# 7. Appendices

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	<b>Asset Management Policy</b>					
	Policy Category: corporate-wide					
<b>WARKHAM</b>	Policy No.: (Follow corporate standard, assigned by Clerk's Dept.)	Implementing Procedure No.: (Follow corporate standard, assigned by Policy Author)				
Approving Authority: Council	Effective Date: (Date of this effective)	policy has been approved to become				
Approved or Last Reviewed Date: N/A	Next Review Year: 2024 (Ev	very 5 years)				
Area(s) this policy applies to: City Wide	Owner Department: Sustai	inability & Asset Management				
Related Policy(ies):	,					

O. Reg. 588/17 Asset Management Planning for Municipal Infrastructure made under the Infrastructure For Jobs and Prosperity Act, 2015

## **Appendix A: 2019 Asset Management Policy**

#### 1. **Policy Statement**

The City of Markham will ensure infrastructure are planned, built and maintained effectively through sound Asset Management and the company of the companyprinciples and practices to meet its strategic goals and deliver services in a socially, economically and environmentally responsible manner.

#### 2. **Purpose**

Asset Management in the City is to be guided by the following objectives:

- A. Align Asset Management practice with the City of Markham's Strategic Plan, Building Markham's Future Together (BMFT), and other key strategic documents, including the Greenprint, Markham's Community Sustainability Plan, and the Official Plan;
- **B.** Ensure strong governance, accountability and transparency by:
  - a. Demonstrating to owners, customers and stakeholders that services are delivered effectively and efficiently;
  - b. Providing a transparent and auditable basis for making service/risk/cost trade-off decisions; and
  - c. Improving accountability for use of resources through performance and financial metrics
- C. Make effective and long term sustainable decisions by:
  - a. Having robust information/documentation to support evidence-based decisions;
  - Considering viable options and all aspects of decisions; and
  - Ensuring total cost of ownership is the basis of decision making processes, so that emphasis is placed on sustainable long term efficiencies rather than short term gains
- D. Provide customer serviceby:
  - a. Defining level of service in consultation with stakeholders; and
  - **b.** Ensuring service delivery meets the defined level of service
- Manage risk effectively by:
  - Understanding the risks related to asset management and service delivery and applying a framework to prioritize risk mitigation
  - **b.** Developing and implementing risk management strategies; and
  - Demonstrating compliance with legal and regulatory requirements;

- F. Demonstrate fiscal stewardship and financial efficiency through:
  - a. Balancing cost, risk and service performance to achieve the lowest total cost of ownership; and
  - **b.** Updating the Life Cycle Reserve Study annually to determine if there are sufficient funds in the reserve to sustain the future replacement and rehabilitation requirements of the City's assets for the next 25 years based on known inflows and outflows.
- G. Provide excellent sustainable community planning and infrastructure management to accommodate growth.

#### 3. Definitions

For consistency, terminology in all official asset management documents shall be consistent with ISO 55000:2014(E) – International Standard for Asset Management. For the purpose of this document, the following definitions apply:

**Asset:** Item, thing or entity that has potential or actual value to an organization. Value can be tangible or intangible financial or non-financial, and includes consideration of risks and liabilities.

**AssetManagement:**Coordinated activity of an organization to realize value from assets. Realization of value will normally involve an appropriate balancing of costs, performance and risks, opportunities and performance benefits.

**Asset Management Plan:** Documented information that specifies the activities, resources, and timescales required for an individual asset, or grouping of assets, to achieve the organization's asset management objectives.

**Level of Service:** Parameters or a combination of parameters, which reflect social, political, environmental and economic outcomes that an organization delivers from their assets.

Life Cycle: Phases involved in the management of an asset.

Asset Manager: All employees of the City that have a direct and/or indirect link to assets

## 4. Guiding Principles

#### A. Customer Focused:

The City will apply asset management practices to promote confidence of customers in how City assets are managed.

#### B. Service focused:

The City will consider all the assets in a service context and take into account their inter-relationships as opposed to optimizing individual assets in isolation.

#### C. Risk-based

The City will manage the asset risk associated with attaining the agreed level of service by focusing resources, expenditures and priorities based upon risk assessments and the corresponding cost/benefit, recognizing that public safety is a priority.

#### D. Value-based / Affordable

The City will choose practices that aim at reducing the life cycle cost of asset ownership, while satisfying agreed level of service. Decisions are based on balancing pre-determined service level, acceptable risks, and minimizing costs.

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#### E. Forward Looking:

The City will make the appropriate decisions and provisions to better enable its assets to meet future challenges, including changing demographics and populations, customer expectations, legislative requirements, technological and environmental factors.

#### F. Holistic

The City will take a comprehensive approach that looks at the "big picture" and considers the combined impact of managing all aspects of the asset life cycle.

## G. Systematic

The City will adopt a formal, consistent, repeatable and standardized approach to the management of its assets that will ensure services are provided in the most effective manner.

#### H. Innovative

The City will continually improve its asset management approach, by driving innovation in the development of tools, practices, and solutions

The City will adopt and adhere to the asset managing planning principles listed in Section 3 of the Infrastructure for Jobs and Prosperity Act, 2015.

## 5. Application

The City of Markham relies on a wide range of diversified assets to provide services to its customers at the agreed Level of Service. Service is critically important to the well-being of present and future customers and it drives the implementation of a structured approach to asset management.

This policy applies to all assets related service provision such as Right of Way Assets (Roads, Storm Water Management, Bridges, Streetlight, Traffic Light, Water, and Wastewater), Parks, Facilities, Community Centers, Libraries, Library Collections, Fire Equipment, IT infrastructure, and Fleet.

This policy applies to all departments and employees of the City that have a direct and/or indirect link to assets.

## 6. Asset Management Framework

To meet the objectives of this policy, the City will follow Asset Management Framework in Figure 1. The Framework describes the business processes and asset management activities, and illustrates the relationships between those activities.

The Framework consists of several major elements:

#### A. Regulatory Requirements, Business Drivers

Business Drivers are the external influences that govern how the infrastructures are managed and set overall expectations of how the departments operate, including, but not limited to:

- a. Customer requirements (residents and businesses);
- **b.** Corporate goals and strategies;
- c. Regulatory requirements, such as the Safe Drinking Water Act, the Ontario Water Resources Act, Fire Code, the Highway Traffic Act, the Municipal Act and provincial regulation Minimum Maintenance Standards for Municipal Highways, Regional By-law requirements, municipal by-laws requirements, the Planning Act and Places to Grow requirements; and
- d. Environmental factors, such as the economy, technology innovations, political and social priorities.

### B. Core Processes supported by Core Support Services

The underlying structure is based on the all-encompassing PDCA (Plan Do Check Act) cycle to control and continuously improve on processes and products.

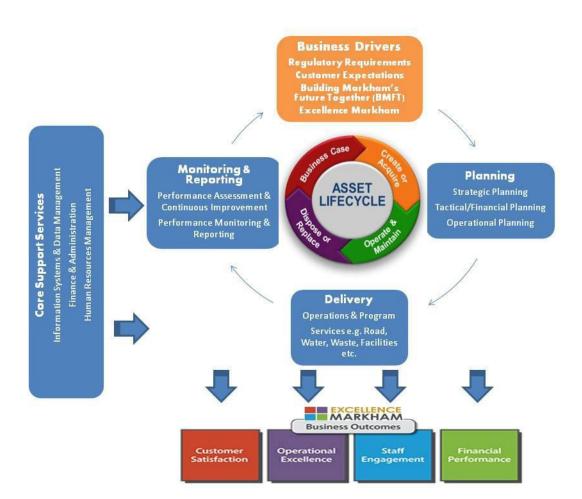


Figure 1: Asset Management Framework

- **a.** Planning Converts the Business Drivers (Orange) into a set of operational plans that describe how the department will deliver theservice.
- b. Delivery Refers to the actual delivery of the services to the customers, both internal and/or external.
- **c.** Monitoring and Reporting-Also known as performance management checks that measures if the department is doing what it intended/planned to do, including:
  - i. Monitoring and reporting actual results against targets over time;
  - ii. Conducting results based benchmarking against internal and external data sets;
  - iii. Assessing gaps, and reporting on lessons learned; and
  - iv. Assessing if the results meet the Business Drivers (orange) and applying continuous improvement to the Planning and Delivery.
  - **d.** Core Support Services The Core Support Services include finance and administration, information systems and data management, and human resources management, which provide the necessary support to Business units to successfully manageinfrastructure.

## C. Asset Life Cycle

Centred amongst the Business Drivers, and overlaying the Plan-Do-Check-Act cycle, is the management of physical infrastructure. This Asset Management Cycle describes how the various assets are managed.

The asset Life Cycle Reserve includes:

- **a.** Asset procurement, creation or acquisition to provide assets to meet current and future needs while achieving the defined levels of service and risks;
- Asset operations, maintain to maintain an asset to meet the required functional condition and/or extend its life; and
- c. Asset disposal, replace To rebuild or replace an asset to restore it to a required functional condition.

#### D. Excellence Markham Business Outcomes

The City use Excellence Canada's Excellence Framework for municipalities to guide how the organization is managed, focusing on areas of Customer Satisfaction, Operational Excellence, Staff Engagement, and Financial Performance. Asset Management Framework aligns to the Excellence Markham Business outcomes.

## 7. Responsibilities

#### A. Customers

Customers include both internal and external customers who receive and experience service delivery.

- a. Participate in stakeholder engagement initiatives, where applicable;
- b. Provide feedback related to levels of service and experience; and
- **c.** Report concerns related to assets.

## B. Asset Managing Departments

Assetmanaging departments comprise of Environmental Services, Operations, Sustainability and Asset Management, Recreation, Library, Engineering, Information Technology Services, Economic Growth, Culture and Entrepreneurship and Fire. These departments are to:

- **a.** Lead and implement the asset management process for assets under their accountability including the development, implementation, operation and continuous improvement of departmental asset management programs;
- **b.** Include all assets in life cycle studies;
- c. Liaise with Finance to update long term financial forecasts, which will ensure that sustainable financial strategies support asset life cycle needs; and provide asset management requirements as inputs to the annual budget process;

- **d.** Participate in the development of the Asset Management Plans pertaining to assets under each department's accountability and related asset management initiatives; and
- **e.** Engage customers to obtain feedback on levels of service and asset management planning and incorporate feedback.

### C. Corporate Asset Management Steering Committee – Executive Lead

The Corporate Asset Management Steering Committee comprises of Director of Environmental Services, Director of Operations, Director of Sustainability and Asset Management, Director of Engineering, Treasurer, Director of Recreation, and Chief Information Officer. Corporate Asset Management Steering Committee serves as executive lead for asset management planning.

- a. Develop and update Asset Management Policy and Asset Management Plan;
- **b.** Ensure systematic and uniformity of approach across the organization;
- c. Ensure all Assets identified in Asset Management Plan are included in the City's Life Cycle Replacement and Capital Reserve Study or the City's Water and Wastewater Reserve Study;
- **d.** Align asset management planning to address vulnerabilities caused by climate change and to support implementation of the City's Emergency Management Plan;
- e. Encourage information sharing and collaboration across departments;
- f. Disseminate Steering Committee information within applicable departments where necessary;
- g. Ensure organization-wide accountability for achieving and reviewing corporate asset management goals and objectives:
- h. Review asset management programs; and
- i. Consider opportunities to coordinate asset management planning with the Region of York and neighbouring municipalities
- **j.** Select the Chair from among the committee members and define the process, term(s) and address any other governance matters necessary for the efficient function of the committee.

#### D. Executive Leadership Team

Executive leadership team comprises of Chief Administrative Officer (CAO), Commissioner of Community Services, Commissioner of Corporate Services, Commissioner of Development Services, City Solicitor and Director of Human Resources.

- a. Endorse Asset Management Policy and Plan;
- b. Ensure alignment of Asset Management Policy and Plan with corporate strategies and objectives;
- c. Champion asset management practices at the corporate level; and
- **d.** Ensure compliance with the plan for assets within their commission
- E. Council
  - a. Approves Asset Management Policy and Plan;
  - b. Serves as the representative of customers; and
  - c. Approves funding to meet the objectives and outcomes of the Asset Management Plan.

#### 8. Reference

- A. O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure;
- B. Infrastructure for Jobs and Prosperity Act, 2015, S.O. 2015, c. 15;
- C. International Infrastructure Management Manual, Institute of Public Works Engineering Australasia; and
- D. ISO 55000:2014(E) Asset Management Overview, Principles and Terminology, International Organization for Standardization (ISO)

## 9. Non-Compliance

Accountability and compliance with this policy is the responsibility of all Asset Managers and the Corporate Asset Management Steering Committee.

### 10. Contact

Director, Sustainability and Asset Management

## 11. Appendix

Asset Management Organization Structure

**Appendix: Asset Management Organization Structure** 



#### **Asset Managing Departments Matrix**

Asset	Asset Construction / Procurement	Asset Operation & Maintenance	Asset Rehabilitation/ Replacement (Life Cycle)	
Water/Wastewater				
Stormwater Management	ENG	ES	ES	
Bridges/Culverts	ENG	ES	ES	
Streetlight				
Roads	ENG			
Parks	UD	OP	OP	
Fleet	OP			
Traffic Lights	ENG	ENG	ENG	
IT Infrastructure Hardware	ITS	ITS	ITS	
Libraries		LIB/REC	SAM/LIB/REC	
SAM				
Facility Buildings (including Fire Stations, Culture and others)	SAM	SAM	SAM	
Community Centres		REC	REC/SAM	
Library/Facility/CommunityCentre Exterior Property*	SAM	OP/others*	OP/others*	
Library Collections	LIB	LIB	LIB	
Fire Equipment	FIRE	FIRE	FIRE	

#### Note:

 $^*\,Refer \,to \,detailed \,roles \,and \,responsibilities \,for \,each \,fire \,station/library/facility/community \,center \,exterior \,property \,within \,SAM$ 

ES: Environmental Services

OP: Operations

SAM: Sustainability and Asset Management

ITS: IT Services ENG: Engineering LIB: Library REC: Recreation UD: Urban Design

Fire

## Appendix B: Cashflow Projection – Capital Rehabilitation, Replacement, Maintenance and Repairs (excl. Waterworks and Development Charges)

	2020	2021	2022	2023	2024	
Opening Balance	81,024,957	78,255,098	76,280,424	44,098,825	28,051,027	
Interest	1,523,876	1,461,152	970,401	894,806	968,442	
Inflows						\
Operating Budget	7,658,399	7,811,567	7,967,798	8,127,154	8,289,697	ge
Transfer to reserve	28,887,784	27,686,640	29,118,993	29,717,549	30,328,077	
Stormwater Management Fee	0	9,735,533	10,027,447	10,326,038	10,631,463	next
DMAF Grant	7,520,000	11,840,000	1,200,000	3,560,000	7,200,000	
Investment Income	12,210,546	8,598,546	13,865,146	13,098,346	15,642,931	on
Canada Community Building Fund	6,433,207	6,433,207	6,433,207	6,886,825	6,886,825	ed
Other	649,145	3,358,145	2,673,187	2,340,924	2,380,358	nut
Subtotal Revenues	63,359,081	75,463,638	71,285,778	74,056,837	81,359,351	Contil
Outflows						Co
Maintenance & Repair	-7,658,399	-7,811,567	-7,967,798	-8,127,154	-8,289,697	
Capital Rehabilitation, Replacement, and Disposal	-57,503,672	-68,547,335	-93,878,607	-80,229,086	-71,333,771	
Expansion Activities	-2,490,747	-2,540,562	-2,591,373	-2,643,200	-2,696,064	
Subtotal Expenditure	-67,652,817	-78,899,463	-104,437,778	-90,999,440	-82,319,533	
Closing Balance	78,255,098	76,280,424	44,098,825	28,051,027	28,059,288	

	2033	2034	2035	2036	2037	
Opening Balance	21,726,806	758,569	16,230,069	-5,112,547	4,762,710	
Interest	1,028,099	1,236,699	898,150	1,017,662	941,770	
Revenue						
Operating Budget	9,906,955	10,105,094	10,307,196	10,513,340	10,723,607	
Transfer to reserve	36,402,658	37,146,888	37,906,002	38,680,299	39,470,082	
Stormwater management	13,716,242	14,099,736	14,492,117	14,893,600	15,304,411	
DMAF Grant	0	0	0	0	0	
Investment Income	17,839,386	17,710,907	17,482,013	17,721,362	17,965,498	
Canada Community Building Fund	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825	
Other	2,772,707	2,820,776	2,869,807	2,919,817	2,970,829	
Subtotal Revenues	87,524,774	88,770,227	89,943,959	91,615,244	93,321,252	
Expenditure						
Maintenance & Repair	-9,906,955	-10,105,094	-10,307,196	-10,513,340	-10,723,607	
Capital Rehabilitation, Replacement, and Disposal	-96,392,108	-61,143,844	-98,525,312	-68,825,049	-83,163,042	
Expansion Activities	-3,222,046	-3,286,487	-3,352,217	-3,419,262	-3,487,647	
Subtotal Expenditure	-109,521,110	-74,535,426	-112,184,725	-82,757,650	-97,374,296	
Closing Balance	758,569	16,230,069	-5,112,547	4,762,710	1,651,435	

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2025	2026	2027	2028	2029	2030	2031	2032
28,059,288	24,778,314	36,225,936	24,397,192	29,749,108	32,320,435	25,229,964	39,630,119
1,086,335	1,321,150	1,394,431	1,480,437	1,528,737	1,433,044	1,634,059	1,355,099
8,455,491	8,624,601	8,797,093	8,973,035	9,152,495	9,335,545	9,522,256	9,712,701
30,950,815	31,586,008	32,233,905	32,894,760	33,568,832	34,256,386	34,957,690	35,673,021
10,943,886	11,263,474	11,590,400	11,924,838	12,266,972	12,616,986	12,975,071	13,341,422
7,120,000	6,240,000	880,000	0	0	0	0	0
15,813,528	15,889,990	17,030,125	17,391,143	17,571,688	17,774,528	17,976,181	18,097,903
6,886,825	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825
2,420,579	2,461,606	2,503,453	2,546,136	2,589,674	2,634,082	2,679,379	2,725,581
82,591,125	82,952,504	79,921,801	80,616,738	82,036,486	83,504,352	84,997,401	86,437,454
-8,455,491	-8,624,601	-8,797,093	-8,973,035	-9,152,495	-9,335,545	-9,522,256	-9,712,701
-75,752,957	-61,396,445	-81,486,798	-64,853,917	-68,864,728	-79,656,115	-59,612,118	-92,824,296
-2,749,986	-2,804,985	-2,861,085	-2,918,307	-2,976,673	-3,036,206	-3,096,930	-3,158,869
-86,958,433	-72,826,031	-93,144,976	-76,745,259	-80,993,897	-92,027,867	-72,231,305	-105,695,867
24,778,314	36,225,936	24,397,192	29,749,108	32,320,435	25,229,964	39,630,119	21,726,806

	2038	2039	2040	2041	2042	2043	2044	2045
	1,651,435	-15,835,412	-13,264,839	-10,317,334	-611,685	-10,081,713	-3,919,503	7,572,729
	649,736	650,204	652,099	749,484	558,847	594,324	475,771	112,592
	10,938,079	11,156,841	11,379,978	11,607,577	11,839,729	12,076,523	12,318,054	12,564,415
	40,275,660	41,097,350	41,935,474	42,790,360	43,662,344	44,551,768	45,458,980	46,384,336
į	15,724,779	16,154,938	16,595,131	17,045,606	17,506,619	17,978,430	18,461,309	18,955,533
į	0	0	0	0	0	0	0	0
	18,214,517	18,468,517	18,727,596	18,991,857	19,324,404	19,663,601	20,009,582	20,362,483
į	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825	6,886,825
	3,022,860	3,075,932	3,130,065	3,185,281	3,241,602	3,299,048	3,357,644	3,417,412
	95,062,721	96,840,403	98,655,069	100,507,507	102,461,522	104,456,195	106,492,394	108,571,003
	-10,938,079	-11,156,841	-11,379,978	-11,607,577	-11,839,729	-12,076,523	-12,318,054	-12,564,415
	-98,703,825	-80,134,645	-81,278,567	-76,168,624	-96,800,023	-82,884,130	-79,151,669	-95,799,078
	-3,557,400	-3,628,548	-3,701,119	-3,775,141	-3,850,644	-3,927,657	-4,006,210	-4,086,334
	-113,199,304	-94,920,034	-96,359,663	-91,551,342	-112,490,396	-98,888,310	-95,475,933	-112,449,827
į	-15,835,412	-13,264,839	-10,317,334	-611,685	-10,081,713	-3,919,503	7,572,729	3,806,497

## **Appendix C: Cashflow Projection – Waterworks**

	2020	2021	2022	2023	2024	
Opening Balance	61,853,261	55,042,857	49,765,691	38,844,755	36,115,823	
Interest	562,171	533,250	485,682	575,985	682,080	page
Revenue	11,489,265	14,051,115	14,871,690	15,760,254	16,685,302	next
Expenditure						0 u
Maintenance & Repair	-486,640	-496,373	-506,300	-516,426	-526,755	nuted
Capital Rehabilitation, Replacement, and Disposal	-18,375,200	-19,365,159	-25,772,007	-18,548,745	-17,686,919	onti
Subtotal Expenditure	-18,861,840	-19,861,532	-26,278,308	-19,065,171	-18,213,673	6
Closing Balance	55,042,857	49,765,691	38,844,755	36,115,823	35,269,531	

	2033	2034	2035	2036	2037	
Opening Balance	10,815,628	14,571,582	9,030,466	10,609,572	20,438,968	
Interest	1,214,685	1,358,484	1,492,012	1,853,761	2,010,707	page
Revenue	24,575,518	25,460,510	26,382,188	27,341,857	28,455,314	next
Expenditure						0 O
Maintenance & Repair	-629,521	-642,111	-654,953	-668,052	-681,413	nuted
Capital Rehabilitation, Replacement, and Disposal	-21,404,729	-31,717,998	-25,640,141	-18,698,170	-33,899,967	onti
Subtotal Expenditure	-22,034,250	-32,360,109	-26,295,094	-19,366,222	-34,581,380	0
Closing Balance	14,571,582	9,030,466	10,609,572	20,438,968	16,323,609	

2025	2026	2027	2028	2029	2030	2031	2032
35,269,531	33,442,805	30,927,721	33,423,719	28,288,100	22,510,634	14,943,063	11,791,413
749,688	795,070	916,785	957,687	976,877	902,887	981,203	906,554
17,465,583	18,256,797	19,091,916	19,972,765	20,901,371	21,879,895	22,910,731	23,725,978
-537,290	-548,036	-558,996	-570,176	-581,580	-593,211	-605,076	-617,177
-19,504,708	-21,018,916	-16,953,707	-25,495,894	-27,074,135	-29,757,141	-26,438,507	-24,991,139
-20,041,998	-21,566,951	-17,512,704	-26,066,070	-27,655,715	-30,350,353	-27,043,583	-25,608,317
33,442,805	30,927,721	33,423,719	28,288,100	22,510,634	14,943,063	11,791,413	10,815,628

2038	2039	2040	2041	2042	2043	2044	2045
16,323,609	17,303,653	19,630,565	19,763,204	17,843,216	15,005,981	14,551,571	13,349,770
2,187,283	2,416,903	2,662,160	2,940,079	3,164,150	3,383,308	3,635,667	3,873,133
29,614,510	30,821,334	32,077,754	33,385,823	34,747,673	36,165,530	37,641,710	39,178,626
-695,042	-708,943	-723,121	-737,584	-752,336	-767,382	-782,730	-798,385
-30,126,707	-30,202,382	-33,884,154	-37,508,306	-39,996,723	-39,235,866	-41,696,448	-55,603,144
-30,821,748	-30,911,325	-34,607,275	-38,245,890	-40,749,058	-40,003,248	-42,479,178	-56,401,529
17,303,653	19,630,565	19,763,204	17,843,216	15,005,981	14,551,571	13,349,770	0

## **Appendix D: Cashflow Projection — Development Charges Reserves** (excl. non-growth & discounted share)

	2020	2021	2022	2023	
LIBRARY	2020	2021		2020	
Opening Balance	1,738,982	5,061,789	8,094,495	11,232,122	
Interest	42,605	124,014	198,315	275,187	
Revenues	3,280,202	2,908,692	2,939,312	1,764,642	
Expenditures	0	0	0	0	
Closing Balance	5,061,789	8,094,495	11,232,122	13,271,952	
FIRE SERVICE	3,002,100	2,000			
Opening Balance	3,055,595	5,003,543	-6,395,828	-4,689,966	
Interest	74,862	122,587	-156,698	-114,904	
Revenues	1,873,087	1,678,042	1,862,560	1,252,441	
Expenditures	0	-13,200,000	0	0	
Closing Balance	5,003,543	-6,395,828	-4,689,966	-3,552,429	
INDOOR RECREATION	0,000,000	5,010,000	-,001,100	5,555,555	
Opening Balance	-57,764,104	-43,376,211	-30,426,646	-16,960,418	
Interest	-1,415,221	-1,062,717	-745,453	-415,530	
Revenues	15,803,114	14,012,282	14,211,681	8,553,982	
Expenditures	0	0	0	-6,983,100	(I)
Closing Balance	-43,376,211	-30,426,646	-16,960,418	-15,805,066	age
PARK DEVELOPMENT AND FACILITIES		, ,	, ,		9
Opening Balance	38,239,022	29,367,533	19,044,371	19,510,958	EX I
Interest	936,856	719,505	466,587	478,018	=
Revenues	10,891,656	9,657,333	9,793,021	5,893,603	0
Expenditures	-20,700,000	-20,700,000	-9,793,021	-5,893,603	60
Closing Balance	29,367,533	19,044,371	19,510,958	19,988,976	E
PUBLIC WORKS					Continuted on next page
Opening Balance	3,294,676	-479,498	-3,678,793	-2,526,882	5
Interest	80,720	-11,748	-90,130	-61,909	
Revenues	1,625,731	1,456,499	1,621,172	1,091,851	
Expenditures	-5,480,625	-4,644,046	-379,130	0	
Closing Balance	-479,498	-3,678,793	-2,526,882	-1,496,939	
PARKING	,	2,21.5,1.0	,: ::,::=	, ,	
Opening Balance	213,083	257,514	299,013	350,860	
Interest	5,221	6,309	7,326	8,596	
Revenues	39,211	35,189	44,521	31,979	
Expenditures	0	0	0	0	
Closing Balance	257,514	299,013	350,860	391,436	
HARD SERVICES	2.,222	,	223,230		
Opening Balance	60,034,173	59,455,817	52,564,402	44,550,889	
Interest	1,470,837	1,456,668	1,287,828	1,091,497	
Revenues	33,212,340	30,596,117	31,044,191	21,309,717	
Expenditures	-35,261,532	-38,944,199	-40,345,532	-37,910,699	
Closing Balance	59,455,817	52,564,402	44,550,889	29,041,404	

2024	2025	2026	2027	2028	2029	2030	2031
13,271,952	15,381,498	10,402,505	8,884,624	10,953,615	12,086,062	13,257,342	14,469,401
325,163	376,847	254,861	217,673	268,364	296,109	324,805	354,500
1,784,383	1,806,283	1,827,258	1,851,317	864,084	875,171	887,253	899,478
0	-7,162,123	-3,600,000	0	0	0	0	0
15,381,498	10,402,505	8,884,624	10,953,615	12,086,062	13,257,342	14,469,401	15,723,379
-3,552,429	-2,374,720	-4,543,410	-3,363,262	-3,402,447	-142,584	3,238,082	6,746,186
-87,035	-58,181	-111,314	-82,400	-83,360	-3,493	79,333	165,282
1,264,743	1,278,391	1,291,462	1,306,455	3,343,223	3,384,160	3,428,771	3,473,906
0	-3,388,900	0	-1,263,240	0	0	0	0
-2,374,720	-4,543,410	-3,363,262	-3,402,447	-142,584	3,238,082	6,746,186	10,385,374
-15,805,066	-15,408,616	-7,030,294	-2,233,031	6,686,390	12,906,517	19,356,745	26,049,687
-387,224	-377,511	-172,242	-54,709	163,817	316,210	474,240	638,217
8,649,674	8,755,833	8,857,506	8,974,130	6,056,310	6,134,019	6,218,702	6,304,381
-7,866,000	0	-3,888,000	0	0	0	0	0
-15,408,616	-7,030,294	-2,233,031	6,686,390	12,906,517	19,356,745	26,049,687	32,992,286
19,988,976	20,478,706	21,119,508	21,846,060	22,670,766	23,958,955	25,363,727	26,895,570
489,730	501,728	517,428	535,228	555,434	586,994	621,411	658,941
5,959,533	6,032,676	6,102,727	6,183,080	6,626,357	6,711,381	6,804,034	6,897,778
-5,959,533	-5,893,603	-5,893,603	-5,893,603	-5,893,603	-5,893,603	-5,893,603	-5,893,603
20,478,706	21,119,508	21,846,060	22,670,766	23,958,955	25,363,727	26,895,570	28,558,687
-1,496,939	-2,493,534	-2,702,641	-1,642,972	-544,264	2,252,283	5,151,697	8,159,581
-36,675	-61,092	-66,215	-40,253	-13,334	55,181	126,217	199,910
1,102,581	1,114,484	1,125,884	1,138,961	2,809,882	2,844,233	2,881,667	2,919,540
-2,062,500	-1,262,500	0	0	0	0	0	0
-2,493,534	-2,702,641	-1,642,972	-544,264	2,252,283	5,151,697	8,159,581	11,279,031
391,436	411,466	424,807	438,474	452,477	466,822	481,519	496,577
9,590	10,081	10,408	10,743	11,086	11,437	11,797	12,166
10,440	3,260	3,260	3,260	3,260	3,260	3,260	3,260
0	0	0	0	0	0	0	0
411,466	424,807	438,474	452,477	466,822	481,519	496,577	512,003
29,041,404	43,534,180	50,934,685	54,487,316	63,898,671	78,961,336	84,754,421	90,939,763
711,514	1,066,587	1,247,900	1,334,939	1,565,517	1,934,553	2,076,483	2,228,024
21,490,140	21,690,297	21,881,997	21,788,540	22,988,386	23,218,097	23,468,423	23,124,163
-7,708,879	-15,356,380	-19,577,265	-13,712,124	-9,491,239	-19,359,565	-19,359,565	-6,168,868
43,534,180	50,934,685	54,487,316	63,898,671	78,961,336	84,754,421	90,939,763	110,123,083