) and property size (varied by size groupings), agricultural and vacant properties would be exempt, and schools within a public or separate school board would not be considered due to a legislated mandatory exemption, under the Education Act. The types and property size groupings for the tiered rate model/structure are as follows:

Residential:

Small properties: Less than or equal to 0.25 acres

Medium properties: Greater than 0.25 acres and less than 1 acres

Large Properties: Greater than or equal to 1 acre

Non-Residential:

Small properties: Less than or equal to 5 acres

Medium properties: Greater than 5 acres and less than or equal to 15

acres

o Large Properties: Greater than 15 acres

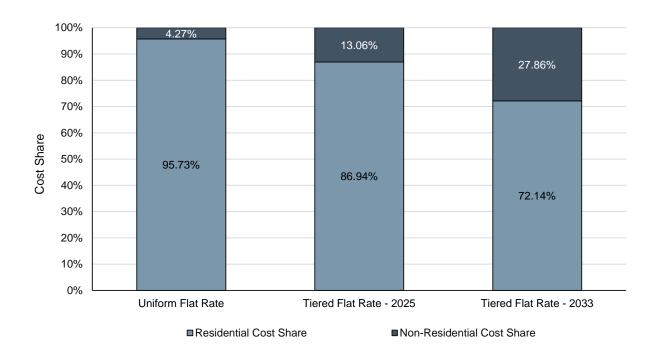
Advantages of a varied flat rate funding model over the Municipality's current uniform flat rate funding model include:

- Increased equity between properties that provide greater quantity and/or faster runoff quantities into the municipal stormwater system;
- A shift overtime to the share of stormwater costs being recovered from the residential properties to non-residential properties which tend to have less permeable surfaces and therefore, typically contribute more quantities and/or faster runoff of stormwater into the stormwater system; and
- Increased awareness of the importance of stormwater management and associated costs which can increase public support.

As noted above, with the tiered flat rate that is varied by property type and size, there is a shift in the amount of revenue being recovered from the residential property base to the non-residential property base. Figure 7-1 provides an illustration of the shift between the current uniform flat rate and the tiered flat rate.



Figure 7-1
Cost Share Between Residential and Non-Residential by Rate Funding Model/Structure





Chapter 8 Rate Forecast



8. Rate Forecast

8.1 Introduction

To summarize the financial plan developed thus far, Chapter 3 reviewed capital-related issues and Chapter 4 responds to the provincial directives to maintain and upgrade infrastructure to required levels. Chapter 5 provided a review of capital financing options. Chapter 6 established the operating forecast of expenditures including an annual capital reserve contribution. Finally, Chapter 7 summarizes the process undertaken to arrive at the potential funding model/rate structure options. The following sections describe the rate calculations and analysis undertaken to calculate the range of potential impacts for the two funding models. Additional work will be required to confirm the property data base at the time of implementation to ensure all residential and non-residential properties within the urban serviced areas of Dorchester and Thorndale are captured for billing purpose. Further, the Municipality will need to confirm the frequency and way in which billings will be provided to the eligible properties.

8.2 Stormwater Rate Calculations

As previously stated, two funding models have been developed, and the rate forecasts for each are discussed below.

8.2.1 Option 1 – Uniform Flat Rate per Property

For Option 1, a uniform flat rate is imposed on all properties regardless of size or use. The charge is calculated based on the growth forecast summarized in Section 2.2 of this report. Table 8-1 provides the rate forecast based on the level of funding required over the forecast period to fund the capital and operating expenditures, including lifecycle reserve transfers.

The stormwater rate, imposed on a per property basis, is forecasted to increase by 50% from \$70.74 in 2024 to \$106.11 in 2025, by 15% annually from 2026 to 2030, and then by \$5% annually from 2031 to 2033. The rate is forecasted to be \$247.07 in 2033.



Table 8-1 Municipality of Thames Centre Stormwater Rate Forecast and Bill Impacts Option 1 – Uniform Flat Rate per Property Basis (Status Quo)

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Stormwater Billing Recovery	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Total Number of Properties	2,615	3,185	3,252	3,387	3,548	3,728	3,928	4,144	4,384	4,645	4,922
Uniform Flat Annual Rate	\$68.16	\$70.74	\$106.11	\$122.03	\$140.33	\$161.38	\$185.59	\$213.43	\$224.10	\$235.30	\$247.07
Uniform Flat Monthly Rate	\$5.68	\$5.90	\$8.84	\$10.17	\$11.69	\$13.45	\$15.47	\$17.79	\$18.67	\$19.61	\$20.59
Annual Percentage Change - Per Property		4%	50.0%	15.0%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	5.0%



8.2.2 Option 2 – Tiered Flat Rate Varied by Type and Size of Property

For Option 2, the stormwater charge is calculated and imposed on a tiered (or varied) flat rate which differs based on the type and size of the property. Each property within the urban serviced areas of Dorchester and Thorndale are group by types (i.e., residential or non-residential) and then into size categories (i.e., small, medium or large), as noted in Section 7.4. The charge is calculated based on the growth forecast summarized in Section 2.2.2 of this report and the costs required to be recovered for capital and operating expenditures. Table 8-2 provides the forecast rate for each type and size of property and provides the percentage change annually to each rate.

Based on the comparison of current annual bills under the current uniform flat rate and this alternative tiered flat rate options, the following provides an example of the change in annual bill that various customers would experience in 2025 (see Table 8-2 for further details over the forecast period):

- For a small residential property, with a property size equal to or less than 0.25 acres, the annual cost for stormwater management services would increase from \$70.74 currently in 2024 to \$72.03(+2%) in 2025.
- For a medium sized residential property (> 0.25 and less than 1 acre), the annual stormwater bill would increase from \$70.74 currently in 2024 to \$144.07 (+104%) in 2025.
- For a large sized residential property (> or equal to 1 acre), the annual stormwater bill would increase from \$70.74 currently in 2024 to \$216.10 (+205%) in 2025.
- For a small non-residential property, with a property size equal to or less than 5 acres, the annual cost for stormwater management services would increase from \$70.74 currently in 2024 to \$265.00 (+275%) in 2025.
- For a medium sized non-residential property (> 5 and less than or equal to 15 acres), the annual stormwater bill would increase from \$70.74 currently in 2024 to \$530.00 (+649%) in 2025.
- For a large sized residential property (> 15 acre), the annual stormwater bill would increase from \$70.74 currently in 2024 to \$795.00 (+1024%) in 2025.



• For the forecast period from 2026 to 2028, all rates would increase by 13% annually over the 2025 rates, by14% annually in 2029 to 2030, and by 4% annually in 2031 to 2033.



Table 8-2 Municipality of Thames Centre Stormwater Rate Forecast and Bill Impacts Option 2 – Tiered Flat Rate per Property Based on Type and Size

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Stormwater Billing Recovery	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Annual Rates:											
Residential <=0.25 acres (Flat Rate)	\$68.16	\$70.74	\$72.03	\$81.28	\$91.94	\$104.24	\$118.50	\$134.97	\$140.54	\$146.49	\$152.97
Residential >0.25 & < 1 acre (Flat Rate)	\$68.16	\$70.74	\$144.07	\$162.56	\$183.87	\$208.49	\$236.99	\$269.95	\$281.09	\$292.98	\$305.94
Residential >=1 acre (Flat Rate)	\$68.16	\$70.74	\$216.10	\$243.84	\$275.81	\$312.73	\$355.49	\$404.92	\$421.63	\$439.48	\$458.91
Non-Residential <=5 acres (Flat Rate)	\$68.16	\$70.74	\$265.00	\$299.01	\$338.21	\$383.49	\$435.93	\$496.54	\$517.03	\$538.92	\$562.75
Non-Residential >5 & <= 15 acres (Flat Rate)	\$68.16	\$70.74	\$530.00	\$598.02	\$676.43	\$766.99	\$871.85	\$993.09	\$1,034.07	\$1,077.84	\$1,125.51
Non-Residential >15 acres (Flat Rate)	\$68.16	\$70.74	\$795.00	\$897.03	\$1,014.64	\$1,150.48	\$1,307.78	\$1,489.63	\$1,551.10	\$1,616.76	\$1,688.26
Annual Percentage Change:											
Residential <=0.25 acres (Flat Rate)		4%	2%	13%	13%	13%	14%	14%	4%	4%	4%
Residential >0.25 & < 1 acre (Flat Rate)		4%	104%	13%	13%	13%	14%	14%	4%	4%	4%
Residential >=1 acre (Flat Rate)		4%	205%	13%	13%	13%	14%	14%	4%	4%	4%
Non-Residential <=5 acres (Flat Rate)		4%	275%	13%	13%	13%	14%	14%	4%	4%	4%
Non-Residential >5 & <= 15 acres (Flat Rate)		4%	649%	13%	13%	13%	14%	14%	4%	4%	4%
Non-Residential >15 acres (Flat Rate)		4%	1024%	13%	13%	13%	14%	14%	4%	4%	4%



As part of future considerations under the preferred tired rate funding model/structure, the Municipality may wish to consider options for a credit program to recognize investments made by property owners to better manage stormwater on properties thereby giving them greater control over their stormwater bill. However, it is noted that the total value of the stormwater program must be funded, therefore, where a credit program is in place, it would result in higher charges to other properties unless an external funding source for the credit program is available/established.



Chapter 9 Considerations



9. Recommendations

Based on increasing financial pressures to the Municipality's stormwater system, it is recommended that the Municipality consider implementing a funding model/structure option that begins to take into consideration that different types and sizes of properties contribute differently to the stormwater management system verses continuing with the current approach of funding stormwater management services through a uniform flat rate structure.

One of the more compelling reasons for introducing a varied user fee is that the costs related to stormwater management would be more fairly distributed amongst benefitting properties. Runoff coefficients and impervious area are commonly used to assess the benefit derived from a municipal stormwater management program. However, these methods were not assessed partly due to lack of available data and complexity of calculating the charge. If the Municipality was to undertake further studies to understand the runoff generated by specific types and/or sizes of properties, it is recommended that it revisits the rate calculations to ensure an enhanced alignment between the fee and the benefit generated.

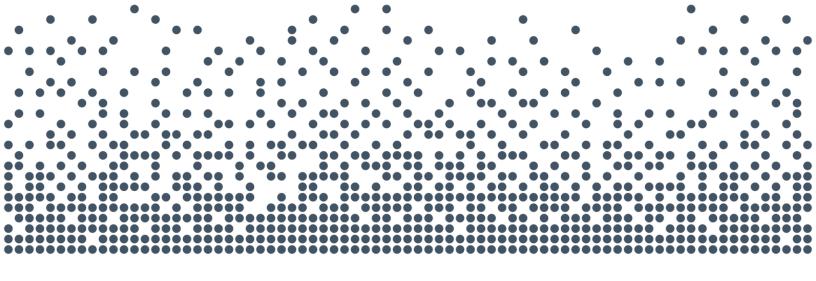
If a decision is made by Council to adopt a tiered flat rate, implementation would need to consider the billing process and frequency. Additionally, a process would need to be established to capture growth/changes in properties by the type and size category on an ongoing basis through a billing database in preparation for sending out stormwater bills to customers. The rates presented in this report should be reviewed based on the information in the billing database (i.e., land area by property type and category for billable properties), updated and adjusted as necessary.

As presented within this report, capital and operating expenditures have been identified and forecast to 2033 for stormwater management services. Based upon the foregoing, the following recommendations are identified for consideration by Municipality Council:

- 1. That Council provide for the recovery of all stormwater costs through full cost recovery rates, with increased transfers to reserves to assist with future asset management/replacement needs.
- 2. That Council consider the Capital Plan for stormwater as provided in Table 2-1 and the associated Capital Financing Plan as set out in Table 4-2.







Appendices



Appendix A Property Classification



Appendix A: Property Classification

Table A-1 Municipality of Thames Centre Property Classification

				Number of	Propertie	es		Tot	al Propert	y Size (ac	res)	Perc	entage of	Property 5	Size	
Property Code	Property Code Description	Property Classification	Small <=0.25	Medium >0.25 &	Large	Total	Total Count	Small <=0.25	Medium >0.25 &	Large	Total	Small <=0.25	Medium >0.25 &		Total	Precent of Total Properties
Residential			acres	< 1acres				acres	< 1acre			acres	< 1acre			
	Single-family detached not on water	Residential (Low Density)	1.605	806	45	2,456	2.459	315.59	338.60	76.22	730.41	43%	46%	10%	100%	
	Vacant residential land not on water	Residential (Low Density) Residential Vacant	268	20	2	2,436	2,459	38.97	9.31	3.30	51.58	76%	18%	6%	100%	
	Residential development land	Residential Vacant	200	- 20	5	290	5	30.91	9.31	9.50	9.50	70%	1076	100%	100%	
	Townhouse block - freehold units	Residential Vacant		-	2	2	2	-	-	4.00	4.00			100%	100%	
	Farm with residence - with or without secondary		-	-		1		-	-	31.60	31.60			100%	100%	
	structures; no farm outbuildings	Agricultural - Charged Stormwater	-	-	ı	·	'	-	-							
260	Vacant residential/commercial/industrial land owned	Agricultural/Vacant - Charged	-	-	1	1	1	-	-	15.00	15.00			100%	100%	
	by a non-farmer with a portion being farmed	Stormwater														
302	More than one structure used for residential	Residential (Medium Density)	1	1	1	3	3	0.25	0.31	1.16	1.72	15%	18%	67%	100%	
	purposes with a least one of the structures occupied permanently															
303	Residence with a commercial unit	Residential with Commercial Mix	5	11	2	18	18	1.08	5.29	3.10	9.47	11%	56%	33%	100%	
304	Residence with a commercial/industrial use building	Residential with Commercial/Industrial	1	2	2	5	6	0.25	0.82	4.00	5.07	5%	16%	79%	100%	
309	Freehold townhouse/rowhouse	Residential (Medium Density)	14	_		14	14	2.37	_	_	2.37	100%			100%	
	Semi-detached residential	Residential (Low Density)	53	1	_	54	54	6.15	0.45	_	6.60	93%	7%		100%	
	Single family detached on water – year round residence	Residential (Low Density)	6	33	7	46	46	1.19	18.82	10.93	30.94	4%	61%	35%	100%	
322	Semi-detached with both units under one ownership	Residential (Low Density)	3	4	-	7	7	0.59	1.60	-	2.19	27%	73%		100%	
332	Duplex	Residential (Low Density)	12	7	-	19	19	2.60	2.47	-	5.07	51%	49%		100%	
333	Residential property with three self-contained units	Residential (Medium Density)	2	2	-	4	4	0.45	0.84	-	1.29	35%	65%		100%	
334	Residential property with four self-contained units	Residential (Medium Density)	2	2	-	4	4	0.44	0.71	-	1.15	38%	62%		100%	
336	Residential property with six self-contained units	Residential (Medium Density)	-	-	1	1	1	-	-	1.93	1.93			100%	100%	
340	Multi-residential, with seven or more self-contained units	Residential (High Density)	-	1	3	4	4	-	0.80	4.50	5.30		15%	85%	100%	
369	Vacant land condominium (residential - improved) – condo plan registered against the land.	Residential/Vacant	77	7	-	84	84	9.91	2.05	-	11.96	83%	17%		100%	
370	Residential condominium	Residential (Medium Density)	44	-	-	44	44	6.00	-	-	6.00	100%			100%	
	Mobile home	Residential (Low Density)	1	-	-	1	1	0.18	-	-	0.18	100%			100%	
382	Mobile home park - more than one mobile home on	Residential (Low Density)	-	4	-	4	4	-	2.31	-	2.31		100%		100%	
	a parcel of land, which is a mobile park operation.															
Total Resid	ential Properties		2.094	901	72	3.067	3.072	386.02	384.38	165.24	935.64	41%	41%	18%	100%	68%
	res Per Property					, , , , ,		0.18	0.43	2.30		.,,	,,,	.,,		



Table A-1 (continued) Municipality of Thames Centre Property Classification

				Number of	Propertie	es		To	al Propert	ty Size (ad	cres)	Pero	entage of	Property	Size	
Property			Small	Medium	Large			Small	Medium	Large		Small	Medium	Large		Precent of
Code	Property Code Description	Property Classification				Total	Total				Total				Total	Total
			<=5	>5 & < 15 acres	>=15		Count	<=5	>5 & <	>=15		<=5	>5 & <	>=15		Properties
Non-Reside	l ntial		acres	15 acres	acres			acres	15 acres	acres		acres	15 acres	acres		
Agriculture																
J		Agricultural	-	1	-	1	1	-	10.67	-	10.67		100%		100%	
	operation			-			-								,	
Total Agric	ulture Properties		-	1	_	1	1	-	10.67	-	10.67		100%		100%	1%
Non-Reside													10070		10070	
Commercia																
400	Small office building, generally single tenant or	Commercial	7	-	-	7	7	8.85	-	-	8.85	100%			100%	
	owner-occupied under 7,500 sq ft															
230		Agricultural - Charged Stormwater	1	-	-	1	1	0.99	-	-	0.99	100%			100%	
	Small medical/dental building, generally single	Commercial	3	-	-	3	3	1.89	-	-	1.89	100%			100%	
	tenant or owner-occupied under 7,500 square feet															
405	Office use converted from house	Commercial	2	-	-	2	2	0.60	-	-	0.60	100%			100%	
406	Retail use converted from house	Commercial	7	-	-	7	7	1.30	-	-	1.30	100%			100%	
407	Retail lumber yard	Commercial	1	-	-	1	1	1.49	-	-	1.49	100%			100%	
408	Freestanding Beer Store/LCBO-not associated with	Commercial	2	-	-	2	2	0.86	-	-	0.86	100%			100%	
	power/shopping centre															
409	Retail - one storey, generally over 10,000 square feet	Commercial	-	1	-	1	1	-	8.00	-	8.00		100%		100%	
440	Retail - one storey, generally under 10,000 square	Commercial	7	_	_	7	7	4.13	-	_	4.13	100%			100%	
410	feet	Commercial	′	-	-	,	·	4.13	-	-	4.13	100%			100%	
/11		Commercial	1	_	_	1	1	0.38	-	_	0.38	100%			100%	
	Restaurant - fast food national chain	Commercial	1	-		1	1	0.59	-		0.59	100%			100%	
	Automotive fuel station with or without service	Commercial	1			1	1	1.14	-	-	1.14	100%			100%	
					_					_						
421	Speciality automotive shop/auto repair/collision service/car or truck wash	Commercial	2	1	-	3	3	3.66	13.00	-	16.66	22%	78%		100%	
422	Auto dealership	Commercial	1	-	-	1	1	0.83	-	-	0.83	100%			100%	
430	Neighbourhood shopping centre with more than two	Commercial	5	-	-	5	5	6.08	-	-	6.08	100%			100%	
	stores attached and under one ownership, without															
	anchor - generally less than 150,000 square feet															
432	Banks and similar financial institutions, including	Commercial	1	-	-	1	1	0.35	-	-	0.35	100%			100%	
	credit unions - typically single-tenanted, generally															
	less then 7,500 square feet															
435		Commercial	1	-	-	1	1	1.78	-	-	1.78	100%			100%	
	30,000 square feet															
471	Retail or office with residential unit(s)above or behind	Commercial	7	-	-	7	7	3.33	-	-	3.33	100%			100%	
	-less than 10,000 square feet gross building area															
	(GBA), street or onsite parking, with six or less															
	apartments, older downtown core															
477	Retail with office(s) - less than 10,000 square feet	Commercial	1	-	-	1	1	0.43	-	-	0.43	100%			100%	
	gross building area (GBA with offices above															
490	Golf course	Commercial	-	-	1	1	1	-	-	15.00	15.00			100%	100%	
496	Communication buildings	Commercial	2	-	-	2	2	1.13	-	-	1.13	100%			100%	
Total Comm	nercial		53	2	1	56	56	39.81	21.00	15.00	75.81	53%	28%	20%	100%	6%



Table A-1 (continued) Municipality of Thames Centre Property Classification

				Number of	Propertie	es		Tot	al Proper	ty Size (ac	res)	Pero	entage of	Property S	Size	
Property			Small	Medium	Large			Small	Medium	Large		Small	Medium	Large		Precent of
Code	Property Code Description	Property Classification	<=5	>5 & <	>=15	Total	Total Count	<=5	>5 & <	>=15	Total	<=5	>5 & <	>=15	Total	Total Properties
In direttical			acres	15 acres	acres			acres	15 acres	acres		acres	15 acres	acres		
Industrial	Vacant industrial land	Vacant		- 1		1	1	_	12.42	_	12.42		100%		100%	
	Heaw manufacturing (non-automotive)	Industrial	-	- '	1	1	1	-	12.42	15.00	15.00		100%	100%	100%	
	Standard industrial properties not specifically	Industrial	2	- 1	1	4	4	4.22	6.79	15.00	26.01	16%	26%	58%	100%	
320	identified by other Industrial Property Codes	Industrial	2	'		4	4	4.22	0.79	15.00	20.01	10%	20%	36%	100%	
523	Grain handling - Primary elevators (including	Industrial	-	1	-	1	1	-	5.04	-	5.04		100%		100%	
1	feedmills)					-							,.			
530	Warehousing	Industrial	5	-	-	5	5	7.39	-	-	7.39	100%			100%	
540	Other industrial (all other types not specifically	Industrial	13	4	3	20	20	24.90	30.17	45.00	100.07	25%	30%	45%	100%	
	defined)															
580	Industrial mall	Industrial	4	-	-	4	4	6.71	-	-	6.71	100%			100%	
591	Sewage treatment	Industrial	-	1	1	2	2	-	6.72	15.00	21.72		31%	69%	100%	
Total Indust	trial		24	8	6	38	38	43.22	61.14	90.00	194.36	22%	31%	46%	100%	14%
Institutional																
605	School (elementary or secondary, including private)	Institutional	-	4	1	5	5	-	32.02	15.00	47.02		68%	32%	100%	
608	Day care	Institutional	1	-	-	1	1	0.38	-	-	0.38	100%			100%	
626	Old age/retirement home	Institutional	1	-	-	1	1	3.20	-	-	3.20	100%			100%	
Total Institu	itional		2	4	1	7	7	3.58	32.02	15.00	50.60	7%	63%	30%	100%	4%
Special & E	xempt															
700	Place of worship - with a clergy residence	Institutional	1	-	-	1	1	0.52	-	-	0.52	100%			100%	
701	Place of worship - without a clergy residence	Institutional	6	-	-	6	6	6.85	-	-	6.85	100%			100%	
	Funeral home	Commercial	1	-	-	1	1	0.18	-	-	0.18	100%			100%	
718	Exhibition grounds/fair grounds	Institutional	-	-	2	2	2	-	-	30.00	30.00			100%	100%	
721	Non-commercial sports complex	Institutional	-	-	1	1	1	-	-	15.00	15.00			100%	100%	
731	Library and literary institutions	Institutional	2	-	-	2	2	1.57	-	-	1.57	100%			100%	
	Assembly hall, community hall	Institutional	1	-	-	1	1	0.25	-	-	0.25	100%			100%	
736	Clubs, private and fraternal	Commercial	1	-	1	2	3	1.85	-	15.00	16.85	11%		89%	100%	
Total Speci	al & Exempt		12	-	4	16	17	11.22	-	60.00	71.22	16%		84%	100%	5%
Governmen																
	Post Office or depot	Institutional	1	-	-	1	2	0.31	-	-	0.31	100%			100%	
	Conservation Authority Land	Institutional Vacant	-	-	1	1	1	-	-	15.00	15.00			100%	100%	
103	Municipal park (excludes Provincial parks, Federal parks, campgrounds)	Institutional Vacant	1	-	-	1	1	2.67	-	-	2.67	100%			100%	
130	Non-buildable land (walkways, buffer/berm, storm water management pond, etc.)	Institutional Vacant	3	-	-	3	3	4.93	-	-	4.93	100%			100%	
810	Fire Hall	Institutional	-	1	-	1	1	-	12.58	-	12.58		100%		100%	
812	Ambulance Station	Institutional	1	-	-	1	1	0.50	-	-	0.50	100%			100%	
Total Gover	rnment		6	1	1	8	9	8.41	12.58	15.00	35.99	23%	35%	42%	100%	3%
Total Non-l	Residential Properties		97	15	13	125	127	106.24	126.74	195.00	427.98	25%	30%	46%	100%	31%
Average Ac	res Per Property							1.10	8.45	15.00						
Grand Total	l		2,191	917	85	3,193	3,200	492.26	521.79	360.24	1,374.29	36%	38%	26%	100%	100%



Appendix B Detailed Rate Calculations



Appendix B: Detailed Rate Calculations

Table B-1 Municipality of Thames Centre Capital Budget Forecast (uninflated \$)

Beautifus.	Actual	Total					Foreca	st				
Description	2023	Total	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Capital Expenditures												
Porter Subdivision Watermain Replacement - Phase 2 Stormwater component (Combination with Roads and Water)	420,543	-	-	-	-	-	-	-	-	1	-	ı
Porter Subdivision Watermain Replacement - Phase 3 Stormwater component (Combination with Roads and Water)	-	611,500	50,000	ı	561,500	ı	,	-	ı		-	ı
Upper Queen Street/Railway Street - Design	-	951,000	150,000	801,000	-	-	-	-		-	-	-
2022 & Prior Year Commitments	440,238	-	-	-	-	-	-	-	-	-	-	-
Storm Pond Inspections	-	47,500	-	-	-	47,500	-	-	-	-	-	-
Thorndale Industrial Drain		1,650,000	-	-	1,650,000	-	-	-	-	-	-	-
Thorndale Road/King Street Urbanization		769,700	-	374,000	395,700	-	-	-		-	-	-
Dale Drive Reconstruction		165,000	-	-	-	20,000	145,000	-	-	-	-	-
Mill Road Urbanization		406,500	-	-	-	-	-	-	30,500	376,000	-	-
Studies:												
Stormwater Rate Study	-	60,000	-	-	-	-	30,000	-	-	-	-	30,000
Asset Management:												
Stormwater Facilities	-	109,200	-	-	-	-	53,500	-	-	-	55,700	-
Linear Inventory	-	47,180	-	-	47,180	-	-	-	-	-	-	-
Manholes	-	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	4,460	-	-	-	-	-	4,460	-	-	-	-
Total Capital Expenditures	\$860,781	\$4,822,040	\$200,000	\$1,175,000	\$2,654,380	\$67,500	\$228,500	\$4,460	\$30,500	\$376,000	\$55,700	\$30,000



Table B-2 Municipality of Thames Centre Capital Budget Forecast (inflated \$)

	Actual						Fo	precast				
Description	2023	Total	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Capital Expenditures												
Porter Subdivision Watermain Replacement -												
Phase 2 Stormwater component (Combination	420,543	-	-	-	-	-	-	-	-	-	-	-
with Roads and Water)												
Porter Subdivision Watermain Replacement -												
Phase 3 Stormwater component (Combination	-	700,000	50,000	-	650,000	-	-	-	-	-	-	-
with Roads and Water)												
Upper Queen Street/Railway Street - Design	-	1,050,000	150,000	900,000	-	-	-	1	-	-	-	-
2022 & Prior Year Commitments	440,238	-	-	-	-	-	-	•	-	-	-	-
Storm Pond Inspections	-	60,000	-	-	-	60,000	-		-	-	-	-
Thorndale Industrial Drain	-	1,700,000	-	-	1,700,000	-	-	-	-	-	-	-
Thorndale Road/King Street Urbanization	-	877,900	-	420,000	457,900	-	-	1	-	-	-	-
Dale Drive Reconstruction	-	225,000	-	-	-	25,000	200,000	1	-	-	-	-
Mill Road Urbanization	-	725,000	-	-	-	-	-	-	50,000	675,000	-	-
Studies:	-	-	-	-	-	-	-	•	-	-	-	-
Stormwater Rate Study	-	105,000	-	-	-	-	41,000	1	-	-	-	64,000
Asset Management:	-	-	-	-	-	-	-	-	-	-	-	-
Stormwater Facilities	-	183,000	-	-	-	-	74,000	-	-	-	109,000	-
Linear Inventory	-	55,000	-	-	55,000	-	-	-	-	-	-	-
Manholes	-	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	7,000	-	-	-	-	-	7,000	-	-	-	-
Total Capital Expenditures	\$860,781	\$5,687,900	\$200,000	\$1,320,000	\$2,862,900	\$85,000	\$315,000	\$7,000	\$50,000	\$675,000	\$109,000	\$64,000
Capital Financing												
Provincial/Federal Grants	846,795	3,020,000	-	1,320,000	1,700,000	-	-	-	-	-	-	-
Middlesex County Loan Requirements	-	935,000			935,000		·					,
Lifecycle Reserve Fund	13,986	1,732,900	200,000	-	227,900	85,000	315,000	7,000	50,000	675,000	109,000	64,000
Total Capital Financing	\$860,781	\$5,687,900	\$200,000	\$1,320,000	\$2,862,900	\$85,000	\$315,000	\$7,000	\$50,000	\$675,000	\$109,000	\$64,000

Table B-3
Municipality of Thames Centre
Schedule of Non-Growth-Related Loan Repayments (inflated \$)

Debenture	2023	Principal					Fc	orecast				
Year	2023	(Inflated)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
2023		,	-	-	-	-	-	1	-	-	-	-
2024		1		-	-	-	-	-	-	-	-	-
2025		-			-	-	-		-	-	-	-
2026		935,000				62,333	62,333	62,333	62,333	62,333	62,333	62,333
2027		-					-		-	-	-	-
2028		-							-	-	-	-
2029		-							-	-	-	-
2030		1								-	-	-
2031		-									-	-
2032		-										-
2033		-										
Total Annual Debt Charges	\$0	\$935,000	\$0	\$0	\$0	\$62,333	\$62,333	\$62,333	\$62,333	\$62,333	\$62,333	\$62,333



Table B-4
Municipality of Thames Centre
Stormwater Lifecycle Reserve Fund Continuity (inflated \$)

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Opening Balance	(99,017)	25,484	(42,570)	255,538	395,091	704,160	888,883	1,519,636	2,275,866	2,507,849	3,432,601
Transfer from Operating	138,486	132,780	293,098	359,706	380,262	482,294	607,956	761,605	857,810	966,446	1,087,533
Transfer to Capital	13,986	200,000	-	227,900	85,000	315,000	7,000	50,000	675,000	109,000	64,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	\$25,484	-\$41,736	\$250,528	\$387,344	\$690,353	\$871,454	\$1,489,840	\$2,231,241	\$2,458,676	\$3,365,295	\$4,456,134
Interest		(835)	5,011	7,747	13,807	17,429	29,797	44,625	49,174	67,306	89,123

Table B-5
Municipality of Thames Centre
Operating Budget Forecast (inflated \$)

	Actual	Budget					Forecast				
Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Expenditures											
Operating Costs											
Benefits	3,340	2,911	2,351	2,400	2,500	2,600	2,700	2,800	2,900	3,000	3,100
Studies / Assessments / Surveys	17,444	45,000	5,000	5,200	5,400	5,600	5,800	6,000	6,200	6,400	6,600
Sub-Contract / Contracted Services	1,674	35,000	35,000	36,100	37,200	38,300	39,400	40,600	41,800	43,100	44,400
Wages - Regular	17,327	9,617	9,622	9,900	10,200	10,500	10,800	11,100	11,400	11,700	12,100
Sub Total Operating	\$39,786	\$92,528	\$51,973	\$53,600	\$55,300	\$57,000	\$58,700	\$60,500	\$62,300	\$64,200	\$66,200
Capital-Related											
New Non-Growth Related Loan (Principal)	-	-	-	-	62,333	62,333	62,333	62,333	62,333	62,333	62,333
New Non-Growth Related Loant (Interest)	-	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Charge - Reserve Contribution (\$)	138,486	132,780	293,098	359,706	380,262	482,294	607,956	761,605	857,810	966,446	1,087,533
Sub Total Capital Related	\$138,486	\$132,780	\$293,098	\$359,706	\$442,595	\$544,628	\$670,290	\$823,938	\$920,143	\$1,028,779	\$1,149,866
Total Expenditures	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Revenues											
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stormwater Billing Recovery - Operating	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066



Table B-6 Municipality of Thames Centre Stormwater Rate Forecast – Rate Structure Option 1 Uniform Flat Rate Per Property (Status Quo)

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Stormwater Billing Recovery	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Total Number of Properties	2,615	3,185	3,252	3,387	3,548	3,728	3,928	4,144	4,384	4,645	4,922
Uniform Flat Annual Rate	\$68.16	\$70.74	\$106.11	\$122.03	\$140.33	\$161.38	\$185.59	\$213.43	\$224.10	\$235.30	\$247.07
Uniform Flat Monthly Rate	\$5.68	\$5.90	\$8.84	\$10.17	\$11.69	\$13.45	\$15.47	\$17.79	\$18.67	\$19.61	\$20.59
Annual Percentage Change - Per Property		4%	50.0%	15.0%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	5.0%

Table B-7 Municipality of Thames Centre Stormwater Rate Forecast Rate Structure Option 2 (Tiered Flat Rate by Customer Type and Property Size Category)

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total Stormwater Billing Recovery	\$178,272	\$225,308	\$345,071	\$413,306	\$497,895	\$601,628	\$728,990	\$884,438	\$982,443	\$1,092,979	\$1,216,066
Annual Rates:											
Residential <=0.25 acres (Flat Rate)	\$68.16	\$70.74	\$51.22	\$59.35	\$68.75	\$79.54	\$91.92	\$105.85	\$110.19	\$113.75	\$117.63
Residential >0.25 & < 1 acre (Flat Rate)	\$68.16	\$70.74	\$153.66	\$178.06	\$206.26	\$238.61	\$275.77	\$317.56	\$330.56	\$341.24	\$352.89
Residential >=1 acre (Flat Rate)	\$68.16	\$70.74	\$358.53	\$415.48	\$481.28	\$556.76	\$643.46	\$740.97	\$771.31	\$796.23	\$823.41
Non-Residential <=5 acres (Flat Rate)	\$68.16	\$70.74	\$281.71	\$326.45	\$378.15	\$437.45	\$505.58	\$582.19	\$606.03	\$625.61	\$646.96
Non-Residential >5 & <= 15 acres (Flat Rate)	\$68.16	\$70.74	\$422.56	\$489.68	\$567.23	\$656.18	\$758.36	\$873.28	\$909.04	\$938.41	\$970.45
Non-Residential >15 acres (Flat Rate)	\$68.16	\$70.74	\$704.26	\$816.13	\$945.38	\$1,093.64	\$1,263.94	\$1,455.47	\$1,515.06	\$1,564.02	\$1,617.41
Percentage Change in Annual Water Bill:											
Residential <=0.25 acres (Flat Rate)		3.8%	-28%	16%	16%	16%	16%	15%	4%	3%	3%
Residential >0.25 & < 1 acre (Flat Rate)		3.8%	117%	16%	16%	16%	16%	15%	4%	3%	3%
Residential >=1 acre (Flat Rate)		3.8%	407%	16%	16%	16%	16%	15%	4%	3%	3%
Non-Residential <=5 acres (Flat Rate)		3.8%	298%	16%	16%	16%	16%	15%	4%	3%	3%
Non-Residential >5 & <= 15 acres (Flat Rate)		3.8%	497%	16%	16%	16%	16%	15%	4%	3%	3%
Non-Residential >15 acres (Flat Rate)		3.8%	896%	16%	16%	16%	16%	15%	4%	3%	3%



Appendix C Stormwater Inventory Data



Appendix C: Stormwater Inventory Data

Table C-1 Municipality of Thames Centre Stormwater Facilities Inventory

Asset ID	Facility	Asset	Work	Year Installed	Estimated Life	Replacement Year	Replacement Cost (2024\$)	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
8221	Storm Water Management Ponds	Quail Run	Full Pond Cleanout	2005	40	2045	222,900	21	14,460	-
									suggested for 10 year capital	
8221	Storm Water Management Ponds	Quail Run	Forebay Cleanout	2005	27	2032	55,700	8	forecast	55,700
21150	Storm Water Management Ponds	Trails at Wye Creek	Full Pond Cleanout	2019	70	2089	724,600	65	25,467	-
21150	Storm Water Management Ponds	Trails at Wye Creek	North Forebay Cleanout	2019	20	2039	222,900	15	18,672	-
21150	Storm Water Management Ponds	Trails at Wye Creek	West Forebay Cleanout	2019	20	2039	78,000	15	6,534	-
21150	Storm Water Management Ponds	Trails at Wye Creek	East Forebay Cleanout	2019	20	2039	89,200	15	7,472	-
21152	Storm Water Management Ponds	Valleyview Too	Full Pond Cleanout	1998	86	2084	457,000	60	16,513	-
									suggested for 10 year capital	
21152	Storm Water Management Ponds	Valleyview Too	North Forebay Cleanout	1998	30	2028	25,600	4	forecast	25,600
									suggested for 10 year capital	
21152	Storm Water Management Ponds	Valleyview Too	South Forebay Cleanout	1998	30	2028	27,900	4	forecast	27,900
23174	Storm Water Management Ponds	Foxborough	Full Pond Cleanout	2023	70	2093	557,400	69	19,223	-
23174	Storm Water Management Ponds	Foxborough	East Forebay Cleanout	2023	23	2046	245,200	22	15,386	-
Total							\$2,706,400		\$123,725	\$109,200



Table C-2 Municipality of Thames Centre Stormwater Linear Inventory

Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
Not Assigned	Dorchester Road	Mains	STS 675 mm	Storm Sewer	17	675	50D CONC	2012	75	2087	8,690	63	309	-
Not Assigned	Dorchester Road	Mains	STS 675 mm	Storm Sewer	72	675	50D CONC	2012	86	2098	25,370	74	857	-
Not Assigned	Dorchester Road	Mains	STS 600 mm	Storm Sewer	9	600	65D CONC	2012	86	2098	3,840	74	130	-
Not Assigned	Dorchester Road	Mains	STS 675 mm	Storm Sewer	15	675	65D CONC	2012	86	2098	6,940	74	235	-
Not Assigned	Dorchester Road	Mains	STS 600 mm	Storm Sewer	5	600	65D CONC	2012	75	2087	2,470	63	88	-
Not Assigned	Dorchester Road	Mains	STS 675 mm	Storm Sewer	12	675	65D CONC	2012	75	2087	5,670	63	201	-
Not Assigned	Dorchester Road	Mains	STS 675 mm	Storm Sewer	9	675	65D CONC	2012	86	2098	4,850	74	164	-
Not Assigned	Catherine Street	Mains	STS 375 mm	Storm Sewer	29	375		2012	86	2098	8,480	74	287	-
Not Assigned	Catherine Street	Mains	STS 300 mm	Storm Sewer	29	300	PVC	2012	75	2087	7,570	63	269	-
Not Assigned	Catherine Street	Mains	STS 450 mm	Storm Sewer	27	450		2012	86	2098	9,880	74	334	-
Not Assigned	Catherine Street	Mains	STS 300 mm	Storm Sewer	15	300		2012	86	2098	4,090	74	138	-
Not Assigned	Catherine Street	Mains	STS 450 mm	Storm Sewer	4	450		2012	75	2087	1,250	63	44	-
Not Assigned	Catherine Street	Mains	STS 450 mm	Storm Sewer	4	450		2012	75	2087	1,250	63	44	-
Not Assigned	Catherine Street	Mains	STS 450 mm	Storm Sewer	9	450		2012	86	2098	2,570	74	87	-
Not Assigned	Catherine Street	Mains	STS 450 mm	Storm Sewer	12	450		2012	86	2098	3,290	74	111	-
ST 10 TO 11 22693	King Street	Mains	STS 450 mm	Storm Sewer	5	450	CONC	2021	86	2107	17,340	83	569	-
ST 11 TO 12 22695	King Street	Mains	STS 750 mm	Storm Sewer	103	750	CONC	2021	86	2107	174,940	83	5,742	-
ST 12 TO 13 22694	King Street	Mains	STS 750 mm	Storm Sewer	77	750	CONC	2021	86	2107	134,170	83	4,404	-
ST 13 TO 14 22696	King Street	Mains	STS 750 mm	Storm Sewer	99	750	CONC	2021	86	2107	176,440	83	5,791	-
ST 14 TO 15 22697	King Street	Mains	STS 600 mm	Storm Sewer	93	600	CONC	2021	75	2096	110,640	72	3,768	-
ST 15 TO 16 22698	King Street	Mains	STS 525 mm	Storm Sewer	77	525	CONC	2021	86	2107	79,230	83	2,601	-
ST 16 TO 17 22699	King Street	Mains	STS 450 mm	Storm Sewer	78	450	CONC	2021	86	2107	76,670	83	2,517	-
ST 15 TO CAP 22701	King Street	Mains	STS 250 mm	Storm Sewer	11	250	PVC	2021	86	2107	5,020	83	165	-
ST 13 TO CAP 22700	King Street	Mains	STS 300 mm	Storm Sewer	12	300	PVC	2021	86	2107	5,020	83	165	-
12 to 16	Ross Ave	Mains	STS 300 mm	Storm Sewer	60	300	PVC SDR 3	2022	86	2108	28,090	84	919	-
16 to 17	Ross Ave	Mains	STS 375 mm	Storm Sewer	55	375	PVC SDR 3	2022	86	2108	28,040	84	918	-
17 to 20	Ross Ave	Mains	STS 300 mm	Storm Sewer	57	300	PVC SDR 3	2022	86	2108	28,630	84	937	-
20 to 21	Ross Ave	Mains	STS 300 mm	Storm Sewer	57	300	PVC SDR 3	2022	86	2108	26,450	84	866	-
21 to 22	Ross Ave	Mains	STS 300 mm	Storm Sewer	91	300	PVC SDR 3	2022	86	2108	42,300	84	1,385	-
22 to 23	Ross Ave	Mains	STS 375 mm	Storm Sewer	9	375	PVC SDR 3	2022	75	2097	4,570	73	155	-
23 to 19	Ross Ave	Mains	STS 450 mm	Storm Sewer	99	450	PVC SDR 3	2022	86	2108	62,600	84	2,049	-
19 to 18	Patricia Ave	Mains	STS 375 mm	Storm Sewer	68	375	PVC SDR 3	2022	86	2108	34,700	84	1,136	-
18 to 17	Patricia Ave	Mains	STS 375 mm	Storm Sewer	68	375	PVC SDR 3	2022	86	2108	39,060	84	1,279	-
19 to 24	Patricia Ave	Mains	STS 525 mm	Storm Sewer	45	525	CONC	2022	86	2108	26,570	84	870	-
24 to 25	Patricia Ave	Mains	STS 525 mm	Storm Sewer	60	525	CONC	2022	86	2108	35,750	84	1,170	-
12 to 13	David Street	Mains	STS 450 mm	Storm Sewer	64	450	PVC SDR 3	2022	86	2108	40,730	84	1,333	-
13 to 14	David Street	Mains	STS 450 mm	Storm Sewer	64	450	PVC SDR 3	2022	86	2108	36,370	84	1,191	-
14 to 15	David Street	Mains	STS 450 mm	Storm Sewer	68	450	PVC SDR 3	2022	86	2108	38,580	84	1,263	-
15 to 26	David Street	Mains	STS 525 mm	Storm Sewer	14	525	CONC	2022	86	2108	30,270	84	991	-
15 to EX CB B	David Street	Mains	STS 450 mm	Storm Sewer	15	450	PVC SDR 3	2022	86	2108	12,760	84	418	-
25 to 27	Patricia Ave	Mains	STS 600 mm	Storm Sewer	17	600	CONC	2022	86	2108	33,690	84	1,103	-
25 to DICB 4	Patricia Ave	Mains	STS 375 mm	Storm Sewer	15	375	VC SDR 3	2022	75	2097	11,980	73	406	-
19043	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	15	300	CSP	2002	86	2088	7,370	64	260	-
19044	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	10	300	HDPE	2002	86	2088	4,690	64	166	-
19045	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	7	300	HDPE	2002	75	2077	3,500	53	133	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed		Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19046	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	970	64	34	-
19047	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	8	300	CSP	2002	75	2077	4,000	53	152	-
19048	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	3	300	CSP	2002	75	2077	1,540	53	58	-
19049	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	75	2077	830	53	31	
19050	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	22	300	HDPE	2002	75	2077	10,620	53	403	-
19051	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	8	300	CSP	2002	75	2077	3,850	53	146	-
19052	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	75	2077	840	53	32	-
19053	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	29	300	HDPE	2002	86	2088	14,020	64	495	-
19054	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	6	300	CSP	2002	86	2088	2,990	64	106	-
19055 19056	Hamilton Road Drain Hamilton Road Drain	Mains Mains	STS 300 mm STS 300 mm	Storm Sewer Storm Sewer	15	300 300	CSP HDPE	2002	86 86	2088 2088	7,420 1,230	64 64	262 43	-
19057	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	11	300	HDPE	2002	75	2077	5,090	53	193	
19058	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	11	300	HDPE	2002	86	2088	670	64	24	
19059	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	7	300	HDPE	2002	86	2088	3,590	64	127	-
19060	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	10	300	HDPE	2002	75	2077	4,660	53	177	-
19061	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	1,100	64	39	-
19062	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	11	300	CSP	2002	86	2088	5,300	64	187	-
19063	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	8	300	HDPE	2002	86	2088	4,010	64	142	_
19064	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	1.040	64	37	-
19065	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	8	300	HDPE	2002	86	2088	3,780	64	134	-
19066	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	75	2077	1,010	53	38	-
19067	King Street	Mains	STS 250 mm	Storm Sewer	8	250	HDPE	1965	75	2040	3,930	16	313	-
19068	Porter Subdivision Drain	Mains	STS 250 mm	Storm Sewer	74	250	PVC	1979	75	2054	35,560	30	1,814	-
19069	Hamilton Road Drain Relocation	Mains	STS 250 mm	Storm Sewer	8	250	PVC	1992	86	2078	3,850	54	145	-
19070	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	14	300	HDPE	2002	86	2088	6,750	64	238	-
19071	King Street	Mains	STS 250 mm	Storm Sewer	12	250	CONC	1980	86	2066	5,910	42	249	-
19072	Hamilton Road Drain	Mains	STS 250 mm	Storm Sewer	10	250	CSP	2002	86	2088	4,550	64	161	-
19073	King Street	Mains	STS 250 mm	Storm Sewer	15	250	CONC	1980	75	2055	6,990	31	349	-
19074	Porter Subdivision Drain	Mains	STS 525 mm	Storm Sewer	134	525	CONC	1979	86	2065	110,230	41	4,708	-
19075	King Street	Mains	STS 250 mm	Storm Sewer	8	250	CONC	1980	75	2055	4,060	31	203	-
19076	Porter Subdivision Drain	Mains	STS 675 mm	Storm Sewer	92	675	CONC	1979	86	2065	122,700	41	5,241	-
19077	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	1	300	HDPE	2002	86	2088	620	64	22	-
19078	King Street	Mains	STS 250 mm	Storm Sewer	12	250	CONC	1980	86	2066	5,530	42	233	-
19079	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	300	HDPE	2002	86	2088	620	64	22	-
19080	Porter Subdivision Drain	Mains	STS 300 mm	Storm Sewer	133	300	PVC	1979	86	2065	63,990	41	2,733	-
19081	Hamilton Road Drain	Mains	STS 375 mm	Storm Sewer	3	375	PVC	2002	86	2088	2,340	64 41	83	-
19082	Porter Subdivision Drain	Mains Mains	STS 200 mm	Storm Sewer Storm Sewer	99	200	PVC CONC	1979 1979	86 86	2065	47,230	41	2,017	-
19083 19084	Porter Subdivision Drain	Mains	STS 250 mm STS 250 mm	Storm Sewer	13	250 250	CSP	2002	86	2065 2088	6,150 2,970	64	263 105	
19084	Hamilton Road Drain Hamilton Road Drain	Mains	STS 250 mm	Storm Sewer	11	300	HDPE	2002	86	2088	5,300	64	105	-
19085	Hamilton Road Drain Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	11	300	HDPE	2002	75	2088	7.180	53	272	-
19086	Hamilton Road Drain	Mains	STS 250 mm	Storm Sewer	9		CSP	2002	86	2077	4.310	64	152	-
19088	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	17	300	HDPE	2002	75	2077	7,970	53	302	



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19089	Hamilton Road Drain	Mains	STS 450 mm	Storm Sewer	10	450	CSP	1990	75	2065	7,800	41	333	-
19090	Hamilton Road Drain	Mains	STS 600 mm	Storm Sewer	21	600	CSP	2002	86	2088	23,520	64	831	-
19091	Hamilton Road Drain	Mains	STS 250 mm	Storm Sewer	7	250	CSP	2002	75	2077	3,360	53	127	-
19092	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	8	300	CSP	2002	86	2088	4,090	64	144	-
19093	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	8	300	CSP	2002	86	2088	3,850	64	136	-
19094	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	8	300	CSP	2002	75	2077	3,850	53	146	-
19095	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	3	300	HDPE	2002	75	2077	1,300	53	49	-
19096	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	14	300	HDPE	2002	86	2088	6,760	64	239	-
19097	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	1	300	HDPE	2002	86	2088	670	64	24	-
19098	King Street	Mains	STS 250 mm	Storm Sewer	10	250	HDPE	2006	86	2092	4,560	68	158	-
19099	Hamilton Road Drain	Mains	STS 200 mm	Storm Sewer	10	200	CSP	2002	86	2088	4,840	64	171	-
19100	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	1	300	HDPE	2002	86	2088	700	64	25	-
19101	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	18	300	HDPE	2002	86	2088	8,490	64	300	-
19102	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	11	300	CSP	2002	86	2088	5,300	64	187	-
19103	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	75	2077	1,120	53	42	-
19104	King Street	Mains	STS 250 mm	Storm Sewer	12	250	CONC	1980	75	2055	5,910	31	295	-
19105	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	30	300	HDPE	2002	75	2077	14,650	53	555	-
19106	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	20	300	HDPE	2002	86	2088	9,610	64	339	-
19107	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	1	300	HDPE	2002	75	2077	700	53	27	-
19108	Hamilton Road Drain	Mains	STS 450 mm	Storm Sewer	35	450	CSP	2002	86	2088	27,380	64	967	-
19109	Hamilton Road Drain	Mains	STS 450 mm	Storm Sewer	50	450	CSP	2002	86	2088	39,530	64	1,397	-
19110	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	7	300	CSP	2002	86	2088	3,370	64	119	-
19111	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	920	64	33	-
19112	King Street	Mains	STS 200 mm	Storm Sewer	9	200	HDPE	1965	75	2040	4,180	16	333	-
19113	King Street	Mains	STS 250 mm	Storm Sewer	9	250	CONC	1980	86	2066	4,160	42	176	-
19114	King Street	Mains	STS 250 mm	Storm Sewer	17	250	CONC	1980	86	2066	8,110	42	342	-
19115	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	7	300	CSP	2002	86	2088	3,370	64	119	-
19116	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	920	64	33	-
19117	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	9	300	CSP	2002	75	2077	4,480	53	170	-
19118	Porter Subdivision Drain	Mains	STS 450 mm	Storm Sewer	20	450	CONC	1979	86	2065	15,760	41	673	-
19119	Porter Subdivision Drain	Mains	STS 300 mm	Storm Sewer	102	300	PVC	1979	75	2054	49,100	30	2,505	-
19120	Porter Subdivision Drain	Mains	STS 375 mm	Storm Sewer	20	375	CONC	1979	75	2054	15,050	30	768	-
19121	Porter Subdivision Drain	Mains	STS 200 mm	Storm Sewer	58	200	PVC	1979	75	2054	27,530	30	1,405	-
19122	Porter Subdivision Drain	Mains	STS 300 mm	Storm Sewer	186	300	PVC	1979	75	2054	89,690	30	4,576	-
19123	King Street	Mains	STS 250 mm	Storm Sewer	69	250	CONC	1980	75	2055	33,040	31	1,652	-
19124	King Street	Mains	STS 250 mm	Storm Sewer	60	250	CONC	1980	86	2066	28,820	42	1,216	-
19125	King Street	Mains	STS 250 mm	Storm Sewer	21	250	CONC	1980	86	2066	10,030	42	423	-
19126	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	11	300	HDPE	2002	86	2088	5,320	64	188	-
19127	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	6	300	HDPE	2002	86	2088	3,000	64	106	-
19128	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	6	300	CSP	2002	86	2088	3,030	64	107	-
19129	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	1	300	HDPE	2002	75	2077	450	53	17	-
19130	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	9	300	CSP	2002	75	2077	4,570	53	173	-
19131	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	9	300	CSP	2002	86	2088	4,480	64	158	-
19132	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	10	300	HDPE	2002	86	2088	4,770	64	169	-
19133	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	20	300	CSP	2002	86	2088	9,630	64	340	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Life	Replacement Year	Total Main Replacement Costs	Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19134	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	13	300	HDPE	2002	86	2088	6,230	64	220	-
19135	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	14	300	HDPE	2002	75	2077	6,960	53	264	-
19136	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	10		CSP	2002	75	2077	4,570		173	-
19137	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	7	300	CSP	2002	86	2088	3,370	64	119	-
19138	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	950	64	34	-
19139	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	27	300	HDPE	2002	86	2088	12,920	64	456	-
19140	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	1,180	64	42	-
19141	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	11	300	HDPE	2002	86	2088	5,510	64	195	-
19142	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	1,080	64	38	-
19143	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	35	300	HDPE	2002	86	2088	17,030	64	602	-
19144	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	1	300	HDPE	2002	86	2088	280	64	10	-
19145	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	4	300	CSP	2002	86	2088	1,930	64	68	-
19146	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	5	300	CSP	2002	86	2088	2,630	64	93	-
19147	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	7	300	CSP	2002	75	2077	3,420	53	130	-
19148	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	2	300	HDPE	2002	86	2088	1,120	64	40	-
19149	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	/	300	CSP	2002	86	2088	3,130	64	111	-
19150	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	3	300	HDPE	2002	86	2088	1,400	64	49	-
19151	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	16	300	HDPE	2002	86	2088	7,590	64	268	-
19152	Hamilton Road Drain	Mains	STS 300 mm	Storm Sewer	15	300	HDPE	2002	86	2088	7,150	64	253	-
19153	Library Drain	Mains	STS 450 mm	Storm Sewer	6		PVC	1977	86	2063	4,860	39	213	-
19154	Petersson Drain "A"	Mains	STS 350 mm	Storm Sewer	22	325	CSP	1982	86	2068	16,040	44	661	-
19155	Hamilton Road Drain Relocation	Mains	STS 300 mm	Storm Sewer	35 14	300 300	PVC HDPE	1992 1992	86 86	2078	16,710	54 54	629 246	-
19156	Hamilton Road Drain Relocation	Mains	STS 300 mm	Storm Sewer						2078	6,550			-
19157	Queen Street Municipal Drain 1963	Mains	STS 250 mm	Storm Sewer	56 61	250	CONC	1963	86	2049	26,740	25 41	1,536	-
19158	Porter Subdivision Drain	Mains	STS 300 mm	Storm Sewer Storm Sewer	6	300 300	CONC	1979 1979	86 86	2065	29,380 2,920	41	1,255 125	-
19159 19160	Porter Subdivision Drain	Mains Mains	STS 300 mm STS 200 mm	Storm Sewer	60	200	CSP	1979	86	2065 2056	28,620	32	1,404	-
19161	Petersson Drain	Mains	STS 250 mm	Storm Sewer	00	250	CSP	1961	86	2047	1,610	23	98	
19162	Petersson Drain	Mains	STS 250 mm	Storm Sewer	15	250	CSP	1961	86	2047	7,420	23	451	
19163	Petersson Drain	Mains	STS 600 mm	Storm Sewer	15		CSP	1961	86	2047	16,700	23	1.016	
19164	Petersson Drain	Mains	STS 450 mm	Storm Sewer	22	450	CSP	1982	86	2068	17.340	44	715	-
19165	Petersson Drain	Mains	STS 350 mm	Storm Sewer	14	350	CSP	1982	86	2068	10,490	44	433	_
19166	Fox Drain	Mains	STS 250 mm	Storm Sewer	13	250	CONC	1976	75	2051	6.340	27	346	-
19167	Fox Drain	Mains	STS 250 mm	Storm Sewer	88	250	CONC	1976	86	2062	42.010	38	1.868	
19168	Petersson Drain "A"	Mains	STS 200 mm	Storm Sewer	75	200	CONC	1982	86	2068	35,840	44	1,478	
19169	Petersson Drain "A"	Mains	STS 350 mm	Storm Sewer	93	350	CONC	1961	86	2047	70.080	23	4.262	-
19170	Petersson Drain "A"	Mains	STS 200 mm	Storm Sewer	91	200	CONC	1982	86	2068	43,420	44	1.790	
19170	Petersson Drain "A"	Mains	STS 200 mm	Storm Sewer	7	200	STEEL	1982	86	2068	3,340	44	138	-
19172	Petersson Drain "A"	Mains	STS 200 mm	Storm Sewer	1	200	STEEL	1982	86	2068	1,910	44	79	-
19173	Library Drain	Mains	STS 450 mm	Storm Sewer	102	450	PVC	1988	86	2074	80.020	50	3.110	-
19174	Library Drain	Mains	STS 450 mm	Storm Sewer	102	450	PVC	1988	86	2074	84.340		3,110	-
19174	Library Drain	Mains	STS 450 mm	Storm Sewer	58	450	PVC	1988	75	2063	45,900	39	2.012	-
19176	Library Drain	Mains	STS 450 mm	Storm Sewer	57	450	PVC	1988	86	2074	44,780	50	1,740	-
19177	Library Drain	Mains	STS 500 mm	Storm Sewer	23	500	CSP	1988	86	2074	18.800	50	731	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19178	Library Drain	Mains	STS 525 mm	Storm Sewer	3	525	CSP	1988	86	2074	2,470	50	96	-
19179	Library Drain	Mains	STS 450 mm	Storm Sewer	63	450	PVC	1988	86	2074	49,810	50	1,936	-
19180	Fox Drain "A"	Mains	STS 200 mm	Storm Sewer	98	200	CONC	1976	86	2062	46,730	38	2,078	-
19181	Fox Drain	Mains	STS 300 mm	Storm Sewer	114	300	CONC	1976	86	2062	54,820	38	2,437	-
19182	Thorndale Drain	Mains	STS 350 mm	Storm Sewer	98	350	CONC	1951	86	2037	73,720	13	6,932	-
19183	Thorndale Drain	Mains	STS 350 mm	Storm Sewer	51	350	CONC	1951	86	2037	38,200	13	3,592	-
19184	Thorndale Drain	Mains	STS 400 mm	Storm Sewer	3	400	PVC	1951	86	2037	2,630	13	247	-
19185	Thorndale Drain	Mains	STS 300 mm	Storm Sewer	11	300	CONC	1951	86	2037	5,090	13	479	-
19186	Thorndale Drain	Mains	STS 350 mm	Storm Sewer	61	350	PVC	1951	86	2037	45,880	13	4,314	-
19187	Thorndale Drain	Mains	STS 300 mm	Storm Sewer	59	300	CONC	1951	86	2037	28,440	13	2,674	-
19188	Fox Drain	Mains	STS 250 mm	Storm Sewer	93	250	CONC	1976	86	2062	44,560	38	1,981	-
19189	Thomdale Drain	Mains	STS 450 mm	Storm Sewer	15		CSP	1951	86	2037	11,950	13	1,124	-
19190	Thorndale Drain	Mains	STS 350 mm	Storm Sewer	25	350	HDPE	1951	86	2037	18,560	13	1,745	-
19191	Thorndale Drain	Mains	STS 250 mm	Storm Sewer	24	250	CONC	1951	86	2037	11,590	13	1,090	-
19192	Thorndale Drain	Mains	STS 250 mm	Storm Sewer	129	250	CONC	1951	86	2037	61,960	13	5,826	-
19193	Thorndale Drain	Mains	STS 350 mm	Storm Sewer	7	350	HDPE	1951	86	2037	5,310	13	499	-
19194	Catherine Street Drain, North Branch	Mains	STS 200 mm	Storm Sewer	38	200	HDPE	1995	86	2081	18,040	57	664	-
19195	Catherine Street Drain, North Branch	Mains	STS 200 mm	Storm Sewer	3	200	HDPE	1995	86	2081	1,400	57	52	-
19196	Catherine Street Drain, North Branch	Mains	STS 200 mm	Storm Sewer	17	200	HDPE	1995	86	2081	7,990	57	294	-
19197	Catherine Street Drain, North Branch	Mains	STS 300 mm	Storm Sewer	192	300	HDPE	1995	86	2081	92,360	57	3,402	-
19198	Catherine Street Drain, North Branch	Mains	STS 250 mm	Storm Sewer	99	250	HDPE	1995	86	2081	47,380	57	1,745	-
19199	Catherine Street Drain, South Branch	Mains	STS 150 mm	Storm Sewer	10	150	HDPE	1995	86	2081	7,240	57	267	-
19200	Catherine Street Drain, South Branch	Mains	STS 200 mm	Storm Sewer	263	200	HDPE	1995	86	2081	125,670	57	4,629	-
19201	Catherine Street Drain, South Branch	Mains	STS 150 mm	Storm Sewer	80	150	HDPE	1995	86	2081	58,020	57	2,137	-
19202	Catherine Street Drain	Mains	STS 375 mm	Storm Sewer	80	375	HDPE	1995	86	2081	60,110	57	2,214	-
19203	Catherine Street Drain	Mains	STS 375 mm	Storm Sewer	102	375	HDPE	1995	86	2081	76,750	57	2,827	-
19204	Catherine Street Drain	Mains	STS 375 mm	Storm Sewer	6	375	HDPE	1995	86	2081	4,520	57	166	-
19205	Catherine Street Drain, South Branch	Mains	STS 200 mm	Storm Sewer	50	200	HDPE	1995	86	2081	23,830	57	878	-
19206	Porter Subdivision Drain	Mains	STS 750 mm	Storm Sewer	94	750	CONC	1979	86	2065	138,220	41	5,904	-
19207	Catherine Street Drain, North Branch	Mains	STS 200 mm	Storm Sewer	31	200	HDPE	1995	86	2081	14,880	57	548	-
19208	Catherine Street Drain, North Branch	Mains	STS 400 mm	Storm Sewer	32	400	CSP	1995	86	2081	24,900	57	917	-
19209	Porter Subdivision Drain	Mains	STS 750 mm	Storm Sewer	183	750	CONC	1979	86	2065	270,120	41	11,537	-
19210	Porter Subdivision Drain	Mains	STS 750 mm	Storm Sewer	259	750	CONC	1979	86	2065	381,270	41	16,285	-
19211	Walker Drain	Mains	STS 675 mm	Storm Sewer	52	675	CONC	1983	86	2069	69,780	45	2,846	-
19212	Hamilton Park Drain	Mains	STS 900 mm	Storm Sewer	49	900	HDPE	1978	86	2064	91,760	40	3,970	-
19213	Hamilton Park Drain	Mains	STS 900 mm	Storm Sewer	17	900	HDPE	1978	86	2064	30,640	40	1,326	-
19214	Hamilton Park Drain	Mains	STS 900 mm	Storm Sewer	73	900	HDPE	1978	86	2064	135,680	40	5,870	-
19215	Hamilton Park Drain	Mains	STS 900 mm	Storm Sewer	100	900	HDPE	1978	86	2064	186,310	40	8,060	-
19216	Hamilton Park Drain	Mains	STS 900 mm	Storm Sewer	125	900	HDPE	1978	86	2064	230,800	40	9,985	-
19217	Hamilton Park Drain	Mains	STS 750 mm	Storm Sewer	13	750	CSP	1978	86	2064	19,450	40	841	-
19218	Pondview Court	Mains	STS 375 mm	Storm Sewer	66	375	CONC	1987	86	2073	49,860	49	1,955	-
19219	Pondview Court	Mains	STS 375 mm	Storm Sewer	76	375	CONC	1987	86	2073	57,230	49	2,244	-
19220	Oakwood Drive SWM	Mains	STS 1050 mm	Storm Sewer	40	1,050	CONC	2004	86	2090	87,320	66	3,054	-
19221	Charles Street Drain	Mains	STS 300 mm	Storm Sewer	58	300	PVC	1989	86	2075	27,790	51	1,071	-
19222	Byron Avenue	Mains	STS 675 mm	Storm Sewer	9	675	CONC	1990	86	2076	11,760	52	449	



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19223	Charles Street Drain	Mains	STS 300 mm	Storm Sewer	53	300	PVC	1989	86	2075	25,620	51	987	-
19224	Pondview Court	Mains	STS 450 mm	Storm Sewer	77	450	CONC	1987	75	2062	60,480	38	2,689	-
19225	Hamilton Road	Mains	STS 600 mm	Storm Sewer	95	600	CONC	2002	86	2088	104,590	64	3,695	-
19226	Queen Street Municipal Drain	Mains	STS 375 mm	Storm Sewer	91	375	PVC	1970	86	2056	68,330	32	3,351	-
19227	Thames Street	Mains	STS 200 mm	Storm Sewer	2	200	PVC	1989	86	2075	910	51	35	-
19228	Hamilton Road	Mains	STS 600 mm	Storm Sewer	93	600	CONC	2002	86	2088	101,600	64	3,589	-
19229	Pondview Court	Mains	STS 300 mm	Storm Sewer	54	300	CONC	1987	86	2073	25,990	49	1,019	-
19230	Thames Street	Mains	STS 375 mm	Storm Sewer	104	375	CONC	1989	86	2075	78,330	51	3,018	-
19231	Turnberry Drive	Mains	STS 525 mm	Storm Sewer	27	525	CONC	2004	86	2090	22,380	66	783	-
19232	Pondview Court	Mains	STS 375 mm	Storm Sewer	78	375	CONC	1987	86	2073	58,860	49	2,308	-
19233	Turnberry Drive	Mains	STS 300 mm	Storm Sewer	17	300	PVC	2004	86	2090	8,180	66	286	-
19234	Foxhollow Drive	Mains	STS 450 mm	Storm Sewer	28	450	PVC	2003	86	2089	21,900	65	770	-
19235	Pondview Court	Mains	STS 450 mm	Storm Sewer	9	450	CONC	1987	86	2073	6,800	49	267	-
19236	Oakwood Drive	Mains	STS 450 mm	Storm Sewer	90	450	CONC	1995	86	2081	70,770	57	2,607	-
19237	Foxhollow Drive	Mains	STS 600 mm	Storm Sewer	37	600	CONC	2003	86	2089	40,970	65	1,440	-
19238	Hamilton Road	Mains	STS 450 mm	Storm Sewer	28	450	CONC	1970	86	2056	22,030	32	1,080	-
19239	Oakwood Drive	Mains	STS 450 mm	Storm Sewer	83	450	CONC	1995	86	2081	65,170	57	2,400	-
19240	Oakwood Drive	Mains	STS 300 mm	Storm Sewer	39	300	CONC	1995	86	2081	18,630	57	686	-
19241	Oakwood Drive	Mains	STS 300 mm	Storm Sewer	39	300	CONC	1995	86	2081	18,680	57	688	-
19242	Foxhollow Drive	Mains	STS 375 mm	Storm Sewer	39	375	PVC	2006	86	2092	29,450	68	1,020	-
19243	Hamilton Road	Mains	STS 600 mm	Storm Sewer	13	600	CONC	1970	86	2056	14,210	32	697	-
19244	Forest Grove Crescent	Mains	STS 675 mm	Storm Sewer	89	675	CONC	2003	86	2089	118,240	65	4,156	-
19245	Foxhollow Drive	Mains	STS 300 mm	Storm Sewer	84	300	PVC	2006	86	2092	40,480	68	1,402	-
19246	Foxhollow Drive	Mains	STS 375 mm	Storm Sewer	58	375	PVC	2006	86	2092	43,500	68	1,507	-
19247	Forest Grove Crescent	Mains	STS 675 mm	Storm Sewer	23	675	CONC	2003	86	2089	30,180	65	1,061	-
19248	Mapleridge Crescent	Mains	STS 250 mm	Storm Sewer	27	250	PVC	2003	86	2089	12,750	65	448	-
19249	Hamilton Road	Mains	STS 600 mm	Storm Sewer	69	600	CONC	1970	75	2045	75,770	21	4,915	-
19250	Forest Grove Crescent	Mains	STS 750 mm	Storm Sewer	55	750	CONC	2003	86	2089	81,460	65	2,863	-
19251	Turnberry Drive	Mains	STS 600 mm	Storm Sewer	80	600	CONC	2004	86	2090	87,520	66	3,061	-
19252	Forest Grove Crescent	Mains	STS 675 mm	Storm Sewer	120	675	CONC	2003	86	2089	159,380	65	5,602	-
19253	Mapleridge Crescent	Mains	STS 250 mm	Storm Sewer	27	250	PVC	2003	86	2089	12,850	65	452	-
19254	Turnberry Drive	Mains	STS 600 mm	Storm Sewer	90	600	CONC	2004	86	2090	99,000	66	3,462	-
19255	Oakwood Drive	Mains	STS 375 mm	Storm Sewer	60	375	CONC	1995	86	2081	45,020	57	1,658	-
19256	Mapleridge Crescent	Mains	STS 250 mm	Storm Sewer	94	250	PVC	2003	86	2089	45,230	65	1,590	-
19257	Mapleridge Crescent	Mains	STS 250 mm	Storm Sewer	25	250	PVC	2003	86	2089	12,150	65	427	-
19258	Valleyview Crescent	Mains	STS 900 mm	Storm Sewer	54	900	CONC	1993	86	2079	99,200	55	3,705	-
19259	Mapleridge Crescent	Mains	STS 250 mm	Storm Sewer	86	250	PVC	2003	86	2089	41,330	65	1,453	-
19260	Valleyview Crescent	Mains	STS 900 mm	Storm Sewer	31	900	CONC	1993	86	2079	56,720	55	2,118	-
19261	Mapleridge Crescent	Mains	STS 250 mm	Storm Sewer	33	250	PVC	2003	86	2089	15,770	65	554	-
19262	Turnberry Drive	Mains	STS 675 mm	Storm Sewer	87	675	CONC	2004	86	2090	115,400	66	4,036	-
19263	Oakwood Drive	Mains	STS 300 mm	Storm Sewer	76	300	PVC	1995	86	2081	36,670	57	1,351	-
19264	Valleyview Crescent	Mains	STS 900 mm	Storm Sewer	29	900	CONC	1993	86	2079	54,320	55	2,029	-
19265	Oakwood Drive	Mains	STS 675 mm	Storm Sewer	100	675	CONC	2004	86	2090	133,000	66	4,651	-
19266	Hamilton Road	Mains	STS 450 mm	Storm Sewer	18	450	CSP	1970	86	2056	14,410	32	707	-
19267	Carleton Court	Mains	STS 450 mm	Storm Sewer	42	450	PVC	1986	86	2072	33,240	48	1,316	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19268	Valleyview Crescent	Mains	STS 975 mm	Storm Sewer	50	975	CONC	1993	86	2079	99,640	55	3,721	-
19269	Riness Drive	Mains	STS 825 mm	Storm Sewer	141	825	CONC	2004	86	2090	223,350	66	7,811	-
19270	Carleton Court	Mains	STS 600 mm	Storm Sewer	69	600	PVC	1986	86	2072	75,470	48	2,987	-
19271	Riness Drive	Mains	STS 525 mm	Storm Sewer	51	525	CONC	2004	86	2090	41,500	66	1,451	-
19272	Riness Drive	Mains	STS 450 mm	Storm Sewer	64	450	CONC	2004	86	2090	50,220	66	1,756	-
19273	Carleton Court	Mains	STS 600 mm	Storm Sewer	19	600	PVC	1986	86	2072	21,140	48	837	-
19274	Quail Run Drive	Mains	STS 300 mm	Storm Sewer	61	300	PVC	2004	86	2090	29,320	66	1,025	-
19275	Quail Run Drive	Mains	STS 300 mm	Storm Sewer	79	300	PVC	2004	86	2090	38,150	66	1,334	-
19276	Quail Run Drive	Mains	STS 600 mm	Storm Sewer	92	600	CONC	2004	86	2090	100,360	66	3,510	-
19277	Countryside Lane	Mains	STS 450 mm	Storm Sewer	93	450	CONC	1991	86	2077	73,250	53	2,777	-
19278	Dorchester WWTP Road	Mains	STS 600 mm	Storm Sewer	117	600	CONC	2002	86	2088	128,010	64	4,522	-
19279	Dorchester WWTP Road	Mains	STS 600 mm	Storm Sewer	116	600	CONC	2002	86	2088	127,100	64	4,490	-
19280	Dorchester WWTP Road	Mains	STS 600 mm	Storm Sewer	116	600	CONC	2002	86	2088	127,610	64	4,508	-
19281	Foxhollow Drive	Mains	STS 450 mm	Storm Sewer	36	450	PVC	2003	86	2089	28,640	65	1,007	-
19282	Turnberry Drive	Mains	STS 300 mm	Storm Sewer	105	300	PVC	2004	86	2090	50,320	66	1,760	-
19283	Mill Road	Mains	STS 250 mm	Storm Sewer	20	250	CONC	1991	86	2077	9,480	53	359	-
19284	Meadowbrook Lane	Mains	STS 450 mm	Storm Sewer	40	450	CONC	1991	86	2077	31,360	53	1,189	-
19285	Countryside Lane	Mains	STS 375 mm	Storm Sewer	70	375	PVC	1991	86	2077	52,790	53	2,002	-
19286	Turnberry Drive	Mains	STS 450 mm	Storm Sewer	29	450	CONC	2004	86	2090	22,540	66	788	-
19287	Village Gate Drive	Mains	STS 450 mm	Storm Sewer	61	450	CONC	1989	86	2075	47,880	51	1,845	-
19288	Turnberry Drive	Mains	STS 525 mm	Storm Sewer	72	525	CONC	2004	86	2090	59,180	66	2,070	-
19289	Meadowbrook Lane	Mains	STS 300 mm	Storm Sewer	84	300	PVC	1991	86	2077	40,430	53	1,533	-
19290	Mill Road	Mains	STS 600 mm	Storm Sewer	86	600	CONC	1991	86	2077	94,070	53	3,567	-
19291	Christie Drive	Mains	STS 400 mm	Storm Sewer	127	400	CSP	1986	86	2072	99,850	48	3,952	-
19292	Village Gate Crescent	Mains	STS 525 mm	Storm Sewer	64	525	CONC	1989	86	2075	52,710	51	2,031	-
19293	Mitchell Avenue	Mains	STS 525 mm	Storm Sewer	104	525	CONC	1986	86	2072	85,360	48	3,378	-
19294	Mill Road	Mains	STS 250 mm	Storm Sewer	52	250	CONC	1991	86	2077	25,030	53	949	-
19295	Mill Road	Mains	STS 300 mm	Storm Sewer	67	300	CONC	1991	86	2077	32,100	53	1,217	-
19296	Oakwood Drive	Mains	STS 600 mm	Storm Sewer	97	600	CONC	1986	86	2072	106,510	48	4,215	-
19297	Scarlett Circle	Mains	STS 525 mm	Storm Sewer	27	525	CONC	1986	86	2072	22,240	48	880	-
19298	Park Lane	Mains	STS 375 mm	Storm Sewer	110	375	PVC	1991	86	2077	82,870	53	3,142	-
19299	Riness Drive	Mains	STS 450 mm	Storm Sewer	34	450	CONC	2004	86	2090	27,110	66	948	-
19300	Riness Drive	Mains	STS 300 mm	Storm Sewer	37	300	PVC	2004	86	2090	17,810	66	623	-
19301	Linwood Drive	Mains	STS 450 mm	Storm Sewer	91	450	HDPE	2000	86	2086	71,610	62	2,557	-
19302	Quail Run Drive	Mains	STS 525 mm	Storm Sewer	23	525	CONC	2004	86	2090	18,670	66	653	-
19303	Quail Run Drive	Mains	STS 300 mm	Storm Sewer	20	300	PVC	2004	86	2090	9,650	66	337	-
19304	Amber Drive	Mains	STS 675 mm	Storm Sewer	53	675	HDPE	2000	86	2086	71,180	62	2,542	-
19305	Linwood Drive	Mains	STS 675 mm	Storm Sewer	6	675	HDPE	2000	86	2086	8,380	62	299	-
19306	Quail Run Drive	Mains	STS 300 mm	Storm Sewer	62	300	PVC	2004	86	2090	29,890	66	1,045	-
19307	Linwood Drive	Mains	STS 300 mm	Storm Sewer	69	300	HDPE	2000	86	2086	33,100	62	1,182	-
19308	Linwood Drive	Mains	STS 375 mm	Storm Sewer	59	375	HDPE	2000	86	2086	44,080	62	1,574	-
19309	Linwood Drive	Mains	STS 375 mm	Storm Sewer	22	375	HDPE	2000	86	2086	16,630	62	594	-
19310	Woodvale Drive	Mains	STS 200 mm	Storm Sewer	78	200	PVC	2003	86	2089	37,190	65	1,307	-
19311	Woodvale Drive	Mains	STS 600 mm	Storm Sewer	17	600	CONC	2003	86	2089	18,290	65	643	-
19312	Woodvale Drive	Mains	STS 250 mm	Storm Sewer	11	250	PVC	2003	86	2089	5,120	65	180	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19313	Woodvale Drive	Mains	STS 600 mm	Storm Sewer	47	600	CONC	2003	86	2089	51,610	65	1,814	-
19314	Forest Grove Crescent	Mains	STS 525 mm	Storm Sewer	30	525	CONC	2003	86	2089	24,450	65	859	-
19315	Forest Grove Crescent	Mains	STS 525 mm	Storm Sewer	45	525	CONC	2003	86	2089	36,670	65	1,289	-
19316	Forest Grove Crescent	Mains	STS 525 mm	Storm Sewer	22	525	CONC	2003	86	2089	17,850	65	627	-
19317	Forest Grove Crescent	Mains	STS 750 mm	Storm Sewer	34	750	CONC	2003	86	2089	50,590	65	1,778	-
19318	Woodvale Drive	Mains	STS 600 mm	Storm Sewer	12	600	CONC	2003	86	2089	12,820	65	451	-
19319	The Neighbourhood 2	Mains	STS 450 mm	Storm Sewer	13	450	PVC	2007	86	2093	10,490	69	362	-
19320	Forest Grove Crescent	Mains	STS 300 mm	Storm Sewer	57	300	PVC	2003	86	2089	27,490	65	966	-
19321	Foxhollow Drive	Mains	STS 250 mm	Storm Sewer	75	250	PVC	2003	86	2089	35,810	65	1,259	-
19322	Foxhollow Drive	Mains	STS 250 mm	Storm Sewer	52	250	PVC	2003	86	2089	25,160	65	884	-
19323	Foxhollow Drive	Mains	STS 450 mm	Storm Sewer	47	450	PVC	2003	86	2089	37,270	65	1,310	-
19324	The Neighbourhood 2	Mains	STS 300 mm	Storm Sewer	24	300	PVC	2007	86	2093	11,400	69	393	-
19325	Woodvale Drive	Mains	STS 600 mm	Storm Sewer	95	600	CONC	2003	86	2089	104,060	65	3,657	-
19326	Forest Grove Crescent	Mains	STS 675 mm	Storm Sewer	86	675	CONC	2003	86	2089	113,830	65	4,001	-
19327	Eric Drive	Mains	STS 1200 mm	Storm Sewer	70	1,200	CONC	1989	86	2075	172,970	51	6,665	-
19328	Eric Drive	Mains	STS 300 mm	Storm Sewer	17	300	PVC	1989	86	2075	7,950	51	306	-
19329	Eric Drive	Mains	STS 1200 mm	Storm Sewer	12	1,200	CONC	1989	86	2075	28,510	51	1,099	-
19330	Eric Drive	Mains	STS 600 mm	Storm Sewer	38	600	CONC	2000	86	2086	41,530	62	1,483	-
19331	Eric Drive	Mains	STS 600 mm	Storm Sewer	24	600	CONC	2000	86	2086	26,190	62	935	-
19332	The Neighbourhood 2	Mains	STS 250 mm	Storm Sewer	30	250	PVC	2007	86	2093	14,310	69	493	-
19333	The Neighbourhood 2	Mains	STS 250 mm	Storm Sewer	87	250	PVC	2007	86	2093	41,700	69	1,438	-
19334	Walker Drain Improvement 2001	Mains	STS 450 mm	Storm Sewer	93	450	HDPE	2006	86	2092	73,150	68	2,534	-
19335	The Neighbourhood	Mains	STS 450 mm	Storm Sewer	38	450	PVC	2004	86	2090	29,940	66	1,047	-
19336	Walker Drain Improvement 2001	Mains	STS 450 mm	Storm Sewer	90	450	HDPE	2006	86	2092	70,950	68	2,458	-
19337	The Neighbourhood	Mains	STS 250 mm	Storm Sewer	47	250	PVC	2004	86	2090	22,640	66	792	-
19338	Woodvale Drive	Mains	STS 525 mm	Storm Sewer	41	525	CONC	2003	86	2089	33,740	65	1,186	-
19339	Riness Drive	Mains	STS 600 mm	Storm Sewer	12	600	CONC	2004	86	2090	12,600	66	441	-
19340	The Neighbourhood	Mains	STS 250 mm	Storm Sewer	51	250	PVC	2004	86	2090	24,260	66	848	-
19341	Woodvale Drive	Mains	STS 525 mm	Storm Sewer	47	525	CONC	2003	86	2089	38,610	65	1,357	-
19342	Quail Run Condo	Mains	STS 525 mm	Storm Sewer	14	525	CONC	2004	86	2090	11,490	66	402	-
19343	Valleyview Crescent	Mains	STS 300 mm	Storm Sewer	63	300	PVC	1993	86	2079	30,520	55	1,140	-
19344		Mains	STS 1350 mm	Storm Sewer	80	1,350	CONC	1986	86	2072	216,360	48	8,563	-
19345	Woodvale Drive	Mains	STS 525 mm	Storm Sewer	65	525	CONC	2003	86	2089	53,570	65	1,883	-
19346	Valleyview Crescent	Mains	STS 300 mm	Storm Sewer	69	300	PVC	1993	86	2079	33,370	55	1,246	-
19347	Valleyview Crescent	Mains	STS 900 mm	Storm Sewer	76	900	CONC	1993	86	2079	141,520	55	5,286	-
19348	Manley Drive	Mains	STS 375 mm	Storm Sewer	93	375	PVC	1993	86	2079	70,000	55	2,614	-
19349	Woodvale Drive	Mains	STS 450 mm	Storm Sewer	87	450	CONC	2003	86	2089	68,320	65	2,401	-
19350	Village Gate Drive	Mains	STS 1200 mm	Storm Sewer	58	1,200	CONC	1989	86	2075	143,790	51	5,541	-
19351	Valleyview Crescent	Mains	STS 900 mm	Storm Sewer	89	900	CONC	1993	86	2079	164,230	55	6,134	-
19352	Woodvale Drive	Mains	STS 250 mm	Storm Sewer	55	250	PVC	2003	86	2089	26,320	65	925	-
19353	Woodvale Drive	Mains	STS 450 mm	Storm Sewer	40	450	CONC	2003	86	2089	31,210	65	1,097	-
19354	Maplewood Place	Mains	STS 300 mm	Storm Sewer	48	300	PVC	2003	86	2089	23,020	65	809	-
19355	Mitchell Court	Mains	STS 600 mm	Storm Sewer	52	600	CONC	2004	86	2090	57,020	66	1,994	-
19356	Woodvale Drive	Mains	STS 450 mm	Storm Sewer	19	450	CONC	2003	75	2078	15,050	54	566	-
19357	Minnie Street	Mains	STS 375 mm	Storm Sewer	21	375	CONC	1992	86	2078	16,100	54	606	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19358	Village Gate Drive	Mains	STS 825 mm	Storm Sewer	80	825	CONC	1989	86	2075	126,670	51	4,881	
19359	Village Gate Drive	Mains	STS 450 mm	Storm Sewer	50	450	CONC	1989	86	2075	39,200	51	1,511	-
19360	Mitchell Avenue	Mains	STS 250 mm	Storm Sewer	38	250	CONC	1986	86	2072	18,060	48	715	-
19361	Scarlett Circle	Mains	STS 525 mm	Storm Sewer	94	525	CONC	1986	86	2072	77,160	48	3,054	-
19362	Scarlett Circle	Mains	STS 450 mm	Storm Sewer	55	450	CONC	1986	86	2072	43,030	48	1,703	-
19363	Oakwood Drive	Mains	STS 300 mm	Storm Sewer	54	300	CONC	2004	86	2090	26,090	66	912	
19364	Oakwood Drive	Mains	STS 300 mm	Storm Sewer	32	300	CONC	2004	86	2090	15,330	66	536	-
19365	Oakwood Drive	Mains	STS 525 mm	Storm Sewer	96	525	CONC	1986	86	2072	78,650	48	3,113	-
19366	Scarlett Circle	Mains	STS 525 mm	Storm Sewer	24	525	CONC	1986	86	2072	19,370	48	767	-
19367	Chittick Crescent	Mains	STS 250 mm	Storm Sewer	76	250	CONC	1986	75	2061	36,430	37	1,643	-
19368	Eva Street	Mains	STS 600 mm	Storm Sewer	79	600	CONC	1992	86	2078	86,110	54	3,240	-
19369	Sherwood Crescent	Mains	STS 250 mm	Storm Sewer	74	250	CONC	1990	86	2076	35,550	52	1,359	-
19370	Sherwood Crescent	Mains	STS 250 mm	Storm Sewer	66	250	CONC	1990	86	2076	31,520	52	1,205	-
19371	Mitchell Avenue	Mains	STS 825 mm	Storm Sewer	95	825	CONC	1986	86	2072	149,910	48	5,933	-
19372	Clara Street	Mains	STS 900 mm	Storm Sewer	61	900	CONC	1992	86	2078	112,700	54	4,240	-
19373	Sherwood Place	Mains	STS 250 mm	Storm Sewer	71	250	CONC	1990	86	2076	34,000	52	1,299	-
19374		Mains	STS 1350 mm	Storm Sewer	100	1,350	CONC	1986	86	2072	270,980	48	10,725	-
19375		Mains	STS 1350 mm	Storm Sewer	100	1,350	CONC	1986	86	2072	270,980	48	10,725	-
19376		Mains	STS 1350 mm	Storm Sewer	100	1,350	CONC	1986	86	2072	270,980	48	10,725	-
19377		Mains	STS 1350 mm	Storm Sewer	100	1,350	CONC	1986	86	2072	270,980	48	10,725	-
19378	Hamilton Road	Mains	STS 600 mm	Storm Sewer	10	600	PVC	1989	86	2075	11,100	51	428	-
19379	Elizabeth Street	Mains	STS 450 mm	Storm Sewer	94	450	PVC	1993	86	2079	74,110	55	2,768	-
19380	Minnie Street	Mains	STS 300 mm	Storm Sewer	112	300	CONC	1992	86	2078	53,740	54	2,022	-
19381	Village Gate Drive	Mains	STS 825 mm	Storm Sewer	63	825	CONC	1989	86	2075	100,180	51	3,860	-
19382	Village Gate Crescent	Mains	STS 450 mm	Storm Sewer	90	450	CONC	1989	86	2075	70,720	51	2,725	-
19383	Village Gate Drive	Mains	STS 300 mm	Storm Sewer	10	300	PVC	1989	86	2075	4,610	51	178	-
19384	Village Gate Crescent	Mains	STS 600 mm	Storm Sewer	26	600	CONC	1989	86	2075	28,580	51	1,101	-
19385	Village Gate Drive	Mains	STS 1200 mm	Storm Sewer	80	1,200	CONC	1989	86	2075	199,570	51	7,690	-
19386	Village Gate Drive	Mains	STS 1200 mm	Storm Sewer	86	1,200	CONC	1989	86	2075	212,880	51	8,203	-
19387	Oakwood Drive SWM	Mains	STS 375 mm	Storm Sewer	9	375	PVC	2004	86	2090	7,070	66	247	-
19388	Oakwood Drive SWM	Mains	STS 375 mm	Storm Sewer	5	375	PVC	2004	86	2090	3,910	66	137	-
19389	Village Gate Crescent	Mains	STS 675 mm	Storm Sewer	99	675	CONC	1989	86	2075	131,550	51	5,069	-
19390	Village Gate Crescent	Mains	STS 375 mm	Storm Sewer	36	375	PVC	1989	86	2075	27,260	51	1,050	-
19391	Village Gate Drive	Mains	STS 375 mm	Storm Sewer	40	375	PVC	1989	86	2075	30,300	51	1,168	-
19392	Village Gate Drive	Mains	STS 300 mm	Storm Sewer	85	300	PVC	1989	86	2075	40,930	51	1,577	-
19393	Village Gate Drive	Mains	STS 825 mm	Storm Sewer	98	825	CONC	1989	86	2075	155,620	51	5,997	-
19394	Village Gate Crescent	Mains	STS 300 mm	Storm Sewer	49	300	PVC	1989	86	2075	23,600	51	909	-
19395	Village Gate Drive	Mains	STS 1200 mm	Storm Sewer	38	1,200	CONC	1989	86	2075	94,000	51	3,622	-
19396	Village Gate Drive	Mains	STS 600 mm	Storm Sewer	55	600	CONC	1989	86	2075	60,270	51	2,322	-
19397	Village Gate Drive	Mains	STS 600 mm	Storm Sewer	101	600	CONC	1989	86	2075	110,510	51	4,258	-
19398	Clara Street	Mains	STS 1200 mm	Storm Sewer	34	1,200	CSP	1992	75	2067	83,210	43	3.470	-
19399	Mill Road	Mains	STS 600 mm	Storm Sewer	9	600	CONC	1991	86	2077	9,420	53	357	-
19400	Tiner Avenue	Mains	STS 675 mm	Storm Sewer	29	675	CONC	1991	86	2077	38,670	53	1,466	-
19401	Wheeler Avenue	Mains	STS 250 mm	Storm Sewer	66		CONC	1991	86	2077	31,550	53	1,196	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed		Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19402	Mill Road	Mains	STS 250 mm	Storm Sewer	62	250	CONC	1991	86	2077	29,820	53	1,131	-
19403	Melvin Drive	Mains	STS 375 mm	Storm Sewer	107	375	CONC	1989	86	2075	80,890	51	3,117	-
19404	Elizabeth Drive	Mains	STS 450 mm	Storm Sewer	64	450	CONC	1989	86	2075	50,420	51	1,943	-
19405	Valleyview Crescent	Mains	STS 975 mm	Storm Sewer	96	975	CONC	1993	86	2079	192,730	55	7,198	-
19406	Eric Drive	Mains	STS 300 mm	Storm Sewer	59	300	CONC	2000	86	2086	28,570	62	1,020	-
19407	Hamilton Road	Mains	STS 300 mm	Storm Sewer	46	300	CONC	1970	86	2056	22,250	32	1,091	-
19408	Hill Street	Mains	STS 250 mm	Storm Sewer	14	250	PVC	1989	86	2075	6,820	51	263	-
19409	Hamilton Road	Mains	STS 450 mm	Storm Sewer	3	450	CSP	1970	86	2056	2,400	32	118	-
19410	Charles Street	Mains	STS 300 mm	Storm Sewer	75	300	PVC	1989	86	2075	36,360	51	1,401	-
19411	Catherine Street	Mains	STS 600 mm	Storm Sewer	55	600	CONC	1984	86	2070	60,350	46	2,436	-
19412	Forest Grove Crescent	Mains	STS 525 mm	Storm Sewer	56	525	CONC	2003	86	2089	46,190	65	1,623	-
19413	Charles Street	Mains	STS 300 mm	Storm Sewer	105	300	PVC	1989	86	2075	50,560	51	1,948	-
19414	Hamilton Road	Mains	STS 300 mm	Storm Sewer	59	300	CONC	1970	86	2056	28,240	32	1,385	-
19415	Hamilton Road	Mains	STS 250 mm	Storm Sewer	110	250	CONC	1970	86	2056	52,800	32	2,590	-
19416	Melvin Drive	Mains	STS 250 mm	Storm Sewer	54	250	PVC	2000	86	2086	25,880	62	924	-
19417	Linwood Drive	Mains	STS 675 mm	Storm Sewer	69	675	HDPE	2000	86	2086	91,350	62	3,262	-
19418	Elizabeth Street	Mains	STS 250 mm	Storm Sewer	17	250	CONC	1992	86	2078	8,040	54	303	-
19419	Hamilton Road	Mains	STS 600 mm	Storm Sewer	86	600	PVC	1992	86	2078	94,780	54	3,566	-
19420	Melvin Drive	Mains	STS 300 mm	Storm Sewer	56	300	CONC	1989	86	2075	26,970	51	1,039	-
19421	Hamilton Road	Mains	STS 525 mm	Storm Sewer	108	525	CONC	1989	86	2075	88,200	51	3,399	-
19422	Eric Drive	Mains	STS 300 mm	Storm Sewer	55	300	CONC	1989	86	2075	26,490	51	1,021	-
19423	Catherine Street	Mains	STS 375 mm	Storm Sewer	60	375	CONC	1984	86	2070	45,410	46	1,833	-
19424	Catherine Street	Mains	STS 450 mm	Storm Sewer	78	450	CONC	1984	86	2070	61,250	46	2,472	-
19425	Catherine Street	Mains	STS 300 mm	Storm Sewer	90	300	CONC	1984	86	2070	43,440	46	1,753	-
19426	Catherine Street	Mains	STS 450 mm	Storm Sewer	57	450	CONC	1984	86	2070	44,670	46	1,803	-
19427	Hamilton Road	Mains	STS 250 mm	Storm Sewer	53	250	CONC	1969	86	2055	25,510	31	1,275	-
19428	Catherine Street	Mains	STS 300 mm	Storm Sewer	6	300	PVC	1989	86	2075	2,740	51	106	-
19429	Hamilton Road	Mains	STS 450 mm	Storm Sewer	1	450	CONC	1989	86	2075	950	51	37	-
19430	Catherine Street	Mains	STS 450 mm	Storm Sewer	106	450	CONC	1984	86	2070	83,210	46	3,359	-
19431	Catherine Street	Mains	STS 300 mm	Storm Sewer	6	300	PVC	1984	86	2070	2,940	46	119	-
19432	Hamilton Road	Mains	STS 300 mm	Storm Sewer	86	300	CONC	1989	86	2075	41,330	51	1,593	-
19433	Thames Street	Mains	STS 375 mm	Storm Sewer	6	375	CONC	1989	86	2075	4,680	51	180	-
19434	Hamilton Road	Mains	STS 450 mm	Storm Sewer	87	450	CONC	1989	86	2075	68,790	51	2,651	-
19435	Hamilton Road	Mains	STS 300 mm	Storm Sewer	9	300	CONC	1989	86	2075	4,240	51	163	-
19436	Thames Street	Mains	STS 375 mm	Storm Sewer	7	375	CONC	1984	86	2070	5,640	46	228	-
19437	Catherine Street	Mains	STS 525 mm	Storm Sewer	73	525	CONC	1984	86	2070	59,720	46	2,410	-
19438	Catherine Street	Mains	STS 525 mm	Storm Sewer	56	525	CONC	1984	86	2070	45,760	46	1,847	-
19439	Walker Drain Improvement 2001	Mains	STS 450 mm	Storm Sewer	13	450	HDPE	2006	86	2092	10,630	68	368	-
19440	Walker Drain Improvement 2001	Mains	STS 675 mm	Storm Sewer	7	675	CSP	1984	86	2070	9,820	46	396	-
19441	Tiner Avenue	Mains	STS 675 mm	Storm Sewer	39	675	CONC	1991	86	2077	52,560	53	1,993	-
19442	Tiner Avenue	Mains	STS 600 mm	Storm Sewer	47	600	CONC	1991	86	2077	51,660	53	1,959	-
19443	Bridge Street	Mains	STS 675 mm	Storm Sewer	54	675	CONC	1984	86	2070	72,120	46	2,911	-
19444	Mill Road	Mains	STS 600 mm	Storm Sewer	46	600	CONC	1991	86	2077	50,560	53	1,917	-
19445	Mill Road	Mains	STS 250 mm	Storm Sewer	61	250	CONC	1991	86	2077	29,260	53	1,109	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19446	Wheeler Avenue	Mains	STS 450 mm	Storm Sewer	100	450	CONC	1991	86	2077	78,660	53	2,982	-
19447	Christie Drive	Mains	STS 250 mm	Storm Sewer	58	250	CONC	1991	86	2077	27,790	53	1,054	-
19448	Wheeler Avenue	Mains	STS 450 mm	Storm Sewer	108	450	CONC	1991	86	2077	85,140	53	3,228	-
19449	Wheeler Avenue	Mains	STS 450 mm	Storm Sewer	73	450	CONC	1991	86	2077	57,380	53	2,176	-
19450	Wheeler Avenue	Mains	STS 250 mm	Storm Sewer	111	250	CONC	1991	86	2077	53,210	53	2,017	-
19451	Wheeler Avenue	Mains	STS 450 mm	Storm Sewer	27	450	CONC	1991	86	2077	20,950	53	794	-
19452	Wheeler Avenue	Mains	STS 525 mm	Storm Sewer	100	525	CONC	1991	86	2077	81,910	53	3,106	-
19453	Wheeler Avenue	Mains	STS 525 mm	Storm Sewer	48	525	CONC	1991	86	2077	39,700	53	1,505	-
19454	Wheeler Avenue	Mains	STS 600 mm	Storm Sewer	103	600	CONC	1991	86	2077	112,460	53	4,264	-
19455	Tiner Avenue	Mains	STS 675 mm	Storm Sewer	25	675	CONC	1991	86	2077	33,250	53	1,261	-
19456	Tiner Avenue	Mains	STS 250 mm	Storm Sewer	91	250	CONC	1991	86	2077	43,420	53	1,646	-
19457	Lacroix Avenue	Mains	STS 600 mm	Storm Sewer	105	600	CONC	2004	86	2090	115,050	66	4,023	-
19458	Minnie Street	Mains	STS 300 mm	Storm Sewer	129	300	CONC	1992	86	2078	62,020	54	2,334	-
19459	Canterbury Drive	Mains	STS 300 mm	Storm Sewer	75	300	CONC	1990	75	2065	35,900	41	1,533	-
19460	Mitchell Court	Mains	STS 600 mm	Storm Sewer	39	600	CONC	2004	86	2090	42,300	66	1,479	-
19461	Mitchell Court	Mains	STS 600 mm	Storm Sewer	10	600	CONC	2004	86	2090	10,960	66	383	-
19462	Eva Street	Mains	STS 600 mm	Storm Sewer	45	600	CONC	1992	86	2078	49,100	54	1,847	-
19463	Woodvale Drive	Mains	STS 250 mm	Storm Sewer	56	250	PVC	2003	86	2089	26,830	65	943	-
19464	Mapleridge Crescent	Mains	STS 250 mm	Storm Sewer	48	250	PVC	2003	86	2089	22,980	65	808	-
19465	Forest Grove Crescent	Mains	STS 300 mm	Storm Sewer	53	300	PVC	2003	86	2089	25,520	65	897	-
19466		Mains	STS 1350 mm	Storm Sewer	100	1,350	CONC	1986	86	2072	270,980	48	10,725	-
19467		Mains	STS 1350 mm	Storm Sewer	115	1,350	CONC	1986	86	2072	311,620	48	12,333	-
19468		Mains	STS 1350 mm	Storm Sewer	99	1,350	CONC	1986	86	2072	269,620	48	10,671	-
19469		Mains	STS 1350 mm	Storm Sewer	106	1,350	CONC	1987	86	2073	288,300	49	11,305	-
19470	lda Street	Mains	STS 375 mm	Storm Sewer	71	375	CONC	1993	86	2079	53,410	55	1,995	-
19471		Mains	STS 1350 mm	Storm Sewer	28	1,350	CONC	1987	86	2073	76,190	49	2,988	-
19472	Oakwood Drive	Mains	STS 675 mm	Storm Sewer	97	675	CONC	1986	86	2072	129,680	48	5,132	-
19473	Mitchell Avenue	Mains	STS 525 mm	Storm Sewer	93	525	CONC	1986	86	2072	76,360	48	3,022	-
19474	Chittick Crescent	Mains	STS 375 mm	Storm Sewer	67	375	CONC	1986	86	2072	50,450	48	1,997	-
19475	Amber Drive	Mains	STS 675 mm	Storm Sewer	64	675	HDPE	2000	86	2086	84,710	62	3,025	-
19476	Amber Drive	Mains	STS 675 mm	Storm Sewer	53	675	HDPE	2000	86	2086	70,410	62	2,515	-
19477	Byron Avenue	Mains	STS 450 mm	Storm Sewer	111	450	CONC	1990	86	2076	87,720	52	3,352	-
19478	Queen Street Municipal Drain	Mains	STS 300 mm	Storm Sewer	98	300	PVC	1970	86	2056	46,960	32	2,303	-
19479	Linwood Drive	Mains	STS 675 mm	Storm Sewer	47	675	CONC	2000	86	2086	63,090	62	2,253	-
19480	Queen Street	Mains	STS 250 mm	Storm Sewer	10	250	PVC	1993	86	2079	4,590	55	171	-
19481	Queen Street Municipal Drain	Mains	STS 250 mm	Storm Sewer	52	250	PVC	1970	86	2056	24,860	32	1,219	-
19482	Queen Street	Mains	STS 250 mm	Storm Sewer	48	250	PVC	1993	86	2079	23,170	55	865	-
19483	Huntington Drive	Mains	STS 375 mm	Storm Sewer	102	375	CONC	1990	86	2076	76,560	52	2,926	-
19484	Canterbury Drive	Mains	STS 375 mm	Storm Sewer	57	375	CONC	1990	86	2076	43,210	52	1,651	-
19485	Huntington Drive	Mains	STS 300 mm	Storm Sewer	89	300	CONC	1990	86	2076	42,650	52	1,630	-
19486	Huntington Drive	Mains	STS 300 mm	Storm Sewer	87	300	CONC	1990	86	2076	41,660	52	1,592	-
19487	Eric Drive	Mains	STS 1200 mm	Storm Sewer	62	1,200	CONC	1989	86	2075	152,770	51	5,887	-
19488	Marion Street	Mains	STS 1200 mm	Storm Sewer	20	1,200	CONC	1989	86	2075	49,150	51	1,894	-
19489	Sherwood Crescent	Mains	STS 250 mm	Storm Sewer	111	250	CONC	1990	86	2076	53,110	52	2,030	-
19490	Melvin Drive	Mains	STS 375 mm	Storm Sewer	8	375	CONC	2000	86	2086	5,640	62	201	



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19491	Parkview Drive	Mains	STS 600 mm	Storm Sewer	64	600	CONC	1990	86	2076	69,680	52	2,663	-
19492	Byron Avenue	Mains	STS 300 mm	Storm Sewer	42	300	PVC	1990	86	2076	20,430	52	781	-
19493	Melvin Drive	Mains	STS 375 mm	Storm Sewer	11	375	CONC	1989	86	2075	8,050	51	310	-
19494	Byron Avenue	Mains	STS 200 mm	Storm Sewer	10	200	PVC	1990	75	2065	4,580	41	196	-
19495	Melvin Drive	Mains	STS 375 mm	Storm Sewer	72	375	PVC	2000	86	2086	54,180	62	1,935	-
19496	Byron Avenue	Mains	STS 300 mm	Storm Sewer	74	300	PVC	1990	86	2076	35,780	52	1,367	-
19497	Pinehurst Drive	Mains	STS 450 mm	Storm Sewer	98	450	PVC	1990	75	2065	77,030	41	3,290	-
19498	Parkview Drive	Mains	STS 600 mm	Storm Sewer	53	600	CONC	1990	86	2076	58,020	52	2,217	-
19499	Pinehurst Drive	Mains	STS 400 mm	Storm Sewer	85	400	PVC	1990	86	2076	66,950	52	2,559	-
19500	Byron Avenue	Mains	STS 300 mm	Storm Sewer	81	300	PVC	1990	86	2076	39,010	52	1,491	-
19501	King Street	Mains	STS 900 mm	Storm Sewer	15	900	CSP	1980	86	2066	28,180	42	1,189	-
19502	Monteith Avenue	Mains	STS 375 mm	Storm Sewer	86	375	CONC	1977	86	2063	64,760	39	2,839	-
19503	Elizabeth Drive	Mains	STS 200 mm	Storm Sewer	77	200	PVC	2000	86	2086	36,510	62	1,304	-
19504	Elizabeth Drive	Mains	STS 200 mm	Storm Sewer	69	200	PVC	2000	86	2086	33,060	62	1,181	-
19505	Monteith Avenue	Mains	STS 450 mm	Storm Sewer	43	450	CONC	1977	86	2063	34,140	39	1,497	-
19506	Fairview Road	Mains	STS 750 mm	Storm Sewer	95	750	CONC	1977	86	2063	139,990	39	6,138	-
19507	Fairview Road	Mains	STS 825 mm	Storm Sewer	92	825	CONC	1977	86	2063	145,980	39	6,400	-
19508	Hueston Drive	Mains	STS 375 mm	Storm Sewer	59	375	CONC	1987	86	2073	44,390	49	1,741	-
19509	Hueston Drive	Mains	STS 200 mm	Storm Sewer	69	200	CONC	1987	75	2062	32,710	38	1,454	-
19510	Hueston Drive	Mains	STS 200 mm	Storm Sewer	57	200	CONC	1987	86	2073	27,300	49	1,071	-
19511	Hueston Drive	Mains	STS 375 mm	Storm Sewer	24	375	CONC	1987	86	2073	18,400	49	722	-
19512	Hueston Drive	Mains	STS 375 mm	Storm Sewer	25	375	CONC	1987	86	2073	18,770	49	736	-
19513	Hueston Drive	Mains	STS 375 mm	Storm Sewer	76	375	CONC	1987	86	2073	57,070	49	2,238	-
19514	Monteith Avenue	Mains	STS 375 mm	Storm Sewer	73	375	CONC	1977	86	2063	54,770	39	2,401	-
19515	Monteith Avenue	Mains	STS 450 mm	Storm Sewer	80	450	CONC	1977	86	2063	63,240	39	2,773	-
19516	Monteith Avenue	Mains	STS 525 mm	Storm Sewer	76	525	CONC	1977	86	2063	62,360	39	2,734	-
19517	Monteith Avenue	Mains	STS 525 mm	Storm Sewer	76	525	CONC	1977	86	2063	62,250	39	2,729	-
19518	Monteith Avenue	Mains	STS 525 mm	Storm Sewer	77	525	CONC	1977	86	2063	62,840	39	2,755	-
19519	Monteith Avenue	Mains	STS 600 mm	Storm Sewer	68	600	CONC	1977	86	2063	74,790	39	3,279	-
19520	Hueston Drive	Mains	STS 450 mm	Storm Sewer	60	450	CONC	1987	86	2073	47,450	49	1,861	-
19521	Hueston Drive	Mains	STS 300 mm	Storm Sewer	81	300	CONC	1987	86	2073	39,220	49	1,538	-
19522	Meadowbrook Lane	Mains	STS 250 mm	Storm Sewer	82	250	CONC	1991	86	2077	39,170	53	1,485	-
19523	Park Lane	Mains	STS 250 mm	Storm Sewer	86	250	PVC	1991	86	2077	41,130	53	1,559	-
19524	Fairview Road	Mains	STS 750 mm	Storm Sewer	44	750	CONC	1977	86	2063	65,070	39	2,853	-
19525	Fairview Road	Mains	STS 750 mm	Storm Sewer	96	750	CONC	1977	86	2063	141,340	39	6,197	-
19526	Fairview Road	Mains	STS 750 mm	Storm Sewer	54	750	CONC	1977	86	2063	78,990	39	3,463	-
19527	Mitchell Court	Mains	STS 600 mm	Storm Sewer	27	600	CONC	2004	86	2090	29,590	66	1,035	-
19528	Mitchell Avenue	Mains	STS 450 mm	Storm Sewer	32	450	CONC	1986	86	2072	25,400	48	1,005	-
19529	Mitchell Court	Mains	STS 600 mm	Storm Sewer	79	600	CONC	1986	86	2072	87,090	48	3,447	-
19530	Mill Road	Mains	STS 300 mm	Storm Sewer	126	300	CONC	1991	86	2077	60,530	53	2,295	-
19531	Hamilton Road	Mains	STS 450 mm	Storm Sewer	30	450	CONC	1991	86	2077	23,740	53	900	-
19532	Mill Road	Mains	STS 300 mm	Storm Sewer	100	300	CONC	1991	86	2077	48,010	53	1,820	-
19533	Mill Road	Mains	STS 250 mm	Storm Sewer	100	250	CONC	1991	86	2077	47,900	53	1,816	-
19534	Thorndale Road	Mains	STS 250 mm	Storm Sewer	83	250	PVC	2004	86	2090	39,950	66	1,397	-
19535	Mill Road	Mains	STS 300 mm	Storm Sewer	11	300	CONC	1991	86	2077	5,530	53	210	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19536	Christie Drive	Mains	STS 400 mm	Storm Sewer	63	400	CSP	1991	86	2077	50,040	53	1,897	-
19537	Thorndale Road	Mains	STS 300 mm	Storm Sewer	8	300	PVC	2004	86	2090	3,670	66	128	-
19538	King Street	Mains	STS 200 mm	Storm Sewer	114	200	CONC	1980	86	2066	54,620	42	2,305	-
19539	Walker Drain Improvement 2001	Mains	STS 675 mm	Storm Sewer	16	675	CSP	1984	75	2059	20,740	35	965	-
19540	King Street	Mains	STS 600 mm	Storm Sewer	11	600	CONC	1980	86	2066	12,210	42	515	-
19541	King Street	Mains	STS 200 mm	Storm Sewer	13	200	CONC	1980	86	2066	6,290	42	265	-
19542	King Street	Mains	STS 525 mm	Storm Sewer	78	525	CONC	1980	86	2066	64,380	42	2,716	-
19543	King Street	Mains	STS 525 mm	Storm Sewer	85	525	CONC	1980	86	2066	69,610	42	2,937	-
19544	King Street	Mains	STS 600 mm	Storm Sewer	7	600	CONC	1980	86	2066	7,470	42	315	-
19545	Marion Street	Mains	STS 300 mm	Storm Sewer	101	300	PVC	1996	86	2082	48,570	58	1,777	-
19546	Marion Street	Mains	STS 250 mm	Storm Sewer	36	250	PVC	1996	86	2082	17,020	58	623	-
19547	King Street	Mains	STS 675 mm	Storm Sewer	8	675	CONC	1980	86	2066	10,230	42	432	-
19548	King Street	Mains	STS 600 mm	Storm Sewer	16	600	CONC	1980	86	2066	17,690	42	746	-
19549	Carleton Court	Mains	STS 900 mm	Storm Sewer	70	900	CONC	1990	86	2076	129,690	52	4,956	-
19550	Carleton Court	Mains	STS 375 mm	Storm Sewer	90	375	CONC	1990	86	2076	67,720	52	2,588	-
19551	Queen Street	Mains	STS 200 mm	Storm Sewer	47	200	CSP	1993	86	2079	22,200	55	829	-
19552	The Parkway	Mains	STS 300 mm	Storm Sewer	72	300	PVC	1990	86	2076	34,700	52	1,326	-
19553	Queen Street	Mains	STS 200 mm	Storm Sewer	3	200	PVC	1993	86	2079	1,580	55	59	-
19554	Queen Street	Mains	STS 300 mm	Storm Sewer	80	300	PVC	1993	86	2079	38,340	55	1,432	-
19555	Parkview Drive	Mains	STS 600 mm	Storm Sewer	57	600	CONC	1990	86	2076	62,480	52	2,388	-
19556	The Parkway	Mains	STS 300 mm	Storm Sewer	66	300	PVC	1990	86	2076	31,550	52	1,206	-
19557	Elizabeth Drive	Mains	STS 525 mm	Storm Sewer	66	525	CONC	1989	86	2075	53,850	51	2,075	-
19558	Parkview Drive	Mains	STS 1050 mm	Storm Sewer	33	1,050	CONC	1990	86	2076	72,600	52	2,775	-
19559	Carleton Court	Mains	STS 600 mm	Storm Sewer	121	600	CONC	1990	86	2076	132,060	52	5,047	-
19560	Carleton Court	Mains	STS 600 mm	Storm Sewer	27	600	CONC	1990	86	2076	30,070	52	1,149	-
19561	Parkview Drive	Mains	STS 200 mm	Storm Sewer	45	200	PVC	1990	86	2076	21,280	52	813	-
19562	Carleton Court	Mains	STS 600 mm	Storm Sewer	38	600	CONC	1990	86	2076	41,660	52	1,592	-
19563	Parkview Drive	Mains	STS 600 mm	Storm Sewer	65		CONC	1990	86	2076	70,940	52	2,711	-
19564	Parkview Drive	Mains	STS 200 mm	Storm Sewer	45		PVC	1990	86	2076	21,410	52	818	-
19565	Parkview Drive	Mains	STS 525 mm	Storm Sewer	107	525	CONC	1990	86	2076	87,500	52	3,344	-
19566	Queen Street	Mains	STS 450 mm	Storm Sewer	12	450	CONC	1993	86	2079	9,300	55	347	-
19567	Queen Street	Mains	STS 100 mm	Storm Sewer	5		PVC	1993	86	2079	3,620	55	135	-
19568	Hamilton Road	Mains	STS 300 mm	Storm Sewer	7	300	CONC	1989	86	2075	3,370	51	130	-
19569	Hamilton Road	Mains	STS 300 mm	Storm Sewer	17	300	CONC	1989	86	2075	8,040	51	310	-
19570	Parkview Drive	Mains	STS 200 mm	Storm Sewer	43	200	PVC	1990	86	2076	20,470	52	782	-
19571	Parkview Drive	Mains	STS 1200 mm	Storm Sewer	103	1,200	CONC	1990	86	2076	254,390	52	9,722	-
19572	Clara Street	Mains	STS 900 mm	Storm Sewer	69	900	CONC	1992	86	2078	127,940	54	4,814	-
19573	The Parkway	Mains	STS 900 mm	Storm Sewer	64	900	CONC	1990	86	2076	119,360	52	4,562	-
19574	Parkview Drive	Mains	STS 600 mm	Storm Sewer	100	600	CONC	1990	86	2076	109,170	52	4,172	-
19575	Parkview Drive	Mains	STS 675 mm	Storm Sewer	83	675	CONC	1990	86	2076	110,970	52	4,241	-
19576	Parkview Drive	Mains	STS 600 mm	Storm Sewer	101	600	CONC	1990	86	2076	111,030	52	4,243	-
19577	Parkview Drive	Mains	STS 1050 mm	Storm Sewer	32	1,050	CONC	1990	86	2076	71,120	52	2,718	-
19578	Parkview Drive	Mains	STS 200 mm	Storm Sewer	57	200	CONC	1990	86	2076	27,150	52	1,038	-
19579	Clara Street	Mains	STS 900 mm	Storm Sewer	104	900	CONC	1992	86	2078	192,770	54	7,253	-
19580	Dorchester Road	Mains	STS 450 mm	Storm Sewer	20	450	HDPE	1989	86	2075	15,780	51	608	



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19581	Dorchester Road	Mains	STS 600 mm	Storm Sewer	4	600	CSP	1989	86	2075	4,380	51	169	-
19582	Dorchester Road	Mains	STS 250 mm	Storm Sewer	12		PVC	1989	86	2075	5,750	51	222	-
19583	Hamilton Road	Mains	STS 300 mm	Storm Sewer	63	300	CONC	1989	86	2075	30,570	51	1,178	-
19584	Parkview Drive	Mains	STS 1050 mm	Storm Sewer	35	1,050	CONC	1990	86	2076	77,930	52	2,978	-
19585	Hamilton Road	Mains	STS 150 mm	Storm Sewer	9	150	PVC	1989	86	2075	6,410	51	247	
19586	Hamilton Road	Mains	STS 250 mm	Storm Sewer	22	250	CONC	1989	86	2075	10,500	51	405	-
19587	Parkview Drive	Mains	STS 1050 mm	Storm Sewer	53	1,050	CONC	1990	86	2076	117,340	52	4,484	-
19588	Hamilton Road	Mains	STS 250 mm	Storm Sewer	74	250	CONC	1989	86	2075	35,690	51	1,375	-
19589	Hamilton Road	Mains	STS 250 mm	Storm Sewer	77	250	CONC	1989	86	2075	36,980	51	1,425	-
19590	Meadowbrook Lane	Mains	STS 375 mm	Storm Sewer	81	375	PVC	1991	86	2077	61,080	53	2,316	-
19591	Meadowbrook Lane	Mains	STS 450 mm	Storm Sewer	57	450	CONC	1991	86	2077	44,750	53	1,697	-
19592	Eva Street	Mains	STS 600 mm	Storm Sewer	119	600	CONC	1992	86	2078	130,910	54	4,926	-
19593	lda Street	Mains	STS 525 mm	Storm Sewer	99	525	CONC	1993	86	2079	80,870	55	3,020	-
19594	Elizabeth Drive	Mains	STS 525 mm	Storm Sewer	59	525	CONC	1989	86	2075	48,510	51	1,869	-
19595	Parkview Drive	Mains	STS 1200 mm	Storm Sewer	28	1,200	CONC	1990	86	2076	70,420	52	2,691	-
19596	Hamilton Road	Mains	STS 150 mm	Storm Sewer	10	150	PVC	1989	86	2075	7,210	51	278	-
19597	Meadowbrook Lane	Mains	STS 600 mm	Storm Sewer	17		CONC	1991	86	2077	18,950	53	718	-
19598	Meadowbrook Lane	Mains	STS 375 mm	Storm Sewer	53	375	PVC	1991	86	2077	39,970	53	1,515	-
19599	Meadowbrook Lane	Mains	STS 375 mm	Storm Sewer	21	375	PVC	1991	86	2077	16,120	53	611	-
19600	Parkview Drive	Mains	STS 675 mm	Storm Sewer	57	675	CONC	1990	86	2076	75,960	52	2,903	-
19601	Parkview Drive	Mains	STS 600 mm	Storm Sewer	30		CONC	1990	86	2076	33,190	52	1,268	-
19602	Parkview Drive	Mains	STS 675 mm	Storm Sewer	65	675	CONC	1990	86	2076	86,100	52	3,290	-
19603	Parkview Drive	Mains	STS 1050 mm	Storm Sewer	51	1,050	CONC	1990	86	2076	111,900	52	4,277	-
19604	Parkview Drive	Mains	STS 1500 mm	Storm Sewer	15	1,500	CONC	1990	86	2076	45,850	52	1,752	-
19605	Woodvale Drive	Mains	STS 250 mm	Storm Sewer	48	250	PVC	2003	86	2089	22,840	65	803	-
19606	Parkview Drive	Mains	STS 200 mm	Storm Sewer	44	200	PVC	1990	86	2076	21,030	52	804	-
19607	Carleton Court	Mains	STS 250 mm	Storm Sewer	61	250	PVC	1986	86	2072	29,140	48	1,153	-
19608	Woodvale Drive	Mains	STS 250 mm	Storm Sewer	47	250	PVC	2003	86	2089	22,550	65	793	-
19609	The Neighbourhood 2	Mains	STS 300 mm	Storm Sewer	37	300	PVC	2007	86	2093	17,820	69	615	-
19610	The Neighbourhood 2	Mains	STS 200 mm	Storm Sewer	32	200	PVC	2007	86	2093	15,250	69	526	-
19611	King Street	Mains	STS 675 mm	Storm Sewer	106	675	CONC	1980	86	2066	140,780	42	5,940	-
19612	Queen Street	Mains	STS 200 mm	Storm Sewer	8	200	PVC	1993	86	2079	4,010	55	150	-
19613	Queen Street	Mains	STS 250 mm	Storm Sewer	30	250	PVC	1993	86	2079	14,410	55	538	-
19614	The Neighbourhood	Mains	STS 250 mm	Storm Sewer	29	250	PVC	2004	86	2090	14,140	66	494	-
19615	Hamilton Road	Mains	STS 250 mm	Storm Sewer	16	250	CONC	1989	86	2075	7,710	51	297	-
19616	Dorchester WWTP Road	Mains	STS 450 mm	Storm Sewer	6	450	CONC	2002	86	2088	4,890	64	173	-
19617	Dorchester Road	Mains	STS 300 mm	Storm Sewer	14	300	HDPE	1998	86	2084	6,870	60	248	-
19618	King Street	Mains	STS 375 mm	Storm Sewer	97	375	CONC	1980	86	2066	72,630	42	3,064	-
19619	Dorchester WWTP Road	Mains	STS 600 mm	Storm Sewer	58	600	CONC	2002	86	2088	64,060	64	2,263	-
19620	Bridge Street	Mains	STS 250 mm	Storm Sewer	12	250	CONC	1976	86	2062	5,910	38	263	-
19621	Bridge Street	Mains	STS 250 mm	Storm Sewer	11	250	CONC	1976	86	2062	5,300	38	236	-
19622	King Street	Mains	STS 200 mm	Storm Sewer	7	200	CONC	1980	86	2066	3,310	42	140	-
19623	Dorchester Road	Mains	STS 450 mm	Storm Sewer	195	450	HDPE	1998	86	2084	153,920	60	5,562	-
19624	King Street	Mains	STS 750 mm	Storm Sewer	24	750	CONC	1980	86	2066	35,040	42	1,478	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19625	King Street	Mains	STS 750 mm	Storm Sewer	36	750	CONC	1980	86	2066	53,450	42	2,255	-
19626	Dorchester WWTP Road	Mains	STS 600 mm	Storm Sewer	116	600	CONC	2002	86	2088	127,260	64	4,496	-
19627	King Street	Mains	STS 250 mm	Storm Sewer	72	250	CONC	1980	86	2066	34,330	42	1,448	-
19628	King Street	Mains	STS 250 mm	Storm Sewer	83	250	CONC	1980	86	2066	39,650	42	1,673	-
19629	Hamilton Road	Mains	STS 375 mm	Storm Sewer	56	375	CONC	1989	86	2075	41,880	51	1,614	-
19630	Pondview Court	Mains	STS 750 mm	Storm Sewer	76	750	CONC	1987	86	2073	112,030	49	4,393	-
19631	Hamilton Road	Mains	STS 150 mm	Storm Sewer	14	150	PVC	1963	86	2049	10,190	25	585	-
19632	Dorchester Road	Mains	STS 600 mm	Storm Sewer	93	600	CONC	1989	86	2075	101,980	51	3,930	-
19633	Hamilton Road	Mains	STS 450 mm	Storm Sewer	28	450	CONC	1989	86	2075	22,170	51	854	-
19634	Dorchester Road	Mains	STS 450 mm	Storm Sewer	23	450	CONC	1989	86	2075	17,900	51	690	-
19635	Harrison Street	Mains	STS 100 mm	Storm Sewer	7	100	CONC	1981	86	2067	4,740	43	198	-
19636	Byron Avenue	Mains	STS 300 mm	Storm Sewer	6	300	CONC	1990	86	2076	2,980	52	114	-
19637	Byron Avenue	Mains	STS 300 mm	Storm Sewer	9	300	CONC	1990	86	2076	4,240	52	162	-
19638	Harrison Street	Mains	STS 300 mm	Storm Sewer	64	300	CONC	1981	86	2067	30,760	43	1,283	-
19639	Canterbury Drive	Mains	STS 300 mm	Storm Sewer	77	300	CONC	1990	86	2076	36,860	52	1,409	-
19640	Harrison Street	Mains	STS 300 mm	Storm Sewer	53	300	CONC	1981	86	2067	25,550	43	1,065	-
19641	Harrison Street	Mains	STS 300 mm	Storm Sewer	41	300	CONC	1981	86	2067	19,980	43	833	-
19642	Harrison Street	Mains	STS 300 mm	Storm Sewer	48	300	CONC	1981	86	2067	23,010	43	959	-
19643	Harrison Street	Mains	STS 300 mm	Storm Sewer	21	300	CONC	1981	86	2067	9,960	43	415	-
19644	Harrison Street	Mains	STS 450 mm	Storm Sewer	23	450	CONC	1981	86	2067	18,360	43	766	-
19645	Harrison Street	Mains	STS 450 mm	Storm Sewer	28	450	CONC	1981	86	2067	22,370	43	933	-
19646	Harrison Street	Mains	STS 400 mm	Storm Sewer	26	400	CONC	1981	86	2067	20,200	43	842	-
19647	Meadowbrook Lane	Mains	STS 600 mm	Storm Sewer	61	600	CONC	1991	86	2077	66,560	53	2,524	-
19648	Foxhollow Drive	Mains	STS 450 mm	Storm Sewer	100	450	PVC	2003	86	2089	78,980	65	2,776	-
19649	Clara Street	Mains	STS 750 mm	Storm Sewer	99	750	CONC	1993	86	2079	145,160	55	5,422	-
19650	King Street	Mains	STS 450 mm	Storm Sewer	94	450	CONC	1980	86	2066	74,220	42	3,131	-
19651	Elizabeth Drive	Mains	STS 200 mm	Storm Sewer	5	200	CONC	2000	86	2086	2,520	62	90	-
19652	Oakwood Drive	Mains	STS 1050 mm	Storm Sewer	54	1,050	CONC	2009	86	2095	117,870	71	4,030	-
19653	Dorchester Road	Mains	STS 150 mm	Storm Sewer	151	150	PVC	2001	86	2087	109,660	63	3,895	-
19654	Dorchester Road	Mains	STS 150 mm	Storm Sewer	174	150	PVC	2001	86	2087	125,940	63	4,473	-
19655	Byron Avenue	Mains	STS 450 mm	Storm Sewer	21	450	PVC	2009	86	2095	16,900	71	578	-
19656	Byron Avenue	Mains	STS 600 mm	Storm Sewer	107	600	CONC	1990	86	2076	117,600	52	4,494	-
19657	Byron Avenue	Mains	STS 600 mm	Storm Sewer	107	600	CONC	1990	86	2076	117,520	52	4,491	-
19658	Dorchester Road	Mains	STS 150 mm	Storm Sewer	150	150	PVC	1995	86	2081	108,850	57	4,009	-
19659	Dorchester Road	Mains	STS 150 mm	Storm Sewer	150	150	PVC	1995	86	2081	108,850	57	4,009	-
19660	Clara Street	Mains	STS 750 mm	Storm Sewer	87	750	CONC	1992	86	2078	128,830	54	4,847	-
19661	Canterbury Drive	Mains	STS 450 mm	Storm Sewer	105	450	CONC	1990	86	2076	82,450	52	3,151	-
19662	Byron Avenue	Mains	STS 300 mm	Storm Sewer	99	300	PVC	2009	86	2095	47,870	71	1,637	-
19663	Marion Street	Mains	STS 300 mm	Storm Sewer	10	300	PVC	1996	86	2082	4,710	58	172	-
19664	Temperance Street	Mains	STS 300 mm	Storm Sewer	3	300	CONC	1985	86	2071	1,630	47	65	-
19665	Agnes Street	Mains	STS 600 mm	Storm Sewer	3	600	CONC	1951	86	2037	3,450	13	324	-
19666	Temperance Street	Mains	STS 300 mm	Storm Sewer	42	300	CONC	1985	86	2071	20,020	47	800	-
19667	Thorndale Drain	Mains	STS 250 mm	Storm Sewer	3	250	CONC	1951	86	2037	1,590	13	150	-
19668	Harrison Street	Mains	STS 300 mm	Storm Sewer	15	300	CONC	1981	86	2067	7,220	43	301	-
19669	Harrison Street	Mains	STS 300 mm	Storm Sewer	54	300	CONC	1981	86	2067	25,860	43	1,078	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19670	Hamilton Road	Mains	STS 375 mm	Storm Sewer	75	375	CONC	1989	86	2075	56,640	51	2,183	-
19671	Dorchester Road	Mains	STS 450 mm	Storm Sewer	74	450	HDPE	1998	86	2084	58,390	60	2,110	-
19672	Dorchester Road	Mains	STS 450 mm	Storm Sewer	30	450	HDPE	1998	86	2084	23,580	60	852	-
19673	Mitchell Avenue	Mains	STS 600 mm	Storm Sewer	16	600	CONC	2009	86	2095	17,230	71	589	-
19674	Byron Avenue	Mains	STS 300 mm	Storm Sewer	98	300	PVC	2009	86	2095	47,050	71	1,609	-
19675	Byron Avenue	Mains	STS 375 mm	Storm Sewer	96	375	PVC	2009	86	2095	72,310	71	2,472	-
19676	Byron Avenue	Mains	STS 450 mm	Storm Sewer	9	450	CONC	1990	78	2068	7,070	44	291	-
19677	Byron Avenue	Mains	STS 300 mm	Storm Sewer	102	300	PVC	2009	78	2087	49,020	63	1,741	-
19678	Oakwood Drive	Mains	STS 450 mm	Storm Sewer	29	450	CONC	1995	86	2081	22,810	57	840	-
19679	Oakwood Drive	Mains	STS 450 mm	Storm Sewer	9	450	CONC	1995	86	2081	6,840	57	252	-
19680	Oakwood Drive	Mains	STS 1050 mm	Storm Sewer	31	1,050	CONC	2009	86	2095	67,200	71	2,298	-
19681	Mitchell Avenue	Mains	STS 825 mm	Storm Sewer	40	825	CONC	1986	86	2072	63,490	48	2,513	-
19682	Elizabeth Drive	Mains	STS 200 mm	Storm Sewer	5	200	CONC	2000	86	2086	2,340	62	84	-
19683	Walker Drain Improvement 2001	Mains	STS 675 mm	Storm Sewer	48	675	CONC	1984	86	2070	63,780	46	2,574	-
19684	Byron Avenue	Mains	STS 375 mm	Storm Sewer	97	375	PVC	2009	86	2095	72,990	71	2,496	-
19685	Byron Avenue	Mains	STS 300 mm	Storm Sewer	97	300	PVC	2009	86	2095	46,710	71	1,597	-
19686	Byron Avenue	Mains	STS 450 mm	Storm Sewer	96	450	PVC	2009	86	2095	75,660	71	2,587	-
19687	Byron Avenue	Mains	STS 300 mm	Storm Sewer	65	300	PVC	2009	86	2095	31,540	71	1,078	-
19688	Marion Street	Mains	STS 675 mm	Storm Sewer	49	675	CONC	2010	86	2096	64,850	72	2,208	-
19689	Marion Street	Mains	STS 375 mm	Storm Sewer	19	375	HDPE	2010	86	2096	14,380	72	490	-
19690	Marion Street	Mains	STS 150 mm	Storm Sewer	19	150	HDPE	2010	79	2089	13,870	65	487	-
19691	Ludwig Street	Mains	STS 600 mm	Storm Sewer	10	600	CONC	2010	79	2089	10,940	65	384	-
19692	Ludwig Street	Mains	STS 375 mm	Storm Sewer	13	375	CONC	2010	86	2096	9,780	72	333	-
19693	Newton Avenue	Mains	STS 825 mm	Storm Sewer	13	825	CONC	2010	86	2096	20,530	72	699	-
19694	Newton Avenue	Mains	STS 675 mm	Storm Sewer	13	675	CONC	2010	86	2096	17,570	72	598	-
19695	Newton Avenue	Mains	STS 375 mm	Storm Sewer	105	375	PVC	2010	86	2096	79,010	72	2,691	-
19696	Newton Avenue	Mains	STS 675 mm	Storm Sewer	85	675	CONC	2010	86	2096	113,130	72	3,853	-
19697	Newton Avenue	Mains	STS 675 mm	Storm Sewer	78	675	CONC	2010	78	2088	104,480	64	3,691	-
19698	Ludwig Street	Mains	STS 900 mm	Storm Sewer	100	900	CONC	2010	78	2088	185,190	64	6,542	-
19699	Ludwig Street	Mains	STS 900 mm	Storm Sewer	66	900	CONC	2010	78	2088	122,750	64	4,336	-
19700	Ludwig Street	Mains	STS 1050 mm	Storm Sewer	24	1,050	CONC	2010	78	2088	52,810	64	1,866	-
19701	Newton Avenue	Mains	STS 300 mm	Storm Sewer	99	300	PVC	2010	78	2088	47,870	64	1,691	-
19702	Gerald Parkway	Mains	STS 600 mm	Storm Sewer	44	600	HDPE	2010	86	2096	48,430	72	1,649	-
19703	Gerald Parkway	Mains	STS 450 mm	Storm Sewer	55	450	HDPE	2010	86	2096	43,190	72	1,471	-
19704	Gerald Parkway	Mains	STS 450 mm	Storm Sewer	99	450	HDPE	2010	86	2096	78,020	72	2,657	-
19705	Gerald Parkway	Mains	STS 450 mm	Storm Sewer	90	450	HDPE	2010	86	2096	70,570	72	2,403	-
19706	Gerald Parkway	Mains	STS 600 mm	Storm Sewer	99	600	HDPE	2010	86	2096	108,480	72	3,694	-
19707	Gerald Parkway	Mains	STS 525 mm	Storm Sewer	99	525	HDPE	2010	79	2089	81,220	65	2,855	-
19708	Gerald Parkway	Mains	STS 525 mm	Storm Sewer	99	525	HDPE	2010	79	2089	81,220	65	2,855	-
19709	Ideal Drive	Mains	STS 300 mm	Storm Sewer	68	300	CONC	2010	79	2089	32,820	65	1,153	-
19710	Ideal Drive	Mains	STS 375 mm	Storm Sewer	99	375	CONC	2010	79	2089	74,490	65	2,618	-
19711	Ideal Drive	Mains	STS 450 mm	Storm Sewer	37	450	CONC	2010	79	2089	29,160	65	1,025	-
19712	Ideal Drive	Mains	STS 825 mm	Storm Sewer	52	825	CONC	2010	79	2089	81,560	65	2,866	-
19713	Ideal Drive	Mains	STS 825 mm	Storm Sewer	19	825	CONC	2010	79	2089	29,690	65	1,043	-



Asset ID	Location	Segment	Profile	Name	(m)	Diameter (mm)	Material	Year Installed	Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19714		Mains	STS 750 mm	Storm Sewer	57	750	CONC	2010	86	2096	84,740	72	2,886	-
19715	Byron Avenue	Mains	STS 900 mm	Storm Sewer	48	900	CONC	2012	86	2098	88,170	74	2,979	-
19716	Byron Avenue	Mains	STS 900 mm	Storm Sewer	113	900	CONC	2010	86	2096	210,220	72	7,159	-
19717	Quail Run Condo	Mains	STS 300 mm	Storm Sewer	45	300	PVC	2010	86	2096	21,690	72	739	-
19718	Elliott Trail	Mains	STS 675 mm	Storm Sewer	96	675	CONC	2019	86	2105	128,220	81	4,233	-
19719	Brooker Trail - Thorndale	Mains	STS 675 mm	Storm Sewer	83	675	CONC	2019	78	2097	110,690	73	3,755	-
19720	Brooker Trail	Mains	STS 375 mm	Storm Sewer	70	375	CONC	2012	86	2098	52,910	74	1,788	-
19721	Brooker Trail	Mains	STS 450 mm	Storm Sewer	22	450	CONC	2012	86	2098	17,650	74	596	-
19722	Brooker Trail	Mains	STS 300 mm	Storm Sewer	28	300	CONC	2012	86	2098	13,640	74	461	-
19723	Elliott Trail	Mains	STS 375 mm	Storm Sewer	56	375	CONC	2012	86	2098	42,150	74	1,424	-
19724	Elliott Trail	Mains	STS 450 mm	Storm Sewer	8	450	CONC	2012	86	2098	6,700	74	226	-
19725	Leesboro Trail	Mains	STS 675 mm	Storm Sewer	100	675	CONC	2012	86	2098	132,650	74	4,482	-
19726	Elliott Trail	Mains	STS 900 mm	Storm Sewer	76	900	CONC	2012	86	2098	140,490	74	4,747	-
19727	Elliott Trail	Mains	STS 300 mm	Storm Sewer	12	300	CONC	2012	86	2098	5,570	74	188	-
19728	Elliott Trail	Mains	STS 975 mm	Storm Sewer	24	975	CONC	2012	86	2098	48,100	74	1,625	-
19729	Trails at Wye Creek Condo	Mains	STS 375 mm	Storm Sewer	15	375	CONC	2016	86	2102	10,930	78	364	-
19730	Trails at Wye Creek SWM	Mains	STS 450 mm	Storm Sewer	21	450	PVC	2016	86	2102	16,500	78	550	-
19731	Trails at Wye Creek SWM	Mains	STS 600 mm	Storm Sewer	10	600	CONC	2016	86	2102	10,950	78	365	-
19732	William Court	Mains	STS 375 mm	Storm Sewer	55	375	CONC	2020	86	2106	41,020	82	1,350	-
19733	Leesboro Trail	Mains	STS 300 mm	Storm Sewer	83	300	CONC	2020	81	2101	39,990	77	1,337	-
19734	Brooker Trail	Mains	STS 450 mm	Storm Sewer	54	450	CONC	2012	81	2093	42,200	69	1,455	-
19735	Brooker Trail	Mains	STS 450 mm	Storm Sewer	17	450	CONC	2012	86	2098	13,300	74	449	-
19736	Brooker Trail	Mains	STS 450 mm	Storm Sewer	68	450	CONC	2012	81	2093	53,790	69	1,855	-
19737	Brooker Trail	Mains	STS 375 mm	Storm Sewer	44	375	CONC	2012	81	2093	33,380	69	1,151	-
19738	Brooker Trail	Mains	STS 300 mm	Storm Sewer	21	300	CONC	2012	86	2098	10,020	74	339	-
19739 19740	Brooker Trail	Mains	STS 675 mm	Storm Sewer	41 44	675 525	CONC	2019 2019	81 81	2100 2100	54,840	76 76	1,840 1,201	-
19740	Slammer Trail - Thorndale Slammer Trail - Thorndale	Mains Mains	STS 525 mm	Storm Sewer Storm Sewer	82	450	CONC	2019	81	2100	35,790 64,440	76	2.162	
19741	Elliott Trail	Mains	STS 450 mm STS 600 mm	Storm Sewer	99	600	CONC	2019	81	2100	108,170	76	3,629	-
19742	Elliott Trail	Mains	STS 600 mm	Storm Sewer	25	600	CONC	2019	81	2100	27.540	76	924	-
19743	Elliott Trail	Mains	STS 825 mm	Storm Sewer	77	825	CONC	2019	81	2093	121.020	69	4.174	-
19744	Elliott Trail	Mains	STS 750 mm	Storm Sewer	35	750	CONC	2012	81	2093	50,850	69	1.754	-
19745	Elliott Trail	Mains	STS 750 mm	Storm Sewer	79	750	CONC	2012	81	2093	116.890	69	4.031	-
19746	Elliott Trail	Mains	STS 750 mm	Storm Sewer	45	750	CONC	2012	81	2093	66.740	69	2,302	-
19747	Elliott Trail	Mains	STS 300 mm	Storm Sewer	54	300	CONC	2012	81	2093	26,200	69	904	-
19748	Leesboro Trail	Mains	STS 375 mm	Storm Sewer	21	375	CONC	2012	81	2093	15.860	77	530	-
19749	Leesboro Trail	Mains	STS 375 mm	Storm Sewer	21	375	CONC	2020	81	2101	4,050	77	135	-
19750	Leesboro Trail	Mains	STS 375 mm	Storm Sewer	44	375	CONC	2020	86	2106	33.370	82	1.098	-
19751	Leesboro Trail	Mains	STS 375 mm	Storm Sewer	24	375	CONC	2020	86	2106	18.290	82	1,098	-
19752	William Court	Mains	STS 300 mm	Storm Sewer	9	300	CONC	2020	86	2106	4.120	82	136	-
19753	Leesboro Trail	Mains	STS 300 mm	Storm Sewer	68	300	CONC	2020	86	2106	32.580	82	1.072	-
19754	Leesboro Trail	Mains	STS 300 mm	Storm Sewer	13	300	CONC	2020	86	2106	6,460	82	213	-
19756					50	300	CONC	2020	86	2106	-,	79	797	-
19/00	Foxborough Place Foxborough Place	Mains Mains	STS 300 mm STS 450 mm	Storm Sewer Storm Sewer	83	450	CONC	2017	86	2103	24,000 65,280	79 79	2.168	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19758	Foxborough	Mains	STS 525 mm	Storm Sewer	89	525	CONC	2017	81	2098	73,170	74	2,473	-
19759	Trails at Wye Creek SWM	Mains	STS 150 mm	Storm Sewer	13	150	PVC	2016	81	2097	9,340	73	317	-
19760	Leesboro Trail	Mains	STS 450 mm	Storm Sewer	49	450	CONC	2016	86	2102	38,980	78	1,299	-
19761	Elliott Trail	Mains	STS 675 mm	Storm Sewer	58	675	CONC	2019	81	2100	76,610	76	2,570	-
19762	Brooker Trail	Mains	STS 450 mm	Storm Sewer	20	450	CONC	2012	81	2093	15,920	69	549	-
19763	Village on the Thames	Mains	STS 250 mm	Storm Sewer	26	250	CONC	2010	81	2091	12,570	67	437	-
19764	Village on the Thames	Mains	STS 300 mm	Storm Sewer	78	300	CONC	2010	86	2096	37,560	72	1,279	-
19765	Village on the Thames	Mains	STS 450 mm	Storm Sewer	19	450	CONC	2010	86	2096	14,730	72	502	-
19766	Village on the Thames	Mains	STS 525 mm	Storm Sewer	39	525	CONC	2010	86	2096	31,970	72	1,089	-
19767	Village on the Thames	Mains	STS 525 mm	Storm Sewer	8	525	CONC	2010	86	2096	6,500	72	221	-
19768	Village on the Thames	Mains	STS 250 mm	Storm Sewer	18	250	CONC	2010	86	2096	8,660	72	295	-
19769	Village on the Thames	Mains	STS 250 mm	Storm Sewer	103	250	CONC	2010	86	2096	49,570	72	1,688	-
19770	Village on the Thames	Mains	STS 250 mm	Storm Sewer	16	250	CONC	2010	75	2085	7,480	61	269	-
19771	Village on the Thames	Mains	STS 250 mm	Storm Sewer	42	250	CONC	2010	86	2096	20,090	72	684	-
19772	Quail Run Condo	Mains	STS 450 mm	Storm Sewer	22	450	PVC	2010	75	2085	17,450	61	627	-
19773	Quail Run Condo	Mains	STS 375 mm	Storm Sewer	21	375	PVC	2010	86	2096	16,000	72	545	-
19774	Quail Run Condo	Mains	STS 300 mm	Storm Sewer	24	300	PVC	2010	86	2096	11,580	72	394	-
19775	Brooker Trail	Mains	STS 600 mm	Storm Sewer	56	600	CONC	2020	86	2106	61,850	82	2,036	-
19776	Nicoles Trail	Mains	STS 300 mm	Storm Sewer	74	300	CONC	2021	86	2107	35,530	83	1,166	-
19777	Jennifers Trail	Mains	STS 525 mm	Storm Sewer	76	525	CONC	2015	86	2101	62,590	77	2,093	-
19778	Leesboro Trail	Mains	STS 300 mm	Storm Sewer	55	300	CONC	2021	86	2107	26,540	83	871	-
19779	Shawns Trail	Mains	STS 450 mm	Storm Sewer	91	450	CONC	2021	86	2107	71,520	83	2,347	-
19780	Hill Street	Mains	STS 200 mm	Storm Sewer	5	200	PVC	1989	86	2075	2,620	51	101	-
19781	Elliott Trail	Mains	STS 600 mm	Storm Sewer	59	600	CONC	2021	86	2107	64,830	83	2,128	-
19782	Shawns Trail	Mains	STS 450 mm	Storm Sewer	47	450	CONC	2021	86	2107	37,410	83	1,228	-
19783	Nicoles Trail	Mains	STS 300 mm	Storm Sewer	55	300	CONC	2020	86	2106	26,360	82	868	-
19784	Nicoles Trail	Mains	STS 300 mm	Storm Sewer	15	300	CONC	2020	86	2106	7,250	82	239	-
19785	Nicoles Trail	Mains	STS 450 mm	Storm Sewer	99	450	CONC	2020	86	2106	77,700	82	2,558	-
19786	Nicoles Trail	Mains	STS 600 mm	Storm Sewer	85	600	CONC	2020	86	2106	92,650	82	3,050	-
19787	Nicoles Trail	Mains	STS 600 mm	Storm Sewer	30	600	CONC	2020	86	2106	33,370	82	1,098	-
19788	Brooker Trail	Mains	STS 600 mm	Storm Sewer	27	600	CONC	2020	86	2106	30,120	82	991	-
19789	Brooker Trail	Mains	STS 600 mm	Storm Sewer	20	600	CONC	2020	78	2098	22,340	74	755	-
19790	Nicoles Trail	Mains	STS 450 mm	Storm Sewer	72	450	CONC	2021	86	2107	56,420	83	1,852	-
19791	Nicoles Trail	Mains	STS 450 mm	Storm Sewer	46	450	CONC	2021	86	2107	35,890	83	1,178	-
19792	Jennifers Trail	Mains	STS 375 mm	Storm Sewer	89	375	CONC	2021	86	2107	67,020	83	2,200	-
19793	Jennifers Trail	Mains	STS 375 mm	Storm Sewer	19	375	CONC	2016	86	2102	14,410	78	480	-
19794	Jennifers Trail	Mains	STS 375 mm	Storm Sewer	11	375	CONC	2016	86	2102	7,970	78	266	-
19795	Jennifers Trail	Mains	STS 300 mm	Storm Sewer	46	300	CONC	2016	86	2102	22,300	78	743	-
19796	Jennifers Trail	Mains	STS 300 mm	Storm Sewer	47	300	CONC	2016	86	2102	22,470	78	749	-
19797	Jennifers Trail	Mains	STS 375 mm	Storm Sewer	47	375	CONC	2016	86	2102	35,010	78	1,167	-
19798	Jennifers Trail	Mains	STS 375 mm	Storm Sewer	35	375	CONC	2016	86	2102	26,190	78	873	-
19799	Jennifers Trail	Mains	STS 450 mm	Storm Sewer	11	450	CONC	2016	75	2091	8,910	67	310	-
19800	Jennifers Trail	Mains	STS 525 mm	Storm Sewer	30	525	CONC	2021	86	2107	24,350	83	799	-
19801	Elliott Trail	Mains	STS 600 mm	Storm Sewer	63	600	CONC	2021	86	2107	69,100	83	2,268	-
19802	Elliott Trail	Mains	STS 375 mm	Storm Sewer	9	375	CONC	2012	86	2098	6,900	74	233	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19803	Leesboro Trail	Mains	STS 300 mm	Storm Sewer	54	300	CONC	2021	86	2107	26,160	83	859	-
19804	Shawns Trail	Mains	STS 450 mm	Storm Sewer	29	450	CONC	2021	86	2107	23,100	83	758	-
19805	Nicoles Trail	Mains	STS 300 mm	Storm Sewer	55	300	CONC	2020	86	2106	26,270	82	865	-
19806	Thorndale Drain	Mains	STS 400 mm	Storm Sewer	8	400	PVC	1951	86	2037	6,460	13	607	-
19807	Thorndale Drain	Mains	STS 900 mm	Storm Sewer	65	900	CONC	2013	86	2099	120,360	75	4,052	-
19808	Thorndale Drain	Mains	STS 1050 mm	Storm Sewer	97	1,050	CONC	2013	86	2099	214,300	75	7,215	-
19809	Thorndale Drain	Mains	STS 900 mm	Storm Sewer	64	900	CONC	2013	86	2099	117,910	75	3,970	-
19810	Thorndale Drain	Mains	STS 900 mm	Storm Sewer	6	900	CONC	2013	86	2099	10,450	75	352	-
19811	Thorndale Drain	Mains	STS 900 mm	Storm Sewer	8	900	CONC	2013	86	2099	15,080	75	508	-
19812	Petersson Drain	Mains	STS 350 mm	Storm Sewer	18	350	CSP	1982	86	2068	13,670	44	564	-
19813		Mains	STS 200 mm	Storm Sewer	117	200	CONC	1970	86	2056	55,720	32	2,733	-
													suggested for 10 year capital	
19814	Agnes Street	Mains	STS 150 mm	Storm Sewer	65	150	STEEL	1951	75	2026	47,180	2	forecast	47,180
19815	Park Lane	Mains	STS 250 mm	Storm Sewer	70	250	PVC	1991	86	2077	33,700	53	1,278	-
19816	Meadowbrook Lane	Mains	STS 250 mm	Storm Sewer	70	250	PVC	1991	86	2077	33,460	53	1,269	-
19817	Ideal Drive	Mains	STS 300 mm	Storm Sewer	16	300	CONC	2010	86	2096	7,630	72	260	-
19818	Forest Grove Crescent	Mains	STS 300 mm	Storm Sewer	100	300	PVC	2001	86	2087	48,090	63	1,708	-
19819	Trails at Wye Creek Condo	Mains	STS 300 mm	Storm Sewer	34	300	CONC	2010	86	2096	16,350	72	557	-
19820	Trails at Wye Creek Condo	Mains	STS 300 mm	Storm Sewer	60	300	CONC	2010	86	2096	28,770	72	980	-
19821	Trails at Wye Creek Condo	Mains	STS 300 mm	Storm Sewer	34	300	CONC	2010	86	2096	16,150	72	550	-
19822	Trails at Wye Creek Condo	Mains	STS 300 mm	Storm Sewer	61	300	CONC	2010	86	2096	29,300	72	998	-
19823	Trails at Wye Creek Condo	Mains	STS 300 mm	Storm Sewer	35	300	CONC	2010	86	2096	16,920	72	576	-
19824	Trails at Wye Creek Condo	Mains	STS 250 mm	Storm Sewer	9	250	CONC	2010	86	2096	4,290	72	146	-
19825	Trails at Wye Creek Condo	Mains	STS 300 mm	Storm Sewer	35	300	CONC	2010	86	2096	16,900	72	576	-
19826	Village on the Thames	Mains	STS 375 mm	Storm Sewer	41	375	CONC	2010	86	2096	30,580	72	1,041	-
19827	Village on the Thames	Mains	STS 525 mm	Storm Sewer	5	525	CONC	2010	86	2096	4,340	72	148	-
19828	Village on the Thames	Mains	STS 525 mm	Storm Sewer	59	525	CONC	2010	86	2096	48,110	72	1,638	-
19829	Village on the Thames	Mains	STS 400 mm	Storm Sewer	16	400	HDPE	2010	86	2096	12,510	72	426	-
19830	Village on the Thames	Mains	STS 400 mm	Storm Sewer	16	400	HDPE	2010	75	2085	12,460	61	448	-
19831	Slammer Trail	Mains	STS 375 mm	Storm Sewer	49	375	CONC	2019	75	2094	36,780	70	1,263	-
19832	Forest Grove Crescent	Mains	STS 250 mm	Storm Sewer	22	250	PVC	2001	86	2087	10,570	63	375	-
19833	Forest Grove Crescent	Mains	STS 250 mm	Storm Sewer	108	250	PVC	2001	86	2087	51,690	63	1,836	-
19834	Forest Grove Crescent	Mains	STS 300 mm	Storm Sewer	54	300	PVC	2001	86	2087	26,080	63	926	-
19835	Forest Grove Crescent	Mains	STS 300 mm	Storm Sewer	56	300	PVC	2010	86	2096	26,980	72	919	-
19836	Forest Grove Crescent	Mains	STS 600 mm	Storm Sewer	20	600	PVC	2003	86	2089	21,490	65	755	-
19837	Forest Grove Crescent	Mains	STS 250 mm	Storm Sewer	63	250	PVC	2001	86	2087	30,320	63	1,077	-
19838	Thorndale Drain	Mains	STS 250 mm	Storm Sewer	59	250	CONC	1951	86	2037	28,060	13	2,638	-
19839	Thorndale Drain	Mains	STS 350 mm	Storm Sewer	38	350	HDPE	1951	86	2037	28,420	13	2,672	-
19840	Thorndale Drain	Mains	STS 150 mm	Storm Sewer	2	150	PVC	1951	86	2037	1,620	13	152	-
19841	King Street	Mains	STS 600 mm	Storm Sewer	14	600	CSP	1980	78	2058	15,560	34	736	-
19842		Mains	STS 300 mm	Storm Sewer	5	300	CONC	2010	86	2096	2,260	72	77	-
19843	Trails at Wye Creek Condo	Mains	STS 375 mm	Storm Sewer	8	375	CONC	2016	86	2102	6,090	78	203	-
19844	Trails at Wye Creek Condo	Mains	STS 375 mm	Storm Sewer	5	375	CONC	2016	86	2102	4,120	78	137	-
19845	Waste Water Treament Plant	Mains	STS 825 mm	Storm Sewer	16	825	CONC	2010	86	2096	25,220	72	859	-



Asset ID	Location	Segment	Profile	Name	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19846		Mains	STS 900 mm	Storm Sewer	32	900	CONC	2013	86	2099	60,230	75	2,028	-
19847		Mains	STS 900 mm	Storm Sewer	95	900	CONC	2013	86	2099	176,220	75	5,933	-
19848		Mains	STS 450 mm	Storm Sewer	77	450	CONC	2013	86	2099	61,060	75	2,056	-
19849		Mains	STS 450 mm	Storm Sewer	74	450	CONC	2013	86	2099	58,170	75	1,958	-
19850		Mains	STS 450 mm	Storm Sewer	9	450	CONC	2013	86	2099	7,130	75	240	-
19851		Mains	STS 200 mm	Storm Sewer	12	200	PVC	2008	86	2094	5,730	70	197	-
19852		Mains	STS 675 mm	Storm Sewer	17	675	CONC	2010	86	2096	22,160	72	755	-
19853		Mains	STS 150 mm	Storm Sewer	73	150	PVC	2008	86	2094	52,940	70	1,818	-
19854		Mains	STS 200 mm	Storm Sewer	86	200	PVC	2008	86	2094	41,250	70	1,416	-
19855		Mains	STS 150 mm	Storm Sewer	66	150	PVC	2008	86	2094	47,730	70	1,639	-
22353	Clara Street	Mains	STS 300 mm	Storm Sewer	48	300	PVC	2020	84	2104	5,340	80	177	-
22354	Clara Street	Mains	STS 300 mm	Storm Sewer	7	300	PVC	1993	84	2077	3,410	53	129	-
Total					\$43,002						\$39,123,930		\$1,495,558	\$47,180



Table C-3 Municipality of Thames Centre Stormwater Catch Basin Inventory

Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19856	Rear Yard Catch Basin	STS 600 mm	CSP	1970	81	2051	51,430	27	2,806	-
19857	Rear Yard Catch Basin	STS 150 mm	HDPE	1995	81	2076	52,690	52	2,014	-
19863	Rear Yard Catch Basin	STS 250 mm	CONC	1989	86	2075	6,370	51	245	-
19864	Rear Yard Catch Basin	STS 250 mm	PVC	1989	86	2075	13,460	51	519	-
19871	Rear Yard Catch Basin	STS 375 mm	HDPE	2006	86	2092	37,680	68	1,305	-
19872	Rear Yard Catch Basin	STS 500 mm	CSP	1989	86	2075	17,310	51	667	-
19873	Rear Yard Catch Basin	STS 500 mm	CSP	1989	86	2075	13,590	51	524	-
19874	Rear Yard Catch Basin	STS 375 mm	HDPE	2006	86	2092	31,260	68	1,083	-
19875	Rear Yard Catch Basin	STS 675 mm	CONC	2010	86	2096	118,960	72	4,051	-
19876	Rear Yard Catch Basin	STS 675 mm	CONC	2010	86	2096	98,140	72	3,342	-
19877	Rear Yard Catch Basin	STS 750 mm	CONC	1978	86	2064	52,100	40	2,254	-
19878	Rear Yard Catch Basin	STS 675 mm	CONC	1978	86	2064	101,330	40	4,384	-
19882	Rear Yard Catch Basin	STS 150 mm	HDPE	1995	86	2081	22,700	57	836	-
19896	Rear Yard Catch Basin	STS 300 mm	CONC	2016	86	2102	24,000	78	800	-
19909	Rear Yard Catch Basin	STS 375 mm	HDPE	2010	86	2096	16,750	72	570	-
19910	Rear Yard Catch Basin	STS 375 mm	HDPE	2010	86	2096	132,320	72	4,506	-
19911	Rear Yard Catch Basin	STS 450 mm	HDPE	2010	86	2096	67,130	72	2,286	-
19912	Rear Yard Catch Basin	STS 450 mm	HDPE	2010	86	2096	56,900	72	1,938	-
19919	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	8,110	54	305	-
19920	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	3,390	62	121	-
19921	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	3,330	54	125	-
19923	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	800	62	29	-
19924	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	4,140	54	156	-
19925	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	990	54	37	-
19926	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	4,870	57	179	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19929	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	3,080	48	122	-
19930	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,340	52	89	-
19931	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,390	53	91	-
19932	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,220	53	122	-
19933	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,520	53	96	-
19934	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,170	53	120	-
19935	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	4,180	53	158	-
19936	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,170	53	120	-
19937	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	4,220	53	160	-
19938	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	4,740	53	180	-
19939	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,680	53	102	-
19940	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,650	53	138	-
19941	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,690	53	64	-
19942	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,940	53	111	-
19943	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	7,250	53	275	-
19944	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,450	53	93	-
19945	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	6,040	53	229	-
19946	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,570	53	135	-
19947	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,550	53	97	-
19948	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,160	53	120	-
19949	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,250	53	85	-
19950	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	2,620	65	92	-
19951	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	3,890	65	137	-
19952	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	2,980	65	105	-
19953	Catch Basin Lead	STS 150 mm	HDPE	1995	86	2081	2,560	57	94	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19954	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	6,050	65	213	-
19955	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	600	54	23	-
19956	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	1,000	65	35	=
19957	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	1,230	66	43	-
19958	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	2,820	65	99	-
19959	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	1,240	65	44	-
19960	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	5,930	65	208	-
19961	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	2,210	65	78	-
19962	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	2,990	65	105	-
19963	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	990	65	35	-
19964	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,760	66	97	-
19965	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,840	66	99	-
19966	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	1,250	66	44	-
19967	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	1,200	66	42	-
19968	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,790	66	98	-
19969	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	2,830	66	99	-
19970	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,190	66	42	-
19971	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	3,180	66	111	-
19972	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	960	66	34	-
19973	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,660	66	93	-
19974	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	1,160	66	41	-
19975	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,650	66	93	-
19976	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	1,160	66	41	-
19977	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,200	66	42	-
19978	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	2,650	66	93	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19979	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,620	66	92	-
19980	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	1,260	66	44	-
19981	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	2,730	66	95	-
19982	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,110	66	39	-
19983	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	3,110	66	109	-
19984	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	790	66	28	-
19985	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	880	66	31	-
19986	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	6,930	48	274	-
19987	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,170	66	41	-
19988	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	3,080	66	108	-
19989	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	2,740	66	96	-
19990	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,420	66	50	-
19991	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,890	66	101	-
19992	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,990	66	105	-
19993	Catch Basin Lead	STS 150 mm	HDPE	1995	86	2081	2,480	57	91	-
19994	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	890	66	31	-
19995	Catch Basin Lead	STS 300 mm	PVC	1993	86	2079	3,420	55	128	-
19996	Catch Basin Lead	STS 300 mm	PVC	1993	86	2079	3,810	55	142	-
19997	Catch Basin Lead	STS 300 mm	PVC	1993	86	2079	3,270	55	122	-
19998	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	4,520	54	170	-
19999	Catch Basin Lead	STS 150 mm	HDPE	1995	86	2081	2,540	57	94	-
20000	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	950	54	36	-
20001	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	3,740	48	148	-
20002	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	5,390	48	213	-
20003	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	5,590	48	221	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20004	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	1,350	48	53	-
20005	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	4,440	54	167	=
20006	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	590	54	22	-
20007	Catch Basin Lead	STS 150 mm	HDPE	1995	86	2081	2,540	57	94	=
20008	Catch Basin Lead	STS 250 mm	PVC	1992	86	2078	2,790	54	105	-
20009	Catch Basin Lead	STS 250 mm	PVC	1992	86	2078	1,380	54	52	-
20010	Catch Basin Lead	STS 250 mm	PVC	1992	86	2078	1,390	54	52	=
20011	Catch Basin Lead	STS 250 mm	PVC	1992	86	2078	2,640	54	99	-
20012	Catch Basin Lead	STS 250 mm	PVC	1992	86	2078	990	54	37	=
20013	Catch Basin Lead	STS 250 mm	PVC	1992	86	2078	3,140	54	118	-
20014	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	920	54	35	-
20015	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	890	54	33	-
20016	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	4,240	54	160	-
20017	Catch Basin Lead	STS 200 mm	CONC	1980	86	2066	1,120	42	47	-
20018	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,390	51	92	-
20019	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,700	52	103	=
20020	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,500	52	57	=
20021	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,570	51	99	-
20022	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,060	52	41	-
20023	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,590	52	137	-
20024	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,600	52	99	-
20025	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	4,000	51	154	-
20026	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,810	71	62	-
20027	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,060	51	41	-
20028	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,720	52	142	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20029	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,370	51	53	-
20030	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,640	51	102	-
20031	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	5,840	71	200	-
20032	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	1,990	65	70	-
20033	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	2,950	65	104	-
20034	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	6,690	65	235	-
20035	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,840	51	148	-
20036	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	6,780	65	238	-
20037	Catch Basin Lead	STS 200 mm	CONC	2000	86	2086	1,010	62	36	-
20038	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	3,180	65	112	-
20039	Catch Basin Lead	STS 200 mm	PVC	2002	86	2088	2,740	64	97	-
20040	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	770	65	27	-
20041	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,290	51	88	-
20042	Catch Basin Lead	STS 200 mm	PVC	2002	86	2088	2,890	64	102	-
20043	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	9,100	48	360	-
20044	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,410	51	54	-
20045	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	2,380	65	84	-
20046	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	3,140	65	110	-
20047	Catch Basin Lead	STS 250 mm	PVC	2006	86	2092	2,950	68	102	-
20048	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	690	51	27	-
20049	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,820	51	109	-
20050	Catch Basin Lead	STS 250 mm	PVC	2006	86	2092	1,160	68	40	-
20051	Catch Basin Lead	STS 250 mm	PVC	2006	86	2092	2,820	68	98	-
20052	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	990	65	35	-
20053	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,760	71	60	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20054	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,470	51	134	-
20055	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	3,760	71	129	-
20056	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	5,020	51	193	-
20057	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	3,080	65	108	-
20058	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	4,650	62	166	-
20059	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,780	71	61	-
20060	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	1,640	65	58	-
20061	Catch Basin Lead	STS 250 mm	PVC	2006	86	2092	1,150	68	40	-
20062	Catch Basin Lead	STS 300 mm	CONC	1980	86	2066	1,320	42	56	-
20063	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	3,060	65	108	-
20064	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	2,450	65	86	-
20065	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	3,100	65	109	-
20066	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	1,000	65	35	-
20067	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	1,630	65	57	-
20068	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,430	71	49	-
20069	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	3,070	71	105	-
20070	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	2,250	71	77	-
20071	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	2,410	71	82	-
20072	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,670	71	57	-
20073	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,610	53	99	-
20074	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,330	53	50	-
20075	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,480	53	56	-
20076	Catch Basin Lead	STS 200 mm	PVC	2004	86	2090	2,610	66	91	-
20077	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,700	53	102	-
20078	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	4,370	66	153	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20079	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,300	53	49	-
20080	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	2,530	66	88	-
20081	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,030	53	115	-
20082	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,700	53	102	-
20083	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,690	53	102	-
20084	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	2,600	62	93	-
20085	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,240	53	85	-
20086	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,910	53	72	-
20087	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	8,310	49	326	-
20088	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,560	53	97	-
20089	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,010	53	76	-
20090	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,950	53	74	-
20091	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,210	51	85	-
20092	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,260	53	48	-
20093	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	6,050	53	229	-
20094	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	6,180	49	242	-
20095	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	5,520	53	209	-
20096	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	10,410	52	398	-
20097	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	7,770	52	297	-
20098	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,970	53	113	-
20099	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,080	52	118	-
20100	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,210	53	46	-
20101	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,440	52	55	-
20102	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	7,180	52	274	-
20103	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,070	52	41	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20104	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	970	52	37	-
20105	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,670	52	102	-
20106	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	5,630	49	221	=
20107	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,890	52	72	-
20108	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	670	52	26	=
20109	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,100	52	42	-
20110	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	1,290	48	51	=
20111	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	4,010	52	153	-
20112	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,650	52	63	-
20113	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	4,650	52	178	-
20114	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	5,370	52	205	-
20115	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	5,060	52	193	=
20116	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	4,850	52	185	-
20117	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,640	52	101	-
20118	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	670	39	29	-
20119	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	4,300	39	189	-
20120	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	1,810	55	68	-
20121	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	2,800	65	98	-
20122	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	2,310	55	86	-
20123	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	800	51	31	-
20124	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	2,840	65	100	-
20125	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	1,370	65	48	-
20126	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	800	51	31	-
20127	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	630	51	24	-
20128	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	1,300	65	46	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20129	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	1,400	55	52	-
20130	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	4,270	39	187	-
20131	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	550	39	24	=
20132	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	4,150	39	182	-
20133	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	1,410	55	53	=
20134	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	3,130	55	117	-
20135	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	2,600	55	97	=
20136	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,920	51	74	-
20137	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	1,090	39	48	-
20138	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	4,340	39	190	-
20139	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	2,340	55	87	-
20140	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	4,790	55	179	=
20141	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	1,000	39	44	-
20142	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	4,120	39	181	-
20143	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	6,240	55	233	-
20144	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	1,500	65	53	-
20145	Catch Basin Lead	STS 250 mm	PVC	2003	86	2089	2,690	65	95	-
20146	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	1,080	39	47	-
20147	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	4,210	39	185	-
20148	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	2,900	55	108	-
20149	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	2,960	55	111	-
20150	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	5,500	55	205	-
20151	Catch Basin Lead	STS 200 mm	PVC	1977	86	2063	1,040	39	46	-
20152	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	2,460	55	92	-
20153	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	7,170	65	252	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20154	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	920	65	32	-
20155	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	8,020	55	300	-
20156	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	3,090	65	109	=
20157	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	3,770	49	148	-
20158	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	6,680	55	249	-
20159	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	5,610	65	197	-
20160	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	920	49	36	-
20161	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	870	49	34	-
20162	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	2,960	65	104	-
20163	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	3,860	49	151	-
20164	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	3,890	49	153	-
20165	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	970	49	38	Ē
20166	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	4,030	49	158	-
20167	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	910	49	36	-
20168	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,240	52	86	-
20169	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,660	52	63	-
20170	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	12,950	52	495	-
20171	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	4,030	49	158	-
20172	Catch Basin Lead	STS 200 mm	PVC	1987	86	2073	1,180	49	46	-
20173	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,610	53	99	-
20174	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,550	53	59	-
20175	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	810	52	31	-
20176	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,060	52	117	-
20177	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	2,280	52	87	-
20178	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	2,830	52	108	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20179	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	2,640	48	104	-
20180	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,790	52	107	-
20181	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	6,170	62	220	-
20182	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	1,460	48	58	-
20183	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	790	62	28	-
20184	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	2,140	62	76	-
20185	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	2,380	48	94	-
20186	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	1,330	62	47	-
20187	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	3,840	57	141	-
20188	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	3,690	62	132	-
20189	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	1,500	48	59	-
20190	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	4,050	62	145	-
20191	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	4,310	62	154	-
20192	Catch Basin Lead	STS 250 mm	PVC	1992	86	2078	43,660	54	1,643	-
20193	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	1,990	62	71	-
20194	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	9,040	48	358	-
20195	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	3,830	62	137	-
20196	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	6,990	42	295	-
20197	Catch Basin Lead	STS 375 mm	CONC	1989	86	2075	5,470	51	211	-
20198	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	3,360	62	120	-
20199	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	6,020	51	232	-
20200	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	4,130	42	174	-
20201	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	430	42	18	-
20202	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	840	54	32	-
20203	Catch Basin Lead	STS 200 mm	CONC	1976	86	2062	5,830	38	259	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20204	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	580	54	22	-
20205	Catch Basin Lead	STS 300 mm	PVC	1993	86	2079	550	55	21	-
20206	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	3,400	62	121	-
20207	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	4,160	42	176	-
20208	Catch Basin Lead	STS 200 mm	PVC	1992	86	2078	4,600	54	173	-
20209	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	3,540	62	126	-
20210	Catch Basin Lead	STS 200 mm	PVC	2000	86	2086	820	62	29	-
20211	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	4,700	49	184	-
20212	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	4,110	49	161	-
20213	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	470	49	18	-
20214	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,200	52	84	-
20215	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,430	52	55	-
20216	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	7,020	52	268	-
20217	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	7,200	52	275	-
20218	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	2,440	52	93	-
20219	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	1,320	52	50	-
20220	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,870	52	71	-
20221	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,760	52	67	-
20222	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,520	52	96	-
20223	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,410	52	92	-
20224	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,250	52	86	-
20225	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,840	52	147	-
20226	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,080	52	118	-
20227	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	3,680	49	144	-
20228	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,120	52	119	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20229	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	990	52	38	-
20230	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	560	52	21	-
20231	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	12,560	52	480	-
20232	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	3,600	51	139	-
20233	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	2,420	48	96	-
20234	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	6,140	51	237	-
20235	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	6,770	51	261	-
20236	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	3,630	51	140	-
20237	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	4,480	51	173	-
20238	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	3,740	49	147	-
20239	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	960	51	37	-
20240	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	4,240	51	163	-
20241	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	9,230	51	356	-
20242	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	1,600	49	63	-
20243	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,040	53	115	-
20244	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,670	53	101	-
20245	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,680	53	140	-
20246	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,510	53	133	-
20247	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,110	53	80	-
20248	Catch Basin Lead	STS 200 mm	CONC	1991	86	2077	3,200	53	121	-
20249	Catch Basin Lead	STS 200 mm	CONC	1991	86	2077	2,430	53	92	-
20250	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,610	53	137	-
20251	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	2,250	53	85	-
20252	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,260	53	124	-
20253	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,940	53	149	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20254	Catch Basin Lead	STS 200 mm	CONC	1991	86	2077	4,310	53	163	-
20255	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	4,550	53	173	-
20256	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,180	53	121	=
20257	Catch Basin Lead	STS 250 mm	PVC	1991	86	2077	8,070	53	306	-
20258	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	3,750	53	142	-
20259	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	1,500	53	57	-
20260	Catch Basin Lead	STS 200 mm	PVC	1991	86	2077	4,070	53	154	-
20261	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	3,930	42	166	-
20262	Catch Basin Lead	STS 200 mm	CONC	1991	86	2077	4,750	53	180	-
20263	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,370	51	130	-
20264	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	5,160	48	204	-
20265	Catch Basin Lead	STS 200 mm	CONC	1991	86	2077	7,800	53	296	Ē
20266	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	680	51	26	-
20267	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,420	51	132	-
20268	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	3,380	48	134	-
20269	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	440	51	17	-
20270	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,500	51	135	-
20271	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	400	51	15	-
20272	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,710	51	143	-
20273	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	4,060	55	152	-
20274	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,450	51	56	-
20275	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	2,200	55	82	-
20276	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	4,930	51	190	-
20277	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,920	51	151	-
20279	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	1,540	55	58	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20280	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,050	51	79	-
20281	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,670	51	64	-
20282	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	1,690	55	63	-
20283	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,160	51	122	-
20284	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	2,460	55	92	-
20285	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	690	51	27	=
20286	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,140	51	82	-
20287	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	3,730	55	139	=
20288	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,770	51	68	-
20289	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	6,120	48	242	-
20290	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	5,380	48	213	=
20291	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	2,460	48	97	-
20292	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	1,640	48	65	=
20293	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	7,570	48	300	-
20294	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	5,590	48	221	-
20295	Catch Basin Lead	STS 200 mm	PVC	2003	86	2089	4,280	65	150	-
20296	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	2,420	48	96	-
20297	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	4,260	48	169	-
20298	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	1,420	48	56	-
20299	Catch Basin Lead	STS 250 mm	PVC	2007	86	2093	720	69	25	-
20300	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	2,390	48	95	-
20301	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	2,310	48	91	-
20302	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	1,640	48	65	-
20303	Catch Basin Lead	STS 250 mm	PVC	2007	86	2093	2,530	69	87	-
20304	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	1,440	48	57	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20305	Catch Basin Lead	STS 250 mm	PVC	2007	86	2093	2,130	69	73	-
20306	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	2,090	48	83	-
20307	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	4,080	48	161	-
20308	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	3,070	48	122	-
20309	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	3,160	48	125	-
20310	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	840	48	33	=
20311	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	3,060	48	121	-
20312	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	2,090	48	83	=
20313	Catch Basin Lead	STS 250 mm	PVC	2007	86	2093	1,610	69	56	-
20314	Catch Basin Lead	STS 200 mm	PVC	1986	86	2072	2,760	48	109	-
20315	Catch Basin Lead	STS 250 mm	PVC	2007	86	2093	5,590	69	193	=
20316	Catch Basin Lead	STS 250 mm	PVC	2007	86	2093	1,800	69	62	-
20317	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	6,230	66	218	=
20318	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,200	66	42	-
20319	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,910	66	67	-
20320	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,280	66	45	-
20321	Catch Basin Lead	STS 250 mm	PVC	2004	86	2090	1,690	66	59	-
20322	Catch Basin Lead	STS 250 mm	PVC	1970	86	2056	2,490	32	122	-
20323	Catch Basin Lead	STS 250 mm	PVC	1970	86	2056	7,320	32	359	-
20324	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	5,490	55	205	-
20325	Catch Basin Lead	STS 200 mm	PVC	1993	86	2079	3,990	55	149	-
20326	Catch Basin Lead	STS 250 mm	PVC	1993	86	2079	800	55	30	-
20327	Catch Basin Lead	STS 200 mm	CONC	1970	86	2056	4,090	32	201	-
20328	Catch Basin Lead	STS 200 mm	CONC	1970	86	2056	2,950	32	145	-
20329	Catch Basin Lead	STS 250 mm	PVC	1970	86	2056	1,110	32	54	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20330	Catch Basin Lead	STS 150 mm	HDPE	2006	86	2092	450	68	16	-
20331	Catch Basin Lead	STS 150 mm	HDPE	2006	86	2092	450	68	16	-
20332	Catch Basin Lead	STS 250 mm	PVC	1970	86	2056	6,070	32	298	-
20333	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	2,790	51	108	-
20334	Catch Basin Lead	STS 250 mm	PVC	2002	86	2088	2,110	64	75	-
20335	Catch Basin Lead	STS 200 mm	CONC	1976	86	2062	3,210	38	143	-
20336	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	2,880	49	113	-
20337	Catch Basin Lead	STS 250 mm	PVC	2002	86	2088	1,350	64	48	-
20338	Catch Basin Lead	STS 200 mm	CONC	1981	86	2067	3,680	43	153	-
20339	Catch Basin Lead	STS 200 mm	CONC	1981	86	2067	3,910	43	163	-
20340	Catch Basin Lead	STS 150 mm	HDPE	2006	86	2092	8,660	68	300	-
20341	Catch Basin Lead	STS 300 mm	HDPE	1998	86	2084	4,200	60	152	-
20342	Catch Basin Lead	STS 200 mm	CONC	1976	86	2062	3,190	38	142	-
20343	Catch Basin Lead	STS 400 mm	CONC	1981	86	2067	2,160	43	90	-
20344	Catch Basin Lead	STS 200 mm	HDPE	1998	86	2084	1,580	60	57	-
20345	Catch Basin Lead	STS 200 mm	CONC	1976	86	2062	600	38	27	-
20346	Catch Basin Lead	STS 200 mm	HDPE	1998	86	2084	8,120	60	293	-
20347	Catch Basin Lead	STS 200 mm	CONC	1998	86	2084	5,790	60	209	-
20348	Catch Basin Lead	STS 200 mm	CONC	1980	86	2066	3,340	42	141	-
20349	Catch Basin Lead	STS 200 mm	CONC	1987	86	2073	8,760	49	344	-
20350	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,010	52	39	-
20351	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	880	42	37	-
20352	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	820	42	35	-
20353	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	5,230	42	221	-
20354	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,190	52	45	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20355	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,520	52	58	-
20356	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	1,060	52	41	-
20357	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	2,740	52	105	=
20358	Catch Basin Lead	STS 250 mm	HDPE	2006	86	2092	530	68	18	-
20359	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	3,770	46	152	-
20360	Catch Basin Lead	STS 250 mm	HDPE	2006	86	2092	1,920	68	67	-
20361	Catch Basin Lead	STS 250 mm	HDPE	2006	86	2092	840	68	29	-
20362	Catch Basin Lead	STS 250 mm	HDPE	2006	86	2092	2,030	68	70	-
20363	Catch Basin Lead	STS 250 mm	HDPE	2006	86	2092	4,490	68	156	-
20364	Catch Basin Lead	STS 250 mm	HDPE	2006	86	2092	830	68	29	-
20365	Catch Basin Lead	STS 250 mm	HDPE	2006	86	2092	2,120	68	73	-
20366	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	790	51	30	Ē
20367	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,210	51	85	-
20368	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	790	51	30	-
20369	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,480	51	134	-
20370	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,400	51	92	-
20371	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,530	51	59	-
20372	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	4,410	51	170	-
20373	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	1,020	51	39	-
20374	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	3,060	51	118	-
20375	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	2,250	51	87	-
20376	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	740	51	29	-
20377	Catch Basin Lead	STS 200 mm	CONC	1989	86	2075	710	51	27	-
20378	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	4,270	46	172	-
20379	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	6,130	46	247	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20380	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	5,390	46	218	-
20381	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	4,910	46	198	-
20382	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	4,790	46	193	-
20383	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	4,180	46	169	-
20384	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	5,850	46	236	-
20385	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	6,140	46	248	=
20386	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	6,430	46	260	-
20387	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,370	52	52	=
20388	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,090	52	80	-
20389	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,790	52	68	-
20390	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,890	52	149	=
20391	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	2,330	52	89	-
20392	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	2,540	52	97	=
20393	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	2,460	52	94	-
20394	Catch Basin Lead	STS 250 mm	PVC	1990	86	2076	1,290	52	49	-
20395	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	2,410	52	92	-
20396	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	1,370	52	52	-
20397	Catch Basin Lead	STS 200 mm	PVC	1975	86	2061	1,580	37	71	-
20398	Catch Basin Lead	STS 200 mm	CONC	1982	86	2068	5,730	44	236	-
20399	Catch Basin Lead	STS 200 mm	PVC	2009	75	2084	7,030	60	254	-
20400	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,030	72	103	-
20401	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,070	71	37	-
20402	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	3,110	71	106	-
20403	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,630	72	56	-
20404	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	900	71	31	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20405	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	3,110	71	106	-
20406	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,000	72	102	-
20407	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,770	71	61	-
20408	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	2,990	72	102	-
20409	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,790	71	61	-
20410	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,180	71	40	-
20411	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	860	71	29	-
20412	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	2,730	71	93	-
20413	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,670	71	57	-
20414	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,560	72	53	-
20415	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,560	71	53	-
20416	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,050	72	104	-
20417	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	820	71	28	-
20418	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,570	72	53	-
20419	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,640	71	56	-
20420	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,240	72	110	-
20421	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	960	71	33	-
20422	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	2,010	71	69	-
20423	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,230	72	42	-
20424	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	1,640	71	56	-
20425	Catch Basin Lead	STS 200 mm	PVC	2009	86	2095	2,900	71	99	-
20426	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,070	72	105	-
20427	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,550	72	53	-
20428	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,010	72	103	-
20429	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,550	72	53	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20430	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	5,770	72	196	-
20431	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	2,740	72	93	-
20432	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	6,900	72	235	-
20433	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,360	52	128	-
20434	Catch Basin Lead	STS 250 mm	PVC	1970	86	2056	3,310	32	162	-
20435	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	3,330	52	127	-
20436	Catch Basin Lead	STS 250 mm	PVC	1970	86	2056	860	32	42	-
20437	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	4,530	51	175	-
20438	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	3,080	51	119	-
20439	Catch Basin Lead	STS 300 mm	CONC	1989	86	2075	5,310	51	205	-
20440	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	1,960	51	76	-
20441	Catch Basin Lead	STS 250 mm	CSP	1978	86	2064	8,280	40	358	-
20442	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	5,000	51	193	-
20443	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	4,690	51	181	-
20444	Catch Basin Lead	STS 300 mm	CONC	1989	86	2075	2,320	51	89	-
20445	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	3,200	57	118	-
20446	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	2,220	57	82	-
20447	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	3,100	57	114	-
20448	Catch Basin Lead	STS 200 mm	PVC	1995	75	2070	2,350	46	95	-
20449	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	6,840	57	252	-
20450	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	4,700	57	173	-
20451	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	1,210	57	45	-
20452	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	3,200	57	118	-
20453	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	2,880	57	106	-
20454	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	2,280	57	84	<u>-</u>



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20455	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	2,030	57	75	-
20456	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	3,340	57	123	-
20457	Catch Basin Lead	STS 200 mm	PVC	1995	86	2081	980	57	36	-
20458	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	3,530	41	151	-
20459	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	6,750	51	260	-
20460	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	1,130	41	48	-
20461	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	7,470	41	319	-
20462	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	6,120	41	261	-
20463	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	3,660	51	141	-
20464	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	4,520	48	179	-
20465	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	3,360	48	133	-
20466	Catch Basin Lead	STS 200 mm	CONC	1986	86	2072	6,250	48	247	-
20467	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	6,560	51	253	-
20468	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	3,200	51	123	-
20469	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	770	41	33	-
20470	Catch Basin Lead	STS 250 mm	CONC	1979	78	2057	5,220	33	251	-
20471	Catch Basin Lead	STS 200 mm	HDPE	1998	78	2076	29,400	52	1,124	-
20472	Catch Basin Lead	STS 200 mm	HDPE	1998	78	2076	11,720	52	448	-
20473	Catch Basin Lead	STS 250 mm	CONC	1979	78	2057	1,410	33	68	-
20474	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	4,860	41	208	-
20475	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	1,090	41	47	-
20476	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	4,780	41	204	-
20477	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	4,090	41	175	-
20478	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	5,040	52	193	-
20479	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	1,130	41	48	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20480	Catch Basin Lead	STS 200 mm	PVC	1990	86	2076	790	52	30	-
20481	Catch Basin Lead	STS 250 mm	CONC	1979	86	2065	4,470	41	191	-
20482	Catch Basin Lead	STS 200 mm	PVC	1998	86	2084	1,430	60	52	-
20483	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	4,530	51	175	-
20484	Catch Basin Lead	STS 250 mm	PVC	1989	86	2075	4,370	51	168	-
20485	Catch Basin Lead	STS 200 mm	CONC	1980	86	2066	6,290	42	265	=
20486	Catch Basin Lead	STS 250 mm	CONC	1980	86	2066	5,910	42	249	-
20487	Catch Basin Lead	STS 200 mm	CONC	1951	86	2037	4,630	13	435	-
20488	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	1,550	46	63	-
20489	Catch Basin Lead	STS 200 mm	CONC	1984	86	2070	1,850	46	75	-
20490	Catch Basin Lead	STS 250 mm	CSP	1995	86	2081	2,400	57	88	=
20491	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,530	72	52	-
20492	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,020	72	103	=
20493	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,530	72	52	-
20494	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,020	72	103	-
20495	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,530	72	52	-
20496	Catch Basin Lead	STS 250 mm	PVC	2010	78	2088	3,020	64	107	-
20497	Catch Basin Lead	STS 250 mm	PVC	2010	78	2088	7,350	64	260	-
20498	Catch Basin Lead	STS 250 mm	PVC	2010	78	2088	11,870	64	419	-
20499	Catch Basin Lead	STS 250 mm	PVC	2010	78	2088	3,020	64	107	-
20500	Catch Basin Lead	STS 250 mm	PVC	2010	78	2088	1,530	64	54	-
20501	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	2,950	72	100	-
20502	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,610	72	55	-
20503	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,530	72	52	-
20504	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,020	72	103	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20505	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,530	72	52	-
20506	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	7,590	72	258	-
20507	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	1,530	72	52	-
20508	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	3,020	72	103	-
20509	Catch Basin Lead	STS 250 mm	PVC	2010	79	2089	1,480	65	52	-
20510	Catch Basin Lead	STS 250 mm	PVC	2010	79	2089	2,960	65	104	-
20511	Catch Basin Lead	STS 250 mm	PVC	2016	79	2095	2,810	71	96	-
20512	Catch Basin Lead	STS 250 mm	PVC	2019	79	2098	2,910	74	98	-
20513	Catch Basin Lead	STS 250 mm	PVC	2019	79	2098	1,570	74	53	-
20514	Catch Basin Lead	STS 250 mm	PVC	2019	79	2098	1,600	74	54	-
20515	Catch Basin Lead	STS 250 mm	PVC	2019	79	2098	2,760	74	93	-
20516	Catch Basin Lead	STS 250 mm	PVC	2011	79	2090	1,720	66	60	-
20517	Catch Basin Lead	STS 250 mm	PVC	2011	86	2097	2,680	73	91	-
20518	Catch Basin Lead	STS 250 mm	PVC	2012	86	2098	2,740	74	93	-
20519	Catch Basin Lead	STS 250 mm	PVC	2012	86	2098	1,680	74	57	-
20520	Catch Basin Lead	STS 250 mm	PVC	2012	86	2098	1,640	74	55	-
20521	Catch Basin Lead	STS 250 mm	PVC	2012	81	2093	2,680	69	92	-
20522	Catch Basin Lead	STS 250 mm	PVC	2012	81	2093	3,110	69	107	-
20523	Catch Basin Lead	STS 250 mm	PVC	2012	81	2093	1,250	69	43	-
20524	Catch Basin Lead	STS 250 mm	PVC	2012	81	2093	1,580	69	54	-
20525	Catch Basin Lead	STS 250 mm	PVC	2012	81	2093	2,780	69	96	-
20526	Catch Basin Lead	STS 250 mm	PVC	2012	81	2093	1,510	69	52	-
20527	Catch Basin Lead	STS 250 mm	PVC	2012	81	2093	2,830	69	98	-
20528	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	3,660	73	124	-
20529	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	2,080	78	69	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20530	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	2,660	78	89	-
20531	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	1,660	78	55	-
20532	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	2,670	78	89	=
20533	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	1,640	73	56	-
20534	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	1,390	73	47	=
20535	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	2,910	73	99	-
20536	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	3,090	73	105	=
20537	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	1,280	73	43	-
20538	Catch Basin Lead	STS 250 mm	PVC	2019	81	2100	2,850	76	96	-
20539	Catch Basin Lead	STS 250 mm	PVC	2019	81	2100	1,430	76	48	-
20540	Catch Basin Lead	STS 250 mm	PVC	2019	81	2100	2,920	76	98	-
20541	Catch Basin Lead	STS 250 mm	PVC	2019	81	2100	1,470	76	49	=
20542	Catch Basin Lead	STS 250 mm	PVC	2019	81	2100	2,920	76	98	-
20543	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	1,410	73	48	-
20544	Catch Basin Lead	STS 250 mm	PVC	2016	81	2097	5,820	73	197	-
20545	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	5,820	78	194	-
20546	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	6,640	78	221	-
20547	Catch Basin Lead	STS 250 mm	PVC	2010	86	2096	8,640	72	294	-
20548	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	3,070	78	102	-
20549	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	1,360	78	45	-
20550	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	3,540	78	118	-
20551	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	3,100	82	102	-
20552	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	1,450	82	48	-
20553	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	2,630	82	87	-
20554	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	1,980	82	65	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20555	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	4,170	82	137	-
20556	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	820	82	27	-
20557	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	1,910	82	63	-
20558	Catch Basin Lead	STS 250 mm	PVC	2020	86	2106	3,140	82	103	-
20559	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	2,190	78	73	-
20560	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	3,330	78	111	-
20561	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	1,310	78	44	-
20562	Catch Basin Lead	STS 250 mm	PVC	2016	86	2102	2,760	78	92	-
20563	Catch Basin Lead	STS 250 mm	PVC	2021	78	2099	1,380	75	46	-
20564	Catch Basin Lead	STS 250 mm	PVC	2021	78	2099	2,790	75	94	-
20565	Catch Basin Lead	STS 250 mm	PVC	2021	86	2107	2,950	83	97	-
20566	Catch Basin Lead	STS 250 mm	PVC	2021	78	2099	1,330	75	45	-
20567	Catch Basin Lead	STS 250 mm	PVC	2021	81	2102	1,330	78	44	-
20568	Catch Basin Lead	STS 250 mm	PVC	2021	59	2080	2,880	56	107	=
20569	Catch Basin Lead	STS 250 mm	PVC	2021	86	2107	2,880	83	95	=
20570	Catch Basin Lead	STS 250 mm	PVC	2021	84	2105	1,330	81	44	-
20571	Catch Basin Lead	STS 250 mm	PVC	2016	84	2100	2,910	76	98	-
20572	Catch Basin Lead	STS 250 mm	PVC	2016	84	2100	1,430	76	48	-
20573	Catch Basin Lead	STS 250 mm	PVC	2016	84	2100	1,970	76	66	-
20574	Catch Basin Lead	STS 250 mm	PVC	2016	84	2100	3,150	76	106	-
20575	Catch Basin Lead	STS 250 mm	PVC	2020	84	2104	1,330	80	44	-
20576	Catch Basin Lead	STS 250 mm	PVC	2020	84	2104	2,810	80	93	-
20577	Catch Basin Lead	STS 250 mm	PVC	2020	84	2104	3,020	80	100	-
20578	Catch Basin Lead	STS 250 mm	PVC	2020	84	2104	1,400	80	46	-
20579	Catch Basin Lead	STS 250 mm	PVC	2020	85	2105	2,880	81	95	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20580	Catch Basin Lead	STS 250 mm	PVC	2020	85	2105	1,270	81	42	-
20581	Catch Basin Lead	STS 250 mm	PVC	2020	85	2105	1,310	81	43	-
20582	Catch Basin Lead	STS 250 mm	PVC	2020	85	2105	2,770	81	91	-
20583	Catch Basin Lead	STS 250 mm	PVC	2021	85	2106	1,370	82	45	-
20584	Catch Basin Lead	STS 250 mm	PVC	2021	85	2106	2,790	82	92	-
20585	Catch Basin Lead	STS 250 mm	PVC	2021	85	2106	2,840	82	93	-
20586	Catch Basin Lead	STS 250 mm	PVC	2021	85	2106	1,440	82	47	-
20587	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	830	71	28	-
20588	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	2,880	71	98	-
20589	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	280	71	10	-
20590	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	3,130	71	107	-
20591	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	480	71	16	-
20592	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	1,150	71	39	-
20593	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	3,410	71	117	-
20594	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	3,720	71	127	-
20595	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	2,940	71	101	-
20596	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	510	71	17	-
20597	Catch Basin Lead	STS 250 mm	PVC	2010	85	2095	2,520	71	86	-
20598	Catch Basin Lead	STS 250 mm	PVC	2010	84	2094	2,510	70	86	-
20599	Catch Basin Lead	STS 250 mm	PVC	2010	84	2094	940	70	32	-
20600	Catch Basin Lead	STS 250 mm	PVC	2010	84	2094	140	70	5	-
20601	Catch Basin Lead	STS 250 mm	PVC	2010	84	2094	2,420	70	83	-
20602	Catch Basin Lead	STS 250 mm	PVC	2010	84	2094	1,530	70	53	-
20603	Catch Basin Lead	STS 250 mm	PVC	2010	84	2094	2,520	70	87	-
20604	Rear Yard Catch Basin	STS 250 mm	PVC	1992	84	2076	17,960	52	686	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
22039	Catch Basin Lead	STS 250 mm	PVC	2019	84	2103	1,450	79	48	-
22040	Catch Basin Lead	STS 250 mm	PVC	2019	84	2103	1,450	79	48	-
22041	Catch Basin Lead	STS 250 mm	PVC	2019	84	2103	640	79	21	-
22042	Catch Basin Lead	STS 250 mm	PVC	2019	84	2103	640	79	21	-
22352	Catch Basin Lead	STS 250 mm	PVC	2020	84	2104	480	80	16	-
21198	Catch Basin	Catch Basin	n/a	2003	84	2087	4,460	63	158	=
21199	Catch Basin	Catch Basin	n/a	2003	84	2087	4,460	63	158	-
21200	Catch Basin	Catch Basin	n/a	2000	84	2084	4,460	60	161	=
21201	Catch Basin	Catch Basin	n/a	2003	84	2087	4,460	63	158	-
21202	Catch Basin	Catch Basin	n/a	2004	84	2088	4,460	64	158	-
21203	Catch Basin	Catch Basin	n/a	2003	84	2087	4,460	63	158	=
21204	Catch Basin	Catch Basin	n/a	2003	84	2087	4,460	63	158	-
21205	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	=
21206	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	=
21207	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21208	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21209	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21210	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21211	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21212	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21213	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21214	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21215	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21216	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21217	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21218	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21219	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21220	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21221	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21222	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21223	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21224	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21225	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21226	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21227	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21228	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21229	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21230	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21231	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21232	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21233	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21234	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21235	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21236	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	=
21237	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21238	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21239	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21240	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21241	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21242	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21243	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21244	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21245	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21246	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21247	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21248	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21249	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21250	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21251	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21252	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21253	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21254	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21255	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21256	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21257	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21258	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21259	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21260	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21261	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21262	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21263	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21264	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21265	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21266	Catch Basin	Catch Basin	n/a	1998	86	2084	4,460	60	161	-
21267	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21268	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21269	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21270	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21271	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21272	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21273	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21274	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21275	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21276	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21277	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21278	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21279	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21280	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21281	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21282	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21283	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21284	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21285	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21286	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21287	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21288	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21289	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21290	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21291	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21292	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	<u>-</u>



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21293	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21294	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21295	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21296	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21297	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21298	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21299	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21300	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21301	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21302	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21303	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21304	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21305	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21306	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21307	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21308	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21309	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21310	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21311	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21312	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21313	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21314	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21315	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21316	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21317	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21318	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21319	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21320	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21321	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21322	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21323	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21324	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21325	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21326	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21327	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21328	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21329	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21330	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21331	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21332	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21333	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21334	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21335	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21336	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21337	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21338	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21339	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21340	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21341	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21342	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21343	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21344	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21345	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21346	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21347	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21348	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21349	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21350	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21351	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	-
21352	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21353	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21354	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21355	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21356	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21357	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21358	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	=
21359	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21360	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21361	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	=
21362	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21363	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21364	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21365	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21366	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21367	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21368	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21369	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21370	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21371	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21372	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21373	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21374	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21375	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21376	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21377	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21378	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21379	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21380	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21381	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21382	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21383	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21384	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21385	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21386	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21387	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21388	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21389	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21390	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21391	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21392	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21393	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21394	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21395	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21396	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21397	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21398	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21399	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21400	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21401	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21402	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21403	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21404	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21405	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21406	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21407	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	-
21408	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	-
21409	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21410	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	-
21411	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	=
21412	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	-
21413	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21414	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21415	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21416	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21417	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21418	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21419	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21420	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21421	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21422	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21423	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21424	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21425	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21426	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21427	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21428	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21429	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21430	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21431	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21432	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21433	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21434	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21435	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21436	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21437	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21438	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21439	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21440	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21441	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21442	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21443	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21444	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21445	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21446	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	=
21447	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21448	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21449	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21450	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21451	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21452	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21453	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21454	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21455	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21456	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	-
21457	Catch Basin	Catch Basin	n/a	1998	86	2084	4,460	60	161	-
21458	Catch Basin	Catch Basin	n/a	1998	86	2084	4,460	60	161	-
21459	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21460	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21461	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21462	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21463	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21464	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	
21465	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21466	Catch Basin	Catch Basin	n/a	1988	86	2074	4,460	50	173	-
21467	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21468	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21469	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21470	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21471	Catch Basin	Catch Basin	n/a	2000	86	2086	4,460	62	159	-
21472	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21473	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21474	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21475	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21476	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21477	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21478	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21479	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21480	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21481	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21482	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21483	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21484	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21485	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21486	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21487	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21488	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21489	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21490	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21491	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21492	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21493	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21494	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21495	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21496	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21497	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21498	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21499	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21500	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21501	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21502	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21503	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	=
21504	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21505	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	=
21506	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21507	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	=
21508	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21509	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21510	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	=
21511	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21512	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21513	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21514	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21515	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21516	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21517	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21518	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21519	Catch Basin	Catch Basin	n/a	2001	86	2087	4,460	63	158	-
21520	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21521	Catch Basin	Catch Basin	n/a	1998	86	2084	4,460	60	161	-
21522	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21523	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21524	Catch Basin	Catch Basin	n/a	1998	86	2084	4,460	60	161	-
21525	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21526	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21527	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21528	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	=
21529	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21530	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	=
21531	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21532	Catch Basin	Catch Basin	n/a	1998	86	2084	4,460	60	161	=
21533	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21534	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21535	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	=
21536	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21537	Catch Basin	Catch Basin	n/a	1998	86	2084	4,460	60	161	-
21538	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21539	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21540	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21541	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21542	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21543	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21544	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21545	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21546	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21547	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21548	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21549	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21550	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21551	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21552	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21553	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	=
21554	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21555	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	=
21556	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21557	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	=
21558	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21559	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21560	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	=
21561	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21562	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21563	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21564	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21565	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21566	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21567	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21568	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21569	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21570	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21571	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21572	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21573	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	=
21574	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21575	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21576	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21577	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21578	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	=
21579	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21580	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21581	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21582	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21583	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21584	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21585	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	=
21586	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21587	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21588	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21589	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21590	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21591	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21592	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21593	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21594	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21595	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21596	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21597	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21598	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21599	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21600	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21601	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21602	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21603	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	=
21604	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21605	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	=
21606	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21607	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	=
21608	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21609	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21610	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	=
21611	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21612	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21613	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21614	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21615	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21616	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21617	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21618	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21619	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21620	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21621	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21622	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21623	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	=
21624	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21625	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21626	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21627	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21628	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21629	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	=
21630	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21631	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21632	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21633	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21634	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21635	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21636	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21637	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21638	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21639	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21640	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21641	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21642	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21643	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21644	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	=
21645	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21646	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	=
21647	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	=
21648	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21649	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21650	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21651	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21652	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21653	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21654	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21655	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21656	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21657	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21658	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21659	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21660	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21661	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21662	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21663	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21664	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21665	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21666	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21667	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21668	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21669	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21670	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21671	Catch Basin	Catch Basin	n/a	2003	86	2089	4,460	65	157	-
21672	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21673	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21674	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21675	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21676	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21677	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21678	Catch Basin	Catch Basin	n/a	2007	86	2093	4,460	69	154	-
21679	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21680	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21681	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21682	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21683	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21684	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21685	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21686	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21687	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21688	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21689	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21690	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21691	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21692	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21693	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21694	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21695	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21696	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21697	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21698	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21699	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21700	Catch Basin	Catch Basin	n/a	1993	86	2079	4,460	55	167	-
21701	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21702	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21703	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21704	Catch Basin	Catch Basin	n/a	2006	86	2092	4,460	68	155	-
21705	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	=
21706	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21707	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	=
21708	Catch Basin	Catch Basin	n/a	1984	86	2070	4,460	46	180	-
21709	Catch Basin	Catch Basin	n/a	1992	86	2078	4,460	54	168	-
21710	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21711	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21712	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21713	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21714	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21715	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21716	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-
21717	Catch Basin	Catch Basin	n/a	1990	86	2076	4,460	52	170	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21718	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21719	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21720	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21721	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21722	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21723	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21724	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21725	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21726	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21727	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21728	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21729	Catch Basin	Catch Basin	n/a	1977	86	2063	4,460	39	196	-
21730	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21731	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21732	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21733	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21734	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21735	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21736	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21737	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21738	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21739	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21740	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21741	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21742	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21743	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21744	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21745	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21746	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21747	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21748	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21749	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21750	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21751	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21752	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21753	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21754	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21755	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21756	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21757	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21758	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21759	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21760	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21761	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21762	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21763	Catch Basin	Catch Basin	n/a	1991	86	2077	4,460	53	169	-
21764	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21765	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21766	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	-
21767	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21768	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	-
21769	Catch Basin	Catch Basin	n/a	1986	86	2072	4,460	48	177	=
21770	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21771	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	=
21772	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	=
21773	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21774	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	=
21775	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21776	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	=
21777	Catch Basin	Catch Basin	n/a	2002	86	2088	4,460	64	158	-
21778	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21779	Catch Basin	Catch Basin	n/a	1989	86	2075	4,460	51	172	=
21780	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21781	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21782	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	-
21783	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21784	Catch Basin	Catch Basin	n/a	1980	86	2066	4,460	42	188	=
21785	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	=
21786	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21787	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21788	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21789	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21790	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21791	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21792	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21793	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21794	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21795	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21796	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21797	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21798	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21799	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21800	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21801	Catch Basin	Catch Basin	n/a	1987	86	2073	4,460	49	175	-
21802	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21803	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21804	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21805	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21806	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21807	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21808	Catch Basin	Catch Basin	n/a	2008	86	2094	4,460	70	153	-
21809	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21810	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21811	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21812	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21813	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21814	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	-
21815	Catch Basin	Catch Basin	n/a	1982	86	2068	4,460	44	184	-
21816	Catch Basin	Catch Basin	n/a	1982	86	2068	4,460	44	184	-
21817	Catch Basin	Catch Basin	n/a	1982	86	2068	4,460	44	184	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21818	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21819	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21820	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21821	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21822	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21823	Catch Basin	Catch Basin	n/a	1978	86	2064	4,460	40	193	-
21824	Catch Basin	Catch Basin	n/a	1976	86	2062	4,460	38	198	-
21825	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21826	Catch Basin	Catch Basin	n/a	1970	86	2056	4,460	32	219	-
21827	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21828	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	=
21829	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21830	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	=
21831	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21832	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	=
21833	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21834	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21835	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	=
21836	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21837	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21838	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21839	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21840	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21841	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21842	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21843	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21844	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21845	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21846	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21847	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21848	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21849	Catch Basin	Catch Basin	n/a	2009	86	2095	4,460	71	152	-
21850	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21851	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21852	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21853	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21854	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21855	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21856	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21857	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21858	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	=
21859	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21860	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21861	Catch Basin	Catch Basin	n/a	1955	86	2041	4,460	17	339	=
21862	Catch Basin	Catch Basin	n/a	1963	86	2049	4,460	25	256	-
21863	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21864	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21865	Catch Basin	Catch Basin	n/a	2016	86	2102	4,460	78	149	-
21866	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21867	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21868	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21869	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21870	Catch Basin	Catch Basin	n/a	2012	78	2090	4,460	66	156	-
21871	Catch Basin	Catch Basin	n/a	2012	78	2090	4,460	66	156	-
21872	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21873	Catch Basin	Catch Basin	n/a	2019	78	2097	4,460	73	151	=
21874	Catch Basin	Catch Basin	n/a	2012	78	2090	4,460	66	156	-
21875	Catch Basin	Catch Basin	n/a	2012	78	2090	4,460	66	156	-
21876	Catch Basin	Catch Basin	n/a	2012	78	2090	4,460	66	156	-
21877	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21878	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	=
21879	Catch Basin	Catch Basin	n/a	2012	78	2090	4,460	66	156	-
21880	Catch Basin	Catch Basin	n/a	2012	78	2090	4,460	66	156	-
21881	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21882	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	=
21883	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21884	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21885	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	=
21886	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21887	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21888	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21889	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21890	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21891	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21892	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21893	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21894	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21895	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21896	Catch Basin	Catch Basin	n/a	2019	86	2105	4,460	81	147	-
21897	Catch Basin	Catch Basin	n/a	2016	86	2102	4,460	78	149	-
21898	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	=
21899	Catch Basin	Catch Basin	n/a	2010	78	2088	4,460	64	158	-
21900	Catch Basin	Catch Basin	n/a	2010	78	2088	4,460	64	158	=
21901	Catch Basin	Catch Basin	n/a	2010	78	2088	4,460	64	158	-
21902	Catch Basin	Catch Basin	n/a	2010	78	2088	4,460	64	158	=
									suggested for 10 year capital	
21903	Catch Basin	Catch Basin	n/a	1951	78	2029	4,460	5		4,460
21904	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21905	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21906	Catch Basin	Catch Basin	n/a	2021	86	2107	4,460	83		-
21907	Catch Basin	Catch Basin	n/a	2021	86	2107	4,460	83		-
21908	Catch Basin	Catch Basin	n/a	2021	86	2107	4,460	83		-
21909	Catch Basin	Catch Basin	n/a	2021	86	2107	4,460	83	146	-
21910	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21911	Catch Basin	Catch Basin	n/a	2020	81	2101	4,460	77	149	-
21912	Catch Basin	Catch Basin	n/a	2020	81	2101	4,460	77	149	-
21913	Catch Basin	Catch Basin	n/a	2020	81	2101	4,460	77	149	-
21914	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21915	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21916	Catch Basin	Catch Basin	n/a	2021	81	2102	4,460	78	149	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21917	Catch Basin	Catch Basin	n/a	2021	81	2102	4,460	78	149	-
21918	Catch Basin	Catch Basin	n/a	2021	81	2102	4,460	78	149	-
21919	Catch Basin	Catch Basin	n/a	2021	81	2102	4,460	78	149	-
21920	Catch Basin	Catch Basin	n/a	2021	81	2102	4,460	78	149	-
21921	Catch Basin	Catch Basin	n/a	2021	86	2107	4,460	83	146	-
21922	Catch Basin	Catch Basin	n/a	2021	86	2107	4,460	83	146	-
21923	Catch Basin	Catch Basin	n/a	2021	81	2102	4,460	78	149	-
21924	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21925	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21926	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21927	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21928	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21929	Catch Basin	Catch Basin	n/a	2016	81	2097	4,460	73	151	-
21930	Catch Basin	Catch Basin	n/a	2020	81	2101	4,460	77	149	-
21931	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21932	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21933	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21934	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21935	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21936	Catch Basin	Catch Basin	n/a	2020	86	2106	4,460	82	147	-
21937	Catch Basin	Catch Basin	n/a	2020	81	2101	4,460	77	149	-
21938	Catch Basin	Catch Basin	n/a	2020	81	2101	4,460	77	149	-
21939	Catch Basin	Catch Basin	n/a	2020	79	2099	4,460	75	150	-
21940	Catch Basin	Catch Basin	n/a	2012	79	2091	4,460	67	155	-
21941	Catch Basin	Catch Basin	n/a	2012	79	2091	4,460	67	155	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21942	Catch Basin	Catch Basin	n/a	2012	79	2091	4,460	67	155	-
21943	Catch Basin	Catch Basin	n/a	2012	79	2091	4,460	67	155	-
21944	Catch Basin	Catch Basin	n/a	2010	79	2089	4,460	65	157	-
21945	Catch Basin	Catch Basin	n/a	2010	79	2089	4,460	65	157	-
21946	Catch Basin	Catch Basin	n/a	2013	79	2092	4,460	68	155	-
21947	Catch Basin	Catch Basin	n/a	2013	86	2099	4,460	75	150	-
21948	Catch Basin	Catch Basin	n/a	2013	86	2099	4,460	75	150	-
21949	Catch Basin	Catch Basin	n/a	1995	86	2081	4,460	57	164	-
21950	Catch Basin	Catch Basin	n/a	1994	86	2080	4,460	56	165	-
21951	Catch Basin	Catch Basin	n/a	2012	86	2098	4,460	74	151	-
21952	Catch Basin	Catch Basin	n/a	2021	86	2107	4,460	83	146	-
21953	Catch Basin	Catch Basin	n/a	1963	86	2049	4,460	25	256	-
21954	Catch Basin	Catch Basin	n/a	1979	86	2065	4,460	41	190	-
21955	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21956	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21957	Catch Basin	Catch Basin	n/a	1951	86	2037	4,460	13	419	=
21958	Catch Basin	Catch Basin	n/a	2004	86	2090	4,460	66	156	-
21959	Catch Basin	Catch Basin	n/a	2010	81	2091	4,460	67	155	-
21960	Catch Basin	Catch Basin	n/a	1981	86	2067	4,460	43	186	-
21961	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21962	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21963	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21964	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21965	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21966	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21967	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21968	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21969	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21970	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21971	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21972	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	=
21973	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21974	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	=
21975	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21976	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21977	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21978	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21979	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21980	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21981	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21982	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21983	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21984	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21985	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21986	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21987	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21988	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21989	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21990	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21991	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-



Asset ID	Name	Profile	Material	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21992	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21993	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21994	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21995	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21996	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21997	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21998	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
21999	Catch Basin	Catch Basin	n/a	2010	86	2096	4,460	72	152	-
22268	Catch Basin	Default Profile	n/a	2016	86	2102	4,460	78	149	-
22269	Catch Basin	Catch Basin	n/a	2020	86	2106	1,700	82	56	-
Total							\$6,602,470		\$249,909	\$4,460



Table C-4 Municipality of Thames Centre Stormwater Manholes Inventory

Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
Not assigned	Manholes	STMH 1500 mm	CONC	2012	86	2098	17,500	74	591	
Not assigned	Manholes	STMH 2400 mm	CONC	2012	86	2098	20.070		678	-
Not assigned	Manholes	STMH 2400 mm	CONC	2012	86	2098	20,070		678	-
Not assigned	Manholes	STMH 1500 mm	CONC	2012	86	2098	17,500	 	591	-
Not assigned	Manholes	unknown	CONC	2012	86	2098	7,800		264	
Not assigned	Manholes	unknown	CONC	2012	86	2098	7,800		264	-
Not assigned	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	 	264	_
Not assigned	Manholes	unknown	CONC	2012	86	2098	7,800	74	264	-
Not assigned	Marinoles	dikilowii	CONC	2012	00	2090	7,000	74	204	_
Not assigned	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	_
Not assigned	Manholes	Oil/Grit Separator	CONC	2012	86	2098	7,800	74	264	-
Not assigned	Manholes	unknown	CONC	2012	86	2098	7,800	74	264	-
Not assigned	Manholes	unknown	CONC	2012	86	2098	7,800	74	264	-
20605	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20606	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20607	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20608	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20609	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20610	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20611	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20612	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20613	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20614	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20615	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20616	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20617	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20618	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20619	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20620	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20621	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20622	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20623	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20624	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20625	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20626	Manholes	STMH 1200 mm	CONC	2006	86	2092	7,800	68	270	-
20627	Manholes	STMH 1200 mm	CONC	2006	86	2092	7,800	68	270	-
20628	Manholes	STMH 1200 mm	CONC	2006	86	2092	7,800	68	270	-
20629	Manholes	STMH 1500 mm	CONC	2003	86	2089	10,030	65	353	-
20630	Manholes	STMH 1500 mm	CONC	2003	86	2089	10,030	65	353	-
20631	Manholes	STMH 1500 mm	CONC	2003	86	2089	10,030	65	353	-
20632	Manholes	STMH 1500 mm	CONC	2003	86	2089	10,030	65	353	-
20633	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20634	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20635	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20636	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20637	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20638	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20639	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20640	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20641	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
20642	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
20643	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
20644	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20645	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20646	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20647	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20648	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20649	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20650	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20651	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20652	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20653	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20654	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20655	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20656	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20657	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20658	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20659	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800		315	-
20660	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20661	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20662	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20663	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20664	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20665	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20666	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20667	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20668	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20669	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20670	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20671	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20672	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20673	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20674	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20675	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800		274	-
20676	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20677	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20678	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20679	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20680	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20681	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20682	Manholes	STMH 1500 mm	CONC	2004	86	2090	10,030	66	351	-
20683	Manholes	STMH 1800 mm	CONC	2004	86	2090	13,380	66	468	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20684	Manholes	STMH 2400 mm	CONC	2004	86	2090	20,070	66	702	-
20685	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20686	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20687	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20688	Manholes	STMH 1500 mm	CONC	2004	86	2090	10,030	66	351	-
20689	Manholes	STMH 1500 mm	CONC	2004	86	2090	10,030	66	351	-
20690	Manholes	STMH 1500 mm	CONC	2004	86	2090	10,030	66	351	-
20691	Manholes	STMH 1800 mm	CONC	2004	86	2090	13,380	66	468	-
20692	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20693	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20694	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20695	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20696	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20697	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20698	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20699	Manholes	STMH 2400 mm	CONC	2009	86	2095	20,070	71	686	-
20700	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20701	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20702	Manholes	STMH 3000 mm	CONC	2009	86	2095	27,870	71	953	-
20703	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20704	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20705	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20706	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20707	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20708	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20709	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20710	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20711	Manholes	STMH 1200 mm	CONC	2006	86	2092	7,800	68	270	-
20712	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20713	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	
20714	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20715	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20716	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	•
20717	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	•
20718	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	•
20719	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20720	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20721	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20722	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20723	Manholes	STMH 1200 mm	CONC	2006	86	2092	7,800	68	270	-
20724	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20725	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20726	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20727	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20728	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20729	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20730	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20731	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20732	Manholes	STMH 1200 mm	CONC	2006	86	2092	7,800	68	270	-
20733	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20734	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20735	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20736	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20737	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20738	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20739	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20740	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20741	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20742	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20743	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20744	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20745	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20746	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20747	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20748	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20749	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20750	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20751	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20752	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20753	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20754	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20755	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20756	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20757	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20758	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20759	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20760	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20761	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20762	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20763	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20764	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20765	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20766	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-
20767	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20768	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20769	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-
20770	Manholes	STMH 1200 mm	CONC	1998	86	2084	7,800	60	282	-
20771	Manholes	STMH 1200 mm	CONC	1998	86	2084	7,800	60	282	-
20772	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-
20773	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-
20774	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-
20775	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-
20776	Manholes	STMH 1200 mm	CONC	1979	86	2065	7,800	41	333	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20777	Manholes	STMH 1200 mm	CONC	1998	86	2084	7,800	60	282	-
20778	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20779	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20780	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20781	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20782	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20783	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20784	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20785	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20786	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
20787	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20788	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20789	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20790	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20791	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20792	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20793	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20794	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20795	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20796	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20797	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20798	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20799	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20800	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20801	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20802	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20803	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20804	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20805	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20806	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20807	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20808	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20809	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20810	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20811	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800		296	-
20812	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20813	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20814	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800		296	-
20815	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20816	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20817	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20818	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20819	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20820	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20821	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20822	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20823	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20824	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20825	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20826	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20827	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20828	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20829	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20830	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20831	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20832	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20833	Manholes	STMH 1200 mm	CONC	2007	86	2093	7,800	69	269	-
20834	Manholes	STMH 1200 mm	CONC	2007	86	2093	7,800	69	269	-
20835	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20836	Manholes	STMH 1200 mm	CONC	2007	86	2093	7,800	69	269	-
20837	Manholes	STMH 1500 mm	CONC	2007	86	2093	10,030	69	346	-
20838	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20839	Manholes	STMH 1500 mm	CONC	2004	86	2090	10,030	66	351	-
20840	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20841	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20842	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20843	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20844	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20845	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20846	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20847	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20848	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20849	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20850	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20851	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20852	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20853	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20854	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20855	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20856	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20857	Manholes	STMH 1800 mm	CONC	1993	86	2079	13,380	55	500	-
20858	Manholes	STMH 1800 mm	CONC	1993	86	2079	13,380	55	500	-
20859	Manholes	STMH 1800 mm	CONC	1993	86	2079	13,380	55	500	-
20860	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20861	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20862	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20863	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
20864	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20865	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800		298	-
20866	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20867	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800		298	-
20868	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20869	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20870	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20871	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20872	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20873	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20874	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20875	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20876	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20877	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20878	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20879	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20880	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20881	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20882	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20883	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20884	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20885	Manholes	STMH 1200 mm	CONC	2000	86	2086	7,800	62	279	-
20886	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20887	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20888	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20889	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20890	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20891	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20892	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20893	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20894	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20895	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20896	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20897	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20898	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
20899	Manholes	STMH 1200 mm	CONC	1983	86	2069	7,800	45	318	-
20900	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	_



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20901	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20902	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20903	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20904	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20905	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20906	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20907	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20908	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20909	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20910	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20911	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20912	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
20913	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20914	Manholes	STMH 1200 mm	CONC	1998	86	2084	7,800	60	282	-
20915	Manholes	STMH 1200 mm	CONC	1998	86	2084	7,800	60	282	-
20916	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20917	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20918	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20919	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20920	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20921	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20922	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20923	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20924	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	
20925	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20926	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20927	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20928	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20929	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
20930	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20931	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20932	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20933	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20934	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20935	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20936	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20937	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20938	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20939	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20940	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20941	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20942	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20943	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20944	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20945	Manholes	STMH 2400 mm	CONC	2009	86	2095	20,070	71	686	-
20946	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	-
20947	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	•
20948	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	1
20949	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	1
20950	Manholes	STMH 1200 mm	CONC	2009	86	2095	7,800	71	267	•
20951	Manholes	STMH 1200 mm	CONC	1978	86	2064	7,800	40	337	-
20952	Manholes	STMH 1200 mm	CONC	1978	86	2064	7,800	40	337	-
20953	Manholes	STMH 1200 mm	CONC	1978	86	2064	7,800	40	337	-
20954	Manholes	STMH 1200 mm	CONC	1978	86	2064	7,800	40	337	-
20955	Manholes	STMH 1200 mm	CONC	1978	86	2064	7,800	40	337	-
20956	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
20957	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
20958	Manholes	STMH 1200 mm	CONC	1978	86	2064	7,800		337	-
20959	Manholes	STMH 1200 mm	CONC	1978	86	2064	7,800	40	337	-
20960	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800		266	-
20961	Manholes	STMH 2400 mm	CONC	2010	86	2096	20,070	72	683	-
20962	Manholes	STMH 1800 mm	CONC	2010	86	2096	13,380	72	456	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20963	Manholes	STMH 1800 mm	CONC	2010	86	2096	13,380	72	456	-
20964	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
20965	Manholes	STMH 1500 mm	CONC	2010	86	2096	10,030	72	342	-
20966	Manholes	STMH 1800 mm	CONC	2010	86	2096	13,380		456	-
20967	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
20968	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
20969	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800		301	-
20970	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
20971	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20972	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
20973	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
20974	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
20975	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
20976	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20977	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20978	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20979	Manholes	STMH 1200 mm	CONC	1970	86	2056	7,800	32	383	-
20980	Manholes	STMH 1200 mm	CONC	1986	86	2072	7,800	48	309	-
20981	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
20982	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20983	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20984	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20985	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
20986	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20987	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20988	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20989	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20990	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20991	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800		342	-
20992	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-
20993	Manholes	STMH 1200 mm	CONC	1977	86	2063	7,800	39	342	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
20994	Manholes	STMH 1200 mm	CONC	1984	86	2070	7,800	46	315	-
20995	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20996	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20997	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20998	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
20999	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-
21000	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
21001	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21002	Manholes	STMH 1200 mm	CONC	1980	86	2066	7,800	42	329	-
21003	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
21004	Manholes	STMH 1200 mm	CONC	1992	86	2078	7,800	54	293	-
21005	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21006	Manholes	STMH 1200 mm	CONC	2010	78	2088	7,800	64	276	-
21007	Manholes	STMH 1200 mm	CONC	2019	78	2097	7,800	73	265	-
21008	Manholes	STMH 1200 mm	CONC	2019	78	2097	7,800	73	265	-
21009	Manholes	STMH 1200 mm	CONC	2019	78	2097	7,800	73	265	-
21010	Manholes	STMH 1200 mm	CONC	2019	78	2097	7,800	73	265	-
21011	Manholes	STMH 1200 mm	CONC	2019	78	2097	7,800	73	265	-
21012	Manholes	STMH 1200 mm	CONC	2019	78	2097	7,800	73	265	-
21013	Manholes	STMH 1200 mm	CONC	2019	78	2097	7,800	73	265	-
21014	Manholes	STMH 1200 mm	CONC	2019	86	2105	7,800	81	257	-
21015	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21016	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21017	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21018	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21019	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21020	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21021	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21022	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21023	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21024	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21025	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21026	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21027	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21028	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21029	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21030	Manholes	STMH 1200 mm	CONC	2013	86	2099	7,800	75	263	•
21031	Manholes	STMH 1200 mm	CONC	2013	86	2099	7,800	75	263	•
21032	Manholes	STMH 1200 mm	CONC	2013	86	2099	7,800	75	263	-
21033	Manholes	STMH 1200 mm	CONC	2013	86	2099	7,800	75	263	•
21034	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	•
21035	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	1
21036	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	•
21037	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	1
21038	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	•
21039	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	•
21040	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21041	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	•
21042	Manholes	STMH 1200 mm	CONC	2010	81	2091	7,800	67	271	ı
21043	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21044	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	•
21045	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	•
21046	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	-
21047	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	ı
21048	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	•
21049	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	•
21050	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	1
21051	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	ı
21052	Manholes	STMH 1200 mm	CONC	2020	86	2106	7,800	82	257	
21053	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	
21054	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21055	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21056	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21057	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21058	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21059	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21060	Manholes	STMH 1200 mm	CONC	2016	81	2097	7,800	73	265	-
21061	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21062	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21063	Manholes	STMH 1200 mm	CONC	2021	86	2107	7,800	83	256	-
21064	Manholes	STMH 1200 mm	CONC	2016	81	2097	7,800	73	265	-
21065	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21066	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21067	Manholes	STMH 1200 mm	CONC	2021	79	2100	7,800	76	262	-
21068	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21069	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21070	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21071	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21072	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21073	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21074	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21075	Manholes	STMH 1200 mm	CONC	2020	86	2106	7,800	82	257	-
21076	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21077	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21078	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21079	Manholes	STMH 1200 mm	CONC	2012	86	2098	7,800	74	264	-
21080	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21081	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21082	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21083	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21084	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21085	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21086	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21087	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21088	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21089	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800		266	-
21090	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800		266	-
21091	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21092	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21093	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800		266	-
21094	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21095	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21096	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21097	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21098	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21099	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21100	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800		266	-
21101	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21102	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21103	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800		266	-
21104	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21105	Manholes	STMH 1800 mm	CONC	2010	86	2096	13,380		456	-
21106	Manholes	STMH 1800 mm	CONC	2010	86	2096	13,380		456	-
21107	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21108	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21109	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800		266	-
21110	Manholes	STMH 2400 mm	CONC	2010	86	2096	20,070	72	683	-
21111	Manholes	STMH 1200 mm	CONC	2015	86	2101	7,800	77	261	-
21112	Manholes	STMH 1200 mm	CONC	2015	86	2101	7,800	77	261	-
21113	Manholes	STMH 1200 mm	CONC	2015	86	2101	7,800	77	261	-
21114	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21115	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800		260	-
21116	Manholes	STMH 1200 mm	CONC	2011	86	2097	7,800	73	265	-
21117	Manholes	STMH 1200 mm	CONC	2011	86	2097	7,800	73	265	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21118	Manholes	STMH 1200 mm	CONC	2011	86	2097	7,800	73	265	-
21119	Manholes	STMH 1200 mm	CONC	2011	86	2097	7,800	73	265	-
21120	Manholes	STMH 1200 mm	CONC	2011	86	2097	7,800	73	265	-
21121	Manholes	STMH 1200 mm	CONC	2011	86	2097	7,800	73	265	-
21122	Manholes	STMH 1200 mm	CONC	2011	86	2097	7,800	73	265	-
21123	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21124	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
21125	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
21126	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
21127	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
21128	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
21129	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
21130	Manholes	STMH 1200 mm	CONC	2002	86	2088	7,800	64	276	-
21131	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
21132	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
21133	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
21134	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
21135	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
21136	Manholes	STMH 1200 mm	CONC	1993	86	2079	7,800	55	291	-
21137	Manholes	STMH 1200 mm	CONC	1995	86	2081	7,800	57	287	-
21138	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21139	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21140	Manholes	STMH 1800 mm	CONC	2010	86	2096	13,380	72	456	-
21141	Manholes	STMH 1200 mm	CONC	2012	79	2091	7,800	67	271	-
21142	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	-
21143	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800		263	-
21144	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800		263	-
21145	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800		263	-
21146	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800		263	-
21147	Manholes	STMH 1200 mm	CONC	2020	79	2099	7,800	75	263	
21148	Manholes	STMH 1200 mm	CONC	2020	86	2106	7,800	82	257	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21149	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21154	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21155	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21156	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21157	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21158	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21159	Manholes	STMH 1200 mm	CONC	2016	81	2097	7,800	73	265	-
21160	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21161	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21162	Manholes	STMH 1200 mm	CONC	2020	81	2101	7,800	77	261	-
21163	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
21164	Manholes	STMH 1200 mm	CONC	2020	86	2106	7,800	82	257	-
21165	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21166	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21167	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21168	Manholes	STMH 1200 mm	CONC	2016	86	2102	7,800	78	260	-
21169	Manholes	STMH 1200 mm	CONC	2016	78	2094	7,800	70	268	-
21170	Manholes	STMH 1200 mm	CONC	2019	86	2105	7,800	81	257	-
21171	Manholes	STMH 1200 mm	CONC	2017	86	2103	7,800	79	259	-
21172	Manholes	STMH 1200 mm	CONC	2017	86	2103	7,800	79	259	-
21173	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
21174	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
21175	Manholes	STMH 1200 mm	CONC	1990	86	2076	7,800	52	298	-
21176	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
21177	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
21178	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
21179	Manholes	STMH 1200 mm	CONC	1989	86	2075	7,800	51	301	-
21180	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21181	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21182	Manholes	STMH 1200 mm	CONC	2010	86	2096	7,800	72	266	-
21183	Manholes	STMH 1200 mm	CONC	1987	86	2073	7,800	49	306	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
21184	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
21185	Manholes	STMH 1200 mm	CONC	2001	86	2087	7,800	63	277	-
21186	Manholes	STMH 1200 mm	CONC	2003	86	2089	7,800	65	274	-
21187	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21188	Manholes	STMH 1200 mm	CONC	1991	86	2077	7,800	53	296	-
21189	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21190	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21191	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21192	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21193	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21194	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21195	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21196	Manholes	STMH 1200 mm	CONC	2004	86	2090	7,800	66	273	-
21197	Manholes	STMH 1200 mm	CONC	1990	78	2068	7,800	44	322	-
22043	Manholes	STMH 1200 mm	CONC	2019	86	2105	4,950	81	163	-
22266	Manholes	STMH 1200 mm	CONC	1991	79	2070	7,800	46	315	-
22320	Manholes	STMH 1200 mm	CONC	2020	81	2101	5,040	77	169	-
22601	Manholes	STMH 1200 mm	CONC	2021	81	2102	7,800	78	260	-
ST10 - 22702	Manholes	STMH 1500 mm	CONC	2021	84	2105	27,500	81	908	-
ST11	Manholes	STMH 1500 mm	CONC	2021	84	2105	27,500	81	908	-
ST12	Manholes	STMH 1500 mm	CONC	2021	84	2105	27,500	81	908	-
ST13	Manholes	STMH 1500 mm	CONC	2021	84	2105	27,500	81	908	-
ST14	Manholes	STMH 1500 mm	CONC	2021	84	2105	30,730	81	1,014	-
ST15	Manholes	STMH 1500 mm	CONC	2021	84	2105	27,500	81	908	-
ST16	Manholes	STMH 1200 mm	CONC	2021	84	2105	27,500	81	908	-
ST17	Manholes	STMH 1200 mm	CONC	2021	84	2105	27,500	81	908	-
ST12	Manholes	STMH 1200 mm	CONC	2022	85	2107	15,550	83	510	-
ST13	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,790	83	485	-
ST14	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,790	83	485	-
ST15	Manholes	STMH 1200 mm	CONC	2022	85	2107	19,720	83	647	_
ST16	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,790	83	485	-



Asset ID	Sement	Profile	Material	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
ST17	Manholes	STMH 1200 mm	CONC	2022	85	2107	15,170	83	498	-
ST18	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,790	83	485	-
ST19	Manholes	STMH 1200 mm	CONC	2022	85	2107	15,740	83	517	-
ST 20	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,410	83	473	-
ST 21	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,410	83	473	-
ST 22	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,980	83	492	-
ST 23	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,980	83	492	-
ST 24	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,790	83	485	-
ST 25	Manholes	STMH 1200 mm	CONC	2022	85	2107	14,600	83	479	-
ST 26	Manholes	STMH 1500 mm	CONC	2022	85	2107	22,750	83	747	-
ST 27	Manholes	STMH 1500 mm	CONC	2022	85	2107	23,320	83	765	-
Total							\$5,407,470		\$196,895	\$0